SGC121B2S

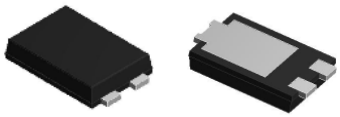
Surface Mount Schottky Rectifier

Reverse Voltage 120V Forward Current 12A

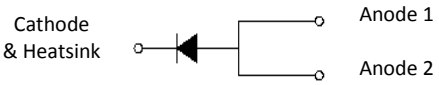
Features

- Heatsink design
- 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
- High temperature soldering guaranteed: 260℃/10 seconds
- Halogen-free according to IEC 61249-2-21 definition

RoHS COMPLIANT



eSGC (TO-277)



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	SGC121B2S	Unit
Maximum repetitive peak reverse voltage	VRRM	120	V
Maximum RMS voltage	VRMS	84	V
Maximum DC blocking voltage	VDC	120	V
Maximum average forward rectified current	IF(AV)	6.0[1)]	A
		12.0[2)]	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	220	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	I_F=1A	T_A=25℃	V_F	0.39	0.45	Volts
	I_F=2A			0.43	0.49	
	I_F=5A			0.52	0.60	
	I_F=12A			0.68	0.75	
	I_F=1A	T_A=125℃		0.27	-	
	I_F=2A			0.34	-	
	I_F=5A			0.46	-	
	I_F=12A			0.58	-	
Maximum DC reverse current at rated DC blocking voltage	Rated VR	T_A=25℃	I_R	0.018	0.2	mA
		T_A=125℃		11.3	30	
Typical junction capacitance	4.0 V, 1 MHz		C_J	1179		pF
Typical thermal resistance	juntion to lead		$R_{\theta JL}$[2)]	3		℃/W
	juntion to ambient		$R_{\theta JA}$[1)]	27		

