寶華精密電子有限公司
PRODUCTWELL PRECISION ELECT.CO.,LTD

Disc Ceramic Capacitor Part Number System

A	B	104	Z	1H	5	1	L	D	7025	G	XX
Package	Temp Char	Capacitance	Tolernace	Rated Voltage	Pitch	Lead Length	Foot Size	Coating	Size	without Pb.	Internal Code
A=T/B	C=NPO	$0R5=5\times10^{-1}=0.5PF$	J=±5%	1H=50V	2=2.5mm	1=25mm	L=Straigh lead	E=Epoxy			
T=T/R	U=N750	$1R0=10\times10^{-1}=1PF$	K=±10%	2A=100V	5=5.0mm	2=2.5mm	I =Inside kink	D=Durez			
B=Bulk	S=SL	$150=15\times10^{0}=15PF$	M=±20%	2H=500V	6=6.35mm	5=5.0mm	X=Strap				
	B=Y5E/Y5P	$101=10\times10^{1}=100PF$	Z=+80-20%	3A=1KV	7=7.5mm	7=7.0mm					
	E=Y5U/Z5U	$332=33\times10^{2}=3300PF$	N=±30%	3D=2KV	9=9.5mm	9=9.0mm					
	F=Y5V/Z5V	$473=47\times10^{3}=47000PF$		3E=2.5KV		0=10mm					
	X=X7R	$104=10\times10^{4}=0.1uF$		3F=3KV							
				3G=4KV							
				3H=5KV							
				3I=6KV							
				3K=8KV							
				4B=12.5KV							
				4C=15KV							
				4D=20KV							

寶華精密電子有限公司
PRODUCTWELL PRECISION ELECT.CO.,LTD

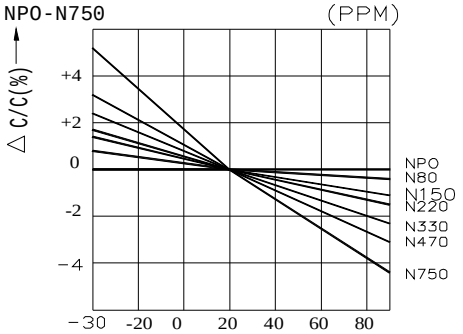
Type： CC

Temperature Compensating Ceramic Capacitors (Class I 50V~100V)

■ Electronic Characteristics

Operating Temperature Range	-25~+85℃
Capacitance	Within tolerance at 1MHZ and 25℃
Capacitance Tolernace	0.5 to 10 pF , above 10pF ：± 5% ± 10% above
Rated Voltage	50 , 100 , VDC
Test Voltage	2.5 times rated voltage for 1.5 sec
Insulation Resistance	10,000 MΩ min at WVDC. 60 sec

■ Temperature characteristics curves

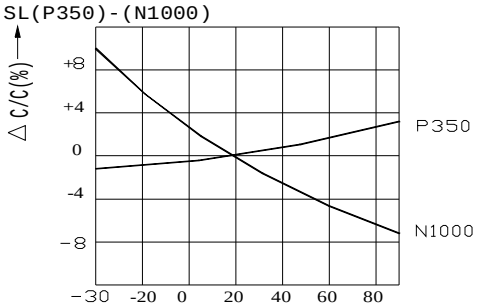


Temperature(℃)

Temperature Coefficient

Code	T . C.	PPM / ℃	EIA Code
CH	NPO	0 ± 60	COH
UJ	N750	-750 ± 120	U2J
SL	N330 ± 500	+350 ~ -1000	S2L

Q Factor	<30PF Q≧400 + 20C ≧30PF Q≧1000
Life Test	apply rated voltage at 85℃ for 500 hours



Temperature(℃)

■ Capacitance Size and Tolerance

T.C	Capacitance	Tolerance	Dmax	F
NPO	0.5 PF	C / D	5.5	2.5 / 5.0
	1~5 PF	C / D	5.5	2.5 / 5.0
	6~7 PF	D / F	5.5	2.5 / 5.0
	8~15 PF	D/F/J/K	6.0	5.0
	16~25 PF	J / K	7.0	5.0
	26~39 PF	J / K	7.0	5.0
	40~56 PF	J / K	7.5	5.0
	58~125 PF	J / K	7.5	5.0
	126~146 PF	J / K	8.0	5.0
	150~200 PF	J / K	9.2	5.0
N750	15~35 PF	J / K	5.5	2.5 / 5.0
	36~56 PF	J / K	5.5	2.5 / 5.0

