

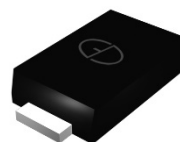
1A,20-40V Schottky Barrier Rectifiers

Features

- Low leakage current
- Schottky barrier diodes
- 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	TP0120S	TP0130S	TP0140S	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	V
Maximum RMS voltage	V _{RMS}	14	21	28	V
Maximum DC blocking voltage	V _{DC}	20	30	40	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}	103	°C /W
Thermal Resistance, Junction to Lead	R _{θJL}	24	°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	T _A =25°C	0.37	0.40	V
		I _F =0.2A		0.39	0.42	
		I _F =0.5A		0.43	0.46	
		I _F =1A		0.47	0.50	
		I _F =0.5A	T _A =125°C	0.33	-	
		I _F =1A		0.40	0.46	
Reverse leakage current	I _R	V _R =10V	T _J =25°C	0.22	-	uA
		V _R =20V		0.43	20	
		V _R =30V		0.80		
		V _R =40V		2		
		V _R =40V	T _J =125°C	1.2	-	mA
Typical junction capacitance	C _J	4.0 V 1 MHz	54		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)

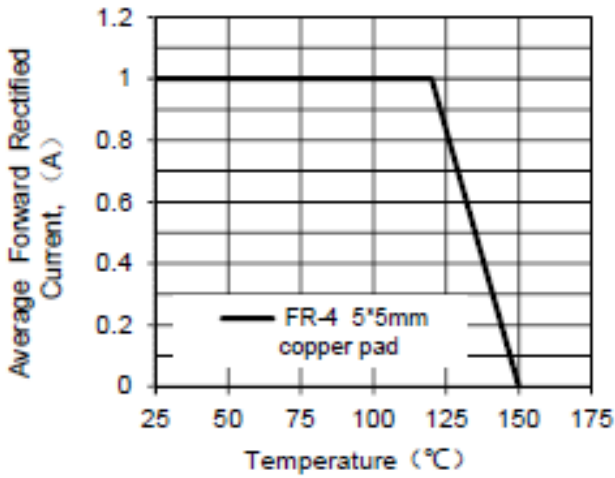


Figure 1. Forward Current Derating Curve

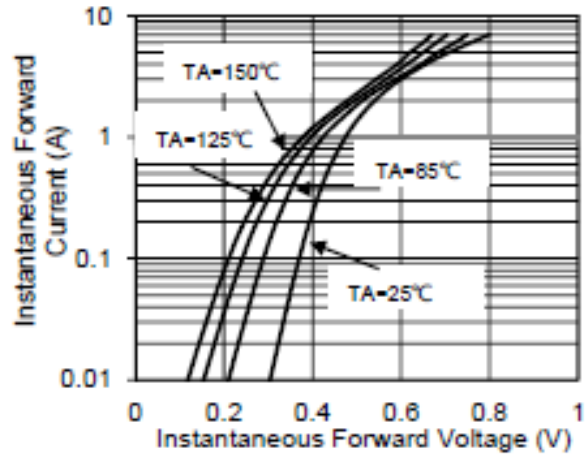


Figure 2. Typical Instantaneous Forward Characteristics

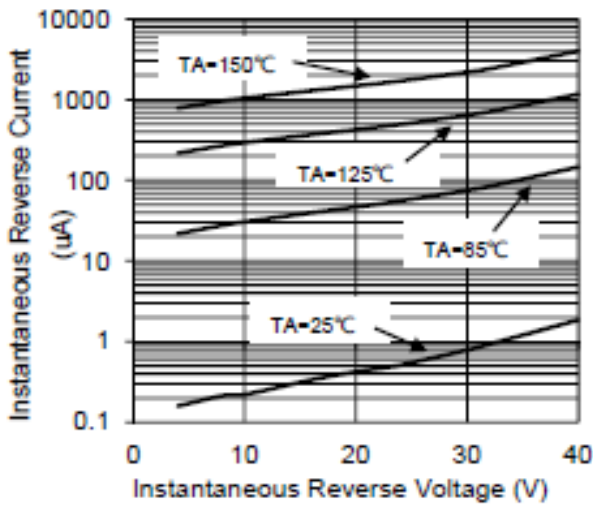


Figure 3. Typical Reverse Characteristics

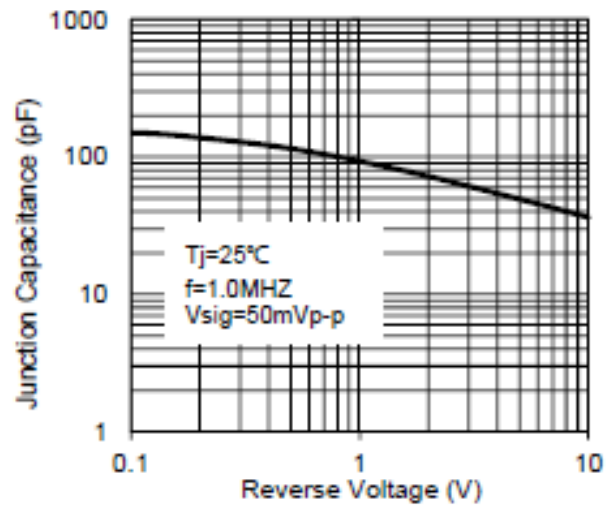


Figure 4. Typical Junction Capacitance

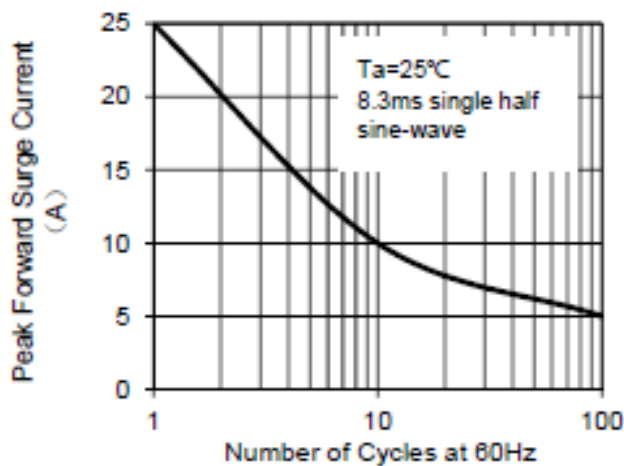
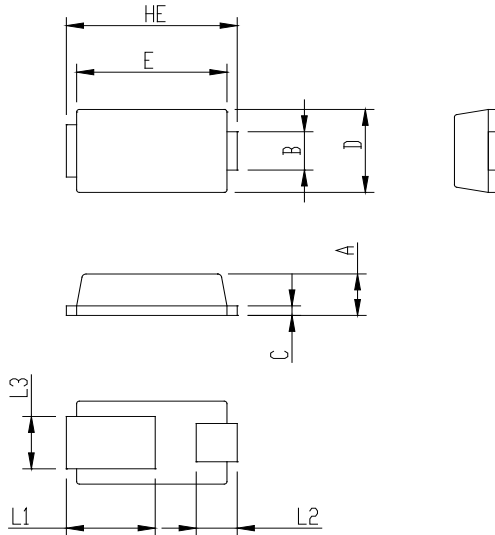


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

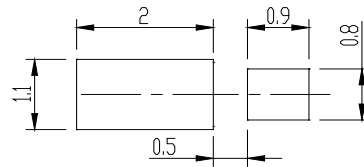
Package Outline Dimensions

in inches (millimeters)

iSGP (SOD-323HE)



iSGP (SOD-323HE)		
	MIN	MAX
A	0.60	0.73
B	0.55	0.75
C	0.10	0.25
D	1.20	1.40
E	2.10	2.30
HE	2.30	2.70
L1	1.10	1.50
L2	0.40	0.75
L3	0.75	1.00



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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