SGC0503U thru SGC0506U

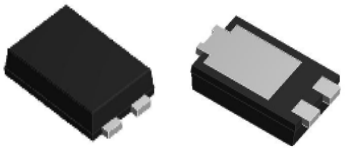
Surface Mount Glass Passivated superfast recovery Rectifier

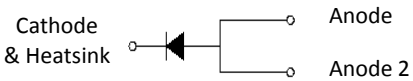
Reverse Voltage 200~800V Forward Current 5A

Features

- Glass passivated Superfast Recovery rectifiers
- Ideal for automated placement
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- AEC-Q101 qualified
- Low profile - typical height of 1.1 mm

RoHS COMPLIANT





Typical Applications

For use of general purpose rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

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

Parameter	Symbol	SGC0503U	SGC0504U	SGC0505U	SGC0506U	Unit
Maximum repetitive peak reverse voltage	VRRM	200	400	600	800	V
Maximum RMS voltage	VRMS	140	280	420	560	V
Maximum DC blocking voltage	VDC	200	400	600	800	V
Maximum average forward rectified current	IF(AV)[1]	5.0				A
	IF(AV)[2]	3.0				
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	150				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	SGC0503U	SGC0504U	SGC0505U	SGC0506U	Unit
Maximum instantaneous forward voltage	5 A	VF	0.95	1.3	1.7		Volts
Maximum DC reverse current at rated DC blocking voltage	TA=25℃	IR	10				μA
	TA=125℃		500				
Maximum reverse recovery time	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	t_{rr}	35				nS
Typical junction capacitance	4.0 V, 1 MHz	CJ	22				pF
Typical thermal resistance	juntion to mount	$R_{\theta JM}$ [1]	15				℃/W
	juntion to ambient	$R_{\theta JA}$ [2]	40				

Notes: 1)Thermal resistance $R_{\theta JM}$ is junction to mount. Free air,mounted on aluminum P.C.B with recommended copper pad

2)Thermal resistance $R_{\theta JA}$ is junction to ambient.Mounted on P.C.B with 30*30mm copper pad area

