

KMF Series

- Endurance with ripple current: 105°C 2,000 to 5,000 hours
- Pb-free design

KMF

↑
lower Z
longer life
KME

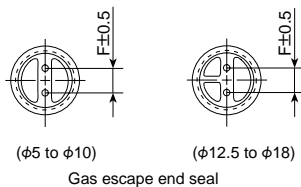
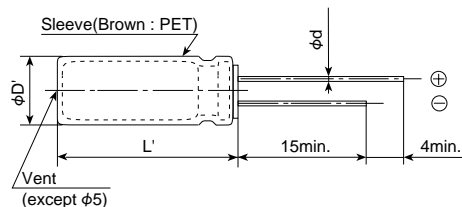


◆SPECIFICATIONS

Items	Characteristics									
Category										
Temperature Range	-55 to +105°C									
Rated Voltage Range	6.3 to 100V _{dc}									
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)									
Leakage Current	I=0.03CV or 4μA, whichever is greater. (at 20°C after 1 minute) I=0.01CV or 3μA, whichever is greater. (at 20°C after 2 minutes) Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C)									
Dissipation Factor (tanδ)	Rated voltage (V _{dc})	6.3V	10V	16V	25V	35V	50V	63V	100V	
	tanδ (Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	
	When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C, 120Hz)									
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	6.3V	10V	16V	25V	35V	50V	63V	100V	
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	2	
	Z(-40°C)/Z(+20°C)	8	6	4	3	3	3	3	3	
(at 120Hz)										
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for the specified period of time at 105°C.									
	Time	φ5 & 6.3 : 2,000 hours			φ8 & 10 : 3,000 hours			φ12.5 and larger : 5,000 hours		
	Capacitance change	≤±20% of the initial value								
	D.F. (tanδ)	≤200% of the initial specified value								
	Leakage current	≤The 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.									
	Capacitance change	≤±20% of the initial value								
	D.F. (tanδ)	≤200% of the initial specified value								
	Leakage current	≤The initial specified value								

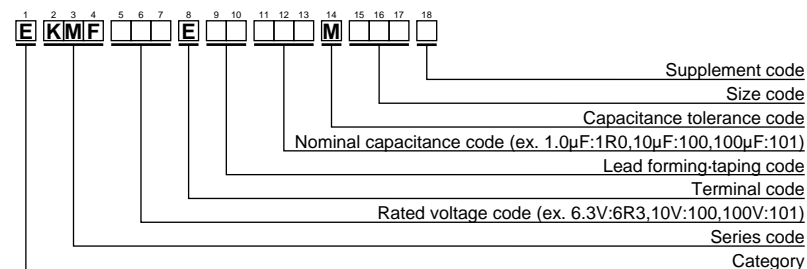
◆DIMENSIONS [mm]

- Terminal Code : E



φD	5	6.3	8	10	12.5	16	18
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φD'	φD+0.5max.						
L'	L+1.5max.						

◆PART NUMBERING SYSTEM



◆RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

Rated Voltage(V _{dc})	Case code	Frequency(Hz)				Rated Voltage(V _{dc})	Case code	Frequency(Hz)			
		120	1k	10k	100k			120	1k	10k	100k
6.3 10	φ5 (to 47μF)	0.40	0.75	0.93	1.00	50 63	φ5 (to 3.3μF)	0.20	0.66	0.90	1.00
	φ5 (100μF), φ6.3, φ8	0.70	0.86	0.96	1.00		φ5 (4.7μF to), φ6.3, φ8	0.40	0.76	0.93	1.00
	φ10 to φ18	0.85	0.95	0.98	1.00		φ10 to φ18	0.60	0.84	0.96	1.00
16 to 35	φ5 (to 22μF)	0.30	0.68	0.91	1.00	100	φ5 (to 1μF)	0.20	0.60	0.88	1.00
	φ5 (33μF to), φ6.3, φ8	0.50	0.80	0.94	1.00		φ5 (2.2μF to), φ6.3, φ8	0.30	0.65	0.90	1.00
	φ10 to φ18	0.70	0.88	0.97	1.00		φ10 to φ18	0.40	0.75	0.93	1.00

Specifications in this bulletin are subject to change without notice.

