

CERAMIC DISC CAPACITORS

CLASS I TEMPERATURE COMPENSATION

FEATURES

- * Linear temperature coefficient of capacitance.
- * High stability of capacitance.
- * Low loss at wide range of frequency.

SPECIFICATIONS

- * Operating temperature range: $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- * Storage Temperature range: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- * Rated working voltage: 50 V.DC, 500 V.DC
- * Test voltage: 3 times of the rated voltage
- * Capacitance: Within the tolerance at 1 MHz, 1 to 3V rms, 25°C
- * Q factor: At 1 MHz, 1 to 3V rms, 25°C .
 $C > 30\text{pF} \dots\dots\dots Q \geq 1,000$
 $C \leq 30\text{pF} \dots\dots\dots Q \geq 400 + 20C$
 (C: Rated capacitance)
- * Insulation resistance: 10,000 Megohms min.

* Load life test:

After application of 200% of the rated voltage for 1000 hours at 85°C , capacitors shall meet the following. Measurement shall be made after 24 hours exposure at room temperature.

Item	Temp. Char.	T.C. (NP0 — N750, SL)	
		≤ 30pF	> 30pF
Capacitance Change		≤ ±5% or ≤ ±0.3pF	≤ ±3%
Q Factor		$Q \geq 275 + 5/3C$	$Q \geq 350$
Insulation Resistance		≥ 1000MΩ	

* Humidity test:

The capacitors shall be exposed in the ambient temperature of 40°C , and at 95% R.H. for 500 hours. The capacitors shall meet the following after 24 hours exposure at room temperature.

Item	Temp. Char.	T.C. (NP0 — N750, SL)	
		≤ 30pF	> 30pF
Capacitance Change		≤ ±5% or ≤ ±0.5pF	≤ ±5%
Q Factor		$Q \geq 275 + 5/3C$	$Q \geq 350$
Insulation Resistance		≥ 1000MΩ	

TEMPERATURE COMPENSATING MATERIAL

EIA	CO	S1	U1	P2	R2	S2	T2	U2	SL
JIS	C	H	L	P	R	S	T	U	SL
T.C. PPM/°C	NP0	N30	N50	N150	N220	N330	N470	N750	P350 to N1000