

Features

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

Applications

For low voltage high frequency inverters, DC/DC converters and polarity protection applications.

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

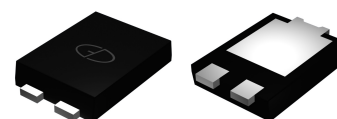
Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	45	V
Maximum RMS Voltage	V _{RMS}	31.5	V
Maximum DC Blocking Voltage	V _{DC}	45	V
Maximum Average Forward Rectified Current	I _{F(AV)} ¹⁾	10.0	A
	I _{F(AV)} ²⁾	5.0	
Peak Forward Surge Current (8.3ms single half sine-wave superimposed on rated load)	I _{FSM}	280	A
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

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

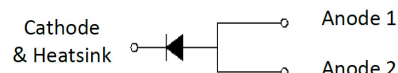
Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous Forward Voltage	I _F =1A	T _A =25°C	V _F	0.30	0.35	V
	I _F =2A			0.33	0.38	
	I _F =10A			0.41	0.45	
	I _F =1A	T _A =85°C		0.22	0.27	
	I _F =2A			0.25	0.3	
	I _F =10A			0.36	0.42	
	I _F =1A	T _A =125°C		0.16	0.20	
	I _F =2A			0.20	0.24	
	I _F =10A			0.32	0.36	
Instantaneous Reverse Current	Rated V _R	T _A =25°C	I _R	0.23	0.3	mA
		T _A =85°C		14.5	18	
		T _A =100°C		35	39	
Junction Capacitance	4.0 V, 1 MHz		C _J	0.95		nF
Typical Thermal Resistance ¹⁾	Juntion to Ambient		R _{θJA}	80		°C/W
	Juntion to Case		R _{θJC}	35		
	Juntion to Mount		R _{θJM}	20		

Note:1) The thermal resistance from junction to ambient,case or mount,mounted on P.C.B with 30×30mm copper pads,2 OZ,FR4 PCB

2) Mounted on recommended copper pad area, free air.



Package:
eSGC (TO-277)



