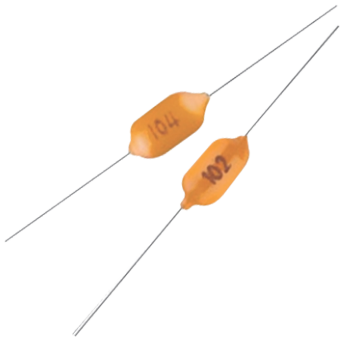
CT42 Series Axial Multilayer(MONO) Ceramic Capacitor

Features

- Miniature size,wide capacitance.
  Ammo Tape packaging available for auto-placement.
- Coating by epoxy resin,creales the excellent humidity resistance and prevents body trom damaging during soldering and washing.
- Industry standard size and vanous load spacing avallable.



T.C	NPO/COG	X7R(B)	Y5V(Y/F)	Z5U(E)
Dielectric type	Stable Class I Dielectric	Stable ClassII Dielectric		
Electrical properties	With negligible depndence of electrical pro-perties on temperature、voltage、frequency and time	With predictable change of properties with temperature、voltage、frequency and time,this dielectric is ferroelectric and offers higher capacitance ranges than Class I.	With high twist dielectric constant and greater variation of properties with temperature and test conditions、very high capacitance per unit volume.	
Application	Use in ciprcuits reoiring stable performance	Use as blocking、coupling、By-passing discriminating element.	Suited for By-passing and coupling application such as store power and memory circuit	
Capacitance range	1pF~10nF	100pF~5uF	1nF~14.7uf	
Operating temperature	0±30PPm/c -55℃~+125℃	±15% -55℃~+125℃	+30%~-80% -25℃~+85℃	+22%~-56% -10℃~+85℃

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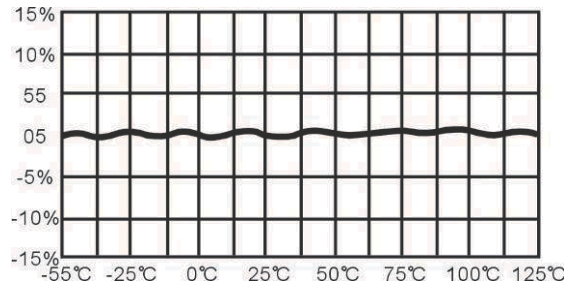
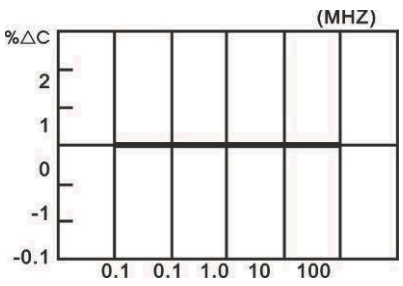
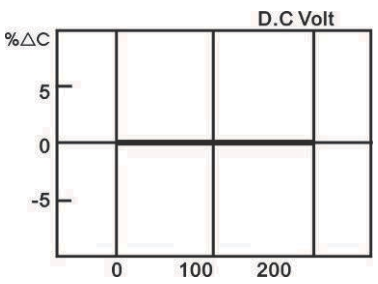
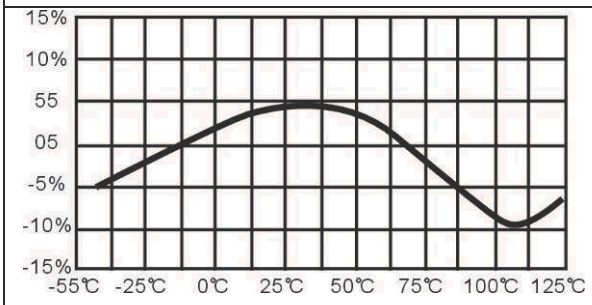
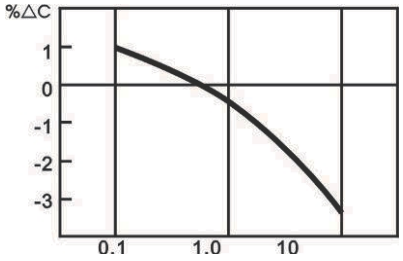
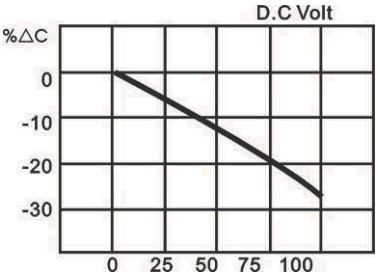
Capacitance Change VS Temperature Characteristic ; Voltage ; Frequency Profiles

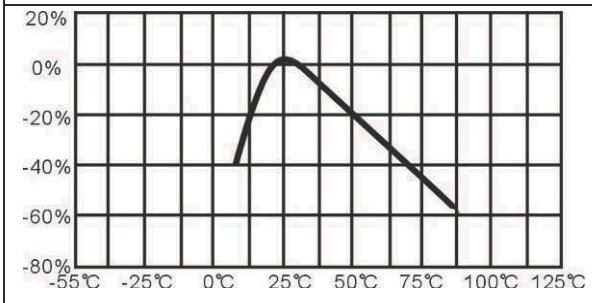
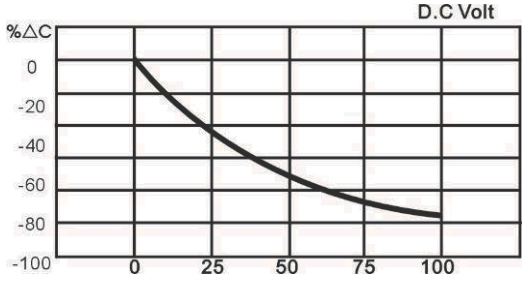
◆ NPO

