EMI Suppression Capacitors
Y2 Class 1500VDC

MEY-1K5D 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 (1) 223 (2) K (3) 1K5D (4) xxxx (5)

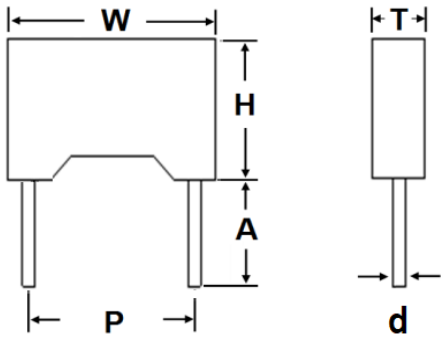
No	Item	Digit	Description	Reference
(1)	**Meritek Series**	MEY	EMI Suppression Capacitors	Y2 Class Safety Film Capacitor
(2)	**Capacitance**	223	223: 22000pF	First two digits: Significant, Third: Multiplier
(3)	**Tolerance**	K	K: ±10%	±5% (J), ±20% (M)
(4)	**Rated Voltage**	1K5D	1K5D:1500VDC	800D: 800VDC, 1K0D:1000VDC, 1K3D: 1350VDC
(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	1500VDC	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%, ≤1.0$_{VRMS}$
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 – 1500VDC

Part Number	Cap Code	Cap (uF)	Tol (%)	Volt (V_{DC})	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Safety Compliance
MEY102□1K5D75	102	0.0010	J,K,M	1500	10.5	9.0	4.0	7.5	0.6	UL,cUL,ENEC
MEY152□1K5D75	152	0.0015	J,K,M	1500	10.5	9.0	4.0	7.5	0.6	UL,cUL,ENEC
MEY222□1K5D75	222	0.0022	J,K,M	1500	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY272□1K5D75	272	0.0027	J,K,M	1500	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY332□1K5D75	332	0.0033	J,K,M	1500	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY392□1K5D75	392	0.0039	J,K,M	1500	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY472□1K5D75	472	0.0047	J,K,M	1500	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY562□1K5D75	562	0.0056	J,K,M	1500	10.5	11.0	5.0	7.5	0.6	UL,cUL,ENEC
MEY102□1K5D10	102	0.0010	J,K,M	1500	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY152□1K5D10	152	0.0015	J,K,M	1500	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY222□1K5D10	222	0.0022	J,K,M	1500	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY272□1K5D10	272	0.0027	J,K,M	1500	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY332□1K5D10	332	0.0033	J,K,M	1500	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY392□1K5D10	392	0.0039	J,K,M	1500	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY472□1K5D10	472	0.0047	J,K,M	1500	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY562□1K5D10	562	0.0056	J,K,M	1500	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY682□1K5D10	682	0.0068	J,K,M	1500	13.0	12.0	6.0	10.0	0.6	UL,cUL,ENEC
MEY822□1K5D10	822	0.0082	J,K,M	1500	13.0	12.0	6.0	10.0	0.6	UL,cUL,ENEC
MEY103□1K5D10	103	0.0100	J,K,M	1500	13.0	12.0	6.0	10.0	0.6	UL,cUL,ENEC
MEY153□1K5D10	153	0.0150	J,K,M	1500	13.0	11.0	5.0	10.0	0.6	UL,cUL,ENEC
MEY123□1K5D10	123	0.0120	J,K,M	1500	13.0	12.0	6.0	10.0	0.6	UL,cUL,ENEC
MEY102□1K5D15	102	0.0010	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY152□1K5D15	152	0.0015	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY222□1K5D15	222	0.0022	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY272□1K5D15	272	0.0027	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY332□1K5D15	332	0.0033	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY392□1K5D15	392	0.0039	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY472□1K5D15	472	0.0047	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY562□1K5D15	562	0.0056	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY682□1K5D15	682	0.0068	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY822□1K5D15	822	0.0082	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY103□1K5D15	103	0.0100	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY123□1K5D15	123	0.0120	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY153□1K5D15	153	0.0150	J,K,M	1500	18.0	11.0	5.0	15.0	0.6	UL,cUL,ENEC
MEY183□1K5D15	183	0.0180	J,K,M	1500	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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Part Number	Cap Code	Cap	Tol	Volt	W	H	T	P	d	Safety
		(uF)	(%)	(V_{DC})	(mm)	(mm)	(mm)	(mm)	(mm)	Compliance
MEY223□1K5D15	223	0.022	J,K,M	1500	17.0	11.0	5.5	15.0	0.6	UL,cUL,ENEC
MEY253□1K5D15	253	0.025	M	1500	18.0	12.0	6.0	15.0	0.6	UL,cUL,ENEC
MEY273□1K5D15	273	0.027	J,K,M	1500	17.0	11.0	5.5	15.0	0.6	UL,cUL,ENEC
MEY273□1K5D15	273	0.027	J,K,M	1500	18.0	12.0	6.0	15.0	0.6	UL,cUL,ENEC
MEY333□1K5D15	333	0.033	J,K,M	1500	18.0	12.0	6.0	15.0	0.6	UL,cUL,ENEC
MEY473□1K5D15	473	0.047	J,K,M	1500	18.0	13.5	6.0	15.0	0.6	UL,cUL,ENEC
MEY563□1K5D15	563	0.056	J,K,M	1500	17.0	15.5	7.5	15.0	0.6	UL,cUL,ENEC
MEY683□1K5D15	683	0.068	J,K,M	1500	17.0	15.5	7.5	15.0	0.6	UL,cUL,ENEC
MEY823□1K5D15	823	0.082	J,K,M	1500	17.0	16.5	9.5	15.0	0.6	UL,cUL,ENEC
MEY104□1K5D15	104	0.100	J,K,M	1500	17.0	16.5	9.5	15.0	0.6	UL,cUL,ENEC
MEY473□1K5D22	473	0.047	J,K,M	1500	25.0	14.5	6.0	22.5	0.8	UL,cUL,ENEC
MEY104□1K5D22	104	0.100	J,K,M	1500	26.5	16.5	7.0	22.5	0.8	UL,cUL,ENEC
MEY104□1K5D27	104	0.100	J,K,M	1500	31.5	16.5	7.5	27.5	0.8	UL,cUL,ENEC

