

Performance and Test Methods

■ Performance and Test Methods

Item		Performance	Test Methods and Conditions (In accordance with JIS C 5101-1)				
		X7R Characteristics					
Capacitance		Within the tolerance					
Dissipation Factor		2.5% or less	<table border="1" style="width: 100%;"> <tr> <td>Measurement Frequency</td> <td>Measurement Voltage</td> </tr> <tr> <td>1kHz±10%</td> <td>1.0V±10%</td> </tr> </table> <p>Heat-treated before measuring</p>	Measurement Frequency	Measurement Voltage	1kHz±10%	1.0V±10%
Measurement Frequency	Measurement Voltage						
1kHz±10%	1.0V±10%						
Withstanding Voltage		No insulation breakdown and no failure.	Applied Voltage : 1~5sec. Applied in silicon oil Charging & Discharging Current : 50mA max Test Voltage: Rated Voltage × 250%				
Insulation Resistance		10,000MΩ or more	Applied Voltage : Rated Voltage Applied Time : 1min.				
Adhesion Strength of Termination	Wire-Bonding	0.03N or more	Wire-bonded by φ25μ wire, then pull the wire in order to measure the strength				
Temp. Cycle	Visual	No serious mechanical damage.	Room Temp.→ Minimum Operation Temp. →Room Temp.→ Maximum Operation Temp.				
	Capacitance Change	±7.5% or less					
	Dissipation Factor (or Q)	Initial standard values must be satisfied.	3min. → 30min. → 3min. → 30min.				
	Insulation Resistance	Initial standard values must be satisfied.					
	Withstanding Voltage	No insulation breakdown and no failure.	Leaving a sample under the temperature of step 1~4 above in order to complete 1 cycle. The cycle is repeated 25 times.				
Humidity Load Test	Visual	No serious mechanical damage.	Voltage Treatment before test				
	Capacitance Change	±12.5% or less	Test Temperature : 85±2°C				
	Dissipation Factor (or Q)	Less than double of the initial value	Relative Humidity : 85±3%RH				
	Insulation Resistance	1,000MΩ or more	Test Voltage : 3.0 Test Time : 240-0,+24hours				
Life Test (at Elevated Ambient Temp.)	Visual	No serious mechanical damage.	Voltage Treatment before test				
	Capacitance Change	±12.5% or less	Test Temp. :125°C±3°C				
	Dissipation Factor (or Q)	Less than double of the initial value	Test Voltage: Rated Voltage				
	Withstanding Voltage	1,000MΩ or more	Test Time : 2,000-0,+48hours Test condition is different for each product. Please check the individual specification sheets.				

Note1 : 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.

Note2 : Voltage Treatment : The capacitor is processed under the prescribed examination condition for 1 hour, then is left at room temperature for 48±4 hours.