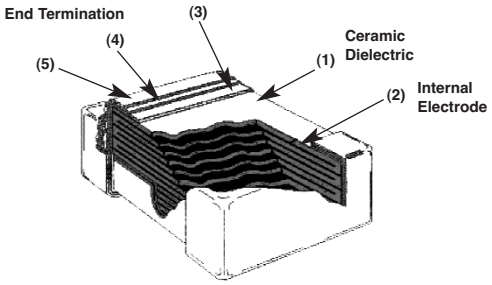
Type TYC Series

Key Features

- Choice of Dielectrics (NP0, X7R, X5R, Y5V)
- 0402 to 1812 sizes as standard
- Other sizes available. 0201 available soon
- 6.3V to 50V in standard range
- Voltage ratings to 3kV on selected products
- Range of tolerances available
- RoHS Compliant
- Excellent thermal stability
- Low dissipation factor

Multilayer ceramic capacitors (MLCC) are manufactured by suspending ceramic powders in liquid and casting into a thin green sheet from 20mm in thickness to 5mm or thinner.
Metal electrodes are sieved printed onto green sheets, which are later stacked to form a laminated structure. The metal electrodes are arranged so that the termination alternates from one edge to another of the capacitor.
Upon sintering at high temperature the part becomes a monolithic block, which can provide an extremely high capacitance in small mechanical volumes.
Finally, the termination electrodes are formed by composite of outer metal-glass electrode and followed by a barrier layer and pure-tin plating to permit MLCC to be soldered directly onto printed circuit board.

Structure



Class 1

No		Specifications	Material
1		Ceramic dielectric	Barium titanate base
2		Internal Electrode	Pb, PdAg
3	End Terminal	Inner Layer	Ag
4		Middle Layer	Ni
5		Outer Layer	Sn

Class 2

No		Specifications	Material	
1		Ceramic dielectric	Barium titanate base	
2	Internal Electrode		Pb, PbAg	Ni
3	End Terminal	Inner Layer	Ag	Cu
4		Middle Layer	Ni	
5		Outer Layer	Sn	

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Type TYC Series

Capacitance & Voltage (NPO)

EIA	Size	0402				0603				0805				1206				1210				1812			
Code	VDCW	10V	16V	25V	50V	10V	16V	25V	50V	10V	16V	25V	50V	10V	16V	25V	50V	10V	16V	25V	50V	10V	16V	25V	50V
0R5	0.5pF	N	N	N	N	S	S	S	S	A	A	A	A												
1R0	1	N	N	N	N	S	S	S	S	A	A	A	A												
1R2	1.2	N	N	N	N	S	S	S	S	A	A	A	A												
1R5	1.5	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
1R8	1.8	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
2R2	2.2	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
2R7	2.7	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
3R3	3.3	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
3R9	3.9	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
4R7	4.7	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
5R6	5.6	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
6R8	6.8	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
8R2	8.2	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
100	10pF	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
120	12	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
150	15	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
180	18	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B								
220	22	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
270	27	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
330	33	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
390	39	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
470	47	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
560	56	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
680	68	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
820	82	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
101	100pF	F	N	N	N	N	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
121	120	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
151	150	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
181	180	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
221	220	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
271	270	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
331	330	N	N	N	N	S	S	S	S	A	A	A	A	B	B	B	B	C	C	C	C				
391	390	N	N			S	S	S	S	B	B	B	B	B	B	B	B	C	C	C	C				
471	470	N	N			S	S	S	S	B	B	B	B	B	B	B	B	C	C	C	C				
561	560					S	S	S	S	B	B	B	B	B	B	B	B	C	C	C	C				
681	680					S	S	S	S	B	B	B	B	B	B	B	B	C	C	C	C				
821	820					S	S	S	S	B	B	B	B	B	B	B	B	C	C	C	C				
102	1000pF					S	S	S	S	B	B	B	B	B	B	B	B	C	C	C	C	D	D	D	D
122	1200					S	S	S	S	B	B	B	B	B	B	B	B	C	C	C	C	D	D	D	D
152	1500					S	S	S	S	B	B	B	B	B	B	B	B	C	C	C	C	D	D	D	D
182	1800					S	S	S	S	B	B	B	B	B	B	B	B	C	C	C	C	D	D	D	D
222	2200					S	S	S	S	B	B	B	B	B	B	B	B	C	C	C	C	D	D	D	D
272	2700					S	S	D	D	D	D			B	B	B	B	C	C	C	C	D	D	D	D
332	3300					S	S	D	D	D	D			B	B	B	B	C	C	C	C	D	D	D	D
392	3900									D	D	D	D	B	B	B	B	C	C	C	C	D	D	D	D
472	4700									D	D	D	D'	B	B	B	B	C	C	C	C	D	D	D	D
562	5600									D	D			B	B	B	B	C	C	C	C	D	D	D	D
682	6800									D	D			C	C	C	C					D	D	D	D
822	8200									D	D			C	C	C	C					D	D	D	D
103	0.01μF									D	D		D'									D	D	D	D
123	0.012																					D	D	D	D
153	0.015																					D	D	D	D
183	0.018																					D	D	D	D
223	0.022																					D	D	D	D
273	0.027																					D	D	D	D
333	0.033																					D	D	D	D
393	0.039																					D	D	D	D
473	0.047																					D	D	D	D
563	0.056																					D	D	D	D
683	0.068																					D	D	D	D
823	0.082																					D	D	D	D
104	0.1μF									D	D											D	D	D	D

