

ITACAP
日田电容

工业级电容器制造商



国家高新技术企业

产品目录

PRODUCT CATALOG



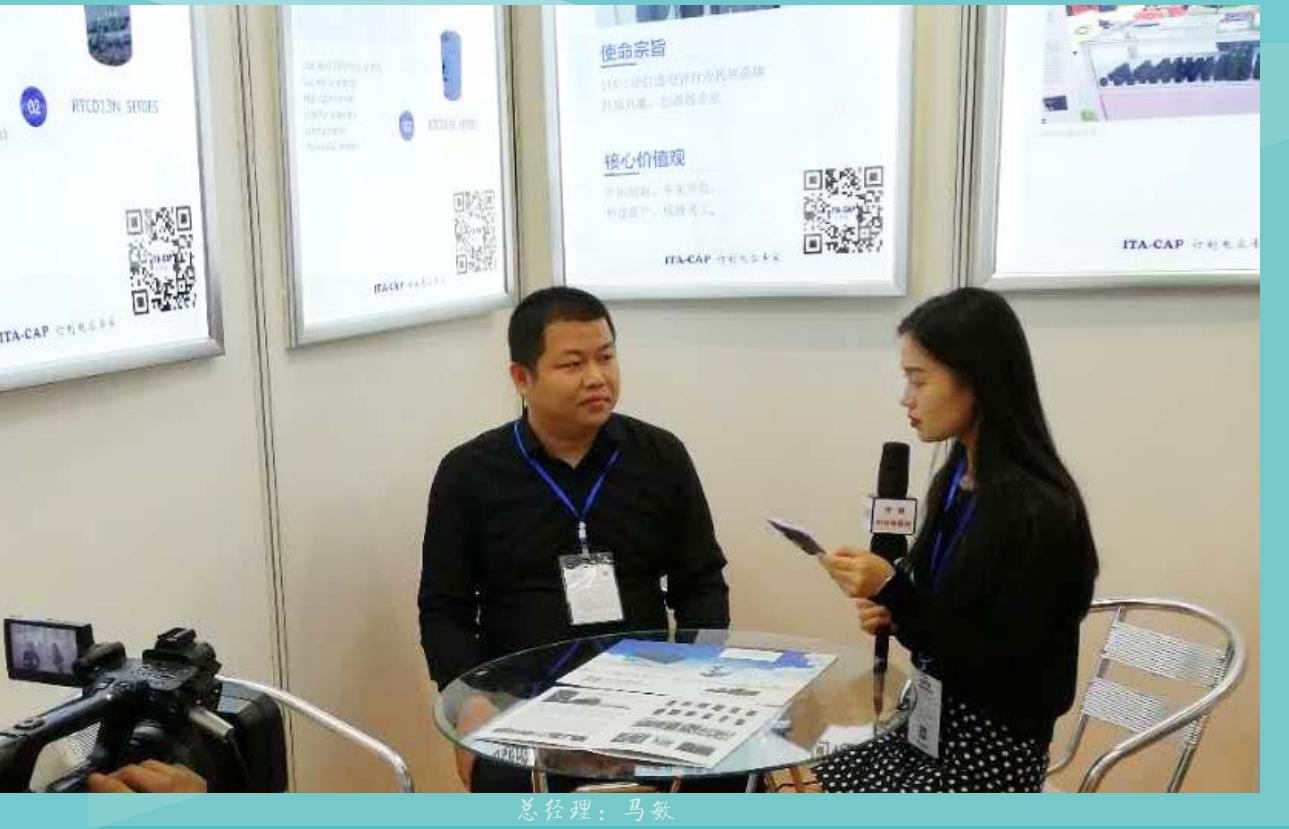
Aluminum Electrolytic Capacitors

深圳市日田特殊电容器有限公司

SHENZHEN ITACAP ELECTRONICS CO.LTD

COMPANY PROFILE

企业简介



日田企业是一家专注中高端铝电解电容器研发、制造、销售的现代化工厂。公司主要系列产品：
(SNAP IN) 焊针式和 (SCREW) 螺栓型及特殊规格定制和 (SUPER CAPACITORS) 超级电容。自创立以来，公司不断引进日本，意大利最先进设备以改进生产技术，吸取了 JAPAN,KOREA 的研究技术及制造工艺之精髓，年产量约 1500 万只。公司始终坚持“以客为本，以质求存，以优取胜，以快为强”的经营理念，实行全员质量管理；产品均已通过 SGS 环保检测，并通过 ISO9001 质量管理体系认证。随着计算机集成制造系统 (CIMS) 、数字加工中心、智能自动化，光伏节能，变频技术的迅猛发展，我司 ITA 电容被广泛应用于大功率驱动电源、不间断电源 (UPS) 、逆变器、通信电源、工业变频器、数控设备，另外激光加工、电梯、充磁机、螺柱点焊机、真空断路器、工矿设备产品、医疗设备电源、电动车充电桩、光伏逆变器系统等工业领域。特别鸣谢试验合作机构：中国科学院理化技术研究所，广西广播电视台器材总公司，重庆大学，宁波大学，上海交通大学等科研单位。

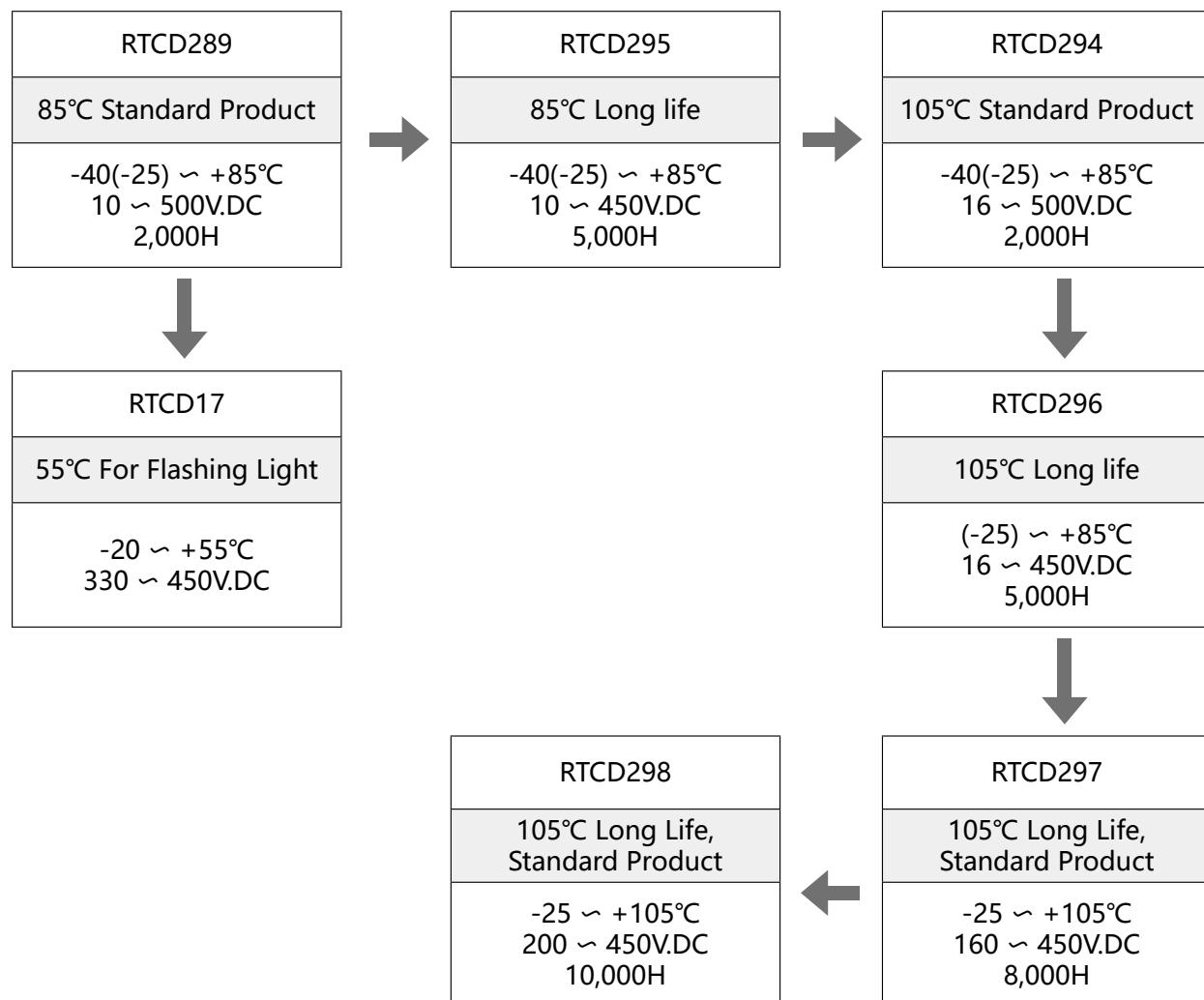
ITACAP

enterprise is a modern chemical factory focusing on the R & D, manufacturing and sales of high-end aluminum electrolytic capacitors. The company's main series of products: (snap in) pin type and (screw) bolt type and special specification customization and (super capacitors) super capacitor. Since its establishment, the company has continuously introduced the most advanced equipment from Japan and Italy to improve production technology, and has absorbed the essence of research technology and manufacturing technology of Japan and Korea, with an annual output of about 15 million. The company has always adhered to the business philosophy of "customer-oriented, quality-oriented, quality-oriented, win-win, and fast-paced" business philosophy, and implemented full staff quality management; products have passed SGS environmental protection testing, and passed ISO9001 quality management system certification. With the rapid development of computer integrated manufacturing system (CIMS), digital machining center, intelligent automation, photovoltaic energy saving, frequency conversion technology, our company's ITA capacitor is widely used in high-power drive power supply, uninterruptible power supply (UPS), inverter, communication power supply, industrial inverter, CNC equipment, laser processing, elevator, magnetizer, stud spot welding machine, vacuum circuit breaker Industrial and mining equipment products, medical equipment power supply, electric vehicle charging pile, photovoltaic inverter system and other industrial fields. Special thanks to the experimental cooperation institutions: Institute of physical and chemical technology, Chinese Academy of Sciences, Guangxi Radio and Television Equipment Corporation, Chongqing University, Ningbo University, Shanghai Jiaotong University, etc.

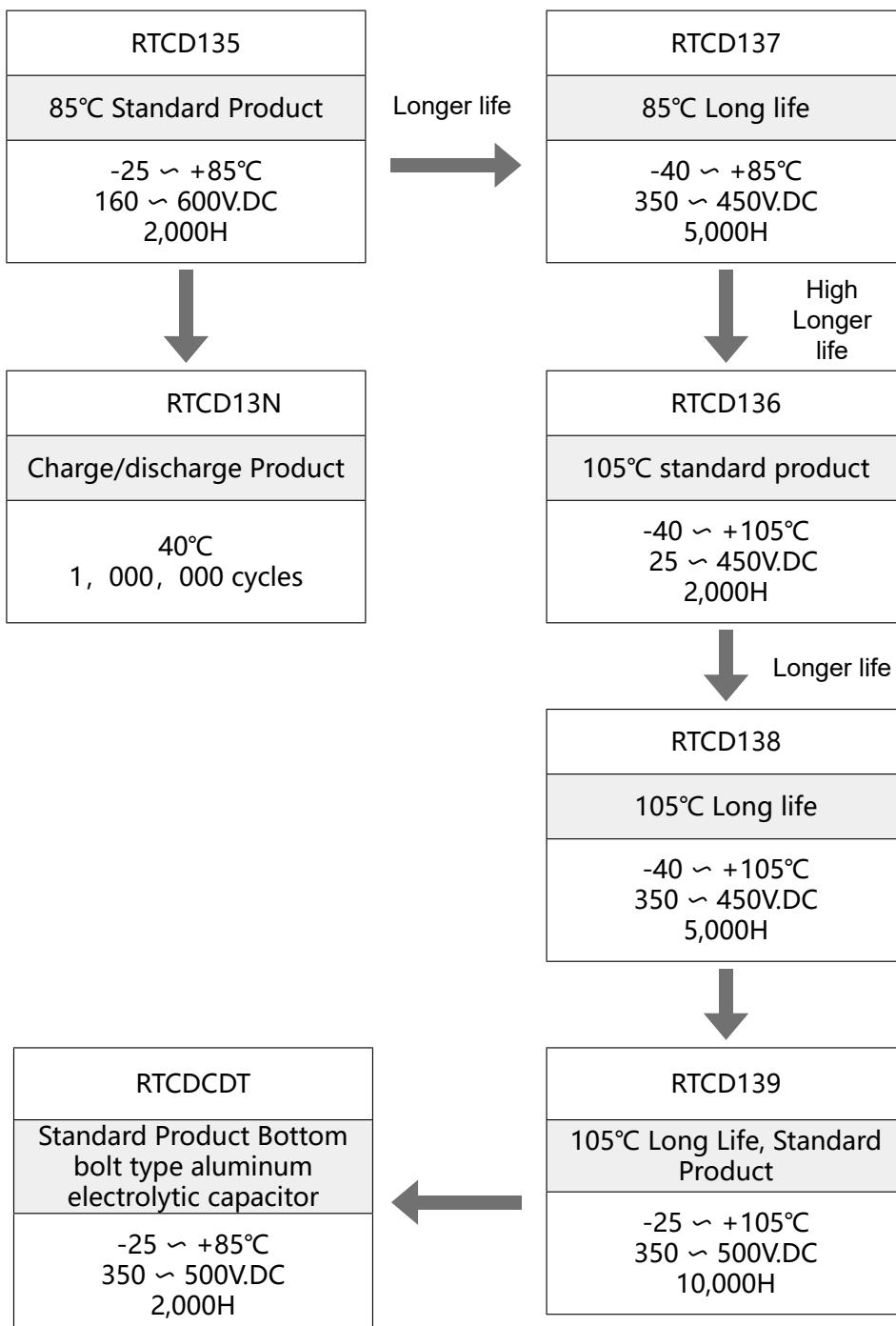
LIST OF PRODUCTS

Class	Series	Features	Operating Temperature range	Standard product	Small-sized product	Highreliabilityproduct	Operating voltage V.DC	Capacitance range μF	Page
Snap-In	RTCD289	85°C Standard Product (85°C 2,000H)	-40(-25) ~ +85°C	○			10 ~ 500	68 ~ 82000	019
	RTCD295	Long Life, Standard Product (85°C 5,000H)	-40(-25) ~ +85°C	○			10 ~ 450	68 ~ 22000	030
	RTCD294	105°C standard product (105°C 2,000H)	-40(-25) ~ +105°C	○			16 ~ 500	39 ~ 47000	040
	RTCD296	Long Life, Standard Product (105°C 5,000H)	-40(-25) ~ +105°C			○	16 ~ 450	68 ~ 56000	050
	RTCD297	Long Life, Standard Product (105°C 8,000H)	-25 ~ +105°C		○	○	160 ~ 450	100 ~ 2200	059
	RTCD298	Long Life, Standard Product (105°C 10,000H)	-25 ~ +105°C			○	200 ~ 450	100 ~ 2200	065
	RTCD17	55°C For Flashing Light	-25 ~ +55°C	○			330 ~ 450	100 ~ 2200	069
Screw Terminal	RTCD135	Standard Product (85°C 2,000H)	-25 ~ +85°C	○			160 ~ 600	100 ~ 39000	075
	RTCD137	Long Life, Standard Product (85°C 5,000H)	-40 ~ +85°C	○		○	350 ~ 450	1000 ~ 18000	080
	RTCD136	105°C Standard product (105°C 2,000H)	-40 ~ +105°C	○		○	25 ~ 450	220 ~ 330000	083
	RTCD138	Long life standard product (105°C 5,000H)	-40 ~ +105°C			○	350 ~ 450	1000 ~ 15000	089
	RTCD139	Long life product (105°C 10,000H)	-40 ~ +85°C			○	400 ~ 450	2700 ~ 22000	092
	RTCDT	Standard Product Bottom bolt type aluminum electrolytic capacitor (85°C 2,000H)	-25 ~ +85°C	○			350 ~ 500	1200 ~ 36000	095
	RTCD13N	For charge/discharge application (40°C 1,000,000Cycles)	-25 ~ +70°C			○	200 ~ 475	100 ~ 36000	99

SERIES CHART(SNAP IN)



SERIES CHART(SCREW TERMINAL)



NOTES TO USERS OF ALUMINUM ELECTROLYTIC CAPACITORS

Aluminum electrolytic capacitors may cause explosion, fire, or other serious hazard if used outside the specified operating conditions. Please familiarize yourself with the instructions below before using these capacitors.

Item	Instructions
Operating temperature, ripple current	1. Check the operating and installation environment and use the capacitor within the range of the rated performance specified in the catalog or specifications.
	2. Maintain operating temperature and ripple current within the specified ranges. Base your choice of capacitors on the maximum load conditions. A capacitor will overheat under excessive current, potentially resulting in short circuit, fire, or other major failure.
	3. A capacitor also generates the self heating. Please bear in mind that the capacitor heats up the interior of the equipment, and take appropriate precautions. Operate the unit under normal conditions and check the temperature of the area surrounding the capacitor.
	4. The permissible ripple current declines with the rise in ambient temperature (the temperature of the capacitor's surroundings). Consider the permissible ripple current at the maximum predictable ambient temperature.
	5. Electric characteristics change as frequencies change. Check frequency changes in order to choose the right capacitor. Special attention needs to be given to the self heating and short life time both low and high frequency, when equivalent series resistance and inductance change.
Applied voltage and other operating conditions	1. In general, capacitors have polarity. Applying reverse voltage or AC voltage to a capacitor may activate the vent or cause a short circuit, fire or other major failure. Use a special AC capacitor for AC voltage.
	2. Use a bipolar capacitor for circuits whose polarity reverses. However, as in any other case, do not use a bipolar capacitor in an AC circuit.
	3. Do not apply voltage in excess of the rated voltage. When an AC voltage is superimposed on DC voltage, prevent the peak value from exceeding the rated voltage. Excessive voltage may cause a short circuit, fire, or other major failure.
	4. Specifications on surge voltage have restricted conditions and therefore do not guarantee long hours of operation. Voltage should never exceed the rated voltage of the capacitor, even for brief periods. Choose your capacitor accordingly.
	5. When connecting more than one capacitor in parallel, give proper consideration to the resistance of the wiring. Establish the connections so that the wiring resistance will be equal at every capacitor.
	6. When connecting more than one capacitor in series, all must be of identical rating, then the balancing resistors connected in parallel. At that time, design the circuit so that equal voltage levels are applied to all the capacitors. Ascertain that the voltage applied to each individual capacitor does not exceed its rated voltage.
	7. Take into account the service life of the equipment in the use of the capacitor. Use of the capacitor beyond its service life risks such failures as safety vent activation or short circuit. Replace as necessary at regular inspection.
	8. Do not use a capacitor for a circuit that is quickly charged and discharged repeatedly. Use a dedicated capacitor for an application like a welding unit or photo flash charging/discharging. Consult us for selecting the proper capacitor, since the control circuits of certain rotation equipment, like servo motors, charge and discharge repeatedly.

Item	Instructions						
Applied voltage and other operating conditions	<p>9. Even slow charging/discharging can shorten the service life of a capacitor, resulting in premature failure, where there are marked changes in voltage changes. Check the installation in your equipment carefully and consult us.</p> <p>10. General purpose capacitors should not be used for a circuit involving rapid charge and discharge or an A.C. circuit. Capacitors specially made for such applications should be used. →Check the self heating of the capacitor used in such a circuit in addition to the types and levels to be imposed to the capacitor of the rapid charge/discharge, rush current and voltage.</p>						
Before installation	<p>1. Check the specifications of the capacitors, and install them within the prescribed specifications.</p> <p>2. Do not reverse the polarity. Do not use a capacitor where reverse voltage is applied, even if it appears problem-free. Not taking these precautions could lead to a major failure.</p> <p>3. Dropping or otherwise impacting a capacitor may result in a decline in its electric performance, causing a failure. Do not use any capacitor whose packaging has a noticeable abnormality on delivery.</p> <p>4. Do not distort the shape of the capacitor, which may lead the major failures such as liquid leakage or short circuit.</p> <p>5. Do not reuse a capacitor that has previously been installed on a machine and energized. No capacitor can be reused (with the exception of removal for measuring electrical performance during periodic checkups).</p>						
Installation	<p>1. Do not install wiring or a circuit pattern near the vent. When the vent is activated, electrolyte may spurt out, resulting in short circuit followed by fire or other secondary hazard due to tracking or migration.</p> <p>2. Do not lay out heat-generating components near the capacitor. Radiated heat and other partially high temperatures may shorten the life of the capacitor. PCB temperature that is higher than the internal temperature of the capacitor markedly hinders the dissipation of heat inside the capacitor, greatly shortening its life. When designing equipment, check temperature distribution first.</p> <p>3. Do not hinder the activation of the vent. Allow for the following clearance above the vent. If dissipation of gas is inhibited while the vent is in operation, the inner pressure will rise, with danger of explosion, fire or other major failure.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Capacitor diameter</td><td style="text-align: center;">Clearance</td></tr> <tr> <td style="text-align: center;">φ18~35(36)</td><td style="text-align: center;">3mm or more</td></tr> <tr> <td style="text-align: center;">φ40 or more</td><td style="text-align: center;">5mm or more</td></tr> </table>	Capacitor diameter	Clearance	φ18~35(36)	3mm or more	φ40 or more	5mm or more
Capacitor diameter	Clearance						
φ18~35(36)	3mm or more						
φ40 or more	5mm or more						
On-board self-supporting (snap in type) capacitors	<p>1. Do not connect the blank terminal (reinforced terminal) of multi-terminal (3-, 4-) snap mount capacitors, as this could cause a short circuit.</p> <p>2. Use a completely isolated circuit between the case and the electrode terminal, and between the case and the circuit pattern.</p> <p>3. Exterior sleeves are for labeling purposes, not for insulation. Consult us if you need insulation.</p> <p>4. Failure to tightly solder the capacitor to the PCB may result in one of its terminals breaking or its pattern peeling off due to vibration. Insert the capacitor snugly and correctly into the designated holes in the PCB, then solder it.</p>						

Item	Instructions
On-board self-supporting (snap in type) capacitors	5. Terminal pitch and dimensions for the terminals are specified for a capacitor. →Check whether the terminal pitch and the mounting holes on the board match properly. The electrolyte leaks from inside if mismatched.
	6. If it becomes necessary to process a lead wire terminal due to mismatching of the space between the terminals to the holes in the PCB, be sure to melt the solder thoroughly so the capacitor isn't subjected to stress.
	7. Flux on the rubber seal may result in corrosion. Do not let flux stick to any part other than the terminals.
	8. Solder at 260°C for not more than 10 seconds or at 350°C for not more than 3 seconds. Exceeding these specifications may result in a decline in electrical performance, leading to trouble. Do not let the tip of the soldering iron come in contact with the capacitor body.
	9. If it becomes necessary to remove a capacitor after soldering, melt the solder with a soldering iron to avoid subjecting the terminals to stress.
	10. For cleaning flux, we recommend an aqueous or higher alcohol detergent or isopropyl alcohol. The recommended concentration of flux with regard to the cleaning agent is 2wt% or less. Excessively high flux concentration may cause corrosion due to halide. For use of other cleaning agents, consult us.
	11. If you must clean the capacitor with halogen solvents, etc., we recommend that you use washable capacitors. Make sure that the cleaning conditions are within those stipulated in the specifications, and measure the cleaning agent for conductivity, pH, specific gravity and moisture content for contamination control. After cleaning, thoroughly dry the capacitors together with PCBs. Do not store the capacitors in the same atmosphere as the cleaning agent or in a sealed container. For details on washable capacitors, consult us.
	12. Some cutting oils contribute to swelling of rubber, with the risk of corrosion and a decline in air-tightness. If the rubber surface will be exposed to cutting oils, use washable capacitors as in 10 above.
	13. Thoroughly remove all traces of the cleaning agent from the capacitor. Even when not cleaning the flux, dry the flux itself. Cleaning agent or flux residue may cause the halide to penetrate the rubber seal, leading to corrosion.
	14. When fixing a PCB and capacitor with a coating agent or fixative, use a substance completely free of halide compounds. Thoroughly dry the flux or detergent before applying the coating. Do not let the coating block the entire surface of the seal. Any halide compound present in the coating may lead to corrosion.
	15. When installing the vent of the capacitor against the PCB, drill a gas bleeder hole to allow the gas to escape when the vent is activated. If the diffusion of gas is hindered while the vent is in operation, the internal pressure can rise, with danger of explosion, fire or other serious failure.
	16. Do not twist or otherwise physically move the capacitor after soldering it to the PCB. Do not take hold of the capacitor to move a PCB either, as this may deform the terminal or decrease its air tightness.
	17. Do not apply physical impact to the capacitor (striking, etc.) after it is soldered to a PCB. When stacking PCBs, make sure that the capacitors don't contact PCBs or other components.
	18. Do not solder a capacitor by dipping in a solder bath. Solder only on the terminal side of the capacitor, via a PCB.
Installation	1. When the capacitor must be installed on its side, the anode terminal side must face upward. If the anode terminal is located below the cathode terminal, internal corrosion may occur during long-time use.

Item	Instructions														
Screw-terminal type capacitors	2.	The vent(cap face)should not face downward. Electrolytic solution and compounds(element fixing agents)could leak from the valve.													
	3.	Recommended tightening torque and terminal permissible current(maximum current a terminal can withstand)for each terminal screw are listed below. Consult us if you wish to use a capacitor on a machine that vibrates significantly.													
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Terminal</th><th style="text-align: center;">Recommended torque (permissible level) [N·m]</th><th style="text-align: center;">Terminal permissible current [A]</th></tr> </thead> <tbody> <tr> <td style="text-align: center;">M5</td><td style="text-align: center;">2.2(1.5~3.0)</td><td style="text-align: center;">60</td></tr> <tr> <td style="text-align: center;">M6</td><td style="text-align: center;">3.5(3.0~4.0)</td><td style="text-align: center;">100</td></tr> <tr> <td style="text-align: center;">M8</td><td style="text-align: center;">7.5(7.0~8.0)</td><td style="text-align: center;">120</td></tr> </tbody> </table>			Terminal	Recommended torque (permissible level) [N·m]	Terminal permissible current [A]	M5	2.2(1.5~3.0)	60	M6	3.5(3.0~4.0)	100	M8	7.5(7.0~8.0)
Terminal	Recommended torque (permissible level) [N·m]	Terminal permissible current [A]													
M5	2.2(1.5~3.0)	60													
M6	3.5(3.0~4.0)	100													
M8	7.5(7.0~8.0)	120													
4.	The terminal screws (M5 standard underhead: 10mm, M6 standard underhead: 12mm) in the separate package are designed for wire thickness not exceeding 2mm. Add to the screw length for wires more than 2mm thick. Heat generated due to a small screw clamping area could cause a failure.														
5.	If a screw is loose or angled, that portion generates heat, with a danger of fire or other serious failure. Check that the screw is inserted on the perpendicular and securely tightened.														
6.	We recommend a bar hole diameter of 6mm for M5 terminals. An excessively large hole diameter may result in poor contact between the terminal surface and the bar, causing local heat buildup, with a danger of fire or other serious failure.														
7.	Do not apply physical stress(tightening with fixtures, etc.) to the curled portion(seal contacting the case and cap). Any such practice may cause a liquid leak or sleeve breakage.														
Operating environment	1.	Water, saltwater, oil or other electrically conductive liquid on a capacitor, or using a capacitor when it is damp with dew may cause a failure. Oil on the rubber seal or safety vent may cause a decline in airtightness. Do not use any capacitor in contact with liquid. Do not use capacitors that have been immersed in rainwater or other contaminated water.													
	2.	Do not use or leave a capacitor in areas where there is halide compound gas such as hydrogen sulfide, nitrous acid, sulfuric acid, chlorine and bromine, or ammonia or other hazardous gas. The ingress of any of these gases into a capacitor may corrode it.													
	3.	Do not use or leave a capacitor in an area exposed to ozone, ultraviolet light, or radiation.													
Operating environment	1.	Water, saltwater, oil or other electrically conductive liquid on a capacitor, or using a capacitor when it is damp with dew may cause a failure. Oil on the rubber seal or safety vent may cause a decline in airtightness. Do not use any capacitor in contact with liquid. Do not use capacitors that have been immersed in rainwater or other contaminated water.													
	2.	Do not use or leave a capacitor in areas where there is halide compound gas such as hydrogen sulfide, nitrous acid, sulfuric acid, chlorine and bromine, or ammonia or other hazardous gas. The ingress of any of these gases into a capacitor may corrode it.													
	3.	Do not use or leave a capacitor in an area exposed to ozone, ultraviolet light, or radiation.													

Item	Instructions
Operating environment	4. Powders(dust, etc.) that settle between terminals can absorb moisture and cause corrosion and tracking of the terminal. When there is conspicuous dust between terminals, stop the current, allow the capacitor to discharge, and wipe the terminals with paper or a towel lightly dampened with water or ethanol. Do not use cleaning agents or other chemicals.
	5. Do not use a capacitor in an area subject to excessive vibration or impact.
Storage	1. Store all capacitors indoors at a temperature of 5-35°C and relative humidity of not more than 75% RH(25°C), away from direct sunlight. The maximum shelf life of capacitors is 3 years. All capacitors which have been on the shelf for more than 3 years have an excessively high leakage current. Treat them with appropriate voltage before use. The maximum shelf life of capacitors for photo flash use is 1 year, and 2 years for snap mount capacitors using leadless soldered terminals, beyond which solderability deteriorates.
	2. Store capacitors under the same operating conditions as mentioned above, with the exception of temperature and humidity.
	3. Store capacitors in their original packaging whenever possible.
	4. Even after discharged, capacitors may hold an electrical charge due to re-striking. Do not touch the terminals with bare hands. Touching the terminals could cause an electric shock. Discharge all capacitors with a resistor(approx. 1kΩ) or a discharge plate before use.
Test run	1. Do not touch the terminals of a capacitor with bare hands. Touching the terminals could cause an electric shock.
	2. Do not short-circuit a capacitor between its terminals with an electrically conductive material.
	3. Do not apply any acid, alkaline, or other electrically conductive solution to a capacitor.
	4. Check the "Design Operating Conditions" for the operating conditions for capacitors.
Maintenance and servicing	1. Conduct periodic checkups on capacitors for industrial equipment, following these checkpoints: (1) Appearance:Condition of the vent(open, notably swollen), liquid leaks or other considerable abnormality. (2) Electrical performance:Capacity, tangent of loss angle, leakage current, and other items specified in the delivery specifications. The standard temperature for measuring electrical performance is 20°C. Leave the capacitor at 20°C and wait for the inside of the capacitor to reach the specified temperature before taking measurements. Consult us on whether to use such a capacitor. Before each periodic checkup, turn off the equipment and completely discharge the capacitor.
	2. Replace all capacitors whose semice life has reached its end. When replacing one capacitor, always replace all of them. Mixing old and new capacitors may cause an imbalance in the ripple current or voltage sharing, risking failures such as activation of the vent or short circuit.
In an emergency	1. If gas is detected while a product is in use, turn off the main power supply or unplug it.
	2. When the safety vent of a capacitor is activated, a hot gas exceeding 100°C will escape. Do not place your face in close proximity to the vent and avoid proximity to areas exposed to the gas.

Item	Instructions
In an emergency	3. Should the gas jet get in your eyes, wash them immediately with clean water. If you inhale the gas, gargle immediately. The gas is composed of a gaseous form of hydrogen or organic solvents.
	4. Should the electrolyte come in contact with your skin, wash with soap and water. Never put it into your mouth.
For scrapping	1. Scrapped capacitors are classified as scrapped metal. For burial they are handled as controllable industrial waste because of the nature of the contents(electrolyte). Commission an industrial waste disposal specialist for their disposal. Ensure that no waste products enter the market.
	2. Most of the material is aluminum and cannot be completely burned. In incineration, take the following into consideration: · Burning the capacitors in an airtight state may cause an explosion. Before incinerating, either pierce the exterior or break them open. Be sure to wear protective clothing during this operation, since electrolyte or gas will jet out if the inner pressure of the capacitor is high. · Because of the exterior material(polyvinyl chloride), low-temperature incineration may emit hazardous gases. Burn the material at high temperatures(800°C or above). Incineration requires separation of the exterior materials.
	3. Do not attempt to crush the capacitors, as this may cause electric shock or injury.
	1. For details, see the Guidelines on the Operation of Fixed Aluminum Electrolytic Capacitors for Electronic Equipment EIAJ RCR-2367B March, 2002 issue.
	2. To preserve the global environment, we are expediting the substitution of chemical substances that negatively impact the environment. We ask your cooperation in our initiative to reduce substances with environmental impact. We also ask you to avoid using ozone-layer destroying substances to clean capacitors.
Miscellaneous	3. To control insects during export, fumigation may be done using halide compounds such as methyl bromide. Direct fumigation of capacitors or equipment incorporating capacitors or use of fumigated timber as a pallet may cause corrosion inside a capacitor, resulting in failure. Even when covered in plastic, chemicals may penetrate through small gaps. Likewise, do not apply insecticides directly on or near the capacitors.
	4. When using a sterilizer against SARS and other infectious diseases, do not spray it directly on or close to capacitors and equipment incorporating capacitors. Some sterilizers contain a high concentration of halide compounds. The sterilizer spray may accelerate internal corrosion, resulting in failure. Avoid using capacitors or equipment incorporating capacitors onto which a chemical has been sprayed. Instead, replace them with new ones.
	5. Consult us for further information.

