

CERAMIC DISC CAPACITORS OF HIGH DIELECTRIC CONSTANT (CLASS 2)

HI-K (For By-pass & Coupling Circuit)

Capacitors possess excellent qualities in many ways. Viewed from the standpoint of electronics components, the following points are notable as special features:

- a) Extremely high dielectric constants compared with other dielectrics, resulting in producing small-sized capacitors with large capacitance.
- b) Quite simple construction as capacitors, permitting their use over a wide frequency range.
- c) Excellent heat resistance; decrease in insulation resistance caused by temperature rise is negligible.
- d) Good moisture resistance for permanent use under normal atmospheric conditions.

CAPACITANCE EXPRESSION**Example:**

104=	0.1 μ F=	100nF=	100,000pF
223=	0.022 μ F=	22nF=	22,000pF
472=	0.0047 μ F=	4.7nF=	4,700pF
821=			820pF

ELECTRIC CHARACTERISTICS**1. Capacitance and Tolerance**

Measured at a temperature at 20 $^{\circ}$ C, using an AC current at a frequency of 1KHz \pm 0.1KHz and at an effective value of 5V (less than 3V when rated voltage is less than 50V), without applying bias.

Capacitance tolerance				
Code	K	M	P	Z
Tolerance	$\pm 10\%$	$\pm 20\%$	+100 - 0 %	+80 - 20 %

T.C.	B	D	E	F
Cap. Tolerance	K.M	M	M.P	Z

2. Dissipation

Same as method used in the above capacitance measurement.

T.C.	B	D	E	F
MAX tan δ (%)	2.5%	2.5%	2.5%	2.5%

3. Insulating Resistance

Resistance between terminals of the capacitor shall not be less than 10,000 Megohms when measured 1 minute after application of DC. test voltage from 100 to 500 through a protective resistance of 1 Megohm.

W.V	50V.DC	500~7.5KV.DC
I.R	10,000M Ω MIN	10,000M Ω MIN

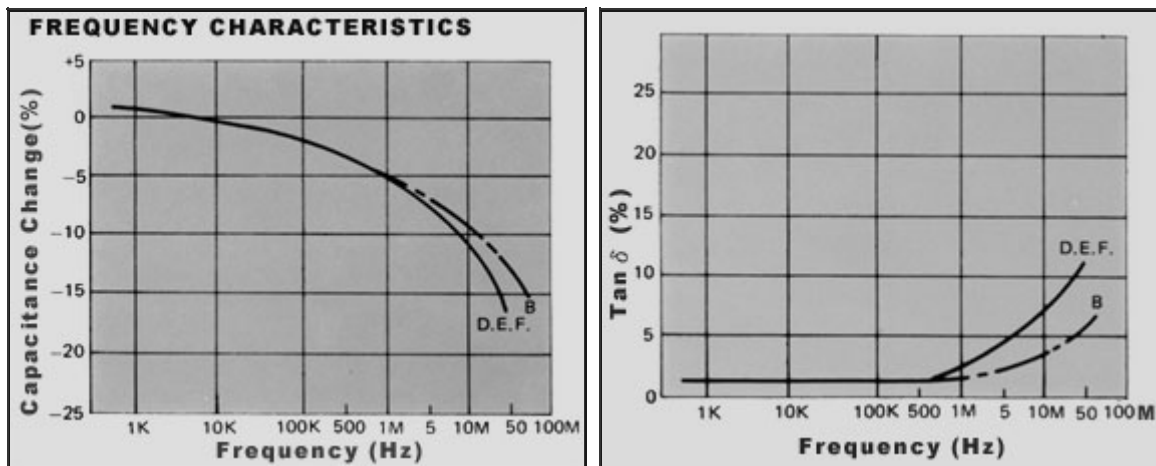
Working Voltage	Testing Voltage
Less than 100V	Same as Working Voltage
100V~500V	100V \pm 15V
more than 500V	500V \pm 50V

4. Testing Voltage

DC voltage is applied between terminals 1~ 5 seconds, through a resistor with maximum charging discharging current less than 50mA.