(1) [D']: The thickness spec. of said items is special defined on 1.25±0.2mm for 0805 and 1.15±0.15mm for 1206.

Size Unit: Inch (mm)	0402 (1005)	0603 (1608)	0805 (2012)	1206 (3216)	1210 (3225)	1808 (4520)	1812 (4532)
A= 0.60±0.10 mm	–	–	Paper 4Kp/reel	–	–	–	–
B= 0.80±0.10 mm	–	–	Paper 4Kp/reel	Paper 4Kp/reel	–	–	–
C= 0.95±0.10 mm	–	–	–	Plastic 3Kp/reel	Plastic 3Kp/reel	–	–
D= 1.25±0.10 mm	–	–	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 2Kp/reel	Plastic 1Kp/reel
G= 1.60±0.20 mm	–	–	–	Plastic 2Kp/reel	Plastic 2Kp/reel	–	–
S= 0.80±0.07 mm	–	Paper 4Kp/reel	–	–	–	–	–
N= 0.50±0.05 mm	Paper 10Kp/reel	–	–	–	–	–	–
K= 2.00±0.20 mm	–	–	–	–	Plastic 2Kp/reel	Plastic 1Kp/reel	Plastic 1Kp/reel
M= 2.50±0.30 mm	–	–	–		Plastic 1Kp/reel	–	Plastic 1Kp/reel

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

For email, phone or live chat, go to: **te.com/help**

Type TYC Series

Capacitance & Voltage (Hi-Voltage NPO)

EIA	Size	0603	0805				1206						1210						1808			1812						
Code	VDCW	100	100	200	250	500	100	200	250	500	1000	2000	100	200	250	500	1000	2000	1000	2000	3000	100	200	250	500	1000	2000	3000
0R5	0.5pF	S	A	A	A	A																						
1R0	1	S	A	A	A	A																						
1R2	1.2	S	A	A	A	A																						
1R5	1.5	S	A	A	A	A	B	B	B	B	B	B																
1R8	1.8	S	A	A	A	A	B	B	B	B	B	B																
2R2	2.2	S	A	A	A	A	B	B	B	B	B	B																
2R7	2.7	S	A	A	A	A	B	B	B	B	B	B																
3R3	3.3	S	A	A	A	A	B	B	B	B	B	B																
3R9	3.9	S	A	A	A	A	B	B	B	B	B	B																
4R7	4.7	S	A	A	A	A	B	B	B	B	B	B																
5R6	5.6	S	A	A	A	A	B	B	B	B	B	B																
6R8	6.8	S	A	A	A	A	B	B	B	B	B	B																
8R2	8.2	S	A	A	A	A	B	B	B	B	B	B																
100	10pF	S	A	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D
120	12	S	A	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D
150	15	S	A	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D
180	18	S	A	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D
220	22	S	A	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D
270	27	S	A	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D
330	33	S	A	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D
390	39	S	A	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D
470	47	S	A	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D
560	56	S	A	A	A	A	B	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	D
680	68	S	A	A	A	A	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	D
820	82	S	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	D
101	100pF	S	A	A	A	B	B	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	D
121	120	S	A	A	A	D	B	B	B	B	B	D	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	D
151	150	S	A	B	B	D	B	B	B	B	C	D	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	D
181	180	S	A	B	B	D	B	B	B	B	C	G	C	C	C	C	C	D	D	D	K	D	D	D	D	D	D	D
221	220	S	A	D	D	D	B	B	B	B	D	G	C	C	C	C	C	D	D	D	K	D	D	D	D	D	D	D
271	270	S	A	D	D	D	B	B	B	C	D		C	C	C	C	C	D	D	D	K	D	D	D	D	D	D	K
331	330	S	A	D	D	D	B	B	B	C			C	C	C	C	D		D	D		D	D	D	D	D	D	K
391	390	S	B	D	D	D	B	B	B	C			C	C	C	C	D		D	K		D	D	D	D	D	D	K
471	470	S	B	D	B	C	C	C					C	C	C	C	D		D	K		D	D	D	D	D	D	K
561	560	S	B	D	B	C	C	C					C	C	C	C			K	K		D	D	D	D	D	D	
681	680	B	D	B	C	C	C						C	C	C	C			K	K		D	D	D	D	D	K	
821	820	B	D	B	C	D	D						C	C	C	C			K	K		D	D	D	D	D	K	
102	1000pF	B	B		C								C	C	C	C			K			D	D	D	D	K	K	
122	1200	B	B	C									C	D	D	D						D	D	D	D	K		
152	1500	B	B	C									C	D	D	D						D	D	D	D	K		
182	1800	B	B	C									C	D	D	D						D	D	D	D			
222	2200	B	B	D									C	D	D							D	D	D	D			
272	2700	D	B										C	D	D							D	D	D	D			
332	3300	D	B										C	D								D	D	D	D			
392	3900	D	B										C	D								D	D					
472	4700	B											C									D	D					
562	5600	B											C									D	D					
682	6800	C											C									D	D					
822	8200	C											C									D						
103	0.01μF												C									D						
123	0.012												D									D						
153	0.015												D									D						
183	0.018																					D						
223	0.022																					D						
273	0.027																					D						
333	0.033μF																					D						

