ELECTRICAL SPECIFICATIONS

Capacitance Range: 10pF to 100000pF

CLASS Ⅰ: Tested at 1.0±0.2V RMS, +25℃ and 1MHz.

CLASSⅡ、Ⅲ: Tested at 1.0±0.2V RMS, +25℃ and 1KHz.

Capacitance Tolerance:

J=±5% (Except for Y5E/Y5P & Y5V/Y5U & Z5V)

K=±10% (Except for Y5V/Y5U & Z5V)

M=±20% (Except for Z5V)

Z=+80%-20%

P=+100%-0%

Working Voltage: 16V 25V 50V 100V 250V

500, 1000, 2000, 3000, 4000, 5000, 6000,…15KV

Dielectric Strength:

Below 1KV: 250% rated voltage with 50mA max charging current.

1KV & above: 200% rated voltage with 50mA max charging current.

10KV & above: 150% rated voltage with 50mA max charging current.

Dissipation Factor:

CLASS Ⅰ: Tested at 1.0±0.2V RMS, +25℃ and 1MHz 30PF below Q>400+20*Cap 30pf above Q≧1000.

CLASSⅡ、Ⅲ: Tested at 1.0±0.2V RMS, +25℃ and 1KHz, 3% max for Z5V, 2.5% max for others.

Insulation Resistance:

10,000 Megohms min at rate working voltage or 500VDC whichever is less. @ 25℃

Humidity Test:

Per EIA RS-198-C, method B3, Condition B. Capacitance Change: 30% max for Z5V, 20% max for others.

Dissipation Factor: 5% max for Z5V, 3% max for others.

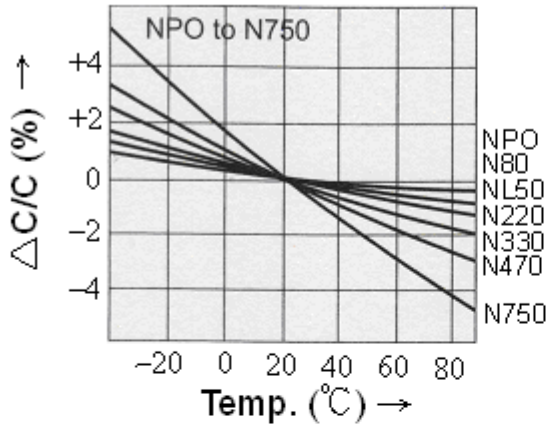
Life Test:

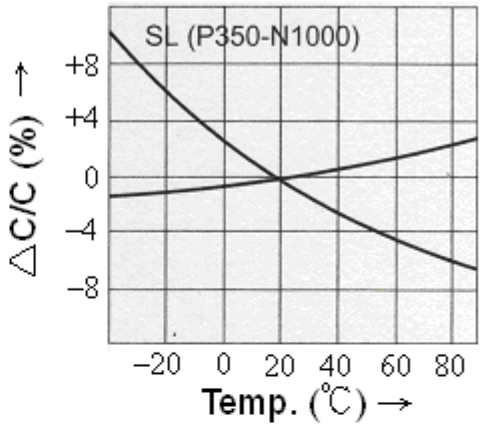
Per EIA RS-198-C, method C2, Condition C, at 85±2℃, and 200% rated working voltage. (150% for parts rated over 500VDC).

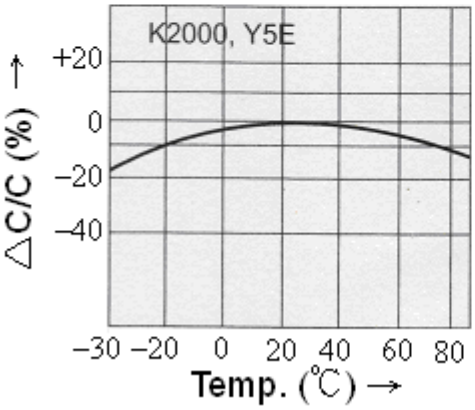
Capacitance Change: 30% max for Z5V, 20% max for others.

