

Ceramic Type

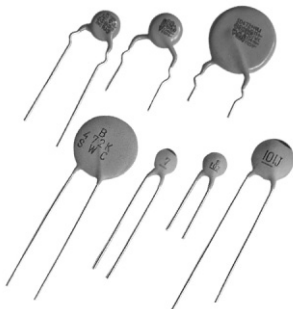
Introduction

SAMWHA disc ceramic capacitors are designed and produced to offer the user capacitors with high reliability and small size. With wide selection of temperature characteristics and voltage ratings, the user can make use for in various circuit application.

How to Order

CC C 1H 120 J 04 F K 5

1 2 3 4 5 6 7 8 9



1 Style & Class

Mark	Product Name	Mark	Product Name
CC, EC	Temperature Compensating Type	SD	AC250/400V(Testing Voltage : AC4000V)
CK, EK	High Dielectric Type	SC	AC250(Testing Voltage : AC2500V)
CG	Semiconductive Type		

2 Temp. Char.

CE, EC Type (PPM/°C)				CK, EK, CG, SC, SD Type	
C	NPO(0)	T	N470(−470)	B	Y5P(+10~ −10%)
L	N80(−80)	U	N750(−750)	R	Y5R(+15~ −15%)
P	N150(−150)	O	SL(+350~ −1000)	E	Y5U(+22~ −56%)
R	N220(−220)			F	Y5V(+22~ −82%)
S	N330(−330)			Fz	Z4V(+22~ −82%)

3 Rating Voltage

1A	10V	1B	12.5V	1C	16V	1E	25V					1H	50V		
2A	100V	2B	125V			2E	250V			2G	400V	2H	500V		
3A	1KV	3B	1.25KV	3D	2KV			3F	3.15KV	3G	4KV	3H	5KV	3J	6.3KV
4A	10KV	4B	12.5KV	4C	16KV										

4 Capacitance

(in picofarads) The first two digits indicate significant digits. The 3rd digit indicate the number of zero following. R denotes decimal.
Ex.)0.5pF-OR5, 10pF-100, 100pF-101

5 Cap. Tolerance

Mark	Cap. Tolerance	Mark	Cap. Tolerance	Mark	Cap. Tolerance
C	±0.25pF	J	±5%	P	+100%−0%
D	±0.5pF	K	±10%	Z	+80%−20%
F	±1.0pF	M	±20%		

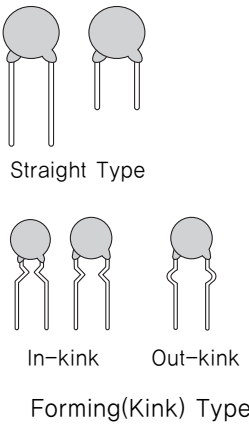
6 Disc Diameter

Code	Dia (Ømm)	Code	Dia (Ømm)	Code	Dia (Ømm)	Code	Dia (Ømm)	Code	Dia (Ømm)
04	4.0	08	8.0	11	11.0	15	15.0	20	20.0
05	5.0	09	9.0	12	12.5	16	16.0		
06	6.3	10	10.0	14	14.0	18	18.0		

7 Packing Style

8 Lead Variation

Packing Style		Lead Variation	
F	Taping Type Flat Pack	S	Straight Type
		K	In - Kink Type
		F	Out - Kink Type
B	Bulk	S	Straight Long Type
		W	Kink Short Type
		K	Kink Long Type
		L	Kink Short Type
		N	Straight Short Type



9 Lead Spacing & Pitch of Component

Taping Type			Bulk Type	
Code	Lead Spacing (mm)	Pitch of Component (mm)	Code	Lead Spacing (mm)
5	5.0	12.7	2	2.5
7	7.5	15.0	5	5.0
8	7.5	30.0	7	7.5
9	7.5	25.4	1	10.0
1	10.0	25.4		
2	10.0	30.0		

CLASS | Temperature Compensating Ceramic Capacitors

Specification

Temp . Range : -25 ~ +85℃(Y class)
Capacitance : Measured at 1MHz, 1 Vrms and 20℃±2℃

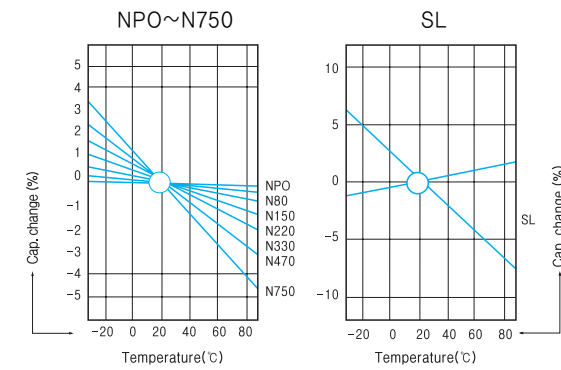
Testing Voltage

R.V	T.V
50V DC	150V DC
500V DC	1,250V DC
1~2KV DC	R.V × 2

Color Code

TC.	Color	TC.	Color	TC.	Color
NPO(C)	Black	N 80(L)	Red	N150(P)	Orange
N220(R)	Yellow	N330(S)	Green	N470(T)	Blue
N750(U)	Purple	SL	Omitted		

