

# SPECIFICATION FOR APPROVAL

CUSTOMER

PART NAME **Ceramic Disc Capacitors**

SPEC **TS15 0.1uF 25V +/-20% P:5.08mm Y5V bulk RoHS\***

PART NO

DATE **2011-11-17**

CUSTOMER APPROVE

DRAWING

PREPARED

CHECKED

APPROVED

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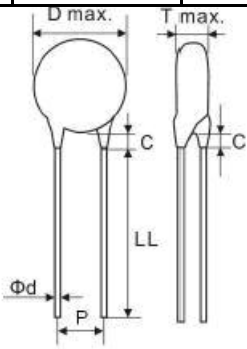
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**Style**

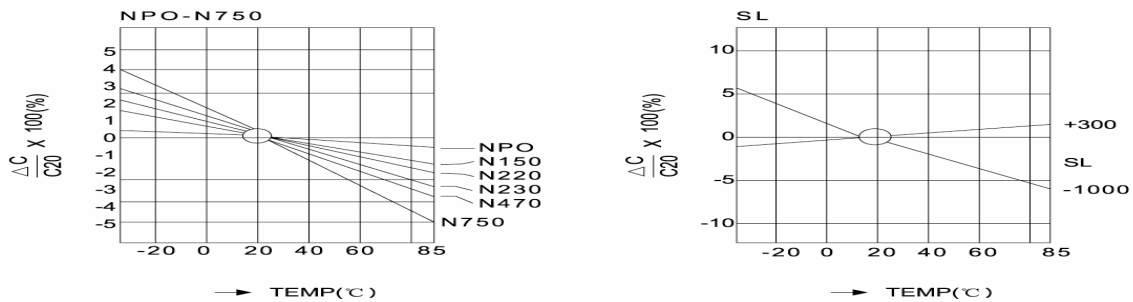
SPECIFICATION	D max(mm)	T max (mm)	P±1 (mm)	LLmin (mm)	d ±0.05(mm)
25V-Y5V-104M	6	4	5.08	16	0.4



**Temperature coefficient and temperature characteristics**

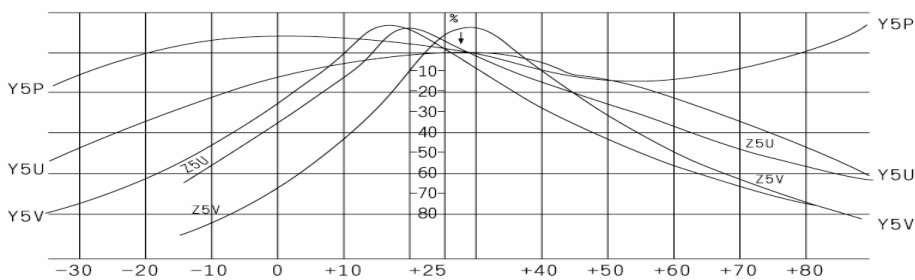
Class I :		Class II, Class III	
Code	T.C	Temperature characteristic	Letter symbol
CH	NP0	Y5P	P
PH	N150	Y5U(Z5U)	U(E)
RH	N220	Y5V(Z5V)	F(V)
UJ	N750	/	
SL	SL		

**Class I Temperature coefficient:**



YL: -3300PPM/°C

**Class II temperature characteristics**



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## Requirements and method of test and environmental substance

