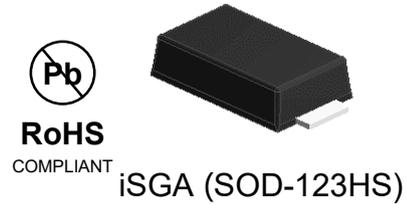


## 3A,20-45V Schottky Barrier Rectifiers

### 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



### Applications

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

Maximum Ratings & Electrical Characteristics (T <sub>A</sub> =25°C unless otherwise noted)						
Parameter	Symbol	PS32	PS33	PS34	PS345	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	45	V
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	31.5	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	45	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	3				A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	100				A
Operating junction temperature range	T <sub>J</sub>	-55 to +150				°C
Storage temperature range	T <sub>STG</sub>	-55 to +150				°C

Thermal-Mechanical Specifications (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	60	°C / W
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	28	°C / W
Thermal Resistance, Junction to Lead	R <sub>θJL</sub>	6	°C / W

Electrical Specifications ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)							
Parameter	Symbol	Test Conditions	PS32	PS33	PS34	PS345	Unit
Forward Drop Voltage	$V_F$	$I_F=3\text{A}$ $T_A=25^{\circ}\text{C}$	0.51				V
		$I_F=3\text{A}$ $T_A=125^{\circ}\text{C}$	0.45				
Reverse leakage current @ $V_R$	$I_R$	$T_J=25^{\circ}\text{C}$	50				$\mu\text{A}$
		$T_J=125^{\circ}\text{C}$	10				mA
Typical junction capacitance	$C_J$	4.0 V 1 MHz	229				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

(TA = 25°C unless otherwise noted)

