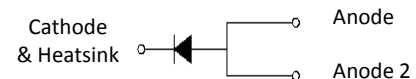
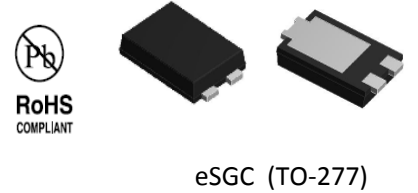


Features

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



Typical Applications

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

Maximum Ratings (TA = 25 °C unless otherwise noted)			
Parameter	Symbol	SGC1545SA	Unit
Maximum repetitive peak reverse voltage	VRRM	45	V
Maximum RMS voltage	VRMS	31.5	V
Maximum DC blocking voltage	VDC	45	V
Maximum average forward rectified current	IF(AV)	15.0	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	300	A
Operating junction and storage temperature range	TJ, TSTG	-55 to +150	°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)						
Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Maximum instantaneous forward voltage	IF=1A	TA=25°C	VF	0.30	0.35	Volts
	IF=2A			0.33	0.38	
	IF=15A			0.46	0.49	
	IF=1A	TA=85°C		0.23	0.28	
	IF=2A			0.26	0.32	
	IF=15A			0.44	0.47	
	IF=1A	TA=125°C		0.18	0.22	
	IF=2A			0.22	0.25	
	IF=15A			0.43	0.46	
Maximum DC reverse current at rated DC blocking voltage	Rated VR	TA=25°C	IR	0.08	0.2	mA
		TA=85°C		3.5	8	
		TA=125°C		25	35	
Typical junction capacitance	4.0 V, 1 MHz		CJ	0.95		nF
Typical thermal resistance	junction to lead		RθJL ¹⁾	5		°C/W

Note1) Thermal resistance RθJL is junction to lead, mounted on P.C.B with 30*30mm copper pad area