ITEM	Rated value		Testing method /application												
	Class I	Class II													
Operating Temperature Range	-25 °C ~ +85 °C														
Capacitance	Within the specified range		<ul style="list-style-type: none"> <li>▪Temperature:20°C .</li> <li>▪Frequency:1±0.1MHz(class I ); 1±0.1KHz(class II )</li> <li>▪Measured voltage:1±0.1Vrms.</li> </ul>												
Dissipation Factor (tanδ,Q)	Less than 3pf: Q≥400+20C. 30pf or over: Q≥ 1000(C:Cap)..	tanδ≤ 2.5%. tanδ≤5%													
Insulation Resistance	Between Terminals	class I :More than 10000MΩ . class II :More than 4000MΩ . class III: UR≤25V, R≥500MΩ UR>25V, R≥1000MΩ	<ul style="list-style-type: none"> <li>▪Applied Voltage: To be below 500V:Rating Voltage. Above 500V:500V.</li> <li>▪Charge Time:60±5sec.</li> </ul>												
Withstand Voltage	Between Terminals	No remarkable abnormality is Recognized	<ul style="list-style-type: none"> <li>▪Testing Voltage</li> </ul> <table border="1"> <tr> <td>R.V</td> <td>50V</td> <td>500 V</td> <td>1~2KV</td> <td>3KV</td> <td>4KV~</td> </tr> <tr> <td>W.V</td> <td>R.V ×2.5</td> <td>R.V ×2.5</td> <td>R.V ×2</td> <td>R.V×1.5+ 500V</td> <td>R.V×1.5</td> </tr> </table> <p>For 1 to 5 sec The discharge current, however was 50mA or less.</p>	R.V	50V	500 V	1~2KV	3KV	4KV~	W.V	R.V ×2.5	R.V ×2.5	R.V ×2	R.V×1.5+ 500V	R.V×1.5
	R.V	50V	500 V	1~2KV	3KV	4KV~									
W.V	R.V ×2.5	R.V ×2.5	R.V ×2	R.V×1.5+ 500V	R.V×1.5										
	Between Exterior terminals	No remarkable abnormality is recognized	<ul style="list-style-type: none"> <li>▪The smaller voltage of the rated voltage ×250% or 1.3KV DC was Applied for 1 to 5 sec</li> </ul>												
Capacitance Temperature Characteristic	See 4. (3)	See 4. (3)	▪Based on items GB/T2693-2001												
Solder Heat Resistance	External-view	No remarkable Abnormality is Recognized													
	Rate change For Capacitance	Within the Greater value Of ±2.5 And ±0.25pf	B: Within ±5% E: Within ±15% F: Within ±20%												
Solderability	The lead wire is soldered more Than 3/4 of it in the Circumferential direction and to The immersed part continuously In the axial direction.		<ul style="list-style-type: none"> <li>▪Soldering temp: 230±5 °C or 260±5 °C.</li> <li>▪Immersion time: 2±0.5 sec.</li> </ul>												

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ITEM		Rated value		Testing method /application
		Class I	Class II	
Humidity Resistance Test	External view	No remarkable abnormality is Recognized.		<ul style="list-style-type: none"> <li>▪Temperature: 40±2℃;</li> <li>▪Humidity: 90 ~ 95% RH;</li> <li>▪Testing time: 500 (+24,-0hours).</li> </ul>
	Rate change for capacitance	Within the greater Value of ±3.0% Or ±0.3pf	B: Within ±10% E: Within ±20% F: Within ±30%	
	Dissipation Factor (tanδ,Q)	Lee than 10pf: Q≥200+10C; 10pf or above & Less than 30pf: Q≥275+5/2C; 30pf or more: Q≥350.	B,E: 5%Max F: 7.5%Max	
	Insulation Resistance	More than 1000MΩ		
Humidity Resistance Load Test	External-view	Rated value is the same Humidity resistance test		<ul style="list-style-type: none"> <li>▪Temperature: 40±2℃;</li> <li>▪Humidity: 90 ~ 95% RH;</li> <li>▪Testing time: 500 (+24,-0hours);</li> <li>▪Applied voltage: Rated voltage;</li> <li>▪The discharge current shall be 50mA Or less.</li> </ul>
	Rate change For Capacitance			
	Dissipation Factor (tanδ,Q)	Lee than 30pf: Q≥100+10/3C; 30pf or more: Q≥200.	B,E: 5%Max F: 7.5%Max	
	Insulation Resistance	More than 1000MΩ		
High Temperature Load	External-view	No remarkable abnormality is Recognized.		<ul style="list-style-type: none"> <li>▪Testing time: 1000 (+48,-0 hours);</li> <li>▪Applied voltage: Rated voltage×200%. (1KV or more rated voltage×150%).</li> <li>▪The discharge current shall be 50mA Or less.</li> </ul>
	Rate change For Capacitance	Within the greater Value of ±3.0% Or ±0.3pf	B: Within ±10% E: Within ±20% F: Within ±30%	
	Dissipation Factor (tanδ,Q)	Lee than 10pf: Q≥200+10C; 10pf or above & Less than 30pf: Q≥275+5/2C; 30pf or more: Q≥350.	B,E: 5%Max F: 7.5%Max	
	Insulation Resistance	More than 1000MΩ		

**Enclosure:** Units are coated with phenol and epoxy compound and cured .

R.V	50 ~ 500V	1KV ~
Material	Phenol Resin	Epoxy Resin

**The regulation of environmental pollution materials**

Testing Item	Limited Level
Cadmlum (Cd)/CadmlumCompounds	≤100PPM
Lead (Pb)/Lead Compounds	≤1000PPM
Mercury (Hg)/Mercury Compounds	≤1000PPM
Hexavalent-Chromiun (Cr <sup>6+</sup> )Compounds	≤1000PPM
PBBs	≤1000PPM
PBDEs	≤1000PPM

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