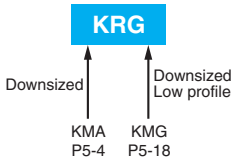
KRG Series

- Low profile : φ4×7mm to φ18×25mm
- Endurance : 1,000 hours at 105℃
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant

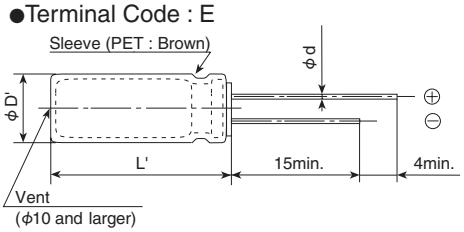


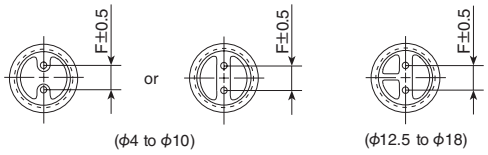
◆SPECIFICATIONS

Items	Characteristics							
Category Temperature Range	-55 to +105℃							
Rated Voltage Range	6.3 to 50Vdc							
Capacitance Tolerance	±20% (M)							(at 20℃, 120Hz)
Leakage Current	I=0.01CV or 3μA, whichever is greater. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)							(at 20℃ after 2 minutes)
Dissipation Factor (tan δ)	Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	
	tan δ (Max.)	0.28	0.24	0.20	0.16	0.14	0.12	
	When nominal capacitance exceeds 1,000μF, add 0.03 to the value above for each 1,000μF increase.							(at 20℃, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	
	Z(-25℃)/Z(+20℃)	5	4	3	2	2	2	
	Z(-40℃)/Z(+20℃)	10	8	6	4	3	3	(at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 1,000 hours at 105℃.							
	Rated voltage	6.3 to 16Vdc				25 to 50Vdc		
	Capacitance change	≦±25% of the initial value				≦±20% of the initial value		
	D.F. (tan δ)	≦200% of the initial specified value				≦200% of the initial specified value		
	Leakage current	≦The initial specified value				≦The initial specified value		
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 500 hours at 105℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.							
	Rated voltage	6.3 to 16Vdc				25 to 50Vdc		
	Capacitance change	≦±25% of the initial value				≦±20% of the initial value		
	D.F. (tan δ)	≦200% of the initial specified value				≦200% of the initial specified value		
	Leakage current	≦The initial specified value				≦The initial specified value		

◆DIMENSIONS [mm]

●Terminal Code : E

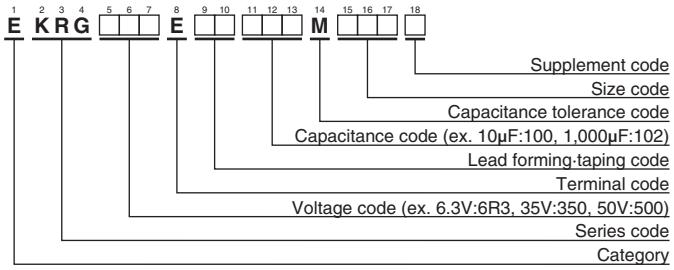




Gas escape end seal

φD		4	5	6.3	8	10 & 12.5	16 & 18
φd	7L	0.45	0.45	0.45	–	—	—
	≧9L	–	0.5	0.5	0.6	0.6	0.8
F		1.5	2.0	2.5	3.5	5.0	7.5
φD'		φD+0.5max.					
L'		L+1.5max. (7L : L+1.0max.)					