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

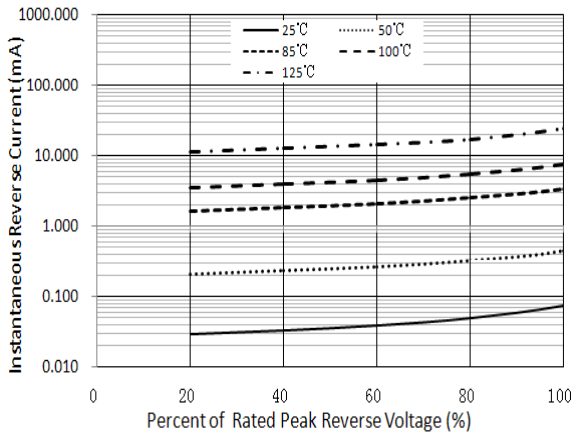


Figure 1. Typical Reverse Characteristics

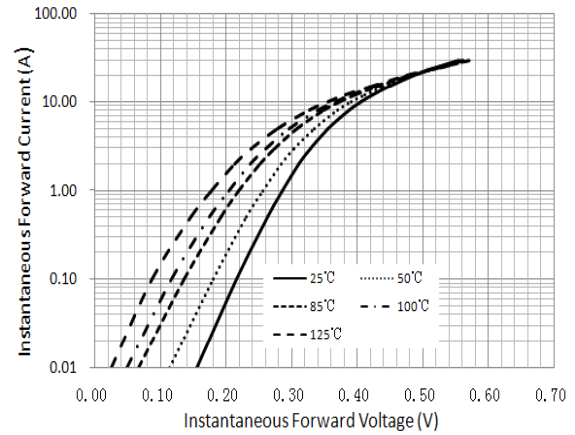


Figure 2. Typical Instantaneous Forward Characteristics

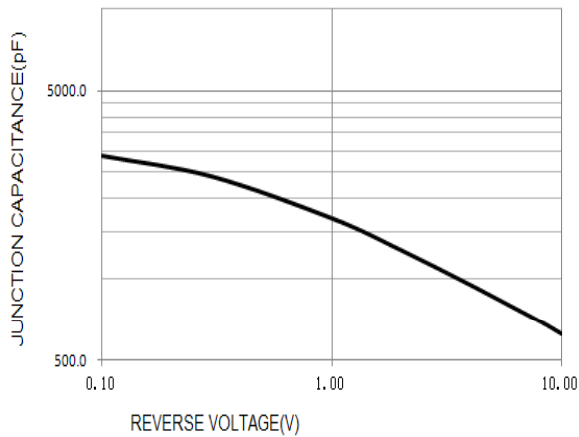


Figure 3. Typical Junction Capacitance

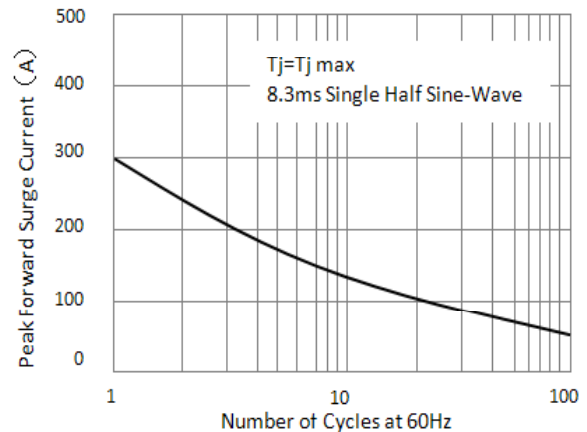


Figure 4. Maximum Non-Repetitive Peak Forward Surge Current

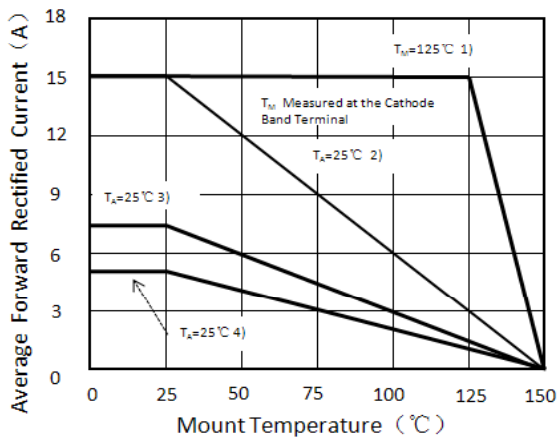
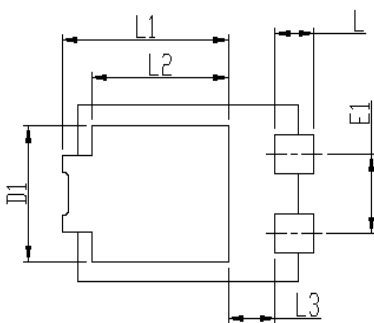
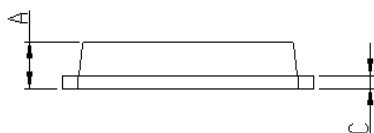
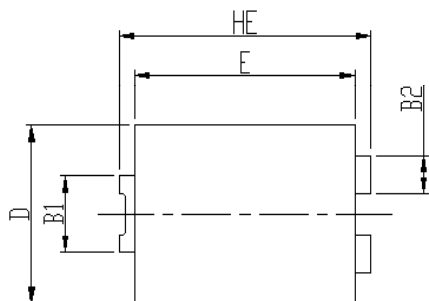


Figure 5. Forward Current Derating Curve

- 1) Mounted on P.C.B with 30*30mm copper pad area
- 2) Mounted on P.C.B with 30*30mm copper pad area ($R_{\theta JA}=28^{\circ}\text{C/W}$)
- 3) Mounted on P.C.B with 30*30mm copper pad area FR4 PCB($R_{\theta JA}=39^{\circ}\text{C/W}$)
- 4) Fre air, Mounted on recommended copper pad area FR4 PCB($R_{\theta JA}=85^{\circ}\text{C/W}$)

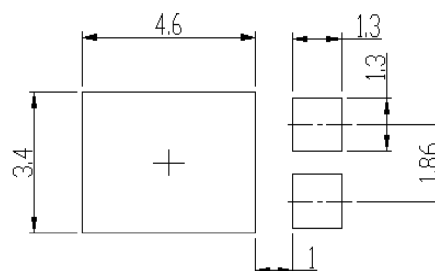
Package Outline Dimensions

in inches (millimeters)



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

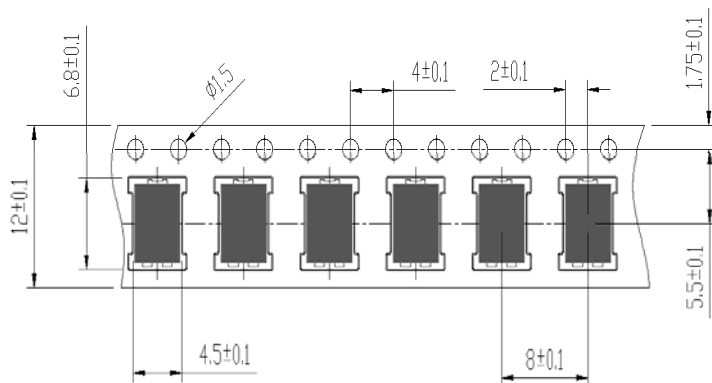


Packing Information

Packing quantities:

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

Tape & Reel Specification



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