

Data Sheet

Customer:

Product: Multilayer Ceramic Chip Capacitor – MC Series

Sizes.: 1825 / 2220 / 2225

Issued Date: 11-Jun-21

Edition: REV.A



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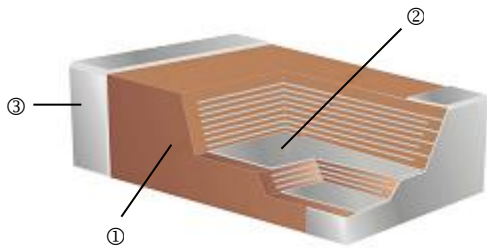
Multilayer Ceramic Chip Capacitor

■ Features

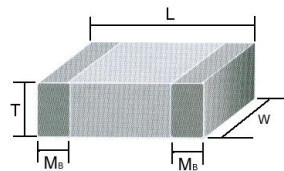
- Wide capacitance range, extremely compact size
- Low inductance of capacitor for high frequency application
- Excellent solderability and resistance to soldering heat, suitable for flow and reflow soldering
- Adaptable to high-speed surface mount assembly
- Conform to EIAJ-RC3402, and also compatible with EIA-RS198 and IEC PUB. 384-10



■ Construction



①	Ceramic Material	③	Termination:
②	Inner Electrodes		Cu/Ni/Sn dielectric



Unit: mm

■ Dimensions

Type	Size (Inch)	L	W	T / Symbol		M _B	Packaging (7" Reel)
							Plastic tape
18	1825	4.50±0.40	6.30±0.40	1.60±0.20	G	0.75±0.35	1K
				2.00±0.20	K		1K
				2.50±0.30	M		0.5K
				2.80±0.30	U		0.5K
20	2220	5.70±0.40	5.00±0.40	1.60±0.20	G	0.85±0.35	1K
				2.00±0.20	K		1K
				2.50±0.30	M		0.5K
				2.80±0.30	U		0.5K
25	2225	5.70±0.40	6.30±0.40	1.60±0.20	G	0.85±0.35	1K
				2.00±0.20	K		1K
				2.50±0.30	M		0.5K
				2.80±0.30	U		0.5K

■ Part Numbering

MC	20	J	T	N	500	150
Product Type	Dimensions (LxW)	Capacitance Tolerance	Packaging Code	Dielectric	Voltage (VDCW)	Capacitance
	18: 1825 20: 2220 25: 2225	J: ±5% K: ±10% M: ±20%	T: Taping Reel	N: NPO B: X7R	500: 50V 101: 100V 102: 1000V	150: 15pF 181: 180pF 225: 2.2μF 106: 10μF

Multilayer Ceramic Chip Capacitor

■ General Capacitance

Capacitance & Voltage (NPO)

