

# KMS SERIES

## GENERAL PURPOSE MICA CAPACITORS

**WRAP & FILL STYLE MICA PAPER CAPACITORS FOR USE  
IN COMMERCIAL, INDUSTRIAL & MILITARY APPLICATIONS**

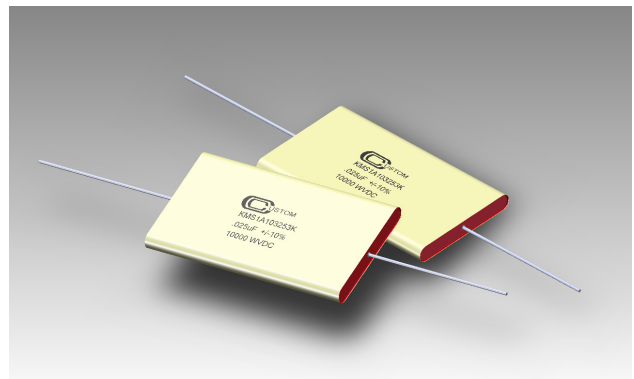
- ◆ Voltage Ratings to 10kvdc ◆ Capacitance Values to 1.0uf ◆ High Reliability ◆ Corona Resistant ◆ Exceptional Thermal Stability ◆ Temperature range of -65°C to 125°C
- ◆ Wrap & Fill Package ◆ Axial Leads

***Do you need the most reliable high voltage capacitor available?***

Since 1964 Custom Electronics has successfully designed and manufactured the highest quality custom reconstituted mica paper capacitors available. Our capacitors (>15,000 designs) are used in many of the most demanding applications imaginable. Historically, every one of our capacitor designs was tailor-made to meet a specific customer's needs. Now, upon overwhelming customer request, we proudly introduce the **KMS SERIES**.

This series of general purpose high voltage capacitors has been designed around the same materials, processes and quality standards that have made our name synonymous with the terms; quality, reliability and high-performance.

Offered in a variety of capacitances up to 1uF and having voltage ratings to 10kVDC, these capacitors are "Wrap & Fill" packaged and have solid copper leads which can be easily formed for installation. They may be manufactured using Lead/tin plating and solder or with RoHS compliant materials.



Each capacitor section is constructed using a minimum of two layers of the finest capacitor grade mica paper. Windings are epoxy impregnated and packaged to yield a very consistent, physically durable and highly corona resistant finished product. These are the finest mica capacitors available.

***The KMS SERIES is an excellent choice for any HV application requiring rock solid reliability at an affordable price.***



**CUSTOM ELECTRONICS, INC.**

87 Browne Street, Oneonta NY 13820  
Phone: 1-607-432-3880 or 1-877-RELY-CEI



# SPECIFICATIONS

# KMS SERIES

## QUALITY

Every product manufactured by Custom Electronics passes through one of the toughest QC systems in the industry. Because product quality and reliability is of the highest importance, we have ensured that our engineering and manufacturing procedures conform to the following Commercial and Military specifications:

- ANSI/NCSL Z540-1  
(Formerly MIL-C-45662)
- MIL-I-45208
- J-STD-001
- MIL-Q-9858
- ISO 9001

Our AS9100 certification is planned for June of 2008

## CONSTRUCTION

Reconstituted Mica Paper with Buried Foil

## CASE

Polyester Tape with Epoxy End-Fill

## LEADS

0.040" Diameter Solid Copper Wire

## MARKING

All capacitors are marked with the Company Logo, Part Number, Capacitance, Rated Voltage, Tolerance and Date Code (YYWW).

