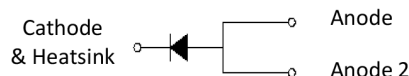
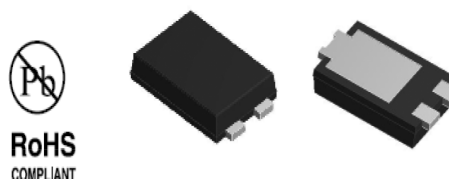


Features

- 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



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	IF=0.5A, IR=1.0A, Irt=0.25A	ttr	35				nS
Typical junction capacitance	4.0 V, 1 MHz	CJ	22				pF
Typical thermal resistance	junction to mount	RθJM ¹⁾	15				°C/W
	junction to ambient	RθJA ²⁾	40				

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

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

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

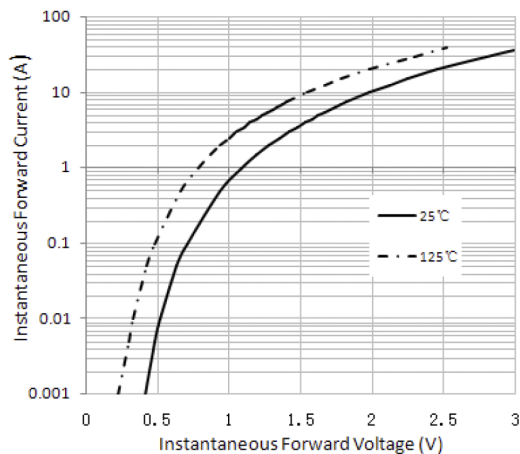


Figure 1. Typical Instantaneous Forward Characteristics

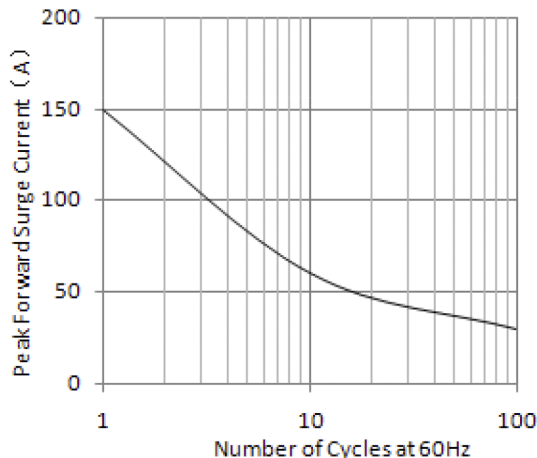


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

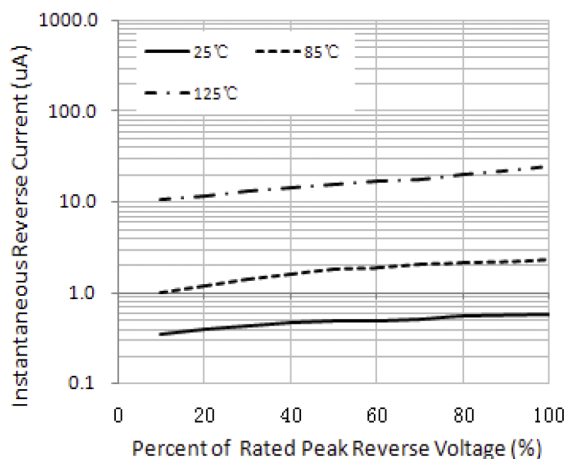


Figure 3. Typical Instantaneous Reverse Characteristics

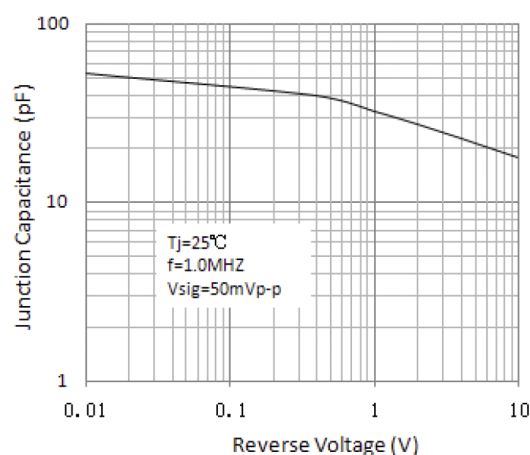


Figure 4. Typical Junction Capacitance

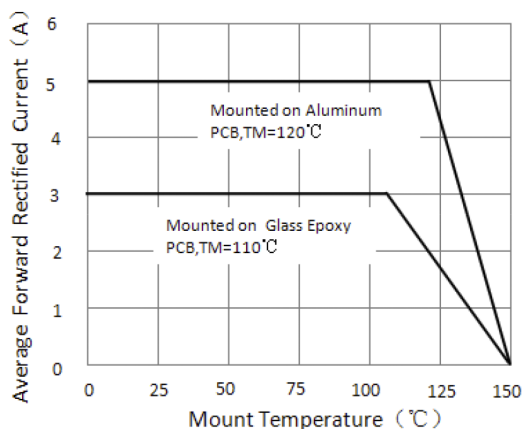
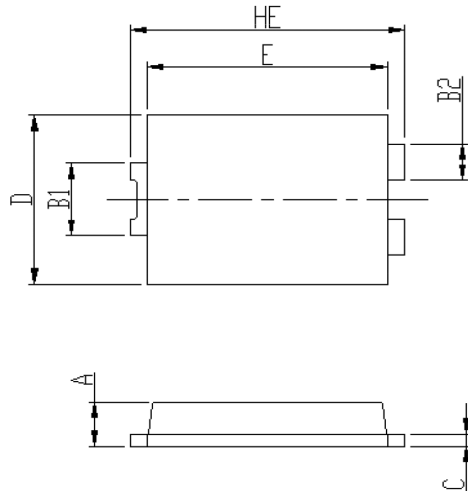
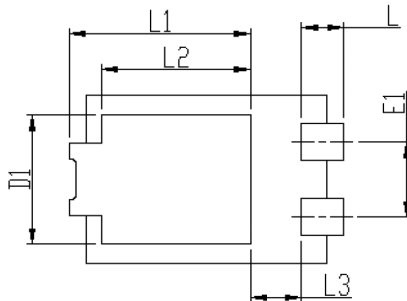


Figure 5. Forward Current Derating Curve

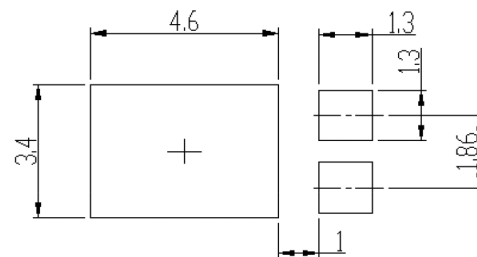
Package Outline Dimensions



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

