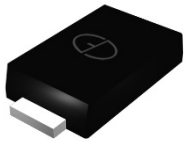
1A,20-40V Schottky Barrier Rectifiers

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℃/10 seconds
- AEC-Q101 qualified

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℃ unless otherwise noted)

Parameter	Symbol	ATP0120S	ATP0130S	ATP0140S	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℃ unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	103	°C /W
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	24	°C /W

Electrical Specifications(T_A=25℃ unless otherwise noted)						
Parameter	**Symbol**	**Test Conditions**	**ATP0120S**	**ATP0130S**	**ATP0140S**	**Unit**
Forward Drop Voltage	V_F	I_F=1A	0.50			V
Reverse leakage current @ V_R	I_R	T_J =25℃	20			uA
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

(T_A = 25℃ unless otherwise noted)

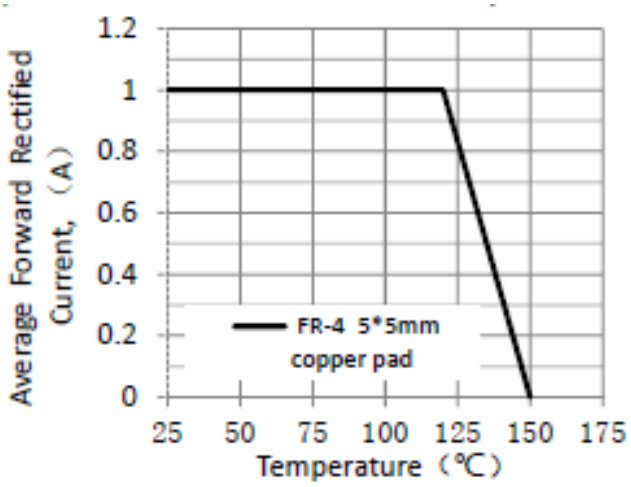


Figure 1.Forward Current Derating Curve

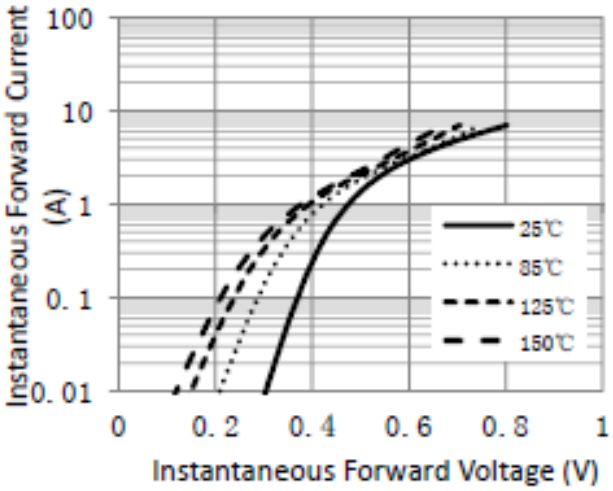


Figure 2. Typical Instantaneous Forward Characteristics

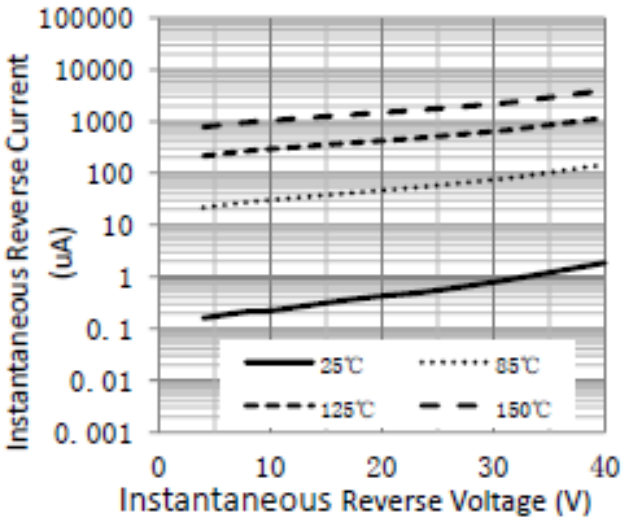


Figure 3. Typical Reverse Characteristics

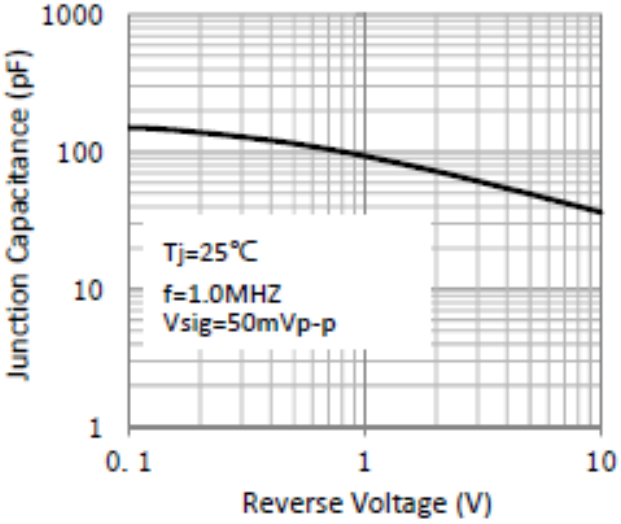


Figure 4. Typical Junction Capacitance

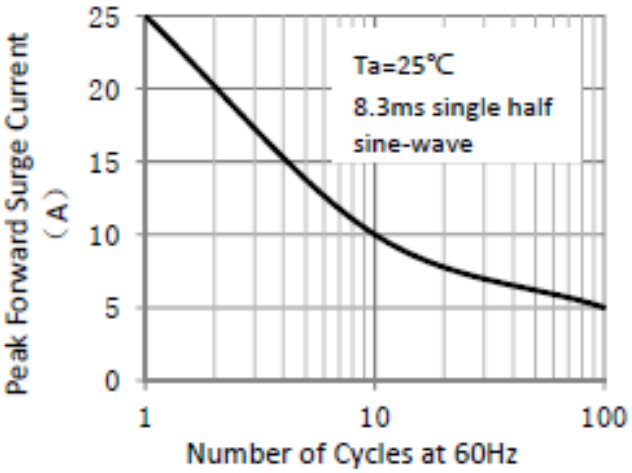
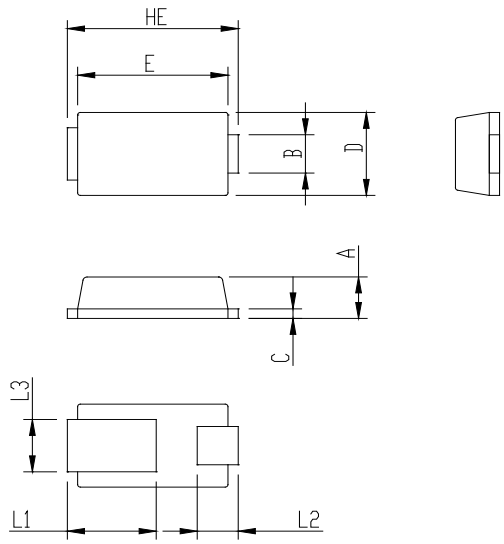


Figure 5.Maximum Non-Repetitive Peak Forward Surge Current

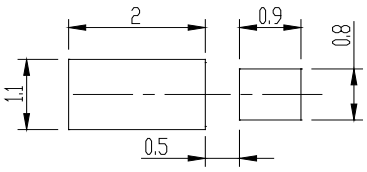
Package Outline Dimensions

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	2023.10.24	Modify document format

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