

HIGH VOLTAGE CERAMIC CAPACITOR

mura

TC / HiK High Voltage Ceramic Capacitors

FEATURES

1. Extremely small diameter to $\phi 4.5\text{mm}$.
2. Lead distance of 1kV and 2kV is 5mm, marking it well-suited to high density mounting.
3. Coated with flame-retardant epoxy resin (equivalent to UL94V-0 standards.)
4. Automatic insertion can be, and save costs.



MARKING

Example	Item
	① Temperature Characteristic [Identified by code for B and E (Rated voltage 3.15kV and under .) Omitted for maximum body diameter $\phi 9\text{mm}$ and under.]
	② Nominal Capacitance (Under 100pF : Actual value, 100pF and over : Identified by 3 figures code.)
	③ Capacitance Tolerance (Omitted for maximum body diameter $\phi 6\text{mm}$ and under.)
	④ Rated Voltage (For 3.15kV...3kV, 6.3kV...6kV)
	⑤ Manufacturer's Identification (Omitted for maximum body diameter $\phi 9\text{mm}$ and under.)
	⑥ Manufactured Date Code (Omitted for maximum body diameter $\phi 9\text{mm}$ and under.)

DIMENSION

•Bulk

Configuration	Straight Long	Straight Short
Lead Code	No Code	—1
Dimension (in mm)	<p>Non vertical crimped type : Apply to DE0405/DE0505/DE0507/ DE0607 and rated voltage of 6.3kV</p> <p>Vertical crimped type : Except for DE0405/DE0505/DE0507/ DE0607 and rated voltage of 6.3kV</p>	<p>Non vertical crimped type : Apply to DE0405/DE0505/DE0507/ DE0607 and rated voltage of 6.3kV</p> <p>Vertical crimped type : Except for DE0405/DE0505/DE0507/ DE0607 and rated voltage of 6.3kV</p>

• Please see "STANDARD LIST" on nominal body diameter (D) and lead spacing (F) .

*1 Thickness of Body (T)

Rated Voltage (VDC)	Thickness of Body T (mm)
1k	4.0
2k	5.0
3.15k	6.0
6.3k	7.0


*2 $\phi 0.5 \pm 0.05\text{mm}$ in case of nominal body diameter $\phi 5\text{mm}$ and under (Type : DE04□, DE05□) .

*3 Vertical crimped type : Up to the end of crimp.

■ STANDARD LIST

Conventional High-Voltage






SL Characteristic

Nominal Capacitance (pF)	Max. Body Dia. D(mm)	Lead Spacing F(mm)	Rated Voltage (kVDC)	Part Number (□ : means optional lead code shown on the right.)	Lead Configuration / Lead Code
					Straight Long
					
22 27 33 39 47	9	10.0	6.3	DE0910 □ SL 220 J 6K DE0910 □ SL 270 J 6K DE0910 □ SL 330 J 6K DE0910 □ SL 390 J 6K DE0910 □ SL 470 J 6K	No Code
56	10			DE1010 □ SL 560 J 6K	
68	12			DE1210 □ SL 680 J 6K	
82				DE1210 □ SL 820 J 6K	
100	13			DE1310 □ SL 101 J 6K	
120	14			DE1410 □ SL 121 J 6K	
150	15			DE1510 □ SL 151 J 6K	






•Please contact us for details.

•Please see page 13 for SL char (1 to 3.15kV) .



