

EMI Suppression Capacitors Y2 Class 1000VDC

MEY-1K0D Series

MERITEK

FEATURE

- Self-Healing Property
- Dielectric: Metallized Polypropylene Film
- Winding: Non-Inductive Type
- Over Voltage Stress Withstanding
- Flammability Classification 94V-0
- UL/cUL Safety Approved: Certification No: E197475



PART NUMBERING SYSTEM

MEY 223 K 1K0D xxxx
(1) (2) (3) (4) (5)



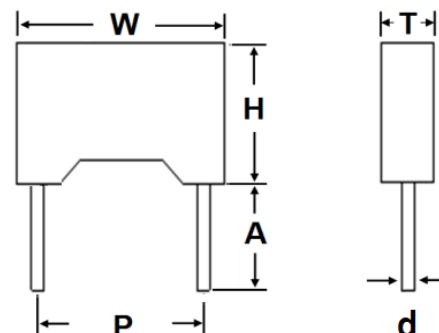
No	Item	Digit	Description	Reference
(1)	Meritek Series	MEY	EMI Suppression Capacitors	Y2 Class Safety Film Capacitor
(2)	Capacitance	223	223: 22000pF	First two digits: Significant, Third: Multiplier
(3)	Tolerance	K	K: ±10%	±5% (J), ±20% (M)
(4)	Rated Voltage	1K0D	1K0D:1000VDC	800D: 800VDC, 1K3D: 1350VDC, 1K5D:1500VDC
(5)	Internal Code	xxxx	Pitch or Internal control code	Internal Control or project reference

SPECIFICATIONS

Item	Characteristic	
Operating Temperature Range	-40°C ~ +110°C	
Rated Voltage , Climate Category	1000VDC	40/110/56/B
Capacitance, Tolerance	0.001μF ~ 0.1μF,	±5% (J), ±10% (K), ±20% (M)
Dissipation Factor (tan δ)	≤0.1%	at 1KHz ±2%, ≤1.0V _{RMS}
Insulation Resistance	≥ 15,000MΩ (C≤0.33μF) ≥ 5,000MΩ*μF/C (C>0.33μF)	VR=500VAC, Vt=500VDC, 250VAC ≤VR<500VAC, Vt=500VDC, Change Time: 60s ±5s
Withstanding Voltage	Between Terminals	Between Terminals and Case
	2,000VAC for 2sec. or 4,000VDC for 2 sec.	2*Ur+1.5KV _{AC} for 2~5s, Min 2KV _{AC}

DIMENSION

P (mm)	d (mm)	W, H, T (mm)
7.5	0.6	See Table Attached
10.0	0.6	
15.0	0.6	
22.5	0.8	
27.5	0.8	



Note:

1. Standard lead length A: 15mm min.
2. Contact Meritek for other available options for lead forming or assembly

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ELECTRICAL SPECIFICATION – 1000VDC

Part Number	Cap Code	Cap	Tol	Volt	W	H	T	P	d	Safety
		(uF)	(%)	(V _{DC})	(mm)	(mm)	(mm)	(mm)	(mm)	Compliance
MEY102□1K0D75	102	0.0010	J,K,M	1000	10.5	9.0	4.0	7.5	0.6	UL,cUL,ENEC
MEY152□1K0D75	152	0.0015	J,K,M	1000	10.5	9.0	4.0	7.5	0.6	UL,cUL,ENEC
MEY222□1K0D75	222	0.0022	J,K,M	1000	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY272□1K0D75	272	0.0027	J,K,M	1000	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY332□1K0D75	332	0.0033	J,K,M	1000	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY392□1K0D75	392	0.0039	J,K,M	1000	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY472□1K0D75	472	0.0047	J,K,M	1000	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY562□1K0D75	562	0.0056	J,K,M	1000	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY102□1K0D10	102	0.0010	J,K,M	1000	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY152□1K0D10	152	0.0015	J,K,M	1000	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY222□1K0D10	222	0.0022	J,K,M	1000	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY272□1K0D10	272	0.0027	J,K,M	1000	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY332□1K0D10	332	0.0033	J,K,M	1000	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY392□1K0D10	392	0.0039	J,K,M	1000	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY472□1K0D10	472	0.0047	J,K,M	1000	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY562□1K0D10	562	0.0056	J,K,M	1000	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY682□1K0D10	682	0.0068	J,K,M	1000	13.0	12.0	6.0	10.0	0.6	UL,cUL,ENEC
MEY822□1K0D10	822	0.0082	J,K,M	1000	13.0	12.0	6.0	10.0	0.6	UL,cUL,ENEC
MEY103□1K0D10	103	0.0100	J,K,M	1000	13.0	12.0	6.0	10.0	0.6	UL,cUL,ENEC
MEY153□1K0D10	153	0.0150	J,K,M	1000	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY123□1K0D10	123	0.0120	J,K,M	1000	13.0	12.0	6.0	10.0	0.6	UL,cUL,ENEC
MEY102□1K0D15	102	0.0010	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY152□1K0D15	152	0.0015	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY222□1K0D15	222	0.0022	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY272□1K0D15	272	0.0027	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY332□1K0D15	332	0.0033	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY392□1K0D15	392	0.0039	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY472□1K0D15	472	0.0047	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY562□1K0D15	562	0.0056	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY682□1K0D15	682	0.0068	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY822□1K0D15	822	0.0082	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY103□1K0D15	103	0.0100	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY123□1K0D15	123	0.0120	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY153□1K0D15	153	0.0150	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY183□1K0D15	183	0.0180	J,K,M	1000	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC

