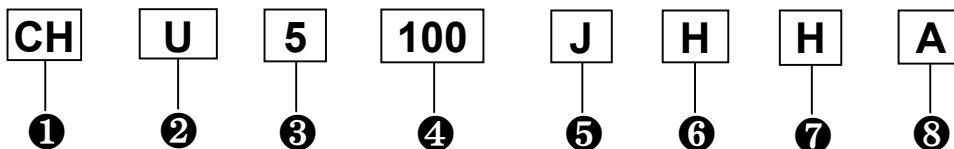


HOW TO ORDER – PART NUMBER EXPLANATION

To Order, please specify Pan Overseas Part No. as the following example :



① Temperature Characteristics Code :

	CH (NPO)	SL	B (Y5P)	E (Z5U)	F (Z5V)	X (X7R)	RY (Y5R)	FY (Y5V)
T.C.(PPM/) or Cap. Change %	0 ± 60PPM	+ 350 - 12000PPM	± 10%	+ 22% -56%	+ 22% - 82%	± 15%	± 15%	+ 22% - 82%

② Rated Voltage :

	B	T	U	A	C	M	M2	M3
Voltage	16V	25V	50V	100V	500V	1000V	2000V	3000V

③ Part Diameter(mm) :

Code	Diameter	Code	Diameter	Code	Diameter	Code	Diameter
5	5mm	8	8mm	A	11mm	D	14mm
6	6mm	9	9mm	B	12mm	E	15mm
7	7mm	0	10mm	C	13mm	F	16mm

④ Capacitance Code :

Code	Capacitance (pF)	Code	Capacitance (pF)
010	1	102	1000
1R5	1.5	222	2200
100	10	472	4700
101	100	103	10000

⑤ Tolerance Code :

Code	Tolerance	Code	Tolerance
C	± 0.25pF	K	± 10%
D	± 0.50pF	M	± 20%
J	± 5%	Z	+ 80-20%

⑥ Lead Configuration Code-Bulk & Taping Package

Bulk Lead Code	Taping Lead Code	Configuration and Dimension			
		Kinked / Straight	Lead Space (F)	Lead Length (L)	Remarks
2		Straight	5.0mm	5±1mm	
5		Straight	2.5mm	25 mm Min.	
6	G or L	Straight	5.0mm	25mm Min.	G = Ammo, L = Reel
7		Straight	6.4mm	25mm Min.	
8		Inside Kinked	5.0mm	5±1mm	
9	H or R	Inside Kinked	5.0mm	25 mm Min.	H = Ammo, R = Reel
A		Straight	10.0mm	5±1mm	
B		Inside Kinked	10.0mm	5±1mm	
C		Straight	10.0mm	25 mm Min.	

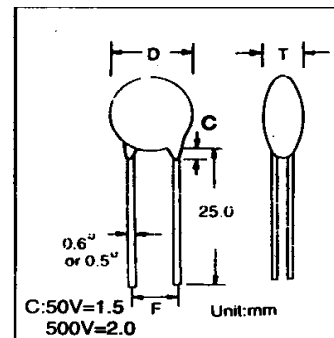
⑦ High temperature soldering type.

⑧ Epoxy coating material is used on 2KV & 3KV parts only.

CLASS I TEMPERATURE COMPENSATION TYPE

FEATURES :

- Capacitance has linear temperature coefficient
- Capacitance high stability
- Low lost at wide range of frequency



GENERAL SPECIFICATION

Capacitance Range	1pF to 820pF
Capacitance Tolerance	±0.25pF, ±0.5pF, ±5%, ±10%
Operating Temperature Range	-25 ~ 85
Rated Working Voltage Rating	50, 500 VDC
Q Factor @ 1MHz, 1±0.2Vrms, 25	C 30 pF.....Q 1,000, C < 30 pF.....Q 400+20°C
Insulation Resistance (IR) @ 25	10,000 M Minimum
Dielectric Strength	3 times the rated WVDC
Testing Parameters	1MHz ±20%, 1.0Vrms±0.2Vrms

