

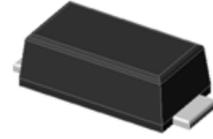
## 2A,150-200V Schottky Barrier Rectifiers

### 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°C/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 <sub>A</sub> =25°C unless otherwise noted)				
Parameter	Symbol	AFS2B5H	AFS2CH	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	150	200	V
Maximum RMS voltage	V <sub>RMS</sub>	105	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	150	200	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	2		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	50		A
Operating junction temperature range	T <sub>J</sub>	-55 to +150		°C
Storage temperature range	T <sub>STG</sub>	-55 to +150		°C

Thermal-Mechanical Specifications (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R <sub>thJA</sub>	100	°C/W
Thermal Resistance, Junction to Case	R <sub>thJC</sub>	20	°C/W
Thermal Resistance, Junction to Lead	R <sub>thJL</sub>	20	°C/W



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

Parameter	Symbol	Test Conditions	AFS2B5H	AFS2CH	Unit
Maximum forward drop voltage	$V_F$	$I_F=2\text{A}$	0.85		V
Maximum reverse leakage current @ $V_R$	$I_R$	$T_J=25^{\circ}\text{C}$	0.2		mA
		$T_J=125^{\circ}\text{C}$	30		

Note:

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

## Ratings and Characteristics Curves (T<sub>A</sub>=25°C unless otherwise noted)

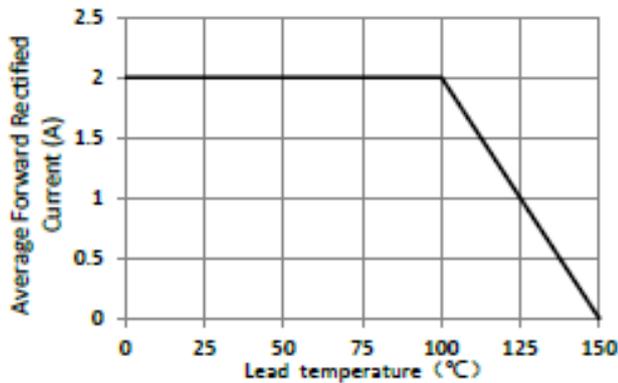


Figure 1. Forward Current Derating Curve

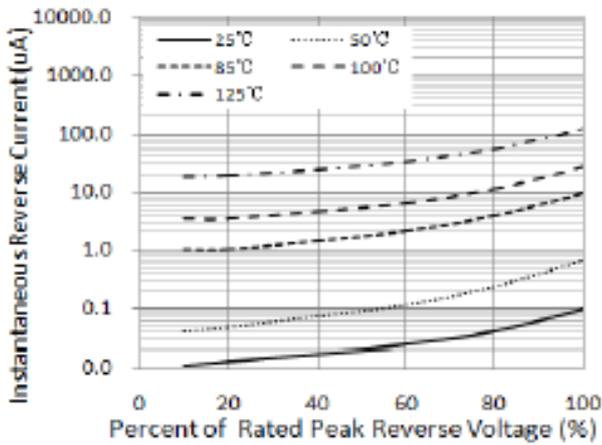


Figure 3. Typical Instantaneous Reverse Characteristics

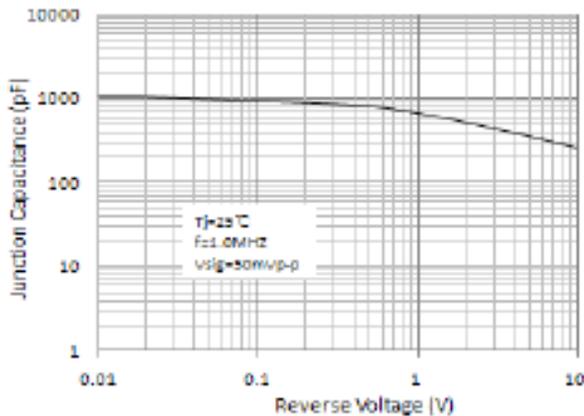


Figure 5. Typical Junction Capacitance

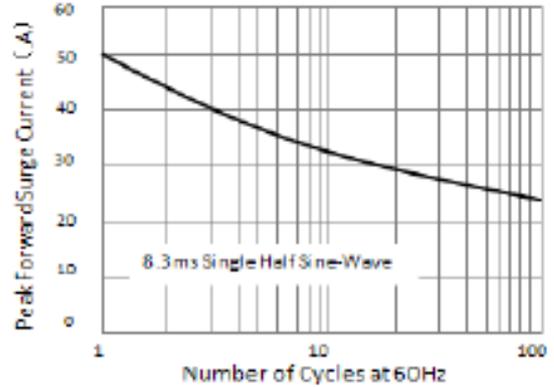


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

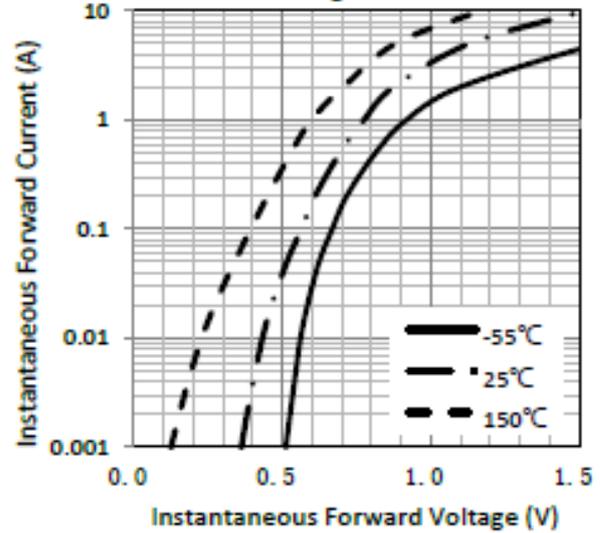
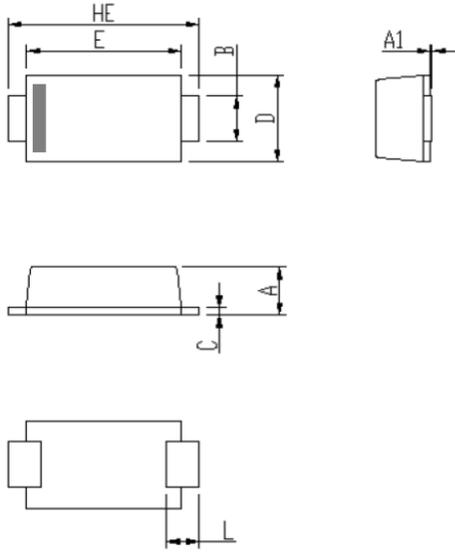


Figure 4. Typical Instantaneous Forward Characteristics

## Package Outline Dimensions

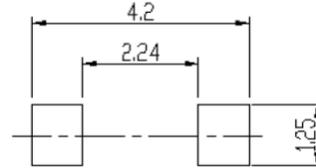
in inches (millimeters)

### 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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