Size Unit: Inch (mm)	0402 (1005)	0603 (1608)	0805 (2012)	1206 (3216)	1210 (3225)	1808 (4520)	1812 (4532)
A= 0.60±0.10 mm	–	–	Paper 4Kp/reel	–	–	–	–
B= 0.80±0.10 mm	–	–	Paper 4Kp/reel	Paper 4Kp/reel	–	–	–
C= 0.95±0.10 mm	–	–	–	Plastic 3Kp/reel	Plastic 3Kp/reel	–	–
D= 1.25±0.10 mm	–	–	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 2Kp/reel	Plastic 1Kp/reel
G= 1.60±0.20 mm	–	–	–	Plastic 2Kp/reel	Plastic 2Kp/reel	–	–
S= 0.80±0.07 mm	–	Paper 4Kp/reel	–	–	–	–	–
N= 0.50±0.05 mm	Paper 10Kp/reel	–	–	–	–	–	–
K= 2.00±0.20 mm	–	–	–	–	Plastic 2Kp/reel	Plastic 1Kp/reel	Plastic 1Kp/reel
M= 2.50±0.30 mm	–	–	–		Plastic 1Kp/reel	–	Plastic 1Kp/reel

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

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Type TYC Series

Capacitance & Voltage (X7R/X5R)