## ENVIRONMENTAL TESTING

These products comply with MIL-STD-202

TEST	METHOD	CONDITION
Vibration	204	D
Shock	213	I
Humidity	103	B
Thermal Shock	107	B

## ELECTRICAL TESTING

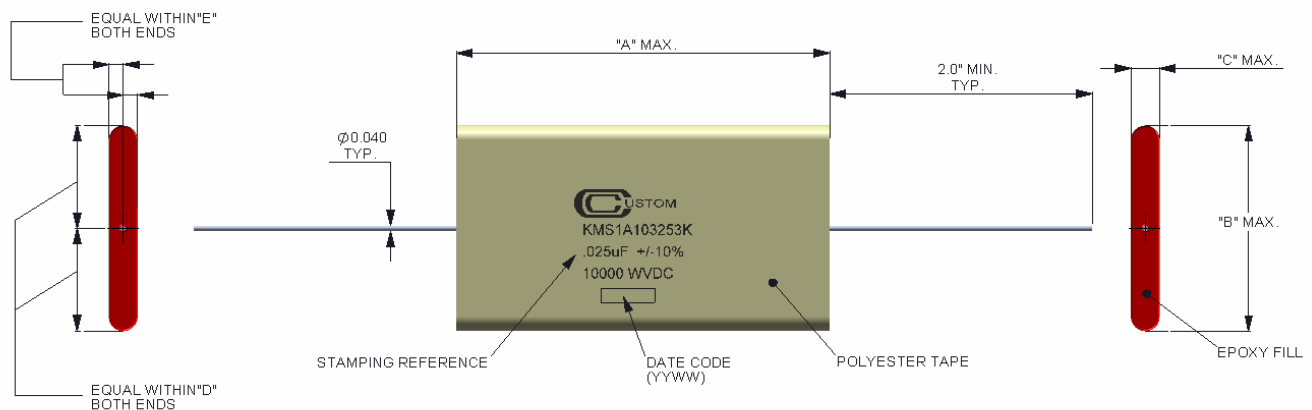
All Capacitors are 100% Tested for the Following:

- ◆ Capacitance Tolerance (25°C, 1kHz)
- ◆ Dissipation Factor (25°C, 1kHz)
- ◆ Dielectric Withstand Voltage 25°C

Capacitors are Sample Tested for the Following:

- ◆ Insulation Resistance (25°C)
- ◆ ESR (25°C)