Note: 1. □: denotes tolerance code; 2. **: Contact Meritek for Part Number

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ELECTRICAL SPECIFICATION – 1000VDC

Part Number	Cap Code	Cap	Tol	Volt	W	H	T	P	d	Safety
		(μ F)	(%)	(V _{DC})	(mm)	(mm)	(mm)	(mm)	(mm)	Compliance
MEY223□1K0D15	223	0.022	J,K,M	1000	17.0	11.0	5.5	15.0	0.6	UL,cUL,ENEC
MEY253□1K0D15	253	0.025	M	1000	18.0	12.0	6.0	15.0	0.6	UL,cUL,ENEC
MEY273□1K0D15	273	0.027	J,K,M	1000	17.0	11.0	5.5	15.0	0.6	UL,cUL,ENEC
MEY273□1K0D15	273	0.027	J,K,M	1000	18.0	12.0	6.0	15.0	0.6	UL,cUL,ENEC
MEY333□1K0D15	333	0.033	J,K,M	1000	18.0	12.0	6.0	15.0	0.6	UL,cUL,ENEC
MEY473□1K0D15	473	0.047	J,K,M	1000	18.0	13.5	6.0	15.0	0.6	UL,cUL,ENEC
MEY563□1K0D15	563	0.056	J,K,M	1000	17.0	15.5	7.5	15.0	0.6	UL,cUL,ENEC
MEY683□1K0D15	683	0.068	J,K,M	1000	17.0	15.5	7.5	15.0	0.6	UL,cUL,ENEC
MEY823□1K0D15	823	0.082	J,K,M	1000	17.0	16.5	9.5	15.0	0.6	UL,cUL,ENEC
MEY104□1K0D15	104	0.100	J,K,M	1000	17.0	16.5	9.5	15.0	0.6	UL,cUL,ENEC
MEY473□1K0D22	473	0.047	J,K,M	1000	25.0	14.5	6.0	22.5	0.8	UL,cUL,ENEC
MEY104□1K0D22	104	0.100	J,K,M	1000	26.5	16.5	7.0	22.5	0.8	UL,cUL,ENEC
MEY104□1K0D27	104	0.100	J,K,M	1000	31.5	16.5	7.5	27.5	0.8	UL,cUL,ENEC

Note: 1. □: denotes tolerance code; 2. **: Contact Meritek for Part Number

RELIABILTY AND TEST CONDITIONS

Item	Test Condition	Requirement
Capacitance	Measuring Frequency: $\pm 2\%$; Measuring Voltage: $\leq 1V_{rms}$.	Within the tolerance specified, at $+20\pm 5^{\circ}C$
Withstand Voltage-Between Terminals	Apply 2,000VAC for 2 sec. or 4,000VDC for 2 sec.	Within specified limits
Withstand Voltage - Between Terminals & Enclosure	Apply 2 times of rated voltage + 1.5KV _{AC} for 2~5sec. Min. 2KV _{AC}	Within specified limits
Dissipation Factor	Measuring Frequency: $\pm 2\%$; Measuring Voltage: $\leq 1V_{rms}$.	D.F. : $\leq 0.001(0.1\%)$ at 1KHz
Insulation resistance	VR=500VAC, Vt=500VDC, 250VAC \leq VR < 500VAC, Vt=500VDC, Change Time: 60s \pm 5s	$\geq 15,000M\Omega$ (C \leq 0.33 μ F) $\geq 5,000M\Omega \cdot \mu$ F/C (C>0.33 μ F)
Solderability	Soldering temperature: $+235\pm 5^{\circ}C$ Immersion duration: 2 ± 0.5 sec	More than 90% of circumferential surface of lead wire shall be covered with new solder
Tensile Terminal Strength	Apply 1.0Kg (10N) for 10 ± 1 sec to the terminal in the axial direction and acting in a direction away from the body.	Shall be no abnormality
Bending Strength	Apply 0.5Kg for 2 cycles. Each cycle includes: 90° once, return to its initial position for 2~3 sec. and then to the opposite direction once.	Shall be no abnormality