Temp. Coefficient



SAMWHA Standard (Cap. and Cap. Tol)

T.C	Cap.Tol	T.C	Cap.Tol	T.C	Cap.Tol	T.C	Cap.Tol
Cap. (pF)	C~U, SL	Cap. (pF)	C~U, SL	Cap. (pF)	C~U, SL	Cap. (pF)	C~U, SL
0.5	C, D	9	D, F	22	J, K	51	J
1	C, D	10	D, F	24	J	56	J, K
2	C, D	11	J	27	J, K	62	J
3	C, D	12	J, K	30	J	68	J, K
4	C, D	13	J	33	J, K	75	J
5	C, D	15	J, K	36	J	82	J, K
6	D, F	16	J	39	J, K	91	J
7	D, F	18	J, K	43	J	100	J, K
8	D, F	20	J	47	J, K	110	J

Quality Factor(Q)

Capacitance	Q value
30pF and over	≥1000
less then 30pF	≥400+(20XC)

Insulation Resistance : 10,000MΩ Min. at Rating voltage for 1 minute(500V and above : 500V)

Temp. Coefficient Tolerance

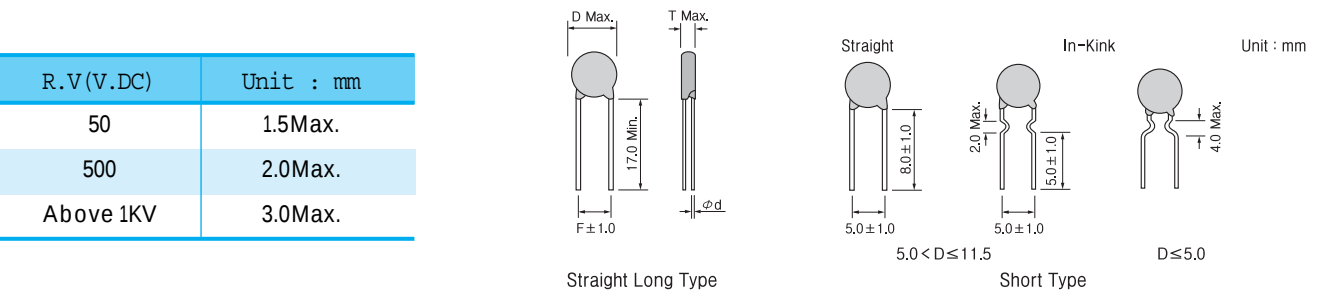
Code	Tol. (PPM/℃)	Code	Tol. (PPM/℃)
G	±30	L	±500
H	±60	M	±1000
J	±120	N	±2500
K	±250		

Combination of the Capacitance Value and the TC.

Cap	TC. PPM/℃						
	NPO	N80	N150	N220	N330	N470	N750
Less then 2pF	CK	LK	PK	RK	SK	TK	UK
3pF	CJ	LJ	PJ	RJ	SJ	TJ	UJ
4pF and above	CH	LH	PH	RH	SH	TH	UJ

T.C	Cap.Tol	T.C	Cap.Tol	T.C	Cap.Tol	T.C	Cap.Tol
Cap. (pF)	C~U, SL	Cap. (pF)	C~U, SL	Cap. (pF)	C~U, SL	Cap. (pF)	C~U, SL
120	J, K	200	J	330	J, K	510	J
130	J	220	J, K	360	J	560	J, K
150	J, K	240	J	390	J, K	620	J
160	J	270	J, K	430	J	680	J, K
180	J, K	300	J	470	J, K	820	J

Lead Variation (Bulk Type)



Capacitance Value According to Type (pF)

