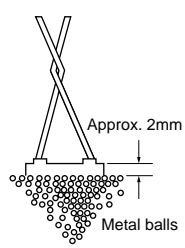
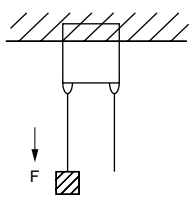




No.	Item		Specifications	Test Method												
1	Operating Temperature Range		-55 to +125°C	—												
2	Appearance		No defects or abnormalities	Visual inspection												
3	Dimension and Marking		See previous pages	Visual inspection, Vernier Caliper												
4	Dielectric Strength	Between Terminals	No defects or abnormalities	<p>The capacitor should not be damaged when voltage in Table is applied between the terminations for 1 to 5 sec. (Charge/Discharge current ≤ 50mA)</p> <table><tr><th>Rated voltage</th><th>Test voltage</th></tr><tr><td>DC250V</td><td>200% of the rated voltage</td></tr><tr><td>DC630V</td><td>150% of the rated voltage</td></tr></table>	Rated voltage	Test voltage	DC250V	200% of the rated voltage	DC630V	150% of the rated voltage						
		Rated voltage	Test voltage													
DC250V	200% of the rated voltage															
DC630V	150% of the rated voltage															
	Body Insulation	No defects or abnormalities	<p>The capacitor is placed in a container with metal balls of 1mm diameter so that each terminal, short-circuit, is kept approximately 2mm from the balls as shown in the figure, and 200% of the rated DC voltage is impressed for 1 to 5 sec. between capacitor terminals and metal balls. (Charge/Discharge current ≤ 50mA)</p> 													
5	Insulation Resistance	Between Terminals	<p>C&lt;0.01μF : 10,000MΩ min. C≥0.01μF : 100MΩ · μF min. C : Nominal capacitance</p>	<p>The insulation resistance should be measured with DC500±50V (DC250±25V in case of rated voltage : DC250V) at normal temperature and humidity and within 2 min. of charging. (Charge/Discharge current ≤ 50mA)</p>												
6	Capacitance		Within the specified tolerance	<p>The capacitance/D.F. should be measured at the frequency of 1±0.1kHz and a voltage of AC1±0.2V(r.m.s.)</p>												
7	Dissipation Factor (D.F.)		0.025 max.													
8	Capacitance Temperature Characteristics		Within ±15%	<p>The capacitance change should be measured at each specified temperature stage.</p> <table><tr><th>Step</th><th>Temperature (°C)</th></tr><tr><td>1</td><td>25±2</td></tr><tr><td>2</td><td>-55±3</td></tr><tr><td>3</td><td>25±2</td></tr><tr><td>4</td><td>125±3</td></tr><tr><td>5</td><td>25±2</td></tr></table> <p>• Pretreatment Perform a heat treatment at 150+0/-10°C for 1 hr., and then let sit at room temperature for 24±2 hrs.</p>	Step	Temperature (°C)	1	25±2	2	-55±3	3	25±2	4	125±3	5	25±2
Step	Temperature (°C)															
1	25±2															
2	-55±3															
3	25±2															
4	125±3															
5	25±2															
9	Terminal Strength	Tensile Strength	Termination not to be broken or loosened	<p>As in the figure, fix the capacitor body, apply the force gradually to each lead in the radial direction of the capacitor until reaching 10N and then keep the force applied for 10±1 sec.</p> 												
		Bending Strength	Termination not to be broken or loosened	<p>Each lead wire should be subjected to a force of 2.5N and then bent 90° at the point of egress in one direction. Each wire is then returned to the original position and bent 90° in the opposite direction at the rate of one bend per 2 to 3 sec.</p>												
10	Vibration Resistance	Appearance	No defects or abnormalities	<p>The capacitor should be firmly soldered to the supporting lead wire and vibrated at a frequency range of 10 to 55Hz, 1.5mm in total amplitude, with about a 1 minute rate of vibration change from 10Hz to 55Hz and back to 10Hz. Apply for a total of 6 hrs., 2 hrs. each in 3 mutually perpendicular directions.</p>												
		Capacitance	Within the specified tolerance													
		D.F.	0.025 max.													

Continued on the following page. 

 Continued from the preceding page.