T.C	Capacitance	Tolerance	Dmax	F
N750	56~86 PF	J / K	6.5	5.0
	87~125 PF	J / K	7.5	5.0
	126~180 PF	J / K	8.0	5.0
	181~220 PF	J / K	9.0	5.0
	221~226 PF	J / K	10.0	5.0
	228~330 PF	J / K	11.0	6.35
SL	35~100 PF	J / K	5.5	2.5 / 5.0
	101~150 PF	J / K	6.5	5.0
	151~250 PF	J / K	7.5	5.0
	251~375 PF	J / K	7.5	5.0
	376~560 PF	J / K	9.0	5.0

寶華精密電子有限公司
PRODUCTWELL PRECISION ELECT.CO.,LTD

Type： CC

High Permittivity Ceramic Capacitors (Class Ⅱ 50V~100V)

■ Electronic Characteristics

Operating Temperature Range

Code	Temp Range	Cap Chang	EIA Code
A	-25℃~+85℃	±4.7%	Y5E
B		±10%	Y5P
E	+10℃~+85℃	+22℃~-56℃	Z5U
F		+22℃~-82℃	Z5V

Capacitance	Within tolerance at 1KHZ and 25℃

Minimum Capacitance tolerance:

TEMP . CHAR .	MIN CAP TOL
Y5E	±10%
Y5P	±10%
Z5U	±20%
Z5V	+80-20%

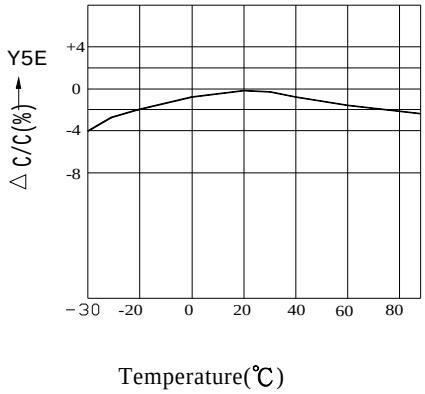
Rated Voltage	50 , 100 , VDC
Test Voltage	2.5 times rated voltage for 1.5 sec.
Insulation Resistance	10,000 MΩ min at WVDC.
Power Factor	2.5(Z5V 3%) max at 1KHZ and 25℃
Life Test	apply working voltage at 85℃ for 500 hours.

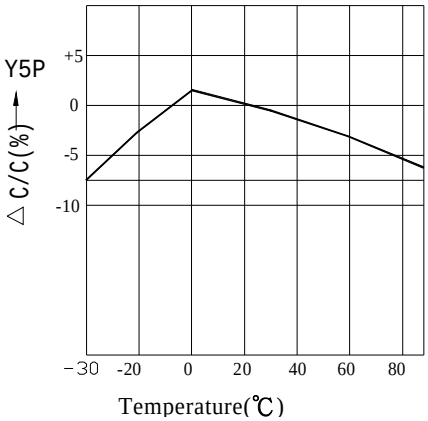
■ Capacitance Size and Tolerance

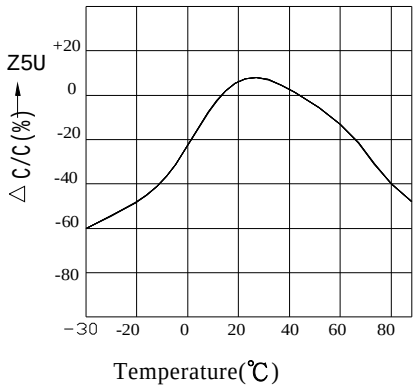
H-K Types	Capacitance (PF)		Tolerance	Dimensions (mm)	Feet Distance (mm)
Y5E	150 ~ 560	PF	K / M	5.0	2.5 / 5.0
	561 ~ 820	PF	K / M	6.0	5.0
Y5P	220 ~ 1000	PF	K / M	4.5	2.5 / 5.0
	1001 ~ 1200	PF	K / M	5.0	2.5 / 5.0
	1201 ~ 2700	PF	K / M	6.0	5.0
	2701 ~ 3000	PF	K / M	7.0	5.0
	3001 ~ 4700	PF	K / M	8.0	5.0
Z5U	1000 ~ 2200	PF	M / Z	4.5	2.5 / 5.0
	2201 ~ 5600	PF	M / Z	5.0	2.5 / 5.0
	5601 ~ 8200	PF	M / Z	6.0	5.0
	0.01	UF	M / Z	7.0	5.0
	0.015~0.022	UF	M / Z	10.0	5.0
	0.47	UF	M / Z	14.0	9.5
Z5V	1000 ~ 8200	UF	Z	5.0	2.5 / 5.0
	0.01	UF	Z	5.0	2.5 / 5.0
	0.015~0.022	UF	Z	6.0	5.0
	0.04	UF	Z	8.5	5.0
	0.047	UF	Z	9.0	5.0
	0.05	UF	Z	9.5	5.0
	0.1	UF	Z	13.0	6.3

