

CKR SERIES

HIGH TEMPERATURE CAPACITORS

WRAP & FILL STYLE MICA PAPER CAPACITORS FOR USE IN HIGH TEMPERATURE APPLICATIONS

- ◆ Voltage Ratings to 5kVDC and 1kVAC ◆ Capacitance Values to 3.0 μ f ◆ High Reliability
- ◆ Temperature range of -65°C to 175°C ◆ Exceptional Thermal Stability ◆ Axial Leads
- ◆ Wrap & Fill Package ◆ Corona Resistant

Do you need a capacitor with the reliability and stability of a mica paper capacitor but also need it to operate in a hotter than typical environment?

Our **CKR SERIES** of capacitors are rated to 175°C and are designed to operate in more severe applications. These high temp capacitors have 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 3.0 μ f and having voltage ratings to 5kVDC for filter caps and 1kVAC for motor start caps, these capacitors are "Wrap & Fill" packaged and have solid nickel leads that can be easily formed for installation.

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



The **CKR SERIES** is an excellent choice for high temperature applications requiring rock solid reliability at an affordable price. Applications include:

- Oil & Gas Exploration
- Detonation Devices
- Motor Start Ups
- Filters & Multipliers
- Jet Ignition



CUSTOM ELECTRONICS, INC.

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

AS9100 / ISO 9001:2000 CERTIFIED



SPECIFICATIONS

CKR SERIES

QUALITY

Custom Electronics maintains an AS9100 / ISO 9001:2000 quality system. Our dedication to quality is a prime reason for our success in the high voltage industry. 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)
- J-STD-001

CONSTRUCTION

Reconstituted mica paper

CASE

Kapton Tape with Epoxy End-Fill

LEADS

0.040" Diameter Solid Nickel Leads

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	201 & 204	D
◆ Shock	213	I
◆ Humidity	103	B
◆ Thermal Shock	107	B

ELECTRICAL TESTING

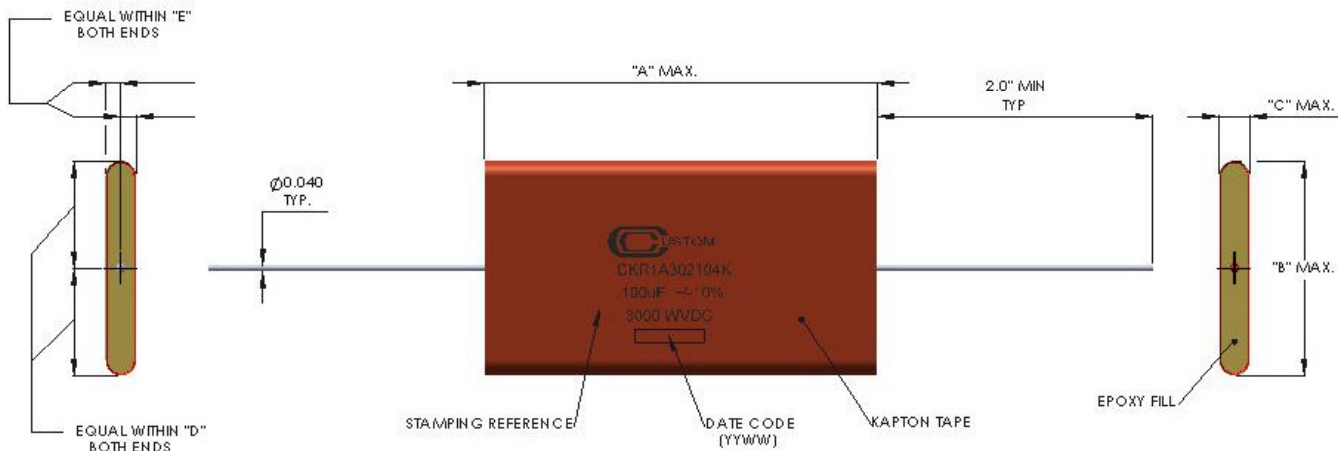
All Capacitors are 100% Tested for the Following:

- ◆ 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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DC Rated Capacitors

PART NUMBER	RoHS	Cap. (μF)	Toler. (± %)	WVDC (V)	DIELECTRIC WITHSTAND (V)	Package Dimensions		
						A (Max) (Inches)	B (Max) (Inches)	C (Max) (Inches)
CKR1A202102K	-R	0.001	10	2000	3500	1.062	0.700	0.150
CKR1A202502K	-R	0.005	10	2000	3500	1.188	0.700	0.150
CKR1A202103K	-R	0.010	10	2000	3500	1.188	0.770	0.180
CKR1A202503K	-R	0.050	10	2000	3500	1.562	1.250	0.240
CKR1A202104K	-R	0.100	10	2000	3500	1.688	1.550	0.290
CKR1A202254K	-R	0.250	10	2000	3500	2.312	1.950	0.350
CKR1A302102K	-R	0.001	10	3000	5000	1.312	0.700	0.150
CKR1A302502K	-R	0.005	10	3000	5000	1.438	0.850	0.180
CKR1A302103K	-R	0.010	10	3000	5000	1.438	1.150	0.220
CKR1A302503K	-R	0.050	10	3000	5000	2.188	1.550	0.280
CKR1A302104K	-R	0.100	10	3000	5000	2.312	2.050	0.350
CKR1A302254K	-R	0.250	10	3000	5000	3.312	2.500	0.400
CKR1A402102K	-R	0.001	10	4000	6000	1.562	0.700	0.150
CKR1A402502K	-R	0.005	10	4000	6000	1.562	1.150	0.220
CKR1A402103K	-R	0.010	10	4000	6000	1.562	1.450	0.270
CKR1A402503K	-R	0.050	10	4000	6000	2.312	2.000	0.370
CKR1A402104K	-R	0.100	10	4000	6000	3.062	2.270	0.400
CKR1A402254K	-R	0.250	10	4000	6000	4.312	3.400	0.400
CKR1A502102K	-R	0.001	10	5000	7500	1.562	0.850	0.175
CKR1A502502K	-R	0.005	10	5000	7500	1.562	1.350	0.260
CKR1A502103K	-R	0.010	10	5000	7500	1.688	1.650	0.300
CKR1A502503K	-R	0.050	10	5000	7500	2.812	2.170	0.390
CKR1A502104K	-R	0.100	10	5000	7500	3.562	2.850	0.400
CKR1A502254K	-R	0.250	10	5000	7500	5.562	3.850	0.400