Schematic Diagram

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

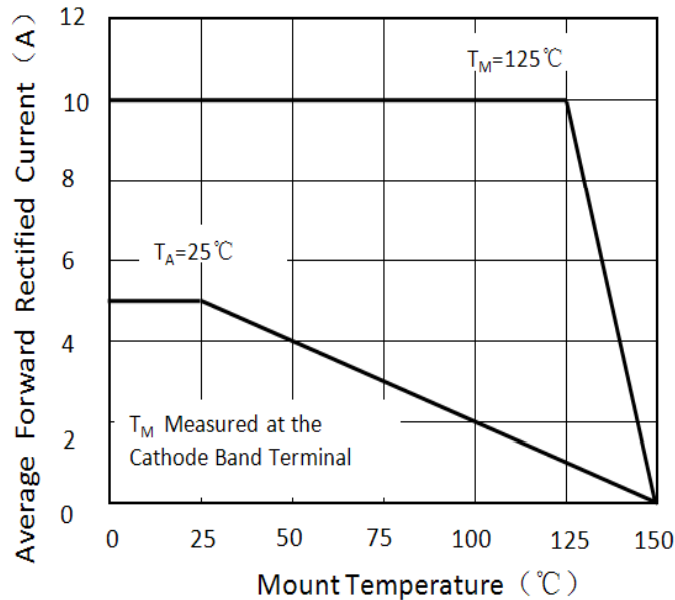


Figure 1. Forward Current Derating Curve

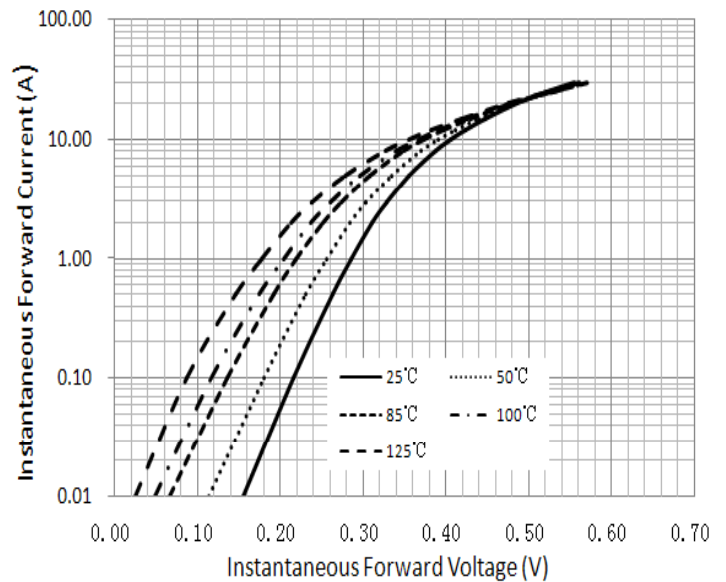


Figure 2. Typical Instantaneous Forward Characteristics

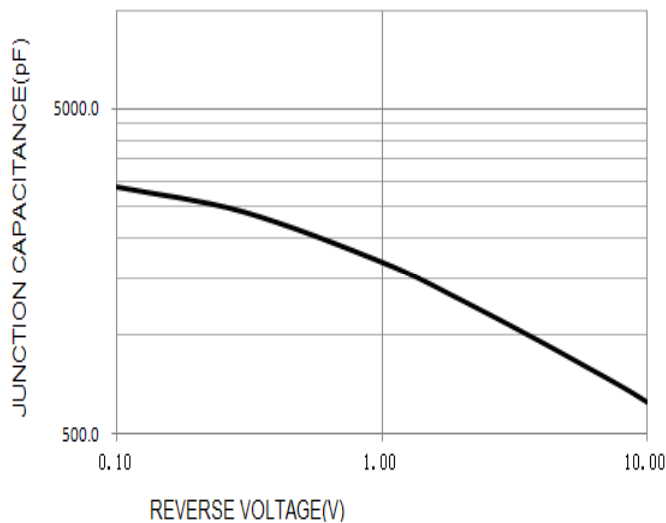


Figure 3. Typical Junction Capacitance

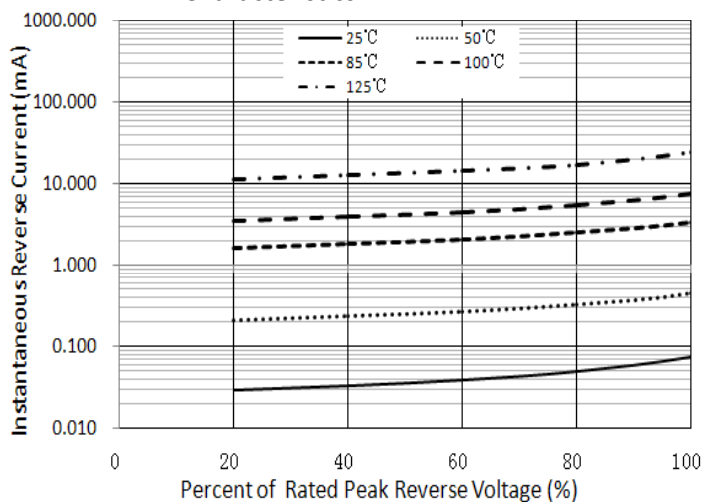


Figure 4. Typical Reverse Characteristics

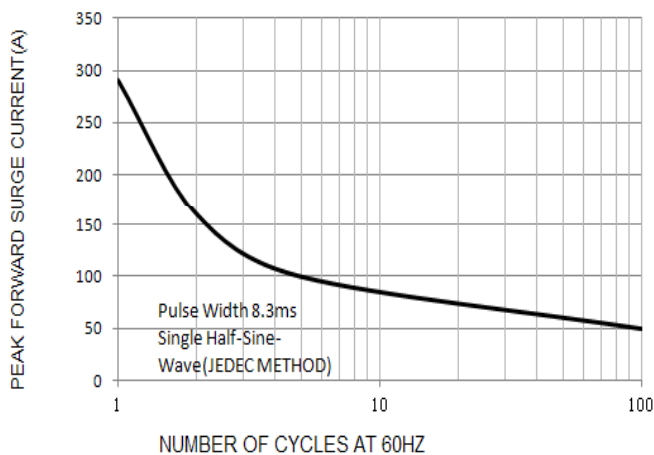
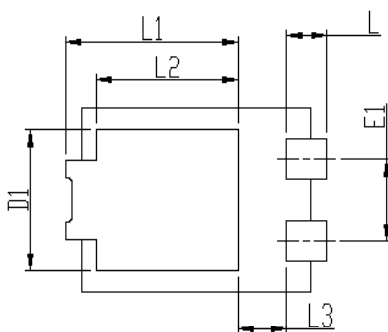
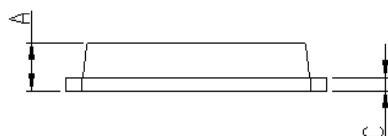
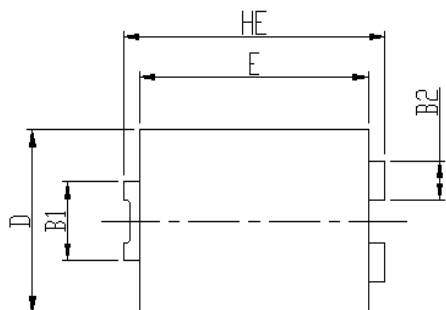


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

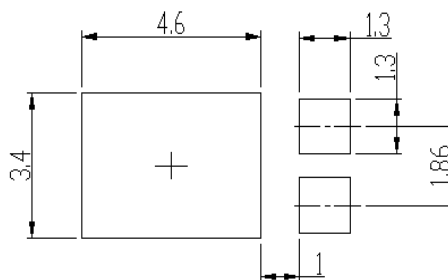
Package Outline Dimensions

eSGC (TO-277)



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



Packing Information

Packing quantities

5000 pcs/Reel, 12 mm Tape, 13" Reel

Tape & Reel Specification

