

Performance and Test Methods

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Item	Performance		Test Methods and Conditions (In accordance with JIS C 5101-1)		
	R characteristics				
Capacitance	Within the tolerance		Class 2		
Dissipation Factor (or Q)	RS: 5.0% or less		Capacitance Value	Measurement Frequency	Measurement Voltage
			C ≤ 10μF	1kHz ± 10%	1.0 ± 0.2Vrms
			C > 10μF	120Hz ± 10%	0.5 ± 0.2Vrms
Withstanding Voltage	No insulation breakdown and no failure. Rated Voltage 50~100V Rated Voltage 250% Rated Voltage 250V Rated Voltage 200% Rated Voltage 630V Rated Voltage 150%		Heat treatment Applied Voltage : 1~5sec. Applied in silicon oil (W.V.630V or more) Charging and Discharging Current : 50mA max.		
Insulation Resistance	No less than 10,000MΩ or 500MΩ · μF, whichever is smaller. (*)		Applied Voltage : Rated Voltage (W.V.630V or more=500V) Applied Time : 1min.		
Adhesion Strength of Termination	No peeling-off or exfoliation shall be manifest or recognizable in its incipient stages.		Applied Force : 5N Keeping Time : 10 sec		
Solderability (Applied for Frame Area)	Termination surface should be covered with new solder to over 75%.		Temperature : 230 ± 5°C Immersion Time : 2 ± 1sec.		
Temp. Cycle	Visual	No serious mechanical damage.	Room Temp. → Minimum Operation Temp. → Room Temp. → Maximum Operation Temp.		
	Capacitance change	± 7.5% or less	3min. → 30min. → 3min. → 30min.		
	Dissipation factor (or Q)	Initial standard values must be satisfied.	Leaving a sample under the temperature of step 1~4 above in order to complete 1 cycle. The cycle is repeated 5 times.		
	Insulation resistance	Initial standard values must be satisfied.			
	Withstanding voltage	No insulation breakdown and no failure.			
Humidity Load Test	Visual	No serious mechanical damage.	Voltage Treatment Test Temperature : 40 ± 2°C (*) Relative humidity : 90~95%RH Test Voltage : Rated Voltage Test Time : 500hours		
	Capacitance change	± 12.5% or less			
	Dissipation factor (or Q)	Less than double of the initial value			
	Withstanding voltage	No less than 1,000MΩ or 50MΩ · μF, whichever is smaller. (*)			
Life Test (at Elevated Ambient Temp.)	Visual	No serious mechanical damage.	Voltage Treatment Test Temp. : Maximum Operation Temp. ± 3°C Test Voltage : W.V.=250V or less Rated Voltage × 200% of DC Voltage W.V.=630V or more Rated Voltage × 100% of DC Voltage Test Time : 1,000hours *Test condition is different for each product. Please check the individual specification sheets.		
	Capacitance Change	± 12.5% or less			
	Dissipation Factor (or Q)	Less than double of the initial value			
	Withstanding Voltage	No less than 1,000MΩ or 50MΩ · μF, whichever is smaller. (*)			
Flexion	Visual	No serious mechanical damage.	Heat Treatment Flexure : 1mm (*) Moving Speed : 0.5mm/sec		
	Capacitance Change	± 12.5% or less	<p>Have a capacitance meter connected to both ends of the specimen during a test.</p>		

Note1 : Specifications may differ depending on the product Please check the individual specification sheets.

Note2 : Heat treatment : The capacitor is heat-treated at 150+0/-10°C for 1 hour, then is left at room temperature for 48 ± 4 hours

Note3 : Voltage treatment : The capacitor is processed in a prescribed examination condition for 1 hour, then is left at room temperature for 48 ± 4 hours.