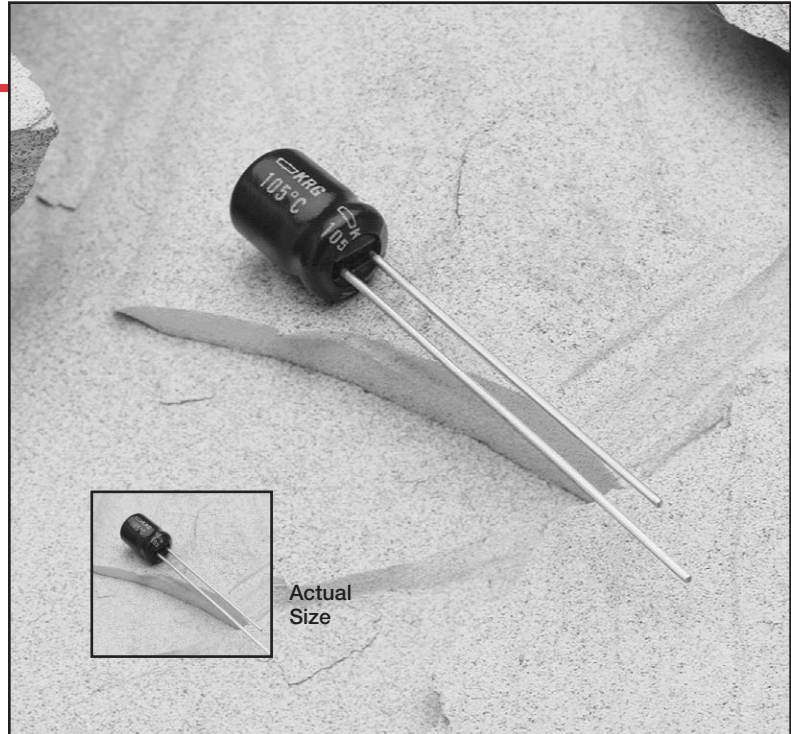


- **Miniature**
- **Low Profile**
- **Solvent Proof**
- **+105°C
Maximum
Temperature**



The KRG series capacitors are designed for low profile applications. These miniaturized capacitors have case sizes from 4 x 7mm to 18 x 25mm, enabling a large range of capacitance values while maintaining a lower profile than standard general purpose capacitors. The KRG capacitors are also ideal because they can be used over a wide temperature range, -55°C to +105°C.

The KRG series capacitors were developed to withstand HCFC cleaning agents for five minutes by ultrasonic, vapor or immersion. This solvent proof design allows all circuit board components to be cleaned together, at the same time, without resorting to more expensive epoxy end-sealed capacitors. Refer to the Mini-Glossary for recommended cleaning conditions.

Summary of Specifications

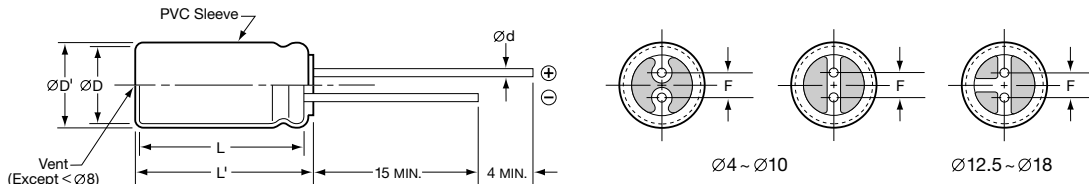
- **Radial lead terminals.**
- **Capacitance range: 0.1 to 10,000µF.**
- **Voltage range: 6.3 to 50VDC.**
- **Operating temperature range: -55°C to +105°C.**
- **Leakage current: 0.01CV or 3µA, whichever is greater, after 2 minutes at +20°C.**
- **Standard capacitance tolerance: ±20%**
- **Nominal case size (D x L): 4 x 7mm to 18 x 25mm.**
- **Rated lifetime: 1,000 hours at +105°C.**

KRG Series

Diagram of Dimensions

VB/Radial Lead

Unit: mm



Gas escape end seal for all case diameters.

For optional lead configurations and tape and ammo packaging, refer to the beginning of the Miniature section.