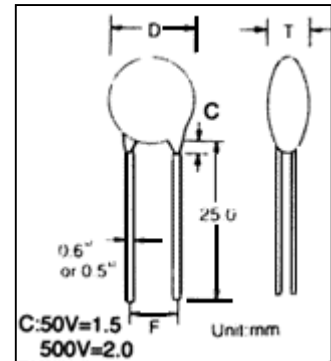
CAPACITANCE CHART :

Temp. Char.	Part Dia.	Rated Voltage	Capacitance		Dim.(mm) Max.		
			Range (pF)	Tol.	D	T	F
CH 0±60 ppm/	5	U (50V)	0.5 - 47	C, D (≤ 10pF)	5.5	3.5	5.00
	6		51 - 75		6.5		
	7		82 - 100		7.5		
	8		120 - 150		8.5		
	10		180 - 270		10.5		
	12		300 - 390		12.5		
	5	C (500V)	0.5 - 36	J, K (≥ 10pF)	5.5	4.0	
	6		39 - 56		6.5		
	8		68 - 100		8.5		
	10		120 - 150		10.5		

Temp. Char.	Part Dia.	Rated Voltage	Capacitance		Dim.(mm) Max.		
			Range (pF)	Tol.	D	T	F
SL + 350 -1200 ppm/	5	U (50V)	10 - 120	J, K	5.5	3.5	5.00
	6		150 - 220		6.5		
	7		240 - 330		7.5		
	8		360 - 470		8.5		
	10		500 - 820		10.5		
	5		C (500V)		10 - 82		
	6	100 - 150		6.5			
	8	180 - 220		8.5			
	10	240 - 390		10.5			

• When Ordering, please use the Pan Overseas part number as indicated on page no. 13.

CLASS II HI-K TYPE



FEATURES :

- Capacitance has non-linear temperature coefficient.
- Large capacitance in small size.
- Wide range of general purposes applications.

GENERAL SPECIFICATION :

Capacitance Range	100pF to 47000pF
Capacitance Tolerance	±10%, ±20%, +80% -20%
Operating Temperature Range	-25 ~ 85 (Y5P); 10 ~ 85 (Z5U, Z5V)
Rated Working Voltage Rating	50, 500 VDC
Dissipation Factor (tan δ)	Y5P, Z5Utan δ ≤2.5%, Z5V tan δ ≤5.0%
Insulation Resistance (IR) @ 25	10,000 M Minimum or 200 M μF whichever is smaller
Dielectric Strength	2.5 times the rated WVDC
Testing Parameters	1KHz ±20%, 1.0Vrms±0.2Vrms

CAPACITANCE CHART :

Temp. Char.	Part Diameter.	Rated Voltage	Capacitance			Dim. (mm) Max			Temp. Char.	Part Diameter	Rated Voltage	Capacitance			Dim. (mm) Max		
			Range (pF)	Tol.	D	T	F	Range (pF)				Tol.	D	T	F		
B (Y5P) ±10%	5	U (50V)	100 - 2000	K, M	5.5	3.5	E (Z5U) +22% -56%	5	U (50V)	50V	2200 - 5000	M, Z	5.5	3.5	5.00		
	6		2200 - 2700		6.5			6			5600 - 8200		6.5				
	7		3000 - 3300		7.5			7			10000		7.5				
	8		3900 - 4700		8.5			8			12000 - 15000		8.5				
	10		5600 - 10000		10.5			10			18000 - 22000		10.5				
	5	C (500V)	100 - 820		5.5	4.0		5	C (500V)	500V	5	1500 - 2200	5.5	4.0			
	6		1000		6.5			6			2700 - 3300	6.5					
	7		1500 - 2000		7.5			8			3900 - 5000	8.5					
	8		2200 - 3000		8.5			10			8200 - 10000	10.5					
	10		3300 - 5000		10.5												
	12		5600 - 6800		13.0												
	14		8200 - 10000		15.0												

