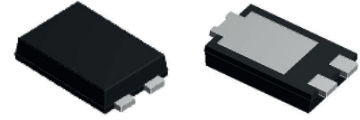


## Features

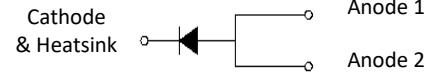
- Low leakage current
- Schottky barrier diode
- Low forward voltage drop
- Very low profile - typical height of 1.1 mm
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



**RoHS**  
COMPLIANT



eSGC (TO-277)



## Applications

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

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

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	70	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	5	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	175	A
Thermal Resistance, Junction to Ambient <sup>1</sup>	R <sub>θJA</sub>	40	°C/W
Thermal Resistance, Junction to Case <sup>1</sup>	R <sub>θJC</sub>	15	°C/W
Thermal Resistance, Junction to Lead <sup>1</sup>	R <sub>θJL</sub>	7	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

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

Parameter	Symbol	Test Conditions	Typ	Max	Unit	
Forward Drop Voltage	V <sub>F</sub>	I <sub>F</sub> =1A	T <sub>A</sub> =25°C	0.51	0.55	V
		I <sub>F</sub> =2A		0.58	0.65	
		I <sub>F</sub> =5A		0.70	0.75	
		I <sub>F</sub> =1A	T <sub>A</sub> =85°C	0.45	0.50	
		I <sub>F</sub> =2A		0.53	0.60	
		I <sub>F</sub> =5A		0.62	0.68	
		I <sub>F</sub> =1A	T <sub>A</sub> =125°C	0.40	0.45	
		I <sub>F</sub> =2A		0.47	0.55	
		I <sub>F</sub> =5A		0.56	0.62	
Reverse Leakage Current @ V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C	1	5	μA	
		T <sub>J</sub> =85°C	75	100		
		T <sub>J</sub> =125°C	1	5	mA	
Typical Junction Capacitance	C <sub>J</sub>	4.0V, 1MHZ	265		pF	

Note:

