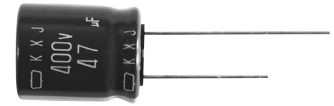
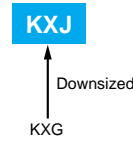


# KXJ Series

- Downsized and Longer life from current KXG series
- Endurance with ripple current : 10,000 to 12,000 hours at 105°C
- Rated voltage range : 160 to 450V, Capacitance range : 6.8 to 680μF
- For electronic ballast circuits and other long life applications
- Non solvent resistant type
- RoHS Compliant

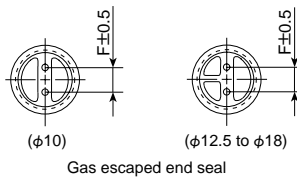
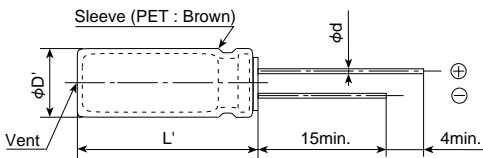


## ◆ SPECIFICATIONS

Items	Characteristics			
Category	—40 to +105°C (160 to 400V <sub>dc</sub> )    -25 to +105°C (420, 450V <sub>dc</sub> )			
Temperature Range				
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	
	CV ≤ 1000	I = 0.1CV + 40	I = 0.03CV + 15	
	CV > 1000	I = 0.04CV + 100	I = 0.02CV + 25	
	Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C)			
Dissipation Factor (tanδ)	Rated voltage (V <sub>dc</sub> )	160 to 250V	350 to 450V	
	tanδ (Max.)	0.20	0.24	(at 20°C, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	160 to 250V	350, 400V	420, 450V
	Z(-25°C)/Z(+20°C)	3	5	6
	Z(-40°C)/Z(+20°C)	6	6	—
	(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 12,000 hours (10,000 hours for 20L max.) at 105°C.			
	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 1000 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	≤ ±20% of the initial value		
	D.F. (tanδ)	≤ 200% of the initial specified value		
	Leakage current	≤ 500% of the initial specified value		

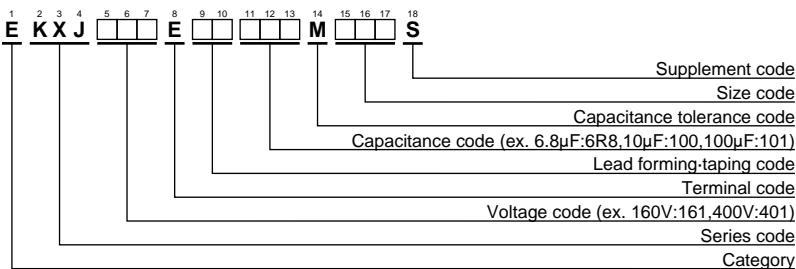
## ◆ DIMENSIONS [mm]

- Terminal Code : E



φD	10	12.5	14.5	16	18
φd	0.6	0.6	0.8	0.8	0.8
F	5.0	5.0	7.5	7.5	7.5
φD'	φD+0.5max.				
L'	L+1.5max.				

## ◆ PART NUMBERING SYSTEM



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

## ◆ RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

Frequency (Hz)	120	1k	10k	100k
Less than 100μF	1.00	1.75	2.25	2.50
100μF or more	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.