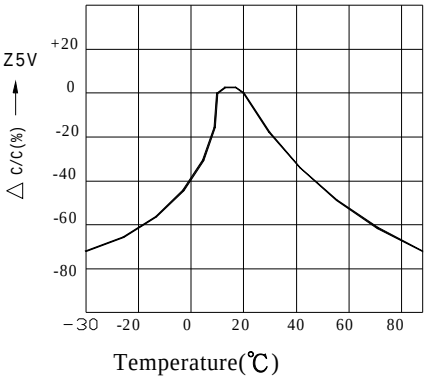
K ----------: ±10%
M ----------: ±20%
Z ----------: + 80 - 20 %

■ Temperature characteristics curves









寶華精密電子有限公司
PRODUCTWELL PRECISION ELECT.CO.,LTD

Type： CC

Semi - Conductive Ceramic Capacitors (Class Ⅲ 12V~50V)

■ Electronic Characteristics

Operating Temperature Range	-25~+85℃
Capacitance	Within tolerance at 1KHZ and 25 ℃, (lever 0.1 Vrms max)
Capacitance Tolernace	± 20%
Rated Voltage	12 , 16 , 25 , 35 , 50 , VDC
Test Voltage	2.5 times rated voltage for 1.5 sec

Insulation Resistance

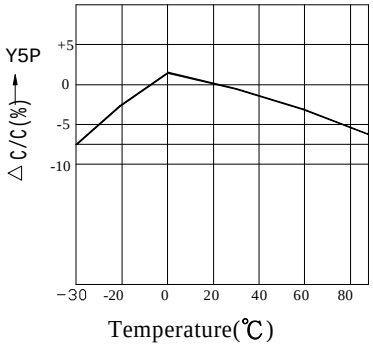
Cap / WV.	0.01	0.022 0.033	0.047 0.068	0.1	0.22	0.47
12-16	100	100	100	100	50	25
25-50	1000	1000	500	200	100	50

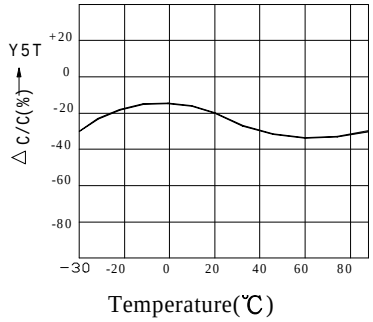
Temperature Characteristic

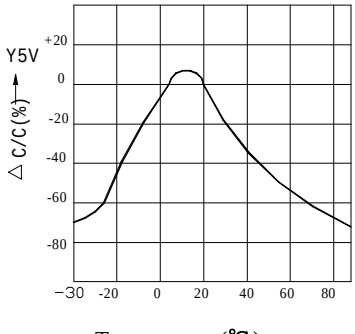
Code	Temp.Range	Cap. Change	EIA Code
B	-25℃	± 10%	Y5P
D	~	+22-33%	Y5T
F	+85℃	+22-82%	Y5V

