

KXN Upgrade!
Series

KXL → Downsize → **KXN**



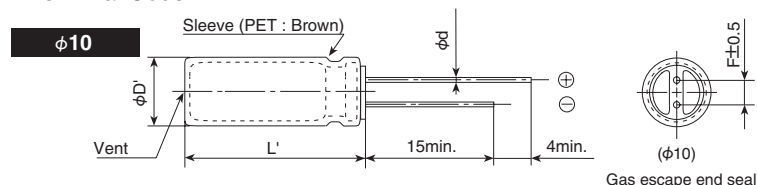
- Ideal for low profile power supply applications
- Downsize from KXL series
- Rated voltage range : 350 to 450V_{dc}, Capacitance range : 15 to 330μF
- Endurance with ripple current : 10,000 to 12,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant

◆ SPECIFICATIONS

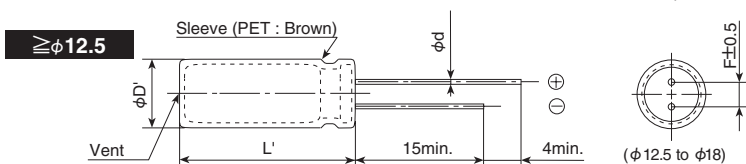
Items	Characteristics		
Category	-40 to +105℃		
Temperature Range			
Rated Voltage Range	350 to 450V _{dc}		
Capacitance Tolerance	± 20% (M) (at 20℃, 120Hz)		
Leakage Current	I=0.04CV+100 (after 1 minute) I=0.02CV+25 (after 5 minutes) Where, I : Max. leakage current(μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20℃)		
Dissipation Factor (tan δ)	Rated voltage (V _{dc})	350 to 450V	(at 20℃, 120Hz)
	tan δ (Max.)	0.24	
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	350 to 450V	(at 120Hz)
	Z(-25℃)/Z(+20℃)	6	
	Z(-40℃)/Z(+20℃)	10	
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 12,000 hours (10,000 hours for 20L and less) at 105℃.		
	Capacitance change	≤ ±20% of the initial value	
	D.F. (tan δ)	≤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℃ after exposing them for 1,000 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.		
	Capacitance change	≤ ±20% of the initial value	
	D.F. (tan δ)	≤200% of the initial specified value	
	Leakage current	≤500% of the initial specified value	

◆ DIMENSIONS [mm]

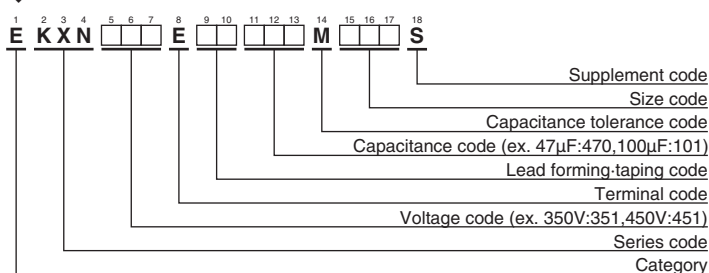
● Terminal Code : E



φD	10	12.5	16	18
φd	0.6	0.6	0.8	0.8
F	5.0	5.0	7.5	7.5
φD'	φD+0.5 max.			
L'	L+2.0 max.			