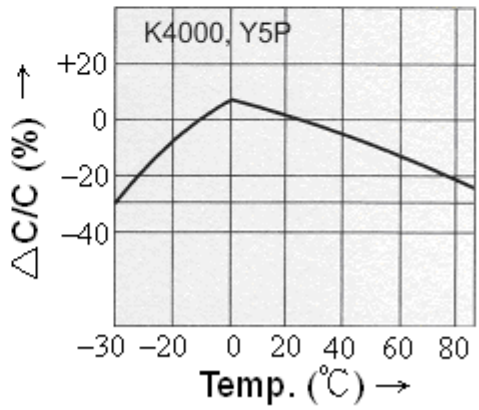
Dissipation Factor: 5% max for Z5V, 3% max for others. Insulation Resistance: 10,000 Megohms min.

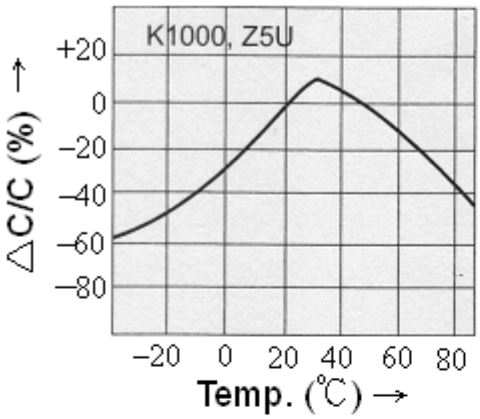
TEMPERATURE DEPENDENCY OF CAPACITANCE

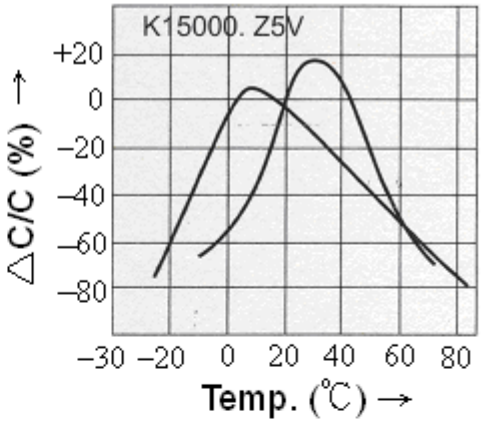




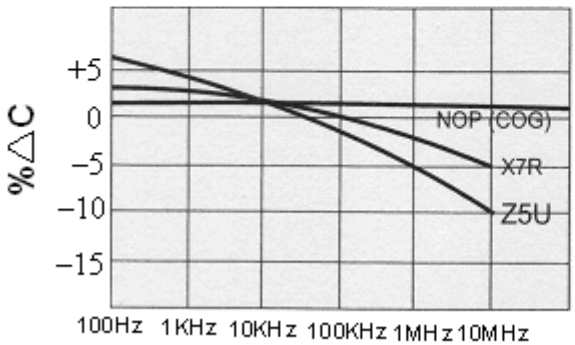




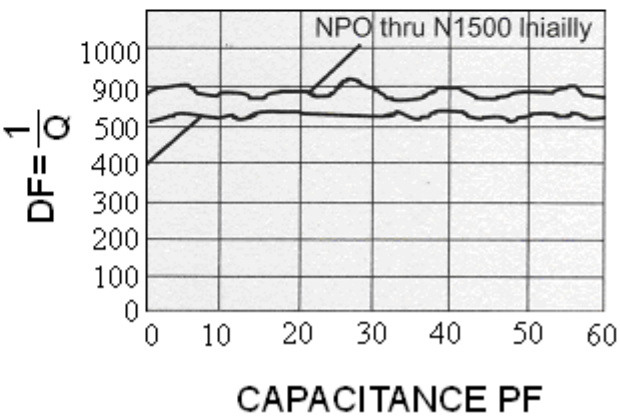




△CAPACITANCE VS, FREQUENCY



DF AND Q



HOW TO ORDER

PARTS NUMBER SYSTEM

E	B	101	M	2H	6	L	3	A

COATING

E: EPOXY
D: DUREZ

TEMP.CHAR

C=NPO
U=N750
S=SL=P350-N1000
B=Y5E/Y5P
E=Y5U/Z5U
F=Y5V/Z5V

CAPACITANCE

101=10*10^{1}=100PF
472=47*10^{2}=4700PF
333=33*10^{3}=33000PF
=33nF
104=10*10^{4}=100nF
=0.1uF

