

CERAMIC DISC CAPACITORS-(Hik)

EIA RS 198●CLASS 2 JIS C 6422●TYPE II

FEATURES

- Large capacitance in small size.
- Non linear temperature coefficient of capacitance.

1. Class II—Type 'H'

2. Temperature coefficient (Ref. Fig. 2)

Code	Temp. Range	Cap. Change	EIA Code	Cap. Change
B	-25°C ~ +85°C	±10%	Y5P	±10%
D		+20% -30%	Y5T	+22% -33%
E	-10°C ~ +70°C	+20% -55%	Z5U	+22% -56%
F		+30% -80%	Z5V	+22% -82%

3. Rated Voltage (D.C.)

Code	Voltage	Code	Voltage
1C	16V	2E	250V
1E	25V	2H	500V
1H	50V	3A	1KV
2A	100V	3D	2KV
2D	200V	3F	3KV

4. Rated capacitance.

Code	Cap. (PF)	Code	Cap. (PF)
101	100PF	821	820PF
121	120PF	102	1,000PF
151	150PF	152	1,500PF
181	180PF	222	2,200PF
221	220PF	332	3,300PF
271	270PF	472	4,700PF
331	330PF	682	6,800PF
391	390PF	103	10,000PF
471	470PF	223	22,000PF
561	560PF	473	47,000PF
681	680PF	104	100,000PF

5. Tolerance on rated capacitance.

Code	Tol.	16V-1KV
K	±10%	B
M	±20%	D, E
Z	+80% -20%	E, F

6. Lead Shape. (Ref. Fig. 3.)

Code	Type	
K	Bulk	Short Kink
S		Short Straight
L		Long Straight
A	Tape/Reel	
B	Tape/Box	

7. Lead Spacing. (F)

Code	Dimension (mm)		
	K	S	L
2	—	2.5 ± 0.8	2.5 ± 0.8
5	5.0 ± 0.8	5.0 ± 0.8	5.0 ± 0.8
6	—	6.3 ± 0.8	6.3 ± 0.8
7	—	7.5 ± 0.8	7.5 ± 0.8
0	10.0 ± 0.8	—	10.0 ± 0.8

8. Lead Length. (L)

Code	Dimension (mm)		
	K	S	L
3	3.5 ± 1.0	3.5 ± 1.0	3.5 ± 1.0
5	5.0 ± 0.8	5.0 ± 0.8	5.0 ± 0.8
6	6.3 ± 0.8	6.3 ± 0.8	6.3 ± 0.8
0	10.0 ± 0.8	10.0 ± 0.8	10.0 ± 0.8
1	—	—	25min

9. Lead Wire. (d)

Code	Dia. (φmm)	Rated Voltage (D.C.)
5	0.5 ± 0.05	16V-500V
6	0.6 ± 0.05	16V-1KV
8	0.8 ± 0.05	1KV-2KV

10. Grade

Code	Temp. Range
Y	-25°C ~ +85°C
Z	-10°C ~ +70°C

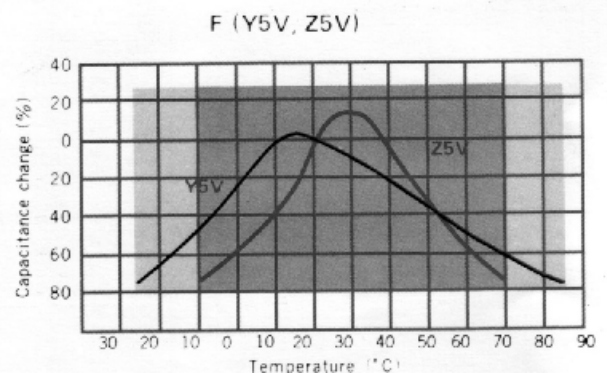
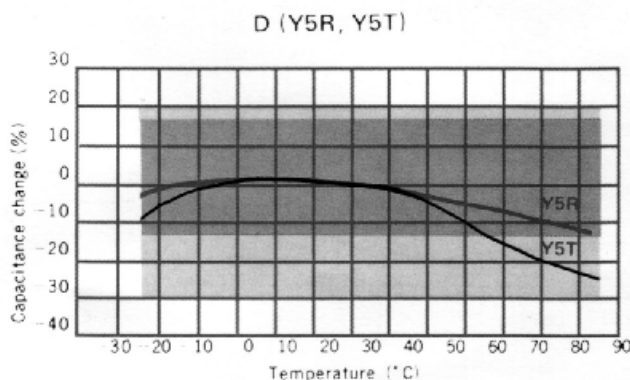
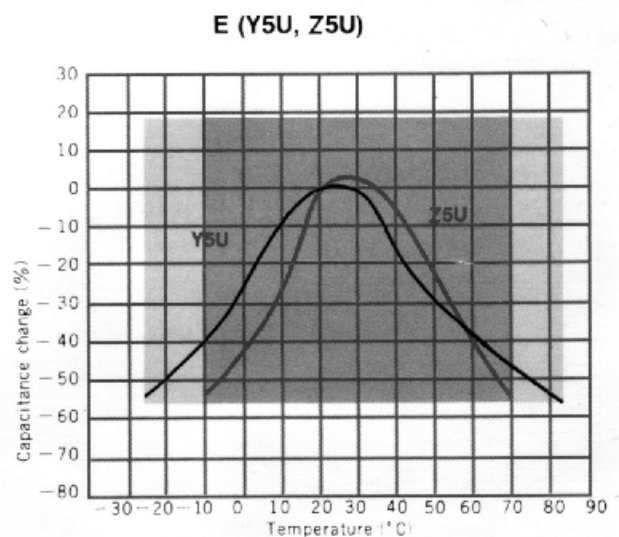
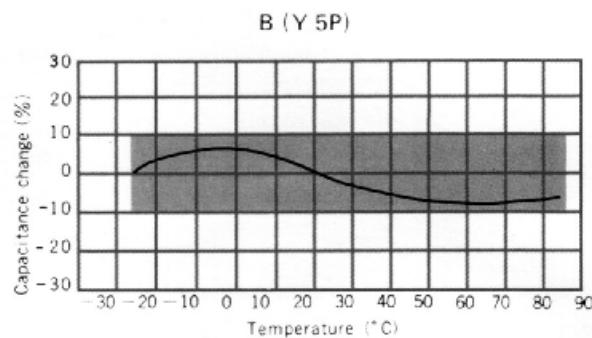
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Dimension & Capacitance Range