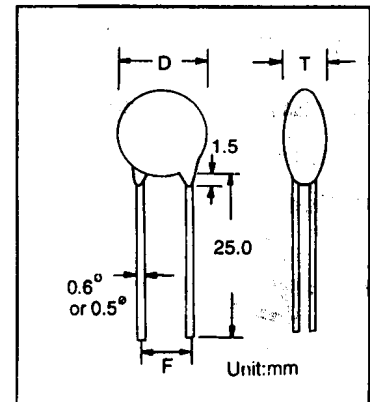
Temp. Char.	Part Diameter.	Rated Voltage	Capacitance		Dim.(mm)Max		
			Range (pF)	Tol.	D	T	F
F (Z5V) +22% -82%	5	U (50V)	4700 - 5000	Z	5.5	3.5	5.00
	6		10000 - 15000		6.5		
	7		18000 - 20000		7.5		
	8		22000		8.5		
	10		30000 - 47000		10.5		
	8	C (500V)	10000	Z	8.5	4.0	5.0

• When Ordering, please use the Pan Overseas part number as indicated on page no. 13.

CLASS III SEMI-CONDUCTIVE TYPE

FEATURES :

- Large capacitance in small size.
- Low lost at wide range of frequency.
- Cost saving by placing film capacitors.
- Capacitance has linear temperature coefficient.
- Stable capacitance change over specified temperature range.



GENERAL SPECIFICATION

Capacitance Range	6800pF to 220000pF
Capacitance Tolerance	±10%, ±20%, +80%-20%
Operating Temperature Range	-25 ~ 85
Rated Working Voltage Rating	16,25 & 50 VDC
Dissipation Factor (tan δ)	Y5V 16V.....tan δ 7.5% Y5V,Y5R 25/50V.....tan δ 5.0%
Insulation Resistance (IR) @ 25	16V.....100M Minimum or 10M μF 25/50V...1000M Minimum or 20M μF
Dielectric Strength	2 times the rated WVDC
Testing Parameters	1KHz±20%, 0.1Vrms Maximum

CAPACITANCE CHART :

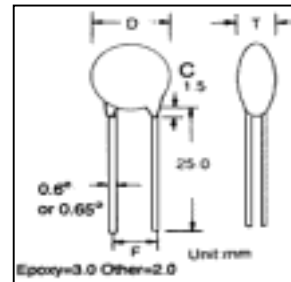
Temp. Char.	Part Diameter	Rated Voltage	Capacitance		Dim. (mm) Max.			Temp. Char.	Part Diameter	Rated Voltage	Capacitance		Dim. (mm) Max.		
			Range (pF)	Tol.	D	T	F				Range (pF)	Tol.	D	T	F
FY (Y5V) +22% -82%	5	B (16V)	22000	M, Z	5.2	4.0	5.00	RY (Y5R) ±15%	5	T (25V)	6800 ~ 10000	K, M	5.2	4.0	5.00
	6		33000 ~ 100000		6.2				6.2						
	10		200000 ~ 220000		10.5				8.5						
	5	22000	5.2		10.5										
	6	33000 ~ 47000	6.2		5.2										
	7	100000	7.2		6.2										
	5	T (25V)	22000		5.2				6.2	U (50V)	6800 ~ 10000	K, M	5.2	4.0	5.00
	6		33000 ~ 47000		6.2				6.2						
	7		100000		7.2				6.2						
	5	U (50V)	22000		5.2				6.2	68000	K, M	5.2	4.0	5.00	
	6		33000 ~ 100000		6.2				8.5						
	8		100000		8.5				10.5						

• When Ordering, please use the Pan Overseas part number as indicated on page no. 13.

HI-VOLTAGE 1KV~3KV TYPE

FEATURES :

- Capacitance has non-linear temperature coefficient.
- Large capacitance in small size.
- Epoxy Coating for 2KV and 3KV parts.
- Wide range of general purposes applications.