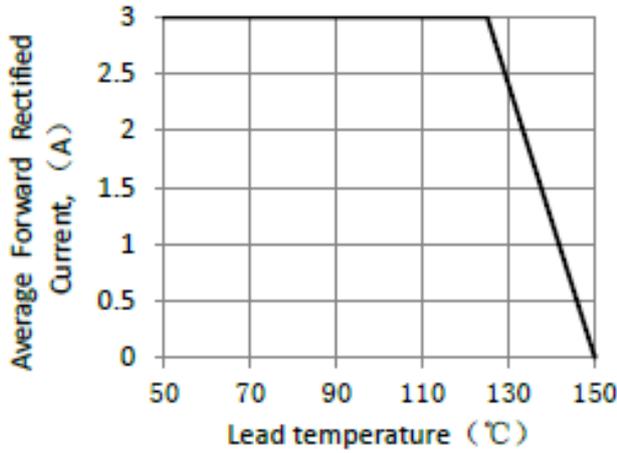


Figure 1. Forward Current Derating Curve

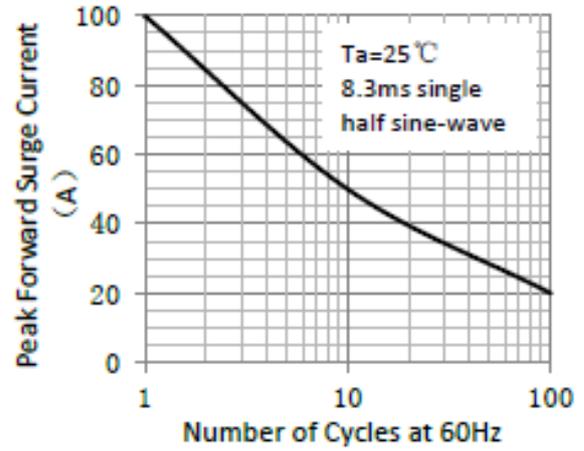


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

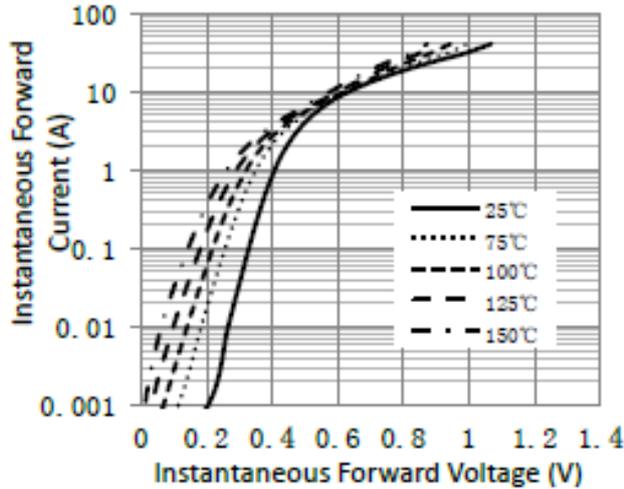


Figure 3. Typical Instantaneous Forward Characteristics

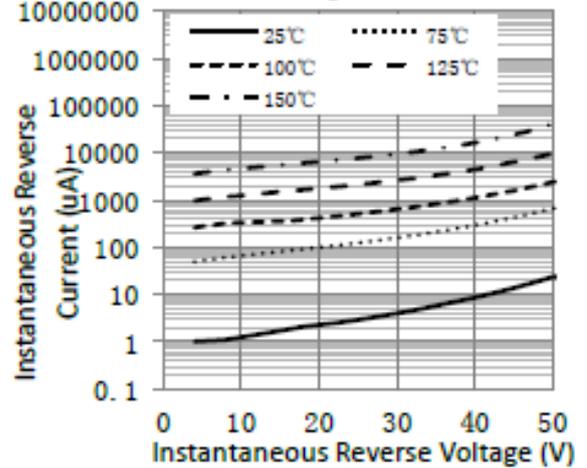


Figure 4. Typical Reverse Characteristics

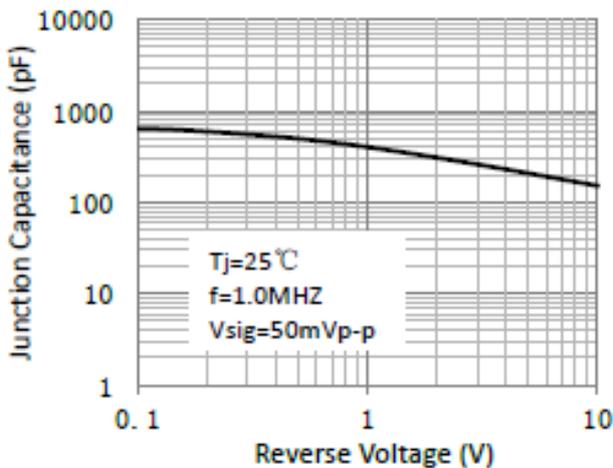
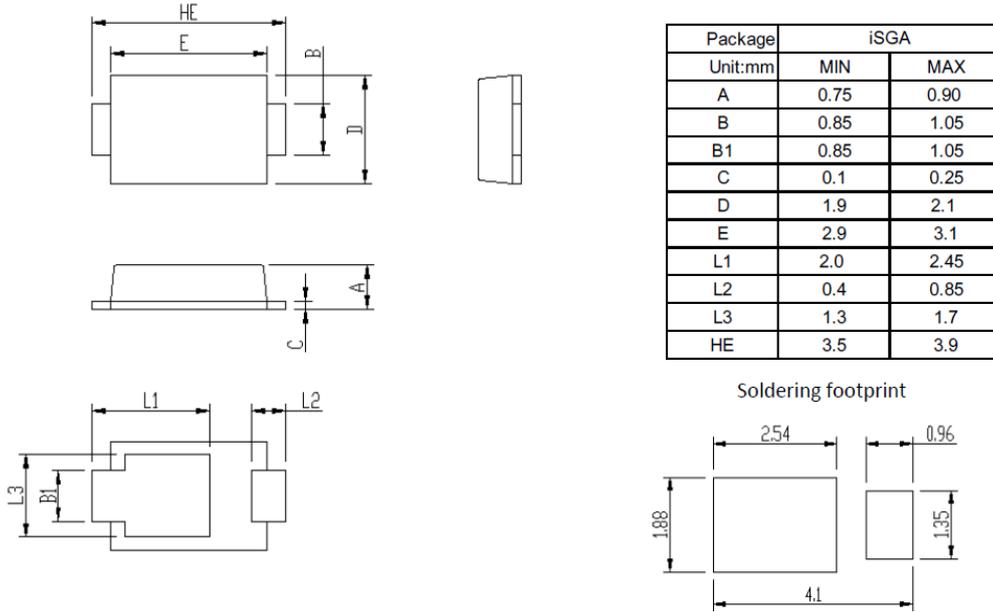


Figure 5. Typical Junction Capacitance

**Package Outline Dimensions**

in inches (millimeters)

**iSGA (SOD-123HS)**



**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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