Dielectric		NPO																						
EIA	Size	1825							2220							2225								
Code	VDCW	50	500	630	1000	2000	3000	4000	50	500	630	1000	2000	3000	4000	50	200	250	500	630	1000	2000	3000	
100	10pF	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
120	12	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
150	15	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
180	18	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
220	22	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
270	27	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
330	33	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
390	39	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
470	47	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
560	56	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
680	68	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
820	82	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
101	100pF	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
121	120	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
151	150	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
181	180	G	G	G	K	K	K	K	G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
221	220	G	G	G	K	K	K		G	G	G	K	K	K	K	G	G	G	G	G	K	K	K	
271	270	G	G	G	K	K	K		G	G	G	K	K	K	M	G	G	G	G	G	K	K	K	
331	330	G	G	G	K	K	K		G	G	G	K	K	M	M	G	G	G	G	G	K	K	K	
391	390	G	G	G	K	K	K		G	G	G	K	K	M		G	G	G	G	G	K	K	K	
471	470	G	G	G	K	K	K		G	G	G	K	K	M		G	G	G	G	G	K	K	K	
561	560	G	G	G	K	K	K		G	G	G	K	K	M		G	G	G	G	G	K	K	K	
681	680	G	G	G	K	K	M		G	G	G	K	K	M		G	G	G	G	G	K	K	K	
821	820	G	G	G	K	K	M		G	G	G	K	K	M		G	G	G	G	G	K	M	M	
102	1000pF	G	G	G	K	K	M		G	G	G	K	K	M		G	G	G	G	G	K	M	M	
122	1200	G	G	G	K	K	M		G	G	G	M	M	M		G	G	G	G	G	K	M	M	
152	1500	G	G	G	K	M	M		G	G	G	M	M	M		G	G	G	G	G	K	M	M	
182	1800	G	G	G	K	M	M		G	G	G	M	M	M		G	G	G	G	G	K	M	M	
222	2200	G	G	G	K	M	M		G	G	G	M	M	M		G	G	G	G	G	K	M	M	
272	2700	G	G	G	K	M	M		G	G	G	M	M	M		G	G	G	G	G	K	M	M	
332	3300	G	G	G	K	M			G	G	G	M	M			G	G	G	G	G	K	M	M	
392	3900	G	G	G	M	M			G	G	G	M	M			G	G	G	G	G	K	M		
472	4700	G	G	G	M	M			G	G	G	M	M			G	G	G	G	G	K	M		
562	5600	G	G	G	M	M			G	G	G	M	M			G	G	G	G	G	M	M		
682	6800	G	G	G	M	M			G	G	G	M	M			G	G	G	G	G	M	M		
822	8200	G	G	G	M	M			G	G	G	M	M			G	G	G	G	G	M	M		
103	0.010uF	G	G	G	M				G	G	G	M				G	G	G	G	G	M	M		
123	0.012	G	G	G	M				G	G	G	M				G	G	G	G	G	M			
153	0.015	G	G	G					G	G	G					G	G	G	G	G				
183	0.018	G	G	G					G	G	G					G	G	G	G	G				
223	0.022	G	G	G					G	G	G					G	G	G	G	G				
273	0.027	G	K	K					G	K	K					G	G	G	G	G				
333	0.033	G	K	K					G	K	K					G	G	G	G	G				
393	0.039	G	M	M					G	M	M					G	K	K	K	K				
473	0.047	G	M	M					G	M	M					G				K	K			
563	0.056	G	M	M					G	M	M					G				M	M			
683	0.068	G	M	M					K							G				M	M			
823	0.082	K							M							K				M	M			
104	0.10uF	M							M							K								
124	0.12	M							M							M								
154	0.15								M							M								
184	0.18								M							M								
224	0.22															M								
274	0.27															M								

■ The letter in cell is expressed the symbol of product thickness

Multilayer Ceramic Chip Capacitor

■ General Capacitance

Capacitance & Voltage (X7R)