GENERAL SPECIFICATION :

Capacitance Range	100pF to 10000pF
Capacitance Tolerance	±10%, ±20%, +80%-20%
Operating Temperature Range	-25 ~ 85 (Y5P), 10 ~ 85 (Z5U,Z5V)
Rated Working Voltage Rating	1000,2000 & 3000 VDC
Dissipation Factor (tan δ)	Y5P,Z5U.....tan δ 2.5% Z5V.....tan δ 5.0%
Insulation Resistance (IR) @ 25	10000M Minimum or 200 M μF whichever is smaller
Dielectric Strength	2 times the rated WVDC
Testing Parameters	1KHz ±20%, 1.0Vrms±0.2Vrms

CAPACITANCE CHART :

Temp. Char.	Part Diameter	Rated Voltage	Capacitance		Dim. (mm) Max.			
			Range (pF)	Tol.	D	T	F	
B (Y5P) ±10%	6	M (1KV)	100 ~ 1000	K, M	7.0	4.5	5.0	
	8		1200 ~ 1800		9.0		5.0 or 10.0	
	10		2200 ~ 2700		11.0		10.0	
	12		3300 ~ 4700		13.0		10.0	
	6	M2 (2KV)	150 ~ 270		7.5		5.0	
	8		330 ~ 1000		9.5		5.0 or 10.0	
	10		1200 ~ 1800		11.5		10.0	
	12		2200 ~ 2700		13.5		10.0	
	14	M3 (3KV)	4700		16.5		10.0	
	6		100 ~ 270		7.0		6.0	7.5 or 10.0
	7		330 ~ 560		8.0			
	9		680 ~ 1000		10.0			
	11		1500 ~ 1800		12.0			
	13		2200		14.0			
	14		2700 ~ 3300		15.0			
	15		3900		16.0			
	17	4700	18.0					

Temp. Char.	Part Diameter	Rated Voltage	Capacitance		Dim. (mm) Max.			
			Range (pF)	Tol.	D	T	F	
E (Z5U) +22% -56%	6	M (1KV)	100 ~ 2200	M, Z	7.0	4.5	5.0	
	8		2700 ~ 4700		9.0		5.0 or 10.0	
	10		5600 ~ 6800		11.0		10.0	
	12		8200 ~ 10000		13.0		10.0	
	8	M2 (2KV)	2200 ~ 3300		9.5		5.0 or 10.0	
	10		3900 ~ 4700		11.5		10.0	
	14		10000		16.5		10.0	
	6	M3 (3KV)	1000		7.0		6.0	7.5 or 10.0
	8		1500 ~ 2200		9.0			
	10		3300		11.0			
	11		3900		12.0			
	12		4700		13.0			
	14		5600 ~ 6800		15.0			
	17		10000		18.0			

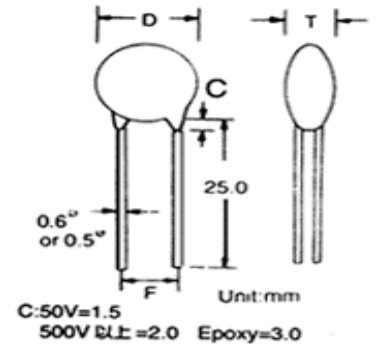
Temp. Char.	Part Diameter	Rated Voltage	Capacitance		Dim.(mm)Max.		
			Range (pF)	Tol.	D	T	F
F (Z5V) +22% -82%	6	M (1KV)	1000 ~ 3300	Z	7.0	4.5	5.0
	8		3600 ~ 5600		9.0		5.0 or 10.0
	10		6800 ~ 10000		11.0		10.0
	12	M2 (2KV)	10000		13.5		4.5

• When Ordering, please use the Pan Overseas part number as indicated on page no. 13.

