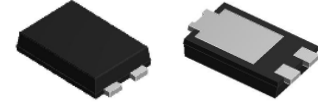


Features

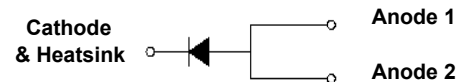
- Heatsink design
- Schottky barrier diode
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Low profile - typical height of 1.1 mm
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



TO-277B

Applications

- Low voltage high frequency inverters
- DC/DC converters
- Polarity protection applications



Schematic Diagram

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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	120	V
Maximum RMS Voltage	V _{RMS}	84	V
DC Blocking Voltage	V _{DC}	120	V
Maximum Average Forward Rectified Current	I _{F(AV)} ¹	6.0	A
	I _{F(AV)} ²	12.0	
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	220	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	Test Conditions	Symbol	Typ	Max	Unit	
Maximum Instantaneous Forward Voltage	I _F =1A I _F =2A I _F =5A I _F =12A	T _A =25°C	V _F	0.39	0.45	V
				0.43	0.49	
				0.52	0.60	
				0.68	0.75	
	I _F =1A I _F =2A I _F =5A I _F =12A	T _A =125°C	0.27	-		
			0.34	-		
			0.46	-		
			0.58	-		
Maximum DC Reverse Current at Rated DC Blocking Voltage	Rated V _R	T _A =25°C	0.018	0.2	mA	
		T _A =125°C	11.3	30		
Typical Junction Capacitance	4.0 V, 1 MHz	C _J	1179		pF	
Typical Thermal Resistance	Junction to Lead ²	R _{θJL}	3		°C/W	
	Junction to Ambient ¹	R _{θJA}	27			

Notes:

- 1) 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 ($T_A=25^\circ\text{C}$ unless otherwise noted)