Dielectric		X7R										
EIA	Size	1825										
Code	VDCW	50V	100V	200V	250V	500V	630V	1000V	1500V	2000V	3000V	4000V
102	1000pF	K	K	K	K	K	K	K	K	K	K	K
122	1200	K	K	K	K	K	K	K	K	K	K	M
152	1500	K	K	K	K	K	K	K	K	K	K	M
182	1800	K	K	K	K	K	K	K	K	K	K	M
222	2200	K	K	K	K	K	K	K	K	K	K	
272	2700	K	K	K	K	K	K	K	K	K	K	
332	3300	K	K	K	K	K	K	K	K	K	K	
392	3900	K	K	K	K	K	K	K	K	K	K	
472	4700	K	K	K	K	K	K	K	K	K	K	
562	5600	K	K	K	K	K	K	K	K	K	M	
682	6800	K	K	K	K	K	K	K	K	K	M	
822	8200	K	K	K	K	K	K	K	K	K	M	
103	0.010uF	K	K	K	K	K	K	K	K	K	M	
123	0.012	K	K	K	K	K	K	K	M	M	U	
153	0.015	K	K	K	K	K	K	K	M	M	U	
183	0.018	K	K	K	K	K	K	K	M	M	U	
223	0.022	K	K	K	K	K	K	K	M	M		
273	0.027	K	K	K	K	K	K	K	U	U		
333	0.033	K	K	K	K	K	K	K	U	U		
393	0.039	K	K	K	K	K	K	K	U	U		
473	0.047	K	K	K	K	K	K	K	U	U		
563	0.056	K	K	K	K	K	K	K	U	U		
683	0.068	K	K	K	K	K	K	K				
823	0.082	K	K	K	K	K	K	M				
104	0.10uF	K	K	K	K	K	K	M				
124	0.12	K	K	K	K	K	K	U				
154	0.15	K	K	K	K	K	K	U				
184	0.18	K	K	K	K	K	K	U				
224	0.22	K	K	K	K	K	K	U				
274	0.27	K	K	K	K	K	K	U				
334	0.33	K	K	K	K	K	K	U				
394	0.39	K	K	K	K	K	K					
474	0.47	K	K	K	K	K	K					
564	0.56	K	K	K	K	M	M					
684	0.68	K	K	K	K	M	M					
824	0.82	K	K	K	K	U	U					
105	1.0uF	K	K	K	K							
155	1.5	K	K									
225	2.2	K	K									
335	3.3	K	K									
475	4.7	K	K									
685	6.8											
106	10uF											

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Capacitance & Voltage (X7R)

Dielectric		X7R											
EIA	Size	2220											
Code	VDCW	25V	50V	100V	250V	500V	630V	1000V	1500V	2000V	2500V	3000V	4000V
102	1000pF	K	K	K	K	K	K	K	K	K	K	K	K
122	1200	K	K	K	K	K	K	K	K	K	K	K	M
152	1500	K	K	K	K	K	K	K	K	K	K	K	M
182	1800	K	K	K	K	K	K	K	K	K	K	K	M
222	2200	K	K	K	K	K	K	K	K	K	K	K	
272	2700	K	K	K	K	K	K	K	K	K	K	K	
332	3300	K	K	K	K	K	K	K	K	K	K	K	
392	3900	K	K	K	K	K	K	K	K	K	K	K	
472	4700	K	K	K	K	K	K	K	K	K	K	K	
562	5600	K	K	K	K	K	K	K	K	K	K	K	
682	6800	K	K	K	K	K	K	K	K	K	K	K	
822	8200	K	K	K	K	K	K	K	M	M	M	M	
103	0.010uF	K	K	K	K	K	K	K	M	M	M	M	
123	0.012	K	K	K	K	K	K	K	M	M	U	U	
153	0.015	K	K	K	K	K	K	K	M	M	U	U	
183	0.018	K	K	K	K	K	K	K	U	U	U	U	
223	0.022	K	K	K	K	K	K	K	U	U			
273	0.027	K	K	K	K	K	K	K	U	U			
333	0.033	K	K	K	K	K	K	K	U	U			
393	0.039	K	K	K	K	K	K	K	U	U			
473	0.047	K	K	K	K	K	K	K	U	U			
563	0.056	K	K	K	K	K	K	K	U	U			
683	0.068	K	K	K	K	K	K	M					
823	0.082	K	K	K	K	K	K	M					
104	0.10uF	K	K	K	K	K	K	M					
124	0.12	K	K	K	K	K	K	M					
154	0.15	K	K	K	K	K	K	U					
184	0.18	K	K	K	K	K	K	U					
224	0.22	K	K	K	K	K	K	U					
274	0.27	K	K	K	K	K	K	U					
334	0.33	K	K	K	K	K	K	U					
394	0.39	K	K	K	K	K	K	U					
474	0.47	K	K	K	K	K	K						
564	0.56	K	K	K	K	M	M						
684	0.68	K	K	K	K	M	M						
824	0.82	K	K	K	K	U	U						
105	1.0uF	K	K	K	K	U	U						
155	1.5	K	K	K	M								
225	2.2	K	K	K	M								
335	3.3	K	K	K									
475	4.7	K	K	M									
685	6.8	M	M	U									
106	10uF	U	U	U									

