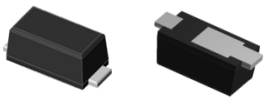
GSPU1 thru GSPU5

Surface Mount Glass Passivated Superfast Rectifier
Reverse Voltage 50-600V Forward Current 1A

Features

- Glass passivated superfast recovery Rectifiers
- Low profile, typical thickness 0.8mm
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Heatsink structure
- High temperature soldering guaranteed: 260℃/10 seconds



Package: iSGA

(SOD-123HS)

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	GSPU1	GSPU2	GSPU3	GSPU4	GSPU5	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	$I_{F(AV)}$	1					A
Peak Forward Surge Current 8.3ms Single Half Sine- Wave Superimposed on Rated Load	I_{FSM}	30					A
Operating Junction and Storage Temperature Range	T_J, T_{STG}	- 55 to + 150					℃

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	GSPU1	GSPU2	GSPU3	GSPU4	GSPU5	Unit
Minimum Breakdown Voltage	T_A=25℃,I_R=100uA	V_{BR}	200			400	600	V
Maximum Instantaneous Forward Voltage	1 A	V_F	0.95			1.3	1.7	
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A=25℃ T_A=125℃	I_R	5.0 100					μA
Maximum Reverse Recovery Time	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	t_{rr}	35					nS
Typical Junction Capacitance	4.0 V, 1 MHz	C_J	7					pF
Typical Thermal Resistance	Juntion to Ambient	$R_{\theta JA}$ [1)]	63					℃/W
	Juntion to Lead	$R_{\theta JL}$ [1)]	9					
	Juntion to Case	$R_{\theta JC}$ [2)]	39					

Note:1) The thermal resistance from junction to ambient or lead, mounted on P.C.B with 5×5mm copper pads,2 OZ,FR4 PCB

2) The thermal resistance from junction to case, mounted on P.C.B with recommended copper pads,2 OZ,FR4 PCB

Ratings and Characteristics Curves (T_A = 25°C unlessotherwise noted)