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

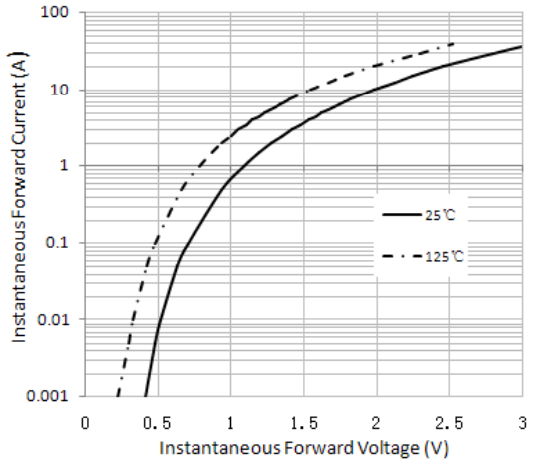


Figure 1. Typical Instantaneous Forward Characteristics

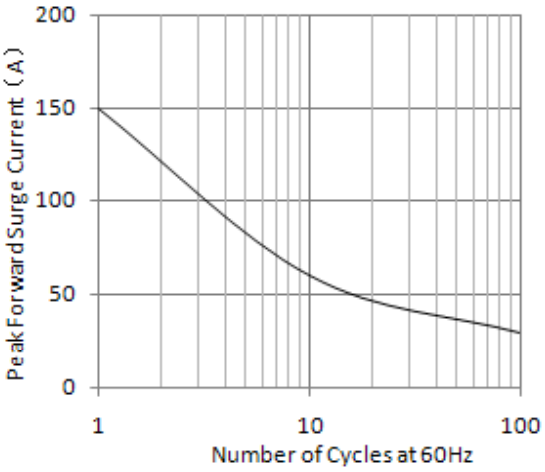


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

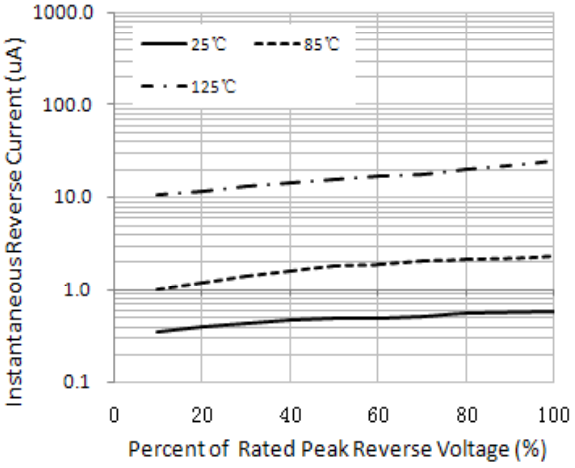


Figure 3. Typical Instantaneous Reverse Characteristics

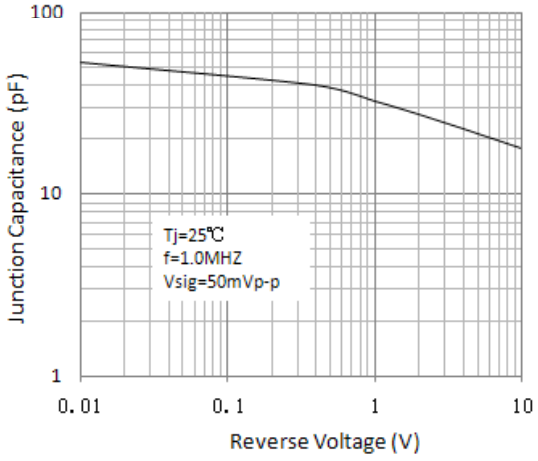


Figure 4. Typical Junction Capacitance

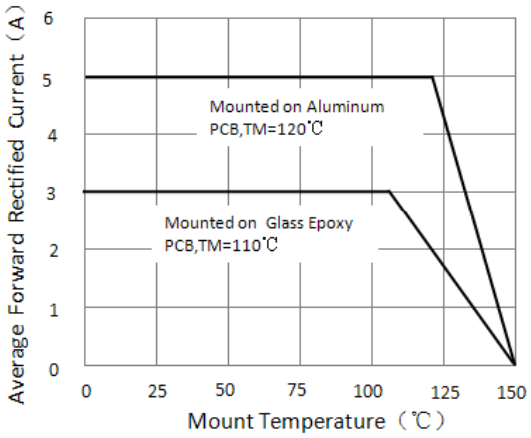


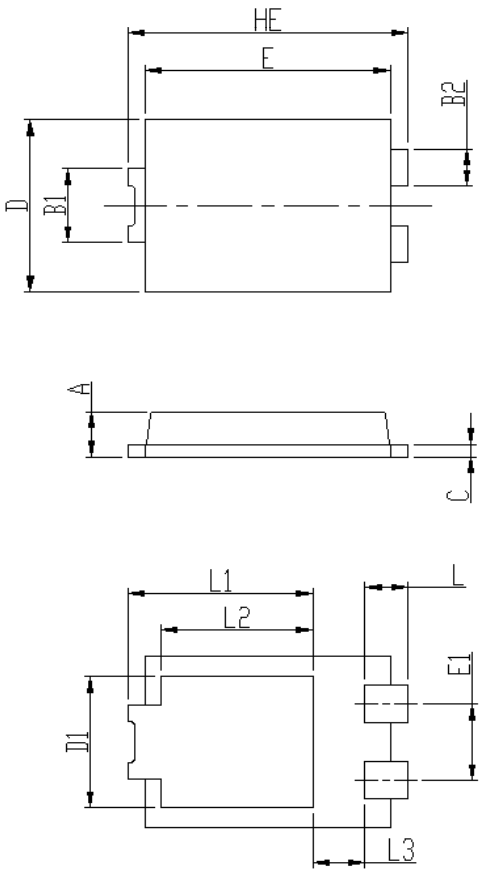
Figure 5.Forward Current Derating Curve

SGC0503U thru SGC0506U

Surface Mount Glass Passivated superfast recovery Rectifier

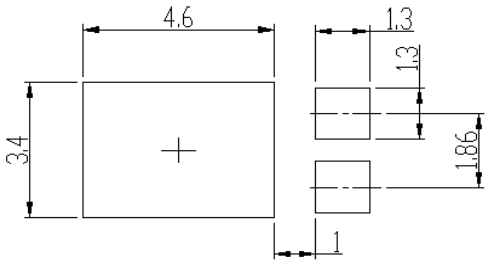
Reverse Voltage 200~800V Forward Current 5A

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

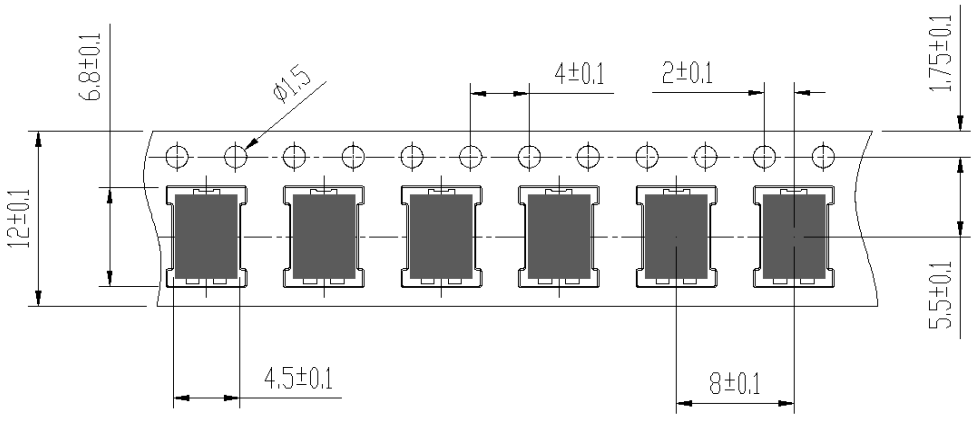


Packing Information

Packing quantities:

5000 pcs/Reel，12mm Tape, 13" Reel

Tape & Reel Specification



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