■ The letter in cell is expressed the symbol of product thickness

Multilayer Ceramic Chip Capacitor

Capacitance & Voltage (X7R)

Dielectric		X7R											
EIA	Size	2225											
Code	VDCW	25V	50V	100V	200V	250V	500V	630V	1000V	1500V	2000V	3000V	4000V
102	1000pF	K	K	K	K	K	K	K	K	K	K	K	K
122	1200	K	K	K	K	K	K	K	K	K	K	K	M
152	1500	K	K	K	K	K	K	K	K	K	K	K	M
182	1800	K	K	K	K	K	K	K	K	K	K	K	M
222	2200	K	K	K	K	K	K	K	K	K	K	K	
272	2700	K	K	K	K	K	K	K	K	K	K	K	
332	3300	K	K	K	K	K	K	K	K	K	K	K	
392	3900	K	K	K	K	K	K	K	K	K	K	K	
472	4700	K	K	K	K	K	K	K	K	K	K	K	
562	5600	K	K	K	K	K	K	K	K	K	K	M	
682	6800	K	K	K	K	K	K	K	K	K	K	M	
822	8200	K	K	K	K	K	K	K	K	K	K	M	
103	0.010uF	K	K	K	K	K	K	K	K	K	K	M	
123	0.012	K	K	K	K	K	K	K	K	M	M	M	
153	0.015	K	K	K	K	K	K	K	K	M	M	U	
183	0.018	K	K	K	K	K	K	K	K	M	M	U	
223	0.022	K	K	K	K	K	K	K	K	M	M		
273	0.027	K	K	K	K	K	K	K	K	M	M		
333	0.033	K	K	K	K	K	K	K	K	M	M		
393	0.039	K	K	K	K	K	K	K	K	U	U		
473	0.047	K	K	K	K	K	K	K	K	U	U		
563	0.056	K	K	K	K	K	K	K	K	U	U		
683	0.068	K	K	K	K	K	K	K	K				
823	0.082	K	K	K	K	K	K	K	K				
104	0.10uF	K	K	K	K	K	K	K	M				
124	0.12	K	K	K	K	K	K	K	U				
154	0.15	K	K	K	K	K	K	K	U				
184	0.18	K	K	K	K	K	K	K	U				
224	0.22	K	K	K	K	K	K	K	U				
274	0.27	K	K	K	K	K	K		U				
334	0.33	K	K	K	K	K	K		U				
394	0.39	K	K	K	K	K	K		U				
474	0.47	K	K	K	K	K	K						
564	0.56	K	K	K	K	K	K						
684	0.68	K	K	K	K	K	K						
824	0.82	K	K	K	K	K	M						
105	1.0uF	K	K	K	K	K	M						
155	1.5	K	K	K	M	M							
225	2.2	K	K	K	M	M							
335	3.3	K	K	K									
475	4.7	K	K										
685	6.8	M	M										
106	10uF	U	U										

■The letter in cell is expressed the symbol of product thickness

Multilayer Ceramic Chip Capacitor

General Environmental Data

Size	1825 / 2220 / 2225	
Dielectric	NPO	X7R
Capacitance*	10pF~0.27μF	1000pF~10μF
Capacitance tolerance	J (± 5%), K (±10%), M (±20%)	
Rated voltage (VDCW)	25V, 50V, 100V, 200, 250V, 500V, 630V, 1000V, 1500V, 2000V, 2500V, 3000V, 4000V	
Tan δ*	Cap<30pF: Q _≥ 400 +20C Cap≥ 30pF: Q _≥ 1000	≤ 2.5%
Operating temperature	-55 to +125°C	
Capacitance change	±30 ppm	±15%
Termination	Ni/Sn (lead-free termination)	