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

## Ratings and Characteristics Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

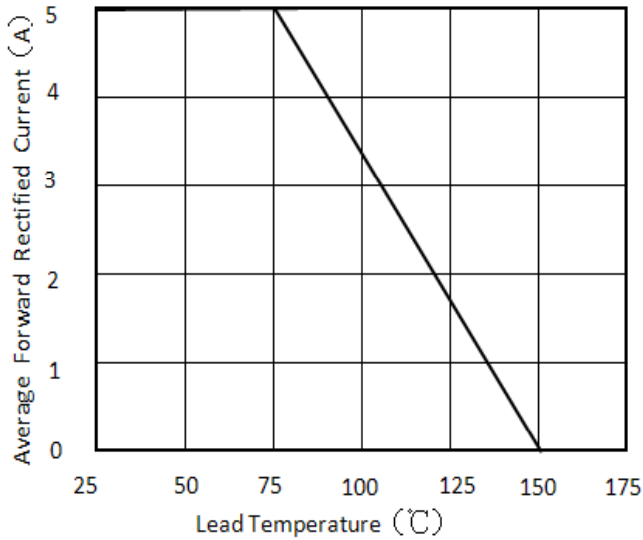


Figure 1. Forward Current Derating Curve

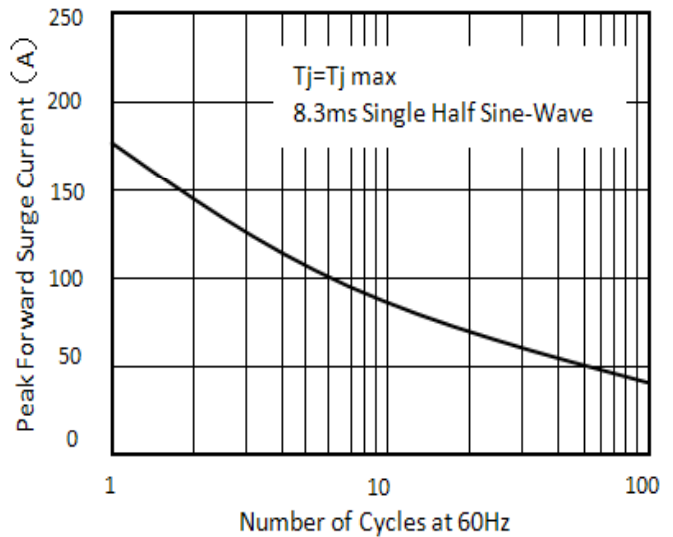


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

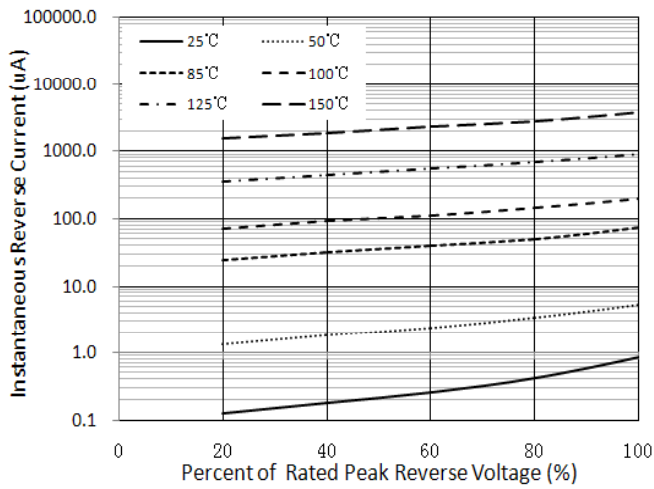


Figure 3. Typical Reverse Characteristics

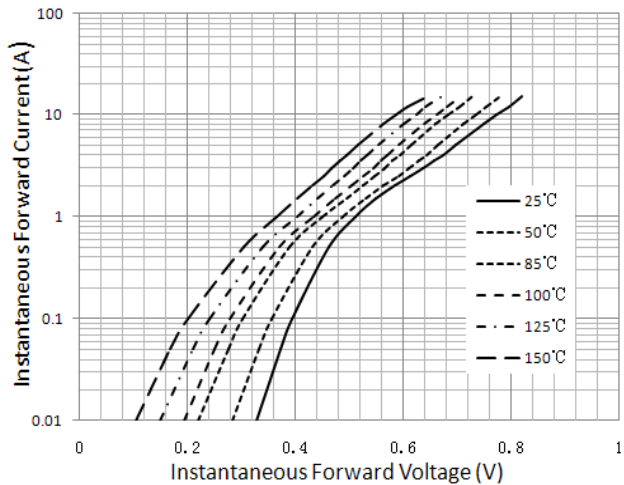


Figure 4. Typical Instantaneous Forward Characteristics

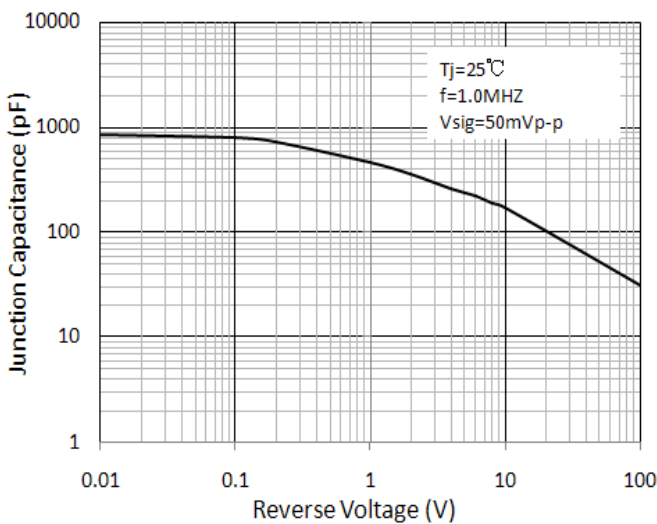
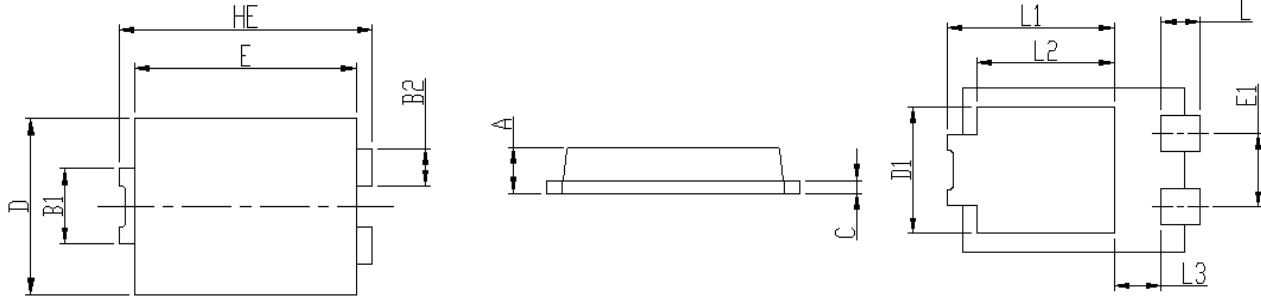


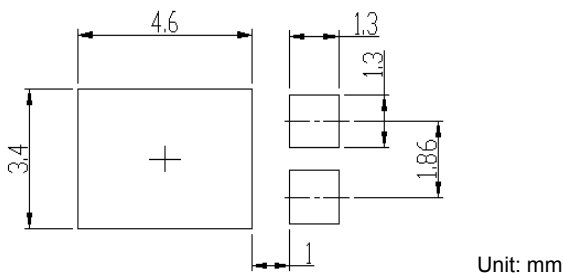
Figure 5. Typical Junction Capacitance

**Package Outline Dimensions eSGC (TO-277)**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
HE	6.400	6.600	0.252	0.260
E	5.600	5.800	0.220	0.228
D	4.100	4.300	0.161	0.169
B1	1.700	1.900	0.067	0.075
B2	0.800	1.000	0.031	0.039
A	1.050	1.200	0.041	0.047
C	0.300	0.400	0.012	0.016
L	0.850	1.100	0.033	0.043
L1	4.200	4.400	0.165	0.173
L2	3.520 TYP		0.139 TYP	
L3	1.100	1.400	0.043	0.055
D1	3.000	3.300	0.118	0.130
E1	1.860 TYP		0.073 TYP	

**Recommended Pad Layout**



**Order Information**

Device	Package	Marking	Carrier	Quantity
GSGC051BS	eSGC (TO-277)	C051BS	Tape & Reel	5,000pcs / Reel

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)