

- **Miniature**
- **7mm Nominal Height**
- **Solvent Proof**
- **+105°C Maximum Temperature**



The KMA series capacitors are designed for use in ultra miniature applications, as the nominal height is 7mm. The KMA series also has a rated lifetime of 1,000 hours at 105°C. Typical applications include video tape recorders, car audio equipment, and other personal electronic products.

The KMA 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 220 $\mu$ F.**
- **Voltage range: 4 to 63VDC.**
- **Operating temperature range: -55°C to +105°C.**
- **Leakage current: 0.01CV or 3 $\mu$ A, whichever is greater, after 2 minutes at +20°C.**
- **Standard capacitance tolerance:  $\pm$ 20%**
- **Nominal case size (D  $\times$  L): 4  $\times$  7mm to 6.3  $\times$  7mm.**
- **Rated lifetime: 1,000 hours at +105°C.**

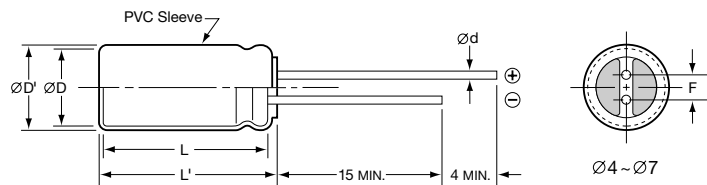


# KMA Series

## 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	0.45	2.0
6.3	ØD + 0.5	L + 1.0	0.45	2.5

## 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
<b>4 Volts</b> 5 Volts Surge	33	KMA4VB33RM4X7LL	4 × 7	17.58	26
	47	KMA4VB47RM4X7LL	4 × 7	12.343	34
	100	KMA4VB101M5X7LL	5 × 7	5.801	61
	220	KMA4VB221M6X7LL	6.3 × 7	2.637	95
<b>6.3 Volts</b> 8 Volts Surge	22	KMA6.3VB22RM4X7LL	4 × 7	16.575	31
	47	KMA6.3VB47RM5X7LL	5 × 7	7.759	47
<b>10 Volts</b> 13 Volts Surge	15	KMA10VB15RM4X7LL	4 × 7	20.995	28
	33	KMA10VB33RM5X7LL	5 × 7	9.543	43
	68	KMA10VB68RM6X7LL	6.3 × 7	4.631	63
	100	KMA10VB101M6X7LL	6.3 × 7	3.149	80
<b>16 Volts</b> 20 Volts Surge	6.8	KMA16VB68RM4X7LL	4 × 7	39	20
	10	KMA16VB10RM4X7LL	4 × 7	26.52	25
	15	KMA16VB15RM5X7LL	5 × 7	17.68	31
	22	KMA16VB22RM5X7LL	5 × 7	12.055	39
	47	KMA16VB47RM6X7LL	6.3 × 7	5.643	59
100	KMA16VB101M6X7LL	6.3 × 7	2.652	97	
<b>25 Volts</b> 32 Volts Surge	33	KMA25VB33RM6X7LL	6.3 × 7	7.032	53
	47	KMA25VB47RM6X7LL	6.3 × 7	4.937	71
<b>35 Volts</b> 44 Volts Surge	4.7	KMA35VB47RM4X7LL	4 × 7	42.319	20
	6.8	KMA35VB68RM5X7LL	5 × 7	29.25	24
	10	KMA35VB10RM5X7LL	5 × 7	19.89	30
	15	KMA35VB15RM6X7LL	6.3 × 7	13.26	37
	22	KMA35VB22RM6X7LL	6.3 × 7	9.041	47
	33	KMA35VB33RM6X7LL	6.3 × 7	6.027	64

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

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<b>50 Volts</b> 63 Volts Surge	0.1	KMA50VBR10M4X7LL	4 × 7	1,657.5	1.3
	0.15	KMA50VBR15M4X7LL	4 × 7	1,105.0	2.0
	0.22	KMA50VBR22M4X7LL	4 × 7	753.409	2.9
	0.33	KMA50VBR33M4X7LL	4 × 7	502.273	3.5
	0.47	KMA50VBR47M4X7LL	4 × 7	352.66	5.0
	0.68	KMA50VBR68M4X7LL	4 × 7	243.75	7.1
	1.0	KMA50VB1R0M4X7LL	4 × 7	165.75	10
	1.5	KMA50VB1R5M4X7LL	4 × 7	110.5	12
	2.2	KMA50VB2R2M4X7LL	4 × 7	75.341	15
	3.3	KMA50VB3R3M4X7LL	4 × 7	50.227	18
	4.7	KMA50VB4R7M5X7LL	5 × 7	35.266	23
	6.8	KMA50VB6R8M6X7LL	6.3 × 7	24.375	28
	10	KMA50VB10RM6X7LL	6.3 × 7	16.575	34
22	KMA50VB22RM6X7LL	6.3 × 7	7.534	57	
<b>63 Volts</b> 79 Volts Surge	0.1	KMA63VBR10M4X7LL	4 × 7	1,326.0	1.3
	0.15	KMA63VBR15M4X7LL	4 × 7	884.0	1.9
	0.22	KMA63VBR22M4X7LL	4 × 7	602.727	2.9
	0.33	KMA63VBR33M4X7LL	4 × 7	401.818	4.4
	0.47	KMA63VBR47M4X7LL	4 × 7	282.128	7.9
	0.68	KMA63VBR68M4X7LL	4 × 7	195.0	9.2
	1.0	KMA63VB1R0M4X7LL	4 × 7	132.6	11
	1.5	KMA63VB1R5M4X7LL	4 × 7	88.4	13
	2.2	KMA63VB2R2M4X7LL	4 × 7	60.273	17
	3.3	KMA63VB3R3M5X7LL	5 × 7	40.182	21
	4.7	KMA63VB4R7M6X7LL	6.3 × 7	28.213	26
10	KMA63VB10RM6X7LL	6.3 × 7	13.26	43	

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