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RELIABILTY AND TEST CONDITIONS

Item	Test Condition	Requirement																	
Damp Heat	Temperature: +40°C ± 2°C, Relative Humidity: 90%~95% Time: 56days; After test, let rest for 1.5±0.5hr at ordinary condition before making measurements.	Appearance : No Visible Damage Withstand Voltage: Within specified limits ΔC/C: ≤ ±5% of the value before test DF: ≤ 0.002 (0.2%) Max at 1KHz IR: ≥ 50% of the rated value																	
Dry Heat Resistance	Temperature: 110°C ± 2°C, Times: 16 +1/-0Hrs																		
Cold Resistance	Temperature: -40±3°C, Times: 2±1Hrs																		
Temperature Cycle	Test Temperature Cycle: Total 5 cycles. Each cycle includes																		
	<table border="1"> <thead> <tr> <th>Cycle</th> <th>Temperature</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+20±2°C</td> <td>3 min</td> </tr> <tr> <td>2</td> <td>-40±3°C</td> <td>30min</td> </tr> <tr> <td>3</td> <td>+20±2°C</td> <td>3 min</td> </tr> <tr> <td>4</td> <td>+110±2°C</td> <td>30min</td> </tr> <tr> <td>5</td> <td>+20±2°C</td> <td>3 min</td> </tr> </tbody> </table>		Cycle	Temperature	Time	1	+20±2°C	3 min	2	-40±3°C	30min	3	+20±2°C	3 min	4	+110±2°C	30min	5	+20±2°C
	Cycle	Temperature	Time																
	1	+20±2°C	3 min																
	2	-40±3°C	30min																
3	+20±2°C	3 min																	
4	+110±2°C	30min																	
5	+20±2°C	3 min																	
After test, let rest for 1.5±0.5hr at ordinary condition before making measurements.																			
Vibration Resistance	Frequency change: 10~55~10Hz Vibration Distance: 1.5mm Test Direction: X, Y, Z Test Duration: 2+1/-0hrs each direction	Appearance : No mechanical Damage Connection: Shall be no short or open																	
Soldering Heat Resistance	Preheat Temperature: 100~120°C Preheat Duration: 60sec max Temperature increase by 3°C/sec max Soldering Temperature: +260±5°C Immersion Duration: 5±1sec Immersion Depth: 4±0.8mm from roots After test, allow it stay alone for 1.5±0.5hrs at ordinary condition before making measurements	Appearance: No Visible Damage Withstand Voltage: Within specified limits ΔC/C: ≤ ±3% of the value before test DF: ≤ 0.002 (0.2%) Max at 1KHz IR: ≥ 50% of the rated value																	
Endurance	Duration: 1,000 hours, Temperature: +110± 2°C Voltage: 1.7 times rated voltage. Once every hour the voltage increased to 1KVrms. For 0.1sec. The test voltage is applied to each capacitor individually through a Resistor of 47Ω±5%.	Appearance : No Visible Damage ΔC/C: ≤ ±10% of the value before test DF: ≤ 0.008 (0.8%) Max at 1KHz IR: ≥ 50% of the rated value																	
Humidity Resistance	Test Temperature: -40±2°C Test Humidity: 87% to 93% R.H. Test Voltage: rated voltage Test Duration: 500 hours After test, allow it stay alone for 1.5±0.5hrs at ordinary condition before making measurements	Appearance: No Visible Damage Withstand Voltage: Within specified limits ΔC/C: ≤ ±5% of the value before test DF: ≤ 0.002 (0.2%) Max at 1KHz IR: ≥ 50% of the rated value																	

Notes:

1. Ambient Temp: 15°C to 35°C, Relative Humidity (R.H.): 45% to 75%, Air Pressure: 86kpa to 106kpa
2. Operating Temperature: -40~110°C
3. Storage needs to be kept indoors at -10~+40°C and relative humidity of under 75% without any sudden temperature changes, direct sunlight and corrosive gas around
4. Do not apply and exceeding vibration, shock (dropping) and pressure

*Specifications subject to change without notice.