Power Factor	7% max at 1KHZ
Life Test	Apply rated voltage at 85℃ for 500 hours

■ Temperature characteristics curves







■ Capacitance Size and Tolerance

		Capacitance		Tolerance	Dmax	F
12V ~ 16V	Y5P	0.01	PF	K / M	5.0	5.0 / 6.35
		0.022~0.033	PF	K / M	6.0	5.0 / 6.35
		0.047	PF	K / M	7.0	5.0 / 6.35
		0.1	PF	K / M	12.0	9.5
	Y5T	0.022	PF	M / Z	5.0	5.0 / 6.35
		0.047~0.1	PF	M / Z	6.0	5.0 / 6.35
		0.22	PF	M / Z	10.5	6.35
		0.33	PF	M / Z	12.0	9.5
		0.47	PF	M / Z	16.0	9.5
	Y5V	0.01~0.022	PF	Z	5.0	5.0 / 6.35
		0.047~0.1	PF	Z	6.0	5.0 / 6.35
		0.22	PF	Z	10.5	6.35
		0.47	PF	Z	13.0	9.5
25V ~ 35V	Y5P	0.01~0.015	PF	K / M	6.0	5.0 / 6.35
		0.022	PF	K / M	7.0	5.0 / 6.35
		0.033	PF	K / M	8.5	6.35
		0.047	PF	K / M	10.5	6.35
		0.1	PF	K / M	13.0	9.5
	Y5T	0.01	PF	M / Z	5.0	5.0 / 6.35
		0.022	PF	M / Z	6.0	5.0 / 6.35

		Capacitance		Tolerance	Dmax	F
25V ~ 35V	Y5T	0.033~0.047	PF	M / Z	8.5	6.35
		0.068~0.1	PF	M / Z	11.0	6.35
	Y5V	0.01~0.022	PF	M / Z	5.0	5.0 / 6.35
		0.047	PF	Z	6.0	5.0 / 6.35
		0.1	PF	Z	7.0	5.0 / 6.35
		0.22	PF	Z	10.5	6.35
		0.47	PF	Z	16.0	9.5
50V	Y5P	0.01	PF	K / M	6.0	5.0 / 6.35
		0.022	PF	K / M	8.5	6.35
		0.033	PF	K / M	10.5	6.35
		0.047	PF	K / M	12.0	9.5
		0.068	PF	K / M	13.0	9.5
	Y5T	0.01	PF	M / Z	6.0	5.0 / 6.35
		0.022	PF	M / Z	8.5	6.35
		0.033~0.047	PF	M / Z	10.5	6.35
		0.068~0.1	PF	M / Z	12.0	9.5
	Y5V	0.01	PF	Z	5.0	5.0 / 6.35
		0.022	PF	Z	5.0	5.0 / 6.35
		0.047	PF	Z	6.0	5.0 / 6.35
		0.1	PF	Z	8.0	6.35

寶華精密電子有限公司
PRODUCTWELL PRECISION ELECT.CO.,LTD

Type： CC

High Permittivity Ceramic Capacitors (Class Ⅱ 500V~15KV)

■ Electronic Characteristics

Operating Temperature Range

Code	Temp Range	Cap Change	EIA Code
A	-25℃~+85℃	±4.7%	Y5E
B		±10%	Y5P
E	+10℃~+85℃	+22%~-56%	Z5U
F		+22%~-82%	Z5V

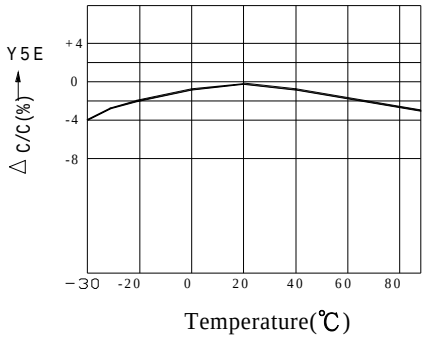
Capacitance	Within tolerance at 1KHZ and 25℃

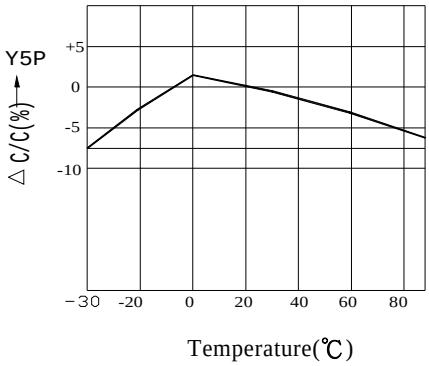
Minimum Capacitance tolerance:

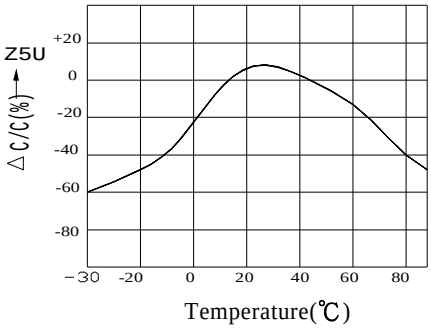
TEMP . CHAR .	MIN CAP TOL
Y5E	±10%
Y5P	±10%
Z5U	±20%
Z5V	+80-20%

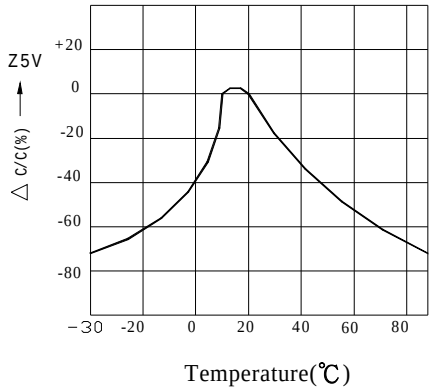
Rated Voltage	500 , 1K , 2K , 3K , 4K , 5K , 6K , 8K , 10K , 15K VDC.
Test Voltage	Below 1KV : 250% ; 1KV ~ 8KV : 200% ; 10KV ~ 15KV : 150% .rated voltage with 50mA max charging current for 2.5 sec
Insulation Resistance	10,000 MΩ min at WVDC.
Power Factor	2.5%(Z5V 3%) max at 1KHZ and 25℃
Life Test	apply working voltage at 85℃ for 500 hours.

■ Temperature characteristics curves









寶華精密電子有限公司
PRODUCTWELL PRECISION ELECT.CO.,LTD

Dimension Of DC High Voltage Disc Capacitors

Unit : pF

	C NPO	U N750	S SL	B Y5E Y5P	E Y5U Z5U	F Z5V Y5V	DIAMETER
500V	0R5-090	100-250	300-680	151-681	102	222	5
	100-470	260-470	750-131	821-122	152	472	6
	510-620	510-620	151-201	152	222		7
	680-820	680-820	221-271	182-222	332-472	103	8
	910-121	910-121	301-391	272-332	682-103		10
	131-181	131-181	431-621	392-472	153	223	12
	201-271	201-271	681-821	562-103	223		14
	301-471	301-471	911-152	123	333	473	16
1KV	080-150	100-200	300-500	101-471	102	102	5
	180-270	220-330	560-680	561-821	152-222	222	6
	330-390	390-560	101-121	102	332	472	7
	470-560	680-820	151-181	122-152			8
	680-820	101	201-221	182-222	472	103	9
	101-131	121-181	271	272-332	682-103		10
	151-201	221-271	331-391	392-472	153	223	12
	221-271	331-391	471-561	562-682	223		14
	331-391	471-561	681-821	822	333	473	16
				103	473	104	18
2KV	050-150	100-200	150-470	101-471		102	6
	180-220	220-300	560-680	561	102	222	7
	240-330	330-470	820-101	681-821	152		8
	360-470	560	121-151	102	222	472	9
	500-750	680-101	181	122-222	332		10
	820-121	121-151	201-221	272-332	472		12
	151	181-221	271-331	392-472	682	103	14
	221	271	391-471	562-682	103	223	16
				822	153		18
				103	223	473	20

103=10,000pF ie . the third digit signifies the number zeroes .