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φDXL(mm)	tanδ	Rated ripple current (mA rms/105°C, 120Hz)	Part No.	WV (Vdc)	Cap (μF)	Case size φDXL(mm)	tanδ	Rated ripple current (mA rms/105°C, 120Hz)	Part No.
160	39	10×16	0.20	245	EKXJ161E□□390MJ16S	220	27	10×16	0.20	200	EKXJ221E□□270MJ16S
	56	10×20	0.20	315	EKXJ161E□□560MJ20S		39	10×20	0.20	265	EKXJ221E□□390MJ20S
	82	10×25	0.20	415	EKXJ161E□□820MJ25S		56	10×25	0.20	345	EKXJ221E□□560MJ25S
	82	10×30	0.20	445	EKXJ161E□□820MJ30S		56	10×30	0.20	370	EKXJ221E□□560MJ30S
	100	12.5×20	0.20	575	EKXJ161E□□101MK20S		68	12.5×20	0.20	475	EKXJ221E□□680MK20S
	120	10×35	0.20	570	EKXJ161E□□121MJ35S		82	10×35	0.20	470	EKXJ221E□□820MJ35S
	120	14.5×20	0.20	675	EKXJ161E□□121MU20S		82	14.5×20	0.20	555	EKXJ221E□□820MU20S
	150	10×40	0.20	665	EKXJ161E□□151MJ40S		100	10×40	0.20	545	EKXJ221E□□101MJ40S
	150	10×45	0.20	695	EKXJ161E□□151MJ45S		100	10×45	0.20	565	EKXJ221E□□101MJ45S
	150	12.5×25	0.20	765	EKXJ161E□□151MK25S		100	12.5×25	0.20	625	EKXJ221E□□101MK25S
	180	10×50	0.20	785	EKXJ161E□□181MJ50S		120	10×50	0.20	645	EKXJ221E□□121MJ50S
	180	12.5×30	0.20	885	EKXJ161E□□181MK30S		120	12.5×30	0.20	725	EKXJ221E□□121MK30S
	180	14.5×25	0.20	890	EKXJ161E□□181MU25S		120	14.5×25	0.20	725	EKXJ221E□□121MU25S
	180	16×20	0.20	855	EKXJ161E□□181ML20S		120	16×20	0.20	695	EKXJ221E□□121ML20S
	220	12.5×35	0.20	1,040	EKXJ161E□□221MK35S		150	12.5×35	0.20	860	EKXJ221E□□151MK35S
	220	16×25	0.20	1,020	EKXJ161E□□221ML25S		150	16×25	0.20	845	EKXJ221E□□151ML25S
	220	18×20	0.20	990	EKXJ161E□□221MM20S		150	18×20	0.20	815	EKXJ221E□□151MM20S
	270	12.5×40	0.20	1,190	EKXJ161E□□271MK40S		180	12.5×40	0.20	975	EKXJ221E□□181MK40S
	270	12.5×45	0.20	1,230	EKXJ161E□□271MK45S		180	12.5×45	0.20	1,005	EKXJ221E□□181MK45S
	270	14.5×31.5	0.20	1,170	EKXJ161E□□271MUN3S		180	14.5×31.5	0.20	955	EKXJ221E□□181MUN3S
	270	14.5×35.5	0.20	1,210	EKXJ161E□□271MUP1S		220	12.5×50	0.20	1,145	EKXJ221E□□221MK50S
	330	12.5×50	0.20	1,400	EKXJ161E□□331MK50S		220	14.5×35.5	0.20	1,095	EKXJ221E□□221MUP1S