◆ PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mA rms/ 105°C, 120Hz)	Part No.	WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mA rms/ 105°C, 120Hz)	Part No.
350	18	10×16	0.24	205	EKXN351E□□180MJ16S	420	15	10×16	0.24	185	EKXN421E□□150MJ16S
	27	10×20	0.24	270	EKXN351E□□270MJ20S		22	10×20	0.24	245	EKXN421E□□220MJ20S
	33	10×25	0.24	325	EKXN351E□□330MJ25S		27	10×25	0.24	295	EKXN421E□□270MJ25S
	33	12.5×16	0.24	315	EKXN351E□□330MK16S		27	12.5×16	0.24	285	EKXN421E□□270MK16S
	47	10×30	0.24	420	EKXN351E□□470MJ30S		33	10×30	0.24	350	EKXN421E□□330MJ30S
	47	12.5×20	0.24	420	EKXN351E□□470MK20S		39	10×35	0.24	405	EKXN421E□□390MJ35S
	56	10×35	0.24	485	EKXN351E□□560MJ35S		39	12.5×20	0.24	380	EKXN421E□□390MK20S
	56	16×16	0.24	475	EKXN351E□□560ML16S		39	16×16	0.24	400	EKXN421E□□390ML16S
	68	10×40	0.24	560	EKXN351E□□680MJ40S		47	10×40	0.24	465	EKXN421E□□470MJ40S
	68	10×45	0.24	580	EKXN351E□□680MJ45S		56	10×45	0.24	530	EKXN421E□□560MJ45S
	68	12.5×25	0.24	550	EKXN351E□□680MK25S		56	10×50	0.24	545	EKXN421E□□560MJ50S
	68	18×16	0.24	550	EKXN351E□□680MM16S		56	12.5×25	0.24	500	EKXN421E□□560MK25S
	82	10×50	0.24	660	EKXN351E□□820MJ50S		56	18×16	0.24	500	EKXN421E□□560MM16S
	82	12.5×30	0.24	640	EKXN351E□□820MK30S		68	12.5×30	0.24	585	EKXN421E□□680MK30S
	82	16×20	0.24	615	EKXN351E□□820ML20S		68	16×20	0.24	560	EKXN421E□□680ML20S
	100	12.5×35	0.24	745	EKXN351E□□101MK35S		82	12.5×35	0.24	675	EKXN421E□□820MK35S
	100	12.5×40	0.24	775	EKXN351E□□101MK40S		82	12.5×40	0.24	705	EKXN421E□□820MK40S
	100	18×20	0.24	715	EKXN351E□□101MM20S		82	16×25	0.24	670	EKXN421E□□820ML25S
	120	12.5×45	0.24	880	EKXN351E□□121MK45S		82	18×20	0.24	645	EKXN421E□□820MM20S
	120	16×25	0.24	810	EKXN351E□□121ML25S		100	12.5×45	0.24	805	EKXN421E□□101MK45S
	120	16×30	0.24	870	EKXN351E□□121ML30S		100	16×30	0.24	795	EKXN421E□□101ML30S
	150	12.5×50	0.24	1,010	EKXN351E□□151MK50S		120	12.5×50	0.24	905	EKXN421E□□121MK50S
	150	18×25	0.24	930	EKXN351E□□151MM25S		120	16×35	0.24	890	EKXN421E□□121ML35S
	180	16×35	0.24	1,090	EKXN351E□□181ML35S		120	18×25	0.24	830	EKXN421E□□121MM25S
	180	16×40	0.24	1,120	EKXN351E□□181ML40S		150	16×40	0.24	1,030	EKXN421E□□151ML40S
	180	18×30	0.24	1,090	EKXN351E□□181MM30S		150	18×30	0.24	995	EKXN421E□□151MM30S
	220	16×45	0.24	1,270	EKXN351E□□221ML45S		180	16×45	0.24	1,140	EKXN421E□□181ML45S
	220	18×35	0.24	1,250	EKXN351E□□221MM35S		180	16×50	0.24	1,160	EKXN421E□□181ML50S
	220	18×40	0.24	1,280	EKXN351E□□221MM40S		180	18×35	0.24	1,130	EKXN421E□□181MM35S
	270	16×50	0.24	1,430	EKXN351E□□271ML50S		180	18×40	0.24	1,160	EKXN421E□□181MM40S
	270	18×45	0.24	1,450	EKXN351E□□271MM45S		220	18×45	0.24	1,310	EKXN421E□□221MM45S
	330	18×50	0.24	1,600	EKXN351E□□331MM50S		270	18×50	0.24	1,450	EKXN421E□□271MM50S
