

# XKM SERIES

## DUAL DIELECTRIC CAPACITORS

**LOW INDUCTANCE CAPACITORS SPECIFICALLY DESIGNED FOR**

**EXPLODING FOIL INITIATOR (EFI) & EXPLODING BRIDGE WIRE (EBW) APPLICATIONS**

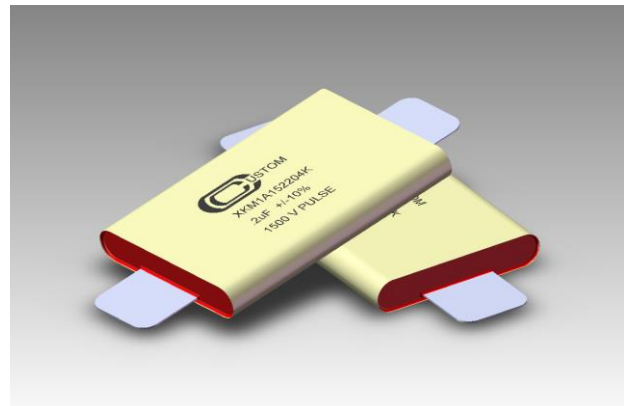
- ◆ 1500V, 2500V and 3500V Ratings ◆ Capacitance .050 $\mu$ F to .25 $\mu$ F ◆ High Peak Current
- ◆ Exceptional Thermal Stability ◆ Low Profile Wrap & Fill Package with Tab Leads
- ◆ Extremely Low Inductance ◆ Temperature range of -55°C to 85°C.

For more than 20 years, Custom Electronics has manufactured thousands of tailor-made capacitors for EFI and EBW circuit use.

The **XKM SERIES** uses the same proven dual dielectric (Mica/PET) construction as our tailored EFI capacitors. This proprietary construction offers exceptional capacitive stability over temperature ( $\Delta C/C^\circ$ ), outstanding dielectric integrity and first class pulse current capability.

To keep the lead inductance to a minimum and provide for flexible installation, 0.5" wide x .005" thick copper leads are solder-attached directly to the capacitor windings. This lead configuration has proven to be one of the most reliable and extremely popular over the years.

"Wrap-and-Fill", one of the most common and cost effective capacitor packaging methods, was chosen to maintain affordability. Polyester tape is wrapped around the entire capacitor assembly then "end-filled" with high grade epoxy. This package style provides a sound moisture barrier and reasonable mechanical protection.



Although similar in many respects to the XKH line, the XKM SERIES is specifically designed to provide a lower profile rather than small footprint. In an effort to maintain a minimal body thickness, all XKM Series capacitors are manufactured using only a single capacitor section (winding).

