For LED light circuits and other long life applications

- ${\small @}$  Rated voltage range : 160 to 450 Vdc , Capacitance range : 5.6 to  $68 \mu F$
- Endurance with ripple current : 15,000 to 20,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant

#### *<b>♦SPECIFICATIONS*

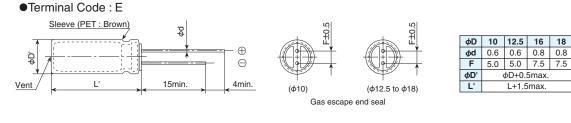
Items	Characteristics							
Category Temperature Range	-40 to +105℃							
Rated Voltage Range	160 to 450V <sub>dc</sub>							
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)							
Leakage Current	After 1 minute	After 5 minutes						
	I=0.04CV+100	I=0.02CV+2	5					
	Where, I : Max. leakage current ( $\mu$ A), C : Nominal capacitance ( $\mu$ F), V : Rated voltage (V) (at 20							
Dissipation Factor (tan $\delta$ )	Rated voltage (V <sub>dc</sub> )	160 to 450V						
	tanδ (Max.)	0.24			(at 20℃, 120Hz)			
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	160 to 250V	400, 450V					
	Z(-25°C)/Z(+20°C)	3	6					
	Z(-40°C)/Z(+20°C)	8	10		(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 (the peak voltage shall not exceed the rated voltage) for 20,000 hours (15,000 hours for $\phi$ 10×12.5L) at 105°C.							
	Capacitance change	$\leq \pm 30\%$ of the initial value						
	D.F. (tan δ )	≦300% of t	he initial spec	ified value				
	Leakage current	≦The initial	specified val	ue				
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. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.							
	Capacitance change	$\leq \pm 30\%$ of	the initial valu	le				
	D.F. (tan δ )	≦300% of t	he initial spec	ified value				
	Leakage current	≦500% of t	he initial spec	ified value				

**KXF** 

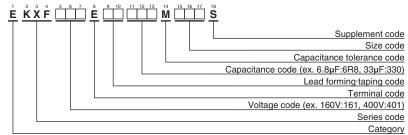
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Longer life

## DIMENSIONS [mm]



# ◆PART NUMBERING SYSTEM



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

## **♦**RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Capacitance(µF) Frequency(Hz)	120	1k	10k	100k
$5.6 \sim 68$	1.00	1.75	2.25	2.50

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



## **STANDARD RATINGS**

WV (Vdc)	Cap (µF)	Case size φD×L(mm)	tan δ	Rated ripple current (mArms/105℃, 120Hz)	Part No.
160	22	10 × 12.5	0.24	121	EKXF161E 220MJC5S
	33	10×16	0.24	158	EKXF161E 330MJ16S
200	18	10 × 12.5	0.24	113	EKXF201E 180MJC5S
	27	10×16	0.24	149	EKXF201E 270MJ16S
250	10	10 × 12.5	0.24	90	EKXF251E 100MJC5S
	12	10 × 12.5	0.24	97	EKXF251E 120MJC5S
	18	10×16	0.24	129	EKXF251E 180MJ16S
400	5.6	10 × 12.5	0.24	64	EKXF401E 5R6MJC5S
	8.2	10×16	0.24	88	EKXF401E 8R2MJ16S
450	6.8	10×16	0.24	62	EKXF451E 6R8MJ16S
	8.2	10×16	0.24	88	EKXF451E 8R2MJ16S
	10	10×20	0.24	92	EKXF451E 100MJ20S
	15	12.5×20	0.24	140	EKXF451E 150MK20S
	22	12.5 × 25	0.24	240	EKXF451E 220MK25S
	27	16×20	0.24	305	EKXF451E 270ML20S
	33	16×25	0.24	392	EKXF451E 330ML25S
	33	18×20	0.24	312	EKXF451E 330MM20S
	47	18 × 25	0.24	480	EKXF451E 470MM25S
	68	18×31.5	0.24	520	EKXF451E 680MMN3S

Product specifications in this catalog are subject to change without notice. Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications.

 $\Box\,\Box$  : Enter the appropriate lead forming or taping code.