T.C	Capacitance (pF)								Dimensions (mm)				Part No. (How to order)	Marking
	N P O (C)	N 8 0 (L)	N 1 5 0 (P)	N 2 2 0 (R)	N 3 3 0 (S)	N 4 7 0 (T)	N 7 5 0 (U)	P 3 5 0 ~ N 1 0 0 0 (SL)	D	T	F	Ød		
50V DC	0.5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36	0.5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36, 39, 43, 47, 51, 56, 62, 68, 75, 82, 91	4.0	3.5	5.0 (2.5)	0.50	CC * 1H *** 04 **	10 D≤5.0
	33, 36, 39, 43, 47	20, 22, 24, 27, 30	22, 24, 27, 30	27, 30, 33, 36	22, 24, 27, 30, 33, 36, 39	27, 30, 33, 36, 39	39, 43, 47	100, 110, 120	5.0	3.5	5.0 (2.5)	0.50	CC * 1H *** 05 **	82J 6.3≤D≤9.0
	51, 56, 62, 68, 75	33, 36, 39, 43, 47	33, 36, 39, 43, 47	39, 43, 47, 51, 56, 62, 68	43, 47, 51, 56, 62	43, 47, 51, 56	51, 56, 62, 68, 75, 82, 91	150, 180, 200, 220, 240	6.3	3.5	5.0	0.50	CC * 1H *** 06 **	221J SWC D≥10.0
	82, 91, 100, 110, 120, 130, 150	51, 56, 62, 68, 75, 82	51, 56, 62, 68, 75, 82	75, 82, 91, 100, 110, 120	68, 75, 82, 91, 100	62, 68, 75, 82, 91, 100, 110, 120	100, 110, 120, 150, 180, 200	270, 300, 330, 360, 390, 430, 470	8.0	3.5	5.0	0.50	CC * 1H *** 08 **	
	160, 180, 200, 220, 240	91, 100, 110, 120	91, 100, 110, 120	130, 150, 180, 200	110, 120, 150, 180	150, 180, 200		510, 560, 620, 680, 820	10.0	3.5	5.0	0.50	CC * 2H *** 10 **	
500V DC	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24			2, 3, 4, 5, 6, 12, 13, 15			2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36, 39, 43, 47, 51, 56, 62, 68	5.0	4.0	5.0	0.50	CC * 2H *** 05 **	10 D≥5.0
	27, 30, 33, 36, 39, 43	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30	7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36, 39, 43	11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36, 39, 43, 47, 51, 56, 62, 68	27, 30, 33, 36, 39, 43, 47, 51, 56, 62, 68, 75, 82, 91, 100, 110, 120	6.3	4.0	5.0	0.50	CC * 2H *** 05 **	47J 6.3≤D≤9.0
	47, 51, 56, 62, 68, 75, 82	22, 24, 27, 30, 33, 36	33, 36, 39, 43, 47	36, 39, 43, 47, 51, 56	39, 43, 47, 51, 56	47, 51, 56, 62	75, 82, 91, 100	130, 150, 160, 180, 200, 220	8.0	4.0	5.0	0.50	CC * 2H *** 08 **	101J SWC D≥10.0
	91, 100, 110, 120, 130	39, 43, 47, 51, 56, 62	51, 56, 62, 68, 75	62, 68, 75, 82, 91, 100	62, 68, 75, 82, 91	68, 75, 82, 91, 100, 110	110, 120, 150, 180	240, 270, 300, 330, 360, 430, 390, 470, 510, 560	10.0	4.0	5.0	0.50	CC * 2H *** 10 *	
	150, 160, 180, 200	68, 75, 82, 91, 100	82, 91, 100, 110, 120	100, 120, 150	100, 110, 120, 150	120, 150, 180	200, 220, 240, 270, 300		12.5	4.0	5.0	0.50	CC * 2H *** 12 *	

CLASS II High Dielectric Constant Ceramic Capacitors

Specification

Temp. Range : -25 ~ +85℃(Y class), -10 ~ +65℃ (Fz)
Capacitance : Measured at 1KHz, 1 Vrms and 20 °C ±2℃

Testing Voltage

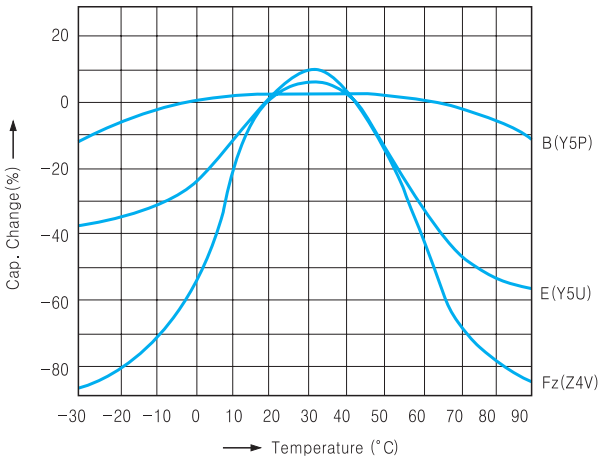
R.V	50V DC	500V DC	1~2KV DC	3KV DC	4~KV DC
T.V	R.V×3	R.V×2.5	R.V×2	R.V×1.75	R.V×1.5

Insulation Resistance : 10,000MΩ or 200MΩ · μF Whichever less at Rating Voltage for 1minute

Dissipation Factor(tanδ)

T.C	B	E	Fz
tanδ	2.5% Max.	2.5% Max.	5.0% Max.

Temp. Char.