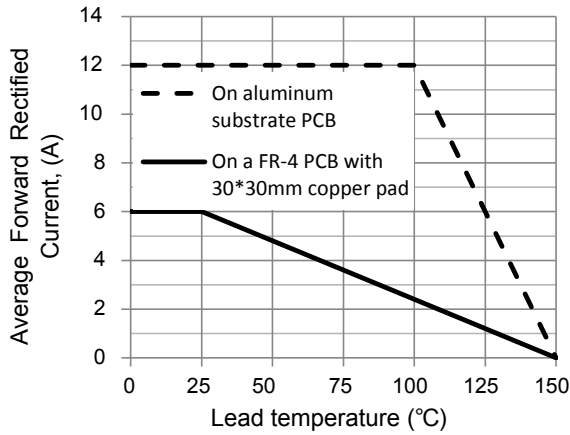


Figure 1. Forward Current Derating Curve

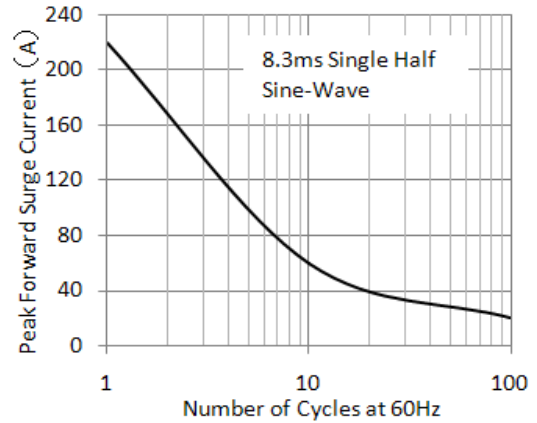


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

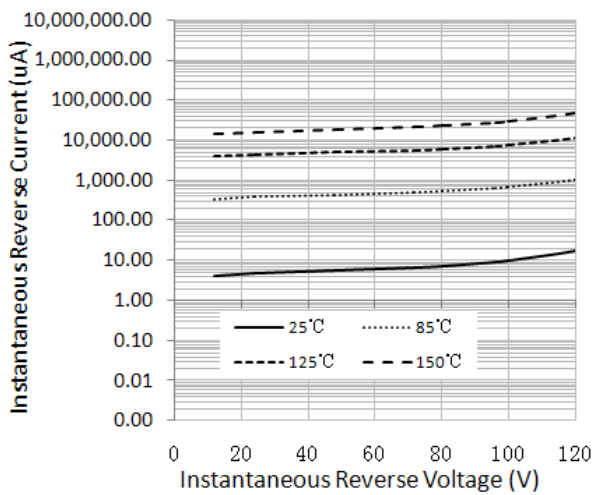


Figure 3. Typical Reverse Characteristics

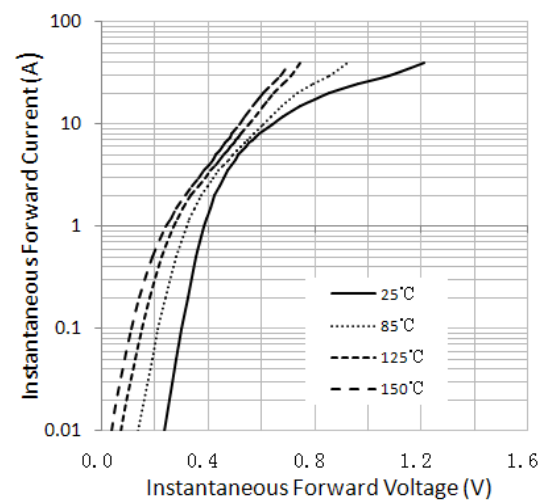


Figure 4. Typical Instantaneous Forward Characteristics

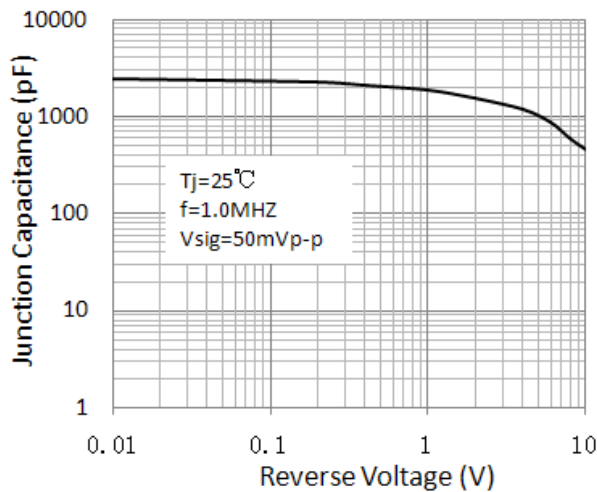
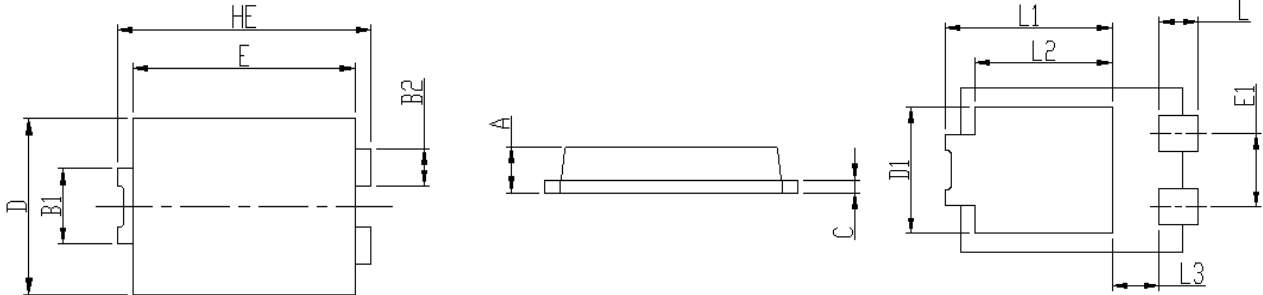


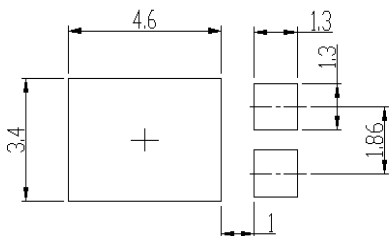
Figure 5. Typical Junction Capacitance

Package Outline Dimensions (TO-277B)



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	0.250	0.400	0.010	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



Unit: mm

Order Information

MPN	Package	Marking	Quantity	HSF Status
GSK12PC120L	TO-277B	12120L	5,000pcs / Reel	RoHS Compliant