EIA	Size	0402				0603					0805					1206					1210					1812				
Code	VDCW	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V
101	100pF	N	N	N	N		S	S	S	S		B	B	B	B															
121	120	N	N	N	N		S	S	S	S		B	B	B	B															
151	150	N	N	N	N		S	S	S	S		B	B	B	B															
181	180	N	N	N	N		S	S	S	S		B	B	B	B		B^	B^	B^	B^										
221	220	N	N	N	N		S	S	S	S		B	B	B	B		B^	B^	B^	B^										
271	270	N	N	N	N		S	S	S	S		B	B	B	B		B^	B^	B^	B^										
331	330	N	N	N	N		S	S	S	S		B	B	B	B		B^	B^	B^	B^										
391	390	N	N	N	N		S	S	S	S		B	B	B	B		B^	B^	B^	B^										
471	470	N	N	N	N		S	S	S	S		B	B	B	B		B^	B^	B^	B^										
561	560	N	N	N	N		S	S	S	S		B	B	B	B		B^	B^	B^	B^										
681	680	N	N	N	N		S	S	S	S		B	B	B	B		B^	B^	B^	B^										
821	820	N	N	N	N		S	S	S	S		B	B	B	B		B	B	B	B										
102	1000pF	N	N	N	N		S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
122	1200	N	N	N	N		S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
152	1500	N	N	N	N		S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
182	1800	N	N	N	N		S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
222	2200	N	N	N	N		S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
272	2700	N	N	N	N		S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
332	3300	N	N	N	N		S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
392	3900	N	N	N	N		S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
472	4700	N	N	N	N		S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
562	5600	N	N	N			S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
682	6800	N	N	N			S	S	S	S		B	B	B	B		B	B	B	B		C^	C^	C^	C^		D^	D^	D^	D^
822	8200	N	N	N			S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
103	0.01μF	N	N	N			S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
123	0.012	N	N				S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
153	0.015	N	N				S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
183	0.018	N	N				S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
223	0.022	N	N				S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
273	0.027	N					S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
333	0.033	N	N				S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
393	0.039	N					S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
473	0.047	N	N				S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
563	0.056	N					S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
683	0.068	*N					S	S	S	S		B	B	B	B		B	B	B	B		C	C	C	C		D^	D^	D^	D^
823	0.082	*N					S	S	S	S		B	B	B	D		B	B	B	B		C	C	C	C		D	D	D	D
104	0.1μF	*N					S	S	S	S		B	B	B	D		B	B	B	B		C	C	C	C		D	D	D	D
124	0.12						S					B	B	B	D		B	B	B	B		C	C	C	C		D	D	D	D
154	0.15						S	S				D	D	D	D		C	C	C	C		C	C	C	C		D	D	D	D
184	0.18						S					D	D	D	D'		C	C	C	C		C	C	C	C		D	D	D	D
224	0.22						S	S				D	D	D	D'		C	C	C	C		C	C	C	C		D	D	D	D
274	0.27											D	D	D			C	C	C			C	C	C	C		D	D	D	D
334	0.33						*S'					D	D	D			C	C	C			C	C	C	C		D	D	D	D
394	0.39											D	D				C	C				C	C	C	C		D	D	D	D
474	0.47						*S'					D	D	D'			D	D	D'	G'		C	C	C			D	D	D	D
564	0.56											D	D				D	D									D	D	D	D
684	0.68											D	D'				D	D									D	D	D	K
824	0.82											D					D	D									D	D	D	K
105	1μF					*S'	*S'					D	D'	D'			D	D	G'			G	G	G			D	D	D	K
225	2.2					*S'					*D'	*D'					*D'	*D'	G'			K	K	K						
335	3.3										*D'	*D'					*G'	*G'				K	K	K						
475	4.7										*D'					*G'	*G'	*G'				K	K	K						
685	6.8																													
106	10μF										*D'					*G'	*G'				*K	*K	*K						M	
226	22μF															*G'	*G'				*M	*M					*M			
107	100μF																									*U				

(1) [^]: The said items are made by NME (Noble Metal Electrode).

(2) [*]: The said items are available in X5R.

(3) [S']: The thickness spec. of said items is special defined on 0.80+0.15/-0.1mm.

(4) [D']: The thickness spec. of said items is special defined on 1.25±0.2mm for 0805 and 1.15±0.15mm for 1206.

(5) [G']: The thickness spec. of said items is special defined on 1.60+0.3/-0.1mm.

Size Unit: Inch (mm)	0402 (1005)	0603 (1608)	0805 (2012)	1206 (3216)	1210 (3225)	1808 (4520)	1812 (4532)
A= 0.60±0.10 mm	–	–	Paper 4Kp/reel	–	–	–	–
B= 0.80±0.10 mm	–	–	Paper 4Kp/reel	Paper 4Kp/reel	–	–	–
C= 0.95±0.10 mm	–	–	–	Plastic 3Kp/reel	Plastic 3Kp/reel	–	–
D= 1.25±0.10 mm	–	–	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 2Kp/reel	Plastic 1Kp/reel
G= 1.60±0.20 mm	–	–	–	Plastic 2Kp/reel	Plastic 2Kp/reel	–	–
S= 0.80±0.07 mm	–	Paper 4Kp/reel	–	–	–	–	–
N= 0.50±0.05 mm	Paper 10Kp/reel	–	–	–	–	–	–
K= 2.00±0.20 mm	–	–	–	–	Plastic 2Kp/reel	Plastic 1Kp/reel	Plastic 1Kp/reel
M= 2.50±0.30 mm	–	–	–	–	Plastic 1Kp/reel	–	Plastic 1Kp/reel
U= 2.80±0.30 mm	–	–	–	–	–	–	Plastic 0.5Kp/reel

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

For email, phone or live chat, go to: **te.com/help**

Type TYC Series

Capacitance & Voltage (Hi-Voltage X7R)