TOLERANCE

D=±0.5PF
J=±5%
K=±10%
X=±15%
M=±20%
Z=+80-20%
P=+100-0%

RATED VOLTAGE

1H=50V	DC
2A=100V	DC
2H=500V	DC
3A=1KV	DC
3B=1.2KV	DC
3C=1.5KV	DC
3D=2KV	DC
3E=2.5KV	DC
3F=3KV	DC
3G=4KV	DC
3H=5KV	DC
3I=6KV	DC
3J=8KV	DC
4A=10KV	DC
4B=12.5KV	DC
4C=15KV	DC
4D=20KV	DC
2Q=125V	DC
2T=250V	DC
2V=400V	DC

MARK

C=103Z
3KV

LEAD STYLE

1= AX
2= AY A=
3= AZ
4= BX B=
5= BY
6= BZ C=

7= CX X: φ= 0.60mm
8= CY Y: φ= 0.65mm
9= CZ Z: φ= 0.80mm

LEAD LENGTH

L= 25mm
M= 10mm
S= 5mm
T= TAPE

LEAD SPACE

5= 5.0 mm
6= 6.35 mm
7= 7.5 mm
9= 9.5 mm

DIMENSION OF D-C HIGH VOLTAGE DISC CAPACITORS

CLASS Ⅰ

T.C. / W.V.DC.	C (NPO)	U (N750)	S (SL)	DIAMETER (MAX)
50V	1PF-50PF	22PF-50PF	47PF-150PF	5φ
	51PF-82PF	51PF-82PF	180PF-220PF	6φ
	83PF-120PF	83PF-120PF	250PF-330PF	8φ
	121PF-180PF	130PF-180PF	340PF-470PF	9φ
	181PF-220PF	181PF-220PF	500PF-680PF	10φ
	221PF-270PF	221PF-270PF	820PF	11φ
	271PF-330PF	271PF=330PF	---	12φ
	340PF-390PF	301PF-331PF	---	13φ
	470PF	470PF	---	15φ

CLASS Ⅱ

T.C. / W.V.DC.	B (Y5P, Y5E)	E (Z5U)	F (Z5V)	DIAMETER (MAX)
50V	270PF-2200PF	2000PF-5000PF	5000PF-10000PF	6φ
	2300PF-3300PF	6800PF-8200PF	10000PF-20000PF	7φ
	3400PF-5000PF	10000PF-12000PF	22000PF	8φ
	5100PF-6800PF	15000PF		9φ
	8200PF-10000PF	18000PF-20000PF		10φ
	10000PF	22000PF	47000PF	11φ

CLASSⅢ

T.C. / W.V.DC.	E (Y5U)	F (Y5V)	DIAMETER (MAX)
50V	33000PF	47000PF	6φ
	47000PF	100000PF	7φ
	68000PF		8φ
	100000PF		9φ

DIMENSION OF D-C HIGH VOLTAGE DISC CAPACITORS

W.V.DC. \ T.C.	B (Y5E, Y5P)	E (Z5U, Y5U)	F (Z5V)	DIAMETER (MAX)
500V	150PF-680PF	1000PF	2200PF	5ϕ
	1200PF	1500PF	4700PF	6-7ϕ
	1500PF	2200PF	6800PF	7ϕ
	2200PF	4700PF	10000PF	8-9ϕ
	3300PF	10000PF	15000PF	9ϕ
	4700PF	---	20000PF	10ϕ
	10000PF	20300PF	33000PF	14ϕ
	---	33000PF	47000PF	18ϕ
1KV	100PF-470PF	1000PF	1000PF	5ϕ
	560PF-820PF	1500PF-2200PF	1500PF-2200PF	6ϕ
	1000PF	3300PF	4700PF	7ϕ
	1500PF	3900PF	6800PF	8ϕ
	2200PF	4700PF	10000PF	9ϕ
	3300PF	10000PF	15000PF	10ϕ
	4700PF	15000PF	22000PF	12ϕ
	6800PF	22000PF	33000PF	14ϕ
	8200PF	33000PF	47000PF	16ϕ
	10000PF	47000PF	100000PF	20ϕ
2KV	100PF-470PF	---	1000PF	4-6ϕ
	560PF	1000PF	2200PF	6-7ϕ
	820PF	1500PF	3300PF	9ϕ
	1000PF	2200PF	4700PF	5-10ϕ
	2200PF	3300PF	6800PF	10ϕ
	3300PF	4700PF	8200PF	12ϕ
	4700PF	6800PF-8200PF	10000PF	14ϕ
	5600PF-6800PF	10000PF	22000PF	16ϕ
	8200PF	---	---	20ϕ
	10000PF	22000PF	47000PF	20ϕ