## PACKAGE DETAILS



- ◆ Package dimensions are provided in Product Guide Table



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# PRODUCT GUIDE

# KMS SERIES

PART NUMBER	RoHS	Cap. (µF)	Toler. (%)	WVDC (V)	DIELECTRIC WITHSTAND (V)	Package Dimensions				
						A (Max) (Inches)	B (Max) (Inches)	C (Max) (Inches)	D (Inches)	E (Inches)
KMS1A102503K	-R	0.050	10	1000	1500	1.688	0.870	0.180	0.125	0.094
KMS1A102104K	-R	0.100	10	1000	1500	1.688	1.400	0.200	0.125	0.094
KMS1A102254K	-R	0.250	10	1000	1500	2.312	1.600	0.250	0.125	0.125
KMS1A102504K	-R	0.500	10	1000	1500	3.062	1.950	0.260	0.125	0.125
KMS1A102105K	-R	1.000	10	1000	1500	3.812	2.150	0.340	0.125	0.125
KMS1A202503K	-R	0.050	10	2000	3000	1.688	0.870	0.180	0.125	0.094
KMS1A202104K	-R	0.100	10	2000	3000	1.688	1.400	0.200	0.125	0.094
KMS1A202254K	-R	0.250	10	2000	3000	2.312	1.600	0.250	0.125	0.125
KMS1A202504K	-R	0.500	10	2000	3000	3.062	1.950	0.260	0.125	0.125
KMS1A202105K	-R	1.000	10	2000	3000	3.812	2.150	0.340	0.125	0.125
KMS1A302103K	-R	0.010	10	3000	4500	1.062	0.860	0.180	0.125	0.094
KMS1A302253K	-R	0.025	10	3000	4500	1.312	1.050	0.210	0.125	0.094
KMS1A302503K	-R	0.050	10	3000	4500	1.562	1.250	0.240	0.125	0.125
KMS1A302104K	-R	0.100	10	3000	4500	1.812	1.470	0.280	0.125	0.125
KMS1A302254K	-R	0.250	10	3000	4500	2.562	1.870	0.340	0.125	0.125
KMS1A302504K	-R	0.500	10	3000	4500	3.312	2.250	0.380	0.125	0.125
KMS1A402103K	-R	0.010	10	4000	6000	1.188	1.150	0.210	0.125	0.094
KMS1A402253K	-R	0.025	10	4000	6000	1.562	1.270	0.245	0.125	0.125
KMS1A402503K	-R	0.050	10	4000	6000	2.312	1.300	0.250	0.125	0.125
KMS1A402104K	-R	0.100	10	4000	6000	2.812	1.600	0.285	0.125	0.125
KMS1A402204K	-R	0.200	10	4000	6000	3.062	2.000	0.365	0.125	0.125
KMS1A402254K	-R	0.250	10	4000	6000	3.312	2.150	0.380	0.125	0.125
KMS1A502102K	-R	0.001	10	5000	7500	1.062	0.750	0.160	0.125	0.062
KMS1A502502K	-R	0.005	10	5000	7500	1.312	1.200	0.180	0.125	0.094
KMS1A502103K	-R	0.010	10	5000	7500	1.562	1.350	0.200	0.125	0.094
KMS1A502253K	-R	0.025	10	5000	7500	1.938	1.700	0.220	0.125	0.094
KMS1A502503K	-R	0.050	10	5000	7500	2.438	1.900	0.260	0.125	0.125
KMS1A502104K	-R	0.100	10	5000	7500	3.312	2.200	0.280	0.125	0.125
KMS1A502254K	-R	0.250	10	5000	7500	4.062	2.800	0.380	0.125	0.125
KMS1A602102K	-R	0.001	10	6000	9000	1.312	0.800	0.160	0.125	0.062
KMS1A602502K	-R	0.005	10	6000	9000	1.688	1.100	0.190	0.125	0.094
KMS1A602103K	-R	0.010	10	6000	9000	1.812	1.200	0.240	0.125	0.125
KMS1A602253K	-R	0.025	10	6000	9000	2.188	1.800	0.250	0.125	0.125
KMS1A602503K	-R	0.050	10	6000	9000	2.812	2.050	0.285	0.125	0.125
KMS1A602104K	-R	0.100	10	6000	9000	4.062	2.200	0.320	0.125	0.125
KMS1A802102K	-R	0.001	10	8000	12000	1.438	0.900	0.160	0.125	0.062
KMS1A802502K	-R	0.005	10	8000	12000	1.812	1.360	0.200	0.125	0.094
KMS1A802103K	-R	0.010	10	8000	12000	2.562	1.400	0.210	0.125	0.094
KMS1A802253K	-R	0.025	10	8000	12000	2.812	1.800	0.280	0.125	0.125
KMS1A802503K	-R	0.050	10	8000	12000	3.562	2.150	0.325	0.125	0.125
KMS1A103102K	-R	0.001	10	10000	15000	1.562	1.150	0.170	0.125	0.125
KMS1A103103K	-R	0.010	10	10000	15000	2.562	1.700	0.260	0.125	0.125
KMS1A103253K	-R	0.025	10	10000	15000	2.812	2.360	0.330	0.125	0.125
KMS1A103502K	-R	0.005	10	10000	15000	2.062	1.550	0.225	0.125	0.125
KMS1A103503K	-R	0.050	10	10000	15000	4.312	2.500	0.350	0.125	0.125

- NOTES:** 1. When ordering, add the suffix “-R” to the base PART NUMBER  for RoHS compliant product.
2. Custom designs available if you can't find a part number that suits your needs exactly.



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## RATINGS

### OPERATING TEMPERATURE RANGE

-65°C to +125°C

### INSULATION RESISTANCE

Minimum of 5,000 MΩ x μF or 100,000 MΩ (whichever is less) @ +25°C.

Minimum of 25 MΩ x μF or 1000 MΩ (whichever is less) @ +125°C.