寶華精密電子有限公司
PRODUCTWELL PRECISION ELECT.CO.,LTD

Dimension Of DC High Voltage Disc Capacitors

Unit : pF

	C NPO	U N750	S SL	B Y5E Y5P	E Y5U Z5U	F Z5V Y5V	DIAMETER
3KV	040-170	080-220	100-500	101-331	102	102	6
	180-250	250-300	560-680	391-471	102		7
	270-330	330-390	820-101	561-681	152	222	8
	360-390	470-560	121	821-102	222		10
	470-680	680-820	151-201	122-152	332	472	12
	820-101	101-121	221-271	182	472		14
	121-131	151	331-391	222-272		103	16
	151	181-221	471	332-392	682		18
				472	103	223	20
4KV	030-180	070-250	100-500	101-271		102	8
	200-250	270-330	560-680	331-561	102		9
	270-330	360-390	750-820	681-821	152	222	10
	360-390	470-560	101-121	102			11
	470	680	151	122	222		12
	560-680	820-101	181-201	152	332	472	14
	820-101	121	221-271	222	472		16
	121-131	151-181	331-391		682		18
				332		103	20
				472	103		22
5KV	020-150	060-200	100-430	221			8
	160-200	220-270	470-560	271-331		102	9
	220-270	330-360	680-750	391-471	102		10
	330-390	390-560	820-121	561-681	152		12
	470-560	680-820	151	821-102			14
	680-820	101	181-221	122-152		222	16
	101	121	271	182-222	222		18
				272			20
				332	332	472	22

103=10,000pF ie . the third digit signifies the number zeroes .

寶華精密電子有限公司
PRODUCTWELL PRECISION ELECT.CO.,LTD

Dimension Of DC High Voltage Disc Capacitors

Unit : pF

	C NPO	U N750	S SL	B Y5E Y5P	E Y5U Z5U	F Z5V Y5V	DIAMETER
6KV	020-130	050-180	100-360	101-221			8
	150-220	200-300	470-560	271-471		102	10
	270-360	330-470	680-101	561-821	102		12
	390-500	560-680	121	102	152		14
	560-750	820	151-181	122-152		222	16
	101	101-121	201-221	182	222		18
							20
				222	332		22
8KV	020-150	040-180	080-390	101	221-331		9
	180-220	200-250	470-560	121-221	471-681		10
	220-270	330-390	680-820	271-471	102		12
	330-390	470-560	101	561-681	152		14
	470-560	680-820	121-151	821-102	222		16
10KV	020-150	030-200	070-390	101	221		10
	180-270	220-360	470-680	121-271	471		12
	330-390	390-470	820-101	331	681		14
	470	560-680	121	391-681	102		16
	560-680	820	151	821-102	152		18
				122-152	222		22
12KV	010-120	030-180	060-390	101			10
	150-220	200-300	470-560	121-331			12
	270-330	330-390	680-820	391-471			14
	390	470-560	101	561-681	102		16
				821-122	152	222	20
15KV	010-120	030-150	050-300	101-151			10
	150-180	180-250	390-470	181-221			12
	200-270	270-360	560-680	271-471			14
	470	390-560	101	561-681			18
				821-102	102	472	22

103=10,000pF ie . the third digit signifies the number zeroes .

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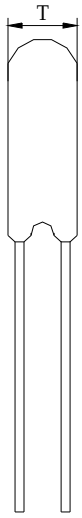
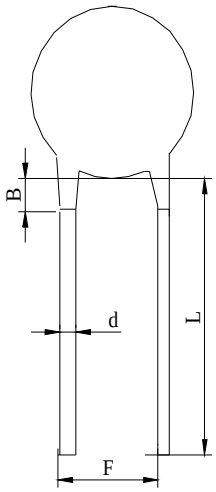
Model & Specification Of Ceramic Capacitors