Note1)Mounted on FR-4 P.C.B with 30*30mm copper pad area

2)On aluminum substrate PCB with recommended copper pad area

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

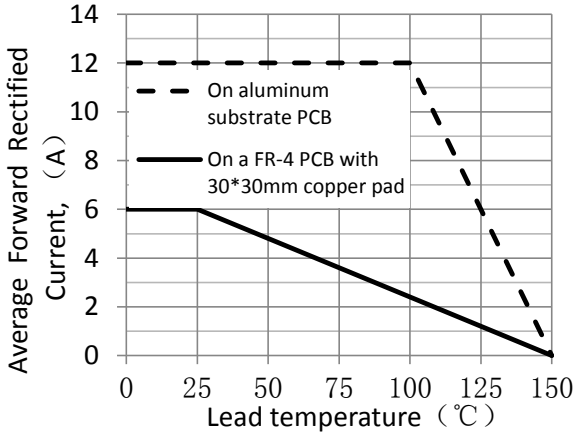


Figure 1.Forward Current Derating Curve

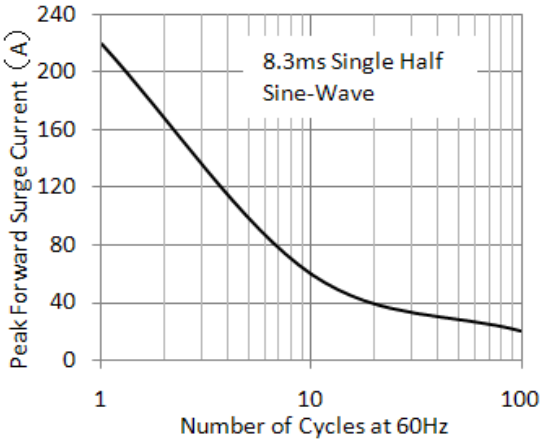


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

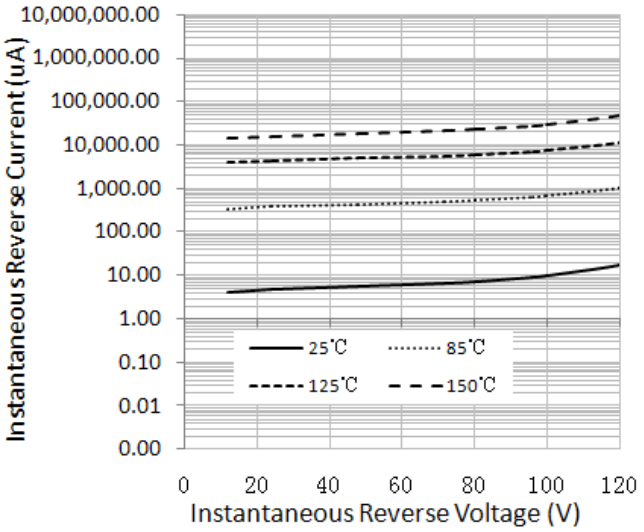


Figure 3. Typical Reverse Characteristics

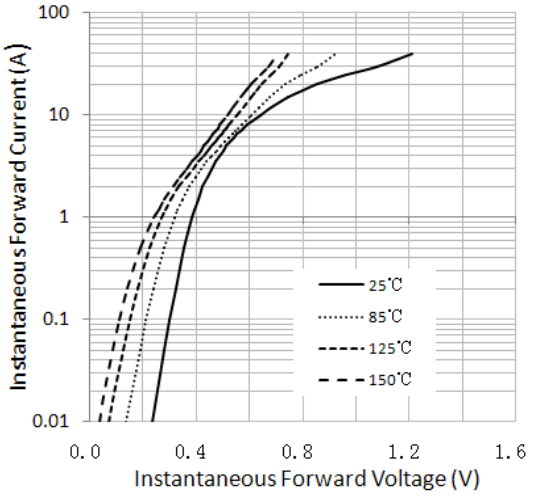


Figure 4. Typical Instantaneous Forward Characteristics

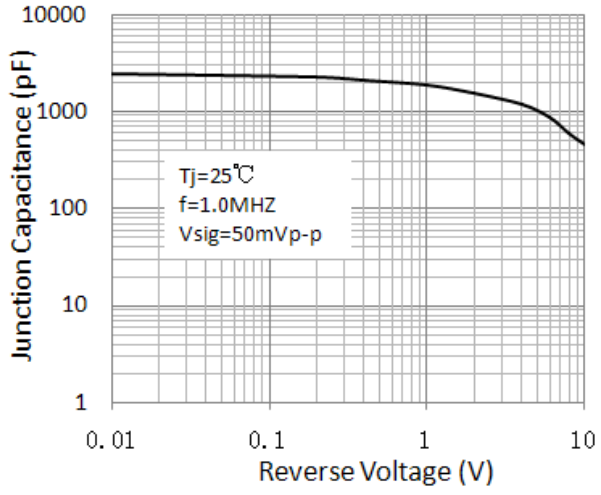
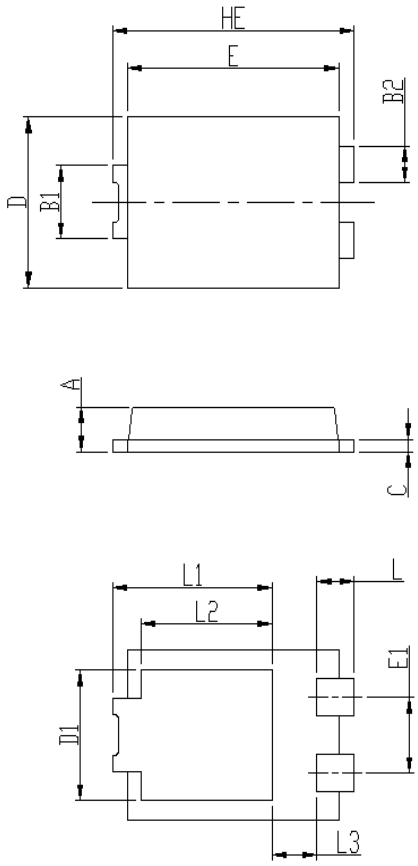


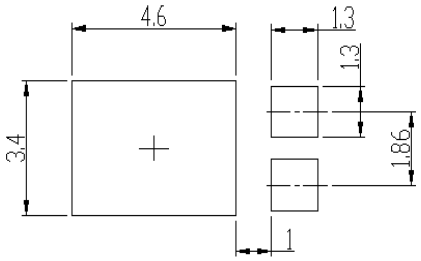
Figure 5. Typical Junction Capacitance

Package Outline Dimensions



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

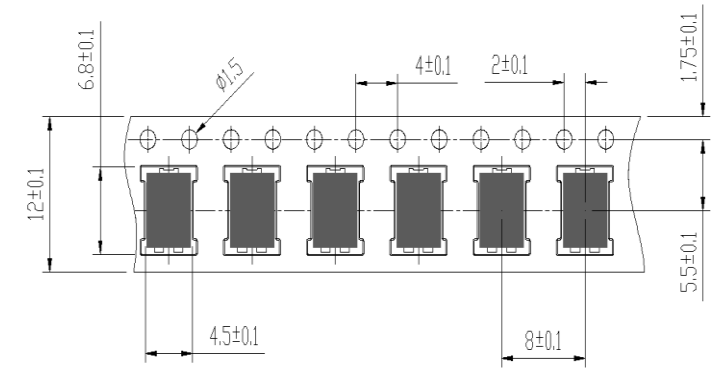


Packing Information

Packing quantities:

5000 pcs/Reel，12mm Tape, 13" Reel

Tape & Reel Specification



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