DIMENSION OF D-C HIGH VOLTAGE DISC CAPACITORS

T.C. / W.V.DC.	B (Y5E, Y5P)	E (Z5U, Y5U)	F (Z5V)	DIAMETER (MAX)
3KV	100PF-330PF	---	1000PF	5ϕ-7ϕ
	390PF-470PF	1000PF	1500PF	4ϕ-8ϕ
	680PF	1500PF	2200PF	6ϕ-8ϕ
	820PF-1000PF	2200PF	3300PF	5ϕ-10ϕ
	1500PF	3300PF	4700PF	10ϕ
	1800PF	4700PF	5600PF	12ϕ
	2000PF-2700PF	5600PF	10000PF	14ϕ
	3300PF-3900PF	6800PF	---	16ϕ
	4700PF	8200PF-10000PF	22000PF	18ϕ
4KV	100PF-270PF	---	1000PF	8ϕ
	330PF-560PF	1000PF	1500PF	9ϕ
	680PF-820PF	1500PF	2200PF	10ϕ
	1000PF	---	---	11ϕ
	1200PF	2200PF	3300PF	12ϕ
	1500PF	3300PF	4700PF	14ϕ
	2200PF	4700PF	5600PF	16ϕ
	---	6800PF	---	18ϕ
	3300PF	8200PF	10000PF	20ϕ
	4700PF	10000PF	---	22ϕ
5KV	220PF	---	---	8ϕ
	270PF-330PF	---	1000PF	9ϕ
	470PF	1000PF	---	10ϕ
	680PF	1500PF	1500PF	12ϕ
	1000PF	---	1800PF	13ϕ
	1500PF	1800PF	2200PF	15ϕ
	2200PF	2200PF	3300PF	18ϕ
	3300PF	---	---	22ϕ

LOW DF OF HIGH VOLTAGE DISC CAPACITORS

These medium HIGH-VOLTAGE ceramic capacitors have a primary of. $SrTio_3$ and provide low voltage distortion and piezoelectric effects as well as excellent.

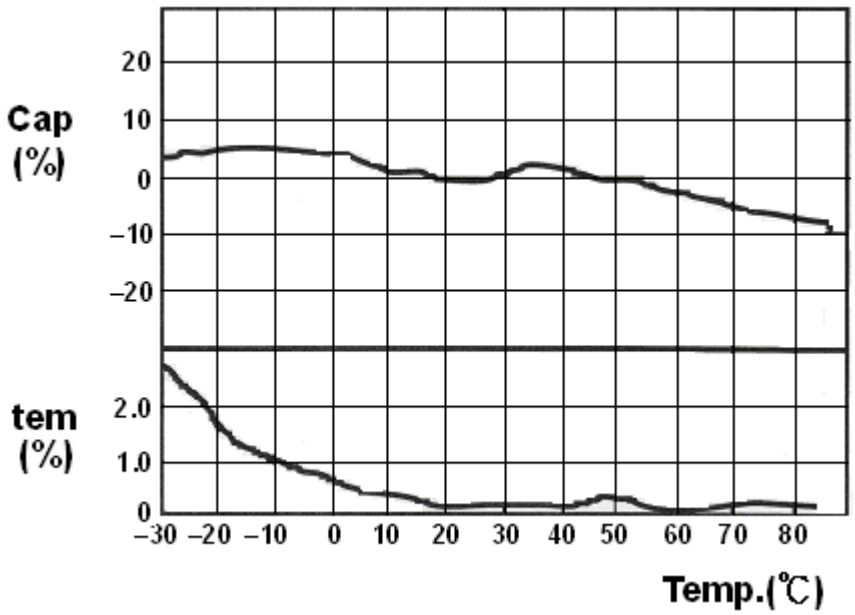
TEMPERATURE, BIAS, and FREQUENCY CHARACTERISTICS.
This article that its Dissipation Factor ≤ 0.5%.

