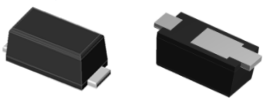
GOOD-ARK
SEMICONDUCTOR

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)

RoHS
COMPLIANT

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)

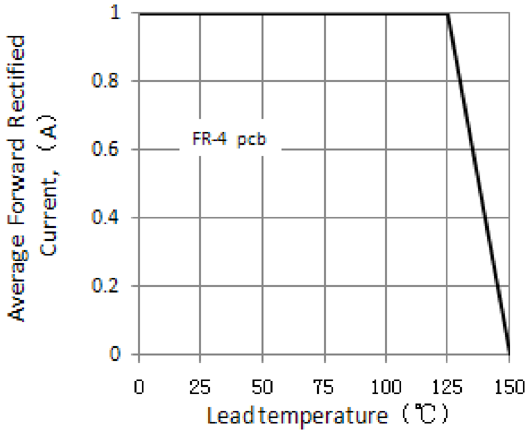


Figure 1.Forward Current Derating Curve

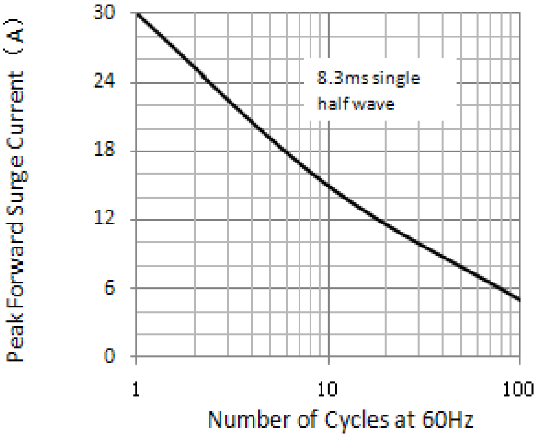


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

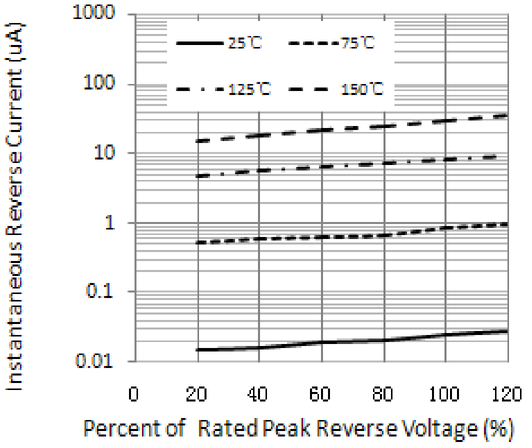


Figure 3. Typical Reverse Characteristics

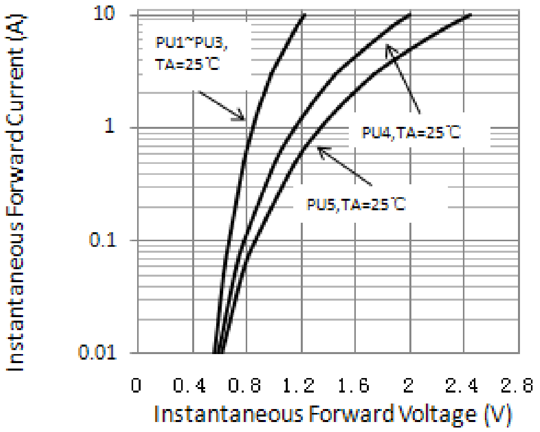


Figure 4. Typical Instantaneous Forward Characteristics

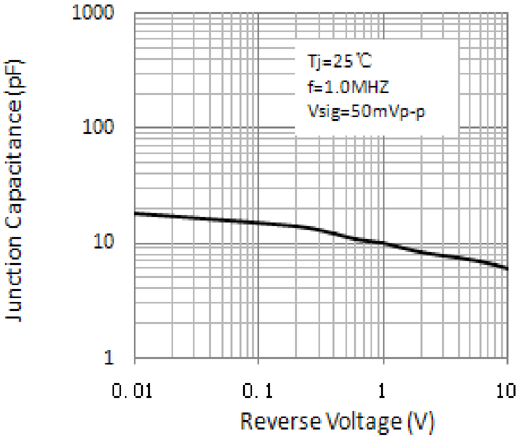


Figure 5. Typical Junction Capacitance

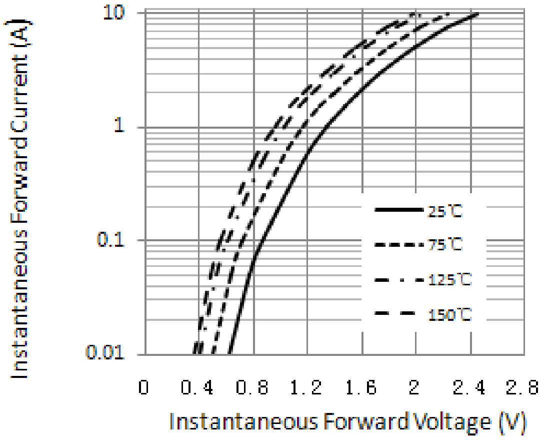
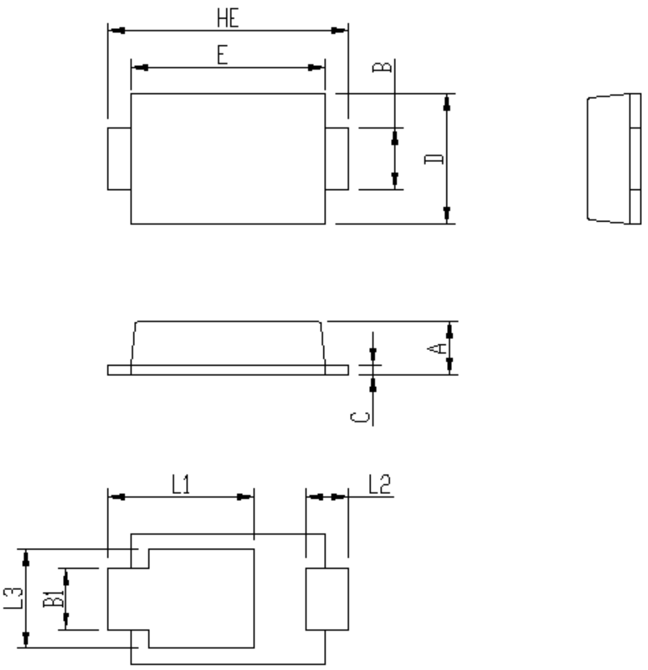


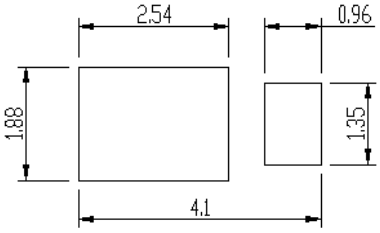
Figure 6. Typical Instantaneous Forward Characteristics (PU5)

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