ØD	ØD' max.	L' max.	Ød	F ±0.5
4	ØD+0.5	L+1.0	0.45	1.5
5	ØD+0.5	L+1.0; L+1.5 (9L)	0.5	2.0
6.3	ØD+0.5	L+1.0; L+1.5 (9L)	0.45 (7L); 0.5 (9L)	2.5
8	ØD+0.5	L+1.5	0.6	3.5
10, 12.5	ØD+0.5	L+1.5	0.6	5.0
16, 18	ØD+0.5	L+1.5	0.8	7.5

Part Numbering System for KRG Series

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

KRG 25 VB 22R M 5X7 LL

- Series Name: Indicates Basic Capacitor Design.
- DC Rated Voltage: Expressed in Volts (e.g. 25 = 25WVDC).
- Lead Configuration: VB = Radial Lead Terminals.
- 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. R22 = .22µF; 2R2 = 2.2µF; 22R = 22µF; 221 = 220µF; 222 = 2,200µF; 223 = 22,000µF).
- Capacitance Tolerance: M = ± 20%
- Case Code: See Case Sizes in Tables.
- Lead Length: LL is Standard.

Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (mA rms) at +105°C, 120Hz
6.3 Volts 8 Volts Surge	47	KRG6.3VB47RM5X7LL	5 × 7	9.874	50
	330	KRG6.3VB331M6X9LL	6.3 × 9	1.406	175
	1,000	KRG6.3VB102M10X9LL	10 × 9	0.464	365
	4,700	KRG6.3VB472M16X15LL	16 × 15	0.130	1,010
	6,800	KRG6.3VB682M18X15LL	18 × 15	0.105	1,190
	10,000	KRG6.3VB103M18X20LL	18 × 20	0.091	1,440

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

KRG Series

Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (mA rms) at +105°C, 120Hz
10 Volts 13 Volts Surge	22	KRG10VB22RM4X7LL	4 × 7	18.082	35
	100	KRG10VB101M6X7LL	6.3 × 7	3.978	80
	100	KRG10VB101M5X9LL	5 × 9	3.978	93
	220	KRG10VB221M6X9LL	6.3 × 9	1.808	154
	470	KRG10VB471M8X9LL	8 × 9	0.846	272
	1,000	KRG10VB102M10X12LL	10 × 12.5	0.398	445
	2,200	KRG10VB222M12X15LL	12.5 × 15	0.203	690
	3,300	KRG10VB332M16X15LL	16 × 15	0.151	940
	4,700	KRG10VB472M18X15LL	18 × 15	0.116	1,120
	6,800	KRG10VB682M18X20LL	18 × 20	0.095	1,330
10,000	KRG10VB103M18X25LL	18 × 25	0.085	1,700	
16 Volts 20 Volts Surge	33	KRG16VB33RM5X7LL	5 × 7	10.045	53
	47	KRG16VB47RM6X7LL	6.3 × 7	7.053	68
	100	KRG16VB101M6X7LL	6.3 × 7	3.315	97
	220	KRG16VB221M8X9LL	8 × 9	1.507	205
	330	KRG16VB331M8X9LL	8 × 9	1.005	251
	470	KRG16VB471M10X9LL	10 × 9	0.705	290
	1,000	KRG16VB102M12X13LL	12.5 × 13	0.332	515
	2,200	KRG16VB222M16X15LL	16 × 15	0.173	830
	3,300	KRG16VB332M18X15LL	18 × 15	0.131	1,050
	4,700	KRG16VB472M18X20LL	18 × 20	0.113	1,260
6,800	KRG16VB682M18X25LL	18 × 25	0.093	1,560	
25 Volts 32 Volts Surge	10	KRG25VB10RM4X7LL	4 × 7	26.52	30
	22	KRG25VB22RM5X7LL	5 × 7	12.055	46
	33	KRG25VB33RM6X7LL	6.3 × 7	8.036	63
	47	KRG25VB47RM6X7LL	6.3 × 7	5.643	71
	47	KRG25VB47RM5X9LL	5 × 9	5.643	75
	100	KRG25VB101M6X9LL	6.3 × 9	2.652	121
	330	KRG25VB331M10X9LL	10 × 9	0.804	270
	470	KRG25VB471M10X12LL	10 × 12.5	0.564	370
	1,000	KRG25VB102M12X15LL	12.5 × 15	0.265	590
	2,200	KRG25VB222M18X15LL	18 × 15	0.143	970
3,300	KRG25VB332M18X20LL	18 × 20	0.111	1,220	
4,700	KRG25VB472M18X25LL	18 × 25	0.088	1,470	
35 Volts 44 Volts Surge	10	KRG35VB10RM5X7LL	5 × 7	23.205	36
	22	KRG35VB22RM6X7LL	6.3 × 7	10.548	57
	33	KRG35VB33RM6X7LL	6.3 × 7	7.032	64
	33	KRG35VB33RM5X9LL	5 × 9	7.032	67
	100	KRG35VB101M8X9LL	8 × 9	2.321	155
	220	KRG35VB221M10X9LL	10 × 9	1.055	235
	330	KRG35VB331M10X12LL	10 × 12.5	0.703	340
	470	KRG35VB471M12X13LL	12.5 × 13	0.494	415
	1,000	KRG35VB102M16X15LL	16 × 15	0.232	720
	2,200	KRG35VB222M18X20LL	18 × 20	0.128	1,110
50 Volts 63 Volts Surge	0.1	KRG50VBR10M4X7LL	4 × 7	1,989.0	1.3
	0.22	KRG50VBR22M4X7LL	4 × 7	904.091	2.9
	0.33	KRG50VBR33M4X7LL	4 × 7	602.727	3.5
	0.47	KRG50VBR47M4X7LL	4 × 7	423.191	5.0
	1.0	KRG50VB1R0M4X7LL	4 × 7	198.9	10
	1.0	KRG50VB1R0M5X9LL	5 × 9	198.9	12
	2.2	KRG50VB2R2M4X7LL	4 × 7	90.409	15
	2.2	KRG50VB2R2M5X9LL	5 × 9	90.409	18
	3.3	KRG50VB3R3M4X7LL	4 × 7	60.273	18
	3.3	KRG50VB3R3M5X9LL	5 × 9	60.273	22
4.7	KRG50VB4R7M4X7LL	4 × 7	42.319	25	

