

NOMINAL CAPACITANCE

Capacitance expressed in pF. 2 significant digits plus number of zeros.

(example) 106 = $10 \times 10^6 = 10000000$ pF

For Values < 10pF, Letter R denotes decimal point.

(example) 1R5 = 1.5 pF

CAPACITANCE TOLERANCE

Temperature Characteristics	Symbol	Tolerance	Applicable Capacitance Range
COG(NPO) or T.C Series	A	$\pm 0.05\text{pF}$	0.5 ~ 10pF
	B	$\pm 0.1\text{pF}$	
	C	$\pm 0.25\text{pF}$	
	D	$\pm 0.5\text{pF}$	
	F	$\pm 1\text{pF}, \pm 1\%^*$	
	G	$\pm 2\%$	E-24 Series for over 10pF
	J	$\pm 5\%$	
	K	$\pm 10\%$	
A(X5R)	J	$\pm 5\%$	E-12 Series
B(X7R)	K	$\pm 10\%$	
X(X6S)	M	$\pm 20\%$	
F(Y5V)	Z	+80%~-20%	E-6 Series

*For Values $\leq 10\text{pF}$, F = $\pm 1\text{pF}$ Values > 10pF, F = $\pm 1\%$

RATED VOLTAGE

Symbol	Rated Voltage(Vdc)	Symbol	Rated Voltage(Vdc)
R	4.0V	D	200V
Q	6.3V	E	250V
P	10V	G	500V
O	16V	H	630V
A	25V	I	1000V
L	35V	J	2000V
B	50V	K	3000V
C	100V		

• Please consult us for special voltage.

THICKNESS OPTION

Size	Code	Thickness (mm)	Specification
0201(0603)	3	0.30	± 0.03
0402(1005)	5	0.50	± 0.05
0603(1608)	8	0.80	± 0.10
0805(2012)	A	0.65	± 0.10
	C	0.85	
	D	1.00	± 0.15
	F	1.25	± 0.10
1206(3216)	Q	1.25	± 0.15
	C	0.85	± 0.15
	D	1.00	
	F	1.25	
1210(3225)	H	1.60	± 0.20
	F	1.25	± 0.20
	H	1.60	
	I	2.00	
	J	2.50	
1808(4520)	V	2.50	± 0.30
	F	1.25	± 0.20
	H	1.60	
	I	2.00	
	J	2.50	
1812(4532)	L	3.20	± 0.20
	F	1.25	
	H	1.60	
	I	2.00	
	J	2.50	± 0.20
2220(5750)	L	3.20	
	F	1.25	
	H	1.60	
	I	2.00	
	J	2.50	± 0.30

PRODUCT & PLATING METHOD

Code	Electrode	Termination	Plating Method
A	Pd	Ag	Sn-100%
N	Ni	Cu	Sn-100%
G	Cu	Cu	Sn-100%
L	Ni	Cu	Sn-100%

PRODUCT CODE

Code	Description of the Code	Code	Description of the Code
A	Array(2 - element)	L	LICC
B	Array(4 - element)	N	Normal
C	High - Q	P	Automotive

RESERVED FOR FUTURE USE

Code	Description of the Code
N	Reserved for future use

PACKAGING CODE

Symbol	Packaging
B	Bulk
P	Bulk Case
C	Cardboard Tape, 7" reel
D	Cardboard Tape, 13" reel(10,000ea)
E	Embossed Tape, 7" reel
F	Embossed Tape, 13" reel
L	Cardboard Tape, 13" reel(15,000ea)
O	Cardboard Tape, 10" reel
S	Embossed Tape, 10" reel

■ CAPACITANCE TABLE (High Voltage Capacitors)

Size	0603(10)			0805(21)			1206(31)						
TC	C0G(C)												
Rated V	100(C)	200(D)	250(E)	100(C)	200(D)	250(E)	100(C)	200(D)	250(E)	500(G)	630(H)	1000(I)	2000(J)
Capacitance -pF- (part numbering code) and T Dimension -mm-													
0.5(0R5) ~9.1(9R1)													
10(100) ~27(270)													
33(330) 39(390)													1.6 (H)
47(470)				0.65 (A)								1.25 (F)	
56(560) 68(680)		0.80 (8)	0.80 (8)		0.85 (C)	*0.8 5 (C)				1.25 (F)	*1.2 5 (F)		
82(820) ~180(181)	0.80 (8)						0.85 (C)					1.6 (H)	151
220(221) ~390(391)													271
470(471) 560(561)				0.85 (C)				0.85 (C)	*0.8 5 (C)				
680(681) 820(821)													
1000(102) 1200(122)					1.25 (F)	*1.2 5 (F)		1.25 (F)	*1.2 5 (F)				
1500(152) 2200(222)				1.25 (F)						1.6 (H)	*1.6 (H)		
2700(272) 3300(332)							1.25 (F)	1.6 (H)	*1.6 (H)				
3900(392) 4700(472)													
8200(822) 10000(103) ~18000(183)							1.6 (H)						

* : Possible to accept an order for 250/630 voltage parts, but in case of the maximum Capacitance part among them, consult with a person in charge of product development before you order.