*NPO: Apply 1.0±0.2Vrms, 1.0MHz±10% for Cap≤ 1000pF and 1.0±0.2Vrms, 1.0 KHz±10% for Cap>1000pF, 25°C ambient temperature

*X7R: Apply 1.0±0.2Vrms, 1.0KHz±10% for Cap≤ 10uF and 0.5±0.2Vrms, 120Hz±20% for Cap>10uF, 30~70% related humidity, at the condition of 25°C ambient temperature

** Preconditioning for Class II MLCC: Perform a heat treatment at 150±10°C for 1 hour, then leave in ambient condition for 24±2 hours before measurement.

Environmental Characteristics

Item	Requirement	Test Method						
Visual and Mechanical	No remarkable defect Dimensions to conform to individual specification sheet	-						
Capacitance Q/ D.F. (Dissipation Factor)	Q/DF: NPO: Cap≥30pF, Q≥1000; Cap<30pF, Q≥400+20C. X7R: ≤2.5%.	Shall not exceed the limits given in the detailed spec Class I: (NPO) C≤1000pF, 1.0±0.2Vrms , 1MHz±10% C>1000pF, 1.0±0.2Vrms , 1KHz±10% Class II: (X7R) C≤10μF, 1.0±0.2Vrms , 1KHz±10% C>10μF, 0.5±0.2Vrms , 120Hz±20% At 25°C ambient temperature						
Dielectric Strength	No evidence of damage or flash over during test	To apply voltage (≤100V) 250%. Duration: 1 to 5 sec. Charge & discharge current less than 50mA. To apply voltage: 200V ~ 300V ≥ 2 times V DC 500V ~ 999V ≥ 1.5 times V DC 1000V ~ 3000V ≥ 1.2 times V DC Cut-off, set at 10mA, TEST= 15 sec., RAMP=0						
Insulation Resistance	≥10GΩ or R•C≥100Ω•F whichever is smaller	UR≤100V: To apply voltage at UR for max. 120 sec. UR>100V: To apply voltage at UR (500V max.) for 60 sec.						
Temperature Coefficient	Capacitance change: NPO: Within ±30ppm/°C. X7R: Within ±15%.	With no electrical load. <table border="1" data-bbox="901 1653 1257 1733"> <thead> <tr> <th>T.C.</th> <th>Operating Temp</th> </tr> </thead> <tbody> <tr> <td>NPO</td> <td>-55~125°C at 25°C</td> </tr> <tr> <td>X7R</td> <td>-55~125°C at 25°C</td> </tr> </tbody> </table>	T.C.	Operating Temp	NPO	-55~125°C at 25°C	X7R	-55~125°C at 25°C
T.C.	Operating Temp							
NPO	-55~125°C at 25°C							
X7R	-55~125°C at 25°C							
Adhesive Strength of Termination	No remarkable damage or removal of the terminations	Pressurizing force : 10N Test time: 10±1 sec						
Vibration Resistance	No remarkable damage. Cap change and Q/D.F.: To meet initial spec.	Vibration frequency: 10~55 Hz/min. Total amplitude: 1.5mm Test time: 6 hrs. (Two hrs each in three mutually perpendicular directions.)						
Solderability	75% min. coverage of all metalized area	Solder temperature: 235±5°C Dipping time: 2±0.5 sec.						

