

Surface Mount Schottky Barrier Diode

Features

- Low power losses, high efficiency
- Low forward voltage drop, low reverse current
- Compliant with RoHS requirements, lead-free, halogen-free
- AEC-Q101 qualified
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Mechanical Data

- Package: SOD-323HE
- Terminals: Tin plated leads, solderable per
- Polarity: Cathode line denotes the cathode end

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

Parameter	Symbol	Unit	SS12HE WSQ	SS13HE WSQ	SS14HE WSQ	SS15HE WSQ	SS16HE WSQ	SS18HE WSQ	SS110HE WSQ	SS115HE WSQ	SS120HE WSQ
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	25								
Storage temperature	T_{STG}	$^{\circ}\text{C}$	-55 ~+150								
Junction temperature	T_J	$^{\circ}\text{C}$	-55 ~+150								

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

Parameter	Symbol	Unit	Test Conditions	SS12HE WSQ	SS13HE WSQ	SS14HE WSQ	SS15HE WSQ	SS16HE WSQ	SS18HE WSQ	SS110HE WSQ	SS115HE WSQ	SS120HE WSQ
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 @ V _{RM} =V _{RRM}	I _{RRM}	mA	T _a =25°C	0.50					0.10			
			T _a =100°C	10					5			

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

Parameter	Symbol	Unit	SS12HE WSQ	SS13HE WSQ	SS14HE WSQ	SS15HE WSQ	SS16HE WSQ	SS18HE WSQ	SS110HE WSQ	SS115HE WSQ	SS120HE WSQ
Thermal Resistance	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	199 ¹⁾								
	$R_{\theta J-L}$		21 ¹⁾								

Note: 1. Per JESD51-3 Recommended Thermal Test Board. Device mounted on FR-4 PCB, board size = 76.2 mm x 114.3 mm



Characteristics (Typical)

FIG1: I_o - T_L Curve

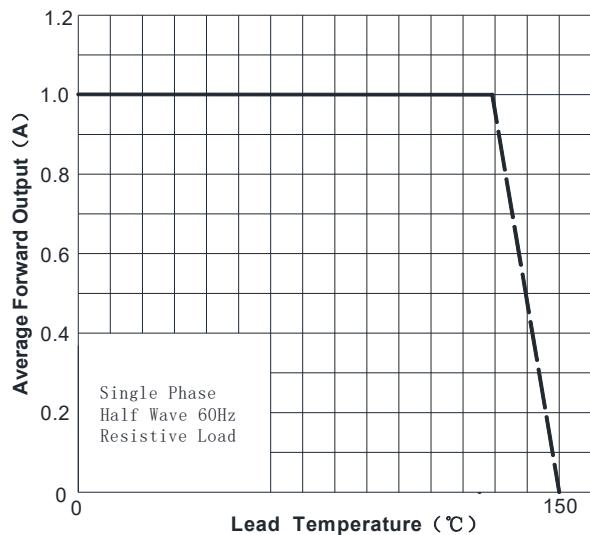


FIG2: Surge Forward Current Capability

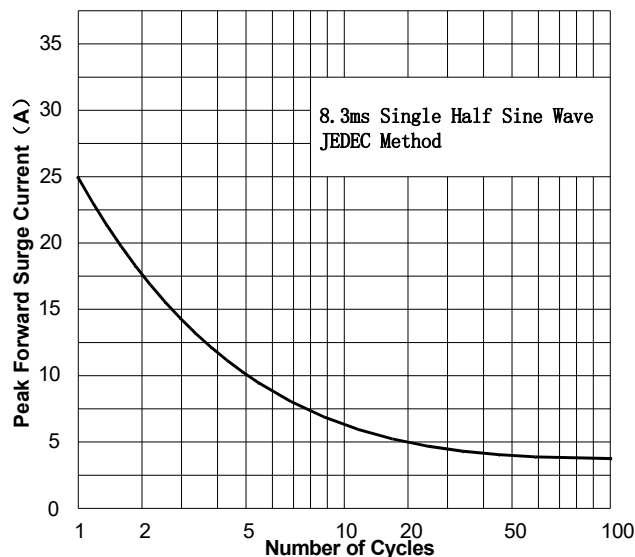


FIG3: Forward Voltage

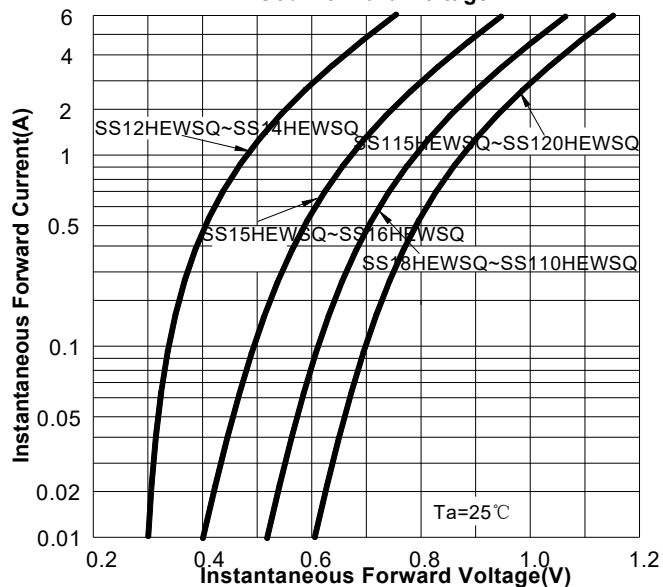
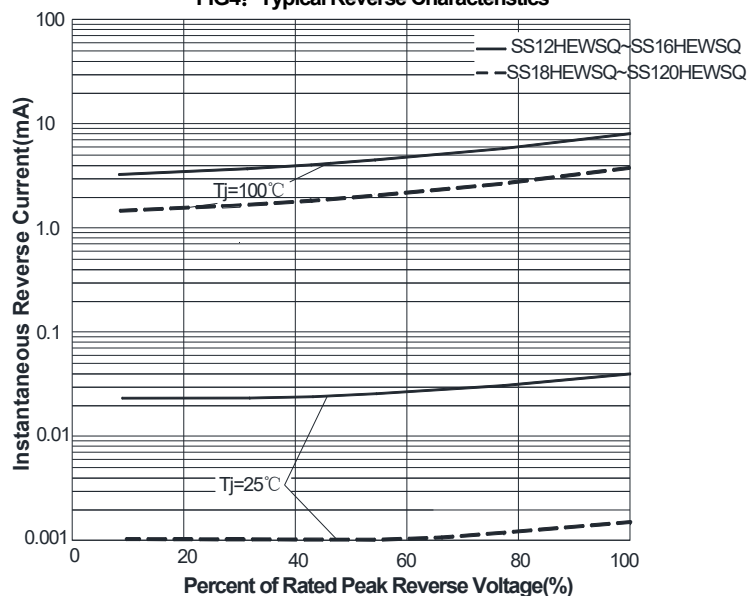


FIG4: Typical Reverse Characteristics





Dimensions (SOD-323HE)

Dim	Inches		Millimeters	
	Min	Max	Min	Max
A	0.083	0.091	2.10	2.30
B	0.094	0.110	2.40	2.80
C	0.050	0.058	1.28	1.48
D	0.020	0.028	0.50	0.70
E	0.025	0.033	0.64	0.84
F1	0.016	0.030	0.41	0.76
F2	0.046	0.062	1.18	1.58
G	0.002	0.010	0.05	0.25
H	0.031	0.041	0.80	1.05