B Characteristic

Nominal Capacitance (pF)	Max. Body Dia. D(mm)	Lead Spacing F(mm)	Rated Voltage (kVDC)	Part Number (□ : means optional lead code shown on the right.)	Lead Configuration / Lead Code										
					Straight Long	Straight Short	Taping								
									 Lead spacing F : 5.0 Pitch of component P : 12.7	 Lead spacing F : 7.5 Pitch of component P : 15.0	 Lead spacing F : 7.5 Pitch of component P : 30.0				
100 150 220 330 470 680 1000 1500 2200 3300 4700 6800	4.5 5 6 8 9 10 12 15	5.0	1	DE0405□B 101 K 1 K DE0405□B 151 K 1 K DE0405□B 221 K 1 K DE0405□B 331 K 1 K DE0505□B 471 K 1 K DE0605□B 681 K 1 K DE0605□B 102 K 1 K DE0805□B 152 K 1 K DE0905□B 222 K 1 K DE1005□B 332 K 1 K DE1207□B 472 K 1 K DE1507□B 682 K 1 K	No Code	-1	-979	-	-						
100 150 220 330 470 680 1000 1500 2200 3300 4700	4.5 5 6 7 8 9 10 12 15			5.0			2	DE0405□B 101 K 2 K DE0405□B 151 K 2 K DE0405□B 221 K 2 K DE0505□B 331 K 2 K DE0605□B 471 K 2 K DE0705□B 681 K 2 K DE0805□B 102 K 2 K DE0905□B 152 K 2 K DE1005□B 222 K 2 K DE1207□B 332 K 2 K DE1507□B 472 K 2 K	-979	-	-				
100 150 220 330 470 680 1000 1500 2200 3300 4700	5 6 7 8 9 11 13 15							7.5	3.15	DE0507□B 101 K 3 K DE0507□B 151 K 3 K DE0507□B 221 K 3 K DE0607□B 331 K 3 K DE0707□B 471 K 3 K DE0807□B 681 K 3 K DE0907□B 102 K 3 K DE1107□B 152 K 3 K DE1307□B 222 K 3 K DE1507□B 332 K 3 K	-	-486	-		
100 150 220 330 470 680 1000 1500 2200 3300	9 10 11 13									10.0	6.3	DE0910□B 101 K 6 K DE0910□B 151 K 6 K DE0910□B 221 K 6 K DE0910□B 331 K 6 K DE1010□B 471 K 6 K DE1110□B 681 K 6 K DE1310□B 102 K 6 K	-	-	-

E Characteristic

Nominal Capacitance (pF)	Max. Body Dia. D(mm)	Lead Spacing F(mm)	Rated Voltage (kVDC)	Part Number (□ : means optional lead code shown on the right.)	Lead Configuration / Lead Code					
					Straight Long	Straight Short	Taping			
										
							Lead spacing F : 5.0 Pitch of component P : 12.7	Lead spacing F : 7.5 Pitch of component P : 15.0	Lead spacing F : 7.5 Pitch of component P : 30.0	
1000	5	5.0	1	DE0505 □ E 102 Z 1 K	No Code	—1	—979	—	—	
2200	7			DE0705 □ E 222 Z 1 K			—	—486		
4700	9			DE0905 □ E 472 Z 1 K						
10000	13	DE1307 □ E 103 Z 1 K		—			—			
1000	6	5.0	2	DE0605 □ E 102 Z 2 K			—979	—	—	—477
2200	8			DE0805 □ E 222 Z 2 K						
4700	11			DE1105 □ E 472 Z 2 K						
10000	16	DE1607 □ E 103 Z 2 K								
1000	7	7.5	3.15	DE0707 □ E 102 Z 3 K				—	—486	—
2200	10			DE1007 □ E 222 Z 3 K						
4700	13			DE1307 □ E 472 Z 3 K						
1000	11	10.0	6.3	DE1110 □ E 102 Z 6 K		—				
2200	15			DE1510 □ E 222 Z 6 K						

F Characteristic

Nominal Capacitance (pF)	Max. Body Dia. D(mm)	Lead Spacing F(mm)	Rated Voltage (kVDC)	Part Number (□ : means optional lead code shown on the right.)	Lead Configuration / Lead Code			
					Straight Long	Straight Short	Taping	
								
2200	6	5.0	1	DE0605 □ F 222 Z 1K	No Code	—1	Lead spacing F : 5.0 Pitch of component P : 12.7	Lead spacing F : 7.5 Pitch of component P : 15.0
4700	7			DE0705 □ F 472 Z 1K			—979	—
10000	10			DE1005 □ F 103 Z 1K				
1000	5	5.0	2	DE0505 □ F 102 Z 2K				
2200	7			DE0705 □ F 222 Z 2K			—	—486
4700	9			DE0905 □ F 472 Z 2K				
10000	12	7.5		DE1207 □ F 103 Z 2K				

Please contact us for details.

