

8A,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°C/10 seconds
- AEC-Q101 qualified



Applications

For use of fast switching in RF module, lighting, cellular phone, portable device, power supplies, other consumer applications and automotive applications.

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)				
Parameter	Symbol	ASGC0850S	ASGC0860S	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	60	V
Maximum RMS voltage	V _{RMS}	50	60	V
Maximum DC blocking voltage	V _{DC}	50	60	V
Maximum average forward rectified current	I _{F(AV)}	8		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	200		A
Operating junction temperature range	T _J	-55 to +150		°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}	40	°C /W
Thermal Resistance, Junction to Case	R _{thJC}	15	°C /W
Thermal Resistance, Junction to Lead	R _{thJL}	7	°C /W

Electrical Specifications($T_A=25^{\circ}\text{C}$ unless otherwise noted)					
Parameter	Symbol	Test Conditions	Typ	Max	Unit
Maximum forward drop voltage	V_F	$I_F=8\text{A}, T_A=25^{\circ}\text{C}$	--	0.48	V
		$I_F=8\text{A}, T_A=125^{\circ}\text{C}$	0.42	--	
Maximum reverse leakage current @ V_R	I_R	$T_J=25^{\circ}\text{C}$	--	0.5	mA
		$T_J=125^{\circ}\text{C}$	--	50	
Typical junction capacitance	C_J	$V_R=4.0\text{V}, f=1\text{MHZ}$	550	--	pF

Note:

1.Mounted on copper pad area of 30 x 30mm to each terminal.