Insulation Resistance ≥ 10GΩ
Temperature Characteristics = Y5P

DIMENSION & CAPACITANCE RANGE

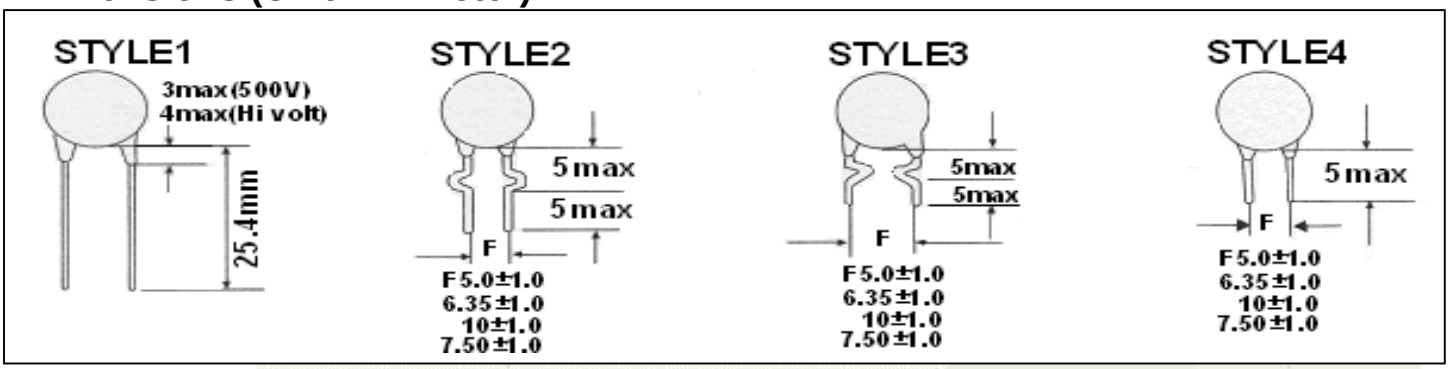
T.C. / W.V.DC.	B TYPE (Y5P)	DIAMETER (MAX)
2KV	150PF-220PF	7φ
	390PF	8φ
	470PF-560PF	9φ
	820PF	10φ
	1000PF	11φ
	1200PF	12φ
	1500PF-1800PF	13φ
	2200PF-2700PF	15φ

TEMPERATURE DEPENDENCY OF CAPACITANCE

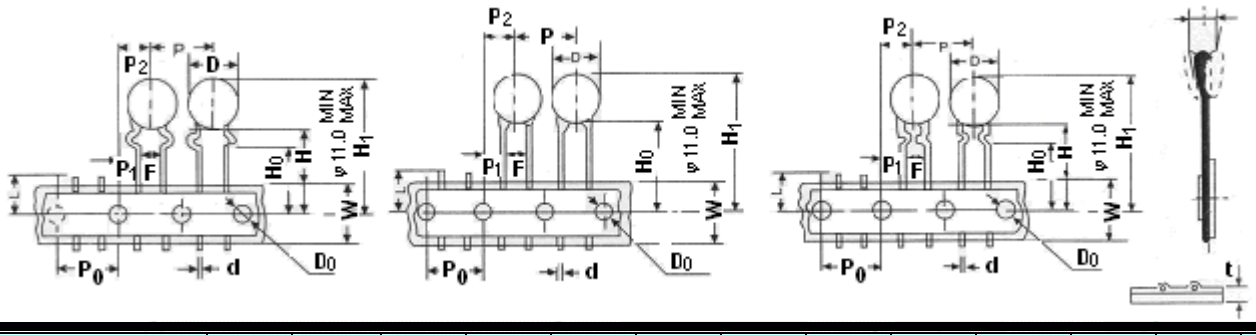


SPECIAL LEAD TYPE OF DISC CAPACITORS

Dimensions (Unit Millimeter)