SPECIFICATION AND TEST METHOD

Item			Specification		Testing Method	
			Temp. Compensating	High Dielectric Constant		
1	Operating Temperature Range		-25 to +85°C		-25 to +85°C	
2	Capacitance		Within the specified tolerance.		Within the specified tolerance.	
3	Q Dissipation Factor (D. F.)		SL	C≥30pF : Q≥1000 C<30pF : Q≥400+20C ¹⁾	B, E F	D. F. ≤2.5% D. F. ≤5.0%
4	Insulation Resistance (I. R.)	Between Lead wires	10000MΩ min.		10000MΩ min.	
5	Dielectric Strength	Between Lead wires	No failure.		No failure.	
		Body Insulation	No failure.		No failure.	
6	Temperature Characteristic		T. C. SL	Temp. Coefficient +350 to -1000pm / °C (Temp. Range : +20 to +85°C)	T.C. B E F	Cap. Change within±10% within ⁺²⁰ ₋₅₅ % within ⁺³⁰ ₋₈₀ %
7	Vibration Resistance	Appearance	No marked defect.		No marked defect.	
		Capacitance	Within the specified tolerance.		Within the specified tolerance.	
		Q. D. F.	SL	C≥30pF : Q≥1000 C<30pF : Q≥400+20C ¹⁾	B, E F	D. F. ≤2.5% D. F. ≤5.0%
8	Soldering Effect	Appearance	No marked defect.		No marked defect.	
		Capacitance Change	SL	within±2.5%	B E F	within±5% within±15% within±20%
		Dielectric Strength (Between lead wires)	Pass the item No. 5.		Pass the item No. 5.	
9	Humidity (Under Steady State)	Appearance	No marked defect.		No marked defect.	
		Capacitance Change	SL	within±5%	B E F	within±10% within±20% within±30%
		Q. D. F.	SL	C≥30pF : Q≥350 C<30pF : Q≥275+ ⁵ / ₂ C ¹⁾	B, E F	D. F. ≤5.0% D. F. ≤7.5%
		I. R.	1000MΩ min.		1000MΩ min.	
10	Humidity Loading	Appearance	No marked defect.		No marked defect.	
		Capacitance Change	SL	within±7.5%	B E F	within±10% within±20% within±30%
		Q D. F.	SL	C≥30pF : Q≥200 C<30pF : Q≥100+ ¹⁰ / ₃ C ¹⁾	B, E F	D. F. ≤5.0% D. F. ≤7.5%
		I. R.	500MΩ min.		500MΩ min.	
11	Life	Appearance	No marked defect.		No marked defect.	
		Capacitance Change	SL	within±3%	B E F	within±10% within±20% within±30%
		Q D. F.	SL	C≥30pF : Q≥350 C<30pF : Q≥275+ ⁵ / ₂ C ¹⁾	B E F	D. F. ≤4.0% D. F. ≤7.5%
		I. R.	2000MΩ min.		2000MΩ min.	
12	Strength of Lead	Pull	Lead wire shall not cut off. Capacitor shall not be broken.		As a figure, fix the body of capacitor, apply a tensile weight gradually to each lead wire in the radial direction of capacitor up to 10N (1.0kgf) 5N (0.51kgf) for Lead diameter φ (0.5) , and keep it for 10±1 sec.	
		Bending			Each lead wire shall be subjected to 5N (0.51kgf) 2.5N (0.25kgf) for Lead diameter φ(0.5) weight and then a 90° bend, at the point of egress, in one direction, return to original position, and then a 90° bend in the opposite direction at the rate of one bend in 2 to 3 seconds.	
13	Solderbility of Leads		Lead wire shall be soldered with uniformly coated on the axial direction over ³ / ₄ of the circumferential direction.		The lead wire of a capacitor shall be dipped into a methanol solution of 25wt% rosin and then into molten solder of 235±5°C for 2±0.5 seconds. In both cases the depth of dipping is up to about 1.5 to 2mm from the root of lead wires.	

1) "C" expresses nominal capacitance value (pF) .

2) "room condition" temperature : 15 to 35°C, humidity : 45 to 75%, atmospheric pressure : 86 to 106kPa