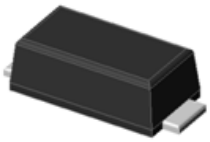
1A,50-60V Schottky Barrier Rectifiers

Features

- Low leakage current
- Schottky barrier diodes
- Low forward voltage drop
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260℃/10 seconds
- AEC-Q101 Qualified

RoHS COMPLIANT



eSGA (SOD-123FL)

Applications

For use in low voltage, high frequency inverters, free-wheeling and polarity protection application.

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	AFSL15	AFSL16	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	60	V
Maximum RMS voltage	V_{RMS}	35	42	V
Maximum DC blocking voltage	V_{DC}	50	60	V
Maximum average forward rectified current	$I_{F(AV)}$	1		A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load per diode	I_{FSM}	40		A
Operating junction temperature range	T_J	-55 to +125		°C
Storage temperature range	T_{STG}	-55 to +150		°C

Thermal-Mechanical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R_{thJA}	100	°C /W
Thermal Resistance, Junction to Case	R_{thJC}	20	°C /W
Thermal Resistance, Junction to Lead	R_{thJL}	20	°C /W

Electrical Specifications(T_A=25°C unless otherwise noted)					
Parameter	**Symbol**	**Test Conditions**	**Typ**	**Max**	**Unit**
Maximum forward drop voltage	V_F	I_F=1A	0.48	0.55	V
		I_F=1A,T_A=125°C	0.45	-	
Maximum reverse leakage current @V_R	I_R	T_J =25°C	-	0.2	mA
		T_J =100°C	-	30	
Typical junction capacitance	C_J	V_R=4.0V, f=1MHZ	65	-	pF

Note：

1.Mounted on copper pad area of 0.2x0.2” (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves (TA=25°C unless otherwise noted)

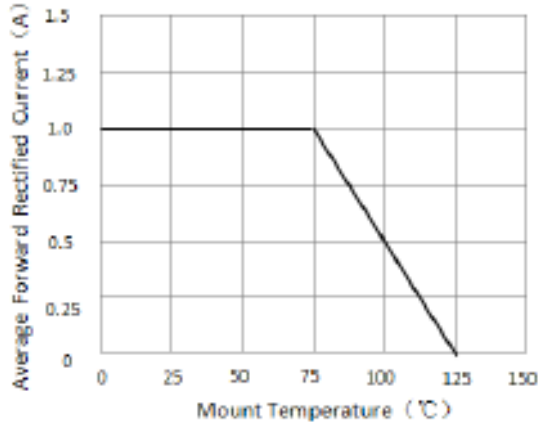


Figure 1.Forward Current Derating Curve

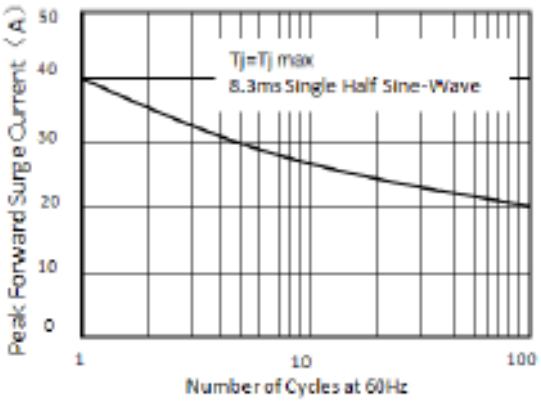


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

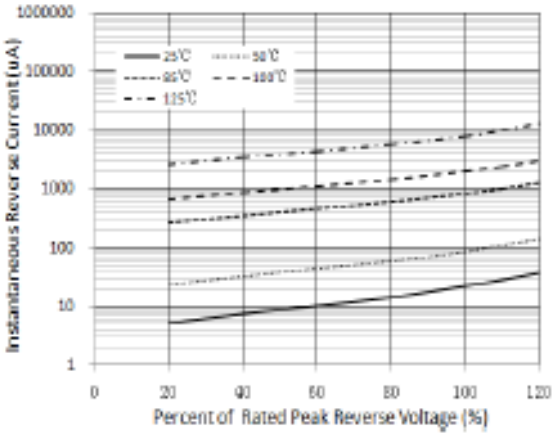


Figure 3. Typical Reverse Characteristics

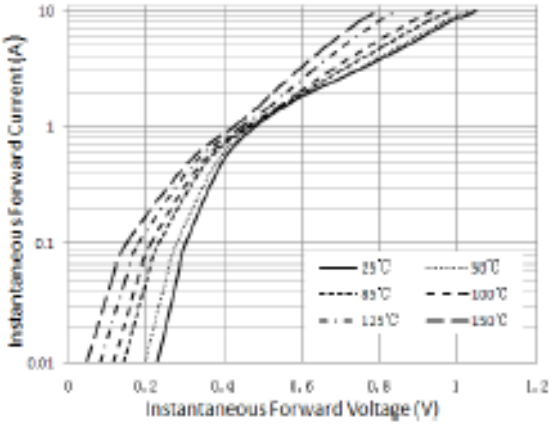


Figure 4. Typical Instantaneous Forward Characteristics

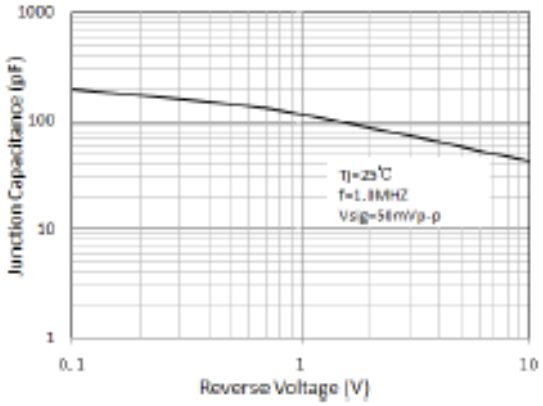
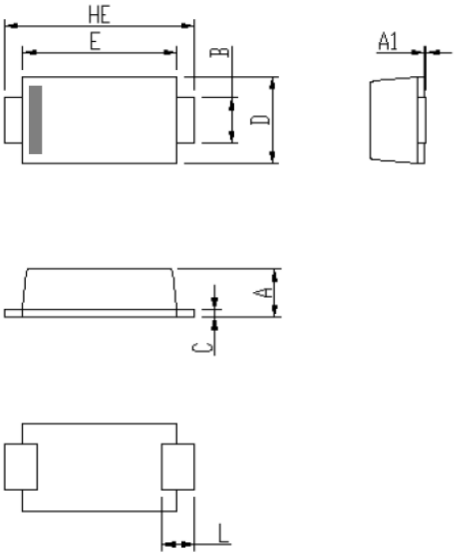


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

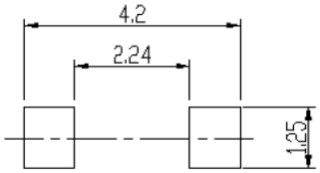
in inches (millimeters)

eSGA (SOD-123FL)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.010
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154

Soldering footprint



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