

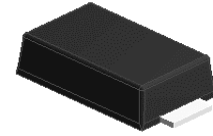
## 2A,50-600V Superfast Rectifiers

### Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- 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



iSGA (SOD-123HS)

### Applications

For use in secondary rectification and freewheeling for superfast switching speeds of converters in consumer applications.

Maximum Ratings & Electrical Characteristics (T <sub>A</sub> =25°C unless otherwise noted)							
Parameter	Symbol	PU21	PU22	PU23	PU24	PU25	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	2					A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	50					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>	93	°C/W
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	43	°C/W
Thermal Resistance, Junction to Lead	R <sub>θJL</sub>	23	°C/W

Electrical Specifications ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)								
Parameter	Symbol	Test Conditions	PU21	PU22	PU23	PU24	PU25	Unit
Forward Drop Voltage	$V_F$	$I_F=2\text{A}$	0.95			1.30	1.70	V
Reverse leakage current @ $V_R$	$I_R$	$T_J = 25^{\circ}\text{C}$	5					uA
		$T_J = 125^{\circ}\text{C}$	100					
Typical junction capacitance	$C_J$	4.0 V 1 MHz	17					pF
Maximum reverse recovery time	$t_{rr}$	$I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{RR}=0.25\text{A}$	35					nS

Note:

1. Mounted on copper pad area of 5.0 x 5.0mm to each terminal.

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

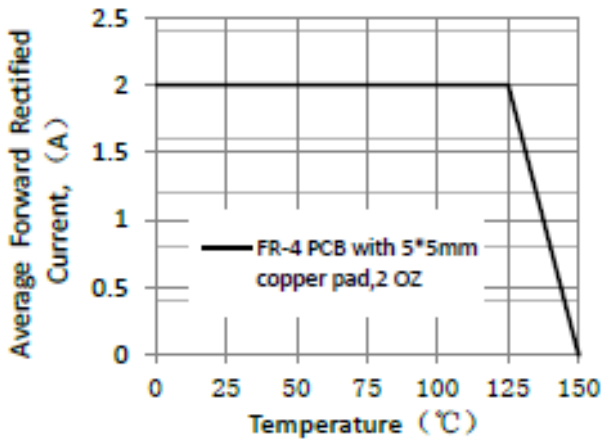


Figure 1. Forward Current Derating Curve

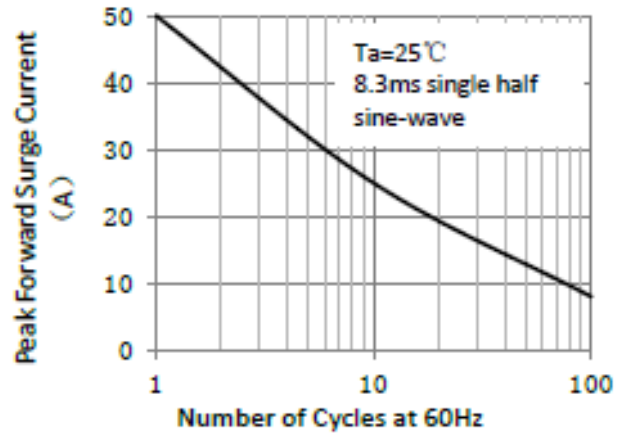


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

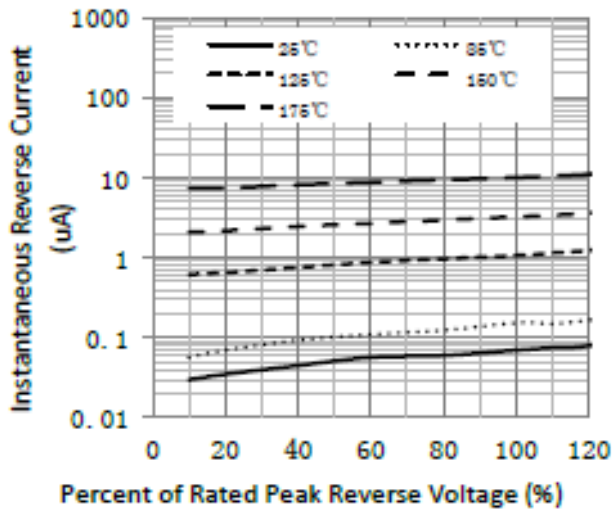


Figure 3. Typical Reverse Characteristics

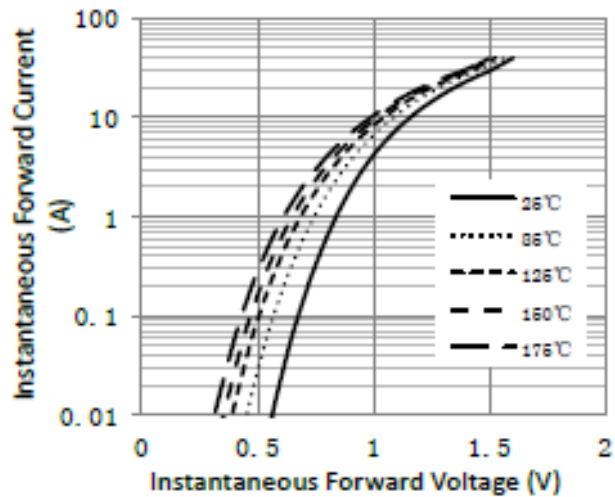


Figure 4. Typical Instantaneous Forward Characteristics

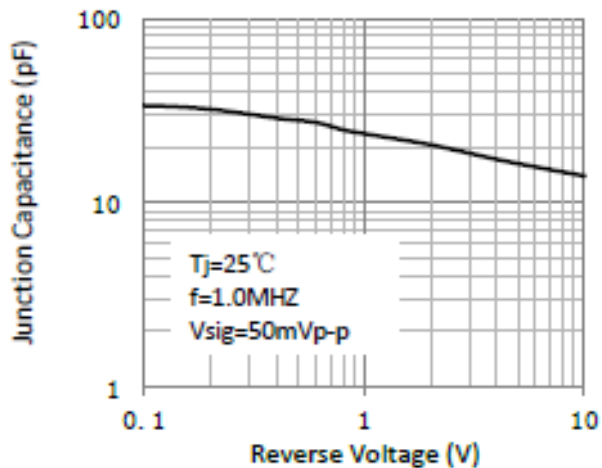
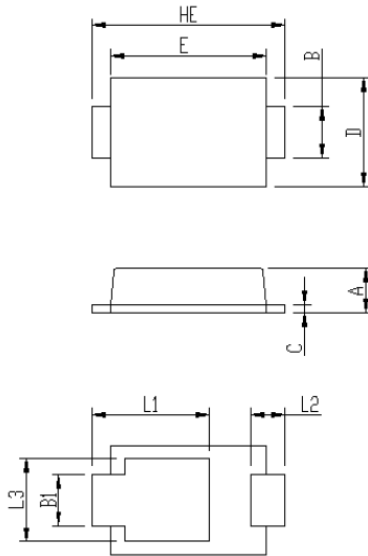


Figure 5. Typical Junction Capacitance

## Package Outline Dimensions

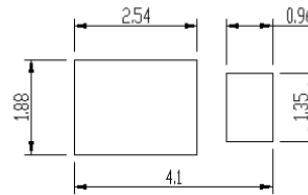
in inches (millimeters)

### 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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