Capacitance Value According to Type (pF)

T.C	Capacitance (pF)			Dimensions (mm)				Part No.	Marking
R.V	Y5P (B)	Y5U (E)	Z4V (Fz)	D	T	F	Ød	(How to order)	
50V DC	150, 180, 220, 270, 330, 390, 470, 560, 680	-	2200, 3300	4.0	3.5	5.0(2.5)	0.50	CK*1H***04**	B101 B222K D≤5.06.3≤D≤9.0 B103KSWC D≥10.0
	100, 120, 820, 1000, 1200, 1500	-	1000, 15000, 4700	5.0	3.5	5.0(2.5)	0.50	CK*1H***05**	
	1800, 2200	-	5600, 10000	6.3	3.5	5.0	0.50	CK*1H***06**	
	2700, 3300, 3900, 4700, 5600	-	15000, 22000, 27000	8.0	3.5	5.0	0.50	CK*1H***08**	
	6800, 8200	-	3300, 40000	10.0	3.5	5.0	0.50	CK*1H***10**	
	10000	-	47000	12.0	3.5	5.0	0.50	CK*1H***12**	
500V DC	120, 150, 180, 220, 270, 330, 390, 470, 560, 680	-	2200	5.0	4.0	5.0	0.50	CK*2H***05**	B221 B222K D≤5.06.3≤D≤9.0 B472KSWC D≥10.0
	100, 820, 1000, 1200, 1500	1000	1000, 4700	6.3	4.0	5.0	0.50	CK*2H***06**	
	1800, 2200	2200	10000	8.0	4.0	5.0	0.50	CK*2H***08**	
	2700, 3900	4700	-	10.0	4.0	5.0	0.50	CK*2H***10**	
	4700, 5600, 6800	6800	20000, 22000	12.5	4.0	5.0	0.50	CK*2H***12**	
	8200, 10000	10000	-	16.0	4.0	10.0	0.60	CK*2H***16**	

DC High Voltage Ceramic Capacitors

High Voltage Ceramic Capacitors (Epoxy Coated Ceramic Capacitors)

T.C	Capacitance (pF)			Dimensions (mm)				Part No.	Marking
R.V	Y5P (B)	Y5U (E)	Z4V (Fz)	D	T	F	Ød	(How to order)	
500V DC	10000			16.0	4.0	10.0	0.60	EK△2H△△△16△△	
1KV DC	100, 120, 150, 180, 220, 270, 330, 390, 470, 560, 680	1000	1000, 2200	6.3	5.0	5.0	0.50	EK△3A△△△06△△	B471K1KV 6.3≤D≤9.0
	820, 1000, 1200, 1500		4700	8.0	5.0	5.0	0.50	EK△3A△△△08△△	
	1800, 2200	2200	10000	10.0	5.0	5.0(7.5)	0.50(0.60)	EK△3A△△△10△△	B222K1KVSWC D≥10.0
	2700, 3300	4700		12.5	5.0	5.0(7.5)	0.50(0.60)	EK△3A△△△12△△	
	3900, 4700			14.0	5.0	7.5(10.0)	0.60	EK△3A△△△14△△	
	5600, 6800		22000	16.0	5.0	7.5(10.0)	0.60	EK△3A△△△16△△	
	8200, 10000	10000		18.0	5.0	7.5(10.0)	0.60	EK△3A△△△18△△	
2KV DC	100, 120, 150, 180, 220, 270, 330, 390, 470, 560		1000, 2200	6.3	5.0	5.0(7.5)	0.50(0.60)	EK△3D△△△06△△	B101K2KV 6.3≤D≤9.0
	680, 820, 1000	1000		8.0	5.0	7.5(5.0)	0.60(0.50)	EK△3D△△△08△△	
	1200, 1500		4700	10.0	5.0	10.0(7.5)	0.60	EK△3D△△△10△△	B272K2KVSWC D≥10.0
	1800, 2200, 2700	2200	6800, 10000	12.5	5.0	10.0(7.5)	0.60	EK△3D△△△12△△	
	3300, 3900	4700		14.0	5.0	10.0(7.5)	0.60	EK△3D△△△14△△	
	4700	6800, 10000		16.0	5.0	10.0(7.5)	0.60	EK△3D△△△16△△	
	5600			18.0	5.0	10.0(7.5)	0.60	EK△3D△△△18△△	
	6800, 8200, 10000	10000		20.0	5.0	10.0(7.5)	0.60	EK△3D△△△20△△	
3.15KV DC		1000		7.0	6.0	7.5(10.0)	0.60	EK△3F△△△07△△	B471K3KV 6.3≤D≤9.0
	100, 120, 150, 180, 220, 270, 330, 390, 470, 560			8.0	6.0	7.5(10.0)	0.60	EK△3F△△△08△△	
	680	1500		9.0	6.0	7.5(10.0)	0.60	EK△3F△△△09△△	E472M3KVSWC D≥10.0
	820, 1000	2200	4700	10.0	6.0	7.5(10.0)	0.60	EK△3F△△△10△△	
			6800	11.0	6.0	7.5(10.0)	0.60	EK△3F△△△11△△	
	1200, 1500	3300		12.5	6.0	7.5(10.0)	0.60	EK△3F△△△12△△	
	1800, 2200	4700	10000	14.0	6.0	7.5(10.0)	0.60	EK△3F△△△14△△	B471K6KV 6.3≤D≤9.0
	2700			16.0	6.0	7.5(10.0)	0.60	EK△3F△△△16△△	
6.3KV DC	3300			18.0	6.0	7.5(10.0)	0.60	EK△3F△△△18△△	E222M6KVSWC D≥10.0
	100, 120, 150, 180, 220, 330, 470	1000	1000	8.0	7.0	10.0	0.60	EK△3J△△△08△△	
		1500		9.0	7.0	10.0	0.60	EK△3J△△△09△△	
	1000	2200	2200, 4700	12.5	7.0	10.0	0.60	EK△3J△△△12△△	
		3300		14.0	7.0	10.0	0.60	EK△3J△△△14△△	B471K6KV 6.3≤D≤9.0
		3900, 4700		15.5	7.0	10.0	0.60	EK△3J△△△15△△	
			10000	20.0	7.0	10.0	0.60	EK△3J△△△20△△	
10KV DC	100, 120, 150, 180, 220			8.0	8.0	10.0	0.60	EK△4A△△△08△△	B471K6KV 6.3≤D≤9.0
	270		1000	10.0	8.0	10.0	0.60	EK△4A△△△10△△	
	330, 390, 470	1000	2200	12.5	8.0	10.0	0.60	EK△4A△△△12△△	
	560, 680, 820, 1000	2200	4700	16.0	8.0	10.0	0.60	EK△4A△△△16△△	