**The XKM SERIES offers the EFI/ EBW designer excellent reliability and performance at an affordable price.**



**CUSTOM ELECTRONICS, INC.**

87 Browne Street, Oneonta NY 13820  
Phone: 1-607-432-3880 or 1-877-RELY-CEI  
<http://www.customelec.com>



# SPECIFICATIONS

# XKM 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:

- AS9100 / ISO9001 Certification
- J-STD-001
- IPC-A-610
- ANSI/ESD S20.20

## CONSTRUCTION

Dual Dielectric (Mica/PET) with Extended Foil

## CASE

Polyester Tape with Epoxy End-Fill

## LEADS

0.50" wide x 0.005" thick Tin Plated Copper Tabs

## 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

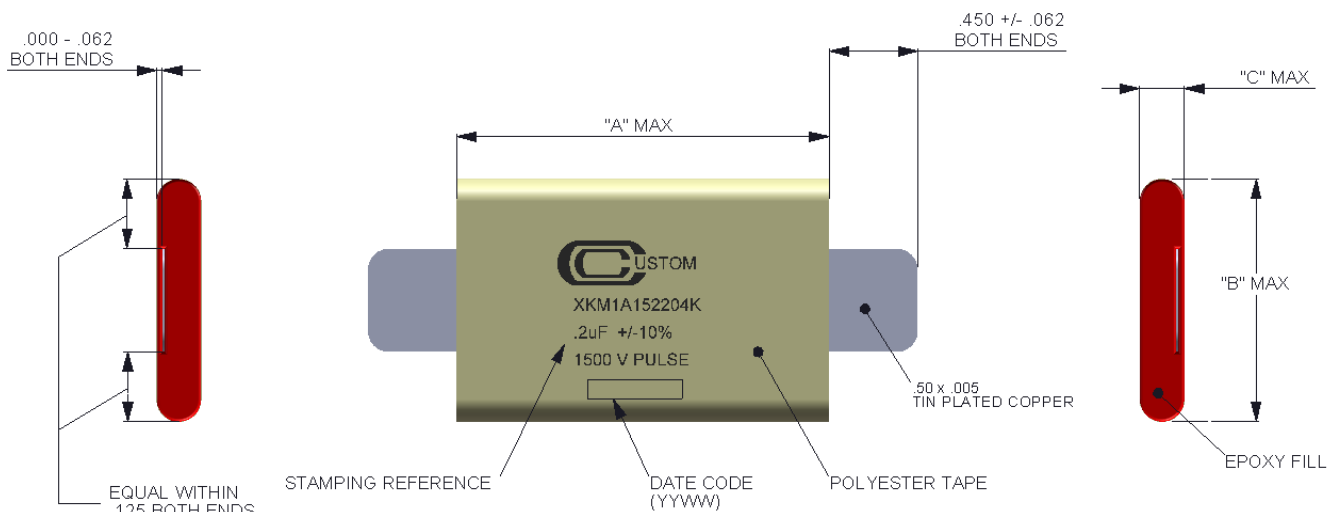
All Capacitors are 100% Tested for the Following:

- ◆ 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 the following Product Guide Table



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## PRODUCT GUIDE

PART NUMBER	RoHS	Cap. (μF)	Toler. (%)	WVDC (V)	DIELECTRIC WITHSTAND (V)	Package Dimensions		
						A (Max) (Inches)	B (Max) (Inches)	C (Max) (Inches)
XKM1A152503K	-R	0.050	10	1500	1800	1.188	0.960	0.190
XKM1A152753K	-R	0.075	10	1500	1800	1.312	1.050	0.200
XKM1A152104K	-R	0.100	10	1500	1800	1.438	1.070	0.205
XKM1A152154K	-R	0.150	10	1500	1800	1.688	1.100	0.210
XKM1A152204K	-R	0.200	10	1500	1800	1.812	1.180	0.220
XKM1A152254K	-R	0.250	10	1500	1800	1.938	1.250	0.240
XKM1A252503K	-R	0.050	10	2500	3000	1.312	1.250	0.240
XKM1A252753K	-R	0.075	10	2500	3000	1.438	1.300	0.250
XKM1A252104K	-R	0.100	10	2500	3000	1.562	1.350	0.250
XKM1A252154K	-R	0.150	10	2500	3000	1.688	1.450	0.270
XKM1A252204K	-R	0.200	10	2500	3000	1.812	1.550	0.280
XKM1A252254K	-R	0.250	10	2500	3000	1.938	1.600	0.290
XKM1A352503K	-R	0.050	10	3500	4200	1.438	1.250	0.240
XKM1A352753K	-R	0.075	10	3500	4200	1.562	1.350	0.250
XKM1A352104K	-R	0.100	10	3500	4200	1.688	1.400	0.260
XKM1A352154K	-R	0.150	10	3500	4200	1.812	1.550	0.280
XKM1A352204K	-R	0.200	10	3500	4200	1.938	1.650	0.290
XKM1A352254K	-R	0.250	10	3500	4200	2.062	1.670	0.310

### NOTES:

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



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## RATINGS

### OPERATING TEMPERATURE RANGE

-55°C to +85°C

### INSULATION RESISTANCE

Minimum of 5,000 MΩ x μF or 100,000 MΩ (whichever is less) @ +25°C and -55°C

Minimum of 100 MΩ x μF or 1000 MΩ (whichever is less) @ +85°C.