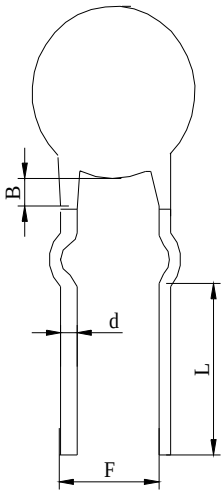


L型



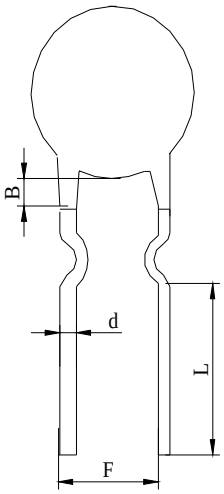
STRAIGNT LEAD

K型



OUTWARD KINK

I 型

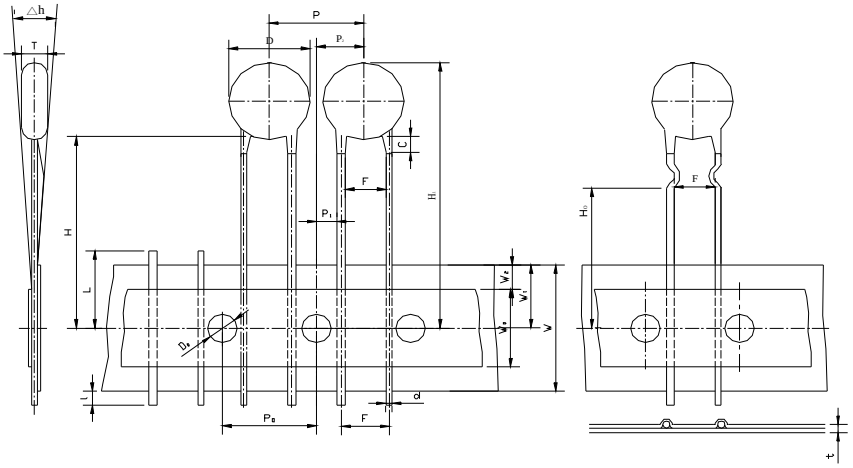


INSIDE KINK

Model	Working Voltage	T (mm) (max)	d (mm)	L (mm)	F (mm)	B (mm) (max)
L	12 ~ 25	3	0.45 ~ 0.8	4 ~ 10	2.5 ± 1.0	2
	50 ~ 100	3			5.0 ± 1.0	2
	500	3			6.35 ± 0.8	3
	1KV ~ 3KV	5		18(min)	9.52 ± 0.8	3
	3KV ~ UP	8			9.52 ± 0.8	5
K	12 ~ 25	3	0.45 ~ 0.8	4 ~ 10	2.5 ± 1.0	5
	50 ~ 100	3			5.0 ± 1.0	5
	500	3			6.35 ± 0.8	5
	1KV ~ 3KV	5		18(min)	9.52 ± 0.8	5
	3KV ~ UP	8			9.52 ± 0.8	5
I	12 ~ 25	3	0.45 ~ 0.8	4 ~ 10	2.5 ± 1.0	5
	50 ~ 100	3			5.0 ± 1.0	5
	500	3			6.35 ± 0.8	5
	1KV ~ 3KV	5		18(min)	9.52 ± 0.8	5
	3KV ~ UP	8			9.52 ± 0.8	5

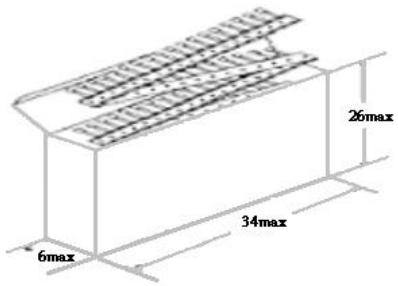
寶華精密電子有限公司
PRODUCTWELL PRECISION ELECT.CO.,LTD

Model & Specification Of Ceramic Capacitors



Unit: mm

Item		Symbol	Specification		Remarks
			Value	Tolerance	
Body Diameter		D	11.0	max.	
Body Thickness		T	3.5	max.	
Lead - wire Diameter		d	0.6	+0.06-0.05	
Pitch of Component		P	12.7	±1.0	
Feed Hole Pich		P_0	12.7	±0.3	Cumulative pitch error:1.0mm/20pitch
Feed Hole Center to Leed		P_1	3.9	±0.7	To be meesured at bottom of clinch
Hole Center to Component Center		P_2	6.4	±1.3	
Lead - to - Lead Distance		F	5.0	±0.8	
Component Alignment, F - R		△h	0.0	±2.0	
Tape Width		W	18.0	+1.0-0.5	
Hold - down Tape Width		W_0	11.0	min	
Hold Position		W_1	9.0	+0.75-0.5	
Hold - down Tape Position		W_2	3.0	max.	
Height of Component From Tape Center	For Straight Lead Type	H	20.0	+1.0-0.5	
	For Kinked Lead Type	H_0	16.0	±0.5	
Component Height		H_1	32.3	max.	
Lead - wirt Protrusion		l	2.0	max.	
Feed Hole Diameter		D_0	4.0	±0.3	
Total Tape Thickness		t	0.7	±0.2	Ground paper:0.5±1.0mm
Length of Snipped Lead		L	11.0	max.	
Coating Rundown on Leads		C	1.5	max.	

The available types radial taped disc are diameters ϕ 11.0mm under.

TAPE & AMMO PACK 2,000 PER BOX