CLASS III Semi-Conductor Capacitors

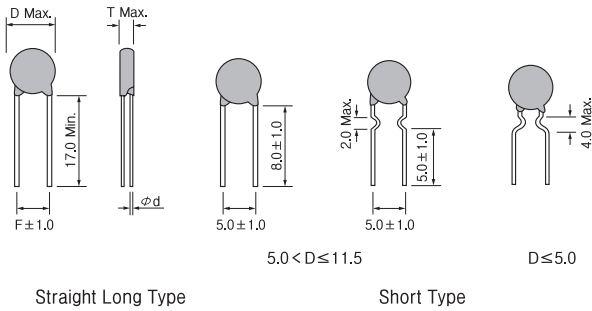
Specification

Temp. Range : -25 ~ +85℃(Y class)
Capacitance : Measured at 1KHz, 0.1 Vrms and 25℃±2℃

Testing Voltage

Rating Voltage	25V DC	50V DC
Testing Voltage	R.V×1.5	R.V×1.5

Lead Variation



Capacitance Value According to Type (pF)

R.V	T.C	Capacitance (pF)			Dimensions (mm)				Part No. (How to order)	Marking
		Y5P (B)	Y5U (E)	Y5V (F)	D	T	F	Ød		
25V DC		10000	2200, 2700, 3300, 3900, 4700, 6800	10000	4.0	3.0	5.0(2.5)	0.5	CG * 1E **** 04 **	
			10000, 15000	22000	5.0	3.0	5.0(2.5)	0.5	CG * 1E **** 05 **	
		22000	22000, 27000, 33000	47000, 56000, 100000	6.3	3.0	5.0	0.5	CG * 1E **** 06 **	
		47000	47000		8.0	3.0	5.0	0.5	CG * 1E **** 08 **	
			56000, 68000	220000	10.0	3.0	5.0	0.5	CG * 1E **** 10 **	
			100000		12.5	3.0	5.0	0.5	CG * 1E **** 12 **	
50V DC				10000	4.0	3.0	5.0(2.5)	0.5	CG * 1H **** 04 **	
		10000		22000, 33000	5.0	3.0	5.0(2.5)	0.5	CG * 1H **** 05 **	
				47000, 56000	6.3	3.0	5.0	0.5	CG * 1H **** 06 **	
		22000		68000, 100000	8.0	3.0	5.0	0.5	CG * 1H **** 08 **	

Insulation Resistance

T.C	Y5P	Y5R	Y5V
I.R(MΩ)	5MΩ · μF Min.	1000MΩ · or 20MΩ · μF Whichever less	5MΩ · μF Min.

Dissipation Factor(tanδ)

T.C	Y5P	Y5R	Y5V
R.V	25V, 50V	25V	25V, 50V
Tanδ	5.0% Max.	1.5% Max.	5.0% Max.

