

GSGC0601A thru GSGC0607A

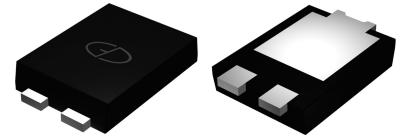
Surface Mount Glass Passivated Rectifier
 Reverse Voltage 50-1000V Forward Current 6A

Features

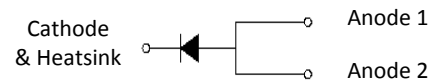
- Glass passivated standard rectifiers
- Ideal for automated placement
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity Level: 1, per J-STD-020
- Solder dip 260°C, 10 seconds
- Low profile



RoHS
COMPLIANT



eSGC (TO-277)



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

Parameter	Symbol	GSGC 0601A	GSGC 0602A	GSGC 0603A	GSGC 0604A	GSGC 0605A	GSGC 0606A	GSGC 0607A	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	I _{F(AV)} ¹	3.0							A
	I _{F(AV)} ²	6.0							
Peak Forward Surge Current (8.3ms single half sine wave superimposed on rated load)	I _{FSM}	180							A
Operating Junction and Storage Temperature	T _J , T _{STG}	-55 to + 150							°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Test Conditions	Symbol	Value	Unit
Instantaneous Forward Voltage	I _F =6A	V _F	Typ:0.94 , Max:1.1	V
Maximum DC Reverse	T _A =25°C	I _R	10	μA
Current at Rated DC Blocking Voltage	T _A =125°C		250	
Typical Reverse Recovery Time	I _F =0.5A, I _R =1.0A,	t _{rr}	4	μs
	I _{rr} =0.25A			
Typical Junction Capacitance	4.0V, 1MHz	C _J	35	pF
Typical Thermal Resistance	Juntion to Ambient	R _{θJA} ¹	72	°C/W
	Juntion to Mount	R _{θJM} ²	5	°C/W

Notes:

1. Thermal resistance R_{θJA} is junction to ambient. Free air, mounted on P.C.B with recommended copper pad area, 2 OZ, FR4
2. Thermal resistance R_{θJM} is junction to mount. Mounted on P.C.B with 30*30mm copper pad area