### DIELECTRIC WITHSTANDING VOLTAGE

150% of WVDC, T=+25°C

### DISSIPATION FACTOR

Maximum of 0.7% @ -65°C, f=1kHz

Maximum of 0.5% @ +25°C, f=1kHz

Maximum of 0.5% @ +85°C, f=1kHz

### THERMAL CAPACITANCE CHANGE

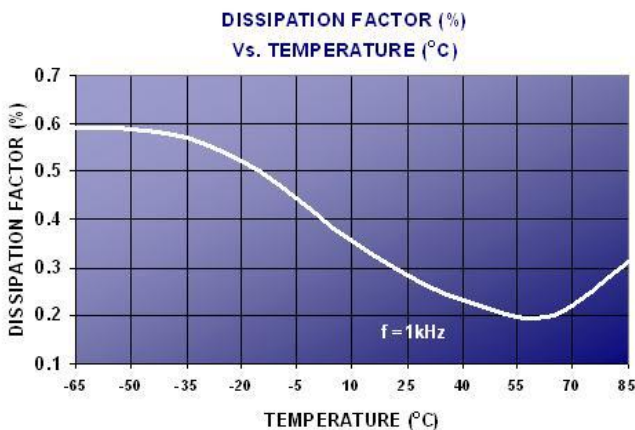
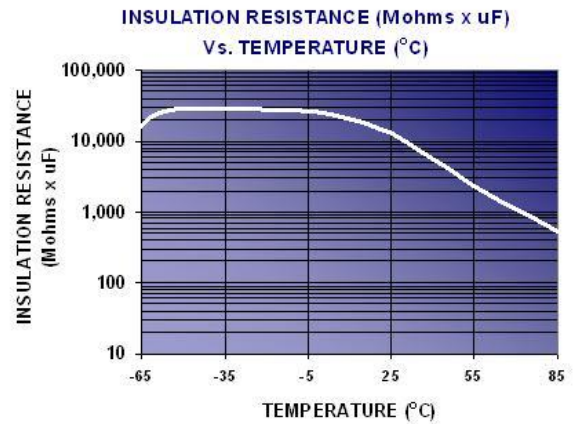
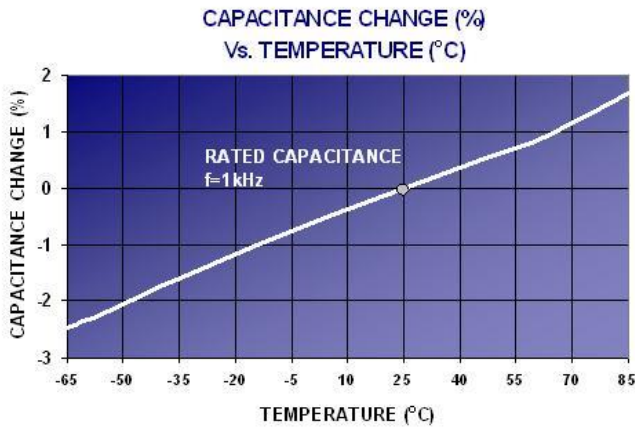
Maximum of -5.0% @ -65°C, f=1kHz

Maximum of +5.0% @ +85°C, f=1kHz

### CAPACITANCE TOLERANCE

Tolerance of +/-10%, T=+25°C, f=1kHz

## TYPICAL PERFORMANCE CURVES



The information contained in this document is believed to be reliable and accurate at the time of release. However, in an effort to continually improve our products and their related documentation, Custom Electronics, Inc. reserves the right to change the contents of this document without notification.

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