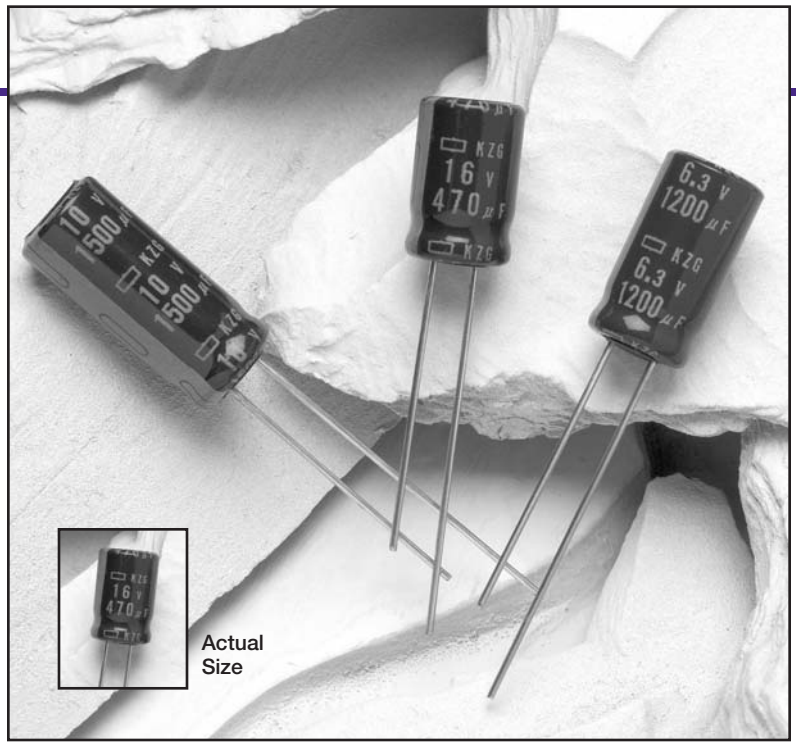
KZG Series

UNITED CHEMI-CON

- Miniature
- Ultra Low Impedance
- Low Resistivity Electrolyte
- +105°C Maximum Temperature



The KZG series is a new ultra low impedance series from United Chemi-Con. These capacitors are different from the standard low impedance capacitors, as they use a new low resistivity electrolyte. Compared to our KZE series that also uses this advanced electrolyte technology, the KZG series has lower ESR/impedance ratings, making them ideal for use in computer board circuits where very low impedance capacitors are required. This series offers large capacitance per case size and a rated lifetime of 2,000 hours at +105°C with the rated ripple current applied. If longer life is a prerequisite for low impedance applications, refer to the LXY, LXZ, or KZE series. As an option the KZG series is available with environmentally friendly PET (polyester) sleeves and Pb-free materials.

The KZG series capacitors are non-solvent proof. Refer to the Mini-Glossary for cleaning guidelines and recommended cleaning agents that are compatible with United Chemi-Con products.

Summary of Specifications

- **Radial lead terminals.**
- **Capacitance range: 470 to 3,300µF.**
- **Voltage range: 6.3 to 16VDC.**
- **Category temperature range: −40°C to +105°C.**
- **Leakage current: 0.01CV or 3µA, whichever is greater, after 2 minutes at +20°C.**
- **Standard capacitance tolerance: ±20%**
- **Nominal case size (D×L): 8×11.5mm to 10×25mm.**
- **Rated lifetime: 2,000 hours at +105°C with the rated ripple current applied.**

KZG Specifications

Item	Characteristics
Category Temperature Range	−40 to +105°C
Rated Voltage Range	6.3 to 16VDC
Capacitance Range	470 to 3,300µF
Capacitance Tolerance	±20% (M) at +20°C, 120Hz
Leakage Current	I = 0.01CV or 3µA, whichever is greater, after 2 minutes at +20°C. Where I = Max. leakage current (µA), C = Nominal capacitance (µF) and V = Rated voltage (V)
Dissipation Factor (Tan δ)	At +20°C, 120Hz Rated Voltage (V): 6.3 / 10 / 16 Tan δ (DF): 0.22 / 0.19 / 0.16 When nominal capacitance exceeds 1,000µF, add 0.02 to the values above for each 1,000µF increase.
Impedance at 100kHz	At 100kHz, maximum impedance at +20°C is specified in the Ratings Tables.
Low Temperature Characteristics	At 120Hz, impedance (Z) ratio between the −25°C or −40°C value and +20°C value shall not exceed the values given below. Rated Voltage (V): 6.3 / 10 / 16 Z(−25°C)/Z(+20°C): 2 / 2 / 2 Z(−40°C)/Z(+20°C): 3 / 3 / 3
Rated Ripple Current Multipliers *Refer to Section 4 of the Mini-Glossary for explanation of Rated Ripple Current Multipliers.*	Frequency (Hz) Capacitance (µF): 120Hz / 1kHz / 10kHz / 100kHz 470-560µF: 0.50 / 0.85 / 0.94 / 1.00 680-1,800µF: 0.60 / 0.87 / 0.95 / 1.00 2,200-3,300µF: 0.75 / 0.90 / 0.95 / 1.00
Endurance (Load Life)	The following specifications shall be satisfied when the capacitors are restored to +20°C after subjecting them to DC voltage for 2,000 hours at +105°C with the rated ripple current applied. The sum of the DC voltage and peak AC voltage must not exceed the full rated voltage of the capacitors. Capacitance change: ≤ ±25% of initial measured value Tan δ (DF) : ≤ 200% of initial specified value Leakage current : ≤ initial specified value
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to +20°C after exposing them for 1,000 hours at +105°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements. Capacitance change: ≤ ±25% of initial measured value Tan δ (DF) : ≤ 200% of initial specified value Leakage current : ≤ initial specified value