	330	14.5×40	0.20	1,385	EKXJ161E□□331MU40S		220	14.5×40	0.20	1,130	EKXJ221E□□221MU40S
	330	16×31.5	0.20	1,350	EKXJ161E□□331MLN3S		220	16×31.5	0.20	1,100	EKXJ221E□□221MLN3S
	330	18×25	0.20	1,290	EKXJ161E□□331MM25S		220	18×25	0.20	1,050	EKXJ221E□□221MM25S
	390	14.5×45	0.20	1,545	EKXJ161E□□391MU45S		270	14.5×45	0.20	1,285	EKXJ221E□□271MU45S
	390	16×35.5	0.20	1,500	EKXJ161E□□391MLP1S		270	14.5×50	0.20	1,315	EKXJ221E□□271MU50S
	470	14.5×50	0.20	1,735	EKXJ161E□□471MU50S		270	16×35.5	0.20	1,245	EKXJ221E□□271MLP1S
	470	16×40	0.20	1,700	EKXJ161E□□471ML40S		270	18×31.5	0.20	1,260	EKXJ221E□□271MMN3S
	470	16×45	0.20	1,730	EKXJ161E□□471ML45S		330	16×40	0.20	1,425	EKXJ221E□□331ML40S
	470	18×31.5	0.20	1,660	EKXJ161E□□471MMN3S		330	16×45	0.20	1,450	EKXJ221E□□331ML45S
	470	18×35.5	0.20	1,715	EKXJ161E□□471MMP1S		330	18×35.5	0.20	1,440	EKXJ221E□□331MMP1S
	560	16×50	0.20	1,920	EKXJ161E□□561ML50S		390	16×50	0.20	1,600	EKXJ221E□□391ML50S
560	18×40	0.20	1,905	EKXJ161E□□561MM40S	390	18×40	0.20	1,590	EKXJ221E□□391MM40S		
680	18×45	0.20	2,130	EKXJ161E□□681MM45S	390	18×45	0.20	1,620	EKXJ221E□□391MM45S		
680	18×50	0.20	2,145	EKXJ161E□□681MM50S	470	18×50	0.20	1,785	EKXJ221E□□471MM50S		
200	27	10×16	0.20	200	EKXJ201E□□270MJ16S	250	22	10×16	0.20	185	EKXJ251E□□220MJ16S
	47	10×20	0.20	290	EKXJ201E□□470MJ20S		33	10×20	0.20	240	EKXJ251E□□330MJ20S
	56	10×25	0.20	345	EKXJ201E□□560MJ25S		47	10×25	0.20	315	EKXJ251E□□470MJ25S
	68	10×30	0.20	405	EKXJ201E□□680MJ30S		47	10×30	0.20	340	EKXJ251E□□470MJ30S
	82	12.5×20	0.20	520	EKXJ201E□□820MK20S		56	12.5×20	0.20	430	EKXJ251E□□560MK20S
	100	10×35	0.20	520	EKXJ201E□□101MJ35S		68	10×35	0.20	430	EKXJ251E□□680MJ35S
	100	12.5×25	0.20	625	EKXJ201E□□101MK25S		68	14.5×20	0.20	505	EKXJ251E□□680MU20S
	100	14.5×20	0.20	615	EKXJ201E□□101MU20S		82	10×40	0.20	495	EKXJ251E□□820MJ40S
	120	10×40	0.20	595	EKXJ201E□□121MJ40S		82	10×45	0.20	515	EKXJ251E□□820MJ45S
	120	10×45	0.20	620	EKXJ201E□□121MJ45S		82	12.5×25	0.20	565	EKXJ251E□□820MK25S
	120	12.5×30	0.20	725	EKXJ201E□□121MK30S		100	10×50	0.20	585	EKXJ251E□□101MJ50S
	120	16×20	0.20	695	EKXJ201E□□121ML20S		100	12.5×30	0.20	660	EKXJ251E□□101MK30S