SERVICE LIFE OF AN ALUMINUM ELECTROLYTIC CAPACITOR

【Factors affecting service life】

Environmental factors affecting the service life of an aluminum electrolytic capacitor include temperature, humidity and vibration (environment), as well as electrical factors, applied voltage, ripple current and charging/discharging conditions. In capacitors for mid-to-high-voltage filters, temperature and applied voltage are the most important controlling factors. The estimated service life may be calculated based on the core temperature of the capacitor and the applied voltage.

【Temperature conditions】

Capacitance change or tangent change for loss angle indicates that the product life has been effected by temperature. Generally, as the ambient temperature (ambient temperature of the capacitor) increases, capacitance decreases and tangent change for loss angle takes place more rapidly. This is mainly because electrolytic solution generates gas due to electrode reaction and diffuses it outside via a sealing rubber. The following expression(1) indicates the relation between the ambient temperature and electric characteristic that changes with time (while the capacitor is used normally according to the rules of serviceability).

$$L = L_0 = X 2^{\frac{T_0 - T}{10}} \dots \dots \dots (1)$$

Where:

L : Estimated service life in actual use.

L_0 : Standard service life when allowable ripple current load or rated voltage is applied at the maximum operating temperature.

To : Maximum core temperature setting when subjected to the maximum allowable ripple load at the maximum operating temperature (settings differ in different series or products. Contact us for details).

T : Core temperature of the capacitor during actual use.

Therefore, the lower the core temperature of the capacitor during actual use, the longer the estimated service life is. The core temperature of a capacitor may be lowered by lowering either the ambient temperature or the load current (operating conditions), or by either boosting capacitance or lowering internal resistance. Some capacitors feature a radiating structure to lower the core temperature. Consult us for the selection of capacitors.

When multiple capacitors are connected in parallel, check the core temperature in each capacitors and the balance of the total series resistance to each capacitors. If capacitors are used at high frequency, the circuit resistance is especially need to be considered. The estimating service life is needed to be calculated from the maximum core temperature.

【Voltage conditions】

The service life of an aluminum electrolytic capacitor for mid-to high-voltage filters is affected by the applied voltage. If the applied voltage is between 60% and 100% of the rated voltage, the estimated service can be extended by lowering the applied voltage below the rated voltage. However, if the applied voltage is less than 60% of the rated voltage or the capacitor is used in low-pressure (100WV or less) applications, the impact of the applied voltage on the service life is negligible. Therefore, service life is estimated assuming no impact from voltage. Continuous application of a voltage over the rated voltage rapidly increases leakage current in a capacitor. This may increase internal pressure due to generation of gases resulting in activation of the safety vent in a short time and/or formation of an internal short circuit. For this reason, the applied voltage must be maintained below the rated voltage during use. Besides, it should be noted that the circuit design is such that the applied voltage will remain 80% or less of the rated voltage during use.

Where more than one capacitor connected in series is used, the applied voltage across the individual capacitors may become out of balance, resulting in the application of excessive voltage to them .To avoid this , either choose a rated voltage allowing for connect a voltage divider (resistors) to the capacitors. Please be careful about charge/discharge.

【Formula for estimating service life】

1. Estimating from the core temperature of the capacitor and applied voltage

Formula for calculating the service life of our capacitors in mid-to-high voltage applications (filters).

$$L=L_0=X2^{\frac{T_0-T}{10}} \times \left[\frac{WV}{V} \right]^{2.5} \dots\dots(2)$$

Where:

To : Maximum core temperature setting when subjected to the maximum allowable ripple load at the maximum operating temperature.

Lo : Standard service life when core temperature is To and rated voltage is (WV)

L : Estimate service life when core temperature is T and applied voltage is (V)

If $V/WV < 0.6$, use $V/WV=0.6$.

2.Estimating core temperature of a capacitor from load ripple current

We recommend that you estimate service life by measuring the core temperature of the capacitor with a thermocouple. We can manufacture samples with inserted thermocouples according to customer requests. If for some reason it is impossible to measure the core temperature. You can estimate the service life by making a rough estimate of the core temperature of the capacitor from the load ripple current. As shown below, assuming the rise in temperature and the square of load current to be nearly proportionate, obtain the core temperature of the capacitor that occurs when the capacitor is loaded with a ripple current.

$$T=T_a + \Delta T_0 \times \left[\frac{I}{IR} \right]^2 \dots\dots(3)$$

Where:

T: Core temperature of the capacitor when ripple current / is loaded

Ta: Ambient temperature

ΔT_0 : Rise in maximum core temperature setting for the capacitor when permissible ripple current IR is loaded

(Setting differ in different series or products. Contact us for details)

Note: Observe the rule: $I \leq IR$. Never use a capacitor loaded with a ripple current greater than IRFor safety reasons, estimate the service life on the basis of the core temperature of the capacitor at maximum load. Temperature distribution should be taken into account when more than one capacitor is used.

【Other factors affecting service life】

(1) Reverse voltage

When a reverse voltage is applied to the capacitor, the capacitor's cathode foil that is not coated with oxide is energized, resulting in forced formation of an oxide film on its surface. During the process of forced formation, heat and gases are generated, This will shorten the service life significantly.

(2) Charge and discharge

Generally, where aluminum electrolytic capacitors are used in a charge/discharge circuit, oxide films are gradually formed on the surfaces of their cathode foils due to discharge current. This will shorten the service life significantly. For this reason general-purpose capacitors are not suitable for circuits in which frequent charge and discharge are common. Examples include circuits for photo flash and welding.

(3) Inrush current

Upon switching on the power supply of a welding machine, a large current flows instantaneously at the beginning of charging. Such a current, called an inrush current, is 10 to 1,000 times as large as the normal value. Inrush currents pose no problem as long as they occur with very low frequency during operation. The reason for this is that their heat-generating energy is relatively small. However, if an inrush current occurs repeatedly during operation, it may shorten the service life significantly.

REDUCING SUBSTANCES WITH ENVIRONMENTAL IMPACT

As part of our initiatives for global environment protection under ISO 14001, we recommend products without any substances with environmental impact to our customers.

(1) Lead-free

Regarding Snap mount type Aluminum Electrolytic Capacitors, our standard specification is to use Tin instead of Lead on the surface plating. We discontinued producing Tin + Lead plating. Regarding Screw terminal type Aluminum Electrolytic Capacitors, they do not contain Lead at all.

(2) Eliminating Chromate Treatment

The previous chromate treatment on the surface of bracket contained hexavalent chromium.

To avoid this material, we changed to trivalent chromium.

The surface treatment is changed but no change in size or other specification.

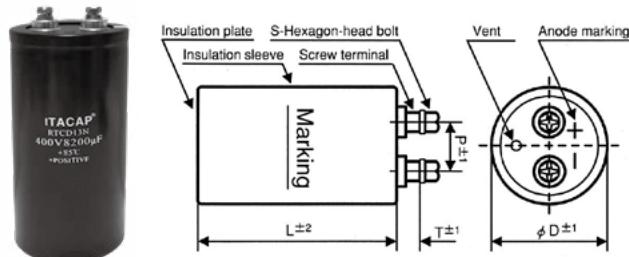
In addition to Lead-free, aluminum electrolytic capacitors that we produce have suited RoHS Directive.

(3) PVC-free

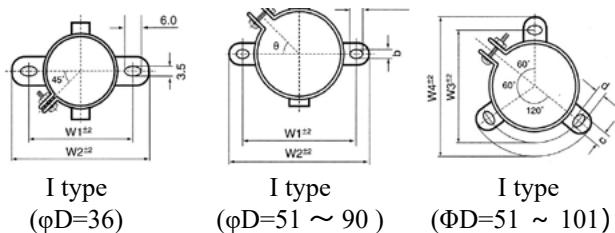
For PVC-free Snap mount type Aluminum Electrolytic Capacitors, the capacitors are covered with PET insulating sleeve, and the bottoms not covered.(Except for PS2/US2 series)

Please contact us for other PVC-free products.

Outline of drawing and dimensions (Unit : mm)



(1) Bracket



ϕD	a	b	θ	ϕD	c	d	θ
51~77	6	4.5	45°	51~90	7	4.5	45°
90	7	5	30°	101	8	5.5	30°

※1.Size of W1~W4 might be changed according to the specification of insulation sleeve; When designing the size of mounting hole, make sure the size by actual capacitors.

2.Product names in the Standard Products Table correspond to the bracket for Type Y (Type I for $\phi 36$ only), but Type I bracket may be used (Type of bracket code =I).

3.If bracket are not necessary, enter "N" for the type of bracket code.

4.Bracket will be delivered separately.

5.Type of terminal: normally $\phi 64$ is M5、 $\phi 77$ 、 90 is M6、 $\phi 100$ is M8.

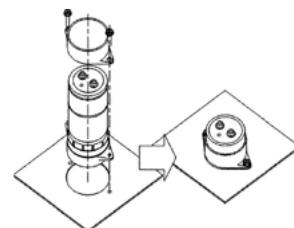
6.Normally ripple current should be under 60Arms at M5 terminal, under 100Arms at M6 terminal, under 120Arms at M8 terminal in accordance with from the permissible current.

DIMENSIONS : (Unit: mm)

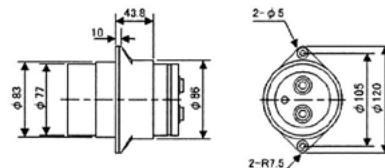
Case code	ϕD	P	I Type Bracket		Y Type Bracket	
			W1	W2	W3	W4
A	36	12.7	48.0	58.0	-	-
C	51	22.0	(68.0)	(80.0)	63.5	73.0
D	64	28.6	(81.0)	(93.0)	76.2	85.1
E	77	32.0	(93.5)	(106)	88.9	98.4
F	90	32.0	(108.0)	(120.5)	101.6	111.1
G	101	32.0	(108.0)	(120.5)	101.6	111.1
(41.5)	-	-	115.0	127.0		
(41.5)	-	-	115.0	127.0		

(2) Insulation holder

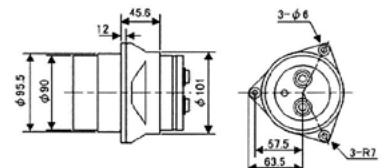
Best suited for improving insulation and vibration resistance and for cutting back on assembly costs.
(For details, see the Technical Report.).



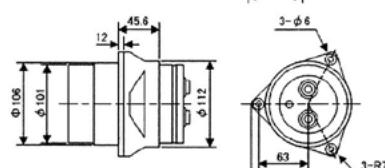
Holder dia 77mm



Holder dia 90m

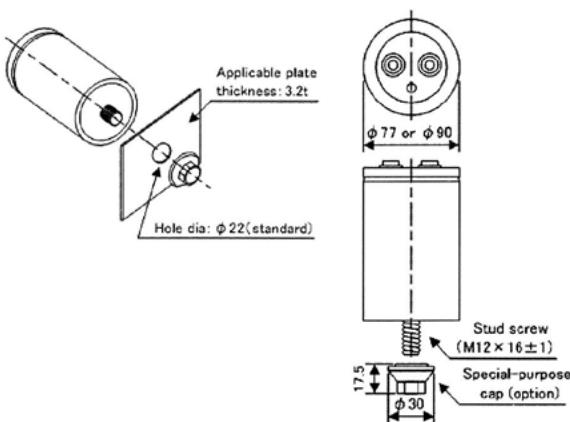


Holder dia 101mm



(3) Stud screw capacitor

Best suited for cutting back on assembly costs.
(For vibration and dielectric resistance, consult Hitachi AIC for details.)



PART NUMBER SYSTEM FOR ALUMINUM ELECTROLYTIC CAPACITORS

1. Part number system for snap in:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
RTCD289	2	G	4	7	1	K	S	0	5	0	M	5	8	x	x				
Type of series	Voltage code(V)	Capacitance code(μF)	Pin code	Diameter (mm)	The length(mm)	Capacitance tolerance	Height of pin	Special code											

1-5: Type of series: see the list of product.

6-7: Voltage code: all code as following:

Voltage(V)	6.3	10	14	16	25	30	35	40	50	63	80	100	110	160				
Code	0J	1A	1B	1C	1E	1L	1V	1W	1H	1J	1K	2A	2B	2C				

Voltage(V)	180	200	250	300	315	330	350	400	420	450	475	500	550	600				
Code	2K	2D	2E	2L	2F	2M	2V	2G	2I	2W	2X	2H	2Y	2S				

8-10: Capacitance code: 68μF is 680, 470μF is 471, 10000μF is 103.

11: Pin code: all code as following:

Type of pin	Flat	U Type	Plumb Type	2 pin	3 pin	4 pin	5 pin											
Pin code	H	U	T	K	L	M	N											

12: Diameter: all code as following:

Diameter(mm)	20	22	25	30	35	42	36	40	45	51	64	77	90	101				
Code	O	P	Q	R	S	T	A	B	V	C	D	E	F	G				

13-15: The length: 50mm is 050.

16: Capacitance tolerance code: all code as following:

Tolerance	±4%	±5%	±8%	±10%	±15%	±20%	±30%	-5 ~ +20%	-10 ~ +30%	-10 ~ +20%	-10 ~ +50%	-10 ~ +20%							
Code	A	J	B	K	L	M	N	H	Q	V	T	v							
Tolerance											-20 ~ +50%	0 ~ +20%	0 ~ +100%						
Code											S	R	P						

17-18: Height of pin: 5.8mm is 58.

19-20: Special code: We will add when the customer need special requirement code, otherwise we will delete.

2.Part number system for screw terminal:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

RTCD135	2	W	1	0	3	Y	F	1	5	7	M	D	5	x	x				
Type of series	Voltage code(V)	Capacitance code(μ F)	Bracket code	Diameter (mm)	The length(mm)	Capacitance tolerance	Diameter of terminal	Type of terminal	Special code										

1-5: Type of series: see the list of product.

6-7: Voltage code: all code as following:

Voltage(V)	6.3	10	14	16	25	30	35	40	50	63	80	100	110	160				
Code	0J	1A	1B	1C	1E	1L	1V	1W	1H	1J	1K	2A	2B	2C				

Voltage(V)	180	200	250	300	315	330	350	400	420	450	475	500	550	600				
Code	2K	2D	2E	2L	2F	2M	2V	2G	2I	2W	2X	2H	2Y	2S				

8-10:Capacitance code: 68 μ F is 680,470 μ F is 471, 10000 μ F is 103.

11: Type of bracket code: two type "I" and "Y", the different and the size please see Page 10.

12: Diameter: all code as following:

Diameter(mm)	20	22	25	30	35	42	36	40	45	51	64	77	90	101				
Code	O	P	Q	R	S	T	A	B	V	C	D	E	F	G				

13-15: The length: 157mm is 157.

16: Capacitance tolerance code: all code as following:

Tolerance	$\pm 4\%$	$\pm 5\%$	$\pm 8\%$	$\pm 10\%$	$\pm 15\%$	$\pm 20\%$	$\pm 30\%$	$-5 \sim +20\%$	$-10 \sim +30\%$	$-10 \sim +20\%$	$-10 \sim +50\%$	$-10 \sim +20\%$						
Code	A	J	B	K	L	M	N	H	Q	V	T	v						
Tolerance													$-20 \sim +50\%$	$0 \sim +20\%$	$0 \sim +100\%$			
Code													S	R	P			

17: Diameter of terminal: $\Phi 17$ mm is D, $\Phi 13$ mm is S, $\Phi 10$ mm is X.

18: Type of screw: 5 is M5 screw terminal, 6 is M6 screw terminal.

19-20:Special code: We will added when the customer need special requirement code, otherwise we will delete.

Snap-In



RTCD289 SERIES

(85°C 2000H)



- Compliant to the RoHS directive.
- Standard product, Load life of 2000 hours at 85°C.
- Used in switching power, frequency converter circuit, filtering circuit, air conditioning, for welder and PCB mounting etc.

■ Specification

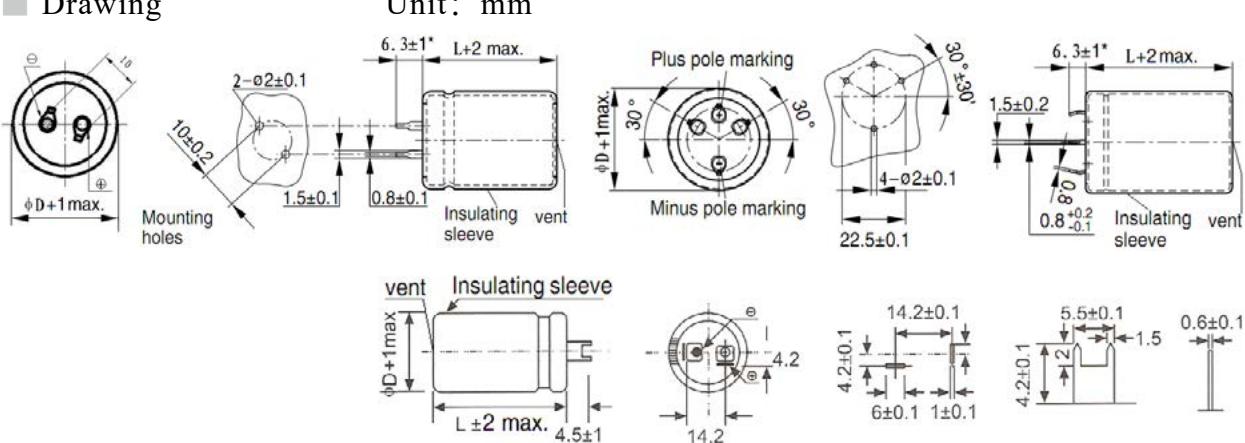
Item	Performance Characteristics																									
Operating range	-40°C ~ +85°C				-25°C ~ +85°C																					
Rated voltage range	10V ~ 250V				315V ~ 500V																					
Capacitance tolerance	$\pm 20\%$ (20°C, 120Hz)																									
Leakage current	$I \leq 0.01CV(\mu A)$ or $1.5mA$ (Whichever is smaller) (20°C, after 5 minutes) C=Nominal capacitance(μF), V=Rated voltage(V)																									
Dissipation factor (20°C, 120Hz)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">$U_R(V)$</td><td style="padding: 2px;">10 ~ 16</td><td style="padding: 2px;">25 ~ 35</td><td style="padding: 2px;">50</td><td style="padding: 2px;">63</td><td style="padding: 2px;">80 ~ 100</td><td style="padding: 2px;">160 ~ 200</td><td style="padding: 2px;">250 ~ 500</td></tr> <tr> <td style="padding: 2px;">$\tan \delta$</td><td style="padding: 2px;">0.45</td><td style="padding: 2px;">0.35</td><td style="padding: 2px;">0.30</td><td style="padding: 2px;">0.25</td><td style="padding: 2px;">0.20</td><td style="padding: 2px;">0.15</td><td style="padding: 2px;">0.15</td></tr> </table>	$U_R(V)$	10 ~ 16	25 ~ 35					50	63	80 ~ 100	160 ~ 200	250 ~ 500	$\tan \delta$	0.45	0.35	0.30	0.25	0.20	0.15	0.15					
$U_R(V)$	10 ~ 16	25 ~ 35	50	63	80 ~ 100	160 ~ 200	250 ~ 500																			
$\tan \delta$	0.45	0.35	0.30	0.25	0.20	0.15	0.15																			
Stability at Low Temperature (Impedance ratio at 120Hz)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">$U_R(V)$</td><td style="padding: 2px;">10</td><td style="padding: 2px;">16 ~ 100</td><td style="padding: 2px;">160 ~ 200</td><td style="padding: 2px;">250 ~ 400</td><td style="padding: 2px;">450 ~ 500</td></tr> <tr> <td style="padding: 2px;">$Z(-25^\circ C)/Z(+20^\circ C)$</td><td style="padding: 2px;">5</td><td style="padding: 2px;">4</td><td style="padding: 2px;">3</td><td style="padding: 2px;">4</td><td style="padding: 2px;">—</td></tr> <tr> <td style="padding: 2px;">$Z(-40^\circ C)/Z(+20^\circ C)$</td><td style="padding: 2px;">18</td><td style="padding: 2px;">15</td><td style="padding: 2px;">10</td><td style="padding: 2px;">8</td><td style="padding: 2px;">—</td></tr> </table>	$U_R(V)$	10	16 ~ 100	160 ~ 200	250 ~ 400	450 ~ 500	$Z(-25^\circ C)/Z(+20^\circ C)$	5	4	3	4	—	$Z(-40^\circ C)/Z(+20^\circ C)$	18	15	10	8	—							
$U_R(V)$	10	16 ~ 100	160 ~ 200	250 ~ 400	450 ~ 500																					
$Z(-25^\circ C)/Z(+20^\circ C)$	5	4	3	4	—																					
$Z(-40^\circ C)/Z(+20^\circ C)$	18	15	10	8	—																					
Load Life	After applying rated voltage with specified ripple current for 2000 hours at 85°C (the peak voltage shall not exceed the rated voltage), and then restored for 24 hours, capacitor shall meet the following requirement:																									
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Capacitance change</td><td style="padding: 2px;">Within $\pm 20\%$ of the initial value.</td></tr> <tr> <td style="padding: 2px;">Dissipation factor</td><td style="padding: 2px;">Not more than 200% of the initial specified value.</td></tr> <tr> <td style="padding: 2px;">Leakage current</td><td style="padding: 2px;">Not more than the initial specified value.</td></tr> </table>	Capacitance change	Within $\pm 20\%$ of the initial value.	Dissipation factor	Not more than 200% of the initial specified value.	Leakage current	Not more than the initial specified value.																			
Capacitance change	Within $\pm 20\%$ of the initial value.																									
Dissipation factor	Not more than 200% of the initial specified value.																									
Leakage current	Not more than the initial specified value.																									
Shelf Life	After storing for 1000 hours at 85°C, UR to be applied for 30 minutes and then restored for 24 hours, capacitor shall meet the following requirement:																									
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Capacitance change</td><td style="padding: 2px;">Within $\pm 20\%$ of the initial value.</td></tr> <tr> <td style="padding: 2px;">Dissipation factor</td><td style="padding: 2px;">Not more than 200% of the initial specified value.</td></tr> <tr> <td style="padding: 2px;">Leakage current</td><td style="padding: 2px;">Not more than the initial specified value.</td></tr> </table>	Capacitance change	Within $\pm 20\%$ of the initial value.	Dissipation factor	Not more than 200% of the initial specified value.	Leakage current	Not more than the initial specified value.																			
Capacitance change	Within $\pm 20\%$ of the initial value.																									
Dissipation factor	Not more than 200% of the initial specified value.																									
Leakage current	Not more than the initial specified value.																									
Standard	JIS C 5101-4																									

■ Coefficient of rated ripple current

T(°C)	40	55	70	85
UR(V)				
<160	2.1	1.8	1.5	1.0
≥160	1.7	1.5	1.3	1.0

F (Hz)	50(60)	120	1K	10K	100K
UR(V)					
≤50	0.95	1.00	1.10	1.15	1.15
63-100	0.95	1.00	1.16	1.30	1.33
≥160	0.95	1.00	1.20	1.50	1.55

