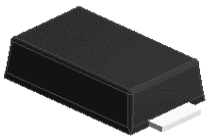
1A,40V Schottky Barrier Rectifier

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℃/10 seconds

RoHS COMPLIANT



iSGA (SOD-123HS)

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	PSL14	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum DC blocking voltage	V_{DC}	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}	40	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	$R_{\theta JA}$	65	°C /W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	35	°C /W
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	9	°C /W

Electrical Specifications(T_A=25℃ unless otherwise noted)					
Parameter	**Symbol**	**Test Conditions**	**Typ**	**Max**	**Unit**
Forward Drop Voltage	V_F	I_F=1A T_A=25℃	0.42	0.45	V
		I_F=1A T_A=125℃	0.34	0.40	
Reverse leakage current @V_R	I_R	T_J =25℃	22	200	uA
		T_J =125℃	10	20	mA
Typical junction capacitance	C_J	4.0 V 1 MHZ	55		pF

Note：

1. The thermal resistance from junction to ambient or lead, mounted on copper pad area of 5.0 x 5.0mm to each terminal.
2. The thermal resistance from junction to case, mounted on recommended copper pad to each terminal.

Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)

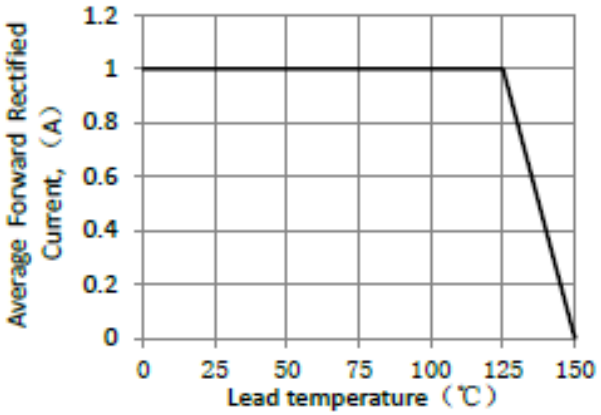


Figure 1.Forward Current Derating Curve

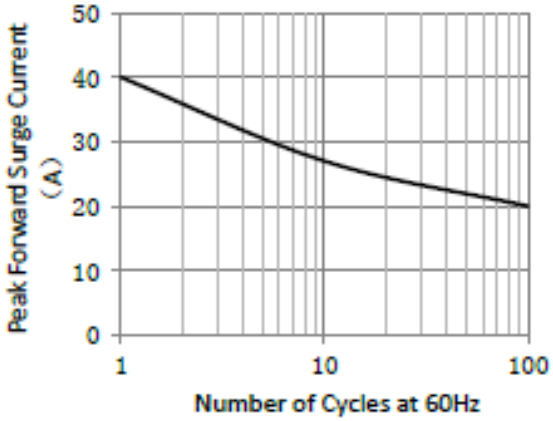


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

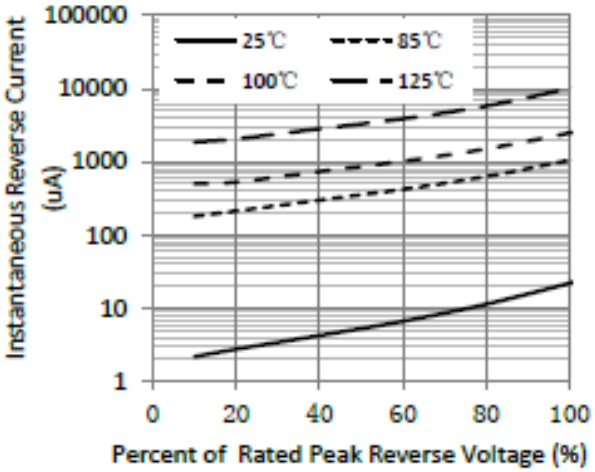


Figure 3. Typical Reverse Characteristics

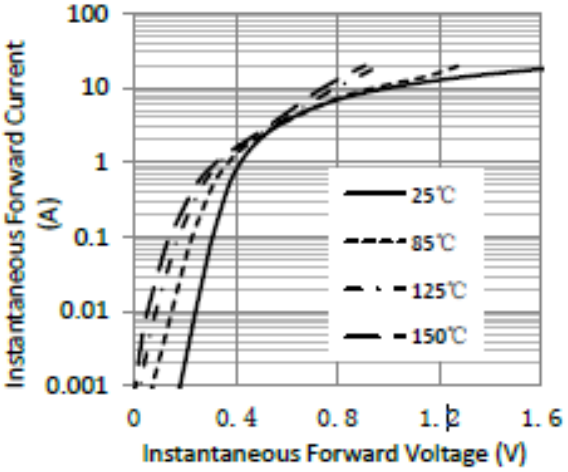


Figure 4. Typical Instantaneous Forward Characteristics

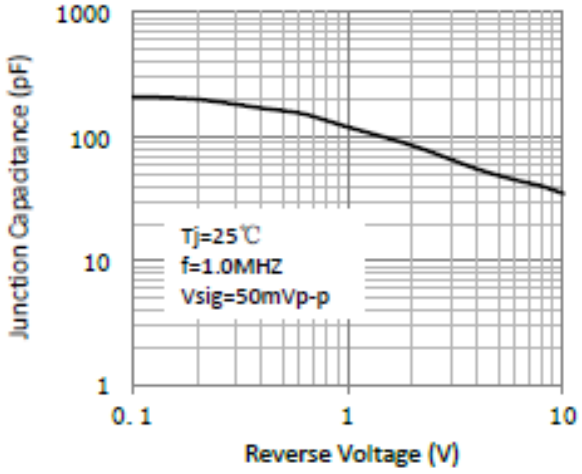
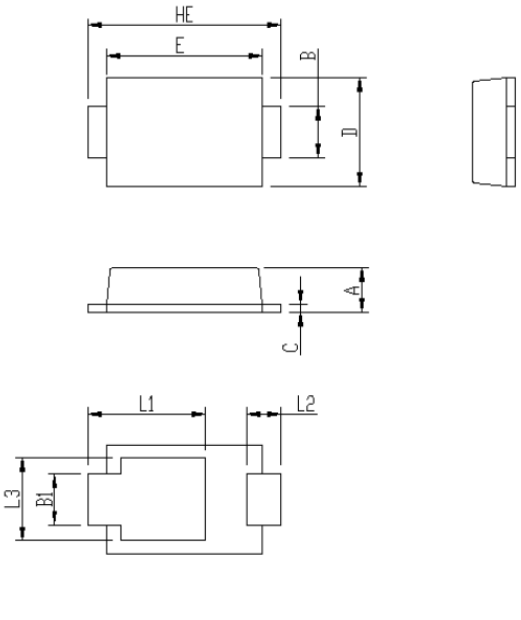


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

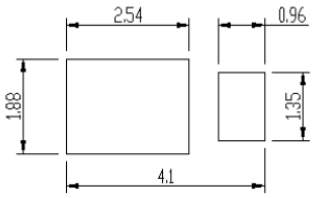
in inches (millimeters)

iSGA (SOD-123HS)



Package	iSGA	
Unit:mm	MIN	MAX
A	0.75	0.90
B	0.85	1.05
B1	0.85	1.05
C	0.1	0.25
D	1.9	2.1
E	2.9	3.1
L1	2.0	2.45
L2	0.4	0.85
L3	1.3	1.7
HE	3.5	3.9

Soldering footprint



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.17	Modify document format

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