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

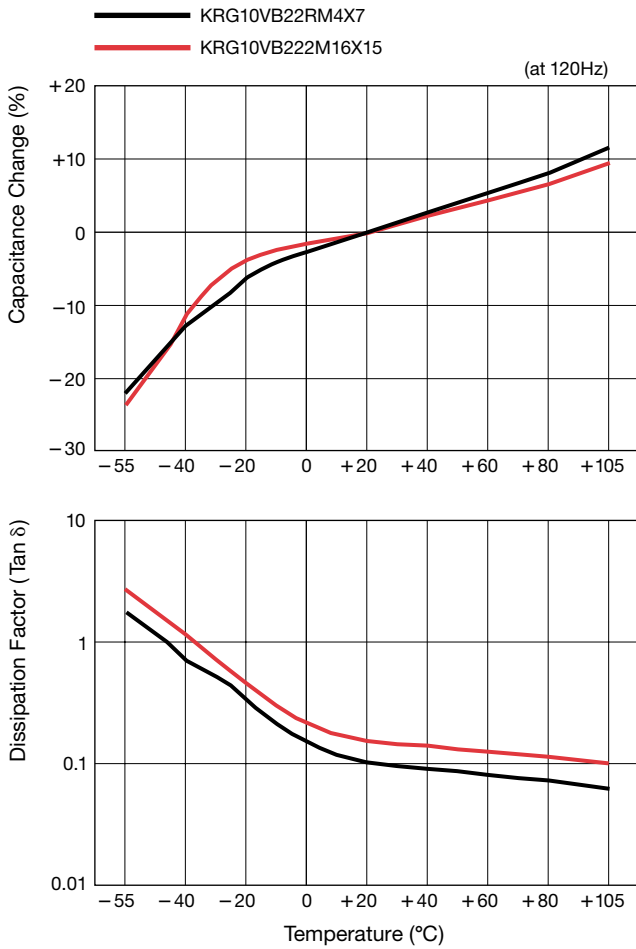
KRG Series

Standard Voltage Ratings - VB/Radial Lead

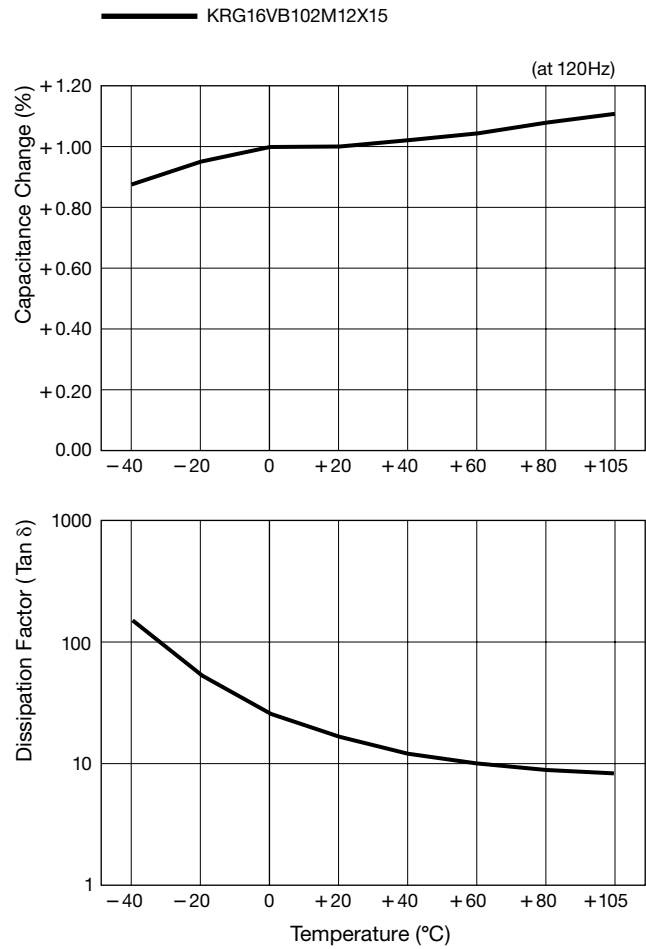
Rated Voltage (WVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (mA rms) at +105°C, 120Hz
50 Volts 63 Volts Surge	4.7	KRG50VB4R7M5X9LL	5 × 9	42.319	27
	10	KRG50VB10RM6X7LL	6.3 × 7	19.89	44
	10	KRG50VB10RM5X9LL	5 × 9	19.89	46
	22	KRG50VB22RM6X7LL	6.3 × 7	9.041	57
	22	KRG50VB22RM5X9LL	5 × 9	9.041	61
