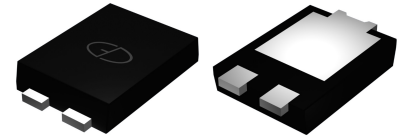
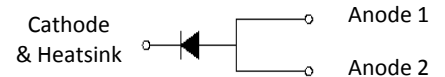


Features

- Glass passivated super-fast 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 1.1mm



eSGC (TO-277)



Typical Applications

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

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

Parameter	Symbol	GSGC 0503U	GSGC 0504U	GSGC 0505U	GSGC 0506U	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	200	400	600	800	V
Maximum RMS Voltage	V _{RMS}	140	280	420	560	
Maximum DC Blocking Voltage	V _{DC}	200	400	600	800	
Maximum Average Forward Rectified Current	I _{F(AV)} ¹	5.0				A
	I _{F(AV)} ²	3.0				
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	120	150			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	Symbol	GSGC 0503U	GSGC 0504U	GSGC 0505U	GSGC 0506U	Unit
Maximum Instantaneous Forward Voltage @5A	V _F	0.95	1.3	1.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	10				uA
	T _A =125°C	500				
Maximum Reverse Recovery Time, I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	35				nS
Typical Junction Capacitance @4.0V, 1MHz	C _J	22				pF
Typical Thermal Resistance, Junction to Lead ¹	R _{θJL}	15				°C/W
Typical Thermal Resistance, Junction to Ambient ²	R _{θJA}	40				

Notes:

1. Thermal resistance R_{θJL} is junction to lead. 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 30x30mm copper pad area.