TAPING LEAD TAPING CAPACITORS FOR AUTOMATIC INSERTION

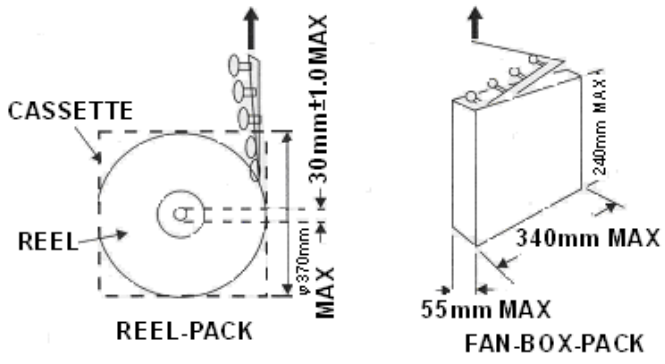


SYMBOL	D	d	P	P_0	P_1	P_2	F	H_0	H	H_1	D_0	W	L	t
VALUE	MAX 11.0	0.6	12.7	12.7	3.85	6.35	5.0	16.0 18.0	20	MAX 32 25	4.0	18.0	MAX 11.0	0.7
TOLERANCE	---	+0.06 -0.05	±1	±0.2	±0.7	±1.0	+0.8 -0.2	+1.5 -1.0	-1.5 -1.0	---	±0.2	±0.5	---	±0.2

PACKAGING QUANTITY:

PACKAGE	ONE BOX	CARTON BOX
REEL PACK	2,500 PCS	25,000PCS
ZIGZAG PACK	2,000 PCS	20,000PCS

REEL and BOX DIMENSIONS (mm)



DISC CERAMIC CAPACITORS

ELECTRICAL SPECIFICATIONS

- **Capacitance Range: 1pF to 10Uf**
- **Capacitance Tolerance: [Standare]**

  NPO:F= ± 1%
  G= ± 2%
  C= ± 0.25PF[10PF and below]
  D= ± 0.5PF[10PF and below]
  J= ± 5%[10PF and above]
  K= ± 10%[5.6PF and above]
  M= ± 20%[2.7PF and above]

  X7R: K= ± 10%
  M= ± 20%
  Z= +80-20%

  Z5U: M= ± 20%
  Z= +80-20%

  Y5V: M= ± 20%
  Z= +80-20%

- **Working Voltage: 25, 50, 100, 200, 1K VDC**
- **Temperature Characteristic:**

  NPO: 0±30ppm℃, -55℃ to +125℃
  X7R: ±15%△C, -55℃ to +125℃
  Z5U: +22% to –56%△C, +10℃ to +85℃
  Y5V: +22% to –82%△C, -30℃ to +85℃

- **Insulation Resistance**

  NPO, X7R: 100,000 megohms min. or 1000 ohm-Farads min., Whichever is less at 25℃

  Z5U, Y5V: 10,000 megohms min. or 1000 ohm-Farads min., Whichever is less at 25℃

- **MECHANICAL SPECIFICATION**

Cast: Conformal coated [epoxy]
Lead Material: Solder coated, copper
Package Method: Bulk, Tape & Ammo Pack,
Solderability: [MIL-STD-202, Method 208]
Leach Resistance: Temp. 230℃, 20 seconds immersion in SN62

- **STANDARD TOLERANCE**

NPO: J.K.
X7R: K.M.
Z5U: M.Z.
Y5V: M.Z.

- **Capacitance Test @ 25℃ or referred to +25℃:**

  NPO, X7R:
  1. 0VRMS±.25 VAMS and 1KHz;
  1MHz for value below 100pF
  Z5U, Y5V:
  0.5 VRMS maximum and 1KHz.

- **Dissipation Factor:**

  NPO: 0.1% maximum @ 25℃. 1.0 VRMS ±25 VRM and 1KHz. 1MHz for values below 100pf.
  X7R: 2.5% maximum @ 25℃. 1.0 VRMS ±25 VRM and 1KHz.
  Z5U: 4% maximum @ 25℃. 0.5 VRMS maximum and 1KHz.
  Y5V: 7% maximum @ 25℃. 1.0 VRMS maximum and 1KHz.

- **Dielectric Strength:**

  NPO, X7R: 250% rated voltage with 50 mA maximum charging current.
  Z5U, Y5V: 200% rated voltage with 50 mA maximum charging current

- **Life Test: (1000 hrs)**

  NPO and X7R: 200% rated voltage at +125℃
  Z5U and Y5V: 150% rated voltage at +85℃

- **Humidity Resistance: [MIL-STD-202 Method 106]**

  NPO, X7R, Z5U, Y5V: 96 hrs at 40℃ relative humidity 90~95%.

- **Thermal Shock: [MIL-STD-202 Method 107, condition A]**