X7R DIELECTRIC TYPE - 50V ~2KV

GENERAL SPECIFICATION :

Capacitance Range	120pF to 10000pF (Depending on the rated voltage)
Capacitance Tolerance	±10%, ±20%
Operating Temperature Range	-55 ~ 125
Rated Voltage	50, 500, 1000 & 2000 VDC
Dissipation Factor (DF%)	2.5% Maximum @1KHz, 1±0.2Vrms,25
Insulation Resistance (IR) @ 25	10000M or 200M μF whichever is smaller
Testing Parameters	50V, 500V: 2.5 times the rated WVDC 1000V, 2000V, 2 times the rated WVDC

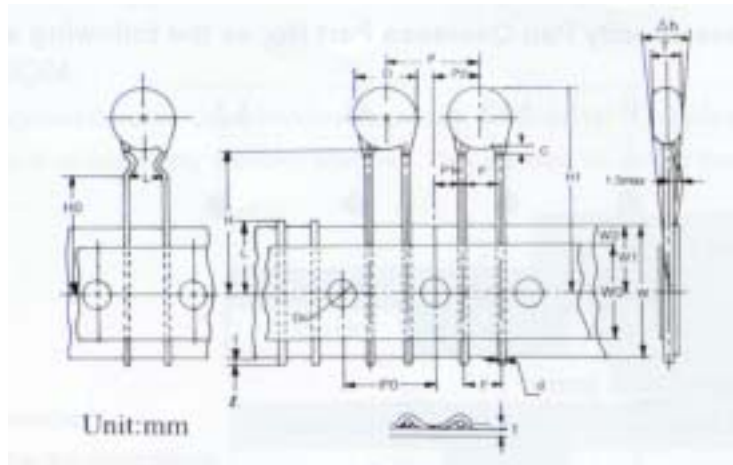


CAPACITANCE CHART :

Part Dimension			Rated Voltage Capacitance			
Diameter Code	Diameter D Max.	Lead Space (F) in mm	50V	500V	1000V	2000V
			Capacitance (pF)	Capacitance (pF)	Capacitance (pF)	Capacitance (pF)
5	6.0mm	5.0, 7.5	150 ~ 1500	150 ~ 680
6	7.0mm	5.0, 7.5	1800 ~ 2200	820 ~ 1000	220 ~ 470	120 ~ 180
7	8.0mm	5.0, 7.5	2700 ~ 3300	1200 ~ 2000	560	...
8	9.0mm	5.0, 7.5, 10.0	3900 ~ 4700	2200 ~ 3000	680 ~ 1800	330 ~ 1000
10	11.0mm	5.0, 7.5, 10.0	5600 ~ 10000	3300 ~ 4700	2200 ~ 2700	1200 ~ 1500
12	13.0mm	5.0, 7.5, 10.0	...	5600 ~ 6800	3000 ~ 4700	1800 ~ 2700
14	15.0mm	7.5, 10.0	...	8200 ~ 10000	...	3300

• When Ordering, please use the Pan Overseas Part number as indicated on page no. 13.

TAPING SPECIFICATION AND DIMENSION



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 pitch	P ₀	12.7	±0.3	Cumulative pitch error : 1.0 mm/20 pitch	
Feed hole center to lead	P ₁	3.85	±0.7	To be measured at bottom of clinch	
Hole center to component center	P ₂	6.35	±1.3		
Lead-to lead distance	F	5.0	+0.8 -0.2		
Component alignment, F-R.	h	0	±2.0		
Tape width	W	18.0	+1.0 -0.5		
Hold-down tape width	W ₀	11.0	Min		
Hole position	W ₁	9.0	+0.75 -0.5		
Hold-down tape position	W ₂	3.0	Max		
Height of component form 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	32.25	Max		
Lead-wire protrusion	l	2.0	Max		
Feed hole diameter	D ₀	4.0	±0.3		
Total tape thickness	t	0.7	±0.2		
Length of snapped lead	L	11.0	Max	Ground paper : 0.5±0.1 mm	
Coating rundown on leads	C	1.5	Max		

These radial taped ceramic disc capacitors are designed especially for automatic insertion, and is only available for those parts have diameter of 11.0mm or smaller.

