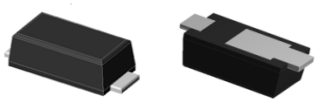
GOOD-ARK
SEMICONDUCTOR

PF151 thru PF157

Surface Mount Glass Passivated Fast Recovery Rectifier Reverse Voltage 50-1000V Forward Current 1.5A

Features

- Glass passivated fast recovery rectifiers
- Heatsink structure
- Low profile, typical thickness 0.8mm
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s



iSGA
(SOD-123HS)

RoHS COMPLIANT

Typical Applications

For use of general purpose rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

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

Parameter	Symbol	GSPF 151	GSPF 152	GSPF 153	GSPF 154	GSPF 155	GSPF 156	GSPF 157	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.5							A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	52							A
Rating for Fusing(t＜8.3ms)	I^2t	11.3							A^2sec
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	GSPF 151	GSPF 152	GSPF 153	GSPF 154	GSPF 155	GSPF 156	GSPF 157	Unit
Minimum Breakdown Voltage	T_A=25℃,I_R=100uA	V_{BR}	400				600	1000		V
Maximum Instantaneous Forward Voltage	I_F=1.5 A,T_A=25°C	V_F	1.3							V
Maximum DC Reverse Current @ Rated DC Blocking Voltage	T_A=25℃ TA=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}	150				250			nS
Typical Junction Capacitance	4.0 V, 1 MHz	C_J	7.5							pF
Typical Thermal Resistance	Juntion to Ambient	$R_{\theta JA}$ 1)	60							℃/W
	Juntion to Lead	$R_{\theta JL}$ 1)	10							
	Juntion to Case	$R_{\theta JC}$ 2)	35							

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 unless otherwise noted)