Temperature Characteristics

T.C	Y5P	Y5R	Y5V
Change Rate	±10%	±15%	+22% -82%

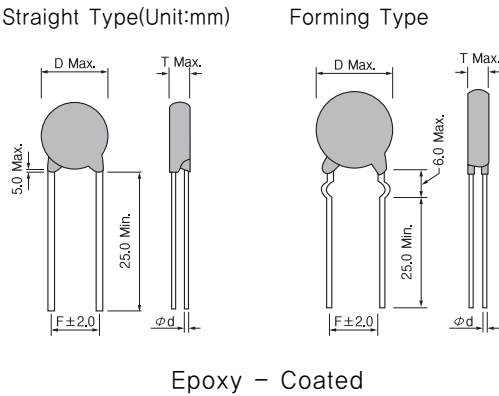
Low Loss Ceramic Capacitors(SL & R Series)

Specification

Temp. Range : -25 ~ +85℃
Capacitance : Measured at 1KHz, 0.1 Vrms and 20℃±2℃
Testing Voltage : R.V×2
Insulation Resistance : 10,000MΩ Min.
at 500V DC for 1 minute

Temperature Characteristics & Dissipation Factor

T.C	SL	R(Y5V)
Change Rate	-1000~350PPM	±15%
D.F	30pF and over : 1000Min. less then 30pF : 400+(20× C)Min.	0.2%Max.



R.V	Capacitance (pF)		Dimensions (mm)				Part No. (How to order)	Marking
	SL	R(Y5R)	D	T	F	Ød		
1KV DC	10, 11, 12, 15, 18, 20, 22, 24, 27, 30, 33, 39, 43, 47, 51	220, 270, 330, 390	6.3	5.0	5.0	0.50	EKΔ3AΔΔΔΔ06ΔΔ	
		470	7.0	5.0	5.0	0.50	EKΔ3AΔΔΔΔ07ΔΔ	
	56, 62, 68, 75, 82, 91, 100	560, 680	8.0	5.0	5.0	0.50	EKΔ3AΔΔΔΔ08ΔΔ	
		820, 1000	9.0	5.0	5.0(7.5)	0.50(0.60)	EKΔ3AΔΔΔΔ09ΔΔ	
	110, 120, 150	1200	10.0	5.0	5.0(7.5)	0.50(0.60)	EKΔ3AΔΔΔΔ10ΔΔ	
		1500	11.0	5.0	5.0(7.5)	0.50(0.60)	EKΔ3AΔΔΔΔ11ΔΔ	
	180, 200, 220, 240, 270		12.5	5.0	5.0(7.5)	0.50(0.60)	EKΔ3AΔΔΔΔ12ΔΔ	
	300, 330, 360	1800, 2200, 2700	14.0	5.0	10.0	0.60	EKΔ3AΔΔΔΔ14ΔΔ	
		3300	15.0	5.0	10.0	0.60	EKΔ3AΔΔΔΔ15ΔΔ	
	390, 430, 470, 510		16.0	5.0	10.0	0.60	EKΔ3AΔΔΔΔ16ΔΔ	
2KV DC		3900	17.0	5.0	10.0	0.60	EKΔ3AΔΔΔΔ17ΔΔ	
	560, 620	4700	18.0	5.0	10.0	0.60	EKΔ3AΔΔΔΔ18ΔΔ	
	18, 20, 22, 24, 27, 30, 33, 36, 39, 43, 47	120	6.3	5.0	5.0	0.50	EKΔ3DΔΔΔΔ06ΔΔ	
		220, 270	7.0	5.0	5.0	0.50	EKΔ3DΔΔΔΔ06ΔΔ	
	51, 56, 62, 68, 75, 82, 91, 100	330, 390	8.0	5.0	10.0	0.60	EKΔ3DΔΔΔΔ07ΔΔ	
		470, 560, 680	10.0	5.0	10.0	0.60	EKΔ3DΔΔΔΔ08ΔΔ	
		820, 1000	11.0	5.0	10.0	0.60	EKΔ3DΔΔΔΔ11ΔΔ	
	120, 150, 180, 200		12.5	5.0	10.0	0.60	EKΔ3DΔΔΔΔ12ΔΔ	
	220, 240	1200, 1500	14.0	5.0	10.0	0.60	EKΔ3DΔΔΔΔ14ΔΔ	
		1800, 2200	15.0	5.0	10.0	0.60	EKΔ3DΔΔΔΔ15ΔΔ	
3.15KV DC	270, 300, 330, 360		16.0	5.0	10.0	0.60	EKΔ3DΔΔΔΔ16ΔΔ	
		2700	17.0	5.0	10.0	0.60	EKΔ3DΔΔΔΔ17ΔΔ	
	390, 430, 470	3300	18.0	5.0	10.0	0.60	EKΔ3DΔΔΔΔ18ΔΔ	
	15, 16, 18, 20, 22, 27, 30		6.3	6.0	5.0	0.50	EKΔ3FΔΔΔΔ06ΔΔ	
		150, 180, 220, 270	7.0	6.0	5.0	0.50	EKΔ3FΔΔΔΔ07ΔΔ	
	33, 36, 39, 43, 47, 51, 56	330, 390	8.0	6.0	5.0	0.50	EKΔ3FΔΔΔΔ08ΔΔ	
	62, 68, 75, 82	470, 560, 680	10.0	6.0	10.0	0.60	EKΔ3FΔΔΔΔ10ΔΔ	
	91, 100, 110, 120, 150	820, 1000	12.5	6.0	10.0	0.60	EKΔ3FΔΔΔΔ12ΔΔ	
	180, 200	1200, 1500	14.0	6.0	10.0	0.60	EKΔ3FΔΔΔΔ14ΔΔ	
	220, 240	1800	16.0	6.0	10.0	0.60	EKΔ3FΔΔΔΔ16ΔΔ	
	270, 300, 330, 360	2200, 2700	18.0	6.0	10.0	0.60	EKΔ3FΔΔΔΔ18ΔΔ	
6.3KV DC	22, 24, 27, 30, 33, 36		8.0	7.0	10.0	0.60	EKΔ3JΔΔΔΔ08ΔΔ	
	43, 47	220, 270, 330	10.0	7.0	10.0	0.60	EKΔ3JΔΔΔΔ10ΔΔ	
	51, 56, 62, 68, 75	390, 470	12.5	7.0	10.0	0.60	EKΔ3JΔΔΔΔ12ΔΔ	
	120	560, 680	16.0	7.0	10.0	0.60	EKΔ3JΔΔΔΔ16ΔΔ	