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

KRG Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mArms/ 105℃, 120Hz)	Part No.
6.3	47	5×7	0.28	50	EKRG6R3E□□470ME07D
	330	6.3×9	0.28	175	EKRG6R3E□□331MF09D
	1,000	10×9	0.28	365	EKRG6R3E□□102MJ09S
	4,700	16×15	0.37	1,010	EKRG6R3E□□472ML15S
	6,800	18×15	0.43	1,190	EKRG6R3E□□682MM15S
	10,000	18×20	0.55	1,440	EKRG6R3E□□103MM20S
10	22	4×7	0.24	35	EKRG100E□□220MD07D
	100	5×9	0.24	93	EKRG100E□□101ME09D
	100	6.3×7	0.24	80	EKRG100E□□101MF07D
	220	6.3×9	0.24	154	EKRG100E□□221MF09D
	470	8×9	0.24	272	EKRG100E□□471MH09D
	1,000	10×12.5	0.24	445	EKRG100E□□102MJC5S
	2,200	12.5×15	0.27	690	EKRG100E□□222MK15S
	3,300	16×15	0.30	940	EKRG100E□□332ML15S
	4,700	18×15	0.33	1,120	EKRG100E□□472MM15S
	6,800	18×20	0.39	1,330	EKRG100E□□682MM20S
	10,000	18×25	0.51	1,700	EKRG100E□□103MM25S
16	33	5×7	0.20	53	EKRG160E□□330ME07D
	47	6.3×7	0.20	68	EKRG160E□□470MF07D
	100	6.3×7	0.20	97	EKRG160E□□101MF07D
	220	8×9	0.20	205	EKRG160E□□221MH09D
	330	8×9	0.20	251	EKRG160E□□331MH09D
	470	10×9	0.20	290	EKRG160E□□471MJ09S
	1,000	12.5×13	0.20	515	EKRG160E□□102MK13S
	2,200	16×15	0.23	830	EKRG160E□□222ML15S
	3,300	18×15	0.26	1,050	EKRG160E□□332MM15S
	4,700	18×20	0.29	1,260	EKRG160E□□472MM20S
	6,800	18×25	0.35	1,560	EKRG160E□□682MM25S
25	10	4×7	0.16	30	EKRG250E□□100MD07D
	22	5×7	0.16	46	EKRG250E□□220ME07D
	33	6.3×7	0.16	63	EKRG250E□□330MF07D
	47	5×9	0.16	75	EKRG250E□□470ME09D
	47	6.3×7	0.16	71	EKRG250E□□470MF07D
	100	6.3×9	0.16	121	EKRG250E□□101MF09D
	330	10×9	0.16	270	EKRG250E□□331MJ09S
25	470	10×12.5	0.16	370	EKRG250E□□471MJC5S
	1,000	12.5×15	0.16	590	EKRG250E□□102MK15S
	2,200	18×15	0.19	970	EKRG250E□□222MM15S
	3,300	18×20	0.22	1,220	EKRG250E□□332MM20S
	4,700	18×25	0.25	1,470	EKRG250E□□472MM25S
35	10	5×7	0.14	36	EKRG350E□□100ME07D
	22	6.3×7	0.14	57	EKRG350E□□220MF07D
	33	5×9	0.14	67	EKRG350E□□330ME09D
	33	6.3×7	0.14	64	EKRG350E□□330MF07D
	100	8×9	0.14	155	EKRG350E□□101MH09D
	220	10×9	0.14	235	EKRG350E□□221MJ09S
	330	10×12.5	0.14	340	EKRG350E□□331MJC5S
	470	12.5×13	0.14	415	EKRG350E□□471MK13S
	1,000	16×15	0.14	720	EKRG350E□□102ML15S
	2,200	18×20	0.17	1,110	EKRG350E□□222MM20S
50	1.0	4×7	0.12	10	EKRG500E□□1R0MD07D
	1.0	5×9	0.12	12	EKRG500E□□1R0ME09D
	2.2	4×7	0.12	15	EKRG500E□□2R2MD07D
	2.2	5×9	0.12	18	EKRG500E□□2R2ME09D
	3.3	4×7	0.12	18	EKRG500E□□3R3MD07D
	3.3	5×9	0.12	22	EKRG500E□□3R3ME09D
	4.7	4×7	0.12	25	EKRG500E□□4R7MD07D
	4.7	5×9	0.12	27	EKRG500E□□4R7ME09D
	10	5×9	0.12	46	EKRG500E□□100ME09D
	10	6.3×7	0.12	44	EKRG500E□□100MF07D
	22	5×9	0.12	61	EKRG500E□□220ME09D
	22	6.3×7	0.12	57	EKRG500E□□220MF07D
	33	6.3×9	0.12	80	EKRG500E□□330MF09D
	47	6.3×9	0.12	95	EKRG500E□□470MF09D
	100	10×9	0.12	170	EKRG500E□□101MJ09S
	220	10×12.5	0.12	290	EKRG500E□□221MJC5S
	330	12.5×13	0.12	370	EKRG500E□□331MK13S
	470	16×15	0.12	535	EKRG500E□□471ML15S
	1,000	18×20	0.12	830	EKRG500E□□102MM20S

□□ : Enter the appropriate lead forming or taping code.

◆RATED RIPPLE CURRENT MULTIPLIERS

❶Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	50	120	300	1k	10k	100k
to 4.7	0.65	1.00	1.35	1.75	2.30	2.50
10 to 47	0.75	1.00	1.25	1.50	1.75	1.80
100 to 1,000	0.80	1.00	1.15	1.30	1.40	1.50
2,200 to	0.85	1.00	1.03	1.05	1.08	1.08

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5℃ rise. When long life performance is required in actual use, the rms ripple current has to be reduced.