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φDXL(mm)	Impedance (Ωmax/ 100kHz)		Rated ripple current (mA rms/ 105°C, 100kHz)	Part No.	WV (Vdc)	Cap (μF)	Case size φDXL(mm)	Impedance (Ωmax/ 100kHz)		Rated ripple current (mA rms/ 105°C, 100kHz)	Part No.
			20°C	-10°C						20°C	-10°C		
6.3	33	5 × 11	1.3	3.9	154	EKMF6R3E□□330ME11D	35	4.7	5 × 11	3.0	9.0	100	EKMF350E□□4R7ME11D
	47	5 × 11	1.3	3.9	154	EKMF6R3E□□470ME11D		10	5 × 11	2.0	6.0	124	EKMF350E□□100ME11D
	100	5 × 11	1.3	3.9	154	EKMF6R3E□□101ME11D		22	5 × 11	1.3	3.9	154	EKMF350E□□220ME11D
	220	6.3 × 11	0.6	1.8	260	EKMF6R3E□□221MF11D		33	5 × 11	1.3	3.9	154	EKMF350E□□330ME11D
	330	6.3 × 11	0.6	1.8	260	EKMF6R3E□□331MF11D		47	6.3 × 11	0.6	1.8	260	EKMF350E□□470MF11D
	470	8 × 11.5	0.33	0.99	400	EKMF6R3E□□471MHB5D		100	8 × 11.5	0.33	0.99	400	EKMF350E□□101MHB5D
	1,000	10 × 12.5	0.25	0.75	510	EKMF6R3E□□102MJC5S		220	10 × 12.5	0.25	0.75	510	EKMF350E□□221MJC5S
	2,200	12.5 × 20	0.085	0.26	1,120	EKMF6R3E□□222MK20S		330	10 × 16	0.19	0.57	635	EKMF350E□□331MJ16S
	3,300	12.5 × 20	0.085	0.26	1,120	EKMF6R3E□□332MK20S		470	10 × 20	0.14	0.42	860	EKMF350E□□471MJ20S
	4,700	16 × 25	0.060	0.18	1,570	EKMF6R3E□□472ML25S		1,000	12.5 × 25	0.070	0.21	1,320	EKMF350E□□102MK25S
	6,800	16 × 25	0.060	0.18	1,570	EKMF6R3E□□682ML25S		2,200	16 × 31.5	0.048	0.14	1,810	EKMF350E□□222MLN3S
	10,000	16 × 31.5	0.048	0.14	1,810	EKMF6R3E□□103MLN3S		3,300	18 × 35.5	0.037	0.11	2,240	EKMF350E□□332MMP1S
15,000	18 × 35.5	0.037	0.11	2,240	EKMF6R3E□□153MMP1S	4,700	18 × 40	0.034	0.10	2,460	EKMF350E□□472MM40S		
10	22	5 × 11	1.3	3.9	154	EKMF100E□□220ME11D	50	0.47	5 × 11	7.0	21.0	66	EKMF500E□□4R7ME11D
	33	5 × 11	1.3	3.9	154	EKMF100E□□330ME11D		1	5 × 11	5.0	15.0	78	EKMF500E□□1R0ME11D
	47	5 × 11	1.3	3.9	154	EKMF100E□□470ME11D		2.2	5 × 11	4.0	12.0	88	EKMF500E□□2R2ME11D
	100	5 × 11	1.3	3.9	154	EKMF100E□□101ME11D		3.3	5 × 11	3.5	11.0	94	EKMF500E□□3R3ME11D
	220	6.3 × 11	0.6	1.8	260	EKMF100E□□221MF11D		4.7	5 × 11	3.0	9.0	100	EKMF500E□□4R7ME11D
	330	8 × 11.5	0.33	0.99	400	EKMF100E□□331MHB5D		10	5 × 11	2.0	6.0	124	EKMF500E□□100ME11D
	470	8 × 11.5	0.33	0.99	400	EKMF100E□□471MHB5D		22	5 × 11	1.3	3.9	154	EKMF500E□□220ME11D
	1,000	10 × 16	0.19	0.57	635	EKMF100E□□102MJ16S		33	6.3 × 11	0.60	1.8	260	EKMF500E□□330MF11D
	2,200	12.5 × 20	0.085	0.26	1,120	EKMF100E□□222MK20S		47	6.3 × 11	0.60	1.8	260	EKMF500E□□470MF11D
	3,300	12.5 × 25	0.070	0.21	1,320	EKMF100E□□332MK25S		100	8 × 11.5	0.33	0.99	400	EKMF500E□□101MHB5D
	4,700	16 × 25	0.060	0.18	1,570	EKMF100E□□472ML25S		220	10 × 16	0.19	0.57	635	EKMF500E□□221MJ16S
	6,800	16 × 31.5	0.048	0.14	1,810	EKMF100E□□682MLN3S		330	10 × 20	0.14	0.42	860	EKMF500E□□331MJ20S
