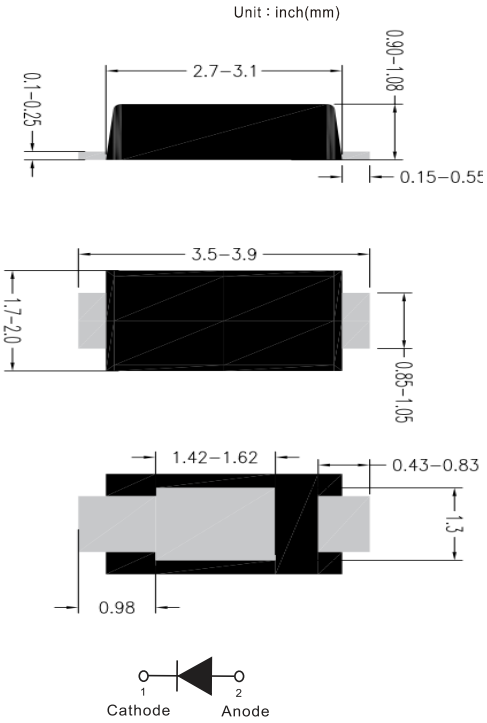
Surface Mount Schottky Rectifier

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

SOD-123HE



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_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SSD22 HE	SSD23 HE	SSD24 HE	SSD25 HE	SSD26 HE	SSD28 HE	SSD210 HE	SSD215 HE	SSD220 HE
Repetitive peak reverse voltage	V_{RRM}	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, Resistance load, Ta (FIG.1)	I_O	A	2.0								
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	50								
Storage temperature	Tstg	℃	-55 ~+150						-55 ~+175		
Junction temperature	Tj	℃	-55 ~+150						-55 ~+175		
Typical Junction Capacitance measured at 1MHz and Applied on 4.0VD.C	Cj	pF	165								

Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SSD22 HE	SSD23 HE	SSD24 HE	SSD25 HE	SSD26 HE	SSD28 HE	SSD210 HE	SSD215 HE	SSD220 HE
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=3.0A	0.55			0.7		0.78		0.9	
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	I_{RRM}	uA	T_a=25℃	20						5		
			T_a=100℃	200						100		

Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	SSD22 HE	SSD23 HE	SSD24 HE	SSD25 HE	SSD26 HE	SSD28 HE	SSD210 HE	SSD215 HE	SSD220 HE
Thermal Resistance	RθJ-A	℃/W	70 1)								
	RθJ-L		16 1)								

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)

Fig.1 Forward Current Derating Curve

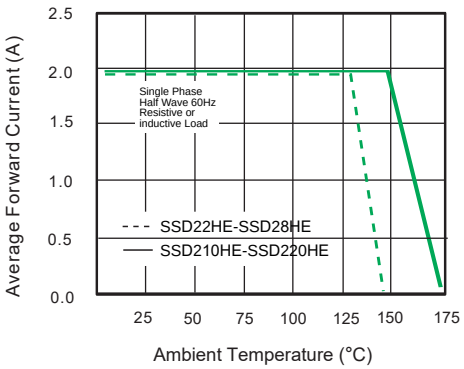


Fig.2 Typical Reverse Characteristics

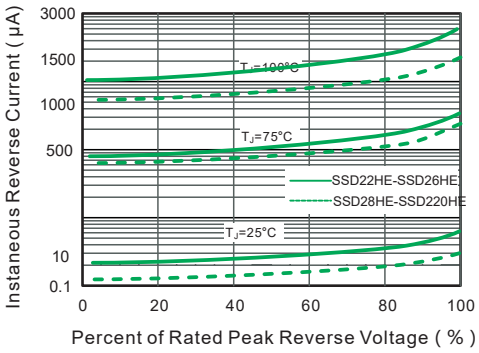


Fig.3 Typical Forward Characteristic

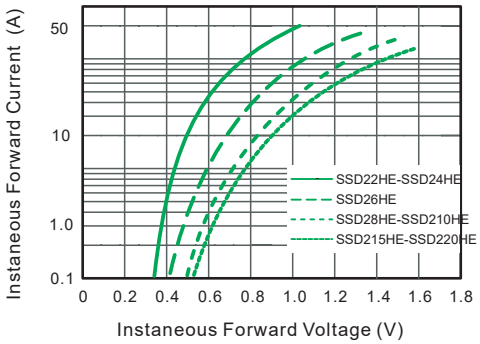


Fig.4 Typical Junction Capacitance

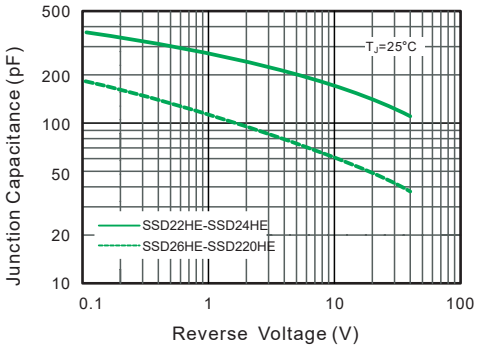


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

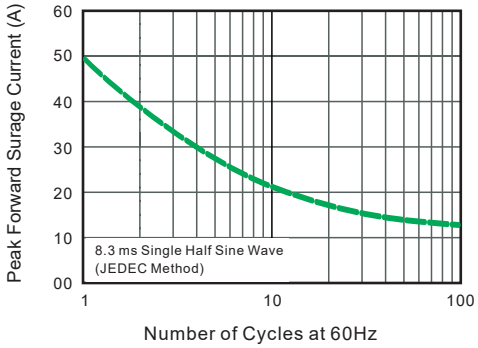


Fig.6- Typical Transient Thermal Impedance