(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
	

CT42 Series Axial Multilayer(MONO) Ceramic Capacitor

Leaded Multilayer Ceramic Capacitors (Axial Lead, Radial Lead)

◆ 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%

CT42 Series Axial Multilayer(MONO) Ceramic Capacitor

Leaded Multilayer Ceramic Capacitors (Axial Lead, Radial Lead)

◆ Quality Item & Reliability inspection

<table>
<tr><th>Item</th><th colspan="2">Test Specifications</th><th>Test Methods</th></tr>
<tr><td>Solderability</td><td colspan="2">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 colspan="2">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>Appearance</td><td>There shall be no evidence of damage or flash over during the test and sign in focus</td><td rowspan="4"><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>
<tr><td></td><td>Capacitance change</td><td>NPO:<2%;X7R<20%; Y5V:<30%</td></tr>
<tr><td></td><td>D.F</td><td>NPO:<0.3
X7R:<5%
Y5V:<7%</td></tr>
<tr><td></td><td>I.R</td><td>R.C<258</td></tr>
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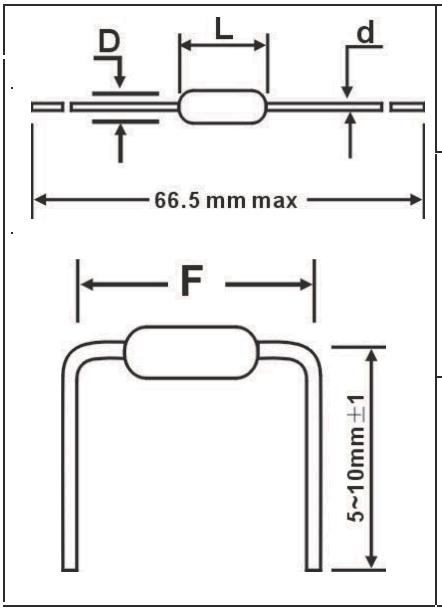
CT42 Series Axial Multilayer(MONO) Ceramic Capacitor

Axial Lead Multilayer Ceramic Capacitors

◆ Size Code, Capacitance and Voltage

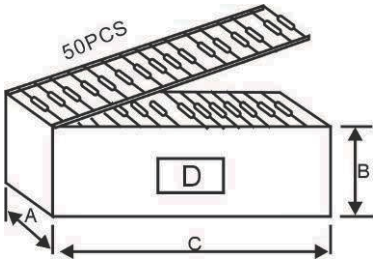


Size code	Dimensions(mm)					voltage	Capacitance ranges		
	L max	D max	F (±0.6)		d (±0.05)		COG (NPO)	X7R	Y5V (Z5U)
15	3.8	2.5	5.08	10.0	0.45	25V 50V 100V	OR5~102 OR5~821 OR5~561	101~333 101~223 101~472	222~224 222~154
17	4.30	2.5	5.08	10.0	0.45	25V 50V 100V	OR5~332 OR5~222 OR5~102	331~104 331~473 331~223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

◆ Packaging style

Ammo Taped (Standard 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)
17	5000	5000	1000(500)

*Tape and Reel Package is available on request

How to order for CT42 axial MLCC

CT4	B	104	K	0050	0017	B	000
Type	**Material Code**	**Capacitance Code**	**Tolerance**	**Rated Voltage**	**Size Code**	**Package Code**	**Suffix Indicate Customer Special Requirement**
	For ceramic cap	**pF Code: 1st two digits**	**C: +/-0.25pF**	**0050： 50VDC**	**B0b2: inside chip 0805, b shape, 2.54mm**	**B: Bulk**	
CT42	B: X7R						
	E: Z5U	represent significant figures	D: +/-0.5pF	0100: 100VDC	**CT42 Axial lead MLCC**	A: Ammo Taped	**000: Indicating Standard**
	Z: Y5V	3rd digit represents multiplier	F: +/-1%	0200: 200VDC	0017: size code 17	R: Tape & Reel	
	U: Y5U	(number of zeros to follow)	G: +/-2%	0500: 500VDC			**If for cut leads or long leads:**
	P: Y5P	106 = 10uF	H: +/-2.5%	1000: 1KVDC			000: mean standard LL
	V: Z5V	105 = 1uF	J: +/-5%	2000: 2KVDC			035: cut leads to 3.5mm
	X: X5R						040: cut leads to 4mm
	Y: Y5T	104 = 0.1uF	K: +/-10%				250: 25mm long leads
	D: N4700	100= 10pF	L: +/-15%				
	N: NPO	470= 47pF	M: +/-20%				
	S : SL	0R1= 0.1pF	Z: +80-20%				
	T: X7T	R47=0.47pF	V: +20-10%				