	150	10×50	0.20	720	EKXJ201E□□151MJ50S		100	14.5×25	0.20	665	EKXJ251E□□101MU25S
	150	12.5×35	0.20	860	EKXJ201E□□151MK35S		100	16×20	0.20	635	EKXJ251E□□121ML20S
	150	14.5×25	0.20	810	EKXJ201E□□151MU25S		120	12.5×35	0.20	770	EKXJ251E□□121MK35S
	180	14.5×31.5	0.20	955	EKXJ201E□□181MUN3S		120	16×25	0.20	755	EKXJ251E□□121ML25S
	180	16×25	0.20	925	EKXJ201E□□181ML25S		120	18×20	0.20	730	EKXJ251E□□121MM20S
	180	18×20	0.20	895	EKXJ201E□□181MM20S		150	12.5×40	0.20	890	EKXJ251E□□151MK40S
	220	12.5×40	0.20	1,075	EKXJ201E□□221MK40S		150	12.5×45	0.20	920	EKXJ251E□□151MK45S
	220	12.5×45	0.20	1,110	EKXJ201E□□221MK45S		150	14.5×31.5	0.20	870	EKXJ251E□□151MUN3S
	220	14.5×35.5	0.20	1,095	EKXJ201E□□221MUP1S		180	12.5×50	0.20	1,035	EKXJ251E□□181MK50S
	220	18×25	0.20	1,050	EKXJ201E□□221MM25S		180	14.5×35.5	0.20	990	EKXJ251E□□181MUP1S
	270	12.5×50	0.20	1,265	EKXJ201E□□271MK50S		180	14.5×40	0.20	1,020	EKXJ251E□□181MU40S
	270	14.5×40	0.20	1,250	EKXJ201E□□271MU40S		180	16×31.5	0.20	995	EKXJ251E□□181MLN3S
	270	14.5×45	0.20	1,290	EKXJ201E□□271MU45S		180	18×25	0.20	950	EKXJ251E□□181MM25S
	270	16×31.5	0.20	1,220	EKXJ201E□□271MLN3S		220	14.5×45	0.20	1,160	EKXJ251E□□221MU45S
	270	16×35.5	0.20	1,250	EKXJ201E□□271MLP1S		220	14.5×50	0.20	1,185	EKXJ251E□□221MU50S
	330	14.5×50	0.20	1,450	EKXJ201E□□331MU50S		220	16×35.5	0.20	1,125	EKXJ251E□□221MUP1S
	330	16×40	0.20	1,425	EKXJ201E□□331ML40S		220	18×31.5	0.20	1,135	EKXJ251E□□221MMN3S
	330	18×31.5	0.20	1,395	EKXJ201E□□331MMN3S		270	16×40	0.20	1,285	EKXJ251E□□271ML40S
	390	16×45	0.20	1,575	EKXJ201E□□391ML45S		270	16×45	0.20	1,310	EKXJ251E□□271ML45S
	390	18×35.5	0.20	1,565	EKXJ201E□□391MMP1S		270	18×35.5	0.20	1,300	EKXJ251E□□271MMP1S
	470	16×50	0.20	1,755	EKXJ201E□□471ML50S		330	16×50	0.20	1,475	EKXJ251E□□331ML50S
470	18×40	0.20	1,745	EKXJ201E□□471MM40S	330	18×40	0.20	1,460	EKXJ251E□□331MM40S		
470	18×45	0.20	1,770	EKXJ201E□□471MM45S	330	18×45	0.20	1,485	EKXJ251E□□331MM45S		
560	18×50	0.20	1,945	EKXJ201E□□561MM50S	390	18×50	0.20	1,625	EKXJ251E□□391MM50S		