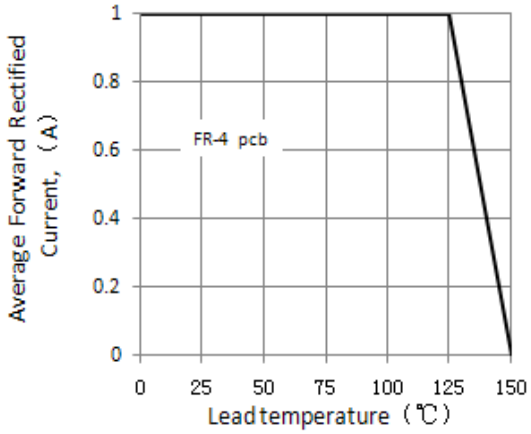


Figure 1.Forward Current Derating Curve

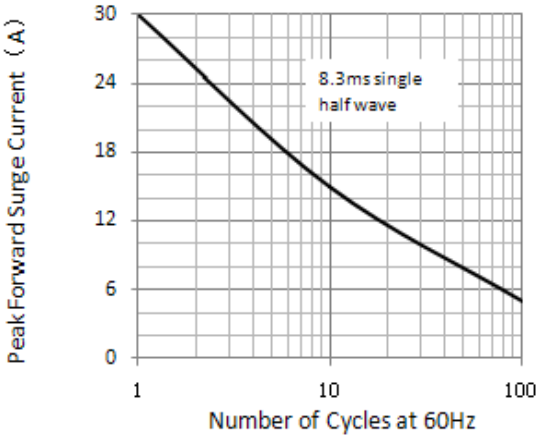


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

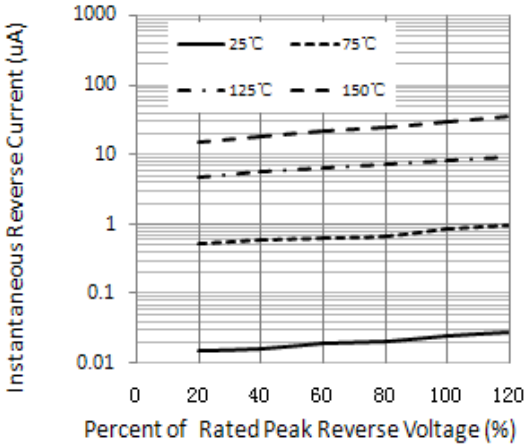


Figure 3. Typical Reverse Characteristics

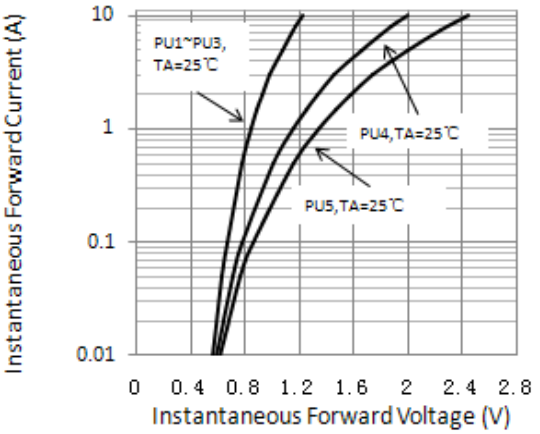


Figure 4. Typical Instantaneous Forward Characteristics

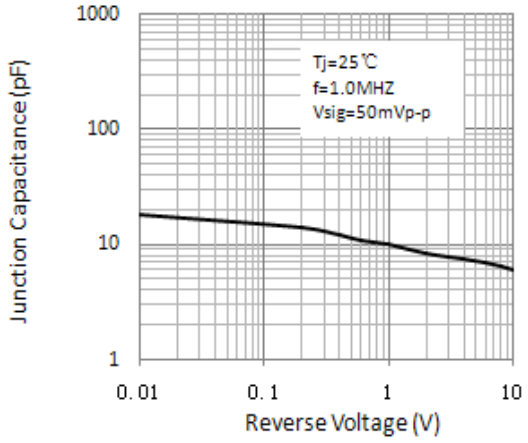


Figure 5. Typical Junction Capacitance

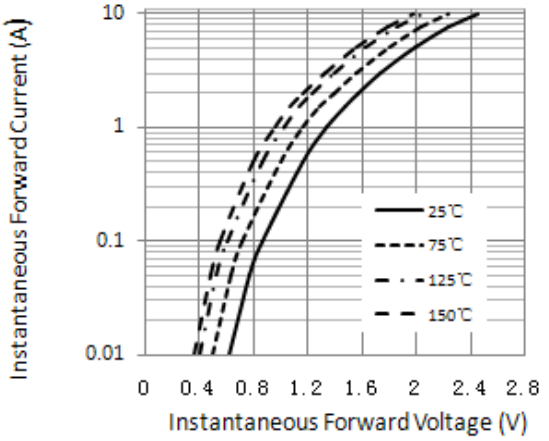


Figure 6. Typical Instantaneous Forward Characteristics (PU5)

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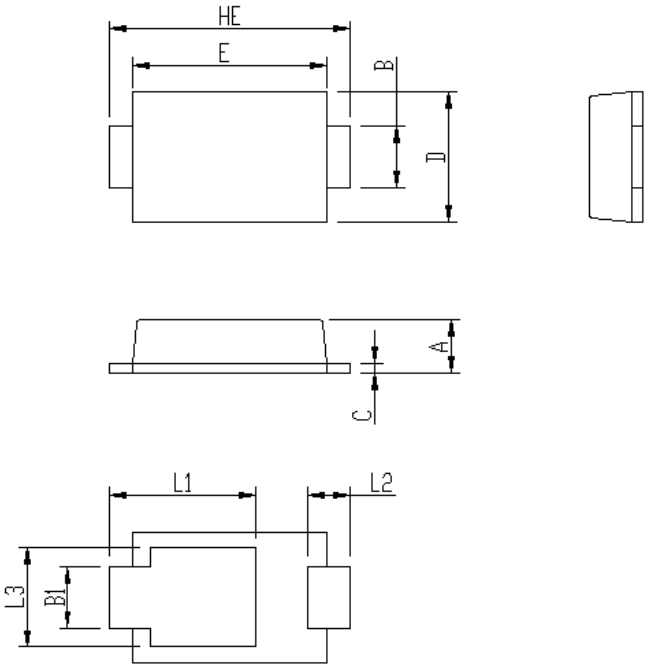
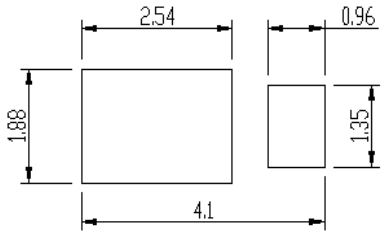
Package Outline Dimensions



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



Packing Information

Packing quantities

Reel size	Quantity/reel	Quantity/inner Box	Quantity/Carton
7"	3K	30K	120K

Tape & Reel Specification