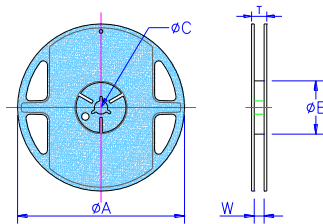
Multilayer Ceramic Chip Capacitor

Item	Requirement	Test Method															
Bending Test	No remarkable damage. Cap change: NP0: within $\pm 5\%$ or 0.5pF whichever is larger. X7R: within $\pm 12.5\%$. (This capacitance change means the change of capacitance under specified flexure of substrate from the capacitance measured before the test.)	The middle part of substrate shall be pressurized by means of the pressurizing rod at a rate of about 1 mm per second until the deflection becomes 1 mm and then the pressure shall be maintained for 5 \pm 1 sec. Measurement to be made after keeping at room temp. for 24 \pm 2 hrs.															
Resistance to Soldering Heat	No remarkable damage. Cap change: NP0: within $\pm 2.5\%$ or 0.25pF whichever is larger. X7R: within $\pm 7.5\%$. Q/D.F., I.R. and dielectric strength: To meet initial requirements. 25% max. leaching on each edge.	Solder temperature: 260 \pm 5°C Dipping time: 10 \pm 1 sec Preheating: 120 to 150°C for 1 minute before immerse the capacitor in a eutectic solder. Before initial measurement (Class II only): Perform 150+0/-10°C for 1 hr and then set for 24 \pm 2 hrs at room temp. Measurement to be made after keeping at room temp. for 24 \pm 2 hrs.															
Temperature Cycle	No remarkable damage. Cap change : NP0: within $\pm 2.5\%$ or 0.25pF whichever is larger. X7R: within $\pm 7.5\%$. Q/D.F.: NP0: To meet initial requirements. X7R: $\leq 1.5 \times$ Initial requirements. I.R.: To meet initial requirements.	Conduct the five cycles according to the temperatures and time. <table border="1" data-bbox="901 705 1452 873"> <thead> <tr> <th>Step</th> <th>Temp. (°C)</th> <th>Time (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Min. operating temp. +0/-3</td> <td>30\pm3</td> </tr> <tr> <td>2</td> <td>Room temp</td> <td>2~3</td> </tr> <tr> <td>3</td> <td>Max. operating temp. +3/-0</td> <td>30\pm3</td> </tr> <tr> <td>4</td> <td>Room temp</td> <td>2~3</td> </tr> </tbody> </table> Before initial measurement (Class II only): Perform 150+0/-10°C for 1 hr and then set for 24 \pm 2 hrs at room temp. Measurement to be made after keeping at room temp. for 24 \pm 2 hrs.	Step	Temp. (°C)	Time (min.)	1	Min. operating temp. +0/-3	30 \pm 3	2	Room temp	2~3	3	Max. operating temp. +3/-0	30 \pm 3	4	Room temp	2~3
Step	Temp. (°C)	Time (min.)															
1	Min. operating temp. +0/-3	30 \pm 3															
2	Room temp	2~3															
3	Max. operating temp. +3/-0	30 \pm 3															
4	Room temp	2~3															
Humidity (Damp Heat) Steady State	No remarkable damage. Cap change: NP0: within $\pm 5\%$ or 0.5pF whichever is larger. X7R: within $\pm 12.5\%$. Q/D.F.: NP0: More than 30pF $Q \geq 350$, 10pF $\leq C \leq 30$ pF, $\geq 275+2.5C$. Less than 10pF $Q \geq 200+10C$. X7R: $\leq 2 \times$ Initial requirements. I.R.: $\geq 1G\Omega$ or $R \cdot C \geq 50\Omega \cdot F$ whichever is smaller	Test temp.: 40 \pm 2°C Humidity: 90~95% RH Test time: 500+24/-0hrs. Before initial measurement (Class II only): Perform 150+0/-10°C for 1 hr and then set for 24 \pm 2 hrs at room temp. Measurement to be made after keeping at room temp. for 24 \pm 2 hrs															
High Temperature Load (Endurance)	No remarkable damage. Cap change: NP0: within $\pm 3\%$ or 0.3pF whichever is larger. X7R: within $\pm 12.5\%$. Q/D.F.: NP0: More than 30pF $Q \geq 350$, 10pF $\leq C \leq 30$ pF, $Q \geq 275+2.5C$ Less than 10pF $Q \geq 200+10C$ X7R: $\leq 2 \times$ Initial requirements. I.R.: $\geq 1G\Omega$ or $R \cdot C \geq 50\Omega \cdot F$ whichever is smaller.	Test temp.: 125 \pm 3°C To apply voltage: (1) Cap. $\geq 1\mu F$: 150% of rated voltage. (2) $U_r \leq 250V$: 200% of rated voltage. (3) $250V < U_r \leq 500V$: 150% of rated voltage. (4) $U_r > 500V$: 120% of rated voltage. Test time: 1000+24/-0 hrs. Before initial measurement (Class II only): To apply test voltage for 1hr at test temp. and then set for 24 \pm 2 hrs at room temp. Measurement to be made after keeping at room temp. for 24 \pm 2 hrs															