Dimension (mm)				Capacitance Range (PF)									
Dia. (D) max.	Lead Spacing (F)			50V				500V			1KV		
	K	S	L	B	D	E	F	B	E	F	B	E	F
5.0	5.0±0.8	2.5±0.8	2.5±0.8	101 ~222	102 ~502	102 ~502	102 ~103	101 ~102	202 ~222	202 ~222	101 ~471	—	—
6.0	5.0±0.8	5.0±0.8	5.0±0.8	272 ~332	682 ~822	682 ~822	153 ~223	122	272	272 ~472	102	102	102
7.0	5.0±0.8	5.0±0.8	5.0±0.8	342 ~392	103	103	223 ~303	152 ~182	392 ~472	—	—	222	—
8.0	5.0±0.8	5.0±0.8	5.0±0.8	472 ~682	—	—	—	202 ~222	—	103	—	—	472
9.0	5.0±0.8	5.0±0.8	5.0±0.8	702 ~822	—	—	333 ~403	—	—	—	222	472	—
10.0	5.0±0.8 to 10.0±0.8	5.0±0.8 to 10.0±0.8	5.0±0.8 to 10.0±0.8	103	—	203 ~223	473 ~503	272 ~332	103	—	—	—	103
12.0				—	—	—	—	472	—	223	—	—	—
14.0				—	—	—	—	103	223	—	472	103	223
16.0				—	—	—	—	—	—	—	—	—	—

Fig. 2 (T.C. %)



CERAMIC DISC CAPACITORS-(T.C.)

EIA RS 198●CLASS 1 JIS C 6423●TYPE I

SPECIFICATION & TEST

No. Item	Performance	Test Method
1. Visual & Mechanical	To meet the specification.	The product shall be inspected for visible evidence of defect.
2. Marking	To be clear and legible.	Marking shall be tested with acetone
3. Voltage Proof (Between terminal)	No failure	2.5 times the rated voltage shall be applied for 1 to 5 sec. Charging and discharging current shall be limited to 50 mA max.
4. Insulation resistance	10,000 MΩ min.	Shall be measured 1 minute after with rated voltage.
5. Capacitance	To be within the specified tolerance	Test frequency: 1MHz ± 100Hz. Test voltage shall not exceed 5Vrms at 25 ± 2°C
6. Q Value	$C \leq 30\text{PF}$ $Q = 400 + 20C$ $C > 30\text{PF}$ $Q > 1000$	Same condition as above (Item 5)
7. Temperature Coefficient	To be within the specification.	T.C. shall be calculated by the following formula: $\text{PPM/}^\circ\text{C} = \frac{C(t_1) - C(t_2)}{C_{t1} (t_2 - t_1)} \times 10^6$ Ct2 = capacitance at t2. Ct1 = capacitance at t1 t2 = 85 ± 3°C t1 = 25 ± 2°C

Part Code Designation

Example: $\frac{T}{(1)}$ $\frac{CH}{(2)}$ $\frac{1H}{(3)}$ $\frac{120}{(4)}$ $\frac{K}{(5)}$ — $\frac{K}{(6)}$ $\frac{5}{(7)}$ $\frac{5}{(8)}$ $\frac{5}{(9)}$ $\frac{Y}{(10)}$