■ Drawing



×:Shorter terminal is: $4.0 \pm 0.5 \text{mm}$

■ RTCD289 Dimensions

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
10 1A (13)	12000	22×30	0.45	3.30	50	40	RTCD2891A123KP030M
	15000	25×25	0.45	3.31	40	30	RTCD2891A153KQ025M
	18000	25×30	0.45	3.96	32	26	RTCD2891A183KQ030M
	22000	25×35	0.45	4.41	25	20	RTCD2891A223KQ035M
	33000	30×30	0.45	4.81	18	13	RTCD2891A333KR030M
	39000	30×35	0.45	5.31	15	11	RTCD2891A393KR035M
	47000	30×40	0.45	6.1	12	9.1	RTCD2891A473KR040M
	68000	35×40	0.45	7.7	8	6.3	RTCD2891A683KS040M
	82000	35×45	0.45	8.72	7	5.2	RTCD2891A823KS045M
16 1C (20)	8200	22×25	0.45	2.22	66	51	RTCD2891C822KP025M
	10000	22×30	0.45	2.66	55	42	RTCD2891C103KP030M
		25×25	0.45	2.66	55	42	RTCD2891C103KQ025M
	12000	22×35	0.45	2.99	48	35	RTCD2891C123KP035M
	15000	22×40	0.45	3.33	38	30	RTCD2891C153KP040M
		25×30	0.45	3.33	38	30	RTCD2891C153KQ030M
		30×25	0.45	3.34	38	30	RTCD2891C153KR025M
	18000	22×45	0.45	3.88	32	23	RTCD2891C183KP045M
		25×35	0.45	3.87	32	23	RTCD2891C183KQ035M
	22000	22×50	0.45	4.42	28	20	RTCD2891C223KP050M
		25×40	0.45	4.42	28	20	RTCD2891C223KQ040M
		30×30	0.45	4.42	28	20	RTCD2891C223KR030M
		35×25	0.45	4.44	28	20	RTCD2891C223KS025M
25 1E (32)	5600	22×25	0.35	2.20	85	66	RTCD2891E562KP025M
	6800	22×30	0.35	2.33	70	55	RTCD2891E682KP030M
		25×25	0.35	2.33	70	55	RTCD2891E682KQ025M
	8200	22×35	0.35	2.66	58	48	RTCD2891E822KP035M
	10000	22×40	0.35	2.99	50	40	RTCD2891E103KP040M
		25×30	0.35	2.88	50	40	RTCD2891E103KQ030M
		30×25	0.35	2.88	50	40	RTCD2891E103KR025M
	12000	22×45	0.35	3.33	40	31	RTCD2891E123KP045M
		25×35	0.35	3.32	40	31	RTCD2891E123KQ035M
		30×30	0.35	3.40	40	31	RTCD2891E123KR030M
	15000	25×40	0.35	3.77	35	25	RTCD2891E153KP040M
		30×30	0.35	3.80	35	25	RTCD2891E153KQ030M
		35×25	0.35	3.90	35	25	RTCD2891E153KS025M
	18000	25×50	0.35	4.35	30	21	RTCD2891E183KP050M
		30×35	0.35	4.32	30	21	RTCD2891E183KQ035M
		35×30	0.35	4.30	30	21	RTCD2891E183KS030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
25 1E (32)	22000	30×40	0.35	4.90	25	18	RTCD2891E223KR040M
		35×35	0.35	5.00	25	18	RTCD2891E223KS035M
35 1V (44)	3300	22×25	0.35	1.88	100	82	RTCD2891V332KP025M
		3900	0.35	2.11	90	70	RTCD2891V392KP030M
	4700	25×25	0.35	2.20	75	60	RTCD2891V472KQ025M
		22×35	0.35	2.33	75	60	RTCD2891V562KP035M
	5600	25×30	0.35	2.33	75	60	RTCD2891V562KQ030M
		22×40	0.35	2.99	60	50	RTCD2891V682KP040M
	6800	25×35	0.35	2.70	60	50	RTCD2891V682KQ035M
		30×25	0.35	2.77	60	50	RTCD2891V682KR025M
	8200	22×50	0.35	2.85	58	47	RTCD2891V822KP050M
		25×40	0.35	2.85	58	47	RTCD2891V822KQ040M
		30×30	0.35	2.85	58	47	RTCD2891V822KR030M
		35×25	0.35	2.90	58	47	RTCD2891V822KS025M
	10000	25×45	0.35	3.20	50	40	RTCD2891V103KQ045M
		30×35	0.35	3.30	50	40	RTCD2891V103KR035M
	12000	25×50	0.35	3.58	40	31	RTCD2891V123KQ050M
		30×40	0.35	3.58	40	31	RTCD2891V123KR040M
		35×30	0.35	3.66	40	31	RTCD2891V123KS030M
	15000	30×45	0.35	4.20	35	25	RTCD2891V153KR045M
		35×35	0.35	4.20	35	25	RTCD2891V153KS035M
	18000	30×50	0.35	4.70	30	22	RTCD2891V183KR050M
		35×40	0.35	4.70	30	22	RTCD2891V183KS040M
	22000	35×45	0.35	5.40	25	18	RTCD2891V223KS045M
50 1H (63)	2200	22×25	0.30	1.80	120	100	RTCD2891H222KP025M
	2700	22×30	0.30	1.95	105	80	RTCD2891H272KP030M
		25×25	0.30	1.90	105	80	RTCD2891H272KQ025M
	3300	22×35	0.30	2.20	105	81	RTCD2891H332KP035M
		25×30	0.30	2.10	105	81	RTCD2891H332KQ030M
	3900	25×35	0.30	2.31	90	70	RTCD2891H392KQ035M
		30×25	0.30	2.30	90	70	RTCD2891H392KR025M
	4700	22×40	0.30	2.54	75	60	RTCD2891H472KP040M
		25×35	0.30	2.54	75	60	RTCD2891H472KQ035M
	5600	25×40	0.30	2.58	75	60	RTCD2891H562KQ040M
		30×30	0.30	2.54	75	60	RTCD2891H562KR030M
	6800	25×45	0.30	2.83	60	50	RTCD2891H682KQ045M
		30×35	0.30	2.80	60	50	RTCD2891H682KR035M
	8200	25×50	0.30	3.50	60	50	RTCD2891H822KP050M
		30×40	0.30	3.20	60	50	RTCD2891H822KQ040M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
50 1H (63)	10000	30×45	0.30	3.60	50	40	RTCD2891H103KR045M
		35×35	0.30	3.60	50	40	RTCD2891H103KS035M
	12000	30×50	0.30	4.00	40	31	RTCD2891H123KS040M
		35×40	0.30	3.90	40	31	RTCD2891H153KS050M
	15000	35×50	0.30	4.55	40	30	RTCD2891H153KS050M
	22000	35×60	0.30	5.96	40	30	RTCD2891H223KS060M
63 1J (79)	1500	22×25	0.25	1.62	140	110	RTCD2891J152KP025M
	1800	22×30	0.25	1.93	115	90	RTCD2891J182KP030M
	2200	22×30	0.25	2.10	100	75	RTCD2891J222KP030M
		25×25	0.25	2.05	100	75	RTCD2891J222KQ025M
	2700	22×35	0.25	2.25	80	60	RTCD2891J272KP035M
		25×30	0.25	2.33	80	60	RTCD2891J272KQ030M
	3300	22×40	0.25	2.37	90	68	RTCD2891J332KP040M
		25×35	0.25	2.36	90	68	RTCD2891J332KQ035M
		30×25	0.25	2.31	90	68	RTCD2891J332KR025M
	3900	22×45	0.25	2.52	70	60	RTCD2891J392KP045M
		25×40	0.25	2.60	70	60	RTCD2891J392KQ040M
		30×30	0.25	2.51	70	60	RTCD2891J392KR030M
	4700	22×50	0.25	2.91	65	52	RTCD2891J472KP050M
		25×45	0.25	3.04	65	52	RTCD2891J472KQ045M
	5600	25×45	0.25	3.14	50	40	RTCD2891J562KQ045M
		30×35	0.25	3.22	50	40	RTCD2891J562KR035M
		35×30	0.25	3.30	50	40	RTCD2891J562KS030M
	6800	30×40	0.25	3.60	45	35	RTCD2891J682KR040M
		35×35	0.25	3.72	45	35	RTCD2891J682KS035M
	8200	30×50	0.25	3.70	45	35	RTCD2891J822KR050M
		35×40	0.25	3.80	45	35	RTCD2891J822KS040M
	10000	35×45	0.25	4.32	35	30	RTCD2891J103KS045M
	12000	35×50	0.25	4.81	30	25	RTCD2891J123KS050M
80 1K (100)	1000	22×25	0.20	1.30	200	160	RTCD2891K102KP025M
	1200	22×30	0.20	1.50	170	135	RTCD2891K122KP030M
		22×40	0.20	1.70	170	135	RTCD2891K122KP040M
	1500	22×35	0.20	1.82	135	110	RTCD2891K152KP035M
		25×25	0.20	1.70	135	110	RTCD2891K152KQ025M
	1800	22×35	0.20	1.94	115	90	RTCD2891K182KP035M
		25×30	0.20	1.91	115	90	RTCD2891K182KQ030M
	2200	22×40	0.20	2.14	95	75	RTCD2891K222KP040M
		25×35	0.20	2.25	95	75	RTCD2891K222KQ035M
		30×25	0.20	2.23	95	75	RTCD2891K222KR025M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
80 1K (100)	2700	22×50	0.20	2.56	75	60	RTCD2891K272KP050M
		25×40	0.20	2.53	75	60	RTCD2891K272KQ040M
		30×30	0.20	2.50	75	60	RTCD2891K272KR030M
	3300	25×45	0.20	2.84	65	50	RTCD2891K332KQ045M
		30×35	0.20	2.81	65	50	RTCD2891K332KR035M
	3900	30×40	0.20	3.22	55	45	RTCD2891K392KR040M
		35×30	0.20	3.20	55	45	RTCD2891K392KS030M
	4700	30×45	0.20	3.66	45	40	RTCD2891K472KR045M
		35×35	0.20	3.62	45	40	RTCD2891K472KS035M
	5600	30×50	0.20	3.52	50	40	RTCD2891K562KR050M
		35×40	0.20	3.51	50	40	RTCD2891K562KS040M
100 2A (125)	6800	35×50	0.20	4.10	45	35	RTCD2891K682KS050M
	10000	40×65	0.2	6.0	45	32	RTCD2891K103KV060M
	680	22×25	0.20	1.10	300	240	RTCD2892A681KP025M
	820	22×30	0.20	1.21	250	200	RTCD2892A821KP030M
	1000	22×30	0.20	1.43	210	165	RTCD2892A102KP030M
		22×35	0.20	1.53	210	165	RTCD2892A102KP035M
	25×25	0.20	1.45	210	165	RTCD2892A102KQ025M	
	1200	22×35	0.20	1.63	180	145	RTCD2892A122KP035M
		25×30	0.20	1.61	180	145	RTCD2892A122KQ030M
	1500	22×40	0.20	1.81	140	115	RTCD2892A152KP040M
		25×35	0.20	1.72	140	115	RTCD2892A152KQ035M
		30×25	0.20	1.83	140	115	RTCD2892A152KR025M
	1800	22×50	0.20	2.15	120	95	RTCD2892A182KP050M
		25×40	0.20	2.12	120	95	RTCD2892A182KQ040M
		30×30	0.20	2.10	120	95	RTCD2892A182KR030M
	2200	25×45	0.20	2.23	100	80	RTCD2892A222KQ045M
		30×35	0.20	2.32	100	80	RTCD2892A222KR035M
		35×30	0.20	2.51	100	80	RTCD2892A222KS030M
	2700	25×50	0.20	2.62	80	65	RTCD2892A272KQ050M
		30×40	0.20	2.70	80	65	RTCD2892A272KR040M
	3300	30×45	0.20	3.10	70	55	RTCD2892A332KR045M
		35×35	0.20	3.05	70	55	RTCD2892A332KS035M
	3900	30×50	0.20	3.44	60	45	RTCD2892A392KR050M
		35×40	0.20	3.42	60	45	RTCD2892A392KS040M
	4700	35×50	0.20	4.03	50	40	RTCD2892A472KS050M
160 2C (200)	270	22×25	0.15	1.20	500	400	RTCD2892C271KP025M
	330	22×30	0.15	1.31	420	350	RTCD2892C331KP030M
	390	22×35	0.15	1.54	350	280	RTCD2892C391KP035M
		25×25	0.15	1.52	350	280	RTCD2892C391KQ025M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
160 2C (200)	470	25×30	0.15	1.62	300	230	RTCD2892C471KQ030M
		22×35	0.15	1.92	250	195	RTCD2892C561KP035M
	560	25×30	0.15	1.91	250	195	RTCD2892C561KQ030M
		30×25	0.15	2.00	250	195	RTCD2892C561KR025M
	680	22×40	0.15	2.11	200	160	RTCD2892C681KP040M
		25×35	0.15	2.20	200	160	RTCD2892C681KQ035M
		22×50	0.15	2.51	170	135	RTCD2892C821KP050M
	820	25×45	0.15	2.43	170	135	RTCD2892C821KQ045M
		30×30	0.15	2.50	170	135	RTCD2892C821KR030M
		25×45	0.15	2.70	140	110	RTCD2892C102KQ045M
	1000	30×40	0.15	2.81	140	110	RTCD2892C102KR040M
		35×35	0.15	2.70	140	110	RTCD2892C102KS035M
		30×40	0.15	3.21	120	92	RTCD2892C122KR040M
	1200	35×35	0.15	3.13	120	92	RTCD2892C122KS035M
		30×45	0.15	3.72	110	90	RTCD2892C152KQ045M
	1500	35×40	0.15	3.53	110	90	RTCD2892C152KS040M
	1800	35×45	0.15	3.93	90	75	RTCD2892C182KS045M
	2200	35×50	0.15	4.51	80	60	RTCD2892C222KS050M
180 2K (225)	270	22×25	0.15	1.21	500	400	RTCD2892K271KP025M
	330	22×30	0.15	1.41	400	330	RTCD2892K331KP030M
	390	25×25	0.15	1.52	350	280	RTCD2892K391KQ025M
		22×35	0.15	1.71	285	230	RTCD2892K471KP035M
	470	25×30	0.15	1.72	285	230	RTCD2892K471KQ030M
		30×25	0.15	1.82	285	230	RTCD2892K471KR025M
		22×40	0.15	1.95	240	200	RTCD2892K561KP040M
	560	25×35	0.15	2.01	240	200	RTCD2892K561KQ035M
		22×50	0.15	2.22	200	160	RTCD2892K681KP050M
	680	25×40	0.15	2.22	200	160	RTCD2892K681KQ040M
		30×30	0.15	2.30	200	160	RTCD2892K681KR030M
		35×25	0.15	2.21	240	190	RTCD2892K681KS025M
		25×45	0.15	2.52	170	130	RTCD2892K821KQ045M
	820	30×35	0.15	2.61	170	130	RTCD2892K821KR035M
		35×30	0.15	2.50	200	160	RTCD2892K821KS030M
		25×50	0.15	2.90	140	110	RTCD2892K102KQ050M
	1000	30×40	0.15	2.90	140	110	RTCD2892K102KR040M
		30×45	0.15	3.31	140	90	RTCD2892K122KQ045M
	1200	35×35	0.15	3.12	140	110	RTCD2892K122KS035M
	1500	35×45	0.15	3.61	110	90	RTCD2892K152KS045M
	1800	35×50	0.15	4.12	90	80	RTCD2892K182KS050M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
200 2D (250)	220	22×25	0.15	1.10	600	500	RTCD2892D221KP025M
	270	22×30	0.15	1.21	500	400	RTCD2892D271KP030M
	330	22×30	0.15	1.41	410	330	RTCD2892D331KP030M
		25×25	0.15	1.40	410	330	RTCD2892D331KQ025M
	390	22×35	0.15	1.61	350	280	RTCD2892D391KP035M
		25×30	0.15	1.61	350	280	RTCD2892D391KQ030M
	470	22×40	0.15	1.81	300	230	RTCD2892D471KP040M
		30×25	0.15	1.92	300	230	RTCD2892D471KR025M
	560	22×45	0.15	2.03	250	200	RTCD2892D561KP045M
		25×35	0.15	2.02	250	200	RTCD2892D561KQ035M
		30×30	0.15	2.10	250	200	RTCD2892D561KR030M
		35×25	0.15	2.02	250	200	RTCD2892D561KS025M
	680	25×40	0.15	2.31	200	160	RTCD2892D681KP040M
		30×35	0.15	2.42	200	160	RTCD2892D681KR035M
	820	25×50	0.15	2.61	170	135	RTCD2892D821KP050M
		30×40	0.15	2.71	170	135	RTCD2892D821KR040M
		35×30	0.15	25.26	170	135	RTCD2892D821KS030M
	1000	30×45	0.15	3.12	150	110	RTCD2892D102KR045M
		35×35	0.15	2.83	160	130	RTCD2892D102KS035M
	1200	30×50	0.15	3.42	120	90	RTCD2892D122KR050M
		35×40	0.15	3.20	140	110	RTCD2892D122KS040M
	1500	35×50	0.15	3.83	110	90	RTCD2892D152KS050M
250 2E (300)	180	22×25	0.15	0.94	1110	890	RTCD2892E181KP025M
	220	22×30	0.15	1.12	910	730	RTCD2892E221KP030M
		25×25	0.15	1.13	910	730	RTCD2892E221KQ025M
	270	22×35	0.15	1.23	750	600	RTCD2892E271KP035M
	330	22×40	0.15	1.45	610	490	RTCD2892E331KP040M
		25×30	0.15	1.43	610	490	RTCD2892E331KQ030M
		25×35	0.15	1.52	610	490	RTCD2892E331KQ035M
		30×25	0.15	1.53	610	490	RTCD2892E331KR025M
	390	22×45	0.15	1.63	520	410	RTCD2892E391KP045M
		25×35	0.15	1.62	520	410	RTCD2892E391KQ035M
	470	25×40	0.15	1.83	430	340	RTCD2892E471KP040M
		30×30	0.15	1.82	430	340	RTCD2892E471KR030M
		35×25	0.15	2.42	430	340	RTCD2892E471KS025M
	560	25×45	0.15	2.05	360	290	RTCD2892E561KP045M
		30×35	0.15	2.05	360	290	RTCD2892E561KR035M
	680	30×40	0.15	2.35	300	240	RTCD2892E681KP040M
		35×30	0.15	2.63	300	240	RTCD2892E681KR030M
	820	30×45	0.15	2.61	250	200	RTCD2892E821KP045M
		35×35	0.15	2.60	250	200	RTCD2892E821KS035M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
250 2E (300)	1000	35×40	0.15	3.02	200	165	RTCD2892E102KS040M
	1200	35×45	0.15	3.43	170	140	RTCD2892E122KS045M
315 2F (365)	100	22×25	0.15	0.67	2000	1600	RTCD2892F101KP025M
	120	22×25	0.15	0.74	2000	1600	RTCD2892F121KP025M
	150	22×30	0.15	0.86	1330	1100	RTCD2892F151KP030M
		25×25	0.15	0.85	1330	1100	RTCD2892F151KQ025M
	180	22×35	0.15	0.97	1110	890	RTCD2892F181KP035M
		25×30	0.15	0.96	1110	890	RTCD2892F181KQ030M
	220	22×40	0.15	1.14	910	730	RTCD2892F221KP040M
		25×35	0.15	1.13	910	730	RTCD2892F221KQ035M
		30×25	0.15	1.11	910	730	RTCD2892F221KR025M
	270	22×45	0.15	1.23	740	600	RTCD2892F271KP045M
		25×40	0.15	1.32	740	600	RTCD2892F271KQ040M
		30×30	0.15	1.31	740	600	RTCD2892F271KR030M
		35×25	0.15	1.30	740	600	RTCD2892F271KS025M
	330	25×45	0.15	1.42	610	490	RTCD2892F331KQ045M
		30×35	0.15	1.41	610	490	RTCD2892F331KR035M
	390	30×40	0.15	1.62	520	410	RTCD2892F391KR040M
		35×30	0.15	1.60	520	410	RTCD2892F391KS030M
	470	30×45	0.15	1.81	430	345	RTCD2892F471KR045M
		35×35	0.15	1.81	430	345	RTCD2892F471KS035M
	560	30×50	0.15	2.04	360	290	RTCD2892F561KR050M
		35×40	0.15	2.02	360	290	RTCD2892F561KS040M
	680	35×45	0.15	2.30	300	240	RTCD2892F681KS045M
350 2V (400)	82	22×25	0.15	0.65	2450	1950	RTCD2892V820KP025M
	100	22×25	0.15	0.78	2000	1600	RTCD2892V101KP025M
	120	22×30	0.15	0.84	1670	1330	RTCD2892V121KP030M
		25×25	0.15	0.82	1670	1330	RTCD2892V121KQ025M
	150	22×35	0.15	0.96	1330	1070	RTCD2892V151KP035M
		25×30	0.15	0.95	1330	1070	RTCD2892V151KQ030M
	180	22×40	0.15	1.15	1110	890	RTCD2892V181KP040M
		30×25	0.15	0.12	1110	890	RTCD2892V181KR025M
	220	22×45	0.15	1.24	920	730	RTCD2892V221KP045M
		25×35	0.15	1.23	920	730	RTCD2892V221KQ035M
		30×30	0.15	1.22	920	730	RTCD2892V221KR030M
	270	25×45	0.15	1.44	745	595	RTCD2892V271KQ045M
		30×35	0.15	1.43	745	595	RTCD2892V271KR035M
		35×30	0.15	1.43	745	595	RTCD2892V271KS030M
	330	25×50	0.15	1.65	610	485	RTCD2892V331KQ050M
		30×40	0.15	1.65	610	485	RTCD2892V331KR040M
		35×30	0.15	1.63	610	485	RTCD2892V331KS030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
350 2V (400)	390	30×40	0.15	1.74	515	410	RTCD2892V391KR040M
		35×35	0.15	1.80	515	410	RTCD2892V391KS035M
	470	30×45	0.15	2.05	430	340	RTCD2892V471KR045M
		35×40	0.15	2.00	430	340	RTCD2892V471KS040M
	560	35×45	0.15	2.31	360	290	RTCD2892V561KS045M
	680	35×50	0.15	2.62	360	290	RTCD2892V681KS050M
400 2G (450)	820	35×60	0.15	2.82	250	200	RTCD2892V821KS060M
	82	22×25	0.15	0.64	2430	1945	RTCD2892G820KP025M
	100	22×30	0.15	0.71	1995	1595	RTCD2892G101KP030M
		25×25	0.15	0.70	1995	1595	RTCD2892G101KQ025M
	120	22×35	0.15	0.80	1660	1330	RTCD2892G121KP035M
	150	25×30	0.15	0.92	1330	1065	RTCD2892G151KQ030M
		30×25	0.15	0.95	1330	1065	RTCD2892G151KR025M
	180	25×35	0.15	1.01	1110	890	RTCD2892G181KQ035M
		30×30	0.15	1.10	1110	890	RTCD2892G181KR030M
		35×25	0.15	1.21	1110	890	RTCD2892G181KS025M
	220	22×50	0.15	1.12	910	730	RTCD2892G221KP050M
		25×40	0.15	1.23	910	730	RTCD2892G221KQ040M
		30×35	0.15	1.24	910	730	RTCD2892G221KR035M
	270	25×45	0.15	1.35	740	600	RTCD2892G271KQ045M
		30×40	0.15	1.51	740	600	RTCD2892G271KR040M
		35×35	0.15	1.56	740	600	RTCD2892G271KS035M
	330	30×40	0.15	1.62	610	490	RTCD2892G331KR040M
		30×45	0.15	1.71	610	490	RTCD2892G331KQ045M
		35×30	0.15	1.63	610	490	RTCD2892G331KS030M
	390	30×50	0.15	1.83	515	415	RTCD2892G391KR050M
		35×35	0.15	1.83	515	415	RTCD2892G391KS035M
	470	35×40	0.15	2.04	425	345	RTCD2892G471KS040M
		35×45	0.15	2.15	425	345	RTCD2892G471KQ045M
		35×50	0.15	2.40	425	345	RTCD2892G471KS050M
	560	35×45	0.15	2.10	360	290	RTCD2892G561KS045M
		35×50	0.15	2.30	360	290	RTCD2892G561KS050M
	680	35×50	0.15	2.36	350	270	RTCD2892G681KS050M
	820	35×60	0.15	3.00	342	260	RTCD2892G821KS060M
	1000	35×65	0.15	3.10	300	250	RTCD2892G102KS065M
	1200	35×80	0.15	3.70	300	250	RTCD2892G122KS080M
450 2W (500)	68	22×30	0.15	0.57	2930	2345	RTCD2892W680KP030M
	82	25×35	0.15	0.70	2430	1945	RTCD2892W820KQ035M
	100	22×35	0.15	0.72	1995	1600	RTCD2892W101KP035M
		25×30	0.15	0.73	1995	1600	RTCD2892W101KQ030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
450 2W (500)	120	22×40	0.15	0.80	1660	1330	RTCD2892W121KP040M
		25×35	0.15	0.84	1660	1330	RTCD2892W121KQ035M
	150	25×40	0.15	0.95	1330	1070	RTCD2892W151KQ040M
		30×30	0.15	0.96	1330	1070	RTCD2892W151KR030M
		35×25	0.15	0.99	1330	1070	RTCD2892W151KS025M
	180	25×45	0.15	1.10	1110	895	RTCD2892W181KQ045M
		30×35	0.15	1.11	1110	895	RTCD2892W181KR035M
		35×25	0.15	1.23	1110	895	RTCD2892W181KS025M
	220	25×50	0.15	1.20	915	730	RTCD2892W221KQ050M
		30×40	0.15	1.32	915	730	RTCD2892W221KR040M
		35×30	0.15	1.32	915	730	RTCD2892W221KS030M
	270	30×45	0.15	1.40	740	590	RTCD2892W271KR045M
		35×35	0.15	1.50	740	590	RTCD2892W271KS035M
	330	30×50	0.15	1.71	610	490	RTCD2892W331KR050M
	390	35×45	0.15	1.90	520	415	RTCD2892W391KS045M
	470	35×50	0.15	2.21	430	342	RTCD2892W471KS050M
	560	35×60	0.15	2.25	360	320	RTCD2892W561KS060M
	680	35×65	0.15	2.90	320	260	RTCD2892W681KS065M
500 2H (550)	100	30×25	0.15	0.92	1995	1600	RTCD2892H101KR025M
	120	30×30	0.15	1.00	1665	1330	RTCD2892H121KR030M
		35×25	0.15	1.00	1665	1330	RTCD2892H121KS025M
	150	30×35	0.15	1.21	1330	1065	RTCD2892H151KR035M
	180	30×40	0.15	1.42	1110	890	RTCD2892H181KR040M
		35×30	0.15	1.31	1110	890	RTCD2892H181KS030M
	270	30×50	0.15	1.80	740	595	RTCD2892H271KR050M
		35×40	0.15	1.71	740	595	RTCD2892H271KS040M
	330	35×45	0.15	2.00	610	485	RTCD2892H331KS045M
	390	35×50	0.15	2.30	520	415	RTCD2892H391KS050M

RTCD295 SERIES (85°C 5000H)



- Compliant to the RoHS directive.
- 85°C High ripple current series.
- 5000H Long life general Industrial electronics.

Specification

Item	Performance Characteristics											
Operating range	-40°C ~ +85°C				-25°C ~ +85°C							
Rated voltage range	10V ~ 400V				450V							
Capacitance tolerance	$\pm 20\%$ (20°C, 120Hz)											
Leakage current	$I \leq 0.01CV(\mu A)$ or $1.5mA$ (Whichever is smaller) ~ (20°C, after 5 minutes) C=Nominal capacitance (μF), V=Rated voltage (V)											
Dissipation factor (20°C, 120Hz)	UR(V)	10	16	25	35	50	63 ~ 100	160 ~ 450				
	$\tan \delta$	0.80	0.60	0.50	0.40	0.30	0.20	0.15				
Stability at Low Temperature (Impedance ratio at 120Hz)	UR(V)	10	16 ~ 35	50 ~ 100	160 ~ 200	250 ~ 400	450					
	$Z(-25^\circ C)/Z(+20^\circ C)$	5	4	3			4					
	$Z(-40^\circ C)/Z(+20^\circ C)$	18	15	10	6	8	—					
Load Life	After applying rated voltage with specified ripple current for 2000 hours at 85°C(the peak voltage shall not exceed the rated voltage), and then restored for 24 hours, capacitor shall meet the following requirement:											
	Capacitance change	Within $\pm 20\%$ of the initial value.										
	Dissipation factor	Not more than 200% of the initial specified value.										
	Leakage current	Not more than the initial specified value.										
Shelf Life	After storing for 1000 hours at 85°C, UR to be applied for 30 minutes and then restored for 24 hours, capacitor shall meet the following requirement:											
	Capacitance change	Within $\pm 20\%$ of the initial value.										
	Dissipation factor	Not more than 200% of the initial specified value.										
	Leakage current	Not more than the initial specified value.										
Standard	JIS C 5101-4											

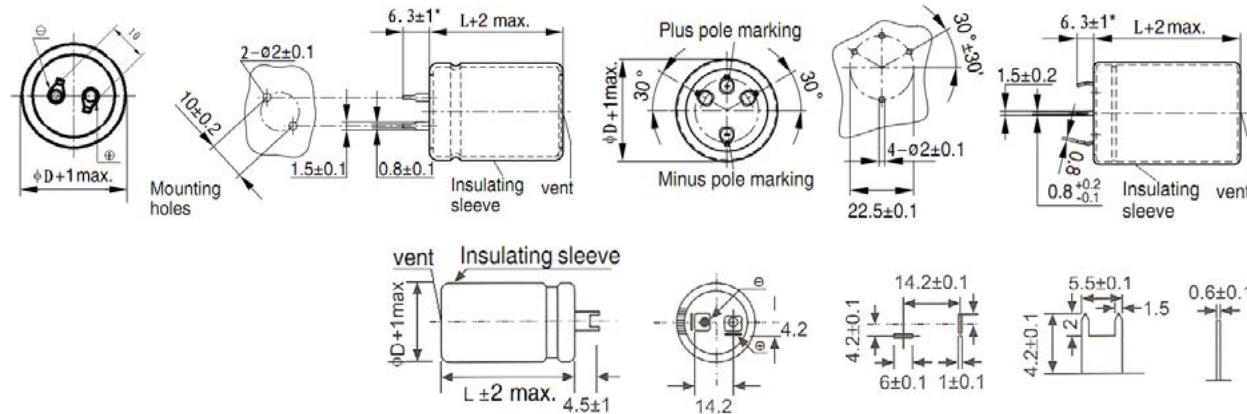
■ Coefficient of rated ripple current

$T(^{\circ}\text{C})$ $U_R(\text{V})$	40	55	70	85
<160	2.1	1.8	1.5	1.0
≥ 160	1.7	1.5	1.3	1.0

$F(\text{Hz})$ $U_R(\text{V})$	50(60)	120	1K	10K	100K
≤ 50	0.90	1.00	1.10	1.15	1.15
63-100	0.90	1.00	1.16	1.30	1.33
≥ 160	0.90	1.00	1.20	1.50	1.55

■ Drawing

Unit: mm



×:Shorter terminal is: $4.0\pm 0.5\text{mm}$

■ RTCD295 Dimensions

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
10 1A (13)	10000	22×25	0.80	2.57	110	75	RTCD2951A103KP025M
	12000	22×30	0.80	2.78	90	65	RTCD2951A123KP030M
	15000	22×35	0.80	3.29	75	50	RTCD2951A153KP035M
		25×25	0.80	3.15	75	50	RTCD2951A153KQ025M
	18000	22×40	0.80	3.70	60	45	RTCD2951A183KP040M
		25×30	0.80	3.66	60	45	RTCD2951A183KQ030M
	22000	22×45	0.80	4.13	50	35	RTCD2951A223KP045M
		25×35	0.80	4.13	50	35	RTCD2951A223KQ035M
16 1C (20)	8200	22×30	0.60	2.27	100	70	RTCD2951C822KP030M
	10000	22×35	0.60	2.69	85	60	RTCD2951C103KP035M
	12000	22×40	0.60	2.98	70	60	RTCD2951C123KP040M
	15000	22×45	0.60	3.38	55	40	RTCD2951C153KP045M
		25×30	0.60	3.33	55	40	RTCD2951C153KQ030M
	18000	22×50	0.60	3.89	45	35	RTCD2951C183KP050M
		25×35	0.60	3.87	45	35	RTCD2951C183KQ035M
	22000	25×40	0.60	4.42	40	28	RTCD2951C223KQ040M
		30×30	0.60	4.42	40	28	RTCD2951C223KR030M
25 1E (32)	5600	22×25	0.50	2.20	120	85	RTCD2951E562KP025M
	6800	22×30	0.50	2.33	100	70	RTCD2951E682KP030M
		25×30	0.50	2.35	100	70	RTCD2951E682KQ030M
	8200	22×35	0.50	2.66	85	60	RTCD2951E822KP035M
	10000	22×40	0.50	2.99	70	50	RTCD2951E103KP040M
		25×35	0.50	2.88	70	50	RTCD2951E103KQ035M
	12000	25×40	0.50	3.30	60	40	RTCD2951E123KQ040M
		30×30	0.50	3.40	60	40	RTCD2951E123KR030M
	15000	25×45	0.50	3.77	45	35	RTCD2951E153KQ045M
		35×25	0.50	3.90	45	35	RTCD2951E153KS025M
	18000	30×40	0.50	4.29	40	30	RTCD2951E183KR040M
		35×30	0.50	4.40	40	30	RTCD2951E183KS030M
	22000	30×45	0.50	4.90	30	25	RTCD2951E223KR045M
		35×35	0.50	5.00	30	25	RTCD2951E223KS035M
35 1V (44)	4700	25×30	0.40	2.28	120	80	RTCD2951V472KQ030M
	5600	25×35	0.40	2.38	100	70	RTCD2951V562KQ035M
	6800	25×40	0.40	2.68	80	55	RTCD2951V682KP040M
		30×25	0.40	2.77	80	55	RTCD2951V682KR025M
	8200	25×45	0.40	2.86	65	45	RTCD2951V822KP045M
		30×30	0.40	2.85	65	45	RTCD2951V822KR030M
	10000	25×50	0.40	3.20	55	40	RTCD2951V103KQ050M
		30×35	0.40	3.30	55	40	RTCD2951V103KR035M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
35 1V (44)	12000	30×40	0.40	3.58	45	35	RTCD2951V123KR040M
		35×30	0.40	3.66	45	35	RTCD2951V123KS030M
	15000	30×45	0.40	4.20	35	25	RTCD2951V153KR045M
		35×35	0.40	4.20	35	25	RTCD2951V153KS035M
	18000	30×50	0.40	4.70	30	22	RTCD2951V183KR050M
		35×40	0.40	4.70	30	22	RTCD2951V183KS040M
50 1H (63)	2200	22×25	0.30	1.75	190	130	RTCD2951H222KP025M
	2700	22×30	0.30	1.92	150	110	RTCD2951H272KP030M
		25×25	0.30	1.90	150	110	RTCD2951H272KQ025M
	3300	22×35	0.30	2.10	125	90	RTCD2951H332KP035M
	3900	22×40	0.30	2.18	110	75	RTCD2951H392KP040M
		25×30	0.30	2.11	110	75	RTCD2951H392KQ030M
	4700	22×45	0.30	2.50	90	60	RTCD2951H472KP045M
		25×35	0.30	2.48	90	60	RTCD2951H472KQ035M
	5600	22×50	0.30	2.56	75	50	RTCD2951H562KP050M
		25×40	0.30	2.58	75	50	RTCD2951H562KQ040M
	6800	25×50	0.30	2.89	60	45	RTCD2951H682KQ050M
		30×35	0.30	2.80	60	45	RTCD2951H682KR035M
	8200	30×40	0.30	3.18	50	35	RTCD2951H822KR040M
		35×35	0.30	3.20	50	35	RTCD2951H822KS035M
	10000	30×45	0.30	3.43	40	30	RTCD2951H103KR045M
		35×40	0.30	3.48	40	30	RTCD2951H103KS040M
	12000	30×50	0.30	4.00	35	25	RTCD2951H123KR050M
		35×45	0.30	3.89	35	25	RTCD2951H123KS045M
	15000	35×50	0.30	4.55	30	20	RTCD2951H153KS050M
63 1J (79)	1500	22×25	0.20	1.62	180	125	RTCD2951J152KP025M
	1800	22×30	0.20	1.93	150	110	RTCD2951J182KP030M
	2200	25×30	0.20	2.08	125	85	RTCD2951J222KQ030M
	2700	22×35	0.20	2.25	100	70	RTCD2951J272KP035M
		25×35	0.20	2.34	100	70	RTCD2951J272KQ035M
	3300	22×40	0.20	2.37	80	60	RTCD2951J332KP040M
		25×40	0.20	2.36	80	60	RTCD2951J332KQ040M
		30×25	0.20	2.31	80	60	RTCD2951J332KR025M
	3900	22×45	0.20	2.52	70	50	RTCD2951J392KP045M
		25×45	0.20	2.60	70	50	RTCD2951J392KQ045M
		30×30	0.20	2.60	70	50	RTCD2951J392KR030M
		35×25	0.20	2.70	70	50	RTCD2951J392KS025M
	4700	30×35	0.20	2.96	60	40	RTCD2951J472KR035M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
63 1J (79)	5600	25×45	0.20	3.14	50	35	RTCD2951J562KQ045M
		30×40	0.20	3.26	50	35	RTCD2951J562KR040M
		35×30	0.20	3.30	50	35	RTCD2951J562KS030M
	6800	30×45	0.20	3.68	40	30	RTCD2951J682KR045M
		35×35	0.20	3.72	40	30	RTCD2951J682KS035M
	8200	30×50	0.20	3.70	35	25	RTCD2951J822KR050M
		35×40	0.20	3.80	35	25	RTCD2951J822KS040M
	10000	35×45	0.20	4.32	30	20	RTCD2951J103KS045M
	12000	35×50	0.20	4.81	25	18	RTCD2951J123KS050M
80 1K (100)	1000	22×25	0.20	1.30	270	190	RTCD2951K102KP025M
	1200	22×30	0.20	1.50	225	160	RTCD2951K122KP030M
	1500	22×35	0.20	1.82	180	130	RTCD2951K152KP035M
		25×30	0.20	1.75	180	130	RTCD2951K152KQ030M
	1800	22×35	0.20	1.94	150	110	RTCD2951K182KP035M
	2200	25×40	0.20	2.25	125	85	RTCD2951K222KQ040M
		30×25	0.20	2.23	125	85	RTCD2951K222KR025M
	2700	22×50	0.20	2.56	100	70	RTCD2951K272KP050M
		25×45	0.20	2.55	100	70	RTCD2951K272KQ045M
		30×30	0.20	2.50	100	70	RTCD2951K272KR030M
	3300	25×50	0.20	2.85	85	60	RTCD2951K332KQ050M
		30×35	0.20	2.81	85	60	RTCD2951K332KR035M
	3900	25×50	0.20	3.20	70	50	RTCD2951K392KQ050M
		30×40	0.20	3.22	70	50	RTCD2951K392KR040M
		35×35	0.20	3.25	70	50	RTCD2951K392KS035M
	4700	30×45	0.20	3.66	60	40	RTCD2951K472KR045M
		35×40	0.20	3.66	60	40	RTCD2951K472KS040M
	5600	30×50	0.20	3.79	50	35	RTCD2951K562KR050M
		35×45	0.20	3.85	50	35	RTCD2951K562KS045M
	6800	35×50	0.20	4.10	25	18	RTCD2951K682KS050M
100 2A (125)	680	22×25	0.20	1.10	390	280	RTCD2952A681KP025M
	820	22×30	0.20	1.21	330	230	RTCD2952A821KP030M
	1000	25×30	0.20	1.45	270	190	RTCD2952A102KQ030M
	1200	22×35	0.20	1.63	225	160	RTCD2952A122KP035M
	1500	22×40	0.20	1.81	180	130	RTCD2952A152KP040M
		25×40	0.20	1.74	180	130	RTCD2952A152KQ040M
		30×25	0.20	1.83	180	130	RTCD2952A152KR025M
	1800	22×50	0.20	2.15	150	110	RTCD2952A182KP050M
		25×45	0.20	2.10	150	110	RTCD2952A182KQ045M
		30×30	0.20	2.10	150	110	RTCD2952A182KR030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
100 2A (125)	2200	25×50	0.20	2.25	125	90	RTCD2952A222KQ050M
		30×35	0.20	2.32	125	90	RTCD2952A222KR035M
		35×30	0.20	2.51	125	90	RTCD2952A222KS030M
	2700	25×55	0.20	2.66	100	70	RTCD2952A272KQ055M
		30×40	0.20	2.70	100	70	RTCD2952A272KR040M
	3300	30×45	0.20	3.10	80	60	RTCD2952A332KR045M
		35×40	0.20	3.17	80	60	RTCD2952A332KS040M
	3900	30×50	0.20	3.44	70	50	RTCD2952A392KR050M
		35×45	0.20	3.48	70	50	RTCD2952A392KS045M
	4700	35×50	0.20	4.03	60	40	RTCD2952A472KS050M
160 2C (200)	330	22×30	0.15	1.31	610	425	RTCD2952C331KP030M
	390	22×35	0.15	1.54	510	360	RTCD2952C391KP035M
		25×25	0.15	1.52	510	360	RTCD2952C391KQ025M
	470	25×25	0.15	1.72	430	300	RTCD2952C471KQ025M
	560	22×40	0.15	1.95	360	250	RTCD2952C561KP040M
		25×30	0.15	1.91	360	250	RTCD2952C561KQ030M
		30×25	0.15	2.00	360	250	RTCD2952C561KR025M
	680	22×45	0.15	2.14	300	205	RTCD2952C681KP045M
		25×35	0.15	2.20	300	205	RTCD2952C681KQ035M
	820	22×50	0.15	2.51	250	170	RTCD2952C821KP050M
		25×40	0.15	2.42	250	170	RTCD2952C821KQ040M
		30×35	0.15	2.55	250	170	RTCD2952C821KR035M
	1000	25×45	0.15	2.70	200	140	RTCD2952C102KQ045M
		30×40	0.15	2.84	200	140	RTCD2952C102KR040M
		35×30	0.15	2.70	200	140	RTCD2952C102KS030M
	1200	30×45	0.15	3.26	170	120	RTCD2952C122KR045M
		35×35	0.15	3.13	170	120	RTCD2952C122KS035M
	1500	30×50	0.15	3.77	140	95	RTCD2952C152KR050M
		35×40	0.15	3.53	140	95	RTCD2952C152KS040M
	1800	35×45	0.15	3.93	120	80	RTCD2952C182KS045M
	2200	35×50	0.15	4.51	95	70	RTCD2952C222KS050M
180 2K (225)	270	22×25	0.15	1.21	740	520	RTCD2952K271KP025M
	330	22×35	0.15	1.45	610	425	RTCD2952K331KP035M
	390	25×25	0.15	1.52	510	360	RTCD2952K391KQ025M
	470	22×40	0.15	1.77	425	300	RTCD2952K471KP040M
		25×30	0.15	1.72	425	300	RTCD2952K471KQ030M
		30×25	0.15	1.82	425	300	RTCD2952K471KR025M
	560	22×45	0.15	1.98	355	250	RTCD2952K561KP045M
		25×35	0.15	2.01	355	250	RTCD2952K561KQ035M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
180 2K (225)	680	22×50	0.15	2.22	295	210	RTCD2952K681KP050M
		25×45	0.15	2.26	295	210	RTCD2952K681KQ045M
		30×30	0.15	2.30	295	210	RTCD2952K681KR030M
		35×25	0.15	2.21	295	210	RTCD2952K681KS025M
	820	25×50	0.15	2.58	245	170	RTCD2952K821KP050M
		30×35	0.15	2.61	245	170	RTCD2952K821KR035M
		35×30	0.15	2.50	245	170	RTCD2952K821KS030M
	1000	30×40	0.15	2.90	200	140	RTCD2952K102KR040M
		35×35	0.15	2.94	200	140	RTCD2952K102KS035M
	1200	30×45	0.15	3.31	170	120	RTCD2952K122KR045M
		35×40	0.15	3.16	170	120	RTCD2952K122KS040M
200 2D (250)	1500	35×45	0.15	3.61	135	100	RTCD2952K152KS045M
	1800	35×50	0.15	4.12	115	80	RTCD2952K182KS050M
	220	22×25	0.15	1.10	910	635	RTCD2952D221KP025M
	270	22×30	0.15	1.21	740	520	RTCD2952D271KP030M
	330	22×35	0.15	1.44	610	425	RTCD2952D331KP035M
		25×25	0.15	1.40	610	425	RTCD2952D331KQ025M
	390	22×40	0.15	1.65	510	360	RTCD2952D391KP040M
		25×30	0.15	1.61	510	360	RTCD2952D391KQ030M
	470	22×45	0.15	1.85	425	300	RTCD2952D471KP045M
		30×25	0.15	1.92	425	300	RTCD2952D471KR025M
	560	22×50	0.15	2.06	355	250	RTCD2952D561KP050M
		25×35	0.15	2.02	355	250	RTCD2952D561KQ035M
		30×30	0.15	2.10	355	250	RTCD2952D561KR030M
	680	25×45	0.15	2.35	295	210	RTCD2952D681KP045M
		30×35	0.15	2.42	295	210	RTCD2952D681KR035M
	820	25×50	0.15	2.61	245	170	RTCD2952D821KP050M
		30×40	0.15	2.71	245	170	RTCD2952D821KR040M
		35×35	0.15	2.56	245	170	RTCD2952D821KS035M
	1000	30×45	0.15	3.12	200	140	RTCD2952D102KR045M
		35×40	0.15	2.85	200	140	RTCD2952D102KS040M
	1200	30×50	0.15	3.42	170	120	RTCD2952D122KR050M
		35×45	0.15	3.26	170	120	RTCD2952D122KS045M
	1500	35×50	0.15	3.83	135	100	RTCD2952D152KS050M
250 2E (300)	180	22×25	0.15	0.94	1110	780	RTCD2952E181KP025M
	220	22×35	0.15	1.16	910	640	RTCD2952E221KP035M
		25×25	0.15	1.13	910	640	RTCD2952E221KQ025M
	270	22×40	0.15	1.25	740	520	RTCD2952E271KP040M
	330	22×45	0.15	1.46	610	425	RTCD2952E331KP045M
		25×30	0.15	1.43	610	425	RTCD2952E331KQ030M
		30×25	0.15	1.53	610	425	RTCD2952E331KR025M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
250 2E (300)	390	22×50	0.15	1.66	510	360	RTCD2952E391KP050M
		25×35	0.15	1.62	510	360	RTCD2952E391KQ035M
	470	25×40	0.15	1.83	425	300	RTCD2952E471KQ040M
		30×30	0.15	1.82	425	300	RTCD2952E471KR030M
		35×30	0.15	2.16	425	300	RTCD2952E471KS030M
		25×45	0.15	2.05	355	250	RTCD2952E561KQ045M
	560	30×35	0.15	2.05	355	250	RTCD2952E561KR035M
		30×45	0.15	2.35	295	210	RTCD2952E681KR045M
	680	35×30	0.15	2.45	295	210	RTCD2952E681KS030M
		30×50	0.15	2.66	245	170	RTCD2952E821KR050M
	820	35×35	0.15	2.60	245	170	RTCD2952E821KS035M
		1000	35×40	0.15	3.02	200	140
	1200	35×45	0.15	3.43	170	120	RTCD2952E122KS045M
315 2F (365)	100	22×25	0.15	0.67	1995	1400	RTCD2952F101KP025M
	120	22×30	0.15	0.76	1665	1170	RTCD2952F121KP030M
	150	22×35	0.15	0.88	1330	935	RTCD2952F151KP035M
		25×25	0.15	0.85	1330	935	RTCD2952F151KQ025M
	180	22×40	0.15	1.00	1110	775	RTCD2952F181KP040M
		25×30	0.15	0.96	1110	775	RTCD2952F181KQ030M
	220	22×45	0.15	1.15	915	635	RTCD2952F221KP045M
		25×35	0.15	1.13	915	635	RTCD2952F221KQ035M
		30×25	0.15	1.11	915	635	RTCD2952F221KR025M
	270	22×50	0.15	1.26	740	520	RTCD2952F271KP050M
		25×40	0.15	1.32	740	520	RTCD2952F271KQ040M
		30×30	0.15	1.31	740	520	RTCD2952F271KR030M
		35×25	0.15	1.30	740	520	RTCD2952F271KS025M
	330	25×45	0.15	1.42	610	425	RTCD2952F331KQ045M
		30×35	0.15	1.41	610	425	RTCD2952F331KR035M
	390	30×40	0.15	1.62	515	360	RTCD2952F391KR040M
		35×30	0.15	1.60	515	360	RTCD2952F391KS030M
	470	30×45	0.15	1.81	425	300	RTCD2952F471KR045M
		35×35	0.15	1.81	425	300	RTCD2952F471KS035M
	560	30×50	0.15	2.04	355	250	RTCD2952F561KR050M
		35×40	0.15	2.02	355	250	RTCD2952F561KS040M
	680	35×45	0.15	2.30	295	210	RTCD2952F681KS045M
350 2V (400)	82	22×25	0.15	0.65	2430	1700	RTCD2952V820KP025M
	100	22×30	0.15	0.78	1995	1400	RTCD2952V101KP030M
	120	22×35	0.15	0.86	1660	1200	RTCD2952V121KP035M
		25×25	0.15	0.82	1660	1200	RTCD2952V121KQ025M
	150	22×40	0.15	0.96	1330	930	RTCD2952V151KP040M
		25×30	0.15	0.95	1330	930	RTCD2952V151KQ030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
350 2V (400)	180	22×45	0.15	1.16	1110	780	RTCD2952V181KP045M
		30×25	0.15	1.12	1110	780	RTCD2952V181KR025M
	220	25×35	0.15	1.23	910	635	RTCD2952V221KQ035M
		30×30	0.15	1.22	910	635	RTCD2952V221KR030M
	270	25×45	0.15	1.44	740	520	RTCD2952V271KQ045M
		30×35	0.15	1.43	740	520	RTCD2952V271KR035M
	330	25×50	0.15	1.65	610	425	RTCD2952V331KQ050M
		35×30	0.15	1.63	610	425	RTCD2952V331KS030M
	390	30×45	0.15	1.76	515	360	RTCD2952V391KR045M
		35×35	0.15	1.80	515	360	RTCD2952V391KS035M
	470	30×50	0.15	2.06	425	300	RTCD2952V471KR050M
		35×40	0.15	2.00	425	300	RTCD2952V471KS040M
	560	35×45	0.15	2.31	360	250	RTCD2952V561KS045M
	680	35×50	0.15	2.62	300	210	RTCD2952V681KS050M
400 2G (450)	68	22×25	0.15	0.56	2930	2060	RTCD2952G680KP025M
	82	22×30	0.15	0.69	2430	1700	RTCD2952G820KP030M
	100	22×35	0.15	0.78	2000	1400	RTCD2952G101KP035M
		25×25	0.15	0.70	2000	1400	RTCD2952G101KQ025M
	120	22×40	0.15	0.88	1660	1170	RTCD2952G121KP040M
	150	25×35	0.15	0.94	1330	930	RTCD2952G151KQ035M
		30×25	0.15	0.95	1330	930	RTCD2952G151KR025M
	180	25×40	0.15	1.12	1110	780	RTCD2952G181KQ040M
		30×30	0.15	1.10	1110	780	RTCD2952G181KR030M
		35×25	0.15	1.21	1110	780	RTCD2952G181KS025M
	220	22×50	0.15	1.12	910	640	RTCD2952G221KP050M
		25×45	0.15	1.30	910	640	RTCD2952G221KQ045M
		30×35	0.15	1.24	910	640	RTCD2952G221KR035M
	270	25×50	0.15	1.35	740	520	RTCD2952G271KQ050M
		30×40	0.15	1.45	740	520	RTCD2952G271KR040M
		35×30	0.15	1.60	740	520	RTCD2952G271KS030M
	330	30×45	0.15	1.63	610	430	RTCD2952G331KR045M
		35×35	0.15	1.71	610	430	RTCD2952G331KS035M
	390	30×50	0.15	1.85	520	360	RTCD2952G391KR050M
		35×40	0.15	1.85	520	360	RTCD2952G391KS040M
	470	30×50	0.15	2.05	450	300	RTCD2952G471KR050M
		35×45	0.15	2.15	450	300	RTCD2952G471KS045M
	560	35×50	0.15	2.10	360	250	RTCD2952G561KS050M
	680	35×55	0.15	2.45	360	250	RTCD2952G561KS055M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
450 2W (500)	68	22×30	0.15	0.57	2930	2050	RTCD2952W680KP030M
	82	22×35	0.15	0.68	2430	1700	RTCD2952W820KP035M
	100	22×35	0.15	0.72	1995	1400	RTCD2952W101KP035M
		25×30	0.15	0.73	1995	1400	RTCD2952W101KQ030M
	120	22×40	0.15	0.80	1660	1170	RTCD2952W121KP040M
		25×35	0.15	0.84	1660	1170	RTCD2952W121KQ035M
	150	25×40	0.15	0.95	1330	935	RTCD2952W151KQ040M
		30×35	0.15	1.10	1330	935	RTCD2952W151KR035M
	180	25×45	0.15	1.10	1110	780	RTCD2952W181KQ045M
		30×35	0.15	1.11	1110	780	RTCD2952W181KR035M
		35×30	0.15	1.30	1110	780	RTCD2952W181KS030M
	220	25×50	0.15	1.20	910	640	RTCD2952W221KQ050M
		30×40	0.15	1.32	910	640	RTCD2952W221KR040M
		35×35	0.15	1.50	910	640	RTCD2952W221KS035M
	270	30×45	0.15	1.40	740	740	RTCD2952W271KQ045M
		35×40	0.15	1.78	740	740	RTCD2952W271KS040M
	330	30×50	0.15	1.71	610	610	RTCD2952W331KR050M
	390	35×45	0.15	1.90	515	515	RTCD2952W391KS045M
	470	35×50	0.15	2.21	430	430	RTCD2952W471KS050M