10,000	18 × 35.5	0.037	0.11	2,240	EKMF100E□□103MMP1S	470	12.5 × 20	0.085	0.26	1,120	EKMF500E□□471MK20S		
16	10	5 × 11	2.0	6.0	124	EKMF160E□□100ME11D	63	1,000	16 × 25	0.060	0.18	1,570	EKMF500E□□102ML25S
	22	5 × 11	1.3	3.9	154	EKMF160E□□220ME11D		2,200	18 × 35.5	0.037	0.11	2,240	EKMF500E□□222MMP1S
	33	5 × 11	1.3	3.9	154	EKMF160E□□330ME11D		4.7	5 × 11	4.0	14.0	88	EKMF630E□□4R7ME11D
	47	5 × 11	1.3	3.9	154	EKMF160E□□470ME11D		10	5 × 11	2.5	8.8	124	EKMF630E□□100ME11D
	100	6.3 × 11	0.6	1.8	260	EKMF160E□□101MF11D		22	6.3 × 11	1.2	4.2	180	EKMF630E□□220MF11D
	220	8 × 11.5	0.33	0.99	400	EKMF160E□□221MHB5D		33	6.3 × 11	1.2	4.2	180	EKMF630E□□330MF11D
	330	8 × 11.5	0.33	0.99	400	EKMF160E□□331MHB5D		47	8 × 11.5	0.56	2.0	305	EKMF630E□□470MHB5D
	470	10 × 12.5	0.25	0.75	510	EKMF160E□□471MJC5S		100	10 × 12.5	0.50	1.8	380	EKMF630E□□101MJC5S
	1,000	10 × 20	0.14	0.42	860	EKMF160E□□102MJ20S		220	10 × 20	0.27	0.95	620	EKMF630E□□221MJ20S
	2,200	12.5 × 25	0.070	0.21	1,320	EKMF160E□□222MK25S		330	12.5 × 20	0.16	0.56	890	EKMF630E□□331MK20S
	3,300	16 × 25	0.060	0.18	1,570	EKMF160E□□332ML25S		470	12.5 × 25	0.14	0.49	1,040	EKMF630E□□471MK25S
	4,700	16 × 31.5	0.048	0.14	1,810	EKMF160E□□472MLN3S		1,000	16 × 31.5	0.06	0.21	1,790	EKMF630E□□102MLN3S
6,800	18 × 35.5	0.037	0.11	2,240	EKMF160E□□682MMP1S	100	0.47	5 × 11	10.0	35.0	55	EKMF101E□□4R7ME11D	
10,000	18 × 40	0.034	0.10	2,460	EKMF160E□□103MM40S		1	5 × 11	7.0	25.0	66	EKMF101E□□1R0ME11D	
4.7	5 × 11	3.0	9.0	100	EKMF250E□□4R7ME11D		2.2	5 × 11	6.0	21.0	72	EKMF101E□□2R2ME11D	
10	5 × 11	2.0	6.0	124	EKMF250E□□100ME11D		3.3	5 × 11	5.0	18.0	78	EKMF101E□□3R3ME11D	
22	5 × 11	1.3	3.9	154	EKMF250E□□220ME11D		4.7	5 × 11	4.0	14.0	88	EKMF101E□□4R7ME11D	
33	5 × 11	1.3	3.9	154	EKMF250E□□330ME11D		10	6.3 × 11	1.2	4.2	180	EKMF101E□□100MF11D	
47	5 × 11	1.3	3.9	154	EKMF250E□□470ME11D		22	8 × 11.5	0.66	2.3	282	EKMF101E□□220MHB5D	
100	6.3 × 11	0.6	1.9	260	EKMF250E□□101MF11D		33	10 × 12.5	0.50	1.8	380	EKMF101E□□330MJC5S	
220	8 × 11.5	0.33	0.99	400	EKMF250E□□221MHB5D		47	10 × 16	0.32	1.1	500	EKMF101E□□470MJ16S	
330	10 × 12.5	0.25	0.75	510	EKMF250E□□331MJC5S		100	12.5 × 20	0.16	0.56	890	EKMF101E□□101MK20S	
470	10 × 16	0.19	0.57	635	EKMF250E□□471MJ16S		220	16 × 25	0.09	0.32	1,440	EKMF101E□□221ML25S	
1,000	12.5 × 20	0.085	0.26	1,120	EKMF250E□□102MK20S		330	16 × 25	0.09	0.32	1,440	EKMF101E□□331ML25S	
2,200	16 × 25	0.060	0.18	1,570	EKMF250E□□222ML25S	470	16 × 31.5	0.06	0.21	1,790	EKMF101E□□471MLN3S		
3,300	16 × 31.5	0.048	0.14	1,810	EKMF250E□□332MLN3S								
4,700	18 × 35.5	0.037	0.11	2,240	EKMF250E□□472MMP1S								
6,800	18 × 40	0.034	0.10	2,460	EKMF250E□□682MM40S								

□□ : Lead forming / taping code

Specifications in this bulletin are subject to change without notice.