

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
- AEC-Q101 qualified
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

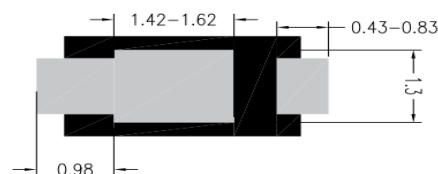
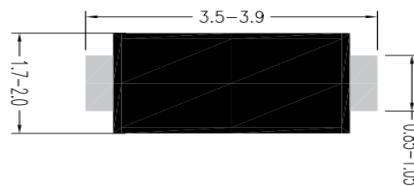
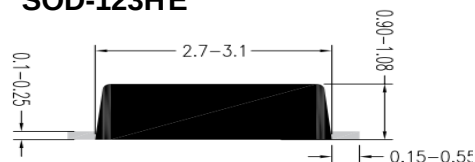
Mechanical Data

- Package: SOD-123HE
- Terminals: Tin plated leads, solderable per
- Polarity: Cathode line denotes the cathode end



SOD-123HE

Unit : inch(mm)



Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Unit	SS12 HEQ	SS13 HEQ	SS14 HEQ	SS15 HEQ	SS16 HEQ	SS18 HEQ	SS110 HEQ	SS115 HEQ	SS120 HEQ
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, T_a (FIG.1)	I_O	A	1.0								
Surge(non-repetitive)forward current @60Hz half-sine wave, 1 cycle, $T_j=25^{\circ}\text{C}$	I_{FSM}	A	30								
Storage temperature	T_{stg}	$^{\circ}\text{C}$	-55 ~+150								
Junction temperature	T_j	$^{\circ}\text{C}$	-55 ~+150					-55 ~+175			

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Unit	Test Conditions	SS12 HEQ	SS13 HEQ	SS14 HEQ	SS15 HEQ	SS16 HEQ	SS18 HEQ	SS110 HEQ	SS115 HEQ	SS120 HEQ
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =1.0A	0.55			0.70		0.85		0.95	
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	I _{RRM}	mA	Ta=25℃	0.50					0.10			
			Ta=100℃	10					5			



Thermal Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Unit	SS12 HEQ	SS13 HEQ	SS14 HEQ	SS15 HEQ	SS16 HEQ	SS18 HEQ	SS110 HEQ	SS115 HEQ	SS120 HEQ
Thermal Resistance	R θ J-A	$^{\circ}\text{C}/\text{W}$	70 ⁽¹⁾								
	R θ J-L		20 ⁽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)

FIG1: I_o -TLCurve

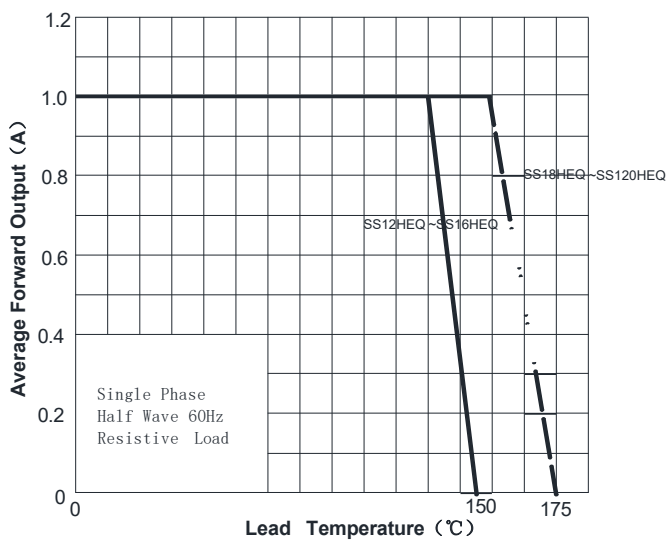


FIG2: Surge Forward Current Capability

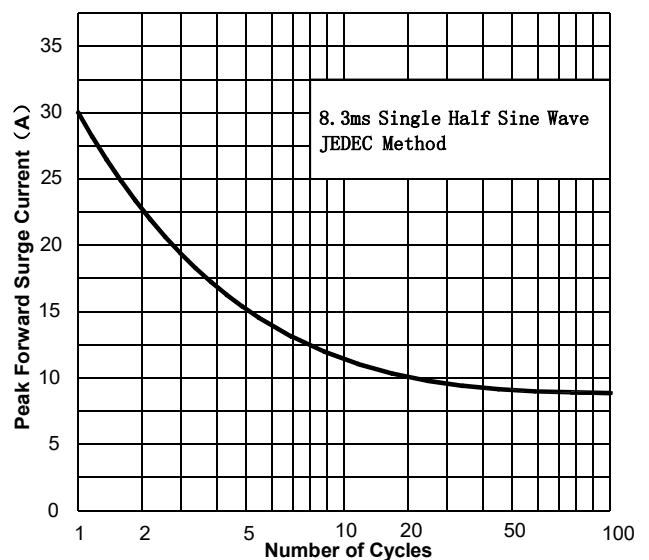


FIG3: Forward Voltage

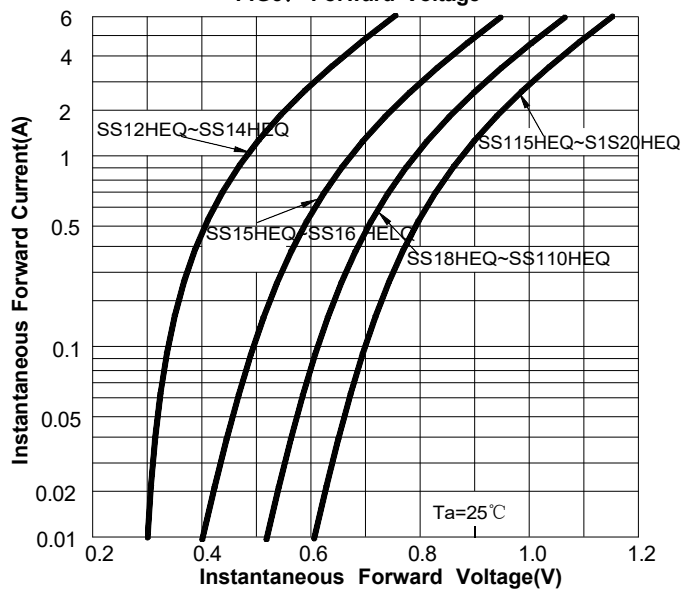


FIG4: Typical Reverse Characteristics