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

RELIABLILTY AND TEST CONDITIONS

Item	Test Condition	Requirement
Capacitance	Measuring Frequency: ±2%; Measuring Voltage: ≤1Vrms.	Within the tolerance specified, at +20±5°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: ±2%; Measuring Voltage: ≤1Vrms.	D.F. : ≤0.001(0.1%) at 1KHz
Insulation resistance	VR=500VAC, Vt=500VDC, 250VAC ≤VR<500VAC, Vt=500VDC, Change Time: 60s ±5s	≥ 15,000MΩ (C≤0.33μF) ≥ 5,000MΩ*μF/C (C>0.33μF)
Solderability	Soldering temperature: +235±5°C Immersion duration: 2±0.5sec	More than 90% of circumferential surface of lead wire shall be covered with new solder
Tensile Terminal Strength	Apply 1.0Kg (10N) for 10±1sec 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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RELIABLILTY AND TEST CONDITIONS

<table>
<tr><th>Item</th><th>Test Condition</th><th>Requirement</th></tr>
<tr><td>Damp Heat</td><td>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.</td><td rowspan="4">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</td></tr>
<tr><td>Dry Heat Resistance</td><td>Temperature: 110°C ± 2°C, Times: 16 +1/-0Hrs</td></tr>
<tr><td>Cold Resistance</td><td>Temperature: -40±3°C, Times: 2±1Hrs</td></tr>
<tr><td>Temperature Cycle</td><td>Test Temperature Cycle: Total 5 cycles.
Each cycle includes
<table>
<tr><th>Cycle</th><th>Temperature</th><th>Time</th></tr>
<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>
</table>
After test, let rest for 1.5±0.5hr at ordinary condition before making measurements.</td></tr>
<tr><td>Vibration Resistance</td><td>Frequency change: 10~55~10Hz
Vibration Distance: 1.5mm
Test Direction: X, Y, Z
Test Duration: 2+1/-0hrs each direction</td><td>Appearance : No mechanical Damage
Connection: Shall be no short or open</td></tr>
<tr><td>Soldering Heat Resistance</td><td>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</td><td>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</td></tr>
<tr><td>Endurance</td><td>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%.</td><td>Appearance : No Visible Damage
△C/C: ≤ ±10% of the value before test
DF: ≤ 0.008 (0.8%) Max at 1KHz
IR: ≥ 50% of the rated value</td></tr>
<tr><td>Humidity Resistance</td><td>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</td><td>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</td></tr>
</table>

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.