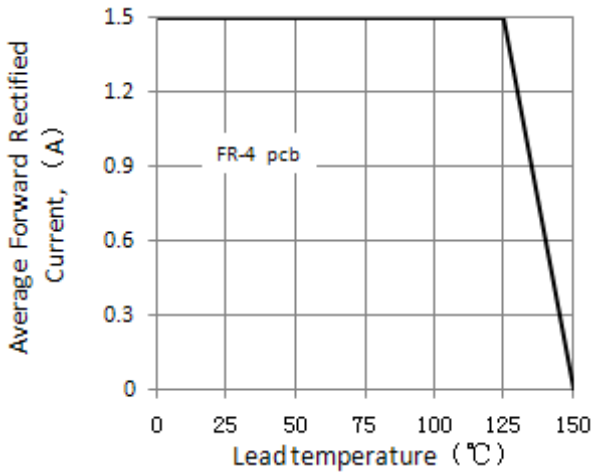


Figure 1.Forward Current Derating Curve

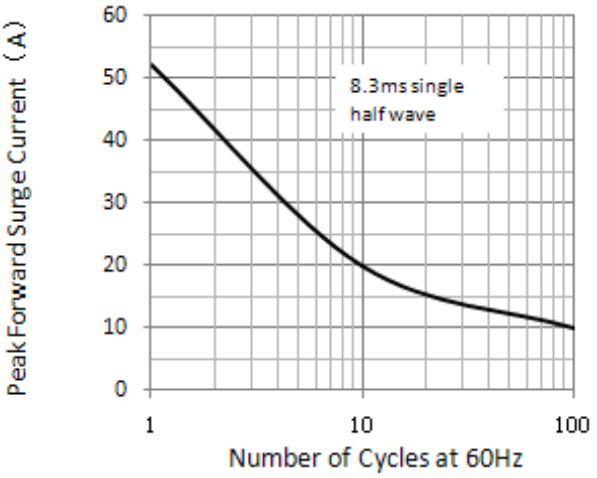


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

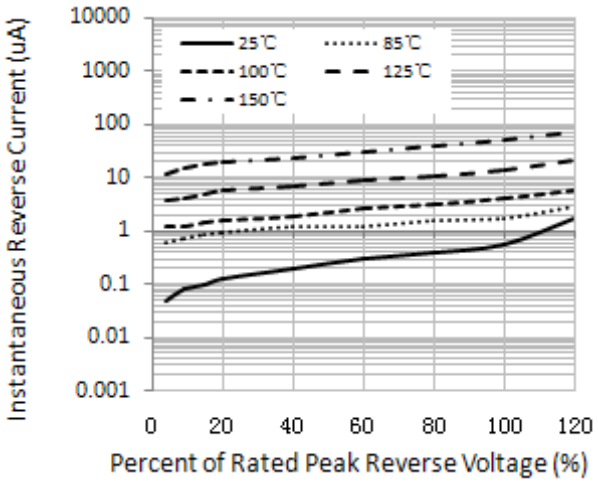


Figure 3. Typical Reverse Characteristics

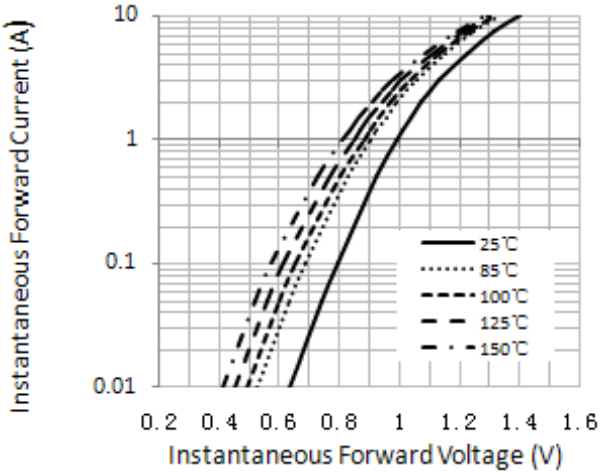


Figure 4. Typical Instantaneous Forward Characteristics

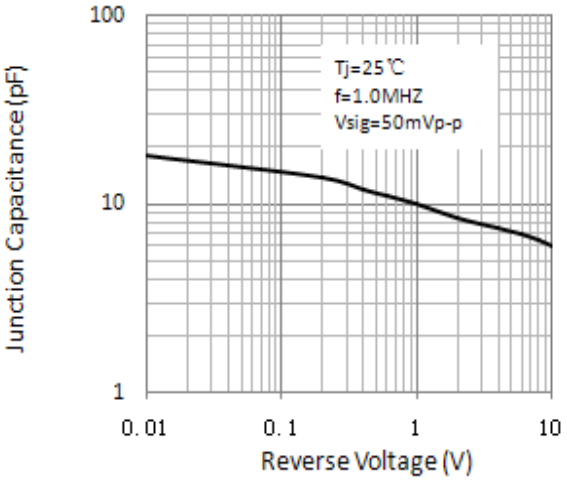


Figure 5. Typical Junction Capacitance

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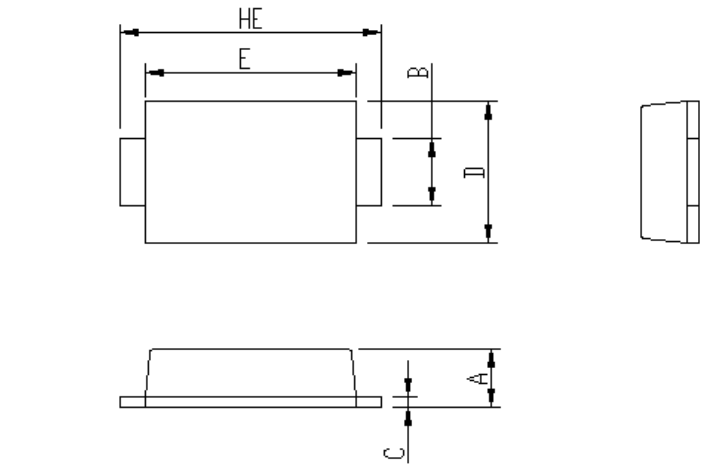
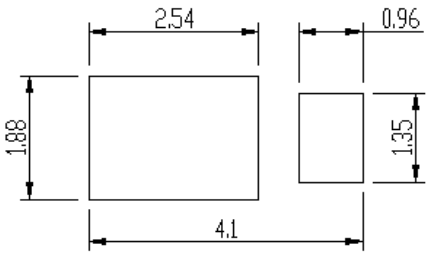
Package Outline Dimensions



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

Packing Tape Specification