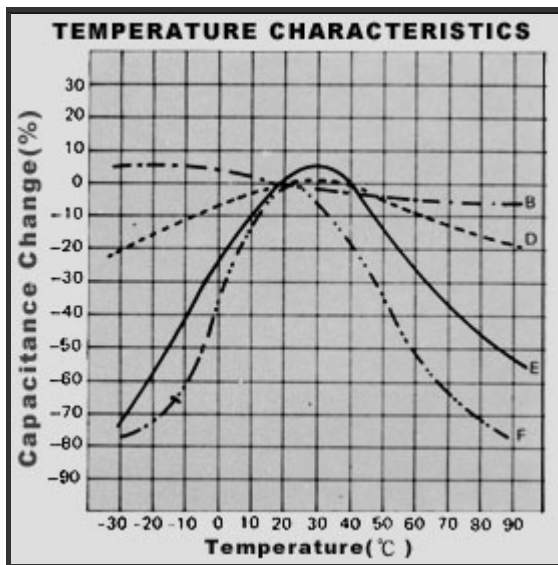
W.V	25~500V	1~2KV	3~5KV	6~15KV
T.V	W.V x 3	W.V x 2	W.V x 1.75	W.V. x 1.5







FREQUENCY CHARACTERISTICS

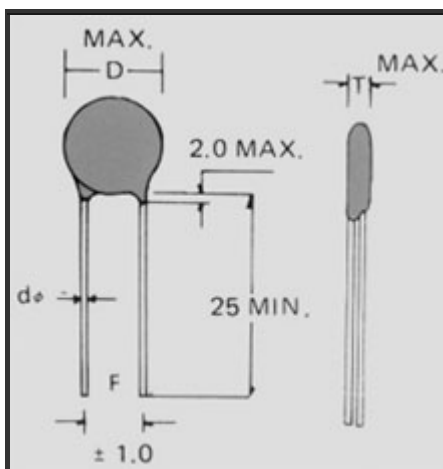


5. Temperature Characteristics of Hi-k Capacitor of JIS 6422 and EIA RS-198

EIA RS-198				JIS 6422			
Temperature Range	Class	Capacitance Change Rate (%)	Temperature Characteristics	Temperature Characteristics	Capacitance Change Rate(%)	Class	Temperature Range
+10 ^{°C} ~+85 ^{°C}	Z5	\pm 4.7	E	A	-	Z	-10 ^{°C} ~+70 ^{°C}
-30 ^{°C} ~+85 ^{°C}	Y5	\pm 7.5	F	-	-	Y	-25 ^{°C} ~+85 ^{°C}
-55 ^{°C} ~+85 ^{°C}	X5	\pm 10.0	P	B	\pm 10.0	X	-55 ^{°C} ~+85 ^{°C}
~+105 ^{°C}	6	\pm 15.0	R	-	-	-	-
~+125 ^{°C}	7	\pm 22.0	S	-	-	-	-
-	-	+22~-33	T	D	+20~-30	-	-
-	-	+22~-56	U	E	+20~-55	-	-
-	-	+22~-82	V	F	+30~-80	-	-



Diameter	6 Ø, 8 Ø	more than 10 Ø
T.C.		
B.D.	 Caacitance Capacitance Tolerance Working Voltage Temperature Characteristics	 Capacitance Capacitance Tolerance Working Voltage Temperature Characteristics
E	 Capacitance Working Voltage	 Capacitance Capacitance Tolerance Working Voltage Temperature Characteristics
F	 Capacitance Working Voltage	 Capacitance Capacitance Tolerance Working Voltage Manufacturer



Specifications:

1. Temperature Range
2. Working Voltage
3. Testing Voltage
4. Insulating Resistance
5. Testing Condition

-25 °C ~ +85 °C
 50V. DC
 150V. DC. 1 ~ 5 Sec. (50mA Max)
 10,000MΩ Min. (50V. DC.)
 1KHz (0.5 ~ 3Vrms) at 20 °C