Part Numbering System

CL	10	A	106	M	P	8	N	N	N	C
1	2	3	4	5	6	7	8	9	10	11

1. SERIES CODE

CL=Multi layer Ceramic Capacitors

2. SIZE CODE — inch(㎜)

02=01005(0402)	21=0805(2012)	43=1812(4532)
03=0201(0603)	31=1206(3216)	55=2220(5750)
05=0402(1005)	32=1210(3225)	
10=0603(1608)	42=1808(4520)	

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3. DIELECTRIC CODE

Class Ⅰ	Class Ⅱ
C=C0G	A=X5R F=Y5V B=X7R X=X6S Y=X7S Z=X7T

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4. CAPACITANCE CODE

Capacitance expressed in pF. 2 significant digits plus number of zeros.
example) 106=10×10^6=10000000pF
For Values < 10pF, Letter R denotes decimal point
example) 1R5=1.5pF

5. TOLERANCE CODE

B=±0.1pF	F=±1pF, ±1%*	K=±10%
C=±0.25pF	G=±2%	M=±20%
D=±0.5pF	J=±5%	Z=+80/-20%

*For Values ≤ 10pF, F=±1pF
Values > 10pF, F=±1%

6. RATED VOLTAGE CODE

R=4V	O=16V	B=50V	E=250V	H=630V	K=3000V
Q=6.3V	A=25V	C=100V	F=350V	I=1000V	
P=10V	L=35V	D=200V	G=500V	J=2000V	

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7. THICKNESS CODE

3=0.30㎜	A=0.65㎜	F=1.25㎜	L=3.20㎜	S=1.35㎜
5=0.50㎜	C=0.85㎜	H=1.60㎜	M=1.15㎜	U=1.80㎜
8=0.80㎜	D=1.00㎜	I=2.00㎜	P=1.15㎜	V=2.50㎜
9=0.90㎜	E=1.10㎜	J=2.50㎜	Q=1.25㎜	Y=1.25㎜

8. INNER ELECTRODE / TERMINATION / PLATING CODE

A= Normal Product Pd / Ag / Ni barrier / Sn 100%
N= Normal Product Ni / Cu / Ni barrier / Sn 100%
G= Normal Product Cu / Cu / Ni barrier / Sn 100%
L= Low profile Ni / Cu / Ni barrier / Sn 100%
S=Nomal Product Ni/Cu/Soft termination /Ni barrier /Sn100%

9. PRODUCT CODE

N= Normal
A= Array(2-element)
B= Array(4-element)
L= LICC
J= SLIC

*Size tolerance

Code \ Size	01005(0402)	0201(0603)	0402(1005)	0603(1608)	0805(2012)	1206(3216)
S	±0.03	±0.05	±0.07	±0.07		±0.30
Q	±0.05	±0.07	±0.10	±0.15	±0.15	
R	±0.07	±0.09	±0.15	±0.20	±0.20	
U	±0.09		±0.20	±0.25	±0.30	
Z			±0.40	±0.30		
9			±0.30			

10. CONTROL CODE

N= Reserved for future use

11. PACKAGING CODE

B= Bulk	O= Cardboard Tape, 10"Reel	E= Embossed Type, 7"Reel
P= Bulk Case	D= Cardboard Tape, 13"Reel(10,000ea)	G= Embossed Type, 7"Reel(3,000ea)
C= Cardboard Tape, 7"Reel	L= Cardboard Tape, 13"Reel(15,000ea)	F= Embossed Type, 13"Reel
		S= Embossed Type, 10"Reel

* Note : This catalog has only typical specifications because there is no space for detailed specifications.
Please approve our product specifications or transact the approval sheet for product specifications before ordering.

Class Ⅰ (Temperature Compensation)

Symbol	EIA Code	Operation Temperature Range(℃)	Temperature Coefficient Range(ppm/℃)
C	C0G	-55 ~ +125	0 ±30

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Class Ⅱ (High Dielectric Constant)

Symbol	EIA Code	Operation Temperature Range(℃)	Capacitance Change(△C %)
A	X5R	-55 ~ + 85	±15
B	X7R	-55 ~ +125	±15
X	X6S	-55 ~ +105	±22
F	Y5V	-30 ~ + 85	-82 ~ +22
Y	X7S	-55 ~ +125	±22
Z	X7T	-55 ~ +125	-33 ~ +22

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Series	TC	Capacitance Step											
E-3	Y5V	1.0				2.2				4.7			
E-6	X5R X7R X6S X7S X7T	1.0		1.5		2.2		3.3		4.7		6.8	
E-12	C0G	1.0	1.2	1.5	1.8	2.2	2.7	3.3	3.9	4.7	5.6	6.8	8.2

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Size	Code	Thickness(mm)	Spec(mm)	Size	Code	Thickness(mm)	Spec(mm)
01005(0402)	2	0.20	±0.02	1210(3225)	C	0.85	±0.10*
0201(0603)	3	0.30	±0.03		9	0.90	±0.10*
0402(1005)	3	0.30	±0.03*		F	1.25	±0.20
	5	0.50	±0.05		S	1.35	±0.15
0603(1608)	5	0.50	+0.0/-0.1*		H	1.60	±0.20
	8	0.80	±0.10		U	1.80	±0.20*
0805(2012)	A	0.65	±0.10		I	2.00	±0.20
	C	0.85	±0.10		J	2.50	±0.20
	C	0.85	±0.10*		V	2.50	±0.30
	M	1.15	±0.10	1808(4520)	F	1.25	±0.20
	F	1.25	±0.10		H	1.60	±0.20
	Q	1.25	±0.15		I	2.00	±0.20
	Y	1.25	±0.20	1812(4532)	F	1.25	±0.20
1206(3216)	C	0.85	±0.15		H	1.60	±0.20
	C	0.85	±0.10*		I	2.00	±0.20
	E	1.10	±0.15		J	2.50	±0.20
	E	1.10	±0.10*		L	3.20	±0.30
	P	1.15	±0.10*	2220(5750)	H	1.60	±0.20
	M	1.15	±0.15		I	2.00	±0.20
	F	1.25	±0.15		J	2.50	±0.20
	H	1.60	±0.20		L	3.00	±0.30

■ * Mark is only applicable to "L" code , 12th code in part number.
■ Please discuss with sales person with regard to Pd products.

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