■ CAPACITANCE TABLE (High Voltage Capacitors)

Size	1210(32)							1808(42)	
TC	C0G(C)								
Rated V	100(C)	200(D)	250(E)	500(G)	630(H)	1000(I)	2000(J)	2000(J)	3000(K)
Capacitance -pF- (part numbering code) and T Dimension -mm-									
10(10Q)									
12(12Q)									
15(15Q)									
22(22Q)									
33(33Q)									1.25 (F)
47(47Q)								1.25 (F)	
56(56Q)									
68(68Q)									
82(82Q)							1.25 (F)		
100(10Q)									
120(12Q)									1.6 (H)
150(15Q)									2.0 (I)
180(18Q)									
220(22Q)							1.6 (H)	1.6 (H)	
270(27Q)							2.0 (I)		
330(33Q)									
390(39Q)							2.5 (J)		
470(47Q)									
560(56Q)						1.6 (H)			
680(68Q)				1.25 (F)	*1.25 (F)	2.0 (I)			
820(82Q)						2.5 (J)			
1000(10Q)									
1200(12Q)				1.6 (H)	*1.6 (H)				
1500(15Q)				2.5 (J)					
2200(22Q)									
2700(27Q)									
3300(33Q)		1.25 (F)	*1.25 (F)						
3900(39Q)		1.6 (H)	*1.6 (H)						
4700(47Q)	1.25 (F)	2.0 (I)	*2.0 (I)		*2.5 (J)				
5600(56Q)									
6800(68Q)									
8200(82Q)	1.6 (H)								
10000(10Q)	2.0 (I)	2.5 (J)	*2.5 (J)						
12000(12Q)									
15000(15Q)									
18000(18Q)	2.5 (J)								
27000(27Q)									
56000(56Q)									

* : Possible to accept an order for 250/630 voltage parts, but in case of the maximum Capacitance part among them, consult with a person in charge of product development before you order.

■ CAPACITANCE TABLE (High Voltage Capacitors)

Size	1812(43)								2220(55)						
TC	COG(C)														
Rated V	100(C)	200(D)	250(E)	500(G)	630(H)	1000(I)	2000(J)	3000(K)	100(C)	200(D)	250(E)	500(G)	630(H)	1000(I)	3000(K)
Capacitance -pF- (part numbering code) and T Dimension -mm-															
47(470)															
82(820)							1.25 (F)								
100(101)															
120(121)															
150(151)							1.6 (H)								
180(181)															
220(221)							2.0 (I)	2.0 (I)							
270(271)															
390(391)								2.5 (J)							
470(471)															
680(681)							1.25 (F)								
820(821)															
1000(102)															
1200(122)															
1500(152)															
1800(182)															
2200(222)															
2700(272)															
3300(332)															
4700(472)															
5600(562)															
6800(682)															
8200(822)															
10000(103)															
)															
12000(123)															
)															
15000(153)															
)															
18000(183)															
)															
22000(223)															
)															

* : Possible to accept an order for 250/630 voltage parts, but in case of the maximum Capacitance part among them, consult with a person in charge of product development before you order.

■ CAPACITANCE TABLE (High Voltage Capacitors)

Size	0603(10)	0805(21)				1206(31)					
TC	X7R(B)										
Rated V	100(C)	100(C)	200(D)	250(E)	100(C)	200(D)	250(E)	500(G)	630(H)	1000(I)	2000(J)
Capacitance -pF- (part numbering code) and T Dimension -mm-											
220(221)											
330(331)											
470(471)											
680(681)											
1000(102)											1.6 (H)
1500(152)		0.65 (A)	0.85 (C)	0.85 (C)						1.25 (F)	
2200(222)								1.25 (F)			
3300(332)	0.80 (8)					0.85 (C)			1.25 (F)		
4700(472)											
6800(682)				1.25 (F)	0.85 (C)						
10000(103)		0.85 (C)									
15000(153)											
22000(223)							1.25 (F)	1.6 (H)	1.6 (H)		
33000(333)		1.25 (F)				1.25 (F)					
47000(473)	393						1.6 (H)				
68000(683)					1.25 (F)	1.6 (H)					
100000(104)											
)					1.6 (H)						

Size	1210(32)						1808(42)
TC	X7R(B)						
Rated V	100(C)	250(E)	500(G)	630(H)	1000(I)	2000(J)	2000(J)
Capacitance -nF- (part numbering code) and T Dimension -mm-							
470(471)							
1000(102)						1.25 (F)	1.25 (F)
2200(222)							
3300(332)					1.25 (F)		
6800(682)							
10000(103)					1.6 (H)		
15000(153)			1.25 (F)				
22000(223)	1.25 (F)						
33000(333)							
47000(473)			1.6 (H)				
68000(683)		2.0 (I)		2.5 (J)			
100000(104)							
150000(154)		2.5 (J)					
220000(224)	1.6 (H)						
330000(334)							
470000(474)	2.0 (I)						
680000(684)	2.5 (J)						
1000000(105)							

*() Tip & Ring : A special CODE will be applicable.