No.	Item		Specifications	Test Method															
11	Solderability of Leads		Lead wire should be soldered with uniform coating on the axial direction over 3/4 of the circumferential direction.	The terminal of a capacitor is dipped into a solution of ethanol (JIS-K-8101) and rosin (JIS-K-5902) (25% rosin in weight proportion) and then into molten solder (JIS-Z-3282) for 2±0.5 sec. In both cases the depth of dipping is up to about 1.5 to 2mm from the terminal body. Temp. of solder : 245±5°C Lead Free Solder (Sn-3.0Ag-0.5Cu) 235±5°C H60A or H63A Eutectic Solder															
12	Resistance to Soldering Heat	Appearance	No defects or abnormalities	The lead wire is immersed in the melted solder 1.5 to 2mm from the main body at 350±10°C for 3.5±0.5 sec. The specified items are measured after 24±2 hrs.  • Pretreatment Perform a heat treatment at 150+0/-10°C for 1 hr., and then let sit at room temperature for 24±2 hrs.															
		Capacitance Change	Within ±10%																
		Dielectric Strength (Between Terminals)	No defects																
13	Temperature and Immersion Cycle	Appearance	No defects or abnormalities	First, repeat 5 cycles according to the 4 heat treatments listed in the following table. Next, repeat twice the successive cycles of immersion, each cycle consisting of immersion in fresh water at 65+5/-0°C for 15 min. and immersion in a saturated aqueous solution of salt at 0±3°C for 15 min. The capacitor is then promptly washed in running water, dried with a drying cloth, and allowed to sit at room temperature for 24±2 hrs. <table><tr><td>Step</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>Temp. (°C)</td><td>Min. Operating Temp. ±3</td><td>Room Temp.</td><td>Max. Operating Temp. ±3</td><td>Room Temp.</td></tr><tr><td>Time (min.)</td><td>30±3</td><td>3 max.</td><td>30±3</td><td>3 max.</td></tr></table> • Pretreatment Perform a heat treatment at 150+0/-10°C for 1 hr., and then let sit at room temperature for 24±2 hrs.	Step	1	2	3	4	Temp. (°C)	Min. Operating Temp. ±3	Room Temp.	Max. Operating Temp. ±3	Room Temp.	Time (min.)	30±3	3 max.	30±3	3 max.
		Step	1		2	3	4												
		Temp. (°C)	Min. Operating Temp. ±3		Room Temp.	Max. Operating Temp. ±3	Room Temp.												
		Time (min.)	30±3		3 max.	30±3	3 max.												
		Capacitance Change	Within ±12.5%																
D.F.	0.05 max.																		
Insulation Resistance	C<0.01μF : 1,000MΩ min. C≥0.01μF : 10MΩ · μF min.																		
Dielectric Strength (Between Terminals)	No defects or abnormalities																		
14	Humidity (Steady State)	Appearance	No defects or abnormalities	Set the capacitor at 40±2°C and relative humidity of 90 to 95% for 500 ±24 <sub>0</sub> hrs. Remove and set for 24±2 hrs. at room temperature, then measure.															
		Capacitance Change	Within ±15%																
		D.F.	0.05 max.																
		Insulation Resistance	C<0.01μF : 1,000MΩ min. C≥0.01μF : 10MΩ · μF min.																
15	Humidity Load	Appearance	No defects or abnormalities	Apply the rated voltage at 40±2°C and relative humidity of 90 to 95% for 500 ±24 <sub>0</sub> hrs. Remove and set for 24±2 hrs. at room temperature, then measure. (Charge/Discharge current ≤ 50mA)															
		Capacitance Change	Within ±15%																
		D.F.	0.05 max.																
		Insulation Resistance	C<0.01μF : 1,000MΩ min. C≥0.01μF : 10MΩ · μF min.																
16	High Temperature Load	Appearance	No defects or abnormalities	Apply voltage in Table for 1000 ±48 <sub>0</sub> hrs. at the maximum operating temperature. Remove and set for 24±2 hrs. at room temperature, then measure. (Charge/Discharge current ≤ 50mA) <table><tr><td>Rated voltage</td><td>Test voltage</td></tr><tr><td>DC250V</td><td>150% of the rated voltage</td></tr><tr><td>DC630V</td><td>120% of the rated voltage</td></tr></table> • Pretreatment Apply test voltage for 1 hr., at test temperature. Remove and set for 24±2 hrs. at room temperature.	Rated voltage	Test voltage	DC250V	150% of the rated voltage	DC630V	120% of the rated voltage									
		Rated voltage	Test voltage																
		DC250V	150% of the rated voltage																
		DC630V	120% of the rated voltage																
Capacitance Change	Within ±15%																		
D.F.	0.05 max.																		
Insulation Resistance	C<0.01μF : 1,000MΩ min. C≥0.01μF : 10MΩ · μF min.																		
17	Solvent Resistance	Appearance	No defects or abnormalities	The capacitor should be fully immersed, unagitated, in reagent at 20 to 25 °C for 30±5 sec. and then remove gently. Marking on the surface of the capacitor should immediately be visually examined. Reagent : • Isopropyl alcohol															
		Marking	Legible																