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

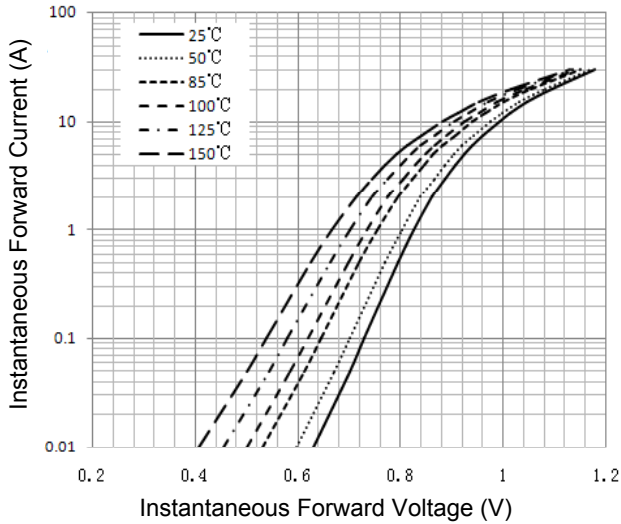


Figure 1. Typical Instantaneous Forward Characteristics

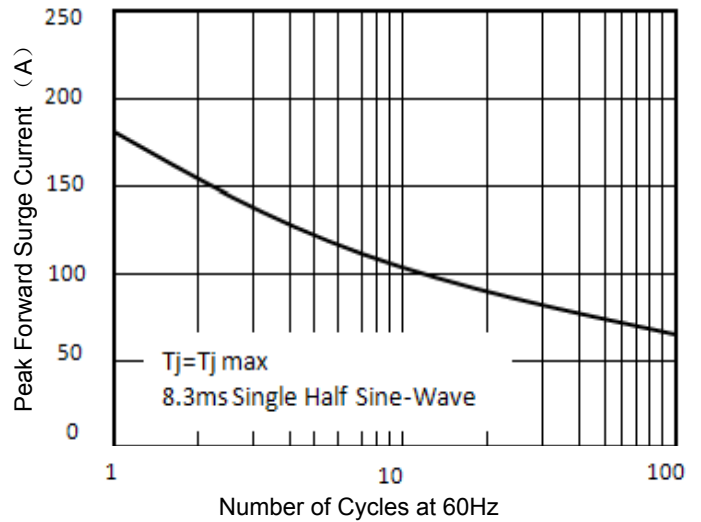


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

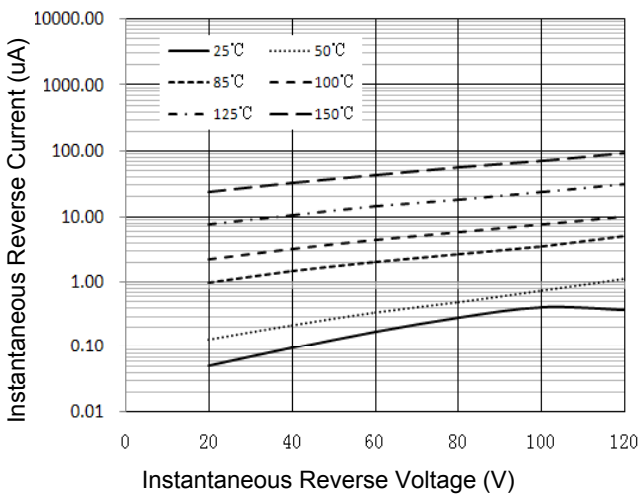


Figure 3. Typical Reverse Characteristics

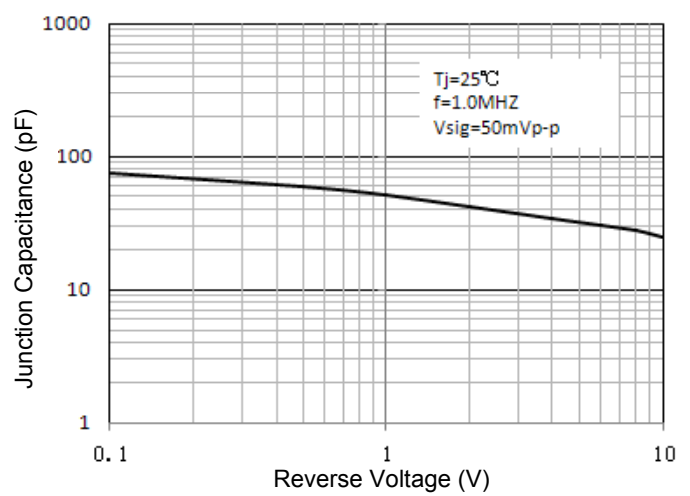


Figure 4. Typical Junction Capacitance

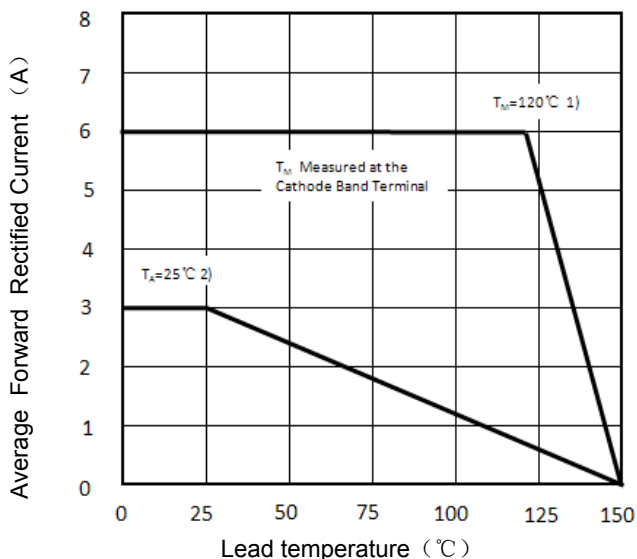


Figure 5. Forward Current Derating Curve

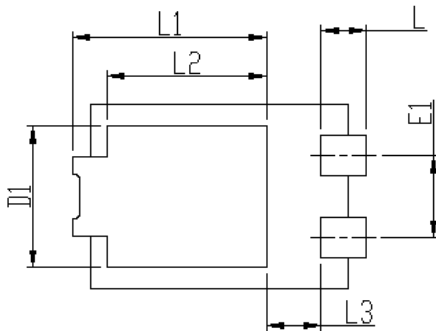
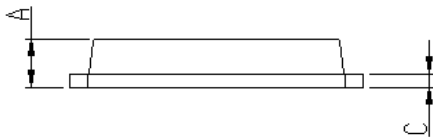
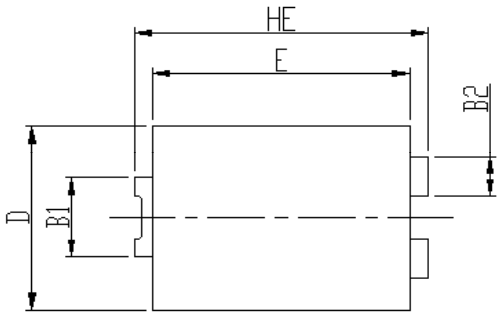
- 1) Mounted on P.C.B with 30*30mm copper pad area
- 2) Free air, Mounted on recommended copper pad area
FR4 PCB($R_{\theta JA} = 72^\circ\text{C/W}$)

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Package Outline Dimensions

eSGC (TO-277)



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

