

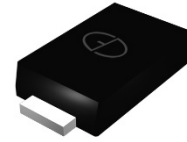
1A,60V Schottky Barrier Rectifier

Features

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



RoHS
COMPLIANT



iSGP (SOD-323HE)

Applications

For use in low voltage, high frequency inverters, free-wheeling and polarity protection application.

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)			
Parameter	Symbol	TP0160S	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	60	V
Maximum RMS voltage	V _{RMS}	42	V
Maximum DC blocking voltage	V _{DC}	60	V
Maximum average forward rectified current	I _{F(AV)}	1	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	25	A
Operating junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	89	°C /W
Thermal Resistance, Junction to Lead	R _{θJL}	10	°C /W

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

Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward Drop Voltage	V _F	I _F =0.1A	0.40	0.45	V
		I _F =0.2A	0.43	0.50	
		I _F =0.5A	0.51	0.55	
		I _F =1A	0.62	0.70	
		I _F =1A	0.56	-	
Reverse leakage current	I _R	V _R =12V	0.14	-	uA
		V _R =60V	1	20	
		V _R =60V	600	-	
Typical junction capacitance	C _J	4.0 V 1 MHz	44		pF

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

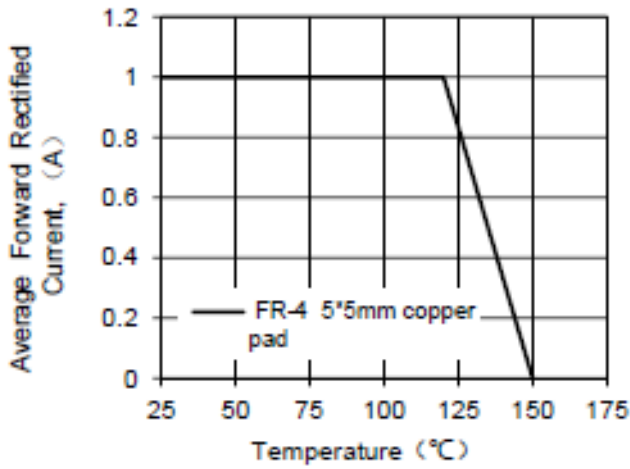


Figure 1. Forward Current Derating Curve

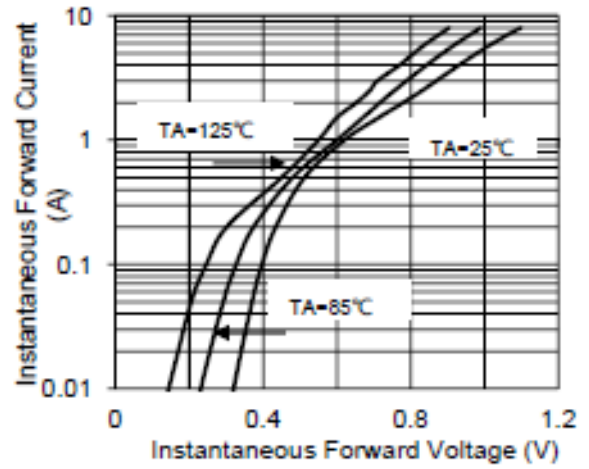


Figure 2. Typical Instantaneous Forward Characteristics

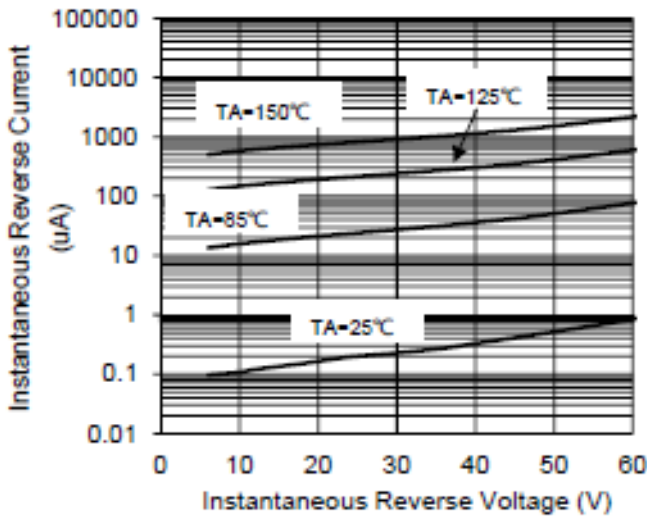


Figure 3. Typical Reverse Characteristics

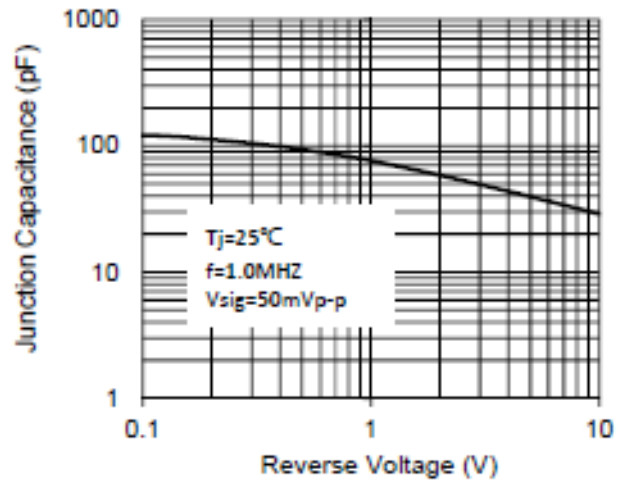


Figure 4. Typical Junction Capacitance

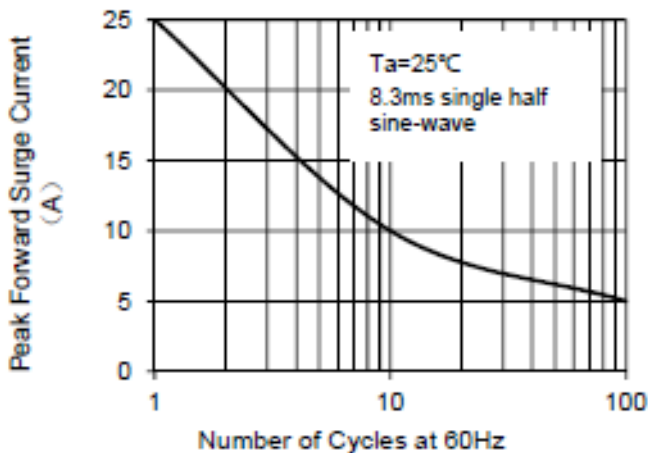
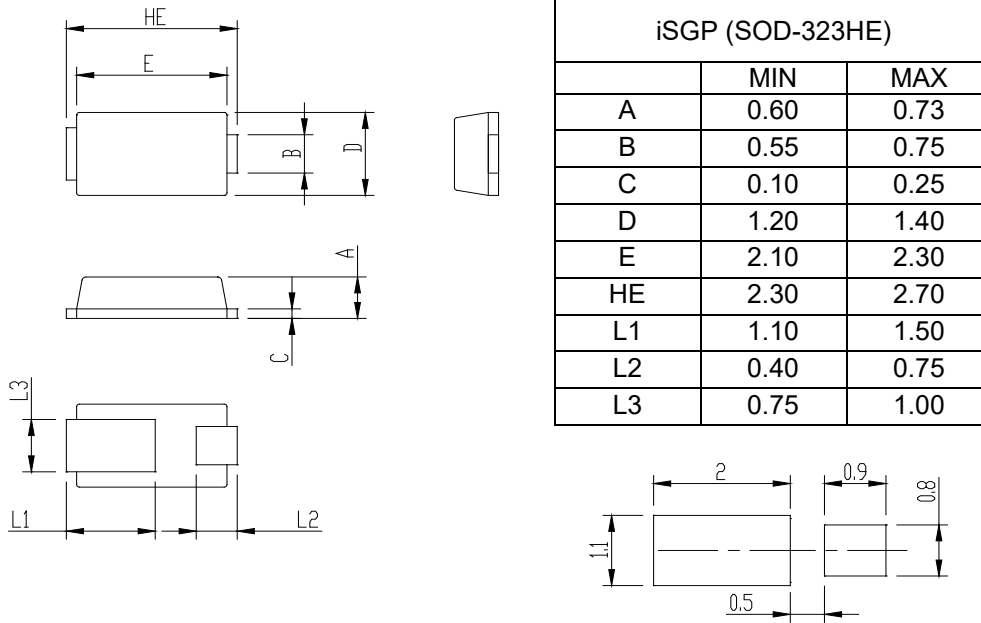


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions

in inches (millimeters)

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Revision History

Document Version	Date of release	Description of changes
Rev.A	2018.08.01	Released Datasheet
Rev.B	2023.10.13	Modify document format

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