RTCD294 SERIES (105°C 2000H)



- Compliant to the RoHS directive.
- 105°C 2000H high temperature and high ripple current series.
- General industry.

Specification

Item	Performance Characteristics												
Operating range	-40°C ~ +105°C				-25°C ~ +105°C								
Rated voltage range	16V ~ 100V				160V ~ 500V								
Capacitance tolerance	$\pm 20\%$ (20°C, 120Hz)												
Leakage current	$I \leq 0.01CV(\mu A)$ or $1.5mA$ (Whichever is smaller) (20°C, after 5 minutes) C=Nominal capacitance (μF), V=Rated voltage (V)												
Dissipation factor (20°C, 120Hz)	$U_R(V)$	16	25	35	50	63 ~ 100	160 ~ 400	450 ~ 500					
	$\tan \delta$	0.50	0.40	0.35	0.30	0.20	0.15	0.20					
Stability at Low Temperature (Impedance ratio at 120Hz)		$U_R(V)$	16 ~ 100	160 ~ 200	250 ~ 500								
		$Z(-25^\circ C)/Z(+20^\circ C)$	4										
		$Z(-40^\circ C)/Z(+20^\circ C)$	15	-									
Load Life	After applying rated voltage with specified ripple current for 2000 hours at 85°C (the peak voltage shall not exceed the rated voltage), and then restored for 24 hours, capacitor shall meet the following requirement:												
	Capacitance change	Within $\pm 20\%$ of the initial value.											
	Dissipation factor	Not more than 200% of the initial specified value.											
	Leakage current	Not more than the initial specified value.											
Shelf Life	After storing for 1000 hours at 85°C, UR to be applied for 30 minutes and then restored for 24 hours, capacitor shall meet the following requirement:												
	Capacitance change	Within $\pm 20\%$ of the initial value.											
	Dissipation factor	Not more than 200% of the initial specified value.											
	Leakage current	Not more than the initial specified value.											
Standard	JIS C 5101-4												

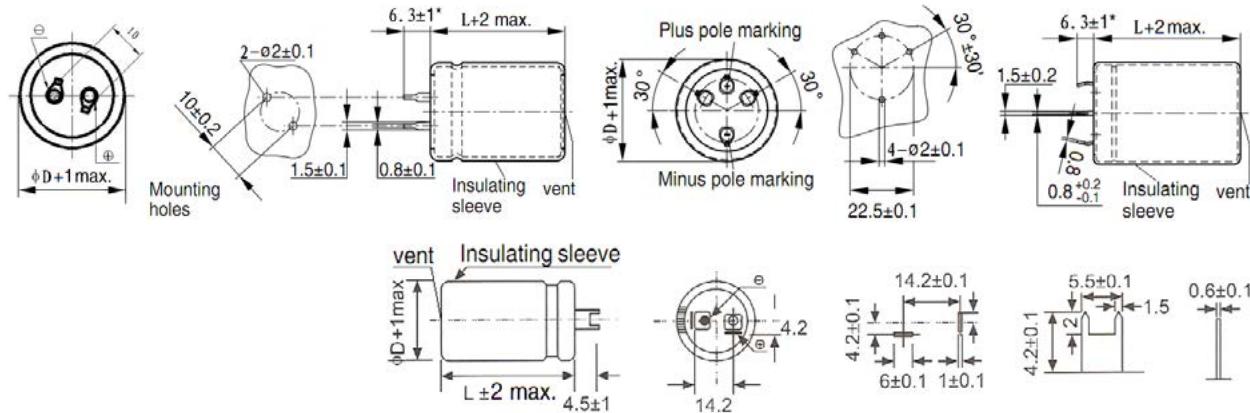
■ Coefficient of rated ripple current

T (°C)	40	55	70	85	105
Coefficient	2.7	2.5	2.1	1.7	1.0

F (Hz) U _R (V)	50(60)	120	1K	10K	≥20K
≤100	0.95	1.00	1.10	1.15	1.15
160-250	0.87	1.00	1.11	1.18	1.20
≥350	0.80	1.00	1.14	1.14	1.20

■ Drawing

Unit: mm



×:Shorter terminal is $4.0\pm0.5\text{mm}$

■ RTCD294 Dimensions

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
16 1C (20)	6800	22×25	0.50	1.63	100	70	RTCD2941C682KP025M
	10000	22×30	0.50	2.00	70	50	RTCD2941C103KP030M
		25×25	0.50	2.00	70	50	RTCD2941C103KQ025M
	12000	22×35	0.50	2.30	60	40	RTCD2941C123KP035M
		25×30	0.50	2.30	60	40	RTCD2941C123KQ030M
		30×25	0.50	2.40	60	40	RTCD2941C123KR025M
	15000	22×40	0.50	2.66	45	35	RTCD2941C153KP040M
		25×35	0.50	2.70	45	35	RTCD2941C153KQ035M
	18000	22×45	0.50	3.00	40	30	RTCD2941C183KP045M
		25×40	0.50	3.05	40	30	RTCD2941C183KQ040M
		30×30	0.50	3.10	40	30	RTCD2941C183KR030M
		35×25	0.50	3.10	40	30	RTCD2941C183KS025M
	22000	25×45	0.50	3.41	30	22	RTCD2941C223KP045M
		30×35	0.50	3.40	30	22	RTCD2941C223KR035M
	27000	25×50	0.50	3.82	25	20	RTCD2941C273KQ050M
		30×40	0.50	3.83	25	20	RTCD2941C273KR040M
		35×30	0.50	3.80	25	20	RTCD2941C273KS030M
	33000	30×45	0.50	4.30	20	15	RTCD2941C333KR045M
		35×35	0.50	4.31	20	15	RTCD2941C333KS035M
	39000	30×50	0.50	4.80	20	15	RTCD2941C393KR050M
		35×40	0.50	4.76	20	15	RTCD2941C393KS040M
	47000	35×45	0.50	5.30	15	12	RTCD2941C473KS045M
25 1E (32)	4700	22×25	0.40	1.60	120	80	RTCD2941E472KP025M
	6800	22×30	0.40	1.95	80	55	RTCD2941E682KP030M
		25×25	0.40	1.94	80	55	RTCD2941E682KQ025M
	8200	22×35	0.40	2.16	65	45	RTCD2941E822KP035M
		25×30	0.40	2.18	65	45	RTCD2941E822KQ030M
		30×25	0.40	2.30	65	45	RTCD2941E822KR025M
	10000	22×40	0.40	2.43	55	40	RTCD2941E103KP040M
		25×35	0.40	2.50	55	40	RTCD2941E103KQ035M
	12000	25×40	0.40	2.75	45	35	RTCD2941E123KQ040M
		30×30	0.40	2.73	45	35	RTCD2941E123KR030M
		35×25	0.40	2.81	45	35	RTCD2941E123KS025M
	15000	25×45	0.40	3.18	35	25	RTCD2941E153KQ045M
		30×35	0.40	3.14	35	25	RTCD2941E153KR035M
		35×30	0.40	3.24	35	25	RTCD2941E153KS030M
	18000	25×50	0.40	3.56	30	22	RTCD2941E183KP050M
		30×40	0.40	3.56	30	22	RTCD2941E183KR040M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number	
25 1E (32)	22000	30×45	0.40	4.28	25	20	RTCD2941E223KR045M	
		35×35	0.40	4.00	25	20	RTCD2941E223KS035M	
	27000	35×45	0.40	4.80	20	15	RTCD2941E273KS045M	
	33000	35×50	0.40	5.40	20	12	RTCD2941E333KS050M	
35 1V (44)	5600	3300	22×25	0.35	1.45	150	100	RTCD2941V332KP025M
		3900	22×30	0.35	1.68	120	85	RTCD2941V392KP030M
		4700	25×25	0.35	1.81	100	70	RTCD2941V472KQ025M
		22×35	0.35	2.03	90	60	RTCD2941V562KP035M	
		25×30	0.35	2.06	90	60	RTCD2941V562KQ030M	
		30×25	0.35	2.11	90	60	RTCD2941V562KR025M	
	6800	22×40	0.35	2.30	70	50	RTCD2941V682KP040M	
		25×35	0.35	2.32	70	50	RTCD2941V682KQ035M	
		22×50	0.35	2.68	60	40	RTCD2941V822KP050M	
	8200	25×40	0.35	2.61	60	40	RTCD2941V822KQ040M	
		30×30	0.35	2.60	60	40	RTCD2941V822KR030M	
		25×45	0.35	2.94	50	35	RTCD2941V103KQ045M	
	10000	30×35	0.35	2.94	50	35	RTCD2941V103KR035M	
		25×50	0.35	3.27	40	30	RTCD2941V123KQ050M	
		30×40	0.35	3.29	40	30	RTCD2941V123KR040M	
	12000	35×30	0.35	3.20	40	30	RTCD2941V123KS030M	
		30×45	0.35	3.75	35	25	RTCD2941V153KQ045M	
		35×35	0.35	3.70	35	25	RTCD2941V153KS035M	
	18000	35×40	0.35	4.18	30	20	RTCD2941V183KS040M	
	22000	35×50	0.35	4.94	25	16	RTCD2941V223KS050M	
50 1H (63)	3300	1800	22×25	0.30	1.31	225	160	RTCD2941H182KP025M
		2200	22×30	0.30	1.46	185	130	RTCD2941H222KP030M
		2700	25×25	0.30	1.72	150	110	RTCD2941H272KQ025M
		22×35	0.30	1.90	125	90	RTCD2941H332KP035M	
		25×30	0.30	2.00	125	90	RTCD2941H332KQ030M	
	3900	25×35	0.30	2.30	110	75	RTCD2941H392KQ035M	
		30×25	0.30	2.20	110	75	RTCD2941H392KR025M	
	4700	30×30	0.30	2.60	90	60	RTCD2941H472KR030M	
		35×25	0.30	2.68	90	60	RTCD2941H472KS025M	
	5600	22×50	0.30	2.90	80	50	RTCD2941H562KP050M	
		25×40	0.30	2.82	80	50	RTCD2941H562KQ040M	
		30×35	0.30	2.96	80	50	RTCD2941H562KR035M	
		30×40	0.30	3.40	60	45	RTCD2941H682KR040M	
	6800	35×30	0.30	3.32	60	45	RTCD2941H682KS030M	
		30×45	0.30	3.72	50	35	RTCD2941H822KR045M	
		35×35	0.30	3.68	50	35	RTCD2941H822KS035M	

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
50 1H (63)	10000	30×50	0.30	4.10	42	30	RTCD2941H103KR050M
		35×40	0.30	4.07	42	30	RTCD2941H103KS040M
	12000	35×45	0.30	4.53	35	25	RTCD2941H123KS045M
63 1J (79)	1200	22×25	0.20	1.27	225	160	RTCD2941J122KP025M
	1800	22×30	0.20	1.53	150	110	RTCD2941J182KP030M
		25×25	0.20	1.52	150	110	RTCD2941J182KQ025M
	2200	22×35	0.20	1.73	125	90	RTCD2941J222KP035M
		25×30	0.20	1.74	125	90	RTCD2941J222KQ030M
	2700	22×40	0.20	1.98	100	70	RTCD2941J272KP040M
		25×35	0.20	2.00	100	70	RTCD2941J272KQ035M
		30×25	0.20	1.94	100	70	RTCD2941J272KR025M
	3300	25×40	0.20	2.29	80	60	RTCD2941J332KQ040M
		30×30	0.20	2.23	80	60	RTCD2941J332KR030M
		35×25	0.20	2.42	80	60	RTCD2941J332KS025M
	3900	25×45	0.20	2.55	70	50	RTCD2941J392KQ045M
		30×35	0.20	2.55	70	50	RTCD2941J392KR035M
	4700	25×50	0.20	2.90	60	40	RTCD2941J472KQ050M
		30×40	0.20	2.90	60	40	RTCD2941J472KR040M
		35×30	0.20	2.82	60	40	RTCD2941J472KS030M
	5600	30×45	0.20	3.29	50	35	RTCD2941J562KR045M
		35×35	0.20	3.24	50	35	RTCD2941J562KS035M
	6800	30×50	0.20	3.74	40	30	RTCD2941J682KR050M
		35×40	0.20	3.71	40	30	RTCD2941J682KS040M
	8200	35×45	0.20	4.18	35	25	RTCD2941J822KS045M
	10000	35×50	0.20	4.70	30	20	RTCD2941J103KS050M
80 1K (100)	1000	22×25	0.20	1.25	270	190	RTCD2941K102KP025M
	1200	22×30	0.20	1.39	230	160	RTCD2941K122KP030M
		25×25	0.20	1.40	230	160	RTCD2941K122KQ025M
	1500	22×35	0.20	1.62	180	130	RTCD2941K152KP035M
		25×30	0.20	1.63	180	130	RTCD2941K152KQ030M
	1800	22×40	0.20	1.84	150	110	RTCD2941K182KP040M
		30×25	0.20	1.82	150	110	RTCD2941K182KR025M
	2200	25×35	0.20	2.00	125	90	RTCD2941K222KQ035M
		30×30	0.20	2.12	125	90	RTCD2941K222KR030M
		35×25	0.20	2.18	125	90	RTCD2941K222KS025M
	2700	25×45	0.20	2.44	100	70	RTCD2941K272KQ045M
		30×35	0.20	2.43	100	70	RTCD2941K272KR035M
	3300	25×50	0.20	2.78	80	60	RTCD2941K332KQ050M
		30×40	0.20	2.79	80	60	RTCD2941K332KR040M
		35×30	0.20	2.72	80	60	RTCD2941K332KS030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
80 1K (100)	3900	30×45	0.20	3.12	70	50	RTCD2941K392KR045M
		35×35	0.20	3.08	70	50	RTCD2941K392KS035M
	4700	30×50	0.20	3.57	60	40	RTCD2941K472KR050M
		35×40	0.20	3.50	60	40	RTCD2941K472KS040M
	5600	35×45	0.20	3.88	50	35	RTCD2941K562KS045M
	6800	35×50	0.20	4.20	40	30	RTCD2941K682KS050M
100 2A (125)	560	22×25	0.20	1.08	480	340	RTCD2942A561KP025M
	820	22×30	0.20	1.36	330	230	RTCD2942A821KP030M
		25×25	0.20	1.36	330	230	RTCD2942A821KQ025M
	1000	22×35	0.20	1.54	270	190	RTCD2942A102KP035M
		25×30	0.20	1.56	270	190	RTCD2942A102KQ030M
	1200	22×40	0.20	1.74	230	160	RTCD2942A122KP040M
		25×35	0.20	1.76	230	160	RTCD2942A122KQ035M
		30×25	0.20	1.72	230	160	RTCD2942A122KR025M
	1500	25×40	0.20	2.04	180	130	RTCD2942A152KQ040M
		30×30	0.20	2.01	180	130	RTCD2942A152KR030M
		35×25	0.20	2.08	180	130	RTCD2942A152KS025M
	1800	25×45	0.20	2.29	150	110	RTCD2942A182KQ045M
		30×35	0.20	2.28	150	110	RTCD2942A182KR035M
	2200	25×50	0.20	2.58	125	85	RTCD2942A222KQ050M
		30×40	0.20	2.60	125	85	RTCD2942A222KR040M
		35×30	0.20	2.52	125	85	RTCD2942A222KS030M
	2700	30×45	0.20	2.95	100	70	RTCD2942A272KR045M
		35×35	0.20	2.90	100	70	RTCD2942A272KS035M
	3300	30×50	0.20	3.33	80	60	RTCD2942A332KR050M
		35×40	0.20	3.32	80	60	RTCD2942A332KS040M
	3900	35×45	0.20	3.70	70	50	RTCD2942A392KS045M
	4700	35×50	0.20	4.16	60	40	RTCD2942A472KS050M
160 2C (200)	330	22×25	0.15	1.18	610	430	RTCD2942C331KP025M
	390	22×30	0.15	1.45	510	360	RTCD2942C391KP030M
	470	22×35	0.15	1.54	430	300	RTCD2942C471KP035M
		25×25	0.15	1.55	430	300	RTCD2942C471KQ025M
	560	22×40	0.15	1.65	355	250	RTCD2942C561KP040M
		25×30	0.15	1.74	355	250	RTCD2942C561KQ030M
	680	22×45	0.15	1.71	300	210	RTCD2942C681KP045M
		25×35	0.15	1.81	300	210	RTCD2942C681KQ035M
		30×25	0.15	1.83	300	210	RTCD2942C681KR025M
	820	25×40	0.15	1.98	245	170	RTCD2942C821KP040M
		30×30	0.15	1.99	245	170	RTCD2942C821KR030M
	1000	25×45	0.15	2.04	200	140	RTCD2942C102KQ045M
		30×35	0.15	2.15	200	140	RTCD2942C102KR035M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number	
160 2C (200)	1200	25×50	0.15	2.15	170	120	RTCD2942C122KQ050M	
		30×40	0.15	2.23	170	120	RTCD2942C122KR040M	
		35×30	0.15	2.43	170	120	RTCD2942C122KS030M	
	1500	30×45	0.15	2.56	135	95	RTCD2942C152KR045M	
		35×35	0.15	2.56	135	95	RTCD2942C152KS035M	
	1800	35×45	0.15	3.00	120	80	RTCD2942C182KS045M	
	2200	35×50	0.15	3.14	100	70	RTCD2942C222KS050M	
180 2K (225)	470	270	22×25	0.15	1.09	740	520	RTCD2942K271KP025M
		330	22×30	0.15	1.30	610	430	RTCD2942K331KP030M
		390	25×25	0.15	1.36	510	360	RTCD2942K391KQ025M
		22×35	0.15	1.51	430	300	RTCD2942K471KP035M	
			0.15	1.63	430	300	RTCD2942K471KQ030M	
	560	22×40	0.15	1.63	360	250	RTCD2942K561KP040M	
		25×35	0.15	1.70	360	250	RTCD2942K561KQ035M	
		30×25	0.15	1.68	360	250	RTCD2942K561KR025M	
	680	25×40	0.15	1.74	300	210	RTCD2942K681KQ040M	
		30×30	0.15	1.76	300	210	RTCD2942K681KR030M	
		35×25	0.15	1.94	300	210	RTCD2942K681KS025M	
	820	25×45	0.15	1.80	245	180	RTCD2942K821KQ045M	
		30×35	0.15	1.86	245	180	RTCD2942K821KR035M	
	1000	25×50	0.15	1.92	200	140	RTCD2942K102KQ050M	
		30×40	0.15	2.03	200	140	RTCD2942K102KR040M	
		35×30	0.15	2.18	200	140	RTCD2942K102KS030M	
	1200	30×45	0.15	2.20	170	120	RTCD2942K122KR045M	
		35×35	0.15	2.36	170	120	RTCD2942K122KS035M	
	1500	30×50	0.15	2.38	140	100	RTCD2942K152KR050M	
		35×40	0.15	2.58	140	100	RTCD2942K152KS040M	
	1800	35×45	0.15	2.68	120	80	RTCD2942K182KS045M	
200 2D (250)	220	22×25	0.15	1.10	910	640	RTCD2942D221KP025M	
	270	22×30	0.15	1.21	740	520	RTCD2942D271KP030M	
	330	25×25	0.15	1.37	610	430	RTCD2942D331KQ025M	
	390	22×35	0.15	1.42	510	360	RTCD2942D391KP035M	
	470	22×40	0.15	1.52	425	300	RTCD2942D471KP040M	
		25×30	0.15	1.48	425	300	RTCD2942D471KQ030M	
		30×25	0.15	1.58	425	300	RTCD2942D471KR025M	
	560	22×45	0.15	1.60	355	250	RTCD2942D561KP045M	
		25×35	0.15	1.67	355	250	RTCD2942D561KQ035M	
	680	22×50	0.15	1.70	300	210	RTCD2942D681KP050M	
		25×40	0.15	1.81	300	210	RTCD2942D681KQ040M	
		30×30	0.15	0.18	300	210	RTCD2942D681KR030M	