EIA	Size	0603	0805				1206							1210					1808			1812						
Code	VDCW	100	100	200	250	500	100	200	250	500	1000	1500	2000	100	200	250	500	1000	1000	1500	2000	100	200	250	500	1000	2000	3000
101	100pF	S	B	B^	B^	B^																						
121	120	S	B	B^	B^	B^																						
151	150	S	B	B^	B^	B^	B^	B^	B^	B^	B^	B^	B^						D^	D^	D^							
181	180	S	B	B^	B^	B^	B^	B^	B^	B^	B^	B^	B^						D^	D^	D^							
221	220	S	B	B^	B^	B^	B^	B^	B^	B^	B^	B^	B^						D^	D^	D^							
271	270	S	B	B^	B^	B^	B^	B^	B^	B^	B^	B^	B^						D^	D^	D^					D^	D^	
331	330	S	B	B^	B^	B^	B^	B^	B^	B^	B^	B^	B^						D^	D^	D^					D^	D^	
391	390	S	B	B^	B^	B^	B^	B^	B^	B^	B^	B^	C^						D^	D^	D^					D^	D^	
471	470	S	B	B^	B^	B^	B^	B^	B^	B^	B^	B^	C^						D^	D^	D^					D^	D^	
561	560	S	B	B^	B^	B^	B^	B^	B^	B^	B^	C^	C^						D^	D^	D^					D^	D^	
681	680	S	B	B^	B^	B^	B^	B^	B^	B^	B^	C^	C^						D^	D^	D^					D^	D^	K^
821	820	S	B	B^	B^	B^	B	B^	B^	B^	B^	G^	G^						D^	D^	D^					D^	D^	K^
102	1000pF	S	B	B^	B^	B^	B	B^	B^	B^	B^	G^	G^	C^	C^	C^	C^	C^	D^	D^	K^	D^	D^	D^	D^	D^	D^	K^
122	1200	S	B	B^	B^	B^	B	B^	B^	B^	B^	G^		C^	C^	C^	C^	C^	D^	D^	K^	D^	D^	D^	D^	D^	D^	
152	1500	S	B	B^	B^	B^	B	B^	B^	B^	C^	G^		C^	C^	C^	C^	C^	D^	D^	K^	D^	D^	D^	D^	D^	D^	
182	1800	S	B	B^	B^	B^	B	B^	B^	B^	C^	G^		C^	C^	C^	C^	C^	D^	D^	K^	D^	D^	D^	D^	D^	D^	
222	2200	S	B	B^	B^	B^	B	B^	B^	B^	D^	G^		C^	C^	C^	C^	C^	D^	D^	K^	D^	D^	D^	D^	D^	D^	
272	2700	S	B	B^	B^	B^	B	B^	B^	B^	G^			C^	C^	C^	C^	C^	D^	D^		D^	D^	D^	D^	D^	D^	
332	3300	S	B	B^	B^		B	B^	B^	B^	G^			C^	C^	C^	C^	D^	D^	K^		D^	D^	D^	D^	D^	K^	
392	3900	S	B	B^	B^		B	B^	B^	B^	G^			C^	C^	C^	C^		D^			D^	D^	D^	D^	D^	K^	
472	4700	S	B	B^	B^		B	B^	B^	B^				C^	C^	C^	C^		D^			D^	D^	D^	D^	D^	K^	
562	5600	S	B	D^	D^		B	B^	B^	B^				C^	C^	C^	C^		K^			D^	D^	D^	D^	D^		
682	6800	S	B	D^	D^		B	B^	B^	B^				C^	C^	C^	C^		K^			D^	D^	D^	D^	D^		
822	8200	S	B	D^	D^		B	B^	B^	C^				C	C^	C^	C^		K^			D^	D^	D^	D^	D^		
103	0.01μF	S	B	D^	D^		B	B^	B^	C^				C	C^	C^	C^		K^			D^	D^	D^	D^	D^		
123	0.012		B				B	B^	B^					C	C^	C^	C^					D^	D^	D^	D^	K^		
153	0.015		B				B	C^	C^					C	C^	C^	C^					D^	D^	D^	D^	K^		
183	0.018		B				B	C^	C^					C	C^	C^	C ^					D^	D^	D^	D^			
223	0.022		B				B	C^	C^					C	C^	C^	D^					D^	D^	D^	D^			
273	0.027		D				B	C^	C^					C	C^	C^						D^	D^	D^	D^			
333	0.033		D				B	G^	G^					C	C^	C^						D^	D^	D^	D^			
393	0.039						B	G^	G^					C	C^	C^						D^	D^	D^	D^			
473	0.047						B	G^	G^					C	D^	D^						D^	D^	D^	D^			
563	0.056						B							C	D^	D^						D^	D^	D^	K^			
683	0.068						B							C								D^	D^	D^	K^			
823	0.082						D							C								D	D^	D^	K^			
104	0.1μF						D							C								D	D^	D^	K^			
124	0.12													C								D	D^	D^				
154	0.15													D								D	K^	K^				
184	0.18													D								D	K^	K^				
224	0.22													D								D	K^	K^				
274	0.27																					D						
334	0.33																					D						
394	0.39																					D						
474	0.47																					K						
564	0.56																					K						
684	0.68																					K						
824	0.82																											
105	1μF																											

(1) [^]: The said items are made by NME (Noble Metal Electrode).