	33	KRG50VB33RM6X9LL	6.3 × 9	6.027	80
	47	KRG50VB47RM6X9LL	6.3 × 9	4.232	95
	100	KRG50VB101M10X9LL	10 × 9	1.989	170
	220	KRG50VB221M10X12LL	10 × 12.5	0.904	290
	330	KRG50VB331M12X13LL	12.5 × 13	0.603	370
	470	KRG50VB471M16X15LL	16 × 15	0.423	535
1,000	KRG50VB102M18X20LL	18 × 20	0.199	830	

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

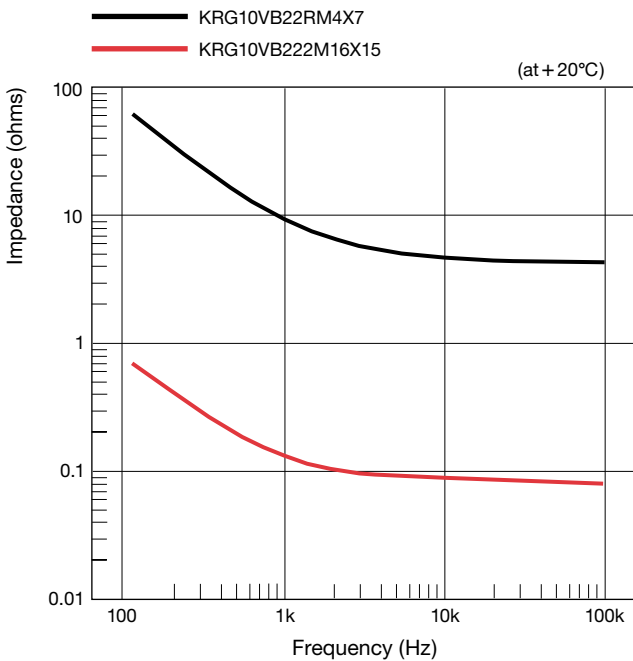
Temperature Characteristics



Temperature Characteristics



Impedance – Frequency Characteristics



Impedance – Frequency Characteristics