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
200 2D (250)	820	25×50	0.15	1.88	245	170	RTCD2942D821KQ050M
		30×35	0.15	2.00	245	170	RTCD2942D821KR035M
		35×30	0.15	2.08	245	170	RTCD2942D821KS030M
	1000	30×45	0.15	2.19	200	140	RTCD2942D102KR045M
		35×35	0.15	2.24	200	140	RTCD2942D102KS035M
	1200	30×50	0.15	2.23	170	120	RTCD2942D122KR050M
		35×40	0.15	2.42	170	120	RTCD2942D122KS040M
	1500	35×45	0.15	2.60	140	100	RTCD2942D152KS045M
	1800	35×50	0.15	2.72	120	80	RTCD2942D182KS050M
250 2E (300)	180	22×25	0.15	0.94	1110	780	RTCD2942E181KP025M
	220	22×30	0.15	1.11	910	640	RTCD2942E221KP030M
		25×25	0.15	1.17	910	640	RTCD2942E221KQ025M
	270	22×35	0.15	1.15	740	520	RTCD2942E271KP035M
	330	22×40	0.15	1.22	610	430	RTCD2942E331KP040M
		25×30	0.15	1.31	610	430	RTCD2942E331KQ030M
		30×25	0.15	1.31	610	430	RTCD2942E331KR025M
	390	22×45	0.15	1.28	510	360	RTCD2942E391KP045M
		25×35	0.15	1.43	510	360	RTCD2942E391KQ035M
	470	25×40	0.15	1.54	430	300	RTCD2942E471KQ040M
		30×30	0.15	1.38	430	300	RTCD2942E471KR030M
		35×25	0.15	1.40	430	300	RTCD2942E471KS025M
	560	25×45	0.15	1.60	360	250	RTCD2942E561KQ045M
		30×35	0.15	1.59	360	250	RTCD2942E561KR035M
		35×30	0.15	1.58	360	250	RTCD2942E561KS030M
	680	25×50	0.15	1.68	300	210	RTCD2942E681KQ050M
		30×40	0.15	1.78	300	210	RTCD2942E681KR040M
	820	30×45	0.15	1.84	245	170	RTCD2942E821KR045M
		35×35	0.15	1.84	245	170	RTCD2942E821KS035M
	1000	30×50	0.15	1.87	200	140	RTCD2942E102KR050M
		35×40	0.15	1.99	200	140	RTCD2942E102KS040M
	1200	35×45	0.15	2.12	170	120	RTCD2942E122KS045M
	1500	35×50	0.15	2.70	170	120	RTCD2942E152KS050M
350 2V (400)	82	22×30	0.15	0.60	2940	1620	RTCD2942V820KP030M
	100	25×25	0.15	0.70	1995	1100	RTCD2942V101KQ025M
	120	22×35	0.15	0.74	1660	920	RTCD2942V121KP035M
	150	22×40	0.15	0.79	1330	730	RTCD2942V151KP040M
		25×30	0.15	0.83	1330	730	RTCD2942V151KQ030M
		30×25	0.15	0.82	1330	730	RTCD2942V151KR025M
	180	22×45	0.15	0.81	1110	610	RTCD2942V181KP045M
		25×35	0.15	0.89	1110	610	RTCD2942V181KQ035M
		30×30	0.15	0.91	1110	610	RTCD2942V181KR030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
350 2V (400)	220	22×50	0.15	0.93	910	500	RTCD2942V221KP050M
		25×40	0.15	0.99	910	500	RTCD2942V221KQ040M
		35×25	0.15	0.98	910	500	RTCD2942V221KS025M
	270	25×50	0.15	1.02	740	410	RTCD2942V271KQ050M
		30×35	0.15	1.06	740	410	RTCD2942V271KR035M
		35×30	0.15	1.02	740	410	RTCD2942V271KS030M
	330	30×45	0.15	1.18	610	340	RTCD2942V331KR045M
		35×35	0.15	1.18	610	340	RTCD2942V331KS035M
	390	30×50	0.15	1.28	510	285	RTCD2942V391KR050M
		35×40	0.15	1.28	510	285	RTCD2942V391KS040M
	470	35×45	0.15	1.36	425	240	RTCD2942V471KS045M
	560	35×50	0.15	1.52	355	200	RTCD2942V561KS050M
400 2G (450)	68	22×25	0.15	0.47	2930	1525	RTCD2942G680KP025M
	82	25×25	0.15	0.65	2430	1265	RTCD2942G820KQ025M
	100	22×30	0.15	0.61	2000	1035	RTCD2942G101KP030M
	120	22×35	0.15	0.64	1660	865	RTCD2942G121KP035M
		25×30	0.15	0.70	1660	865	RTCD2942G121KQ030M
		30×25	0.15	0.79	1660	865	RTCD2942G121KR025M
	150	22×40	0.15	0.70	1330	690	RTCD2942G151KP040M
		25×35	0.15	0.73	1330	690	RTCD2942G151KQ035M
	180	25×40	0.15	0.83	1110	575	RTCD2942G181KQ040M
		30×30	0.15	0.83	1110	575	RTCD2942G181KR030M
		35×25	0.15	0.87	1110	575	RTCD2942G181KS025M
	220	25×45	0.15	0.88	910	475	RTCD2942G221KQ045M
		30×35	0.15	0.87	910	475	RTCD2942G221KR035M
	270	25×50	0.15	0.94	740	385	RTCD2942G271KQ050M
		30×40	0.15	0.95	740	385	RTCD2942G271KR040M
		35×30	0.15	0.92	740	385	RTCD2942G271KS030M
	330	30×45	0.15	1.11	610	315	RTCD2942G331KR045M
		35×35	0.15	1.14	610	315	RTCD2942G331KS035M
	390	30×50	0.15	1.16	510	265	RTCD2942G391KR050M
		35×40	0.15	1.27	510	265	RTCD2942G391KS040M
	470	35×45	0.15	1.31	425	220	RTCD2942G471KS045M
	560	35×50	0.15	1.52	355	185	RTCD2942G561KS050M
	680	35×60	0.15	1.70	305	165	RTCD2942G681KS060M
450 2W (500)	56	22×30	0.20	0.48	4740	2370	RTCD2942W560KP030M
	68	22×30	0.20	0.56	3910	1960	RTCD2942W680KP030M
		25×25	0.20	0.66	3910	1960	RTCD2942W680KQ025M
	82	22×35	0.20	0.65	3240	1620	RTCD2942W820KP035M
		25×30	0.20	0.63	3240	1620	RTCD2942W820KQ030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
450 2W (500)	100	22×40	0.20	0.71	2655	1330	RTCD2942W101KP040M
		25×30	0.20	0.71	2655	1330	RTCD2942W101KQ030M
		30×25	0.20	0.78	2655	1330	RTCD2942W101KR025M
	120	22×45	0.20	0.73	2215	1110	RTCD2942W121KP045M
		25×35	0.20	0.73	2215	1110	RTCD2942W121KQ035M
	150	25×40	0.20	0.82	1770	885	RTCD2942W151KQ040M
		30×30	0.20	0.83	1770	885	RTCD2942W151KR030M
		35×25	0.20	0.86	1770	885	RTCD2942W151KS025M
	180	25×45	0.20	0.89	1475	740	RTCD2942W181KQ045M
		30×35	0.20	0.88	1475	740	RTCD2942W181KR035M
	220	25×50	0.20	0.96	1210	610	RTCD2942W221KQ050M
		30×40	0.20	0.98	1210	610	RTCD2942W221KR040M
		35×30	0.20	0.94	1210	610	RTCD2942W221KS030M
	270	30×45	0.20	1.15	990	500	RTCD2942W271KR045M
		35×35	0.20	1.16	990	500	RTCD2942W271KS035M
	330	30×50	0.20	1.19	810	410	RTCD2942W331KQ050M
		35×40	0.20	1.29	810	410	RTCD2942W331KS040M
	390	35×45	0.20	1.36	685	340	RTCD2942W391KS045M
	470	35×50	0.20	1.54	565	290	RTCD2942W471KS050M
500 2H (550)	39	22×30	0.20	0.37	6810	3410	RTCD2942H390KP030M
	47	22×35	0.20	0.44	5650	2830	RTCD2942H470KP035M
	56	22×40	0.20	0.49	4740	2370	RTCD2942H560KP040M
	68	22×45	0.20	0.56	3905	1960	RTCD2942H680KP045M
	82	25×40	0.20	0.63	3240	1620	RTCD2942H820KQ040M
	100	25×45	0.20	0.68	2660	1330	RTCD2942H101KQ045M
	120	25×50	0.20	0.79	2215	1110	RTCD2942H121KQ050M
		35×30	0.20	0.75	2215	1110	RTCD2942H121KS030M
	150	30×40	0.20	0.88	1770	890	RTCD2942H151KR040M
	180	30×50	0.20	1.03	1475	740	RTCD2942H181KR050M
	220	35×45	0.20	1.13	1210	610	RTCD2942H221KS045M
	270	35×50	0.20	1.30	990	500	RTCD2942H271KS050M

RTCD296 SERIES (105°C 5000H)



- Compliant to the RoHS directive.
- 105°C 5000H long life and high ripple current series.
- Used in professional power supplies and frequency converters etc.

■ Specification

Item	Performance Characteristics																						
Operating range	-40°C ~ +105°C						-25°C ~ +105°C																
Rated voltage range	16V ~ 100V						160V ~ 450V																
Capacitance tolerance	$\pm 20\%$ (20°C, 120Hz)																						
Leakage current	$I \leq 0.01CV(\mu A)$ or $1.5mA$ (Whichever is smaller) (20°C, after 5 minutes) C=Nominal capacitance(μF), V=Rated voltage(V)																						
Dissipation factor (20°C, 120Hz)	$U_R(V)$	16	25	35	50	63	80	100	160 ~ 250	350 ~ 400	450												
	$\tan \delta$	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.20	0.25												
Stability at Low Temperature (Impedance ratio at 120Hz)	<table border="1"> <tr> <td>$U_R(V)$</td> <td>16 ~ 100</td> <td>160 ~ 250</td> <td>315 ~ 450</td> </tr> <tr> <td>$Z(-25°C)/Z(+20°C)$</td> <td>4</td> <td>3</td> <td>8</td> </tr> <tr> <td>$Z(-40°C)/Z(+20°C)$</td> <td>15</td> <td>-</td> <td>-</td> </tr> </table>											$U_R(V)$	16 ~ 100	160 ~ 250	315 ~ 450	$Z(-25°C)/Z(+20°C)$	4	3	8	$Z(-40°C)/Z(+20°C)$	15	-	-
$U_R(V)$	16 ~ 100	160 ~ 250	315 ~ 450																				
$Z(-25°C)/Z(+20°C)$	4	3	8																				
$Z(-40°C)/Z(+20°C)$	15	-	-																				
Load Life	<p>After applying rated voltage with specified ripple current for 2000 hours at 85°C(the peak voltage shall not exceed the rated voltage), and then restored for 24 hours, capacitor shall meet the following requirement:</p> <table border="1"> <tr> <td>Capacitance change</td> <td>Within $\pm 20\%$ of the initial value.</td> </tr> <tr> <td>Dissipation factor</td> <td>Not more than 200% of the initial specified value.</td> </tr> <tr> <td>Leakage current</td> <td>Not more than the initial specified value.</td> </tr> </table>											Capacitance change	Within $\pm 20\%$ of the initial value.	Dissipation factor	Not more than 200% of the initial specified value.	Leakage current	Not more than the initial specified value.						
Capacitance change	Within $\pm 20\%$ of the initial value.																						
Dissipation factor	Not more than 200% of the initial specified value.																						
Leakage current	Not more than the initial specified value.																						
Shelf Life	<p>After storing for 1000 hours at 85°C, UR to be applied for 30 minutes and then restored for 24 hours, capacitor shall meet the following requirement:</p> <table border="1"> <tr> <td>Capacitance change</td> <td>Within $\pm 20\%$ of the initial value.</td> </tr> <tr> <td>Dissipation factor</td> <td>Not more than 200% of the initial specified value.</td> </tr> <tr> <td>Leakage current</td> <td>Not more than the initial specified value.</td> </tr> </table>											Capacitance change	Within $\pm 20\%$ of the initial value.	Dissipation factor	Not more than 200% of the initial specified value.	Leakage current	Not more than the initial specified value.						
Capacitance change	Within $\pm 20\%$ of the initial value.																						
Dissipation factor	Not more than 200% of the initial specified value.																						
Leakage current	Not more than the initial specified value.																						
Standard	JIS C 5101-4																						

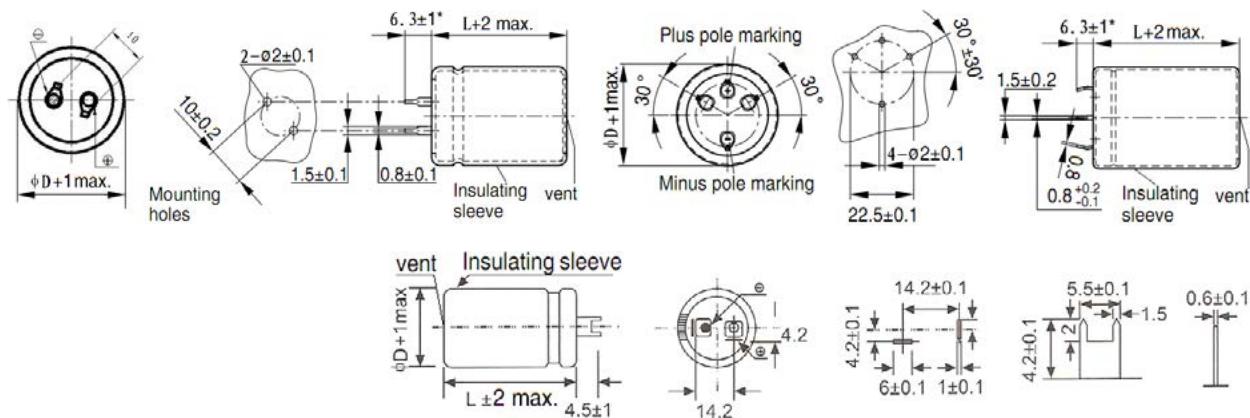
■ Coefficient of rated ripple current

T (°C)	40	55	70	85	105
Coefficient	2.7	2.5	2.1	1.7	1.0

F(Hz) U _R (V)	50(60)	120	500	1K	≥10K
16-100	0.90	1.00	1.05	1.10	1.15
160-250	0.80	1.00	1.20	1.30	1.50
315-450	0.80	1.00	1.20	1.25	1.40

■ Drawing

Unit: mm



×:Shorter terminal is: 4.0±0.5mm

RTCD296 Dimensions

Rated Voltage code (V.DC)	Capacitance (μF)	Case size $\Phi\text{D} \times \text{L}(\text{mm})$	$\tan\delta$ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
16 1C (20)	5600	22×30	0.50	1.49	120	85	RTCD2961C562KP030M
	6800	22×30	0.50	1.66	100	70	RTCD2961C682KP030M
	8200	25×30	0.50	1.71	90	60	RTCD2961C822KQ030M
	10000	22×35	0.50	2.10	70	50	RTCD2961C103KP035M
		25×30	0.50	2.08	70	50	RTCD2961C103KQ030M
	12000	22×40	0.50	23.60	60	40	RTCD2961C123KP040M
		25×35	0.50	2.38	60	40	RTCD2961C123KQ035M
		30×30	0.50	2.35	60	40	RTCD2961C123KR030M
	15000	22×45	0.50	2.67	45	35	RTCD2961C153KP045M
		25×40	0.50	2.72	45	35	RTCD2961C153KQ040M
	18000	25×45	0.50	3.06	40	30	RTCD2961C183KQ045M
		30×35	0.50	3.03	40	30	RTCD2961C183KR035M
		35×30	0.50	3.10	40	30	RTCD2961C183KS030M
	22000	25×50	0.50	3.40	30	22	RTCD2961C223KQ050M
		30×40	0.50	3.46	30	22	RTCD2961C223KR040M
	27000	30×45	0.50	3.89	25	18	RTCD2961C273KR045M
		35×35	0.50	3.86	25	18	RTCD2961C273KS035M
	33000	30×50	0.50	4.33	20	15	RTCD2961C333KR050M
		35×40	0.50	4.33	20	15	RTCD2961C333KS040M
	39000	35×45	0.50	4.96	18	13	RTCD2961C393KS045M
	47000	35×50	0.50	5.49	15	11	RTCD2961C473KS050M
	56000	35×50	0.50	5.38	15	9	RTCD2961C563KS050M
25 1E (32)	3900	22×25	0.45	1.32	160	110	RTCD2961E392KP025M
	4700	22×30	0.45	1.56	130	90	RTCD2961E472KP030M
	5600	22×35	0.45	1.78	110	75	RTCD2961E562KP035M
		25×25	0.45	1.77	110	75	RTCD2961E562KQ025M
	6800	22×40	0.45	2.02	90	65	RTCD2961E682KP040M
		25×30	0.45	1.89	90	65	RTCD2961E682KQ030M
	8200	22×45	0.45	2.28	75	55	RTCD2961E822KP045M
		25×35	0.45	2.18	75	55	RTCD2961E822KQ035M
		30×30	0.45	2.23	75	55	RTCD2961E822KR030M
	10000	22×50	0.45	2.56	60	45	RTCD2961E103KP050M
		25×40	0.45	2.54	60	45	RTCD2961E103KQ040M
	12000	25×45	0.45	2.79	50	35	RTCD2961E123KQ045M
		30×35	0.45	2.72	50	35	RTCD2961E123KR035M
		35×30	0.45	2.76	50	35	RTCD2961E123KS030M
	15000	30×40	0.45	3.13	40	30	RTCD2961E153KR040M
	18000	30×45	0.45	3.52	35	25	RTCD2961E183KR045M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
25 1E (32)	22000	30×50	0.45	3.93	30	20	RTCD2961E223KR050M
		35×40	0.45	3.95	30	20	RTCD2961E223KS040M
		35×50	0.45	4.73	25	18	RTCD2961E273KS050M
35 1V (44)	2700	22×25	0.40	1.30	200	140	RTCD2961V272KP025M
	3300	22×30	0.40	1.55	170	120	RTCD2961V332KP030M
	3900	22×35	0.40	1.77	140	95	RTCD2961V392KP035M
		25×25	0.40	1.76	140	95	RTCD2961V392KQ025M
	4700	22×40	0.40	2.02	120	80	RTCD2961V472KP040M
		25×30	0.40	1.98	120	80	RTCD2961V472KQ030M
	5600	22×45	0.40	2.26	100	70	RTCD2961V562KP045M
		25×35	0.40	2.18	100	70	RTCD2961V562KQ035M
		30×30	0.40	2.12	100	70	RTCD2961V562KR030M
	6800	22×50	0.40	2.50	80	55	RTCD2961V682KP050M
		25×40	0.40	2.46	80	55	RTCD2961V682KQ040M
	8200	25×45	0.40	2.81	65	45	RTCD2961V822KQ045M
		30×35	0.40	2.70	65	45	RTCD2961V822KR035M
	10000	30×40	0.40	3.04	55	40	RTCD2961V103KR040M
		35×30	0.40	2.80	55	40	RTCD2961V103KS030M
	12000	30×45	0.40	3.39	45	35	RTCD2961V123KR045M
		35×35	0.40	3.30	45	35	RTCD2961V123KS035M
	15000	35×40	0.40	3.38	35	25	RTCD2961V153KS040M
	18000	35×45	0.40	4.40	30	21	RTCD2961V183KS045M
50 1H (63)	1500	22×25	0.35	1.21	310	220	RTCD2961H152KP025M
	2200	22×30	0.35	1.53	215	150	RTCD2961H222KP030M
	2700	25×30	0.35	1.77	175	120	RTCD2961H272KQ030M
	3300	22×40	0.35	1.92	145	100	RTCD2961H332KP040M
		30×25	0.35	1.92	145	100	RTCD2961H332KQ025M
	3900	25×40	0.35	2.23	120	85	RTCD2961H392KQ040M
		30×30	0.35	2.20	120	85	RTCD2961H392KR030M
	4700	25×45	0.35	2.46	100	70	RTCD2961H472KQ045M
	5600	30×40	0.35	2.72	85	60	RTCD2961H562KR040M
		35×30	0.35	2.59	85	60	RTCD2961H562KS030M
	6800	30×45	0.35	3.02	70	50	RTCD2961H682KQ045M
		35×35	0.35	2.92	70	50	RTCD2961H682KS035M
	8200	30×50	0.35	3.63	60	40	RTCD2961H822KR050M
		35×40	0.35	3.37	60	40	RTCD2961H822KS040M
	10000	35×45	0.35	3.80	50	35	RTCD2961H103KS045M
	12000	35×50	0.35	4.07	40	30	RTCD2961H123KS050M
63 1J (79)	1500	25×30	0.30	1.42	270	190	RTCD2961J152KQ030M
	1800	22×35	0.30	1.63	230	160	RTCD2961J182KP035M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
63 1J (79)	2200	22×40	0.30	1.86	185	130	RTCD2961J222KP040M
		30×25	0.30	1.81	185	130	RTCD2961J222KR025M
	2700	25×40	0.30	2.04	150	110	RTCD2961J272KQ040M
		30×30	0.30	2.02	150	110	RTCD2961J272KR030M
	3300	25×45	0.30	2.39	125	85	RTCD2961J332KQ045M
	3900	30×35	0.30	2.47	110	75	RTCD2961J392KR035M
		35×30	0.30	2.32	110	75	RTCD2961J392KS030M
	4700	30×45	0.30	2.85	90	60	RTCD2961J472KR045M
		35×35	0.30	2.78	90	60	RTCD2961J472KS035M
	5600	30×50	0.30	3.28	75	50	RTCD2961J562KR050M
		35×40	0.30	3.20	75	50	RTCD2961J562KS040M
80 1K (100)	6800	35×45	0.30	3.62	60	60	RTCD2961J682KS045M
	8200	35×50	0.30	3.95	50	35	RTCD2961J822KS050M
	820	22×25	0.25	1.10	410	290	RTCD2961K821KP025M
	1000	22×30	0.25	1.29	335	235	RTCD2961K102KP030M
	1200	22×35	0.25	1.49	280	195	RTCD2961K122KP035M
		25×25	0.25	1.39	280	195	RTCD2961K122KQ025M
	1500	25×30	0.25	1.75	225	160	RTCD2961K152KQ030M
		30×30	0.25	1.78	225	160	RTCD2961K152KR030M
	1800	22×45	0.25	1.92	185	130	RTCD2961K182KP045M
		25×35	0.25	1.86	185	130	RTCD2961K182KQ035M
100 2A (125)	2200	25×45	0.25	2.22	155	110	RTCD2961K222KQ045M
		30×35	0.25	2.08	155	110	RTCD2961K222KR035M
	2700	30×40	0.25	2.40	130	90	RTCD2961K272KR040M
		35×30	0.25	2.46	130	90	RTCD2961K272KS030M
	3300	30×40	0.25	2.70	110	70	RTCD2961K332KR040M
		35×35	0.25	2.61	110	70	RTCD2961K332KS035M
	3900	30×45	0.25	2.95	85	60	RTCD2961K392KR045M
		35×40	0.25	3.01	85	60	RTCD2961K392KS040M
	4700	35×45	0.25	3.45	75	50	RTCD2961K472KS045M
	5600	35×50	0.25	3.73	60	45	RTCD2961K562KS050M
	560	22×25	0.20	1.01	480	335	RTCD2962A561KP025M
100 2A (125)	820	22×35	0.20	1.34	330	230	RTCD2962A821KP035M
		25×25	0.20	1.28	330	230	RTCD2962A821KQ025M
		22×40	0.20	1.58	265	190	RTCD2962A102KP040M
	1000	25×35	0.20	1.56	265	190	RTCD2962A102KQ035M
		22×45	0.20	1.76	225	160	RTCD2962A122KP045M
	1200	25×40	0.20	1.79	225	160	RTCD2962A122KQ040M
		22×50	0.20	2.00	180	130	RTCD2962A152KP050M
	1500	25×45	0.20	2.06	180	130	RTCD2962A152KQ045M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
100 2A (125)	1800	30×35	0.20	2.20	150	110	RTCD2962A182KR035M
		35×30	0.20	2.16	150	110	RTCD2962A182KS030M
	2200	30×40	0.20	2.52	125	90	RTCD2962A222KR040M
		35×35	0.20	2.49	125	90	RTCD2962A222KS035M
	2700	30×45	0.20	2.86	100	70	RTCD2962A272KR045M
		35×40	0.20	2.88	100	70	RTCD2962A272KS040M
	3300	35×45	0.20	3.25	80	60	RTCD2962A332KS045M
	3900	35×50	0.20	3.57	70	50	RTCD2962A392KS050M
160 2C (200)	220	22×25	0.15	0.63	910	635	RTCD2962C221KP025M
	270	22×30	0.15	0.76	740	520	RTCD2962C271KP030M
	330	22×35	0.15	0.95	610	425	RTCD2962C331KP035M
		25×25	0.15	0.85	610	425	RTCD2962C331KQ025M
	390	25×30	0.15	0.97	510	360	RTCD2962C391KQ030M
		30×25	0.15	1.05	510	360	RTCD2962C391KR025M
	470	22×40	0.15	1.11	425	300	RTCD2962C471KP040M
		25×35	0.15	1.15	425	300	RTCD2962C471KQ035M
		30×30	0.15	1.18	425	300	RTCD2962C471KR030M
	560	22×45	0.15	1.27	355	250	RTCD2962C561KP045M
	680	22×50	0.15	1.44	300	210	RTCD2962C681KP050M
		25×40	0.15	1.44	300	210	RTCD2962C681KQ040M
		30×35	0.15	1.51	300	210	RTCD2962C681KR035M
	820	25×45	0.15	1.63	245	170	RTCD2962C821KQ045M
		30×40	0.15	1.67	245	170	RTCD2962C821KR040M
		35×30	0.15	1.63	245	170	RTCD2962C821KS030M
	1000	30×45	0.15	1.90	200	140	RTCD2962C102KR045M
		35×35	0.15	1.90	200	140	RTCD2962C102KS035M
	1200	30×50	0.15	2.16	170	120	RTCD2962C122KR050M
		35×40	0.15	2.23	170	120	RTCD2962C122KS040M
	1500	35×45	0.15	2.61	135	100	RTCD2962C152KS045M
	1800	35×50	0.15	2.98	115	80	RTCD2962C182KS050M
180 2K (225)	220	22×25	0.15	0.63	910	635	RTCD2962K221KP025M
	270	22×30	0.15	0.76	740	520	RTCD2962K271KP030M
	330	22×35	0.15	0.91	610	520	RTCD2962K331KP035M
		25×30	0.15	0.91	610	425	RTCD2962K331KQ030M
	390	22×40	0.15	1.03	510	425	RTCD2962K391KP040M
		25×35	0.15	1.06	510	360	RTCD2962K391KQ035M
		30×25	0.15	1.03	510	360	RTCD2962K391KR025M
	470	22×45	0.15	1.18	425	360	RTCD2962K471KP045M
		30×30	0.15	1.18	425	300	RTCD2962K471KR030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
180 2K (225)	560	22×50	0.15	1.33	355	300	RTCD2962K561KP050M
		25×40	0.15	1.33	355	250	RTCD2962K561KQ040M
		30×35	0.15	1.33	355	250	RTCD2962K561KR035M
	680	25×45	0.15	1.52	300	205	RTCD2962K681KQ045M
		35×30	0.15	1.49	300	205	RTCD2962K681KS030M
	820	25×50	0.15	1.72	245	170	RTCD2962K821KQ050M
		30×40	0.15	1.75	245	170	RTCD2962K821KR040M
		35×35	0.15	1.76	245	170	RTCD2962K821KS035M
	1000	30×45	0.15	2.02	200	140	RTCD2962K102KR045M
		35×40	0.15	2.08	200	140	RTCD2962K102KS040M
	1200	30×50	0.15	2.25	170	120	RTCD2962K122KR050M
		35×45	0.15	2.24	170	120	RTCD2962K122KS045M
	1500	35×50	0.15	2.77	135	95	RTCD2962K152KS050M
200 2D (250)	180	22×25	0.15	0.57	1110	780	RTCD2962D181KP025M
	220	22×30	0.15	0.72	910	640	RTCD2962D221KP030M
	270	22×35	0.15	0.84	740	520	RTCD2962D271KP035M
		25×25	0.15	0.77	740	520	RTCD2962D271KQ025M
	330	22×40	0.15	0.97	610	430	RTCD2962D331KP040M
		25×30	0.15	0.91	610	430	RTCD2962D331KQ030M
	390	25×35	0.15	1.07	510	360	RTCD2962D391KQ035M
		30×25	0.15	1.03	510	360	RTCD2962D391KR025M
	470	25×40	0.15	1.23	425	300	RTCD2962D471KQ040M
		30×30	0.15	1.18	425	300	RTCD2962D471KR030M
	560	25×45	0.15	1.40	355	250	RTCD2962D561KQ045M
		30×35	0.15	1.39	355	250	RTCD2962D561KR035M
	680	25×50	0.15	1.59	295	210	RTCD2962D681KQ050M
		30×40	0.15	1.61	295	210	RTCD2962D681KR040M
		35×30	0.15	1.50	295	210	RTCD2962D681KS030M
	820	30×45	0.15	1.86	245	170	RTCD2962D821KR045M
		35×35	0.15	1.76	245	170	RTCD2962D821KS035M
	1000	30×50	0.15	2.12	200	140	RTCD2962D102KR050M
		35×40	0.15	2.08	200	140	RTCD2962D102KS040M
	1200	35×45	0.15	2.38	170	120	RTCD2962D122KS045M
	1500	35×50	0.15	2.77	140	100	RTCD2962D152KS050M
250 2E (300)	150	22×25	0.15	0.52	1330	930	RTCD2962E151KP025M
	180	22×30	0.15	0.64	1110	780	RTCD2962E181KP030M
	220	22×35	0.15	0.76	910	640	RTCD2962E221KP035M
		25×30	0.15	0.76	910	640	RTCD2962E221KQ030M
	270	22×40	0.15	0.88	740	520	RTCD2962E271KP040M
		25×35	0.15	0.90	740	520	RTCD2962E271KQ035M
		30×25	0.15	0.85	740	520	RTCD2962E271KR025M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
250 2E (300)	330	22×45	0.15	1.01	610	425	RTCD2962E331KP045M
		30×30	0.15	1.00	610	425	RTCD2962E331KR030M
	390	22×50	0.15	1.14	510	360	RTCD2962E391KP050M
		25×40	0.15	1.14	510	360	RTCD2962E391KQ040M
		30×35	0.15	1.16	510	360	RTCD2962E391KR035M
		25×45	0.15	1.30	425	300	RTCD2962E471KQ045M
	470	35×30	0.15	1.25	425	300	RTCD2962E471KS030M
		25×50	0.15	1.46	355	250	RTCD2962E561KQ050M
		30×40	0.15	1.49	355	250	RTCD2962E561KR040M
	560	35×35	0.15	1.49	355	250	RTCD2962E561KS035M
		30×45	0.15	1.71	295	210	RTCD2962E681KQ045M
		35×40	0.15	1.74	295	210	RTCD2962E681KS040M
	820	30×50	0.15	1.94	245	175	RTCD2962E821KR050M
	1000	35×45	0.15	2.21	200	140	RTCD2962E102KS045M
350 2V (400)	68	22×25	0.20	0.34	3910	2735	RTCD2962V680KP025M
	82	22×30	0.20	0.41	3240	2270	RTCD2962V820KP030M
	100	25×25	0.20	0.47	2660	1860	RTCD2962V101KQ025M
	120	22×35	0.20	0.52	2220	1550	RTCD2962V121KP035M
		25×30	0.20	0.53	2220	1550	RTCD2962V121KQ030M
		30×25	0.20	0.53	2220	1550	RTCD2962V121KR025M
	150	22×40	0.20	0.59	1770	1240	RTCD2962V151KP040M
		25×35	0.20	0.61	1770	1240	RTCD2962V151KQ035M
	180	22×45	0.20	0.68	1480	1040	RTCD2962V181KP045M
		25×40	0.20	0.71	1480	1040	RTCD2962V181KQ040M
		30×30	0.20	0.71	1480	1040	RTCD2962V181KR030M
	220	22×50	0.20	0.79	1210	850	RTCD2962V221KP050M
		25×45	0.20	0.82	1210	850	RTCD2962V221KQ045M
		30×35	0.20	0.82	1210	850	RTCD2962V221KR035M
	270	25×50	0.20	0.94	1000	690	RTCD2962V271KQ050M
		30×40	0.20	0.93	1000	690	RTCD2962V271KR040M
		35×30	0.20	0.91	1000	690	RTCD2962V271KS030M
	330	30×45	0.20	1.06	815	570	RTCD2962V331KR045M
		35×35	0.20	1.02	815	570	RTCD2962V331KS035M
	390	30×50	0.20	1.18	690	480	RTCD2962V391KR050M
		35×40	0.20	1.14	690	480	RTCD2962V391KS040M
	470	35×45	0.20	1.26	570	400	RTCD2962V471KS045M
	560	35×50	0.20	1.40	480	350	RTCD2962V561KS050M
400 2G (450)	68	22×30	0.20	0.38	3910	2735	RTCD2962G680KP030M
	82	25×25	0.20	0.41	3240	2270	RTCD2962G820KQ025M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz (mΩ)	ESR(typ.) 20°C, 120Hz (mΩ)	Part number
400 2G (450)	100	22×35	0.20	0.46	2660	1860	RTCD2962G101KP035M
		25×30	0.20	0.48	2660	1860	RTCD2962G101KQ030M
		30×25	0.20	0.48	2660	1860	RTCD2962G101KR025M
	120	22×40	0.20	0.53	2220	1550	RTCD2962G121KP040M
		25×35	0.20	0.55	2220	1550	RTCD2962G121KQ035M
		30×30	0.20	0.56	2220	1550	RTCD2962G121KR030M
	150	22×50	0.20	0.63	1770	1240	RTCD2962G151KP050M
		25×40	0.20	0.65	1770	1240	RTCD2962G151KQ040M
	180	25×45	0.20	0.72	1480	1035	RTCD2962G181KQ045M
		30×35	0.20	0.74	1480	1035	RTCD2962G181KR035M
	220	25×50	0.20	0.79	1210	850	RTCD2962G221KQ050M
		30×40	0.20	0.85	1210	850	RTCD2962G221KR040M
		35×30	0.20	0.89	1210	850	RTCD2962G221KS030M
	270	30×45	0.20	0.98	985	690	RTCD2962G271KR045M
		35×35	0.20	0.96	985	690	RTCD2962G271KS035M
	330	30×50	0.20	1.12	810	570	RTCD2962G331KR050M
		35×40	0.20	1.12	810	570	RTCD2962G331KS040M
	390	35×45	0.20	1.27	690	480	RTCD2962G391KS045M
	470	35×50	0.20	1.33	570	400	RTCD2962G471KS050M
450 2W (500)	68	22×30	0.25	0.38	3910	2740	RTCD2962W680KP030M
	82	22×35	0.25	0.44	3240	2270	RTCD2962W820KP035M
		25×30	0.25	0.45	3240	2270	RTCD2962W820KQ030M
		30×25	0.25	0.46	3240	2270	RTCD2962W820KR025M
	100	22×40	0.25	0.50	2660	1860	RTCD2962W101KP040M
		25×35	0.25	0.52	2660	1860	RTCD2962W101KQ035M
	120	22×50	0.25	0.58	2220	1550	RTCD2962W121KP050M
		25×40	0.25	0.58	2220	1550	RTCD2962W121KQ040M
		30×30	0.25	0.58	2220	1550	RTCD2962W121KR030M
	150	25×45	0.25	0.66	1770	1240	RTCD2962W151KQ045M
		30×35	0.25	0.68	1770	1240	RTCD2962W151KR035M
	180	25×50	0.25	0.74	1480	1035	RTCD2962W181KQ050M
		30×40	0.25	0.77	1480	1035	RTCD2962W181KR040M
		35×30	0.25	0.77	1480	1035	RTCD2962W181KS030M
	220	30×45	0.25	0.88	1210	850	RTCD2962W221KR045M
		35×35	0.25	0.88	1210	850	RTCD2962W221KS035M
	270	30×50	0.25	0.99	990	690	RTCD2962W271KR050M
		35×40	0.25	1.02	990	690	RTCD2962W271KS040M
	330	35×45	0.25	1.15	810	570	RTCD2962W331KS045M
	390	35×50	0.25	1.29	690	480	RTCD2962W391KS050M

RTCD297 SERIES (105°C 8000H)



- Compliant to the RoHS directive.
- 105°C 8000H long life and high ripple current series.
- Used in professional power supplies and frequency converters etc.