Size Unit: Inch (mm)	0402 (1005)	0603 (1608)	0805 (2012)	1206 (3216)	1210 (3225)	1808 (4520)	1812 (4532)
A= 0.60±0.10 mm	–	–	Paper 4Kp/reel	–	–	–	–
B= 0.80±0.10 mm	–	–	Paper 4Kp/reel	Paper 4Kp/reel	–	–	–
C= 0.95±0.10 mm	–	–	–	Plastic 3Kp/reel	Plastic 3Kp/reel	–	–
D= 1.25±0.10 mm	–	–	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 2Kp/reel	Plastic 1Kp/reel
G= 1.60±0.20 mm	–	–	–	Plastic 2Kp/reel	Plastic 2Kp/reel	–	–
S= 0.80±0.07 mm	–	Paper 4Kp/reel	–	–	–	–	–
N= 0.50±0.05 mm	Paper 10Kp/reel	–	–	–	–	–	–
K= 2.00±0.20 mm	–	–	–	–	Plastic 2Kp/reel	Plastic 1Kp/reel	Plastic 1Kp/reel
M= 2.50±0.30 mm	–	–	–	–	Plastic 1Kp/reel	–	Plastic 1Kp/reel

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Type TYC Series

Capacitance & Voltage (Y5V)

EIA	Size	0402					0603					0805					1206					1210				1812			
Code	VDCW	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	10V	16V	25V	35V	50V	10V	16V	25V	50V	10V	16V	25V	50V
102	1000pF																												
122	1200																												
152	1500																												
182	1800																												
222	2200																												
272	2700																												
332	3300																												
392	3900																												
472	4700																												
562	5600																												
682	6800																												
822	8200																												
103	0.01μF		N	N	N	N		S	S	S	S		A	A	A	A	B	B	B		B								
123	0.012		N	N	N	N		S	S	S	S		A	A	A	A	B	B	B		B								
153	0.015		N	N	N	N		S	S	S	S		A	A	A	A	B	B	B		B								
183	0.018		N	N	N	N		S	S	S	S		A	A	A	A	B	B	B		B								
223	0.022		N	N	N	N		S	S	S	S		A	A	A	A	B	B	B		B								
273	0.027		N	N	N	N		S	S	S	S		A	A	A	A	B	B	B		B								
333	0.033		N	N	N	N		S	S	S	S		A	A	A	A	B	B	B		B								
393	0.039		N	N	N			S	S	S	S		A	A	A	A	B	B	B		B								
473	0.047		N	N	N			S	S	S	S		A	A	A	A	B	B	B		B								
563	0.056		N	N				S	S	S	S		A	A	A	A	B	B	B		B								
683	0.068		N	N				S	S	S	S		A	A	A	A	B	B	B		B								
823	0.082		N	N				S	S	S	S		A	A	A	A	B	B	B		B								
104	0.1μF		N	N				S	S	S	S		A	A	A	A	B	B	B		B	C	C	C	C	D	D	D	D
154	0.15		N					S	S	S	S		A	A	A	A	B	B	B		B	C	C	C	C	D	D	D	D
224	0.22		N					S	S	S	S		A	A	A	A	B	B	B		B	C	C	C	C	D	D	D	D
334	0.33	N	N					S	S	S			B	B	B	B	B	B	B		B	C	C	C	C	D	D	D	D
474	0.47	N	N					S	S	S			B	B	B		B	B	B		B	C	C	C	C	D	D	D	D
684	0.68							S					B	B	D		B	B	B		B	C	C	C	C	D	D	D	D
105	1μF	N						S	S				B	B	D	D'	C	C	C		C	C	C	C	C	D	D	D	D
155	1.5												D	D			C	C	C			C	C	C		D	D	D	D
225	2.2						S						D	D			C	C	C		D'	C	C	C		D	D	D	D
335	3.3												D				D	D	D			C	C	C		D	D	D	D
475	4.7						S						D	D'			D	D	D'	D'		C	C	D	G	D	D	D	D
685	6.8																D	D'				C	C			D	D	D	D
106	10μF											D'	D'				D	D'				D	D	G		D	D	D	
226	22μF																G'					K	K						
476	47μF																					K							

(1) [D']: The thickness spec. of said items is special defined on 1.25±0.2mm for 0805 and 1.15±0.15mm for 1206.