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

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φDXL(mm)	tanδ	Rated ripple current (mA rms/105°C, 120Hz)	Part No.	WV (Vdc)	Cap (μF)	Case size φDXL(mm)	tanδ	Rated ripple current (mA rms/105°C, 120Hz)	Part No.
350	12	10×16	0.24	135	EKXJ351E□□120MJ16S	420	6.8	10×16	0.24	105	EKXJ421E□□6R8MJ16S
	22	10×20	0.24	200	EKXJ351E□□220MJ20S		12	10×20	0.24	150	EKXJ421E□□120MJ20S
	27	10×25	0.24	240	EKXJ351E□□270MJ25S		15	10×25	0.24	185	EKXJ421E□□150MJ25S
	27	10×30	0.24	255	EKXJ351E□□270MJ30S		18	10×30	0.24	215	EKXJ421E□□180MJ30S
	33	12.5×20	0.24	330	EKXJ351E□□330MK20S		22	12.5×20	0.24	285	EKXJ421E□□220MK20S
	39	10×35	0.24	325	EKXJ351E□□390MJ35S		27	10×35	0.24	275	EKXJ421E□□270MJ35S
	47	10×40	0.24	375	EKXJ351E□□470MJ40S		27	10×40	0.24	290	EKXJ421E□□270MJ40S
	47	12.5×25	0.24	425	EKXJ351E□□470MK25S		27	12.5×25	0.24	340	EKXJ421E□□270MK25S
	47	14.5×20	0.24	420	EKXJ351E□□470MU20S		27	14.5×20	0.24	335	EKXJ421E□□270MU20S
	56	10×45	0.24	425	EKXJ351E□□560MJ45S		33	10×45	0.24	335	EKXJ421E□□330MJ45S
	56	12.5×30	0.24	495	EKXJ351E□□560MK30S		33	12.5×30	0.24	400	EKXJ421E□□330MK30S
	56	16×20	0.24	475	EKXJ351E□□560ML20S		33	16×20	0.24	385	EKXJ421E□□330ML20S
	68	10×50	0.24	485	EKXJ351E□□680MJ50S		39	10×50	0.24	375	EKXJ421E□□390MJ50S
	68	12.5×35	0.24	580	EKXJ351E□□680MK35S		39	14.5×25	0.24	435	EKXJ421E□□390MU25S
	68	14.5×25	0.24	545	EKXJ351E□□680MU25S		47	14.5×35	0.24	505	EKXJ421E□□470MK35S
	68	18×20	0.24	550	EKXJ351E□□680MM20S		47	16×25	0.24	500	EKXJ421E□□470ML25S
	82	12.5×40	0.24	655	EKXJ351E□□820MK40S		47	18×20	0.24	480	EKXJ421E□□470MM20S
	82	14.5×31.5	0.24	645	EKXJ351E□□820MUN3S		56	12.5×40	0.24	570	EKXJ421E□□560MK40S
	82	16×25	0.24	625	EKXJ351E□□820ML25S		56	12.5×45	0.24	590	EKXJ421E□□560MK45S
	100	12.5×45	0.24	750	EKXJ351E□□101MK45S		56	14.5×31.5	0.24	560	EKXJ421E□□560MUN3S
	100	12.5×50	0.24	770	EKXJ351E□□101MK50S		68	12.5×50	0.24	670	EKXJ421E□□680MK50S
	100	14.5×35.5	0.24	740	EKXJ351E□□101MUP1S		68	14.5×35.5	0.24	640	EKXJ421E□□101MU50S
	100	16×31.5	0.24	740	EKXJ351E□□101MLN3S		68	14.5×40	0.24	660	EKXJ421E□□680MU40S
	100	18×25	0.24	710	EKXJ351E□□101MM25S		68	16×31.5	0.24	645	EKXJ421E□□680MLN3S
	120	14.5×40	0.24	835	EKXJ351E□□121MU40S		68	18×25	0.24	615	EKXJ421E□□680MM25S
	120	14.5×45	0.24	860	EKXJ351E□□121MU45S		82	14.5×45	0.24	750	EKXJ421E□□820MU45S
	120	16×35.5	0.24	830	EKXJ351E□□121MLP1S		82	16×35.5	0.24	725	EKXJ421E□□820MLP1S
	150	14.5×50	0.24	980	EKXJ351E□□151MU50S		82	18×31.5	0.24	730	EKXJ421E□□820MMN3S
	150	16×40	0.24	960	EKXJ351E□□151ML40S		100	14.5×50	0.24	845	EKXJ421E□□101MU50S
	150	16×45	0.24	975	EKXJ351E□□151ML45S		100	16×40	0.24	825	EKXJ421E□□101ML40S
150	18×31.5	0.24	940	EKXJ351E□□151MMN3S	100	16×45	0.24	840	EKXJ421E□□101ML45S		
180	16×50	0.24	1,090	EKXJ351E□□181ML50S	100	18×35.5	0.24	835	EKXJ421E□□101MMP1S		
180	18×35.5	0.24	1,065	EKXJ351E□□181MMP1S	120	16×50	0.24	935	EKXJ421E□□121ML50S		
180	18×40	0.24	1,080	EKXJ351E□□181MM40S	120	18×40	0.24	930	EKXJ421E□□121MM40S		
220	18×45	0.24	1,210	EKXJ351E□□221MM45S	120	18×45	0.24	945	EKXJ421E□□121MM45S		