■ Specification

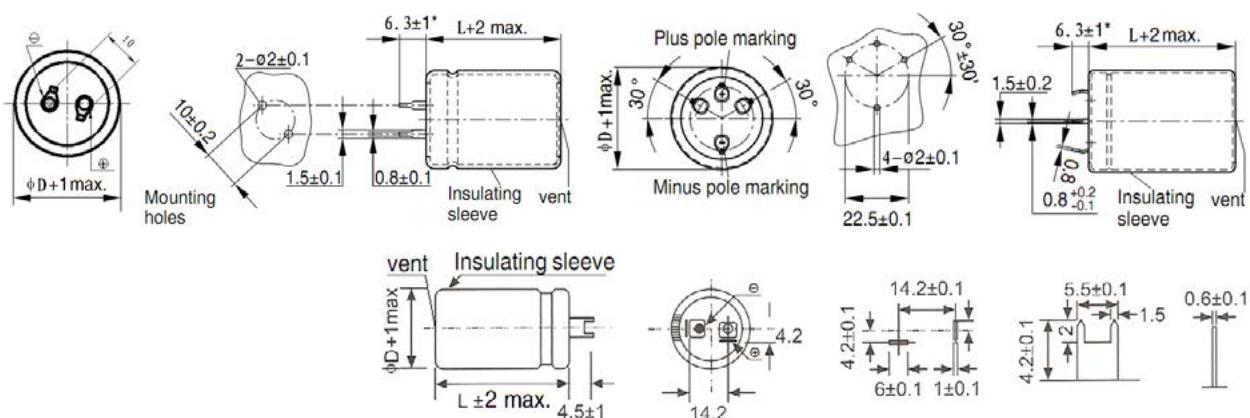
Item	Performance Characteristics								
Operating range	-25°C ~ +105°C								
Rated voltage range	160V ~ 450V								
Capacitance tolerance	±20% (20°C, 120Hz)								
Leakage current	$I \leq 0.01CV(\mu A)$ or $1.5mA$ (Whichever is smaller) (20°C, after 5 minutes) C=Nominal capacitance(μF), V=Rated voltage(V)								
Dissipation factor (20°C, 120Hz)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">$U_R(V)$</td> <td style="padding: 2px;">160-400V</td> <td style="padding: 2px;">420,450V</td> </tr> <tr> <td style="padding: 2px;">$\tan \delta$</td> <td style="padding: 2px;">0.15</td> <td style="padding: 2px;">0.20</td> </tr> </table>	$U_R(V)$	160-400V	420,450V	$\tan \delta$	0.15	0.20		
$U_R(V)$	160-400V	420,450V							
$\tan \delta$	0.15	0.20							
Stability at Low Temperature (Impedance ratio at 120Hz)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">$U_R(V)$</td> <td style="padding: 2px;">160-400V</td> <td style="padding: 2px;">420,450V</td> </tr> <tr> <td style="padding: 2px;">$Z(-25^\circ C)/Z(+20^\circ C)$</td> <td style="padding: 2px;">4</td> <td style="padding: 2px;">8</td> </tr> </table>	$U_R(V)$	160-400V	420,450V	$Z(-25^\circ C)/Z(+20^\circ C)$	4	8		
$U_R(V)$	160-400V	420,450V							
$Z(-25^\circ C)/Z(+20^\circ C)$	4	8							
Load Life	<p>After applying rated voltage with specified ripple current for 8000 hours at 105°C(the peak voltage shall not exceed the rated voltage), and then restored for 24 hours, capacitor shall meet the following requirement:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px; width: 33%;">Capacitance change</td> <td style="padding: 2px;">Within ±20% of the initial value.</td> </tr> <tr> <td style="padding: 2px;">Dissipation factor</td> <td style="padding: 2px;">Not more than 250% of the initial specified value.</td> </tr> <tr> <td style="padding: 2px;">Leakage current</td> <td style="padding: 2px;">Not more than the initial specified value.</td> </tr> </table>			Capacitance change	Within ±20% of the initial value.	Dissipation factor	Not more than 250% of the initial specified value.	Leakage current	Not more than the initial specified value.
Capacitance change	Within ±20% of the initial value.								
Dissipation factor	Not more than 250% of the initial specified value.								
Leakage current	Not more than the initial specified value.								
Shelf Life	<p>After storing for 1000 hours at 105°C, UR to be applied for 30 minutes and then restored for 24 hours, capacitor shall meet the following requirement:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px; width: 33%;">Capacitance change</td> <td style="padding: 2px;">Within ±20% of the initial value.</td> </tr> <tr> <td style="padding: 2px;">Dissipation factor</td> <td style="padding: 2px;">Not more than 250% of the initial specified value.</td> </tr> <tr> <td style="padding: 2px;">Leakage current</td> <td style="padding: 2px;">Not more than the initial specified value.</td> </tr> </table>			Capacitance change	Within ±20% of the initial value.	Dissipation factor	Not more than 250% of the initial specified value.	Leakage current	Not more than the initial specified value.
Capacitance change	Within ±20% of the initial value.								
Dissipation factor	Not more than 250% of the initial specified value.								
Leakage current	Not more than the initial specified value.								
Standard	JIS C 5101-4								

■ Coefficient of rated ripple current

T (°C)	40	55	70	85	105
Coefficient	2.7	2.5	2.1	1.7	1.0

F(Hz) U _R (V)	50(60)	120	300	1K	≥10K
160-250	0.81	1.00	1.17	1.2	1.50
350-450	0.77	1.00	1.16	1.41	1.43

■ Drawing



×:Shorter terminal is: $4.0 \pm 0.5 \text{ mm}$

■ RTCD297 Dimensions

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Part number
160 2C (200)	330	22×25	0.15	1.11	RTCD2972C331KP025M
	390	22×30	0.15	1.26	RTCD2972C391KP030M
	470	22×30	0.15	1.39	RTCD2972C471KP030M
		25×25	0.15	1.38	RTCD2972C471YQ025M
	560	22×35	0.15	1.55	RTCD2972C561KP035M
		25×30	0.15	1.55	RTCD2972C561KQ030M
	680	22×40	0.15	1.75	RTCD2972C681KP040M
		25×35	0.15	1.78	RTCD2972C681KQ035M
		30×25	0.15	1.74	RTCD2972C681KR025M
	820	22×50	0.15	1.97	RTCD2972C821KP050M
		25×40	0.15	2.01	RTCD2972C821KQ040M
		30×30	0.15	1.96	RTCD2972C821KR030M
	1000	25×45	0.15	2.27	RTCD2972C102KQ045M
		30×35	0.15	2.26	RTCD2972C102KR035M
	1200	25×50	0.15	2.54	RTCD2972C122KQ050M
		30×40	0.15	2.56	RTCD2972C122KQ040M
		35×30	0.15	2.52	RTCD2972C122KS030M
	1500	30×45	0.15	2.96	RTCD2972C152KR045M
		35×35	0.15	2.89	RTCD2972C152KS035M
	1800	30×50	0.15	3.32	RTCD2972C182KR050M
		35×40	0.15	3.30	RTCD2972C182KS040M
	2200	35×50	0.15	3.87	RTCD2972C222KS050M
180 2K (225)	270	22×25	0.15	1.00	RTCD2972K271KP025M
	330	22×30	0.15	1.16	RTCD2972K331KP030M
	390	22×30	0.15	1.26	RTCD2972K391KP030M
		25×25	0.15	1.26	RTCD2972K391KQ025M
	470	22×35	0.15	1.42	RTCD2972K471KP035M
		25×30	0.15	1.42	RTCD2972K471KQ030M
	560	22×40	0.15	1.59	RTCD2972K561KP040M
		25×30	0.15	1.55	RTCD2972K561KQ030M
		30×25	0.15	1.58	RTCD2972K561KR025M
	680	22×45	0.15	1.79	RTCD2972K681KP045M
		25×35	0.15	1.78	RTCD2972K681KQ035M
		30×30	0.15	1.79	RTCD2972K681KR030M
	820	25×40	0.15	2.01	RTCD2972K821KP040M
		30×35	0.15	2.04	RTCD2972K821KQ035M
	1000	25×50	0.15	2.32	RTCD2972K102KP050M
		30×35	0.15	2.26	RTCD2972K102KR035M
		35×30	0.15	2.30	RTCD2972K102KS030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Part number
180 2K (225)	1200	30×45	0.15	2.65	RTCD2972K122KR045M
		35×35	0.15	2.58	RTCD2972K122KS035M
	1500	30×50	0.15	3.03	RTCD2972K152KR050M
		35×40	0.15	3.01	RTCD2972K152KS040M
	1800	35×45	0.15	3.41	RTCD2972K182KS045M
	2200	35×50	0.15	3.87	RTCD2972K222KS050M
	220	22×25	0.15	0.90	RTCD2972D221KP025M
	270	22×30	0.15	1.05	RTCD2972D271KP030M
	330	22×30	0.15	1.16	RTCD2972D331KP030M
		25×25	0.15	1.16	RTCD2972D331KQ025M
200 2D (250)	390	22×35	0.15	1.29	RTCD2972D391KP035M
		25×30	0.15	1.29	RTCD2972D391KQ030M
	470	22×40	0.15	1.46	RTCD2972D471KP040M
		25×30	0.15	1.42	RTCD2972D471KQ030M
		30×25	0.15	1.45	RTCD2972D471KR025M
	560	22×45	0.15	1.63	RTCD2972D561KP045M
		25×35	0.15	1.62	RTCD2972D561KQ035M
		30×30	0.15	1.62	RTCD2972D561KR030M
	680	25×40	0.15	1.83	RTCD2972D681KQ040M
		30×30	0.15	1.79	RTCD2972D681KR030M
	820	25×45	0.15	2.06	RTCD2972D821KQ045M
		30×35	0.15	2.04	RTCD2972D821KR035M
	1000	30×45	0.15	2.42	RTCD2972D102KQ045M
		35×30	0.15	2.30	RTCD2972D102KS030M
	1200	30×50	0.15	2.71	RTCD2972D122KR050M
	1200	35×40	0.15	2.70	RTCD2972D122KS040M
	1500	35×45	0.15	3.11	RTCD2972D152KS045M
	1800	35×50	0.15	3.50	RTCD2972D182KS050M
250 2E (300)	180	22×25	0.15	0.82	RTCD2972E181KP025M
	220	22×30	0.15	0.95	RTCD2972E221KP030M
	270	22×35	0.15	1.08	RTCD2972E271KP035M
		25×25	0.15	1.05	RTCD2972E271KQ025M
	330	22×40	0.15	1.22	RTCD2972E331KP040M
		25×30	0.15	1.19	RTCD2972E331KQ030M
	390	22×45	0.15	1.36	RTCD2972E391KP045M
		25×35	0.15	1.35	RTCD2972E391KQ035M
		30×25	0.15	1.32	RTCD2972E391KR025M
	470	22×50	0.15	1.49	RTCD2972E471KP050M
		25×40	0.15	1.52	RTCD2972E471KQ040M
		30×30	0.15	1.49	RTCD2972E471KR030M
	560	25×45	0.15	1.70	RTCD2972E561KQ045M
		30×35	0.15	1.69	RTCD2972E561KR035M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Part number
250 2E (300)	680	25×50	0.15	1.91	RTCD2972E681KQ050M
		30×40	0.15	1.93	RTCD2972E681KR040M
		35×30	0.15	1.90	RTCD2972E681KS030M
	820	30×45	0.15	2.19	RTCD2972E821KR045M
		35×35	0.15	2.13	RTCD2972E821KS035M
	1000	35×40	0.15	2.46	RTCD2972E102KS040M
	1200	35×50	0.15	2.86	RTCD2972E122KS050M
350 2V (400)	100	22×25	0.15	0.67	RTCD2972V101KP025M
	120	22×30	0.15	0.77	RTCD2972V121KP030M
		25×25	0.15	0.76	RTCD2972V121KQ025M
	150	22×35	0.15	0.88	RTCD2972V151KP035M
		25×30	0.15	0.88	RTCD2972V151KQ030M
	180	22×40	0.15	0.99	RTCD2972V181KP040M
		25×30	0.15	0.96	RTCD2972V181KQ030M
		30×25	0.15	0.98	RTCD2972V181KR025M
	220	22×45	0.15	1.12	RTCD2972V221KP045M
		25×35	0.15	1.11	RTCD2972V221KQ035M
		30×30	0.15	1.11	RTCD2972V221KR030M
	270	25×40	0.15	1.26	RTCD2972V271KQ040M
		30×35	0.15	1.28	RTCD2972V271KR035M
	330	25×45	0.15	1.40	RTCD2972V331KQ045M
		30×35	0.15	1.42	RTCD2972V331KR035M
		35×30	0.15	1.45	RTCD2972V331KS030M
	390	30×40	0.15	1.60	RTCD2972V391KR040M
		35×35	0.15	1.61	RTCD2972V391KS035M
	470	30×50	0.15	1.86	RTCD2972V471KR050M
		35×40	0.15	1.85	RTCD2972V471KS040M
	560	35×40	0.15	2.02	RTCD2972V561KS040M
	680	35×50	0.15	2.36	RTCD2972V681KS050M
400 2G (450)	68	22×25	0.15	0.55	RTCD2972G680KP025M
	82	22×30	0.15	0.63	RTCD2972G820KP030M
	100	22×30	0.15	0.70	RTCD2972G101KP030M
		25×25	0.15	0.70	RTCD2972G101KQ025M
	120	22×35	0.15	0.79	RTCD2972G121KP035M
		25×30	0.15	0.79	RTCD2972G121KQ030M
	150	22×40	0.15	0.90	RTCD2972G151KP040M
		25×30	0.15	0.88	RTCD2972G151KQ030M
		30×25	0.15	0.90	RTCD2972G151KR025M
	180	22×45	0.15	0.99	RTCD2972G181KP045M
		25×35	0.15	1.01	RTCD2972G181KQ035M
		30×30	0.15	1.01	RTCD2972G181KR030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Part number
400 2G (450)	220	25×40	0.15	1.14	RTCD2972G221KQ040M
		30×35	0.15	1.16	RTCD2972G221KR035M
	270	25×50	0.15	1.32	RTCD2972G271KQ050M
		30×40	0.15	1.33	RTCD2972G271KR040M
		35×30	0.15	1.31	RTCD2972G271KS030M
	330	30×45	0.15	1.52	RTCD2972G331KR045M
		35×35	0.15	1.48	RTCD2972G331KS035M
	390	30×50	0.15	1.69	RTCD2972G391KR050M
		35×40	0.15	1.68	RTCD2972G391KS040M
	470	35×45	0.15	1.91	RTCD2972G471KS045M
	560	35×50	0.15	2.14	RTCD2972G561KS050M
450 2W (500)	47	22×25	0.20	0.46	RTCD2972W470KP025M
	56	22×30	0.20	0.52	RTCD2972W560KP030M
	68	22×30	0.20	0.58	RTCD2972W680KP030M
		25×25	0.20	0.58	RTCD2972W680KQ025M
	82	22×35	0.20	0.65	RTCD2972W820KP035M
		25×30	0.20	0.65	RTCD2972W820KQ030M
	100	22×40	0.20	0.74	RTCD2972W101KP040M
		25×30	0.20	0.72	RTCD2972W101KQ030M
		30×25	0.20	0.73	RTCD2972W101KR025M
	120	22×45	0.20	0.83	RTCD2972W121KP045M
		25×35	0.20	0.82	RTCD2972W121KQ035M
		30×30	0.20	0.82	RTCD2972W121KR030M
	150	25×40	0.20	0.94	RTCD2972W151KQ040M
		30×35	0.20	0.96	RTCD2972W151KR035M
	180	25×45	0.20	1.06	RTCD2972W181KQ045M
		30×35	0.20	1.05	RTCD2972W181KR035M
		35×30	0.20	1.07	RTCD2972W181KS030M
	220	30×40	0.20	1.20	RTCD2972W221KR040M
		35×35	0.20	1.21	RTCD2972W221KS035M
	270	30×50	0.20	1.41	RTCD2972W271KQ050M
		35×40	0.20	1.40	RTCD2972W271KS040M
	330	35×45	0.20	1.60	RTCD2972W331KS045M
	390	35×50	0.20	1.79	RTCD2972W391KS050M

RTCD298 SERIES (105°C 10000H)



- Compliant to the RoHS directive.
- 105°C 10000H long life and high ripple current series.

■ Specification

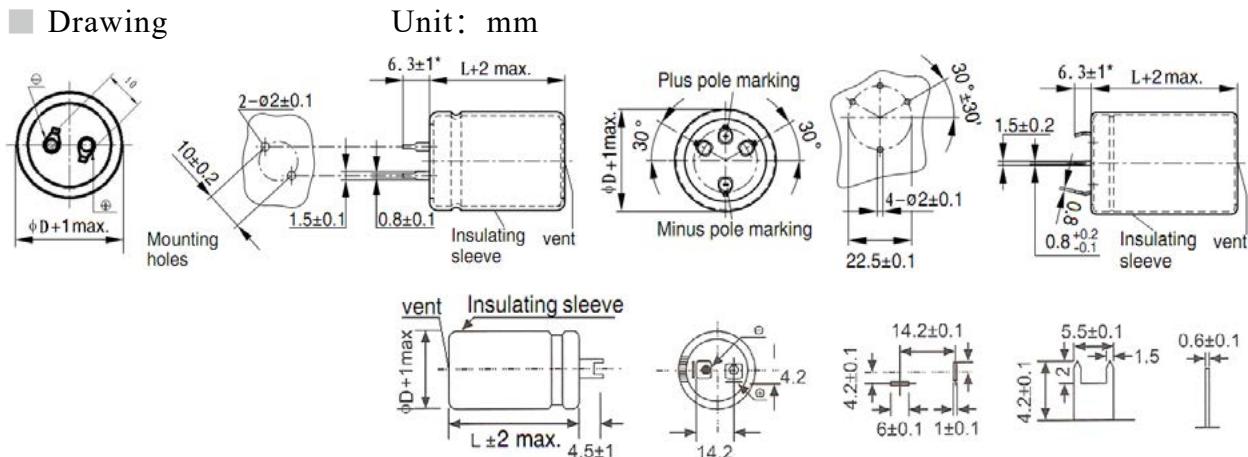
Item	Performance Characteristics								
Operating range	-25°C ~ +105°C								
Rated voltage range	200V ~ 450V								
Capacitance tolerance	±20% (20°C, 120Hz)								
Leakage current	$I \leq 0.01CV(\mu A)$ or $1.5mA$ (Whichever is smaller) (20°C, after 5 minutes) C =Nominal capacitance(μF), V =Rated voltage(V)								
Dissipation factor (20°C, 120Hz)	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 2px;">U_R(V)</td> <td style="padding: 2px;">200-400V</td> <td style="padding: 2px;">450V</td> </tr> <tr> <td style="padding: 2px;">tan δ</td> <td style="padding: 2px;">0.15</td> <td style="padding: 2px;">0.20</td> </tr> </table>	U _R (V)	200-400V	450V	tan δ	0.15	0.20		
U _R (V)	200-400V	450V							
tan δ	0.15	0.20							
Stability at Low Temperature (Impedance ratio at 120Hz)	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 2px;">U_R(V)</td> <td style="padding: 2px;">200-400V</td> <td style="padding: 2px;">450V</td> </tr> <tr> <td style="padding: 2px;">Z(-25°C)/Z(+20°C)</td> <td style="padding: 2px;">4</td> <td style="padding: 2px;">8</td> </tr> </table>	U _R (V)	200-400V	450V	Z(-25°C)/Z(+20°C)	4	8		
U _R (V)	200-400V	450V							
Z(-25°C)/Z(+20°C)	4	8							
Load Life	<p>After applying rated voltage with specified ripple current for 10000 hours at 105°C(the peak voltage shall not exceed the rated voltage), and then restored for 24 hours, capacitor shall meet the following requirement:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 2px;">Capacitance change</td> <td style="padding: 2px;">Within ±20% of the initial value.</td> </tr> <tr> <td style="padding: 2px;">Dissipation factor</td> <td style="padding: 2px;">Not more than 250% of the initial specified value.</td> </tr> <tr> <td style="padding: 2px;">Leakage current</td> <td style="padding: 2px;">Not more than the initial specified value.</td> </tr> </table>			Capacitance change	Within ±20% of the initial value.	Dissipation factor	Not more than 250% of the initial specified value.	Leakage current	Not more than the initial specified value.
Capacitance change	Within ±20% of the initial value.								
Dissipation factor	Not more than 250% of the initial specified value.								
Leakage current	Not more than the initial specified value.								
Shelf Life	<p>After storing for 1000 hours at 105°C, UR to be applied for 30 minutes and then restored for 24 hours, capacitor shall meet the following requirement:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 2px;">Capacitance change</td> <td style="padding: 2px;">Within ±20% of the initial value.</td> </tr> <tr> <td style="padding: 2px;">Dissipation factor</td> <td style="padding: 2px;">Not more than 200% of the initial specified value.</td> </tr> <tr> <td style="padding: 2px;">Leakage current</td> <td style="padding: 2px;">Not more than the initial specified value.</td> </tr> </table>			Capacitance change	Within ±20% of the initial value.	Dissipation factor	Not more than 200% of the initial specified value.	Leakage current	Not more than the initial specified value.
Capacitance change	Within ±20% of the initial value.								
Dissipation factor	Not more than 200% of the initial specified value.								
Leakage current	Not more than the initial specified value.								
Standard	JIS C 5101-4								

■ Coefficient of rated ripple current

T (°C)	40	55	70	85	105
Coefficient	2.7	2.5	2.1	1.7	1.0

F(Hz)\U _R (V)	50(60)	120	300	1K	≥10K
160-250	0.81	1.00	1.17	1.2	1.50
350-450	0.77	1.00	1.16	1.41	1.43

■ Drawing



×:Shorter terminal is: 4.0±0.5mm

■ RTCD298 Dimensions

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Part number
200 2D (250)	560	30×30	0.15	1.50	RTCD2982D561KR030M
	680	30×35	0.15	1.70	RTCD2982D681KR035M
	820	30×40	0.15	2.00	RTCD2982D821KR040M
		35×30	0.15	2.00	RTCD2982D821KS030M
	1000	30×45	0.15	2.20	RTCD2982D102KR045M
		35×35	0.15	2.20	RTCD2982D102KS035M
		40×30	0.15	2.17	RTCD2982D102KB030M
	1200	35×40	0.15	2.40	RTCD2982D122KS040M
		40×35	0.15	2.45	RTCD2982D122KB035M
	1500	35×50	0.15	2.81	RTCD2982D152KS050M
		40×40	0.15	2.79	RTCD2982D152KB040M
	1800	40×50	0.15	3.24	RTCD2982D182KB050M
250 2E (300)	390	30×30	0.15	1.30	RTCD2982E391KR030M
	470	30×35	0.15	1.42	RTCD2982E471KR035M
	560	35×30	0.15	1.58	RTCD2982E561KS030M
	680	30×45	0.15	1.80	RTCD2982E681KR045M
		35×35	0.15	1.76	RTCD2982E681KS035M
	820	30×50	0.15	2.03	RTCD2982E821KR050M
		35×40	0.15	2.01	RTCD2982E821KS040M
		40×30	0.15	1.96	RTCD2982E821KB030M
	1000	35×45	0.15	2.30	RTCD2982E102KS045M
		40×35	0.15	2.27	RTCD2982E102KB035M
	1200	35×50	0.15	2.55	RTCD2982E122KS050M
		40×40	0.15	2.53	RTCD2982E122KB040M
	1500	40×50	0.15	2.96	RTCD2982E152KB050M
	1800	40×60	0.15	3.39	RTCD2982E182KB060M
400 2G (450)	220	30×35	0.15	1.00	RTCD2982G221KR035M
	270	30×40	0.15	1.15	RTCD2982G271KR040M
		35×30	0.15	1.13	RTCD2982G271KS030M
	330	30×45	0.15	1.29	RTCD2982G331KR045M
		35×35	0.15	1.26	RTCD2982G331KS035M
		40×30	0.15	1.28	RTCD2982G331KB030M
	390	30×50	0.15	1.44	RTCD2982G391KR050M
		35×40	0.15	1.43	RTCD2982G391KS040M
	470	35×45	0.15	1.60	RTCD2982G471KS045M
		40×35	0.15	1.58	RTCD2982G471KB035M
	560	35×50	0.15	1.79	RTCD2982G561KS050M
		40×40	0.15	1.78	RTCD2982G561KB040M
	680	40×50	0.15	2.05	RTCD2982G681KB050M
	820	40×60	0.15	2.36	RTCD2982G821KB060M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Part number
450 2W (500)	220	30×40	0.20	1.04	RTCD2982W221KR040M
		35×30	0.20	1.02	RTCD2982W221KS030M
	270	30×45	0.20	1.19	RTCD2982W271KR045M
		35×35	0.20	1.16	RTCD2982W271KS035M
	330	30×50	0.20	1.33	RTCD2982W331KR050M
		35×40	0.20	1.32	RTCD2982W331KS040M
	390	35×45	0.20	1.48	RTCD2982W391KS045M
	470	35×50	0.20	1.64	RTCD2982W471KS050M
	560	40×60	0.20	1.98	RTCD2982W561KB060M

RTCD17 SERIES

- Compliant to the RoHS directive.
- High stability.
- Compact and light weight.
- For photoflash application.

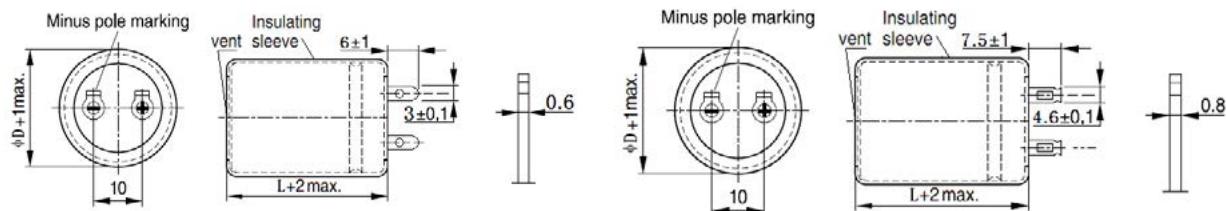


Specification

Specification	Specification							
Operating range	-20°C ~ +55°C							
Rated voltage range	330WV ~ 450V							
Capacitance tolerance	-10% ~ 20% (20°C, 120Hz)							
Leakage current	I≤1 x C (μA) (20°C, after 5 minutes) C=Nominal capacitance(μF), I= Leakage current (μA)							
Dissipation factor (20°C, 120Hz)	<table border="1"> <tr> <td>UR(V)</td> <td>330 ~ 450</td> </tr> <tr> <td>tan δ</td> <td>0.15</td> </tr> </table>		UR(V)	330 ~ 450	tan δ	0.15		
UR(V)	330 ~ 450							
tan δ	0.15							
Charge and Discharge	<p>Charge and discharge at rated voltage at 5 ~ 35°C in every 30 seconds for 5000 times via Xe flash tube with discharge resistance of 0.7-1Ω:</p> <table border="1"> <tr> <td>Capacitance change</td> <td>Within ± 20% of initial value</td> </tr> <tr> <td>Dissipation factor</td> <td>Not more than 200% of specified value</td> </tr> <tr> <td>Leakage current</td> <td>Not more than 200% of specified value</td> </tr> </table>		Capacitance change	Within ± 20% of initial value	Dissipation factor	Not more than 200% of specified value	Leakage current	Not more than 200% of specified value
Capacitance change	Within ± 20% of initial value							
Dissipation factor	Not more than 200% of specified value							
Leakage current	Not more than 200% of specified value							
Shelf Life	<p>Storage without voltage applied at 70°C for 500 hours and measured at 20±5°C. After test: UR to be applied for 60 minutes, 24 to 48 hours before measurement.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>Within ± 20% of initial value</td> </tr> <tr> <td>Dissipation factor</td> <td>Not more than 200% of specified value</td> </tr> <tr> <td>Leakage current</td> <td>Not more than 200% of specified value</td> </tr> </table>		Capacitance change	Within ± 20% of initial value	Dissipation factor	Not more than 200% of specified value	Leakage current	Not more than 200% of specified value
Capacitance change	Within ± 20% of initial value							
Dissipation factor	Not more than 200% of specified value							
Leakage current	Not more than 200% of specified value							
Standard	JIS C 5101-4							

Drawing

Unit: mm



■ RTCD17 Dimensions

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Part number
330 2M (350)	180	22×25	0.15	RTCD172M181KP025M
	200	22×30	0.15	RTCD172M201KP030M
		25×25	0.15	RTCD172M201KQ025M
	250	22×30	0.15	RTCD172M251KP030M
		25×30	0.15	RTCD172M251KQ030M
	300	22×35	0.15	RTCD172M301KP035M
		25×30	0.15	RTCD172M301KQ030M
	350	22×40	0.15	RTCD172M351KP040M
		25×35	0.15	RTCD172M351KQ035M
	400	22×45	0.15	RTCD172M401KP045M
		25×40	0.15	RTCD172M401KQ040M
		30×30	0.15	RTCD172M401KR030M
	450	22×50	0.15	RTCD172M451KP050M
		25×45	0.15	RTCD172M451KQ045M
		30×30	0.15	RTCD172M451KR030M
	500	25×50	0.15	RTCD172M501KP050M
		30×35	0.15	RTCD172M501KQ035M
	600	30×35	0.15	RTCD172M601KR035M
		35×30	0.15	RTCD172M601KS030M
	700	30×40	0.15	RTCD172M701KR040M
		35×30	0.15	RTCD172M701KS030M
	800	30×45	0.15	RTCD172M801KR045M
		35×35	0.15	RTCD172M801KS035M
	900	30×45	0.15	RTCD172M901KR045M
		35×35	0.15	RTCD172M901KS035M
	1000	30×50	0.15	RTCD172M102KR050M
		35×40	0.15	RTCD172M102KS040M
	1200	30×60	0.15	RTCD172M122KR060M
		35×45	0.15	RTCD172M122KS045M
1300	35×45	0.15	RTCD172M132KS045M	
1500	35×50	0.15	RTCD172M152KS050M	
360 2N (390)	180	25×25	0.15	RTCD172N181KQ025M
	200	22×30	0.15	RTCD172N201KP030M
		25×30	0.15	RTCD172N201KQ030M
	250	22×35	0.15	RTCD172N251KP035M
		25×30	0.15	RTCD172N251KQ030M
	300	30×25	0.15	RTCD172N251KR025M
		22×40	0.15	RTCD172N301KP040M
		25×35	0.15	RTCD172N301KQ035M
		30×30	0.15	RTCD172N301KR030M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Part number
360 2N (390)	350	22×45	0.15	RTCD172N351KP045M
		25×40	0.15	RTCD172N351KQ040M
		30×30	0.15	RTCD172N351KR030M
	400	22×50	0.15	RTCD172N401KP050M
		25×45	0.15	RTCD172N401KQ045M
		30×35	0.15	RTCD172N401KR035M
	450	25×50	0.15	RTCD172N451KQ050M
		30×35	0.15	RTCD172N451KR035M
	500	25×60	0.15	RTCD172N601KQ060M
		30×40	0.15	RTCD172N501KR040M
	600	30×40	0.15	RTCD172N601KR040M
		35×35	0.15	RTCD172N601KS035M
	700	30×45	0.15	RTCD172N701KR045M
		35×35	0.15	RTCD172N701KS035M
	800	30×50	0.15	RTCD172N801KR050M
		35×40	0.15	RTCD172N801KS040M
	900	30×60	0.15	RTCD172N901KR060M
		35×40	0.15	RTCD172N901KS040M
	1000	30×60	0.15	RTCD172N102KR060M
		35×45	0.15	RTCD172N102KS045M
	1200	35×50	0.15	RTCD172N122KS050M
400 2G (430)	180	22×35	0.15	RTCD172G181KP035M
		25×30	0.15	RTCD172G181KQ030M
	200	22×40	0.15	RTCD172G201KP030M
		25×35	0.15	RTCD172G201KQ030M
	250	22×45	0.15	RTCD172G251KP045M
		25×40	0.15	RTCD172G251KQ040M
	300	25×45	0.15	RTCD172G301KQ045M
		30×35	0.15	RTCD172G301KR035M
	350	25×50	0.15	RTCD172G351KQ050M
		30×35	0.15	RTCD172G351KR035M
	400	25×50	0.15	RTCD172G401KQ050M
		30×40	0.15	RTCD172G401KR035M
	450	30×45	0.15	RTCD172G451KR045M
		35×35	0.15	RTCD172G451KS035M
	500	30×45	0.15	RTCD172G501KR045M
		35×35	0.15	RTCD172G501KS035M
	600	30×50	0.15	RTCD172G601KR050M
		35×40	0.15	RTCD172G601KS035M
	700	30×55	0.15	RTCD172G701KR055M
		35×45	0.15	RTCD172G701KS045M
	800	30×60	0.15	RTCD172G801KR060M
		35×50	0.15	RTCD172G801KS050M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Part number
400 2G (430)	900	35×55	0.15	RTCD172G901KS055M
	1000	35×60	0.15	RTCD172G102KS060M
450 2W (480)	180	22×40	0.15	RTCD172W181KP040M
		25×35	0.15	RTCD172W181KQ035M
	200	22×45	0.15	RTCD172W201KP045M
		25×40	0.15	RTCD172W201KQ040M
	250	22×50	0.15	RTCD172W251KP050M
		25×45	0.15	RTCD172W251KQ045M
	300	25×50	0.15	RTCD172W301KQ050M
		30×40	0.15	RTCD172W301KR040M
	350	25×55	0.15	RTCD172W351KP055M
		30×45	0.15	RTCD172W351KR045M
	400	25×60	0.15	RTCD172W401KP060M
		30×50	0.15	RTCD172W401KR050M
	450	22×60	0.15	RTCD172W451KP060M
		25×60	0.15	RTCD172W451KQ060M
		30×50	0.15	RTCD172W451KR050M
	500	30×55	0.15	RTCD172W501KR055M
		35×40	0.15	RTCD172W561KS040M
560	35×45	0.15		RTCD172W561KS045M
680	35×50	0.15		RTCD172W681KS050M
800	35×55	0.15		RTCD172W801KS055M
900	35×60	0.15		RTCD172W901KS060M

Screw Terminal

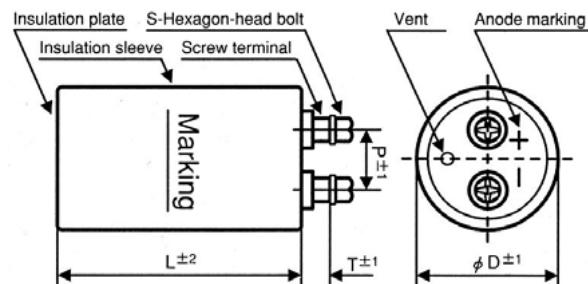


RTCD135 SERIES (85°C 2000H)

- Compliant to the RoHS directive.
- 160WV~600WV extra-high voltage.
- 85°C 2000H for inverters.



