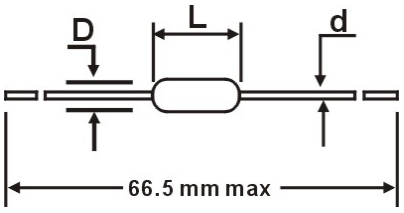
MULTILAYER (MONO) CERAMIC CAPACITOR

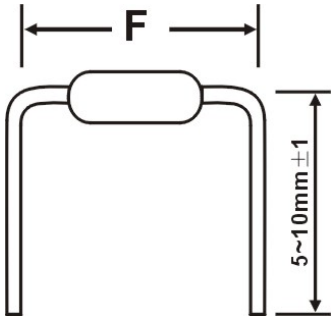
Suntan®

TS17

Axial Laser MLCC

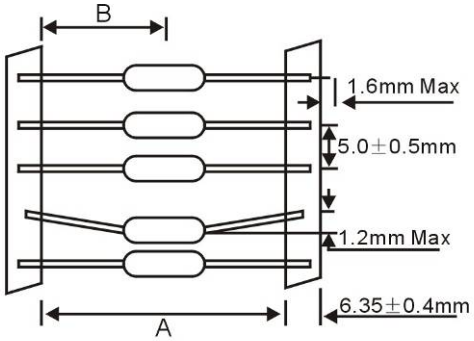
◆ Size Code、Capacitance and Voltage





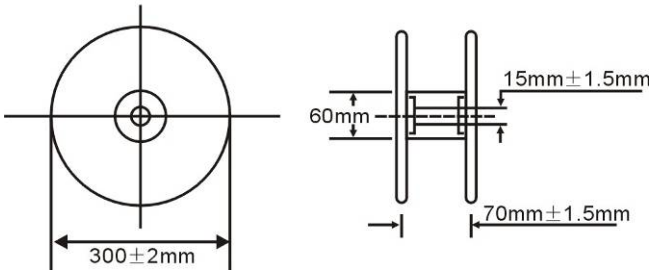
Size code	Dimensions(mm)					voltage	Capacitance ranges		
	L max	D max	F (±0.6)		d (±0.05)		COG (NPO)	X7R	Y5V (Z5U)
15	3.8	2.5	5.08	10.0	0.45	25V 50V 100V	OR5~102 OR5~821 OR5~561	101~333 101~223 101~472	222~224 222~154
16	5.08	2.5	5.08	10.0	0.45	25V 50V 100V	OR5~332 OR5~222 OR5~102	331~104 331~473 331~223	103~105 103~684
17	4.30	2.5	5.08	10.0	0.45	25V 50V 100V	OR5~332 OR5~222 OR5~102	331~104 331~473 331~223	103~105 103~684
19	7.50	3.0	7.50	10.0	0.45	25V 50V 100V	OR5~472 OR5~392 OR5~152	102~224 102~104 102~683	103~125 103~105
20	5.10	3.0	7.50	10.0	0.45	25V 50V 100V	OR5~472 OR5~392 OR5~152	102~224 102~104 102~683	103~125 103~105

◆ Packaging style



Tape and reel

Tape style	A	B
Tape width:26mm	26±1.5mm	13±0.76mm
Tape width:52.4mm	52.4±1.5mm	26.2±0.76mm



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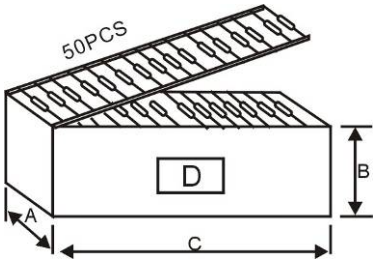
Ammo package

Tape style	A	B	C	D
52.4mm	81(±5)mm	72(±5)mm	258(±5)mm	Lable
26mm	50(±5)mm	110(±5)mm	258(±5)mm	



Packaging quantity

Size code	Tape and reel	Ammo package	Bulk package
15	5000	5000	1000(500)
16	5000	5000	1000(500)
17	5000	5000	1000(500)
19	2500(5000)	2500(5000)	500
20	2500(5000)	2500	500

*packaging according to the customer’s requirement

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Leads MLCC(Radial、Axial)

◆ **Electrical Properties standard**

Item	Test standard			
	NPO/CG/GH/RH/UJ/SL	X7R(B)	Z5U(E)	Y5V(Y/F)
Capacitance	±5%	±10%	+80-20%	±20%
Dissipation Factor	<0.15%	<3.5%	<5%	<7.5%(200nF)
				<10%（220~470nF）
				<15%(470~1000nF)
Insulation Resistance	<10nF IR<1000C0MΩ C>10nF R・C>100S	<25nF IR>25nF C>25Nf R・C>100S	<25nF IR>25nF C>25Nf R・C>100S	<25nF IR>25nF C>25Nf R・C>100S
Withstanding Voltage	2.5 rated voltage	2.5 rated voltage	2.5 rated voltage	2.5 rated voltage
Test Condition				
Test Frequency	1 MHZ (C>1000PF 1KHz)	1KHz	1KHz	1KHz
Test Voltage of Cap.&D.F	1±0.2V	1±0.2V	0.3±0.2V	0.3±0.2V
Test Voltage of IR	Rated Voltage	Rated Voltage	Rated Voltage	Rated Voltage
Temperature	10~25℃	10~25℃	10~25℃	10~25℃
Humidity	<75%	<75%	<75%	<75%

