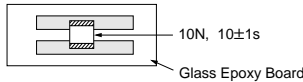
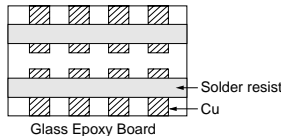
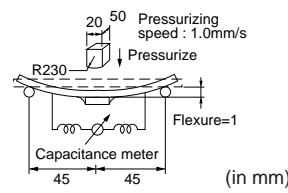
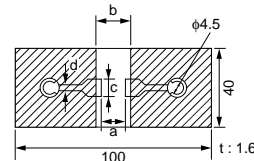


No.	Item		Specifications	Test Method												
1	Operating Temperature Range		−55 to +125℃	—												
2	Appearance		No defects or abnormalities	Visual inspection												
3	Dimensions		Within the specified dimension	Using calipers												
4	Dielectric Strength		No defects or abnormalities	No failure should be observed when voltage in Table is applied between the terminations for 1 to 5 sec., provided the charge/discharge current is less than 50mA. <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><tr><td>DC1kV, DC2kV</td><td>120% of the rated voltage</td></tr><tr><td>DC3.15kV</td><td>DC4095V</td></tr></table>	Rated voltage	Test voltage	DC250V	200% of the rated voltage	DC630V	150% of the rated voltage	DC1kV, DC2kV	120% of the rated voltage	DC3.15kV	DC4095V		
Rated voltage	Test voltage															
DC250V	200% of the rated voltage															
DC630V	150% of the rated voltage															
DC1kV, DC2kV	120% of the rated voltage															
DC3.15kV	DC4095V															
5	Insulation Resistance (I.R.)		More than 10,000MΩ	The insulation resistance should be measured with DC500±50V (DC250±25V in case of rated voltage: DC250V) and within 60±5 sec. of charging.												
6	Capacitance		Within the specified tolerance	The capacitance/Q should be measured at the frequency and voltage shown as follows. <table><tr><th>Capacitance</th><th>Frequency</th><th>Voltage</th></tr><tr><td>C<1,000pF</td><td>1±0.2MHz</td><td>AC0.5 to 5V(r.m.s.)</td></tr><tr><td>C≥1,000pF</td><td>1±0.2kHz</td><td>AC1±0.2V(r.m.s.)</td></tr></table>	Capacitance	Frequency	Voltage	C<1,000pF	1±0.2MHz	AC0.5 to 5V(r.m.s.)	C≥1,000pF	1±0.2kHz	AC1±0.2V(r.m.s.)			
Capacitance	Frequency	Voltage														
C<1,000pF	1±0.2MHz	AC0.5 to 5V(r.m.s.)														
C≥1,000pF	1±0.2kHz	AC1±0.2V(r.m.s.)														
7	Q		U2J char. : 1,000 min. SL char. : 400+20C*1 min.													
8	Capacitance Temperature Characteristics		Temp. Coefficient U2J char. : −750±120 ppm/℃ (Temp. Range : +25 to +125℃) −750+120, −347 ppm/℃ (Temp. Range : −55 to +25℃) SL char. : +350 to −1000 ppm/℃ (Temp. Range : +20 to +85℃)	The capacitance measurement should be made at each step specified in Table. <table><tr><th>Step</th><th>Temperature (℃)</th></tr><tr><td>1</td><td>25±2 (20±2 for SL char.)</td></tr><tr><td>2</td><td>Min. Operating Temp.±3</td></tr><tr><td>3</td><td>25±2 (20±2 for SL char.)</td></tr><tr><td>4</td><td>Max. Operating Temp.±2</td></tr><tr><td>5</td><td>25±2 (20±2 for SL char.)</td></tr></table> SL char. : The capacitance should be measured at even 85℃ between step 3 and step 4.	Step	Temperature (℃)	1	25±2 (20±2 for SL char.)	2	Min. Operating Temp.±3	3	25±2 (20±2 for SL char.)	4	Max. Operating Temp.±2	5	25±2 (20±2 for SL char.)
Step	Temperature (℃)															
1	25±2 (20±2 for SL char.)															
2	Min. Operating Temp.±3															
3	25±2 (20±2 for SL char.)															
4	Max. Operating Temp.±2															
5	25±2 (20±2 for SL char.)															
9	Adhesive Strength of Termination		No removal of the terminations or other defect should occur.	Solder the capacitor to the testing jig (glass epoxy board) shown in Fig. 1. Then apply 10N force in the direction of the arrow. The soldering should be done using the reflow method and should be conducted with care so that the soldering is uniform and free of defects such as heat shock. <div><p>10N, 10±1s Glass Epoxy Board</p></div> <p>Fig. 1</p>												
10	Vibration Resistance	Appearance	No defects or abnormalities	Solder the capacitor to the test jig (glass epoxy board). The capacitor should be subjected to a simple harmonic motion having a total amplitude of 1.5mm, the frequency being varied uniformly between the approximate limits of 10 and 55Hz. The frequency range, from 10 to 55Hz and return to 10Hz, should be traversed in approximately 1 min. This motion should be applied for a period of 2 hrs. in each of 3 mutually perpendicular directions (total of 6 hrs.). <div><p>Solder resist Cu Glass Epoxy Board</p></div>												
		Capacitance	Within the specified tolerance													
		Q	U2J char. : 1,000 min. SL char. : 400+20C*1 min.													

