

## Surface Mount Schottky Rectifier

### Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

### Typical Applications

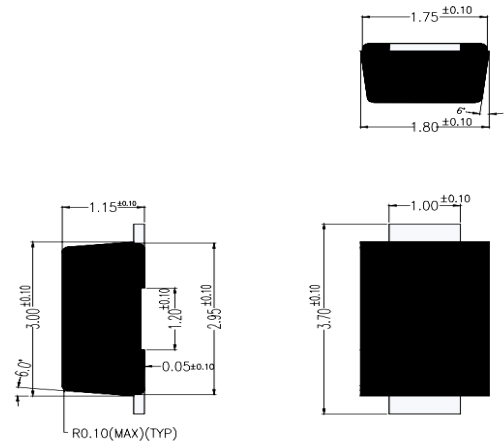
For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

### Mechanical Date

- **Package:** SOD-123FL  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

### SOD-123FL

Unit : inch(mm)



### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	K32	K33	K34	K35	K36	K38	K310	K315	K320	
Repetitive peak reverse voltage	VRRM	V	20	30	40	50	60	80	100	150	200	
Average rectified output current @60Hz sine wave, Resistance load, T <sub>a</sub> (FIG.1)	I <sub>O</sub>	A	3.0									
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T <sub>j</sub> =25°C	I <sub>FSM</sub>	A	65									
Storage temperature	T <sub>stg</sub>	°C	-55 ~+150									
Junction temperature	T <sub>j</sub>	°C	-55 ~+150					-55 ~+175				
Typical Junction Capacitance measured at 1MHz and Applied on 4.0VD.C	C <sub>j</sub>	pF	165									

### ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	K32	K33	K34	K35	K36	K38	K310	K315	K320
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =3.0A	0.55			0.70		0.85		0.95	
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	I <sub>RRM</sub>	mA	T <sub>a</sub> =25°C	0.5					0.1			
			T <sub>a</sub> =100°C	10					5			

■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	K32	K33	K34	K35	K36	K38	K310	K315	K320
Thermal Resistance	R <sub>θJ-A</sub>	°C/W	70 <sup>1)</sup>								
	R <sub>θJ-L</sub>		25 <sup>1)</sup>								

Note:  
(1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm\*3mm copper pad areas.

■ Characteristics (Typical)

FIG1: I<sub>o</sub>-T<sub>L</sub> Curve

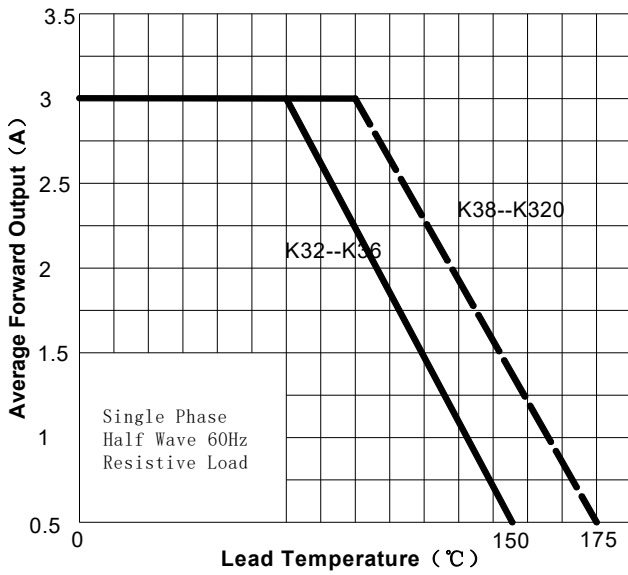


FIG2: Surge Forward Current Capability

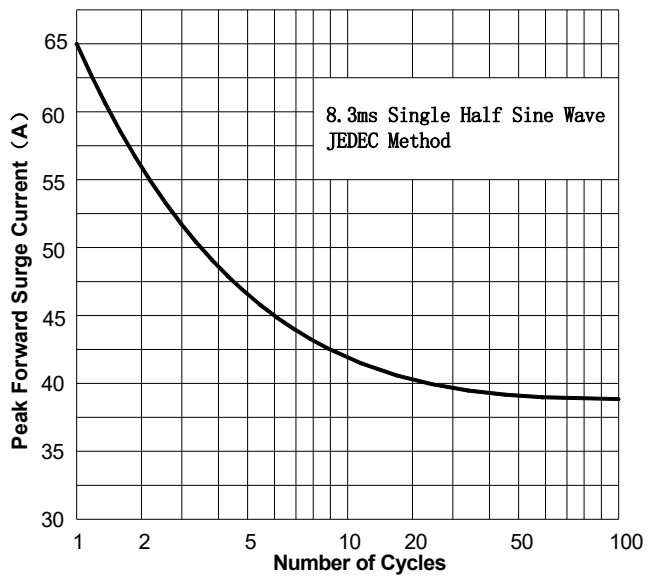


FIG3: Forward Voltage

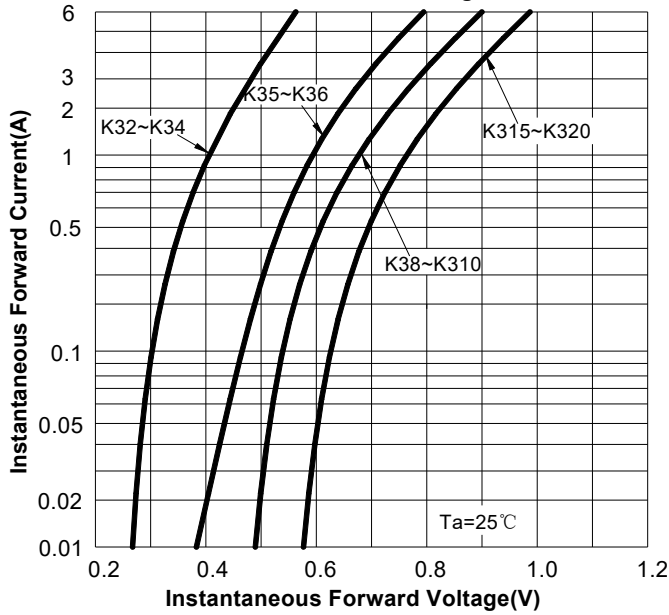


FIG4: Typical Reverse Characteristics