Product Specifications



(unit: mm)

ΦD	P	S	T	Cap material
36	12.7	M5×10	6.0	Phenol
51	22.0	M5×10	5.5	Phenol
64	28.6	M5×10	5.5	Phenol
77	32.0	M5×10	4.5	Phenol
90	32.0	M5×10	4.0	Phenol
101	41.5	M8×17	10.0	Phenol

Items	Specifications
Temperature range	-25°C ~ +85°C
Rated voltage	160 ~ 600V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.01CV (μA) or 5mA, whichever is smaller [C=nominal capacitance (μF), V= rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table.
Permissible ripple current	As specified in the standard products table. (40°C, 120Hz)
High-temperature load	After the rated voltage with specified ripple current is applied at 85°C for 2,000 hours : Capacitance tolerance : ±20% or less of the initial value Dissipation factor : 200% or less of the specified initial value Leakage current : Specified initial value or less
Standard	JIS C 5101-4

Ripple current correction coefficient					
Temperature (°C)	40	60	70	85	
Coefficient	1.0	0.75	0.62	0.37	
Frequency (Hz)	50/60	120	300	1K	≥10K
Coefficient	0.7	1.0	1.1	1.3	1.4

Part number(Example): RTCD135 400V 10,000μF±20% F case (Φ90mm) product

RTCD135	2G	103	Y	F	157	M	D	5
Series	Voltage Code	Capacitance code	Mounting style	Diameter code	Length	Cap. tolerance	Diameter Terminal	Type of screw

Standard Products Table

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
160 2C (200)	3300	36×121	0.25	14.0	35	35	RTCD1352C332IA121M
	3900	51×75	0.25	14.4	30	28	RTCD1352C392YC075M
	4700	51×80	0.25	15.8	25	25	RTCD1352C472YC080M
	5600	51×96	0.25	19.0	23	23	RTCD1352C562YC096M
	6800	51×96	0.25	21.0	20	22	RTCD1352C682YC096M
	8200	51×115	0.25	24.7	18	19	RTCD1352C822YC115M
	10000	64×96	0.25	28.0	15	16	RTCD1352C103YD096M
	12000	64×96	0.25	30.6	12	15	RTCD1352C123YD096M
	15000	64×130	0.25	38.6	11	12	RTCD1352C153YD130M
		77×100	0.25	38.0	11	12	RTCD1352C153YE100M
	18000	64×130	0.25	42.2	9	11	RTCD1352C183YD130M
	22000	77×130	0.25	49.4	8	8	RTCD1352C223YE130M
	27000	77×130	0.25	54.7	7	8	RTCD1352C273YE130M
	33000	90×131	0.25	64.2	6	7	RTCD1352C333YF131M
	39000	90×157	0.25	75.3	5	7	RTCD1352C393YF157M
200 2D (250)	2200	36×100	0.25	10.6	43	60	RTCD1352D222IA100M
	2700	36×121	0.25	12.7	31	39	RTCD1352D272IA121M
	3300	51×80	0.25	13.3	29	35	RTCD1352D332YC080M
	3900	51×75	0.25	14.4	26	30	RTCD1352D392YC075M
	4700	51×96	0.25	17.4	25	27	RTCD1352D472YC096M
	5600	51×115	0.25	20.4	23	25	RTCD1352D562YC115M
	6800	51×130	0.25	23.7	19	20	RTCD1352D682YC130M
	8200	64×96	0.25	25.4	15	18	RTCD1352D822YD096M
	10000	64×96	0.25	28.0	14	14	RTCD1352D103YD096M
	12000	77×96	0.25	32.6	12	14	RTCD1352D123YE096M
	15000	77×96	0.25	39.0	10	13	RTCD1352D153YE096M
	18000	77×130	0.25	44.6	8	12	RTCD1352D183YE130M
	22000	77×155	0.25	53.0	7	7	RTCD1352D223YE155M
	27000	90×131	0.25	58.2	6	7	RTCD1352D273YF131M
	33000	90×157	0.25	69.0	5	7	RTCD1352D333YF157M
	36000	90×157	0.25	70.8	5	7	RTCD1352D363YF157M
250 2E (300)	1500	36×100	0.25	8.7	53	50	RTCD1352E152IA100M
	1800	36×100	0.25	9.5	46	44	RTCD1352E182IA100M
	2200	51×75	0.25	10.8	38	40	RTCD1352E222YC075M
	2700	51×75	0.25	12.0	33	36	RTCD1352E272YC075M
	3300	51×96	0.25	14.6	28	35	RTCD1352E332YC096M
	3900	51×115	0.25	17.0	25	30	RTCD1352E392YC115M
	4700	64×100	0.25	19.2	21	23	RTCD1352E472YD100M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
250 2E (300)	5600	64×100	0.25	21.0	19	21	RTCD1352E562YD100M
	6800	64×115	0.25	24.7	15	18	RTCD1352E682YD115M
	8200	64×115	0.25	27.1	13	16	RTCD1352E822YD115M
	10000	64×130	0.25	31.5	12	14	RTCD1352E103YD130M
		77×130	0.25	34.5	12	14	RTCD1352E103YE130M
	12000	77×115	0.25	34.8	10	11	RTCD1352E123YE115M
	15000	77×130	0.25	40.8	8	11	RTCD1352E153YE130M
	18000	77×155	0.25	47.8	7	10	RTCD1352E183YE155M
	22000	90×157	0.25	56.5	6	8	RTCD1352E223YF157M
350 2V (400)	390	36×53	0.20	4.5	272	296	RTCD1352V391IA053M
	470	36×83	0.20	5.8	232	245	RTCD1352V471IA083M
	560	36×83	0.20	6.4	194	222	RTCD1352V561IA083M
	680	36×83	0.20	7.0	156	197	RTCD1352V681IA083M
	820	36×100	0.20	8.3	130	174	RTCD1352V821IA100M
	1000	36×100	0.20	9.2	109	135	RTCD1352V102IA100M
	1200	51×75	0.20	10.3	90	120	RTCD1352V122YC075M
	1500	51×75	0.20	11.5	77	100	RTCD1352V152YC075M
	1800	51×96	0.20	13.9	62	80	RTCD1352V182YC096M
	2200	51×96	0.20	15.4	51	70	RTCD1352V222YC096M
	2700	51×130	0.20	19.3	41	58	RTCD1352V272YC130M
	3300	51×130	0.20	21.4	35	51	RTCD1352V332YC130M
	3900	64×115	0.20	24.2	30	47	RTCD1352V392YD115M
	4700	64×130	0.20	27.9	28	40	RTCD1352V472YD130M
	5600	77×115	0.20	30.7	25	35	RTCD1352V562YE115M
	6800	77×130	0.20	35.4	20	29	RTCD1352V682YE130M
	8200	77×155	0.20	41.7	17	25	RTCD1352V822YE155M
	10000	77×170	0.20	45.8	15	23	RTCD1352V103YE170M
		90×157	0.20	49.0	15	23	RTCD1352V103YF157M
	12000	90×157	0.20	54.1	13	21	RTCD1352V123YF157M
	15000	90×196	0.20	66.2	10	20	RTCD1352V153YF196M
	18000	90×220	0.20	75.4	8	20	RTCD1352V183YF220M
	22000	90×236	0.20	80.9	8	20	RTCD1352V223YF236M
400 2G (450)	330	36×53	0.20	4.1	253	440	RTCD1352G331IA053M
	390	36×83	0.20	5.3	210	372	RTCD1352G391IA083M
	470	36×83	0.20	5.8	181	310	RTCD1352G471IA083M
	560	36×83	0.20	6.4	148	260	RTCD1352G561IA083M
	680	36×100	0.20	7.6	122	214	RTCD1352G681IA100M
	820	36×100	0.20	8.3	101	177	RTCD1352G821IA100M
	1000	51×75	0.20	9.4	85	150	RTCD1352G102YC075M
	1200	51×80	0.20	10.3	75	125	RTCD1352G122YC080M
	1500	51×96	0.20	12.7	62	108	RTCD1352G152YC096M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
400 2G (450)	1800	51×96	0.20	13.9	51	90	RTCD1352G182YC096M
	2200	51×130	0.20	17.4	39	75	RTCD1352G222YC130M
	2700	64×96	0.20	18.8	36	66	RTCD1352G272YD096M
	3300	64×115	0.20	22.2	35	53	RTCD1352G332YD115M
	3900	64×130	0.20	25.4	29	48	RTCD1352G392YD130M
	4700	77×115	0.20	28.2	26	41	RTCD1352G472YE115M
	5600	77×130	0.20	32.2	21	37	RTCD1352G562YE130M
	6800	77×155	0.20	38.0	18	30	RTCD1352G682YE155M
	8200	90×157	0.20	44.4	16	26	RTCD1352G822YF157M
	10000	90×157	0.20	49.4	13	23	RTCD1352G103YF157M
	12000	90×196	0.20	59.1	12	21	RTCD1352G123YF196M
	15000	90×236	0.20	71.1	10	21	RTCD1352G153YF236M
450 2W (500)	270	36×53	0.20	3.7	422	496	RTCD1352W271IA053M
	330	36×83	0.20	4.9	281	406	RTCD1352W331IA083M
	390	36×83	0.20	5.3	244	343	RTCD1352W391IA083M
	470	36×83	0.20	5.8	201	284	RTCD1352W471IA083M
	560	36×100	0.20	6.9	174	238	RTCD1352W561IA100M
	680	36×100	0.20	7.6	142	196	RTCD1352W681IA100M
	820	51×75	0.20	8.6	99	187	RTCD1352W821YC075M
	1000	51×80	0.20	9.4	84	154	RTCD1352W102YC080M
	1200	51×96	0.20	11.4	73	129	RTCD1352W122YC096M
	1500	51×115	0.20	13.7	60	108	RTCD1352W152YC115M
	1800	51×130	0.20	15.8	48	100	RTCD1352W182YC130M
	2200	64×100	0.20	17.0	35	84	RTCD1352W222YD100M
	2700	64×115	0.20	20.2	35	69	RTCD1352W272YD115M
	3300	64×130	0.20	23.4	32	61	RTCD1352W332YD130M
	3900	77×115	0.20	25.6	32	51	RTCD1352W392YE115M
	4700	77×130	0.20	29.4	26	43	RTCD1352W472YE130M
	5600	77×155	0.20	34.6	18	37	RTCD1352W562YE155M
	6800	90×157	0.20	40.5	16	33	RTCD1352W682YF157M
	8200	90×157	0.20	44.6	14	30	RTCD1352W822YF157M
	10000	90×196	0.20	53.9	12	25	RTCD1352W103YF196M
	12000	90×236	0.20	63.8	10	22	RTCD1352W123YF236M
500 2H (550)	1200	51x115	0.20	17.0	112	120	RTCD1352H122YC115M
	1500	51x130	0.20	19.9	90	96	RTCD1352H152YC130M
	1800	64x115	0.20	22.7	75	80	RTCD1352H182YD115M
	2200	64x130	0.20	26.1	61	65	RTCD1352H222YD130M
	2700	77x115	0.20	29.0	50	53	RTCD1352H272YE115M
	3300	77x130	0.20	33.7	45	48	RTCD1352H332YE130M
	3900	77x155	0.20	39.2	38	41	RTCD1352H392YE155M
	4700	77x170	0.20	44.9	34	37	RTCD1352H472YE170M

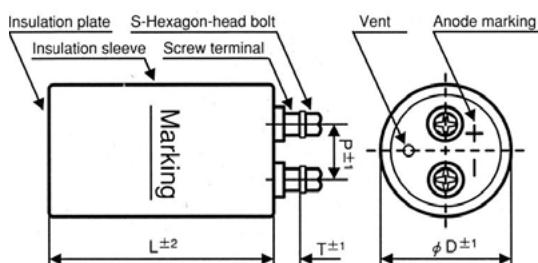
Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
500 2H (550)	5600	77x195	0.20	51.6	28	31	RTCD1352H562YE195M
		90x157	0.20	50.5	28	31	RTCD1352H562YF157M
	6800	90x170	0.20	57.3	23	25	RTCD1352H682YF170M
		77x236	0.20	66.6	21	23	RTCD1352H822YE236M
	8200	90x196	0.20	66.4	21	23	RTCD1352H822YF196M
		90x236	0.20	55.5	17	19	RTCD1352H103YF236M
	10000	101x195	0.20	79.4	17	19	RTCD1352H103YG195M
		101x237	0.20	85.7	16	18	RTCD1352H123YG237M
550 2Y (600)	1000	51×130	0.20	16.2	132	140	RTCD1352Y102YC130M
	1500	64×130	0.20	21.9	93	100	RTCD1352Y152YD130M
	2200	77×115	0.20	25.0	65	70	RTCD1352Y222YE115M
	2700	77×130	0.20	28.9	54	60	RTCD1352Y272YE130M
	3300	77×155	0.20	36.1	47	50	RTCD1352Y332YE155M
	3900	77×170	0.20	43.5	40	45	RTCD1352Y392YE170M
	4700	90×145	0.20	42.6	32	40	RTCD1352Y472YF145M
	5600	90×196	0.20	55.1	26	30	RTCD1352Y562YF196M
	6800	90×236	0.20	65.4	21	30	RTCD1352Y682YF236M
	8200	101×237	0.20	74.0	19	25	RTCD1352Y822YG237M
600 2S (650)	100	36×80	0.20	6.2	1582	1665	RTCD1352S101IA080M
	1200	64×96	0.20	21.1	151	160	RTCD1352S122YD096M
	1500	64×115	0.20	25.4	135	140	RTCD1352S152YD115M
	2200	77×115	0.20	32.7	102	105	RTCD1352S222YE115M
	2700	77×130	0.20	33.0	83	86	RTCD1352S272YE130M
	3300	77×170	0.20	46.5	58	61	RTCD1352S332YE170M
	3900	77×195	0.20	53.5	49	52	RTCD1352S392YE195M
	4700	90×157	0.20	57.0	41	43	RTCD1352S472YF157M

RTCD137 SERIES (85°C 5000H)

- Compliant to the RoHS directive.
- Long-life and high-ripple series for solar photovoltaic grid-connected inverter realized through adoption of high-reliability organic acid type electrolyte liquid and improvement of etched foil technology for high voltage and manufacturing process.



Product Specifications



(unit: mm)

ΦD	P	S	T	Cap material
51	22.0	M5×10	5.5	Phenol
64	28.6	M5×10	5.5	Phenol
77	32.0	M5×10	4.5	Phenol
90	32.0	M5×10	4.0	Phenol

Items	Specifications
Temperature range	-40°C ~ +85°C
Rated voltage	350 ~ 450V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.01CV (µA) or 5mA, whichever is smaller
	[C=nominal capacitance (µF), V= rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table.
Permissible ripple current	As specified in the standard products table. (85°C, 120Hz)
High-temperature load	After the rated voltage with specified ripple current is applied at 85°C for 2000 hours : Capacitance tolerance : ±20% or less of the initial value Dissipation factor : 200% or less of the specified initial value Leakage current : Specified initial value or less
Standard	JIS C 5101-4

Ripple current correction coefficient					
Temperature (°C)	40	60	85		
Coefficient	1.89	1.67	1.0		
Frequency (Hz)	50/60	120	300	1K	≥10K
Coefficient	0.7	1.0	1.1	1.3	1.4

Part number(Example): RTCD137 400V 10,000µF±20% F case (Φ90mm) product								
RTCD137	2G	103	Y	F	157	M	D	5
Series	Voltage Code	Capacitance code	Mounting style	Diameter code	Length	Cap. tolerance	Diameter Terminal	Type of screw

■ Standard Products Table

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
350 2V (400)	1200	51×75	0.15	5.5	85	88	RTCD1372V122YC075M
	1500	51×75	0.15	6.1	68	70	RTCD1372V152YC075M
	1800	51×96	0.15	7.4	57	59	RTCD1372V182YC096M
	2200	51×96	0.15	8.2	46	48	RTCD1372V222YC096M
	2700	51×130	0.15	10.2	38	40	RTCD1372V272YC130M
	3300	51×130	0.15	11.3	30	32	RTCD1372V332YC130M
	3900	64×115	0.15	12.8	26	28	RTCD1372V392YD115M
	4700	64×130	0.15	14.8	21	22	RTCD1372V472YD130M
	5600	64×155	0.15	17.3	18	19	RTCD1372V562YD155M
		77×115	0.15	16.3	18	19	RTCD1372V562YE115M
	6800	64×195	0.15	21.1	15	15	RTCD1372V682YD195M
		77×130	0.15	18.8	15	15	RTCD1372V682YE130M
	8200	77×155	0.15	22.1	12	15	RTCD1372V822YE155M
	10000	90×157	0.15	25.9	10	15	RTCD1372V103YF157M
	12000	90×157	0.15	28.4	8	13	RTCD1372V123YF157M
	15000	90×196	0.15	34.6	7	10	RTCD1372V153YF196M
	18000	90×236	0.15	41.1	7	10	RTCD1372V183YF236M
400 2G (450)	1000	51×75	0.15	5.0	102	105	RTCD1372G102YC075M
	1200	51×75	0.15	5.5	85	88	RTCD1372G122YC075M
	1500	51×96	0.15	6.7	68	70	RTCD1372G152YC096M
	1800	51×96	0.15	7.4	57	58	RTCD1372G182YC096M
	2200	51×130	0.15	9.2	46	48	RTCD1372G222YC130M
	2700	64×96	0.15	9.9	38	40	RTCD1372G272YD096M
	3300	64×115	0.15	11.8	30	32	RTCD1372G332YD115M
	4700	64×130	0.15	13.5	26	28	RTCD1372G392YD130M
		64×155	0.15	15.9	21	22	RTCD1372G472YD155M
		77×115	0.15	14.9	21	22	RTCD1372G472YE115M
	5600	64×195	0.15	19.1	18	19	RTCD1372G562YD195M
		77×130	0.15	17.0	18	19	RTCD1372G562YE130M
	6800	77×155	0.15	20.2	15	15	RTCD1372G682YE155M
	8200	90×157	0.15	23.5	12	15	RTCD1372G822YF157M
	10000	90×157	0.15	25.9	10	15	RTCD1372G103YF157M
	12000	90×196	0.15	31.0	8	13	RTCD1372G123YF196M
	15000	90×236	0.15	37.5	8	10	RTCD1372G153YF236M
450 2W (500)	1000	51×75	0.15	5.0	102	105	RTCD1372W102YC075M
	1200	51×96	0.15	6.0	85	88	RTCD1372W122YC096M
	1500	51×115	0.15	7.2	68	70	RTCD1372W152YC115M
	1800	51×130	0.15	8.3	56	58	RTCD1372W182YC130M

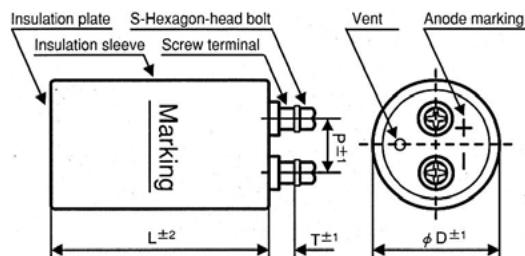
Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
450 2W (500)	2200	64×96	0.15	9.0	46	48	RTCD1372W222YD096M
	2700	64×115	0.15	10.7	38	40	RTCD1372W272YD115M
	3300	64×130	0.15	12.4	30	35	RTCD1372W332YD130M
	3900	64×155	0.15	14.5	27	32	RTCD1372W392YD155M
		77×115	0.15	13.6	27	32	RTCD1372W392YE115M
	4700	64×195	0.15	17.5	21	21	RTCD1372W472YD195M
		77×130	0.15	15.6	21	21	RTCD1372W472YE130M
	5600	77×155	0.15	18.3	20	20	RTCD1372W562YE155M
	6800	90×157	0.15	21.4	18	18	RTCD1372W682YF157M
	8200	90×157	0.15	23.5	15	15	RTCD1372W822YF157M
	10000	90×196	0.15	28.3	12	15	RTCD1372W103YF196M
	12000	90×236	0.15	33.6	9	12	RTCD1372W123YF236M

RTCD136 SERIES (105°C 2000H)



- Compliant to the RoHS directive.
- 25WV~450WV Standard products 2000H at 105°C.

Product Specifications



(unit: mm)

ΦD	P	S	T	Cap material
36	12.7	M5×10	6.0	Phenol
51	22.0	M5×10	5.5	Phenol
64	28.6	M5×10	5.5	Phenol
77	32.0	M5×10	4.5	Phenol
90	32.0	M5×10	4.0	Phenol

Items	Specifications	
Temperature range	-40°C~+105°C	-25°C~+105°C
Rated voltage	25~160V.DC	200~550V.DC
Capacitance tolerance	±20% (20°C, 120Hz)	
Leakage current	0.01CV (μA) or 5 mA, whichever is smaller or less	
	[C=nominal capacitance (μF), V= rated voltage (V)]	
Dissipation factor	Less than the value specified in the standard products table.	
Permissible ripple current	As specified in the standard products table. (105°C, 120Hz)	
High-temperature load	After the rated voltage with specified ripple current is applied at 105°C for 2000 hours : Capacitance tolerance : ±20% or less of the initial value Dissipation factor : 200% or less of the specified initial value Leakage current : Specified initial value or less	
Standard	JIS C 5101-4	

Ripple current correction coefficient					
Temperature (°C)		40	55	70	85
Coefficient	250WV under	4.9	3.9	3.0	1.8
	400WV	3.8	3.3	2.5	2.0
Frequency (Hz)		50/60	120	300	1K
Coefficient		0.8	1.0	1.1	1.3
					≥10K
					1.4

Part number(Example):RTCD136 400V 10,000μF±20% F case (Φ90mm) product

RTCD136	2G	103	Y	F	196	M	D	5
Series	Voltage Code	Capacitance code	Mounting style	Diameter code	Length	Cap. tolerance	Diameter Terminal	Type of screw

Standard Products Table

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
25 1E (32)	10000	36×53	0.35	2.9	32	30	RTCD1361E103IA053M
	15000	36×83	0.35	4.2	27	27	RTCD1361E153IA083M
	22000	36×83	0.35	5.1	22	23	RTCD1361E223IA083M
	33000	36×100	0.40	6.3	15	16	RTCD1361E333IA100M
	47000	51×75	0.40	8.0	10	11	RTCD1361E473YC075M
	68000	51×115	0.50	10.0	7	8	RTCD1361E683YC115M
	100000	64×96	0.60	11.3	6	7	RTCD1361E104YD096M
	150000	64×115	0.80	12.9	6	7	RTCD1361E154YD115M
	220000	77×115	1.00	14.8	4	5	RTCD1361E224YE115M
	330000	90×131	1.00	19.9	4	5	RTCD1361E334YF131M
35 1V (44)	6800	36×53	0.30	2.6	42	37	RTCD1361V682IA053M
	10000	36×83	0.30	3.7	29	31	RTCD1361V103IA083M
	15000	36×83	0.30	4.5	19	20	RTCD1361V153IA083M
	22000	36×100	0.35	5.5	14	15	RTCD1361V223IA100M
	33000	51×75	0.40	6.7	12	13	RTCD1361V333YC075M
	47000	51×96	0.45	8.1	8	9	RTCD1361V473YC096M
	68000	51×115	0.50	10.0	7	8	RTCD136A1V683YC115M
	100000	64×115	0.60	12.1	6	7	RTCD1361V104YD115M
	150000	77×115	0.70	13.8	5	7	RTCD1361V154YE115M
	220000	90×131	0.70	17.6	5	7	RTCD1361V224YF131M
50 1H (63)	3300	36×53	0.20	2.2	90	80	RTCD1361H332IA053M
	4700	36×53	0.25	3.3	64	58	RTCD1361H472IA053M
	6800	36×83	0.25	3.4	44	39	RTCD1361H682IA083M
	10000	36×83	0.25	4.1	30	28	RTCD1361H103IA083M
	15000	36×100	0.30	4.9	20	20	RTCD1361H153IA100M
	22000	51×75	0.35	5.9	14	15	RTCD1361H223YC075M
	33000	51×115	0.40	7.8	13	14	RTCD1361H333YC115M
	47000	64×96	0.40	9.5	11	12	RTCD1361H473YD096M
	68000	64×115	0.45	11.6	8	9	RTCD1361H683YD115M
	100000	77×115	0.50	14.1	6	7	RTCD1361H104YE115M
63 1J (79)	150000	90×131	0.50	18.9	5	7	RTCD1361H154YF131M
	2200	36×53	0.15	2.1	95	87	RTCD1361J222IA053M
	3300	36×53	0.20	2.2	63	58	RTCD1361J332IA053M
	4700	36×83	0.20	3.1	54	50	RTCD1361J472IA083M
	6800	36×83	0.20	3.7	38	35	RTCD1361J682IA083M
	10000	36×100	0.25	4.4	28	28	RTCD1361J103IA100M
	15000	51×75	0.25	5.7	21	22	RTCD1361J153YC075M
	22000	51×96	0.30	6.8	13	14	RTCD1361J223YC096M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
63 1J (79)	33000	64×96	0.30	9.2	10	11	RTCD1361J333YD096M
	47000	64×115	0.35	10.9	8	9	RTCD1361J473YD115M
	68000	77×115	0.40	13.0	7	8	RTCD1361J683YE115M
	100000	90×131	0.40	17.2	7	8	RTCD1361J104YF131M
80 1K (100)	2200	36×53	0.15	2.1	68	63	RTCD1361K222IA053M
	3300	36×83	0.15	3.0	45	42	RTCD1361K332IA083M
	4700	36×83	0.15	3.6	32	30	RTCD1361K472IA083M
	6800	36×100	0.20	4.0	22	23	RTCD1361K682IA100M
	10000	51×75	0.20	5.2	15	16	RTCD1361K103YC075M
	15000	51×96	0.25	6.2	10	11	RTCD1361K153YC096M
	22000	64×96	0.25	8.2	9	10	RTCD1361K223YD096M
	33000	77×96	0.30	9.7	7	7	RTCD1361K333YE096M
	47000	77×115	0.30	12.5	6	7	RTCD1361K473YE115M
	68000	90×131	0.30	16.4	4	7	RTCD1361K683YF131M
100 2A (125)	1000	36×53	0.15	1.4	112	100	RTCD1362A102IA053M
	1500	36×53	0.15	1.7	75	67	RTCD1362A152IA053M
	2200	36×83	0.15	2.5	51	47	RTCD1362A222IA083M
	3300	36×83	0.15	3.0	34	32	RTCD1362A332IA083M
	4700	36×100	0.15	3.9	24	24	RTCD1362A472IA100M
	6800	51×75	0.15	5.0	19	20	RTCD1362A682YC075M
	10000	51×96	0.15	6.5	13	14	RTCD1362A103YC096M
	15000	64×96	0.20	7.6	11	12	RTCD1362A153YD096M
	22000	77×96	0.20	9.7	8	9	RTCD1362A223YE096M
	33000	77×130	0.25	11.8	6	7	RTCD1362A333YE130M
	47000	90×131	0.25	15.0	5	7	RTCD1362A473YF131M
	470	36×53	0.15	1.0	277	261	RTCD1362C471IA053M
160 2C (200)	680	36×53	0.15	1.1	191	180	RTCD1362C681IA053M
	1000	36×83	0.15	1.7	130	120	RTCD1362C102IA083M
	1500	36×83	0.15	2.0	87	80	RTCD1362C152IA083M
	2200	36×100	0.15	2.7	59	53	RTCD1362C222IA100M
	3300	51×75	0.15	3.5	40	35	RTCD1362C332YC075M
	4700	51×96	0.15	4.4	30	25	RTCD1362C472YC096M
	6800	64×96	0.15	5.9	22	23	RTCD1362C682YD096M
	10000	77×96	0.15	7.6	15	16	RTCD1362C103YE096M
	15000	77×130	0.15	10.3	14	14	RTCD1362C153YE130M
	22000	90×131	0.15	13.2	10	10	RTCD1362C223YF131M
200 2D (250)	330	36×53	0.15	0.8	381	372	RTCD1362D331IA053M
	470	36×53	0.15	1.0	270	261	RTCD1362D471IA053M
	680	36×53	0.15	1.1	187	180	RTCD1362D681IA053M
	1000	36×83	0.15	1.7	120	100	RTCD1362D102IA083M
	1500	36×100	0.15	2.2	81	85	RTCD1362D152IA100M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
200 2D (250)	2200	51×75	0.15	2.8	68	60	RTCD1362D222YC075M
	3300	51×96	0.15	3.7	45	35	RTCD1362D332YC096M
	4700	64×96	0.15	4.9	31	27	RTCD1362D472YD096M
	6800	64×115	0.15	0.3	21	20	RTCD1362D682YD115M
	10000	77×115	0.15	8.1	14	14	RTCD1362D103YE115M
	15000	90×130	0.15	10.9	10	10	RTCD1362D153YF130M
250 2E (300)	330	36×53	0.15	0.8	165	268	RTCD1362E331IA053M
	470	36×53	0.15	1.0	126	187	RTCD1362E471IA053M
	680	36×83	0.15	1.4	91	131	RTCD1362E681IA083M
	1000	36×100	0.15	1.9	59	70	RTCD1362E102IA100M
	1500	51×75	0.15	2.3	45	50	RTCD1362E152YC075M
	2200	51×96	0.15	3.1	33	45	RTCD1362E222YC096M
	3300	64×96	0.15	4.2	25	35	RTCD1362E332YD096M
	4700	64×115	0.15	5.4	19	23	RTCD1362E472YD115M
	6800	77×115	0.15	6.9	13	18	RTCD1362E682YE115M
	10000	77×155	0.15	9.3	11	13	RTCD1362E103YE155M
	15000	90×157	0.15	12.2	9	9	RTCD1362E153YF157M
400 2G (450)	1000	51×75	0.15	2.5	86	105	RTCD1362G102YC075M
	1200	51×96	0.15	3.0	77	88	RTCD1362G122YC096M
	1500	51×115	0.15	3.6	53	70	RTCD1362G152YC115M
	1800	51×130	0.15	4.1	43	58	RTCD1362G182YC130M
	2200	64×96	0.15	4.5	36	48	RTCD1362G222YD096M
	2700	64×115	0.15	5.3	27	40	RTCD1362G272YD115M
	3300	64×115	0.15	5.8	24	32	RTCD1362G332YD115M
		64×130	0.15	6.2	24	32	RTCD1362G332YD130M
	3900	64×155	0.15	7.2	22	28	RTCD1362G392YD155M
		77×115	0.15	6.8	22	28	RTCD1362G392YE115M
	4700	64×195	0.15	8.7	17	22	RTCD1362G472YD195M
		77×115	0.15	7.3	17	22	RTCD1362G472YE115M
		77×130	0.15	7.8	17	22	RTCD1362G472YE130M
	5600	64×195	0.15	9.6	15	19	RTCD1362G562YD195M
		77×130	0.15	9.2	15	19	RTCD1362G562YE130M
		77×155	0.15	9.2	15	19	RTCD1362G562YE155M
	6800	77×145	0.15	9.5	14	15	RTCD1362G682YE145M
		77×155	0.15	9.5	14	15	RTCD1362G682YE155M
		90×157	0.15	10.7	14	15	RTCD1362G682YF157M
	8200	90×130	0.15	10.5	12	15	RTCD1362G822YF130M
		90×157	0.15	11.8	12	15	RTCD1362G822YF157M
	10000	77×195	0.15	12	10	15	RTCD1362G103YE195M
		90×130	0.15	11.9	10	15	RTCD1362G103YF130M
		90×196	0.15	14.1	10	15	RTCD1362G103YF196M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
450 2W (500)	220	36×53	0.15	1.2	415	427	RTCD1362W221YA053M
	330	36×100	0.15	1.5	277	286	RTCD1362W331YA100M
	470	51×83	0.15	2.2	195	201	RTCD1362W471YC083M
	680	51×96	0.15	2.8	135	139	RTCD1362W681YC096M
	1000	51×100	0.15	4.2	90	93	RTCD1362W102YC100M
	1500	51×130	0.15	5.8	54	56	RTCD1362W152YC130M
	2200	64×115	0.15	7.4	33	34	RTCD1362W222YD115M
	3300	77×130	0.15	10.1	22	23	RTCD1362W332YE130M
	3900	64×140	0.15	102.	22	23	RTCD1362W392YD140M
		64×155	0.15	10.5	22	23	RTCD1362W392YD155M
		77×130	0.15	10.9	22	23	RTCD1362W392YE130M
	4000	77×220	0.15	11.5	22	23	RTCD1362W402YE220M
	4700	77×155	0.15	12.7	15	15	RTCD1362W472YE155M
	5600	77×155	0.15	14.3	11	11	RTCD1362W562YE155M
		90×157	0.15	15.8	11	11	RTCD1362W562YF157M
	6800	77×170	0.15	17.2	11	11	RTCD1362W682YE170M
		90×130	0.15	18.8	11	11	RTCD1362W682YF130M
		90×157	0.15	19.4	11	11	RTCD1362W682YF157M
	8200	77×170	0.15	20.0	11	11	RTCD1362W822YE170M
	10000	90×157	0.15	22.0	11	11	RTCD1362W103YF157M
	12000	90×220	0.15	28.2	11	11	RTCD1362W123YF220M
500 2H (550)	470	51×80	0.15	3.0	200	220	RTCD1362H471YC080M
	680	51×100	0.15	3.8	180	200	RTCD1362H681YC100M
	1000	51×120	0.15	5.1	160	180	RTCD1362H102YC120M
	1500	64×115	0.15	6.9	140	160	RTCD1362H152YD115M
	2200	64×130	0.15	7.3	120	140	RTCD1362H222YD130M
		77×115	0.15	8.1	120	140	RTCD1362H222YE115M
		77×130	0.15	8.1	120	140	RTCD1362H222YE130M
	2700	64×155	0.15	10.6	100	120	RTCD1362H272YD155M
	3300	77×150	0.15	11.8	80	100	RTCD1362H332YE150M
		77×155	0.15	11.8	80	100	RTCD1362H332YE155M
	3900	77×155	0.15	13.0	60	80	RTCD1362H332YE155M
	4700	90×150	0.15	15.0	40	60	RTCD1362H472YF150M
	5600	90×157	0.15	16.3	35	40	RTCD1362H562YF157M
	6800	90×170	0.15	17.9	30	35	RTCD1362H682YF170M
		90×196	0.15	17.9	30	35	RTCD1362H682YF196M
	8200	90×220	0.15	23.4	20	30	RTCD1362H822YF220M
	10000	90×263	0.15	26.8	15	25	RTCD1362H103YF263M
550 2Y (600)	470	51×100	0.15	3.2	190	195	RTCD1362Y471YC100M
	680	51×120	0.15	4.2	170	180	RTCD1362Y681YC120M
	1000	64×115	0.15	5.6	150	170	RTCD1362Y102YD115M

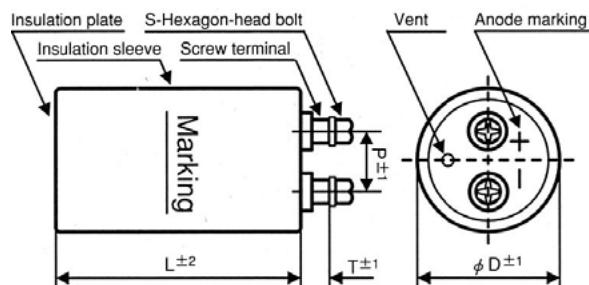
Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
550 2Y (600)	1500	64×130	0.15	7.5	130	150	RTCD1362Y152YD130M
	2200	64×155	0.15	8.9	110	120	RTCD1362Y222YD155M
	2700	77×150	0.15	11.5	90	100	RTCD1362Y272YE150M
	3300	77×155	0.15	13.0	70	80	RTCD1362Y332YE155M
	3900	90×150	0.15	14.3	50	60	RTCD1362Y392YF150M
	4700	90×157	0.15	16.2	40	50	RTCF1362Y472YF157M
	5600	90×196	0.15	20.6	30	35	RTCD1362Y562YF196M
	6800	90×220	0.15	25.0	25	30	RTCD1362Y682YF220M
	8200	90×263	0.15	28.5	20	25	RTCD1362Y822YF263M

RTCD138 SERIES (105°C 5000H)

- Compliant to the RoHS directive.
- Leading product with heat resistance and long life at 105°C to meet the requirement for high temperature and long life in the inverter circuit.