Safety Standard Recognized Ceramic Capacitors

SC Type : Rating Voltage AC 250V, X1 and Y2 Testing Voltage AC 2500V

UL	File No. E97754, E154171, E151195
VDE	File No. 40001503, 40001516, 116012
SEMKO	File No. 0215162/01-04
FIMKO	File No. 219387, 18099
KTL	File No. SU03004-2001, 02-920-2641 File No. SU03004-2002, 02-920-2691
DENKO	File No. 311353-02
DSA	File No. 1513084, LR-78923-1 File No. 1577876, LR-60366-2
NEMKO	File No. P02100817
ISO 9001:2000	File No. ID03/0294

SD Type : Rating Voltage AC 250/400V, X1 and Y1 Testing Voltage AC 4000V

UL	File No. E97754, E154171, E151195
VDE	File No. 40001503, 40001516, 116012
SEMKO	File No. 0215162/01-04
FIMKO	File No. 219387, 18099
KTL	File No. SU03004-2001, 02-920-2641 File No. SU03004-2002, 02-920-2691
DENKO	File No. 311353-02
DSA	File No. 1513084, LR-78923-1 File No. 1577876, LR-60366-2
NEMKO	File No. P02100817
ISO 9001:2000	File No. ID03/0294

How to Order Product Identification

SC B 2E 101 K 08 FF 7

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- 1 Type
- 2 Temperature Characteristic
- 3 Voltage
- 4 Capacitance
- 5 Capacitance Tolerance
- 6 Disc Size
- 7 Packing and Lead Style
- 8 Lead Spacing & Pitch of Component

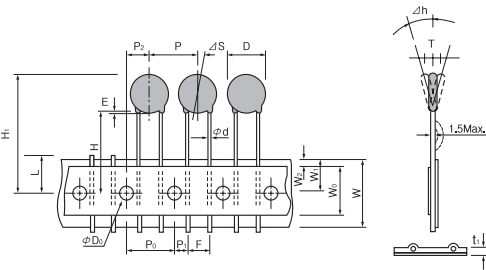
Specification

Type	Temp char.	Capacitance	Size				D ≤ 9.0		D ≥ 10.0
		(pF)	D	T	F	Ød	Front	Rear	
SC	B	100, 150, 220, 330, 390, 470, 560	8.0	6.0	7.5 (10.0)	0.60	SC 101K SP SWC 250~		SC 472M ND(S)F 250~SWC J
		680, 820	10.0						
		1000	10.0						
	E	1000	7.0						
		1500	9.0						
		1800, 2200	10.0						
		3300, 3900	12.0						
		4700	14.0						
	Fz	4700	10.0						
		6800	14.0						
	B	10000	14.0						
		100, 150, 220, 390, 470	8.0						
SD	E	1000	8.0	7.0	10.0	0.60	SC 101K SP SWC 250~		SD 472M ND(S)F 250~SWC J
		1500	9.0						
		2200	12.0						
		3300, 3900	14.0						
		4700	15.0						
		4700	15.0						

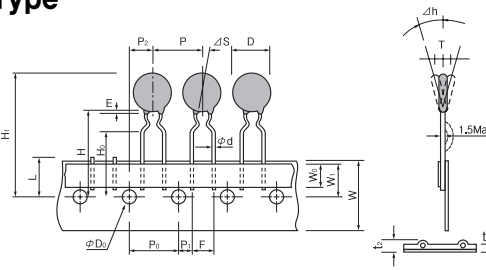
Safety Standard Recognized Ceramic Capacitors