(2) [G']: The thickness spec. of said items is special defined on 1.60+0.3/-0.1mm.

Size Unit: Inch (mm)	0402 (1005)	0603 (1608)	0805 (2012)	1206 (3216)	1210 (3225)	1808 (4520)	1812 (4532)
A= 0.60±0.10 mm	–	–	Paper 4Kp/reel	–	–	–	–
B= 0.80±0.10 mm	–	–	Paper 4Kp/reel	Paper 4Kp/reel	–	–	–
C= 0.95±0.10 mm	–	–	–	Plastic 3Kp/reel	Plastic 3Kp/reel	–	–
D= 1.25±0.10 mm	–	–	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 2Kp/reel	Plastic 1Kp/reel
G= 1.60±0.20 mm	–	–	–	Plastic 2Kp/reel	Plastic 2Kp/reel	–	–
S= 0.80±0.07 mm	–	Paper 4Kp/reel	–	–	–	–	–
N= 0.50±0.05 mm	Paper 10Kp/reel	–	–	–	–	–	–
K= 2.00±0.20 mm	–	–	–	–	Plastic 2Kp/reel	Plastic 1Kp/reel	Plastic 1Kp/reel

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Type TYC Series

Capacitance & Voltage (Hi-Voltage Y5V)

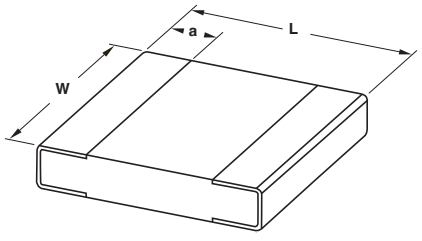
EIA	Size	0805			1206			1210			1812		
Code	VDCW	100	200	250	100	200	250	100	200	250	100	200	250
103	0.01μF	B	B	B	B	B	B	C	C	C	D	D	D
153	0.015	B	B	B	B	B	B	C	C	C	D	D	D
223	0.022	B	B	B	B	B	B	C	C	C	D	D	D
333	0.033	B	B	B	B	B	B	C	C	C	D	D	D
473	0.047	B	B	B	B	B	B	C	C	C	D	D	D
683	0.068	B	B	B	B	B	B	C	C	C	D	D	D
104	0.1μF	B			B	B	B	C	C	C	D	D	D
154	0.15				C	C	C	C	C	C	D	D	D
224	0.22				C			C			D	D	D
334	0.33							C			D	D	D
474	0.47										D	D	D
684	0.68										D	D	D
105	1μF										D		

Size Unit: Inch (mm)	0805 (2012)	1206 (3216)	1210 (3225)	1812 (4532)
A= 0.60±0.10 mm	Paper 4Kp/reel	–	–	–
B= 0.80±0.10 mm	Paper 4Kp/reel	Paper 4Kp/reel	–	–
C= 0.95±0.10 mm	–	Plastic 3Kp/reel	Plastic 3Kp/reel	–
D= 1.25±0.10 mm	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 3Kp/reel	Plastic 1Kp/reel
G= 1.60±0.20 mm	–	Plastic 2Kp/reel	–	–
S= 0.80±0.07 mm	–	–	–	–
N= 0.50±0.05 mm	–	–	–	–
K= 2.00±0.20 mm	–	–	–	Plastic 1Kp/reel
M= 2.50±0.30 mm	–	–	–	–

