

## Surface Mount Schottky Rectifier

### Features

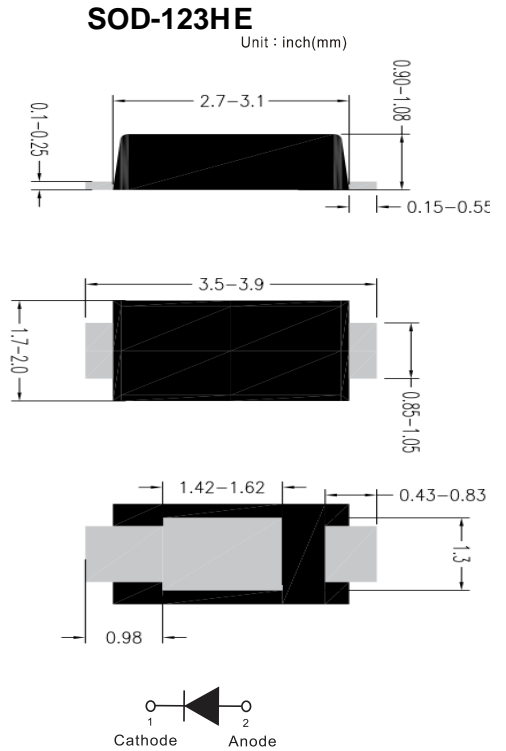
- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Expsemi electronics

### Typical Applications

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

### Mechanical Date

- **Package:** SOD-123HE  
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



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

PARAMETER	SYMBOL	UNIT	SSD32 HE	SSD33 HE	SSD34 HE	SSD35 HE	SSD36 HE	SSD38 HE	SSD310 HE	SSD315 HE	SSD320 HE		
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	80										
Storage temperature	T <sub>stg</sub>	°C	-55 ~+150						-55 ~+175				
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	SSD32 HE	SSD33 HE	SSD34 HE	SSD35 HE	SSD36 HE	SSD38 HE	SSD310 HE	SSD315 HE	SSD320 HE	
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =3.0A	0.55			0.70		0.80		0.95		
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	I <sub>RRM</sub>	uA	T <sub>a</sub> =25°C	5						1			
			T <sub>a</sub> =100°C	200						100			

Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SSD32 HE	SSD33 HE	SSD34 HE	SSD35 HE	SSD36 HE	SSD38 HE	SSD310 HE	SSD315 HE	SSD320 HE
Thermal Resistance	RθJ-A	°C/W	70 <sup>1)</sup>								
	RθJ-L		16 <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)