Part Numbering System for KZG Series

When ordering, always specify complete catalog number for KZG Series.

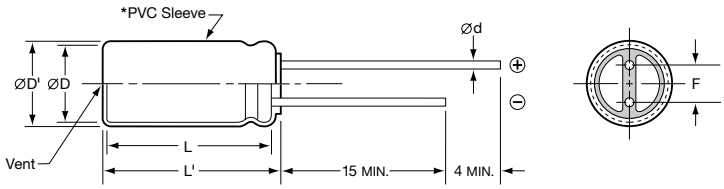
KZG 6.3 VB 122 M 8X15 LL

- LL — Lead Length: LL is Standard.
- 8X15 — Case Code: See Case Sizes in Tables.
- M — Capacitance Tolerance: M = ±20%
- 122 — Capacitance Value: Expressed in Microfarads. The first two digits are significant figures, and the third digit indicates the number of zeros for capacitance of 100µF or more. R indicates the decimal point for capacitance less than 100µF (e.g. R12 = .12µF; 1R2 = 1.2µF; 12R = 12µF; 121 = 120µF; 122 = 1,200µF; 123 = 12,000µF).
- VB — Lead Configuration: VB = Radial Lead Terminals.
- 6.3 — DC Rated Voltage: Expressed in Volts (e.g. 6.3 = 6.3WVDC).
- KZG — Series Name: Indicates Basic Capacitor Design.

Diagram of Dimensions

VB/Radial Lead

Unit: mm



*Optional PET sleeve available upon request.

Gas escape end seal for all case diameters.

Refer to Packaging section for Miniature taping and ammo box specifications and Lead Configurations section for Miniature radial lead cut and lead forming options.

ØD	ØD' max.	L' max.	Ød	F ± 0.5
8	ØD + 0.5	L + 1.5	0.6	3.5
10	ØD + 0.5	L + 1.5	0.6	5.0

Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum Impedance (Ω) at +20°C, 100kHz	Rated Ripple Current (mA rms) at +105°C, 100kHz
6.3 Volts 8 Volts Surge	820	KZG6.3VB821M8X11LL	8 × 11.5	0.036	1,140
	1,200	KZG6.3VB122M8X15LL	8 × 15	0.028	1,490
	1,500	KZG6.3VB152M10X12LL	10 × 12.5	0.026	1,540
	1,800	KZG6.3VB182M8X20LL	8 × 20	0.021	1,870
	1,800	KZG6.3VB182M10X16LL	10 × 16	0.019	2,000
	2,200	KZG6.3VB222M10X20LL	10 × 20	0.013	2,550
	3,300	KZG6.3VB332M10X25LL	10 × 25	0.012	2,800
10 Volts 13 Volts Surge	680	KZG10VB681M8X11LL	8 × 11.5	0.036	1,140
	1,000	KZG10VB102M8X15LL	8 × 15	0.028	1,490
	1,000	KZG10VB102M10X12LL	10 × 12.5	0.026	1,540
	1,500	KZG10VB152M8X20LL	8 × 20	0.021	1,870
	1,500	KZG10VB152M10X16LL	10 × 16	0.019	2,000
	1,800	KZG10VB182M10X20LL	10 × 20	0.013	2,550
	2,200	KZG10VB222M10X25LL	10 × 25	0.012	2,800
16 Volts 20 Volts Surge	470	KZG16VB471M8X11LL	8 × 11.5	0.036	1,140
	680	KZG16VB681M8X15LL	8 × 15	0.028	1,490
	680	KZG16VB681M10X12LL	10 × 12.5	0.026	1,540
	1,000	KZG16VB102M8X20LL	8 × 20	0.021	1,870
	1,000	KZG16VB102M10X16LL	10 × 16	0.019	2,000
	1,500	KZG16VB152M10X20LL	10 × 20	0.013	2,550
	1,800	KZG16VB182M10X25LL	10 × 25	0.012	2,800

***The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.**