

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-323HS)

Applications

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

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

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	V
Maximum RMS Voltage	V _{RMS}	14	V
Maximum DC Blocking Voltage	V _{DC}	20	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	I _{FSM}	25	A
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	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Instantaneous Forward Voltage	I _F =0.1A, T _A =25°C	V _F	-	0.37	0.40	V
	I _F =0.2A, T _A =25°C		-	0.39	0.42	
	I _F =0.5A, T _A =25°C		-	0.43	0.46	
	I _F =1.0A, T _A =25°C		-	0.47	0.50	
	I _F =0.5A, T _A =125°C		-	0.33	-	
	I _F =1.0A, T _A =125°C		-	0.40	0.46	
Instantaneous Reverse Current	V _R =10V, T _J =25°C	I _R	-	0.22	-	uA
	V _R =20V, T _J =25°C		-	0.43	20	
	V _R =30V, T _J =25°C		-	0.80	20	
	V _R =40V, T _J =25°C		-	2	20	
	V _R =40V, T _J =125°C		-	1.2	-	mA
Typical Junction Capacitance	4.0V, 1 MHz	C _J	54			pF
Typical Thermal Resistance ¹	Junction to Ambient	R _{θJA}	103			°C/W
	Junction to Lead	R _{θJL}	24			

Note1: Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

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

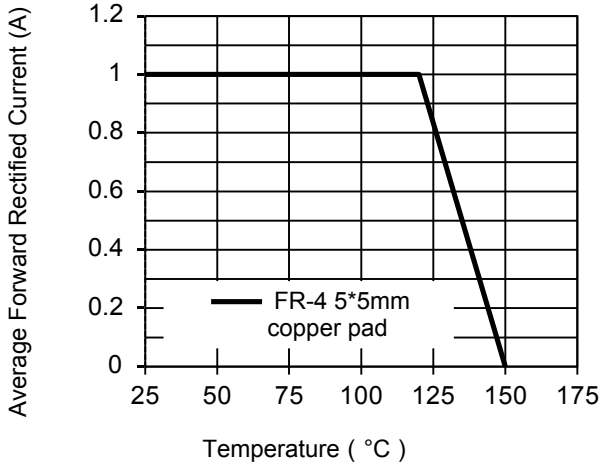


Figure 1. Forward Current Derating Curve

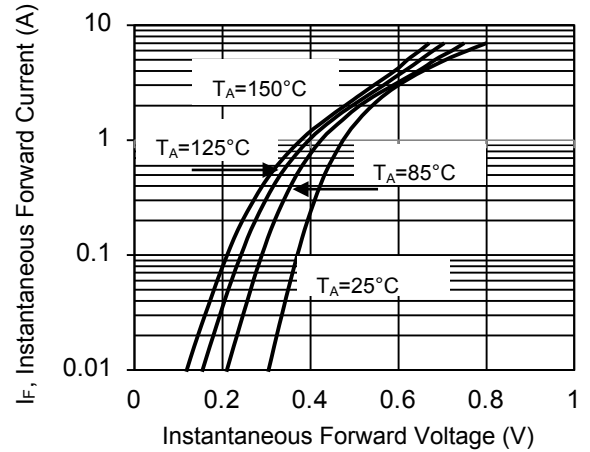


Figure 2. Typical Instantaneous Forward Characteristics

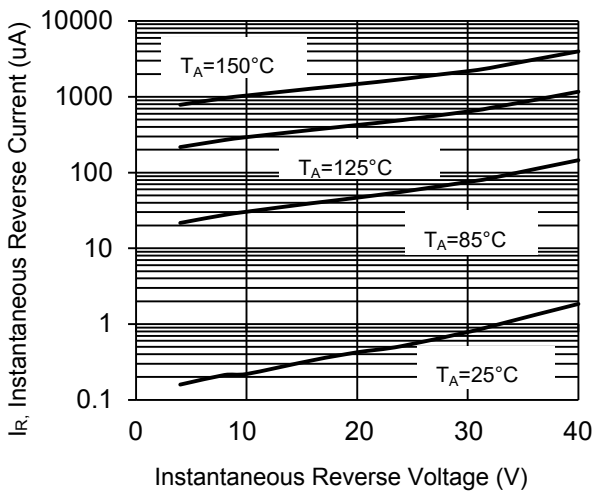


Figure 3. Typical Reverse Characteristics

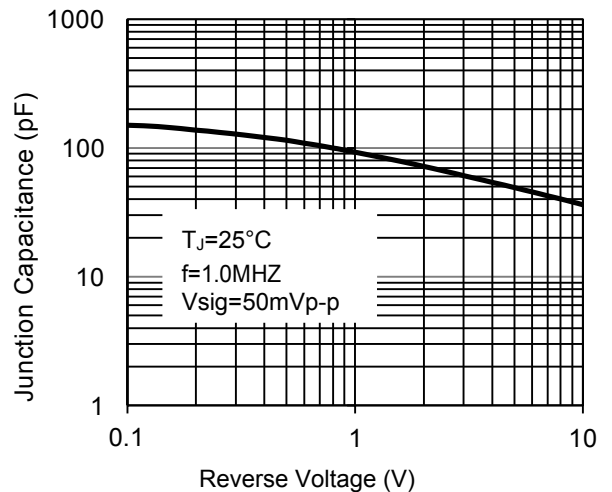


Figure 4. Typical Junction Capacitance

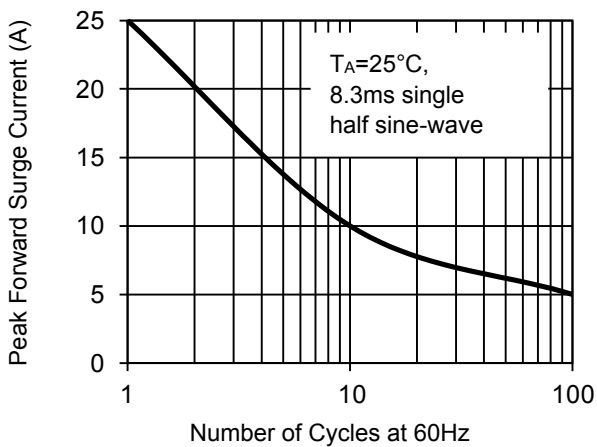
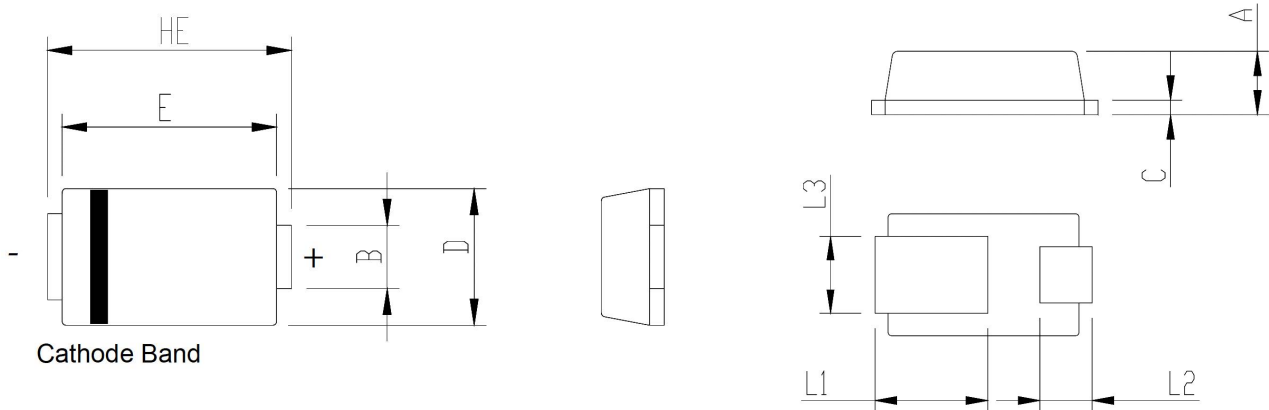


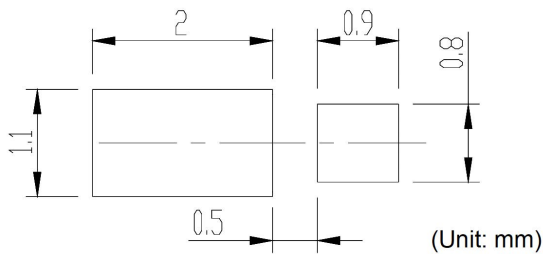
Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions iSGP (SOD-323HS)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.600	0.730	0.024	0.029
B	0.550	0.750	0.022	0.030
C	0.100	0.250	0.004	0.010
D	1.200	1.400	0.047	0.055
E	2.100	2.300	0.083	0.091
HE	2.300	2.700	0.091	0.106
L1	1.100	1.500	0.043	0.059
L2	0.400	0.750	0.016	0.030
L3	0.750	1.000	0.030	0.039

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GSTP0120S	iSGP (SOD-323HS)	12S	Tape & Reel	4,500 pcs / Reel