Product Specifications



(unit: mm)

ΦD	P	S	T	Cap material
51	22.0	M5×10	5.5	Phenol
64	28.6	M5×10	5.5	Phenol
77	32.0	M5×10	4.5	Phenol
90	32.0	M5×10	4.0	Phenol

Items	Specifications
Temperature range	-40°C ~ +105°C
Rated voltage	350 ~ 550V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.01CV (µA) or 5 mA, whichever is smaller or less [C=nominal capacitance (µF), V= rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table.
Permissible ripple current	As specified in the standard products table. (105°C, 120Hz)
High-temperature load	After the rated voltage with specified ripple current is applied at 105°C for 5000 hours : Capacitance tolerance : ±20% or less of the initial value Dissipation factor : 200% or less of the specified initial value Leakage current : Specified initial value or less
Standard	JIS C 5101-4

Ripple current correction coefficient				
Temperature (°C)	40	60	85	105
Coefficient	2.44	2.16	2.0	1.0
Frequency (Hz)	50/60	120	300	1K
Coefficient	0.7	1.0	1.1	1.3
				≥10K
				1.4

Part number(Example): RTCD138 400V 10,000µF±20% F case (Φ90mm) product

RTCD138	2G	103	Y	F	196	M	D	5
Series	Voltage Code	Capacitance code	Mounting style	Diameter code	Length	Cap. tolerance	Diameter Terminal	Type of screw

Standard Products Table

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
350 2V (400)	1000	51×75	0.15	3.9	100	103	RTCD1382V102YC075M
	1200	51×75	0.15	4.2	84	87	RTCD1382V122YC075M
	1500	51×96	0.15	5.2	67	69	RTCD1382V152YC096M
	1800	51×96	0.15	5.7	55	57	RTCD1382V182YC096M
	2200	51×130	0.15	7.1	45	47	RTCD1382V222YC130M
	2700	64×96	0.15	7.7	37	39	RTCD1382V272YD096M
	3300	64×115	0.15	9.1	29	31	RTCD1382V332YD115M
	3900	64×130	0.15	10.4	25	27	RTCD1382V392YD130M
	4700	64×155	0.15	12.2	20	21	RTCD1382V472YD155M
		77×115	0.15	11.5	20	21	RTCD1382V472YE115M
	5600	64×195	0.15	14.6	17	20	RTCD1382V562YD195M
		77×130	0.15	13.1	17	20	RTCD1382V562YE130M
	6800	77×155	0.15	15.5	14	18	RTCD1382V682YE155M
	8200	90×157	0.15	18.1	12	15	RTCD1382V822YF157M
	10000	90×157	0.15	19.9	10	15	RTCD1382V103YF157M
	12000	90×196	0.15	23.8	8	13	RTCD1382V123YF196M
	15000	90×236	0.15	28.8	7	10	RTCD1382V153YF236M
400 2G (450)	1000	51×75	0.15	3.9	102	105	RTCD1382G102YC075M
	1200	51×96	0.15	4.6	85	88	RTCD1382G122YC096M
	1500	51×115	0.15	5.6	68	70	RTCD1382G152YC115M
	1800	51×130	0.15	6.4	57	58	RTCD1382G182YC130M
	2200	64×96	0.15	6.9	46	48	RTCD1382G222YD096M
	2700	64×115	0.15	8.2	38	40	RTCD1382G272YD115M
	3300	64×130	0.15	9.5	30	32	RTCD1382G332YD130M
	3900	64×155	0.15	11.1	27	28	RTCD1382G392YD155M
		77×115	0.15	10.4	27	28	RTCD1382G392YE115M
	4700	64×195	0.15	13.4	21	22	RTCD1382G472YD195M
		77×130	0.15	12.0	21	22	RTCD1382G472YE130M
	5600	64×195	0.15	14.6	20	20	RTCD1382G562YD195M
		77×155	0.15	14.0	20	20	RTCD1382G562YE155M
	6800	90×157	0.15	16.5	18	18	RTCD1382G682YF157M
	8200	90×157	0.15	18.1	15	17	RTCD1382G822YF157M
	10000	90×196	0.15	21.7	12	15	RTCD1382G103YF196M
	12000	90×236	0.15	25.8	10	12	RTCD1382G123YF236M
	15000	90×236	0.15	28.0	10	12	RTCD1382G153YF236M
450 2W (500)	1000	51×96	0.15	4.2	102	105	RTCD1382W102YC096M
	1200	51×115	0.15	5.0	85	88	RTCD1382W122YC115M
	1500	51×130	0.15	5.9	68	70	RTCD1382W152YC130M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
450 2W (500)	1800	64×96	0.15	6.3	57	58	RTCD1382W182YD096M
	2200	64×115	0.15	7.4	46	48	RTCD1382W222YD115M
	2700	64×130	0.15	8.6	40	42	RTCD1382W272YD130M
		77×115	0.15	8.7	40	42	RTCD1382W272YE115M
	3300	64×155	0.15	10.2	30	35	RTCD1382W332YD155M
		77×130	0.15	10.1	30	35	RTCD1382W332YE130M
	3900	64×195	0.15	12.3	27	32	RTCD1382W392YD195M
	4700	77×155	0.15	12.9	24	27	RTCD1382W472YE155M
	5600	77×195	0.15	15.4	22	23	RTCD1382W562YE195M
		90×157	0.15	14.9	22	23	RTCD1382W562YF157M
	6800	90×196	0.15	18	20	20	RTCD1382W682YF196M
	8200	90×196	0.15	19.8	18	18	RTCD1382W822YF196M
	10000	90×196	0.15	21.6	15	15	RTCD1382W103YF196M
	10000	90×236	0.15	23.6	15	15	RTCD1382W103YF236M
500 2H (550)	1000	51×130	0.15	4.5	112	120	RTCD1382H102YC130M
	1200	64×115	0.15	5.2	93	100	RTCD1382H122YD115M
	1500	61×130	0.15	6.1	74	80	RTCD1382H152YD130M
	1800	77×115	0.15	6.7	62	50	RTCD1382H182YE115M
	2200	77×130	0.15	7.3	53	50	RTCD1382H222YE130M
	2700	77×155	0.15	8.7	40	35	RTCD1382H272YE155M
	3300	77×155	0.15	10.0	38	32	RTCD1382H332YE155M
	3900	90×157	0.15	11.6	30	27	RTCD1382H392YF157M
	4700	90×170	0.15	13.3	25	20	RTCD1382H472YF170M
	5600	90×196	0.15	15.5	20	17	RTCD1382H562YF196M
	6800	90×196	0.15	17.0	17	17	RTCD1382H682YF196M
		90×236	0.15	18.5	17	17	RTCD1382H682YF236M
550 2Y (600)	1000	64×115	0.15	4.8	110	115	RTCD1382Y102YD115M
	1200	64×130	0.15	5.6	90	100	RTCD1382H122YD130M
	1500	77×115	0.15	6.6	70	85	RTCD1382H152YE115M
	1800	77×130	0.15	7.2	60	65	RTCD1382H182YE130M
	2200	77×155	0.15	8.4	50	55	RTCD1382H222YE155M
	2700	77×170	0.15	10.0	40	45	RTCD1382H272YE170M
	3300	90×157	0.15	11.0	35	40	RTCD1382H332YF157M
	3900	90×170	0.15	12.8	30	35	RTCD1382H392YF170M
	4700	90×196	0.15	14.5	25	30	RTCD1382H472YF196M
	5600	90×236	0.15	16.7	20	20	RTCD1382H562YF236M

RTCD139 SERIES (105°C 10,000H)



Screw Terminal

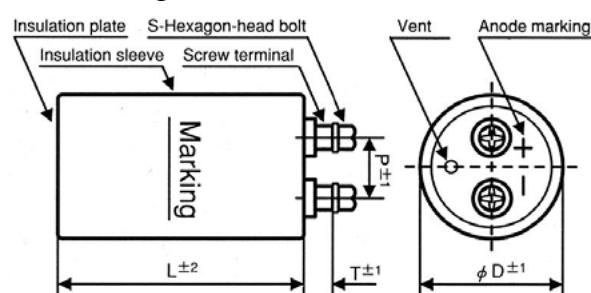
- Compliant to the RoHS directive.
- Long-life series with the warranty of 10,000 hours.
- high-ripple series.

Specification

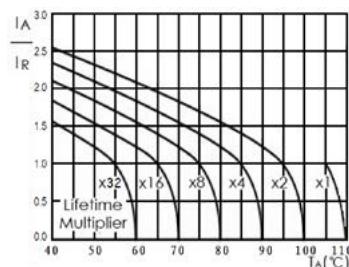
Item	Performance Characteristics	
Operating range	$-25^{\circ}\text{C} \sim +105^{\circ}\text{C}$	
Rated voltage range	350V ~ 500V	
Capacitance tolerance	$\pm 20\%$ (20°C , 120Hz)	
Leakage current	$\leq 0.01\text{CV}(\mu\text{A})$ or 5mA (Whichever is smaller) (20°C , after 5 minutes)	
	$C = \text{Nominal capacitance}(\mu\text{F}), V = \text{Rated voltage(V)}$	
Dissipation factor (20°C , 120Hz)	See the standard products table	
Standard	JIS C 5101-4	

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	15000h		$>300000\text{h}$	10000h	1000h
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value
Capacitance Change	Within $\pm 30\%$ of initial value		Within $\pm 20\%$ of initial value	Within $\pm 20\%$ of initial value	Within $\pm 20\%$ of initial value
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value
Condition: Applied Voltage Applied Current Applied Temperature Failure Rate Level	U_R I_R 105°C $\leq 1\%$ Failure Rate	U_R $1.2 \times I_R$ 40°C $\leq 1\%$ Failure Rate	U_R I_R 105°C Guaranteed	U_R $I_R = 0$ 105°C	$U_R = 0$ $I_R = 0$ 105°C After test: UR to be applied for 60min >24h before measurement

Drawing



Lifetime Diagram

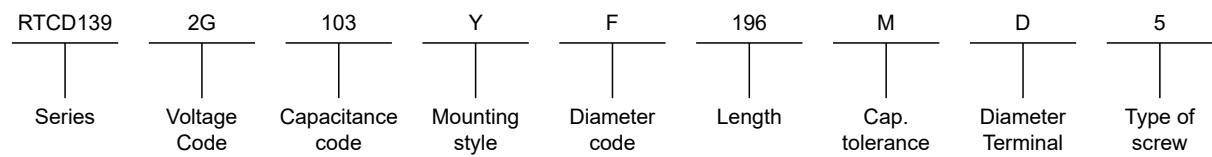


105°C Multiplier of useful life as a function of ambient temperature and ripple current load
I A : actual ripple current at 120Hz, IR: rated ripple current at 120Hz

ΦD	P	S	T	material
35	12.7	M5×10	6.0	Phenol
51	22.0	M5×10	5.5	Phenol
64	28.6	M5×10	5.5	Phenol

ΦD	P	S	T	material
77	32.0	M5×10	4.5	Phenol
90	32.0	M5×10	4.0	Phenol
101	41.5	M8×17	10.0	Phenol

■ Part number(Example): RTCD139 400V 10,000μF±20% F case (Φ90mm) product



Ripple current correction coefficient					
T (°C)	40	60	85	105	
Coefficient	2.44	2.16	2.0	1.0	
Frequency (Hz)	50/60	120	300	1K	≥10K
Coefficient	0.7	1.0	1.1	1.24	1.3

■ Standard Products Table

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
350 2V (400)	2700	64×115	0.15	5.0	50	55	RTCD1392V272YD100M
	3300	64×130	0.15	6.0	40	45	RTCD1392V332YD115M
	3900	64×155	0.15	6.7	30	35	RTCD1392V392YD131M
	4700	77×130	0.15	7.5	27	30	RTCD1392V472YE130M
	5600	90×130	0.15	8.4	23	25	RTCD1392V562YF130M
	6800	90×157	0.15	10.2	20	23	RTCD1392V682YF157M
	8200	90×196	0.15	11.6	18	21	RTCD1392V822YF196M
	10000	90×210	0.15	13.8	15	18	RTCD1392V103YF210M
400 2G (450)	2200	64×115	0.15	5.7	48	52	RTCD1392G222YD100M
	2700	64×130	0.15	6.4	40	46	RTCD1392G272YD115M
	3300	64×155	0.15	7.1	35	40	RTCD1392G332YD130M
	3900	77×130	0.15	8.1	30	35	RTCD1392G392YE120M
	4700	77×155	0.15	9.8	25	30	RTCD1392G472YE137M
	5600	90×140	0.15	10.9	20	25	RTCD1392G562YF140M
	6800	90×196	0.15	13.2	16	20	RTCD1392G682YF196M
	8200	90×210	0.15	15.6	13	18	RTCD1392G822YF210M
450 2W (500)	1800	64×115	0.15	5.5	45	50	RTCD1392W182YD100M
	2200	64×130	0.15	6.3	38	40	RTCD1392W222YD130M
	2700	64×155	0.15	6.9	30	35	RTCD1392W272YD155M
	3300	77×130	0.15	7.8	25	30	RTCD1392W332YE130M
	3900	77×155	0.15	9.5	20	25	RTCD1392W392YE155M
	4700	90×157	0.15	10.7	17	20	RTCD1392W472YF157M
	5600	90×196	0.15	12.3	15	18	RTCD1392W562YF196M

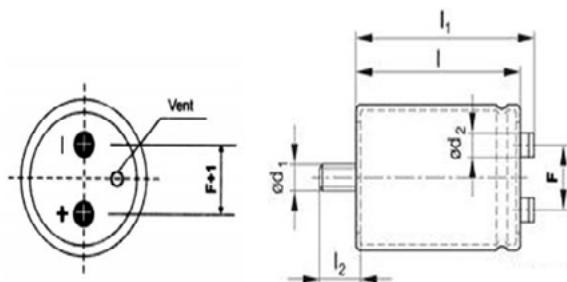
Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
450 2W (500)	6800	90×210	0.15	14.8	13	15	RTCD1392W682YF210M
500 2H (550)	1800	64×130	0.15	6.5	80	95	RTCD1392H182YD130M
	2200	64×155	0.15	7.1	70	80	RTCD1392H222YD155M
	2700	77×155	0.15	8.0	60	70	RTCD1392H272YE155M
	3300	90×130	0.15	9.9	50	61	RTCD1392H332YF130M
	3900	90×157	0.15	11.3	40	49	RTCD1392H392YF157M
	4700	90×196	0.15	11.9	30	42	RTCD1392H472YF196M
	5600	90×210	0.15	13.8	28	30	RTCD1392H562YF210M

RTCDT SERIES (85°C 2000H)

- Compliant to the RoHS directive.
- 350WV~500WV extra-high voltage.
- 85°C 2000H for inverters.



Product Specifications



(unit: mm)

ΦD	P	S	T	Cap material
36	12.7	M5×10	6.0	Phenol
51	22.0	M5×10	5.5	Phenol
64	28.6	M5×10	5.5	Phenol
77	32.0	M5×10	4.5	Phenol
90	32.0	M5×10	4.0	Phenol
101	41.5	M8×17	10.0	Phenol

Items	Specifications
Temperature range	-25°C ~ +85°C
Rated voltage	350 ~ 500V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.01CV (μA) or 5mA, whichever is smaller [C=nominal capacitance (μF), V= rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table.
Permissible ripple current	As specified in the standard products table. (40°C, 120Hz)
High-temperature load	After the rated voltage with specified ripple current is applied at 85°C for 2,000 hours : Capacitance tolerance : ±20% or less of the initial value Dissipation factor : 200% or less of the specified initial value Leakage current : Specified initial value or less
Standard	JIS C 5101-4

Ripple current correction coefficient				
Temperature (°C)	40	60	70	85
Coefficient	1.0	0.75	0.62	0.37
Frequency (Hz)	50/60	120	300	1K
Coefficient	0.7	1.0	1.1	1.3
				≥10K
				1.4

Part number(Example): RTCD135 400V 10,000μF±20% F case (Φ90mm) product

RTCDT	2G	103	Y	F	157	M	D	5
Series	Voltage Code	Capacitance code	Mounting style	Diameter code	Length	Cap. tolerance	Diameter Terminal	Type of screw

Standard Products Table

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
350 2V (400)	1200	51×75	0.15	10.3	90	120	RTCDT2V122YC075M
	1500	51×75	0.15	11.5	77	100	RTCDT2V152YC075M
	1800	51×96	0.15	13.9	62	80	RTCDT2V182YC096M
	2200	51×96	0.15	15.4	51	70	RTCDT2V222YC130M
	2700	51×130	0.15	19.3	51	58	RTCDT2V272YC130M
	3300	51×130	0.15	21.4	35	51	RTCDT2V332YC130M
	3900	64×115	0.15	24.2	30	47	RTCDT2V392YD115M
	4700	64×130	0.15	27.9	28	40	RTCDT2V472YD130M
	5600	77×115	0.15	30.7	25	35	RTCDT2V562YE115M
	6800	77×130	0.15	35.4	20	29	RTCDT2V682YE130M
	8200	77×155	0.15	41.7	17	25	RTCDT2V822YE155M
	10000	90×157	0.15	49.0	15	23	RTCDT2V103YF157M
	12000	90×157	0.15	54.1	13	21	RTCDT2V123YF157M
	15000	90×196	0.15	66.2	10	20	RTCDT2V153YF196M
	18000	90×220	0.15	75.4	8	20	RTCDT2V183YF220M
	22000	90×236	0.15	80.9	8	20	RTCDT2V223YF236M
400 2G (450)	1000	51×75	0.15	9.4	85	105	RTCDT2G102YC075M
		51×100	0.15	10.6	85	150	RTCDT2G122YC100M
	1200	51×80	0.15	10.3	75	125	RTCDT2G152YC080M
	1500	51×96	0.15	12.7	62	108	RTCDT2G152YC096M
		51×100	0.15	12.7	62	108	RTCDT2G152YC100M
	1800	51×96	0.15	13.9	51	90	RTCDT2G182YC096M
		64×96	0.15	15.6	51	90	RTCDT2G182YD096M
	2200	51×100	0.15	16.1	39	75	RTCDT2G222YC100M
		51×105	0.15	16.1	39	75	RTCDT2G222YC105M
		51×115	0.15	16.1	39	75	RTCDT2G222YC115M
		51×130	0.15	17.4	39	75	RTCDT2G222YC130M
		64×80	0.15	16.1	39	75	RTCDT2G222YD080M
		64×96	0.15	17.0	39	75	RTCDT2G222YD096M
		77×90	0.15	19.0	39	75	RTCDT2G222YE090M
	2700	64×96	0.15	18.8	36	66	RTCDT2G272YD096M
	3300	64×96	0.15	20.5	35	53	RTCDT2G332YD096M
		64×115	0.15	22.2	35	53	RTCDT2G332YD115M
		77×96	0.15	22.2	35	53	RTCDT2G332YE096M
		77×100	0.15	22.2	35	53	RTCDT2G332YE100M
	3900	64×115	0.15	24.0	29	48	RTCDT2G392YD115M
		64×130	0.15	25.0	29	48	RTCDT2G392YD130M
		77×96	0.15	24.0	29	48	RTCDT2G392YE096M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
400 2G (450)	4700	64×115	0.15	25.6	26	41	RTCDT2G472YD115M
		64×130	0.15	25.6	26	41	RTCDT2G472YD130M
		77×96	0.15	25.0	26	41	RTCDT2G472YE096M
		77×105	0.15	27.1	26	41	RTCDT2G472YE105M
		77×110	0.15	27.1	26	41	RTCDT2G472YE110M
		77×115	0.15	28.2	26	41	RTCDT2G472YE115M
		77×130	0.15	28.2	26	41	RTCDT2G472YE130M
	5600	64×130	0.15	29.0	21	37	RTCDT2G562YD130M
		64×155	0.15	31.0	21	37	RTCDT2G562YD155M
		77×105	0.15	29.0	21	37	RTCDT2G562YE105M
		77×130	0.15	32.2	21	37	RTCDT2G562YE130M
		90×96	0.15	31.0	21	37	RTCDT2G562YF096M
	5900	77×130	0.15	33.0	27	31	RTCDT2G592YE130M
	6300	77×143	0.15	34.0	21	37	RTCDT2G632YE143M
	6800	77×115	0.15	34.1	18	30	RTCDT2G682YE115M
		77×130	0.15	35.0	18	30	RTCDT2G682YE130M
		77×145	0.15	36.8	18	30	RTCDT2G682YE145M
		77×150	0.15	36.8	18	30	RTCDT2G682YE150M
		77×155	0.15	38.0	18	30	RTCDT2G682YE155M
	8200	77×130	0.15	37.4	16	26	RTCDT2G822YE130M
		77×145	0.15	39.2	16	26	RTCDT2G822YE145M
		90×130	0.15	40.9	16	26	RTCDT2G822YF130M
		90×157	0.15	44.4	16	26	RTCDT2G822YF157M
	10000	90×130	0.15	45.5	13	23	RTCDT2G103YF130M
		90×150	0.15	45.5	13	23	RTCDT2G103YF150M
		90×157	0.15	49.4	13	23	RTCDT2G103YF157M
		90×196	0.15	49.4	13	23	RTCDT2G103YF196M
	12000	90×157	0.15	53.5	12	21	RTCDT2G123YF157M
		90×196	0.15	59.1	12	21	RTCDT2G123YF196M
	15000	90×220	0.15	69.1	11	21	RTCDT2G153YF220M
		90×236	0.15	71.1	11	21	RTCDT2G153YF236M
	18000	90×220	0.15	74.5	10	20	RTCDT2G183YF220M
		90×236	0.15	76.8	10	20	RTCDT2G183YF236M
450 2G (500)	1000	51×80	0.15	9.4	84	154	RTCDT2W102YC080M
	1200	51×96	0.15	11.4	73	129	RTCDT2W122YC096M
	1500	51×80	0.15	11.6	60	108	RTCDT2W152YC080M
		51×115	0.15	13.7	60	108	RTCDT2W152YC115M
	1800	51×130	0.15	15.8	48	100	RTCDT2W182YC130M
	2200	51×120	0.15	16.2	35	84	RTCDT2W222YC120M
		64×100	0.15	17.0	35	84	RTCDT2W222YD100M
	2700	64×115	0.15	20.2	35	69	RTCDT2W272YD115M

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10KHz (mΩ)	Part number
450 2G (500)	3300	64×115	0.15	22.1	32	61	RTCDT2W332YD115M
		64×130	0.15	23.4	32	61	RTCDT2W332YD130M
	3900	77×115	0.15	25.6	32	51	RTCDT2W392YE115M
	4700	77×115	0.15	27.8	26	43	RTCDT2W472YE115M
		77×130	0.15	29.4	26	43	RTCDT2W472YE130M
	5600	77×130	0.15	31.8	24	37	RTCDT2W562YE130M
		77×155	0.15	34.6	24	37	RTCDT2W562YE155M
	6800	77×145	0.15	35.8	22	33	RTCDT2W682YE145M
		77×155	0.15	35.8	22	33	RTCDT2W682YE155M
		90×130	0.15	36.9	22	33	RTCDT2W682YF130M
		90×157	0.15	40.5	22	33	RTCDT2W682YF157M
	8200	90×130	0.15	41.1	20	30	RTCDT2W822YF130M
		90×157	0.15	44.6	20	30	RTCDT2W822YF157M
	10000	90×157	0.15	48.8	18	28	RTCDT2W103YF157M
		90×170	0.15	48.8	18	28	RTCDT2W103YF170M
		90×196	0.15	53.9	18	28	RTCDT2W103YF196M
	12000	90×196	0.15	58.5	16	26	RTCDT2W123YF196M
		90×236	0.15	63.8	16	26	RTCDT2W123YF236M
	15000	77×235	0.15	53.7	14	24	RTCDT2W153YE235M
		90×210	0.15	66.8	14	24	RTCDT2W153YF210M
		90×236	0.15	68.9	14	24	RTCDT2W153YF236M
	18000	101×250	0.15	80.6	12	22	RTCDT2W183YG250M
500 2H (550)	1000	51×115	0.15	15.5	116	130	RTCDT2H102YC115M
	1200	51×115	0.15	17.0	112	120	RTCDT2H122YC115M
	1500	51×130	0.15	19.9	90	96	RTCDT2H152YC130M
	1800	64×115	0.15	22.7	75	80	RTCDT2H182YD115M
	2200	64×110	0.15	24.2	61	65	RTCDT2H222YD110M
		64×130	0.15	26.1	61	65	RTCDT2H222YD130M
	2700	77×115	0.15	29.0	50	53	RTCDT2H272YE115M
	3300	77×130	0.15	33.7	45	48	RTCDT2H332YE130M
	3900	77×155	0.15	39.2	38	41	RTCDT2H392YE155M
	4700	77×170	0.15	44.9	34	37	RTCDT2H472YE170M
	5600	77×195	0.15	51.6	28	31	RTCDT2H562YE195M
		90×157	0.15	50.5	28	31	RTCDT2H562YF157M
	6800	90×170	0.15	57.3	23	25	RTCDT2H682YF170M
	8200	77×236	0.15	66.6	21	23	RTCDT2H822YE236M
		90×196	0.15	66.4	21	23	RTCDT2H822YF196M
	10000	90×236	0.15	69.5	17	19	RTCDT2H103YF236M
		101×195	0.15	79.4	17	19	RTCDT2H103YG195M
	12000	101×237	0.15	85.7	16	18	RTCDT2H123YG237M
	18000	101×260	0.15	93.2	14	16	RTCDT2H183YG260M

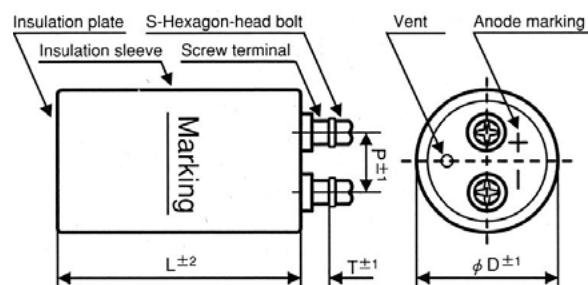
RTCD13N SERIES

(Warranty of 1,000,000 cycles at 40°C)

- Compliant to the RoHS directive.
- High-reliability series charge/discharge for welding machine.
- Guarantees charge/discharge warranty of 1,000,000 cycles at 40°C
(Useful of 3,000,000 cycles at 40°C)



Product Specifications



(unit: mm)

ΦD	P	S	T	Cap material
36	12.7	M5×10	6.0	Phenol
51	22.0	M5×10	5.5	Phenol
64	28.6	M5×10	5.5	Phenol
77	32.0	M5×10	4.5	Phenol

Items	Specifications
Temperature range	-25°C ~ +70°C
Rated voltage	200 ~ 475V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.01CV (µA) or 5 mA, whichever is smaller or less [C=nominal capacitance (µF), V= rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table.
Durability	The rated voltage is applied 1,000,000 cycles a period of one second temperature of 40°C. Following specifications shall meet after the test: (0.8second charge and about 1m second discharge time constant) at a temperature of 40°C. Following specifications shall meet after the test: Capacitance tolerance : ±20% or less of the initial value Dissipation factor : 200% or less of the specified initial value Leakage current : 200% or less of the specified initial value
Standard	JIS C 5101-4

Part number(Example): RTCD13N 475V 1,000μF±20% E case (Φ77mm) product

RTCD13N	2X	102	Y	F	155	M	D	5
Series	Voltage Code	Capacitance code	Mounting style	Diameter code	Length	Cap. tolerance	Diameter Terminal	Type of screw

■ Standard Products Table

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Part number
200(2D)	33000	90×160	0.15	RTCD13N2D333YF160M
	36000	90×160	0.15	RTCD13N2D363YF160M
250(2E)	22000	90×160	0.12	RTCD13N2E223YF160M
	33000	90×196	0.12	RTCD13N2E333YF196M
350(2V)	150	36×100	0.05	RTCD13N2V151IA100M
	330	51×100	0.05	RTCD13N2V331YC100M
450(2W)	330	51×100	0.05	RTCD13N2W331YC100M
	470	51×100	0.05	RTCD13N2W471YC100M
	1000	64×120	0.05	RTCD13N2W102YD120M
475V(2X)	100	36×100	0.05	RTCD13N2X101IA100M
	225	51×110	0.05	RTCD13N2X22WYC110M
	1000	77×155	0.05	RTCD13N2X102YE155M

CERTIFICATE OF HONOR



使命宗旨

ITACAP 打造电容行业民族品牌
共享共赢，创高效企业

核心价值观

开拓创新、务实守信；
利益客户、成就员工。

深圳市日田特殊电容器有限公司

SHENZHEN ITACAP ELECTRONICS CO.LTD

日田企业控股(香港)有限公司

地址：香港九龍紅磡鶴園街2G號恆豐工業大廈2期3樓A222室

Unit No.222,3F,Hang Fung Industrial Building,Phase2,No.2G Hok Yuen Street,
Hung Hom,Kowloon,Hong Kong.

电话:00852-30786632 传真:00852-30786632

深圳市日田特殊电容器有限公司

地址：深圳市光明区公明街道上村同富裕旭发科技园6栋三楼

电话:0755-29694016 传真:0755-61624467

网址:<http://www.itacap.net> Email:sales@itacap.net