400	15	10×16	0.24	185	EKXN401E□□150MJ16S	450	15	10×16	0.24	185	EKXN451E□□150MJ16S
	22	10×20	0.24	245	EKXN401E□□220MJ20S		18	10×20	0.24	220	EKXN451E□□180MJ20S
	27	10×25	0.24	295	EKXN401E□□270MJ25S		22	12.5×16	0.24	255	EKXN451E□□220MK16S
	27	12.5×16	0.24	285	EKXN401E□□270MK16S		27	10×25	0.24	295	EKXN451E□□270MJ25S
	39	10×30	0.24	385	EKXN401E□□390MJ30S		33	10×30	0.24	360	EKXN451E□□330MJ30S
	39	12.5×20	0.24	380	EKXN401E□□390MK20S		33	12.5×20	0.24	350	EKXN451E□□330MK20S
	47	10×35	0.24	445	EKXN401E□□470MJ35S		39	10×35	0.24	410	EKXN451E□□390MJ35S
	47	16×16	0.24	435	EKXN401E□□470ML16S		39	16×16	0.24	400	EKXN451E□□390ML16S
	56	10×40	0.24	505	EKXN401E□□560MJ40S		47	10×40	0.24	465	EKXN451E□□470MJ40S
	56	10×45	0.24	530	EKXN401E□□560MJ45S		47	10×45	0.24	485	EKXN451E□□470MJ45S
	56	12.5×25	0.24	500	EKXN401E□□560MK25S		47	12.5×25	0.24	455	EKXN451E□□470MK25S
	56	18×16	0.24	500	EKXN401E□□560MM16S		47	18×16	0.24	455	EKXN451E□□470MM16S
	68	10×50	0.24	600	EKXN401E□□680MJ50S		56	10×50	0.24	545	EKXN451E□□560MJ50S
	68	12.5×30	0.24	585	EKXN401E□□680MK30S		56	12.5×30	0.24	530	EKXN451E□□560MK30S
	68	16×20	0.24	560	EKXN401E□□680ML20S		56	16×20	0.24	510	EKXN451E□□560ML20S
	82	12.5×35	0.24	675	EKXN401E□□820MK35S		68	12.5×35	0.24	615	EKXN451E□□680MK35S
	82	18×20	0.24	645	EKXN401E□□820MM20S		82	12.5×40	0.24	705	EKXN451E□□820MK40S
	100	12.5×40	0.24	775	EKXN401E□□101MK40S		82	12.5×45	0.24	725	EKXN451E□□820MK45S
	100	12.5×45	0.24	805	EKXN401E□□101MK45S		82	16×25	0.24	670	EKXN451E□□820ML25S
	100	16×25	0.24	740	EKXN401E□□101ML25S		82	18×20	0.24	645	EKXN451E□□820MM20S
	120	12.5×50	0.24	905	EKXN401E□□121MK50S		100	12.5×50	0.24	825	EKXN451E□□101MK50S
	120	16×30	0.24	870	EKXN401E□□121ML30S		100	16×30	0.24	795	EKXN451E□□101ML30S
	120	18×25	0.24	830	EKXN401E□□121MM25S		100	18×25	0.24	760	EKXN451E□□101MM25S
	150	16×35	0.24	995	EKXN401E□□151ML35S		120	16×35	0.24	890	EKXN451E□□121ML35S
	150	16×40	0.24	1,030	EKXN401E□□151ML40S		120	16×40	0.24	920	EKXN451E□□121ML40S
	150	18×30	0.24	995	EKXN401E□□151MM30S		120	18×30	0.24	890	EKXN451E□□121MM30S
	180	16×45	0.24	1,140	EKXN401E□□181ML45S		150	16×45	0.24	1,040	EKXN451E□□151ML45S
	180	18×35	0.24	1,130	EKXN401E□□181MM35S		150	18×35	0.24	1,030	EKXN451E□□151MM35S
	220	16×50	0.24	1,290	EKXN401E□□221ML50S		180	16×50	0.24	1,160	EKXN451E□□181ML50S
	220	18×40	0.24	1,280	EKXN401E□□221MM40S		180	18×40	0.24	1,160	EKXN451E□□181MM40S
	220	18×45	0.24	1,310	EKXN401E□□221MM45S		180	18×45	0.24	1,180	EKXN451E□□181MM45S
	270	18×50	0.24	1,450	EKXN401E□□271MM50S		220	18×50	0.24	1,310	EKXN451E□□221MM50S

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

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF)	Frequency(Hz)	120	1k	10k	100k
15 to 82		1.00	1.75	2.25	2.50
100 to 330		1.00	1.67	2.05	2.25

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.