NOTES:

1. When ordering, add the suffix “-R” to the base PART NUMBER for  RoHS compliant product.
2. Custom designs available if you cannot find a part number that fits your requirements exactly.



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AC Rated Capacitors

PART NUMBER	RoHS	Cap. (μF)	Toler. (± %)	WVAC (V)	DIELECTRIC WITHSTAND (V)	Package Dimensions		
						A (Max) (Inches)	B (Max) (Inches)	C (Max) (Inches)
CKR1A601504KAC	-R	0.500	10	600	2100	2.312	2.300	0.300
CKR1A601105KAC	-R	1.0	10	600	2100	2.812	2.750	0.360
CKR1A601205KAC	-R	2.0	10	600	1800	2.812	2.750	0.670
CKR1A601305KAC	-R	3.0	10	600	1800	2.812	2.750	0.980
CKR1A801504KAC	-R	0.500	10	800	2800	2.562	2.350	0.320
CKR1A801105KAC	-R	1.0	10	800	2200	3.062	2.950	0.390
CKR1A801205KAC	-R	2.0	10	800	2100	3.062	2.950	0.730
CKR1A801305KAC	-R	3.0	10	800	2000	3.062	2.950	1.075
CKR1A102504KAC	-R	0.500	10	1000	3500	2.812	2.800	0.360
CKR1A102105KAC	-R	1.0	10	1000	3000	4.062	3.150	0.400
CKR1A102205KAC	-R	2.0	10	1000	2800	4.062	3.150	0.750
CKR1A102305KAC	-R	3.0	10	1000	2500	4.062	3.150	1.100

NOTES:

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CHARACTERISTICS

RATINGS

OPERATING TEMPERATURE RANGE

-65°C to +175°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) @ +175°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% @ +175°C, f=1kHz

THERMAL CAPACITANCE CHANGE

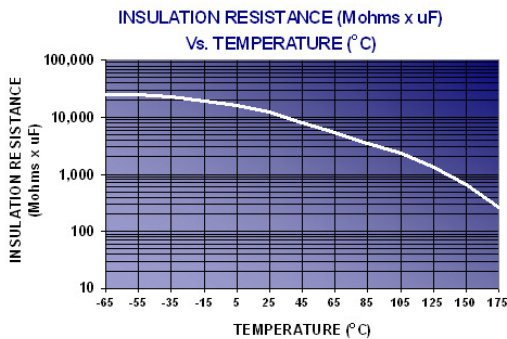
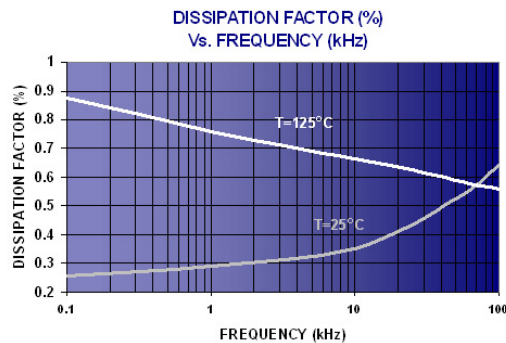
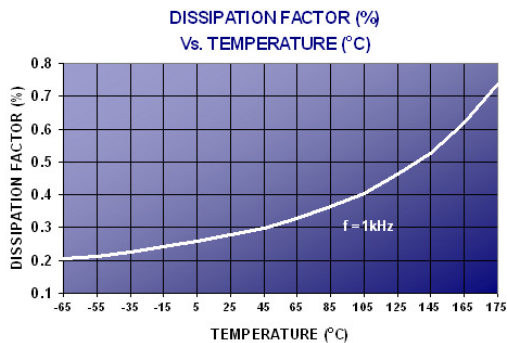
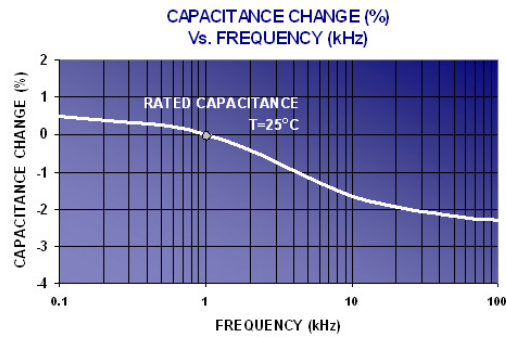
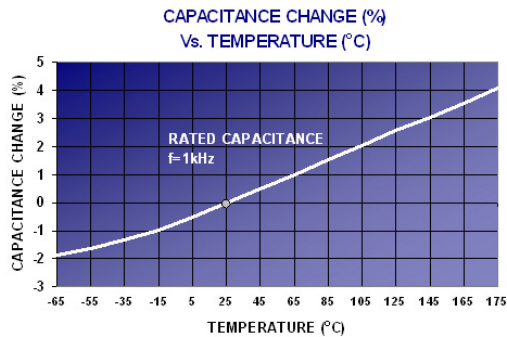
Maximum of -3.0% @ -65°C, f=1kHz

Maximum of +5.0% @ +175°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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