Multilayer Ceramic Chip Capacitor

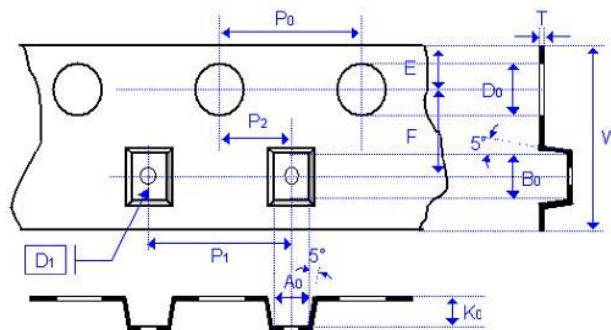
■Tape & Reel Dimensions

Reel Specifications



Type	ΦA (mm)	ΦB (mm)	ΦC (mm)	W (mm)
1825	178±1.0(7")	60.5±1.0(7")	13.0+0.5/-0.2	12.4+2.0/-0
2220				
2225				

Plastic Tape Size Specification



Unit: mm

Type	2220				2220				2225			
	G	K	M	U	G	K	M	U	G	K	M	U
A ₀	<6.80	<6.80	<6.80	<6.80	<5.80	<5.80	<5.80	<5.80	<5.80	<5.80	<5.80	<5.80
B ₀	<5.30	<5.30	<5.30	<5.30	<6.50	<6.50	<6.50	<6.50	<6.50	<6.50	<6.50	<6.50
T	0.30±0.10	0.30±0.10	0.30±0.10	0.30±0.10	0.30±0.10	0.30±0.10	0.30±0.10	0.30±0.10	0.30±0.10	0.30±0.10	0.30±0.10	0.30±0.10
K ₀	<2.50	<3.00	<2.50	<3.10	<2.50	<3.10	<2.50	<3.10	<2.50	<3.10	<2.50	<3.10
W	12.00±0.20	12.00±0.20	12.00±0.20	12.00±0.20	12.00±0.20	12.00±0.20	12.00±0.20	12.00±0.20	12.00±0.20	12.00±0.20	12.00±0.20	12.00±0.20
P ₀	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10
P ₁	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10
P ₂	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05
D ₀	1.50+0.1/-0	1.50+0.1/-0	1.50+0.1/-0	1.50+0.1/-0	1.50+0.1/-0	1.50+0.1/-0	1.50+0.1/-0	1.50+0.1/-0	1.50+0.1/-0	1.50+0.1/-0	1.50+0.1/-0	1.50+0.1/-0
D ₁	1.50±0.10	1.50±0.10	1.50±0.10	1.50±0.10	1.50±0.10	1.50±0.10	1.50±0.10	1.50±0.10	1.50±0.10	1.50±0.10	1.50±0.10	1.50±0.10
E	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10
F	5.50±0.05	5.50±0.05	5.50±0.05	5.50±0.05	5.50±0.05	5.50±0.05	5.50±0.05	5.50±0.05	5.50±0.05	5.50±0.05	5.50±0.05	5.50±0.05