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Leads MLCC(Radial、Axial)

◆ **Quality Item & Reliability inspection**

<table>
<tr><th>Item</th><th>Test Specifications</th><th>Test Methods</th></tr>
<tr><td>Solderability</td><td>Termination area shall be at least 75% covered with a new solder coating.</td><td>The lead wire of acapacitor shall be dipped into a 25% methanol solution of rosin and then into molten solderol 235℃ for 2±0.5seconds,in both cases the depth of dipping is up to about 2.5 to 3.0mm from the rool of lead.</td></tr>
<tr><td>Resistance to soldering heat</td><td>There shall be no evidence of damage or flash over during the test and sign in tocus.
<table>
<tr><td>T.C</td><td>△C/C<</td></tr>
<tr><td>CG/CH/RH</td><td>0.5% or 0.5Pf</td></tr>
<tr><td>UJ/SL</td><td>1% or 1pF</td></tr>
<tr><td>B</td><td>±10%</td></tr>
<tr><td>Y(F)/E</td><td>±20%</td></tr>
</table></td><td>The lead wire shall be immersed ito the melted solder of 260℃±5℃.up to about 2.5 to 3.0mm from the main body for 5±0.5sec and the specitied items shall be measured after leaving for 24±2hours</td></tr>
<tr><td>Life test</td><td colspan="2"><table>
<tr><td>Appearance</td><td>There shall be no evidence of damage or flash over during the test and sign in focus</td></tr>
<tr><td>Capacitance change</td><td>NPO:<2%;X7R<20%; Y5V:<30%</td></tr>
<tr><td>D.F</td><td>NPO:<0.3
X7R:<5%
Y5V:<7%</td></tr>
<tr><td>I.R</td><td>R.C<258</td></tr>
</table></td><td><table>
<tr><td>Condition</td><td>NPO</td><td>X7R</td><td>Y5V</td><td>Z5U</td></tr>
<tr><td>Temperature</td><td colspan="2">+125℃</td><td colspan="2">+85℃</td></tr>
<tr><td>Time</td><td colspan="4">T=1000h</td></tr>
<tr><td>Voltage</td><td colspan="4">V=1.5Vr</td></tr>
<tr><td>Recovery time</td><td colspan="4">24±1h</td></tr>
</table></td></tr>
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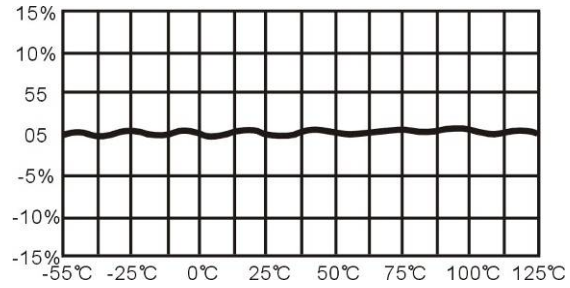
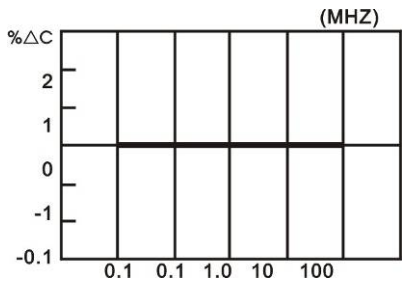
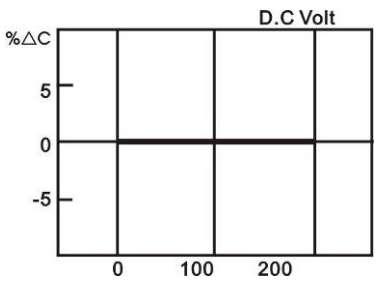
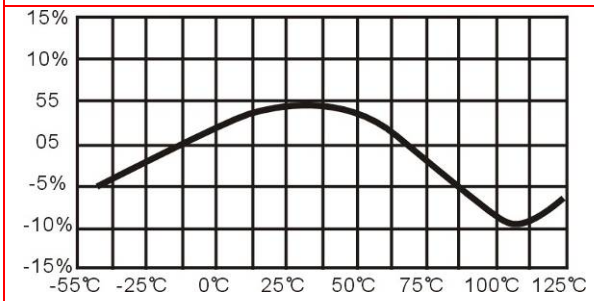
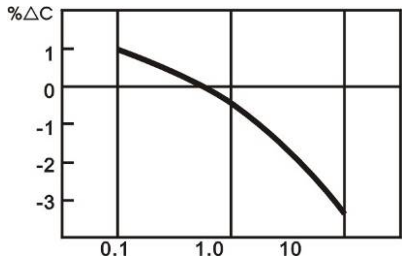
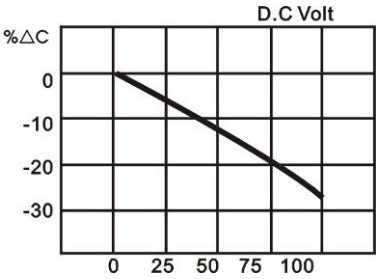
Capacitance Change VS Temperature Characteristic ; Voltage ; Frequency Profiles

◆ **NPO**

(1) Capacitance Change VS Temperature	(2) Frequency	(3) DC voltage
		

◆ **X7R**

(1) Capacitance Change VS Temperature	(2) Frequency	(3) DC voltage
		

◆ **Z5U**

(1) Capacitance Change VS Temperature	(2) DC voltage