Packaging

	Paper Tape			Plastic Tape			Chip
Chip Size	Width (reel)	Thickness	Unit/Reel	Width (reel)	Thickness	Unit/Reel	Thickness
0402	8mm (7”)	N	10Kp/Reel				A=0.50~0.70
0603	8mm (7”)	S	4Kp/Reel				B=0.85+0.05/-0.15
	8mm (10”)	S	10Kp/Reel				
	8mm (13”)	S	15Kp/Reel				C=1.00+0.05/-0.13
0805	8mm (7”)	A, B	4Kp/Reel	8mm (7”)	C, D	3Kp/Reel	
	8mm (10”)	A, B	10Kp/Reel	8mm (10”)	C, D	3Kp/Reel	D=1.20±0.15
	8mm (13”)	A, B	15Kp/Reel	8mm (13”)	C, D	3Kp/Reel	
1206	8mm (7”)	A, B	4Kp/Reel	8mm (7”)	C, D	3Kp/Reel	S=0.80±0.07
	8mm (10”)	A, B	10Kp/Reel	8mm (10”)	C, D	3Kp/Reel	H=0.50~0.60
	8mm (13”)	A, B	15Kp/Reel	8mm (13”)	C, D	3Kp/Reel	E=0.65~0.75
				8mm (7”)	F, G	3Kp/Reel	N=0.50±0.05
				8mm (7”)	K	3Kp/Reel	
1210				8mm (7”)	C, D	3Kp/Reel	F=1.40+0.05/-0.15
				8mm (7”)	F	3Kp/Reel	
1808				12mm (7”)	C, G	3Kp/Reel	G=1.60+0.05/-0.15
				12mm (7”)	K	3Kp/Reel	
1812				12mm (7”)	D	3Kp/Reel	K=2.00±0.10

Dimensions



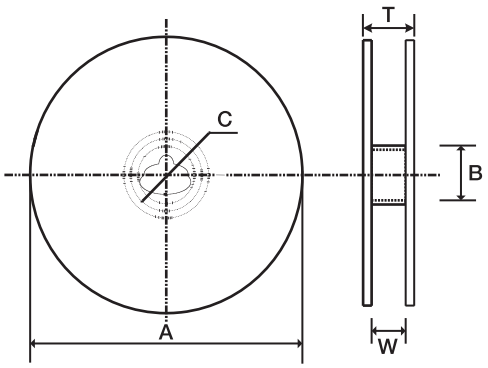
SIZE CODE	L	W	A
0402	1.00±0.05	0.50±0.05	0.25+0.05/-0.10
0603	1.60±0.10	0.80±0.07	0.40±0.15
0805	2.00±0.15	1.25±0.10	0.50±0.20
1206	3.20±0.15	1.60±0.15	0.60±0.20
1210	3.20±0.30	2.50±0.20	0.75±0.25
1808	4.50±0.40	2.03±0.25	0.75±0.25
1812	4.50±0.40	3.20±0.30	0.75±0.25

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

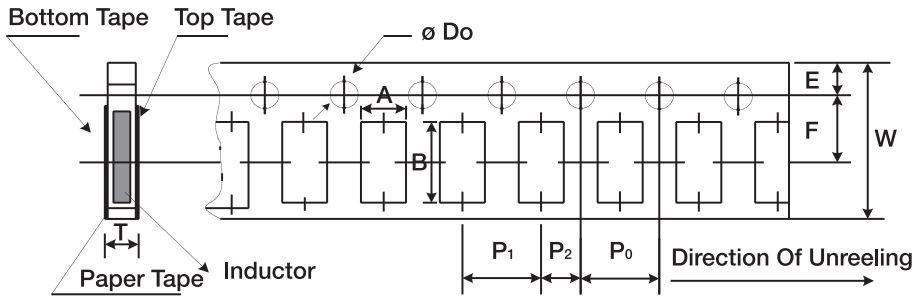
Dimensions are shown for reference purposes only. Specifications subject to change.

Type TYC Series

Packaging (continued)



øA	øB	øC	W
178±1 (7")	60.5±1	13.0±1	9.0±1
	80±1		13.5±1
250±1 (10")	62.5±1		9.0±1
330±1 (13")	100±1		9.0±1



Type	A	B	W	øD0	E	F	P0	P1	P2	T
0402	0.7±0.05	1.23±0.05	8.0±0.32	1.55+0.05	1.70±0.1	3.50±0.1	4.0±0.1	4.0±0.1	2.0±0.1	0.6±0.05
0603	1.0±0.1	1.84±0.1								<1.0
0805	1.55±0.2	2.35±0.2								
1206	2.0±0.2	3.5±0.2								

How to Order

TYC	0201	A	101	B	C	T
Common Part	Size	Dielectric	Capacitance Code	Tolerance	Voltage	Packaging
TYC - Multilayer Ceramic Chip Capacitor	0201 0402 0603 0805 1206	A = NPO B = X7R C = X5R D = Y5V	101 - 100pF 102 - 1000pF 103 - 0.01uF	B = 0.1pF C = 0.25pF D = 0.5pF F = +/- 1% G = +/- 2% J = +/- 5% K = +/- 10% M = +/- 20% Z = +80%/-20%	C = 6.3V D = 10V E = 16V F = 25V G = 50V H = 100V J = 200V L = 500V P = 1KV Q = 2KV R = 3KV S = 4KV	T = Paper (7") P = Plastic (7")

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- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).

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