220	18×50	0.24	1,220	EKXJ351E□□221MM50S	150	18×50	0.24	1,060	EKXJ421E□□151MM50S		
400	10	10×16	0.24	125	EKXJ401E□□100MJ16S	450	6.8	10×16	0.24	105	EKXJ451E□□6R8MJ16S
	18	10×20	0.24	180	EKXJ401E□□180MJ20S		12	10×20	0.24	150	EKXJ451E□□120MJ20S
	22	10×25	0.24	215	EKXJ401E□□220MJ25S		15	10×25	0.24	185	EKXJ451E□□150MJ25S
	27	10×30	0.24	255	EKXJ401E□□270MJ30S		18	10×30	0.24	215	EKXJ451E□□180MJ30S
	27	12.5×20	0.24	300	EKXJ401E□□270MK20S		18	12.5×20	0.24	255	EKXJ451E□□180MK20S
	33	10×35	0.24	300	EKXJ401E□□330MJ35S		22	10×35	0.24	250	EKXJ451E□□220MJ35S
	39	10×40	0.24	340	EKXJ401E□□390MJ40S		27	10×40	0.24	290	EKXJ451E□□270MJ40S
	39	10×45	0.24	355	EKXJ401E□□390MJ45S		27	10×45	0.24	305	EKXJ451E□□270MJ45S
	39	12.5×25	0.24	390	EKXJ401E□□390MK25S		27	12.5×25	0.24	340	EKXJ451E□□270MK25S
	39	14.5×20	0.24	385	EKXJ401E□□390MU20S		27	14.5×20	0.24	335	EKXJ451E□□270MU20S
	47	12.5×30	0.24	455	EKXJ401E□□470MK30S		33	12.5×30	0.24	400	EKXJ451E□□330MK30S
	47	16×20	0.24	435	EKXJ401E□□470ML20S		33	14.5×25	0.24	400	EKXJ451E□□330MU25S
	56	10×50	0.24	440	EKXJ401E□□560MJ50S		33	16×20	0.24	385	EKXJ451E□□330ML20S
	56	12.5×35	0.24	525	EKXJ401E□□560MK35S		39	10×50	0.24	375	EKXJ451E□□390MJ50S
	56	14.5×25	0.24	495	EKXJ401E□□560MU25S		39	12.5×35	0.24	460	EKXJ451E□□390MK35S
	56	18×20	0.24	500	EKXJ401E□□560MM20S		39	18×20	0.24	440	EKXJ451E□□390MM20S
	68	12.5×40	0.24	600	EKXJ401E□□680MK40S		47	12.5×40	0.24	525	EKXJ451E□□470MK40S
	68	14.5×31.5	0.24	585	EKXJ401E□□680MUN3S		47	14.5×31.5	0.24	515	EKXJ451E□□470MUN3S
	68	16×25	0.24	570	EKXJ401E□□680ML25S		47	16×25	0.24	500	EKXJ451E□□470ML25S
	82	12.5×45	0.24	680	EKXJ401E□□820MK45S		56	12.5×45	0.24	590	EKXJ451E□□560MK45S
	82	12.5×50	0.24	700	EKXJ401E□□820MK50S		56	14.5×35.5	0.24	580	EKXJ451E□□560MUP1S
	82	14.5×35.5	0.24	670	EKXJ401E□□820MUP1S		56	16×31.5	0.24	585	EKXJ451E□□560MLN3S
	82	16×31.5	0.24	670	EKXJ401E□□820MLN3S		56	18×25	0.24	560	EKXJ451E□□560MM25S
	82	18×25	0.24	640	EKXJ401E□□820MM25S		68	12.5×50	0.24	670	EKXJ451E□□680MK50S
	100	14.5×40	0.24	760	EKXJ401E□□101MU40S		68	14.5×40	0.24	660	EKXJ451E□□680MU40S
	100	14.5×45	0.24	785	EKXJ401E□□101MU45S		68	14.5×45	0.24	680	EKXJ451E□□680MU45S
	100	16×35.5	0.24	760	EKXJ401E□□101MLP1S		68	16×35.5	0.24	660	EKXJ451E□□680MLP1S
	120	14.5×50	0.24	875	EKXJ401E□□121MU50S		82	14.5×50	0.24	765	EKXJ451E□□820MU50S
	120	16×40	0.24	860	EKXJ401E□□121ML40S		82	16×40	0.24	750	EKXJ451E□□820ML40S
	120	16×45	0.24	875	EKXJ401E□□121ML45S		82	16×45	0.24	760	EKXJ451E□□820ML45S
120	18×31.5	0.24	840	EKXJ401E□□121MMN3S	82	18×31.5	0.24	730	EKXJ451E□□820MMN3S		
120	18×35.5	0.24	870	EKXJ401E□□121MMP1S	100	16×50	0.24	855	EKXJ451E□□101ML50S		
150	16×50	0.24	995	EKXJ401E□□151ML50S	100	18×35.5	0.24	835	EKXJ451E□□101MMP1S		
150	18×40	0.24	985	EKXJ401E□□151MM40S	120	18×40	0.24	930	EKXJ451E□□121MM40S		
180	18×45	0.24	1,095	EKXJ401E□□181MM45S	120	18×45	0.24	945	EKXJ451E□□121MM45S		
220	18×50	0.24	1,220	EKXJ401E□□221MM50S	150	18×50	0.24	1,060	EKXJ451E□□151MM50S		

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