Typical Characteristics Curves

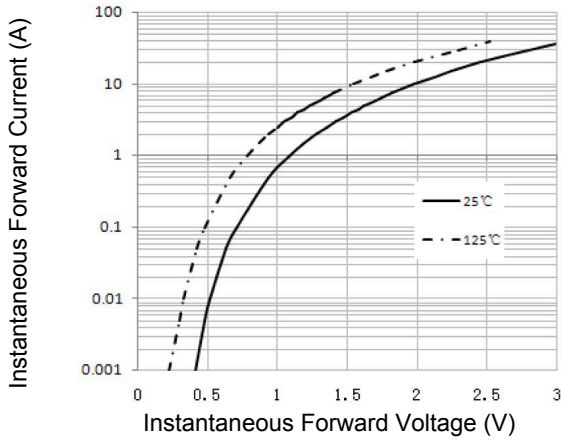


Figure 1. Typical Instantaneous Forward Characteristics

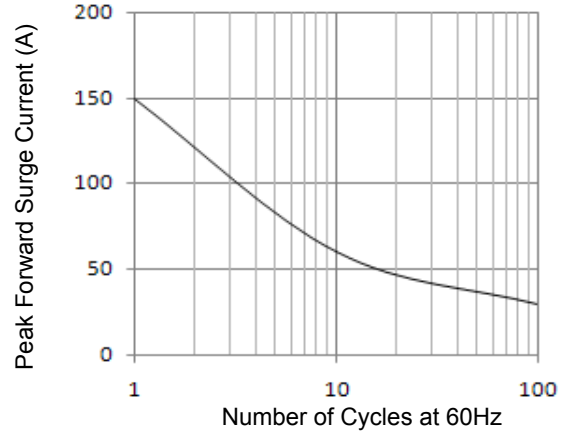


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

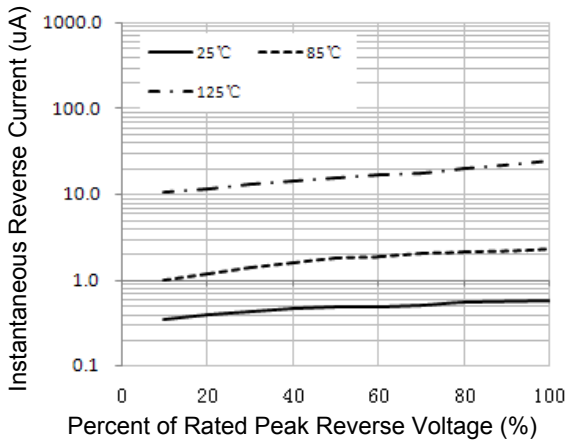


Figure 3. Typical Instantaneous Reverse Characteristics

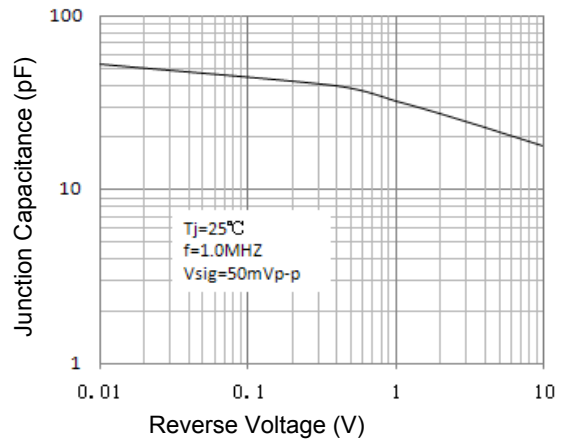


Figure 4. Typical Junction Capacitance

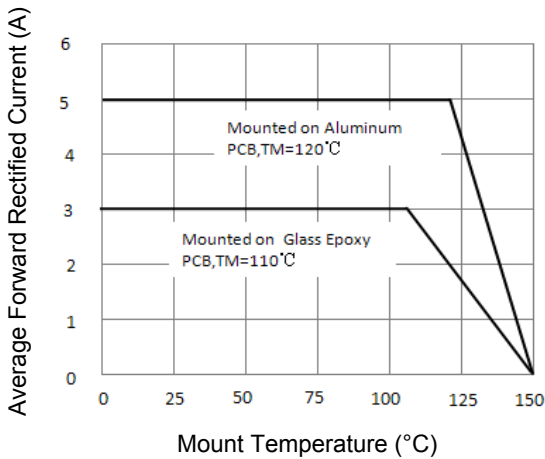
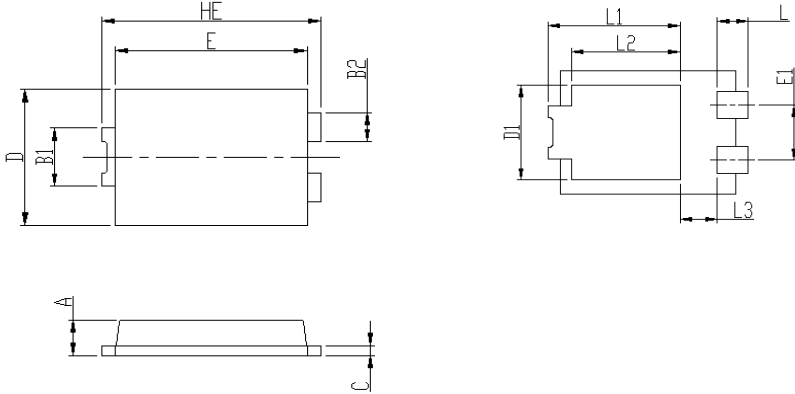


Figure 5. Forward Current Derating Curve

Package Outline Dimensions (TO-277)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
HE	6.400	6.600	0.252	0.260
E	5.600	5.800	0.220	0.228
D	4.100	4.300	0.161	0.169
B1	1.700	1.900	0.067	0.075
B2	0.800	1.000	0.031	0.039
A	1.050	1.200	0.041	0.047
C	0.300	0.400	0.012	0.016
L	0.850	1.100	0.033	0.043
L1	4.200	4.400	0.165	0.173
L2	3.520 TYP		0.139 TYP	
L3	1.100	1.400	0.043	0.055
D1	3.000	3.300	0.118	0.130
E1	1.860 TYP		0.073 TYP	

Recommended Pad Layout