Design

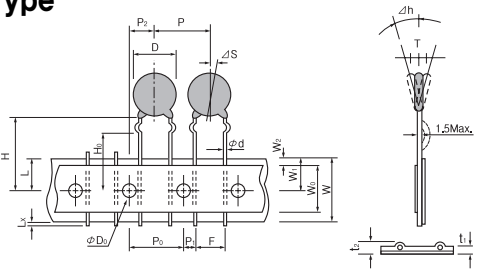
FS5 Type



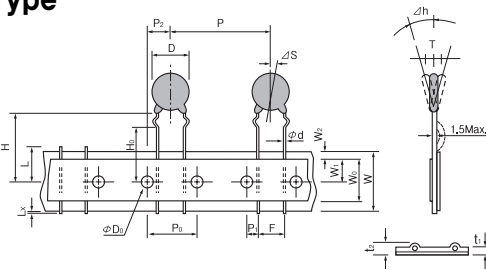
FK5 Type



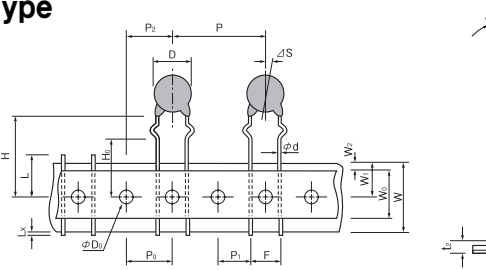
FF7 Type



FF8 Type



FF1 Type



Item	Code	Taping Specification	
		FS5 or FK5	FF1
Body Diameter	D	12.5Max.	6.3≤D≤20.0
Body Thickness	T	6.0Max.	7.0Max.
Lead Diameter	Ød	0.5/0.50±0.05	0.6-0.8±0.05
Pitch of sprocket Hole	P ₀	12.7±0.3	12.7±0.3
Pitch of Component	P	12.7±1.0	25.4±1.0
Lead Length from Hole Center Lead	P ₁	3.85±0.7	7.7±1.0
Lead Length from Hole Center to Component Center	P ₂	6.35±1.3	12.7±1.5
Lead Spacing	F	5.0 ^{+0.8} _{-0.2}	10.0±1.0
Deviation Along Tape. Left or Right	ΔS	0±1.0	0±1.0
Deviation Across Tape	Δh	0±2.0	0±2.0
Carrier Tape Width	W	18.0 ^{+1.0} _{-0.5}	18.0 ^{+1.0} _{-0.5}
Hold Down Tape Width	W ₀	5.0Min.	9.0Min.
Position of Sprocket Hole	W ₁	9.0±0.5	9.0±0.5
Hold Down Tape Position	W ₂	3.0Max.	3.0Max.
Height of Component From Hole Center	H	18.0 ^{+1.0} _{-0.5} 20.0 ^{+1.0} _{-0.5}	20.0 ^{+1.5} _{-1.0}
Lead Wire Clinch Height	H ₀	16.0±0.5	16.0±0.5
Component Height	H _i	32.25Max.	
Length of Snipped Lead	L	11.0Max.	11.0Max.
Diameter of Sprocket Hole	ØD ₀	4.0±0.2	4.0±0.2
Total Tape Thickness	t _i	0.7±0.2	0.7±0.2
Total Thickness. Tape and Lead Wire	t ₂	15Max.	1.7Max.
Lead Wire Protrtsion	Lx	1.0Max.	1.0Max.

Item	Code	Taping Specification	
		FF7	FF8
Body Diameter	D	6.3≤D≤14.0	15.0≤D≤20.0
Body Thickness	T	6.0Max.	
Lead Diameter	Ød	0.6-0.8±0.05	
Pitch of sprocket Hole	P ₀	15.0±0.3	
Pitch of Component	P	15.0±1.0	30.0±1.0
Lead Length from Hole Center Lead	P ₁	3.75±1.0	
Lead Length from Hole Center to Component Center	P ₂	7.5±1.5	
Lead Spacing	F	7.5±1.0	
Deviation Along Tape	ΔS	0±1.0	
Deviation Across Tape	Δh	0±2.0	
Carrier Tape Width	W	18.0 ^{+1.0} _{-0.5}	
Hold Down Tape Width	W ₀	5.0Min.	
Position of Sprocket Hole	W ₁	9.0±0.5	
Hold Down Tape Position	W ₂	3.0Max.	
Lead Wire Clinch Height	H ₀	16.0±0.5	
Heighr of Component Height	H	20.0 ^{+1.5} _{-1.0}	
Diameter of Sprocket Hole	ØD ₀	4.0±0.2	
Length of Snipped Lead	L	11.0Max.	
Total Tape Thickness	t	0.7±0.2	
Lead Wire Protrtsion	Lx	1.0Max.	