### DIELECTRIC WITHSTANDING VOLTAGE

150% of WVDC, T=+25°C

### DISSIPATION FACTOR

Maximum of 0.4% @ -65°C, f=1kHz

Maximum of 0.5% @ +25°C, f=1kHz

Maximum of 1.0% @ +125°C, f=1kHz

### THERMAL CAPACITANCE CHANGE

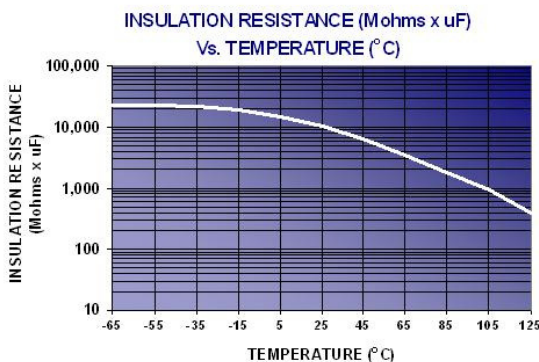
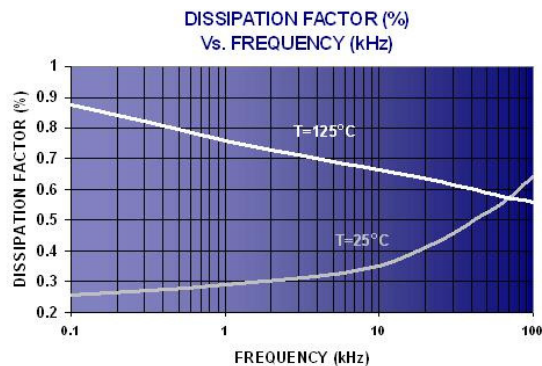
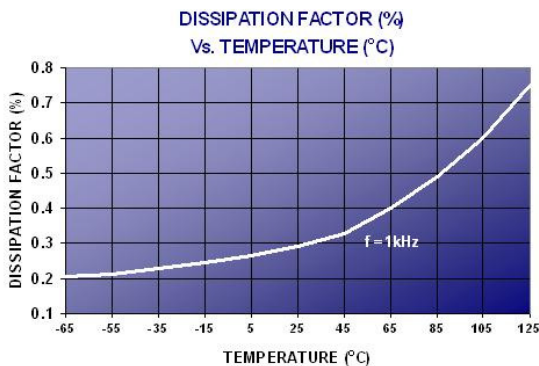
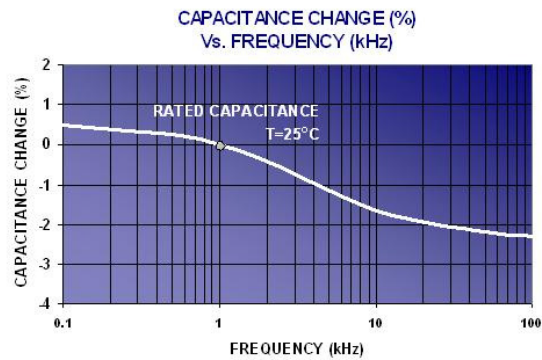
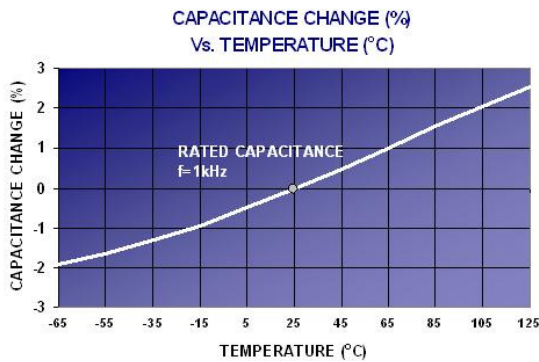
Maximum of -3.0% @ -65°C, f=1kHz

Maximum of +5.0% @ +125°C, f=1kHz

### CAPACITANCE TOLERANCE

Tolerance of +/-10%, T=+25°C, f=1kHz

## TYPICAL PERFORMANCE CURVES



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