*1 "C" expresses nominal capacitance value (pF).

Continued on the following page. 

Continued from the preceding page.

No.	Item	Specifications	Test Method																							
11	Deflection	No cracking or marking defects should occur.	<p>Solder the capacitor to the testing jig (glass epoxy board) shown in Fig. 2.</p> <p>Then apply a force in the direction shown in Fig. 3.</p> <p>The soldering should be done using the reflow method and should be conducted with care so that the soldering is uniform and free of defects such as heat shock.</p>  <p>Fig. 3</p>																							
		 <table><tr><th rowspan="2">L×W (mm)</th><th colspan="4">Dimension (mm)</th></tr><tr><th>a</th><th>b</th><th>c</th><th>d</th></tr><tr><td>2.0×1.25</td><td>1.2</td><td>4.0</td><td>1.65</td><td rowspan="4">1.0</td></tr><tr><td>3.2×1.6</td><td>2.2</td><td>5.0</td><td>2.0</td></tr><tr><td>3.2×2.5</td><td>2.2</td><td>5.0</td><td>2.9</td></tr><tr><td>4.5×2.0</td><td>3.5</td><td>7.0</td><td>2.4</td></tr></table> <p>Fig. 2</p>		L×W (mm)	Dimension (mm)				a	b	c	d	2.0×1.25	1.2	4.0	1.65	1.0	3.2×1.6	2.2	5.0	2.0	3.2×2.5	2.2	5.0	2.9	4.5×2.0
L×W (mm)	Dimension (mm)																									
	a	b	c	d																						
2.0×1.25	1.2	4.0	1.65	1.0																						
3.2×1.6	2.2	5.0	2.0																							
3.2×2.5	2.2	5.0	2.9																							
4.5×2.0	3.5	7.0	2.4																							
12	Solderability of Termination	75% of the terminations are to be soldered evenly and continuously.	<p>Immerse the capacitor in a solution of ethanol (JIS-K-8101) and rosin (JIS-K-5902) (25% rosin in weight proportion). Immerse in solder solution for 2±0.5 sec.</p> <p>Immersing speed: 25±2.5mm/s</p> <p>Temp. of solder: 245±5°C Lead Free Solder (Sn-3.0Ag-0.5Cu)</p> <p>235±5°C H60A or H63A Eutectic Solder</p>																							
13	Resistance to Soldering Heat	Appearance	No marking defects																							
		Capacitance Change	Within ±2.5%																							
		Q	U2J char. : 1,000 min. SL char. : 400+20C*2 min.																							
		I.R.	More than 10,000MΩ																							
		Dielectric Strength	In accordance with item No.4																							
14	Temperature Cycle	Appearance	No marking defects																							
		Capacitance Change	Within ±2.5%																							
		Q	U2J char. : 500 min. SL char. : 400+20C*2 min.																							
		I.R.	More than 10,000MΩ																							
		Dielectric Strength	In accordance with item No.4																							
15	Humidity (Steady State)	Appearance	No marking defects																							
		Capacitance Change	Within ±5.0%																							
		Q	U2J char. : 350 min. SL char. : 275+5/2C*2 min.																							
		I.R.	More than 1,000MΩ																							
		Dielectric Strength	In accordance with item No.4																							
16	Life	Appearance	No marking defects																							
		Capacitance Change	Within ±3.0%																							
		Q	U2J char. : 350 min. SL char. : 275+5/2C*2 min.																							
		I.R.	More than 1,000MΩ																							
		Dielectric Strength	In accordance with item No.4																							

*1 "Room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmospheric pressure: 86 to 106kPa

*2 "C" expresses nominal capacitance value (pF).