

CERAMIC DISC CAPACITORS-CLASS 1

SPECIFICATIONS

1. Operating temperature range: -25°C to 85°C
2. Capacitance: Within the specified tolerance at 25°C , 1MHz, 0.1 to 3V rms.
3. Capacitance tolerance
 $\pm 0.25\text{pF(C)}$ or $\pm 0.5\text{pF(D)}$ for $\text{Cap.} \leq 5\text{pF}$
 $\pm 0.5\text{pF(D)}$ or $\pm 1\text{pF(F)}$ for $\text{Cap.} > 5\text{pF}$ or $\leq 10\text{pF}$
 $\pm 5\%(J)$ or $\pm 10\%(K)$ for $\text{Cap.} > 10\text{pF}$
4. Voltage proof (flash test): No breakdown at 2.5 times rated working voltage for 1 sec.
5. Q(quality factor): At 25°C , 1MHz, 0.1 to 3V rms.
 $C \geq 30\text{pF} \dots Q \geq 1000$
 $C < 30\text{pF} \dots Q \geq 400+20C$
 (where, C=Rated capacitance)
6. Insulation resistance: $10,000\text{M}\Omega$ min. at 50V, 60 sec.
7. Temperature characteristics (TC)

Temp. chara.	Max. Cap. change from 25°C value over Temp. range -25°C to 85°C shall be:	Equivalent to	
		IEC	EIA
B	$\pm 10\%$	2B4	Y5P
D	+20,-30%	2D4	Y5T
F	+30,-80%	2F4	Y5V, Z5V

8. Life test (endurance): Capacitors shall be subjected to life test for 1000 hours at $85^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and 100V DC. After removal from the oven, capacitors shall be cooled 1 to 2 hours to standard condition for testing, and then measured.
 Cap. change: 3% or 0.3pF, whichever is greater
 Q: $C \geq 30\text{pF} \dots Q \geq 350$
 $30\text{pF} > C \geq 10\text{pF} \dots Q \geq 275+5/2C$
 $C < 10\text{pF} \dots Q \geq 200+10C$
 (where, C=Rated capacitance)
 insulation resistance: $1000\text{M}\Omega$ min.
9. Humidity life test (damp heat, accelerated): Capacitors shall be subjected to humidity life test 500 hours at $40 \pm 2^{\circ}\text{C}$, 90 to 95% RH, and 50V DC. After removal from the oven, capacitors shall be cooled 1 to 2 hours to standard condition for testing, and then measured..
 Cap. change: $\pm 7.5\%$ or 0.75 pF, whichever is greater
 Q: $C \geq 30\text{pF} \dots Q \geq 200$
 $C < 30\text{pF} \dots Q \geq 100+10/3C$
 (where, C=Rated capacitance)
 Insulation resistance: $500\text{M}\Omega$ min.

DIAMETERS AND RATED CAPACITANCE RANGE

Max. Diameter Mm(inch)	50V				500V		1KV		2KV	
	B (K)	D (K.M)	E (M.Z)	F (Z)	B (K.M)	E (Z.P)	B (K.M)	E (Z.P)	B (K.M)	E (Z.P)
5.0(.197)	270-1500	560-2200	100-5000	2200-.01						
6.0(.236)	1500-2200	1500-3900	3900-8200	5000-.015	100-1000	100-2200	100-820	100-1200		
7.5(.295)	2200-3900	2700-5600	6800-.015	.01-.027						
8.5(.335)	3900-5600	4700-8200	.01-.018	.022-.4	1000-2700	2200-5600	1000-1800	1500-2700	100-1000	500-2200
9.5(.374)	5600-6800	6800-.01	.01-.022	.033-.05	2200-3300	4700-7500	1500-2700	2700-5000	1000-1500	2200-3900
11.0(.433)	6800-.01	8200-.015	.022-.033	.047-.068	3300-4700	6800-.01	2700-3900	5000-6800	1500-2200	3900-5000
14.0(.551)			.033-.056	.068-.1	4700-6800		3900-5600	6800-01	2200-3900	5000-7500
16.0(.630)					6800-.01		5600-8200			

ORDERING TERMINOLOGY

CK45 B IH 120 M Y J

(1) (2) (3) (4) (5) (6) (7)

(1) Ceramic disc capacitor, class 2

(2) Temp. characteristics

(3) 1H-50V

(4) Rated capacitance

(5) Capacitance tolerance

(6) Grade

(7) A-Long lead

J-Kind lead

P-Taped straight lead

R-Taped kink lead

S-Short lead