

High Voltage Ceramic Capacitors 500V-4KV



HV Series

MERITEK

SPECIFICATIONS

Operating Temperature	SL and Y5P: -30°C to +85°C Z5U and Z5V: +10°C to +85°C
Temperature Characteristic	SL: P350 to N1000 Y5P: ±10% Z5U: +22/-56% Z5V: +22/-82%
Capacitance	SL: Measured at 1 ±0.1MHz, 1Vrms max. at 25°C Y5P, Z5U and Z5V: Measured at 1 ±0.1KHz, 1Vrms max. at 25°C
Rated voltage	500VDC to 4000VDC
Quality and dissipation factor	SL: <30pF >400 + 20°C min., =30pF >1000 Y5P and Z5U: 2.5% max. Z5V: 5.0% max.
Tested voltage	500V: 250% rated voltage 1000V to 4000V: 150% rated voltage
Insulation resistance	10,000 Mega ohms min. at 500VDC 60 sec. charging
Coating material	500V to 2000V phenolic or epoxy resin coating = 3000V epoxy resin (94V-0)



PART NUMBERING SYSTEM

HV **Y5P** **471** **K** **2KV** **6** **B** **1**

High voltage series

Temperature characteristics

Capacitance

CODE	1R5	330	201	202	333	104
	1.5pF	33pF	200pF	2000pF	.033μF	0.1μF

Capacitance tolerance

CODE	Tolerance	Applicable T.C.	Available Capacitances
C	±0.25pF	NPO-N750	0.5pF-5pF
D	±0.5pF	NPO-N750	0.5pF-10pF
J	±5%	NPO-N1500	Over 5pF
K	±10%	NPO-N1500, Y5E, Y5P	Over 10pF
M	±20%	NPO-N1500, Y5E, Y5P, Z5U	Over 10pF
S	+50/-20%	Z5U	Over 1000pF
Z	+80/-20%	Z5U, Z5V	Over 1000pF
P	+100/-0%	Z5U, Z5V	Over 1000pF

Rated voltage

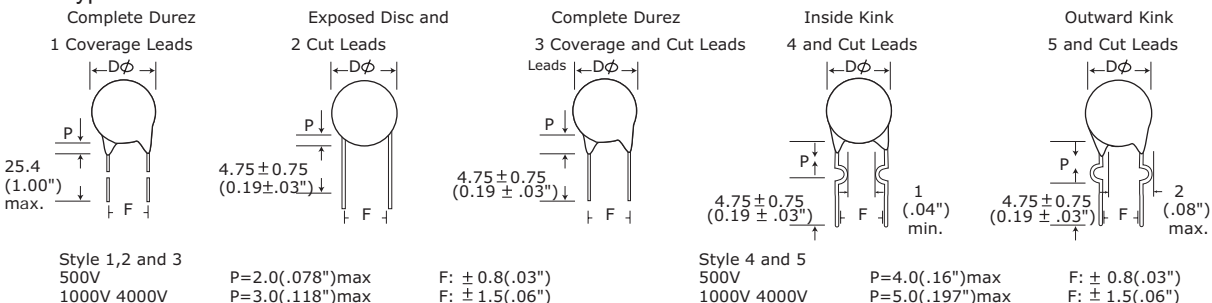
Lead spacing

CODE	5	6	7	9
	5.08mm	6.35mm	7.62mm	9.52mm

Packaging code

CODE	B	R	F
	Bulk	Tape & Reel	Tape & Ammo (Flat)

Lead type



Specifications are subject to change without notice.

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RATED VOLTAGE (VDC)	TEMP CHARACTERISTICS / CAPACITANCE (pF)				DIMENSIONS (mm)		
	SL	Y5P (B)	Z5U (E)	Z5V (F)	D max.	T	dØ
500V	1-82	100-820	100-2200	470-2200	6	4	0.5 ±.05
	83-150	1000-1500	3300	3300-5600	7		
	180	2200	4700-5600	6800	8		
	220		6800	10000	9		
	270-330	3300	8200	15000	10		
	390-560		10000	22000	12		
	680-820	4700	15000	33000	14		
	1000	10000	22000	47000	16		
			33000	56000	18		
			47000	100000	22		
1000V	1-82	100-470	100-1500	470-2200	6	5	0.6 ±.05
	100-120	560-820	2200	3300	7		
	150	1000	3300	4700	8		
	180	1500	4700	5600	9		
	220	2200	5600-6800	6800	10		
	270-390	3300	8200-10000	8200-15000	12		
	470-560	4700	-		14		
	680-820	5600-6800	15000	22000	16		
	1000	8200-10000	22000	33000	18		
			-		20		
2000V	1-50	100-330	100-680	470-1000	7	6	0.6 ±.05
	56-82	390	820-1000	1500	8		
	100-120	470-560	1500	2200	9		
	150	680-820	2200	3300	10		
	180	1000	3300	4700-5600	12		
	220	1500	4700-5600	6800-8200	14		
	270-390	2200	6800-8200	10000	16		
	470-560	3300	10000	15000	18		
	680	4700	-	22000	20		
	820	5600-6800	15000	-	22		
3000V	1-33	100-220	100-560	470-1000	8	7	0.6 ±.05
	39-47	330	680-820	-	9		
	56-68	470	1000-1500	1500	10		
	82-100	560-680	2200	2200	12		
	120-150	820	-	3300	14		
	180-220	1000-1500	3300-4700	4700	16		
	270-330	2200		6800-8200	18		
	470	3300	8200	10000	20		
	560	-	10000	-	22		
	680	4700	-	15000	24		
		15000	22000	26			

NPO and X7R dielectrics also available

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RATED VOLTAGE (VDC)	TEMP CHARACTERISTICS / CAPACITANCE (pF)				DIMENSIONS (mm)		
	SL	Y5P (B)	Z5U (E)	Z5V (F)	D max.	T	dØ
4000V	1-33	100-220	100-680	470-1000	8	8	0.6 ±.05
	47-56	330	820		9		
	68	470	1000	1500	10		
	82-100	560	1500	2200	12		
	120	680-820	2200	3300	14		
	150-180	1000	3300	4700	16		
	220	1500	4700	-	18		
	270-330	2200	-	-	20		
	390	3300	-	10000	22		
	470	-	10000	-	24		
	560-680	4700	15000	15000	26		

SPECIFICATIONS	COG / NPO	X7R	Z5U
Temperature Characteristic	0 ±30ppm/°C	±15%	+22/-56% (+10°C to 85°C)
Operating Temperature Range	-55°C to +125°C	-55°C to +125°C	+10°C to +85°C
Dissipation Factor (25°C, 1KHz)	0.15% max. at 1Vrms	2.5% max. at 1Vrms	3.5% max. at 0.5Vrms
Insulation Resistance at 25°C, rated voltage (min.)	100K Mega ohms or 1000 Mega ohms x µF whichever is less	100K Mega ohms or 1000 Mega ohms x µF whichever is less	10K Mega ohms or 500 Mega ohms x µF whichever is less
Dielectric Withstanding Voltage (50mA max., 5 sec.)	2.5 x Rated Voltage	2.5 x Rated Voltage	2.5 x Rated Voltage
Life Test (1,000 hours)	2 x Rated Voltage at +125°C	2 x Rated Voltage at +125°C	1.5 x Rated Voltage at +85°C