

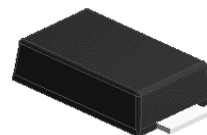
2A,50-600V Superfast Rectifiers

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 _A =25°C unless otherwise noted)							
Parameter	Symbol	PU21	PU22	PU23	PU24	PU25	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	V
Maximum average forward rectified current	I _{F(AV)}	2					A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	30					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}	93	°C / W
Thermal Resistance, Junction to Case	R _{θJC}	43	°C / W
Thermal Resistance, Junction to Lead	R _{θJL}	23	°C / W

Electrical Specifications(T _A =25°C unless otherwise noted)								
Parameter	Symbol	Test Conditions	PU21	PU22	PU23	PU24	PU25	Unit
Forward Drop Voltage	V _F	I _F =2A	0.95			1.30	1.70	V
Reverse leakage current @V _R	I _R	T _J =25°C	5					uA
		T _J =125°C	100					
Typical junction capacitance	C _J	4.0 V 1 MHZ	17					pF
Maximum reverse recovery time	trr	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	35					nS

Note:

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

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

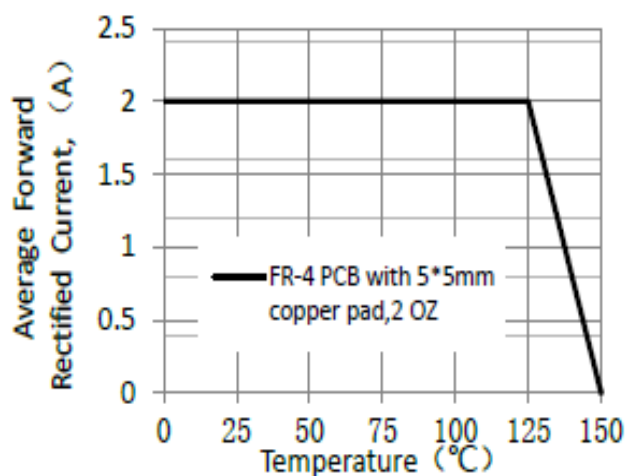


Figure 1. Forward Current Derating Curve

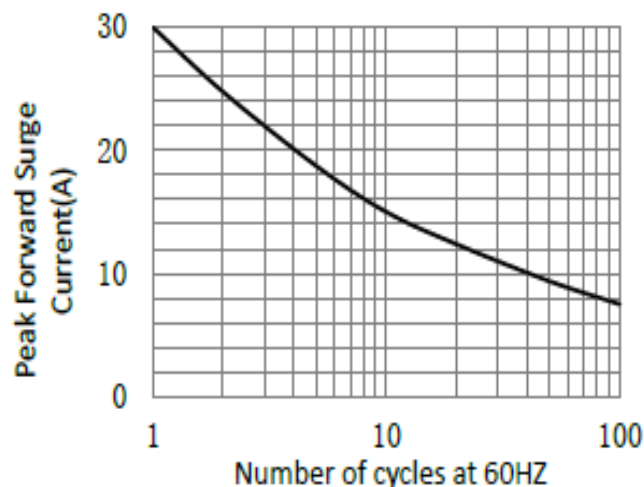


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

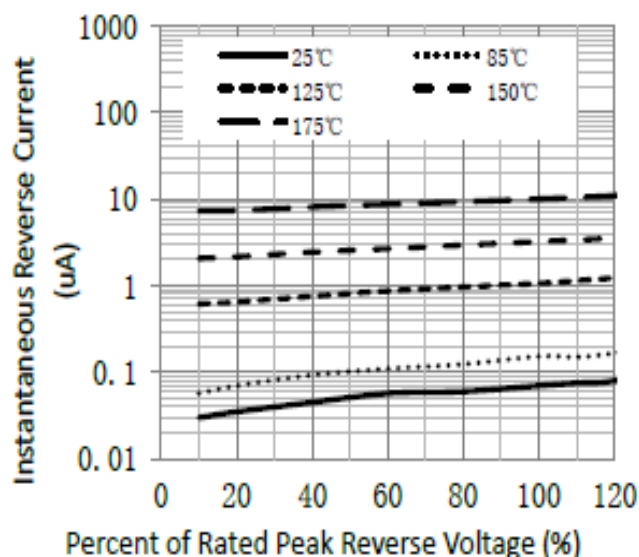


Figure 3. Typical Reverse Characteristics

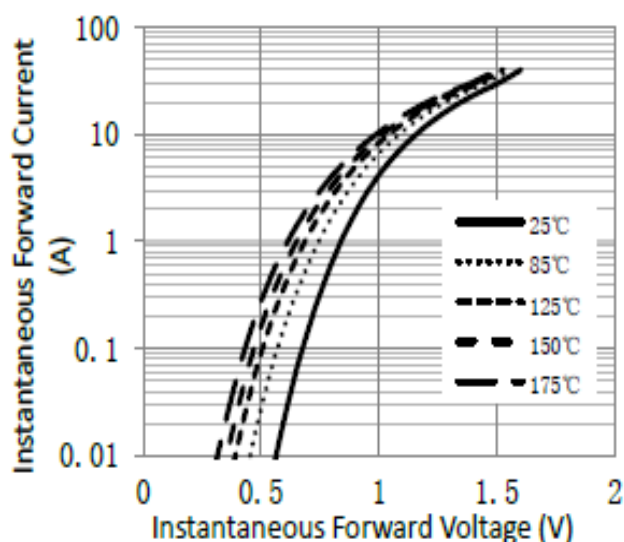


Figure 4. Typical Instantaneous Forward Characteristics

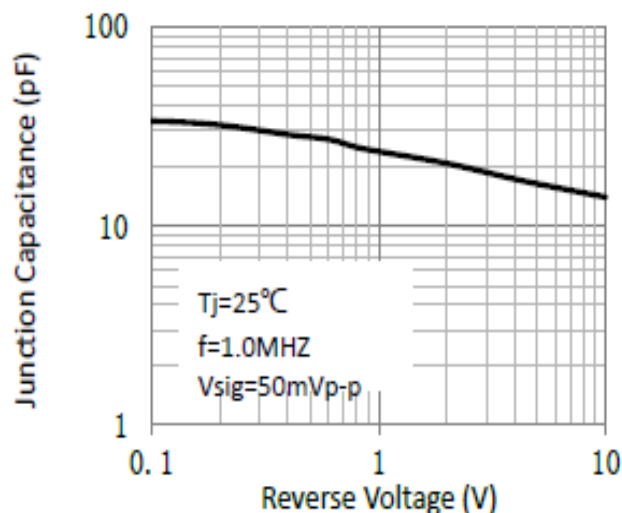
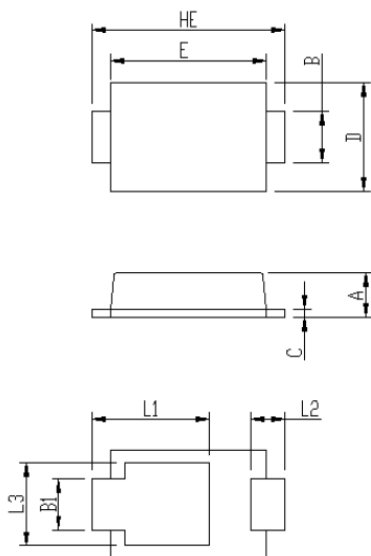


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

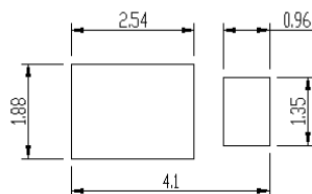
in inches (millimeters)

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
Rev.C	2024.02.06	Modify I _{FSM} information

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