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

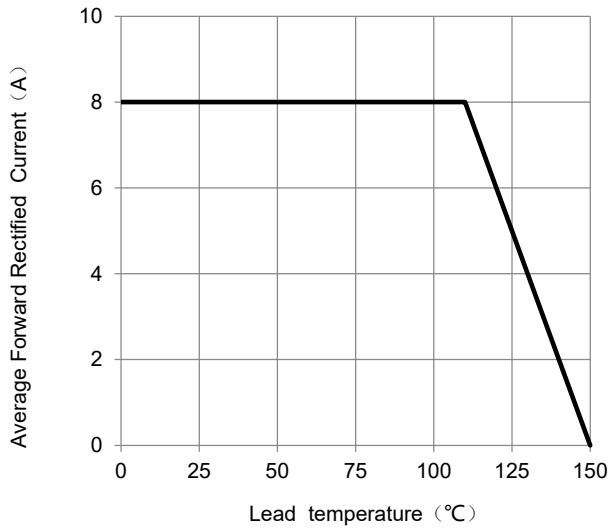


Fig.1 – Forward Current Derating Curve

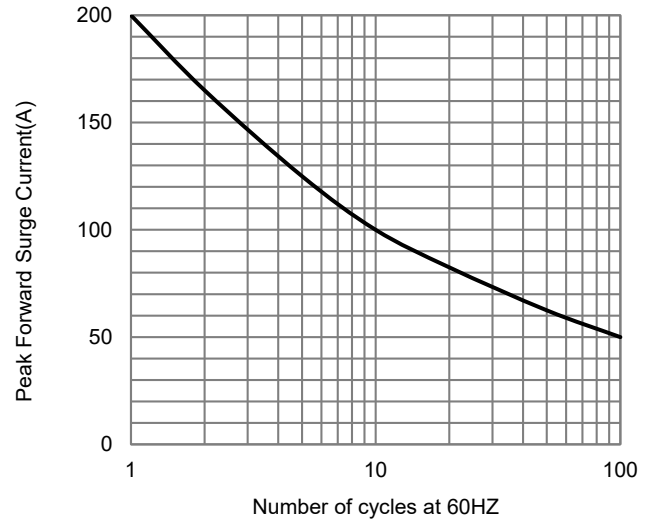


Fig.2 – Maximum Non-Repetitive Surge Current

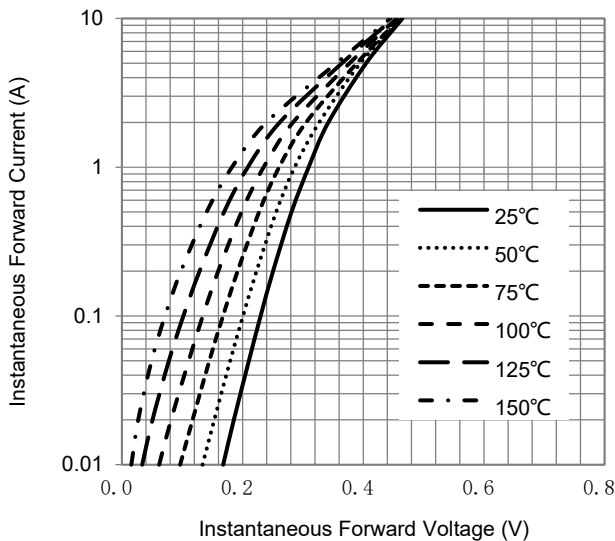


Fig.3 – Typical Forward Voltage Characteristics

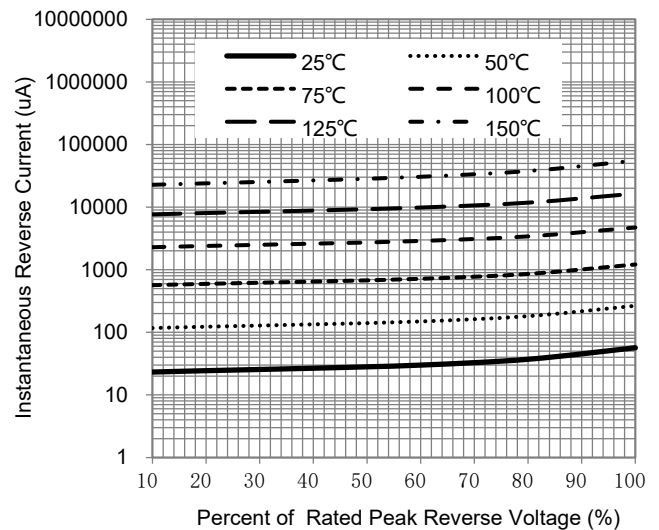


Fig.4 – Typical Reverse Current Characteristics

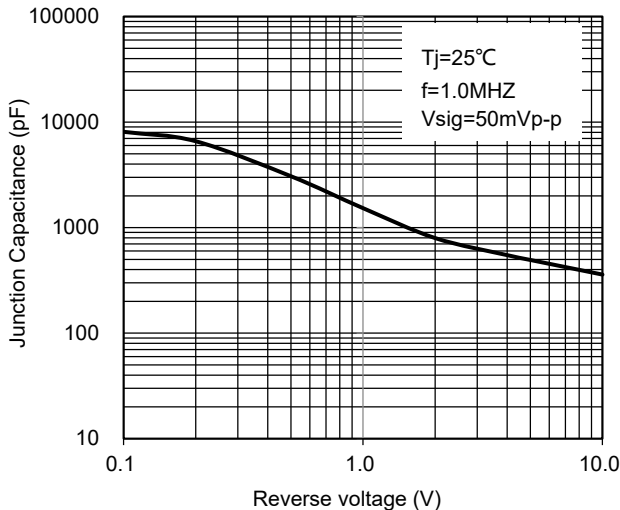
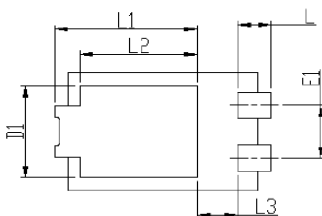
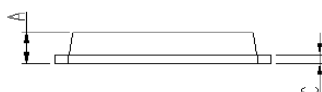
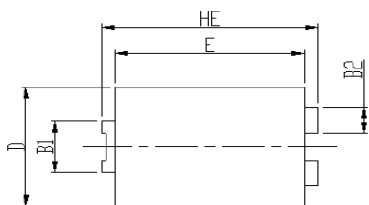


Fig.5 – Typical Junction Capacitance

Package Outline Dimensions

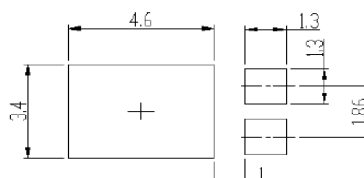
in inches (millimeters)

eSGC (TO-277B)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
HE	6.4	6.6	0.252	0.260
E	5.6	5.8	0.220	0.228
D	4.1	4.3	0.161	0.169
B1	1.7	1.9	0.067	0.075
B2	0.8	1	0.031	0.039
A	1.05	1.2	0.041	0.047
C	0.3	0.4	0.012	0.016
L	0.85	1.1	0.033	0.043
L1	4.2	4.4	0.165	0.173
L2	3.52 Typ.		0.139 Typ.	
L3	1.1	1.4	0.043	0.055
D1	3	3.3	0.118	0.130
E1	1.86 Typ.		0.073 Typ.	

Soldering footprint



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