GOOD-ARK SEMICONDUCTOR

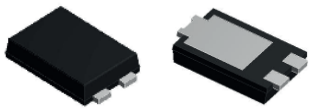
GSP1045L

Surface Mount Schottky Rectifier
Reverse Voltage 45V Forward Current 10A

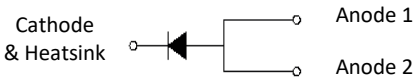
Features

- Excellent high temperature stability
- Low forward voltage
- Low power loss/high efficiency
- High forward surge capability
- Ideal for automated placement
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

RoHS COMPLIANT



TO-277



Schematic Diagram

Mechanical Data

- Case: TO-277
- Molding compound meets UL 94 V-0 flammability rating
  Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per JESD22-B102
  Meet JESD 201 class 2 whisker test
- Polarity: Indicated by cathode band

Applications

Trench Schottky barrier rectifier is designed for high frequency miniature switched mode power supplies such as adapters, lighting and on-board DC/DC converters.

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	10	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed On Rated Load Per Diode	I_{FSM}	220	A
Typical Thermal Resistance	$R_{\theta JL}$	11	°C/W
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

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

Parameter	Symbol	Test Condition	Typ	Max	Unit
Instantaneous Forward Voltage Per Diode[1]	V_F	I_F=2A, T_J=25°C	0.33	-	V
		I_F=10A, T_J=25°C	0.43	0.47	V
Instantaneous Reverse Current Per Diode at Rated Reverse Voltage	I_R	T_J=25°C	45	200	uA
		T_J=125°C	-	80	mA

Note:

1. Pulse test with pulse width=300μs, 1% duty cycle.

Ratings and Characteristics Curves (T_A=25°C unless otherwise noted)

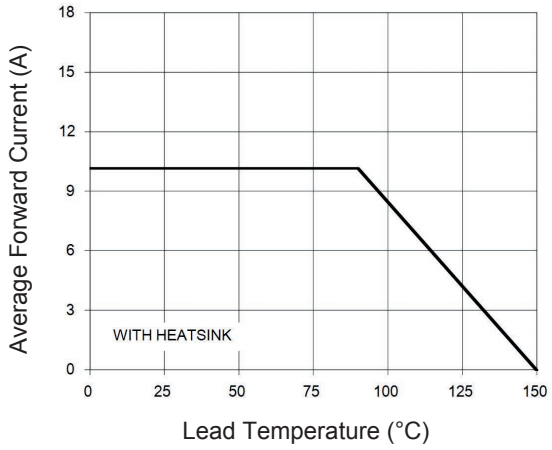


Figure 1. Forward Current Derating Curve

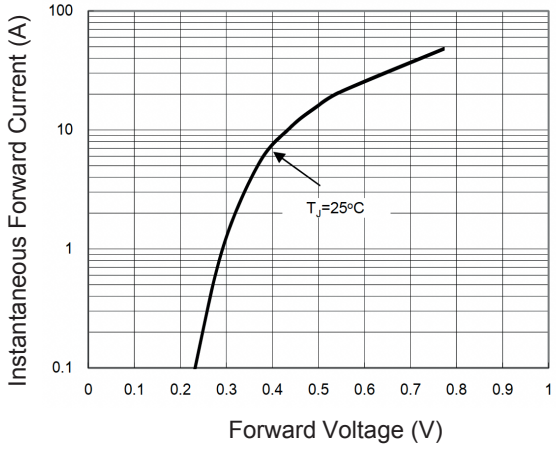


Figure 2. Typical Forward Characteristics

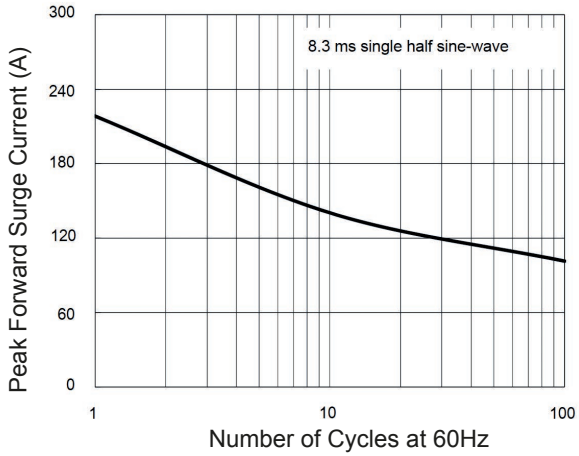


Figure 3. Maximum Non-Repetitive Forward Surge Current

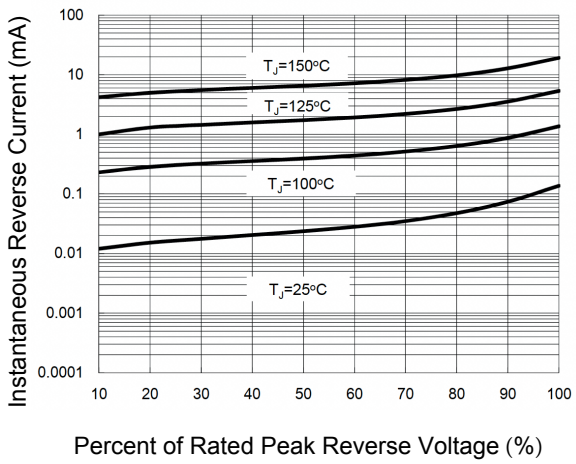


Figure 4. Typical Reverse Characteristics

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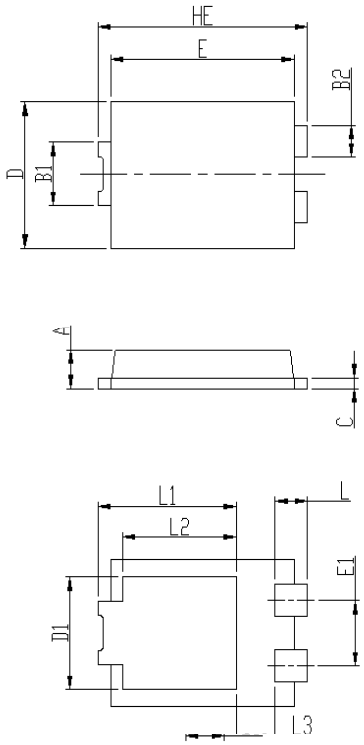
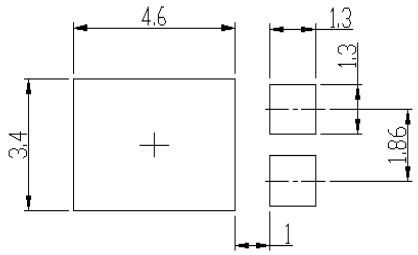
Reverse Voltage 45V Forward Current 10A

Package Outline Dimensions (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
L_1	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	3.0	3.3	0.118	0.130
E1	1.86 Typ.		0.073 Typ.	

Recommended Pad Layout



Unit: mm