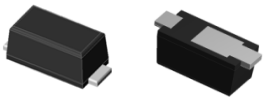
GOOD-ARK
SEMICONDUCTOR

GSPS32 thru GSPS345

Surface Mount Schottly Rectifier
Reverse Voltage 20-45V Forward Current 3.0A

Features

- Super Low VF schottky barrier 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°C/10 seconds



Package: iSGA

(SOD-123HS)

RoHS
COMPLIANT

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

Parameter	Symbol	GSPS32	GSPS33	GSPS34	GSPS345	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	45	V
Maximum RMS voltage	V_{RMS}	14	21	28	31.5	V
Maximum DC blocking voltage	V_{DC}	20	30	40	45	V
Maximum average forward rectified current	$I_{F(AV)}$	3.0				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	100				A
Rating for fusing(t＜8.3ms)	I^2t	42				A^2sec
Operating junction temperature range	T_J	- 55 to + 150				℃
Storage temperature range	T_{STG}	- 55 to + 150				℃

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

Parameter	Test Conditions	Symbol	Value	Unit
Minimum Breakdown voltage	T_A=25℃,I_R=1mA	V_{BR}	45	V
Maximum instantaneous forward voltage	I_F=3A, T_A=25℃	V_F	0.51	
	I_F=3A, T_A=125℃		0.45	
Maximum DC reverse current at rated DC blocking voltage	T_A=25℃	I_R	50	uA
	T_A=125℃		10	mA
Typical junction capacitance	4.0 V, 1 MHz	C_J	229	pF
Typical thermal resistance	juntion to ambient	$R_{\theta JA}$ 1)	60	℃/W
	juntion to lead	$R_{\theta JL}$ 1)	6	
	juntion to case	$R_{\theta JC}$ 2)	28	

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

Typical Electrical Characteristic Curves

(T_A = 25°C unless otherwise noted)

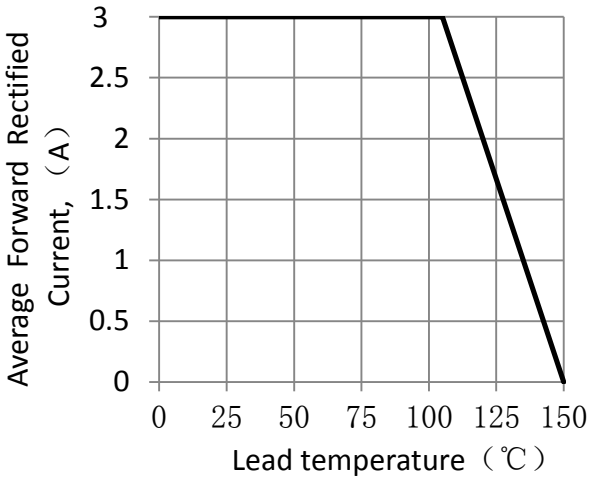


Figure 1.Forward Current Derating Curve

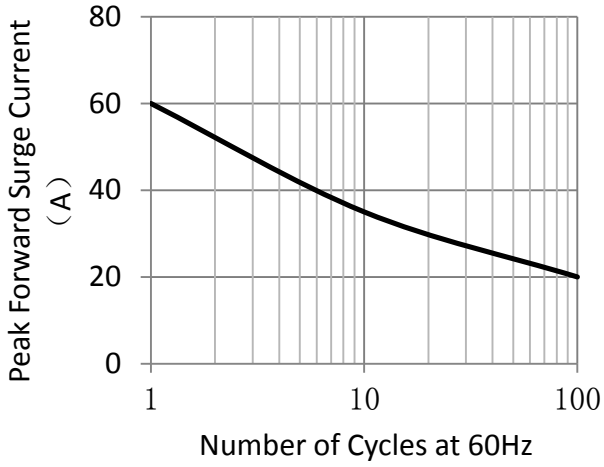


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

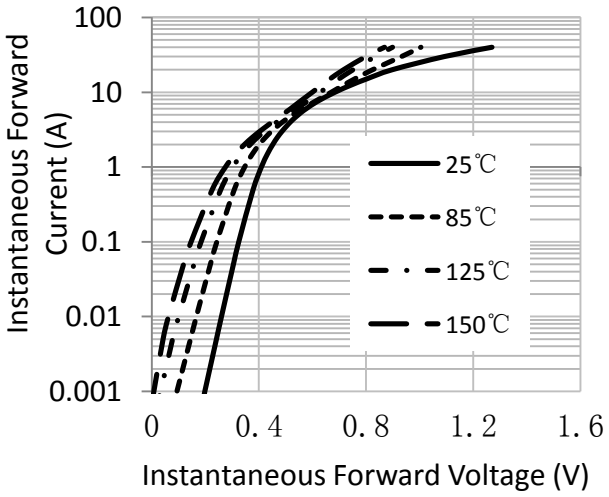


Figure 3. Typical Instantaneous Forward Characteristics

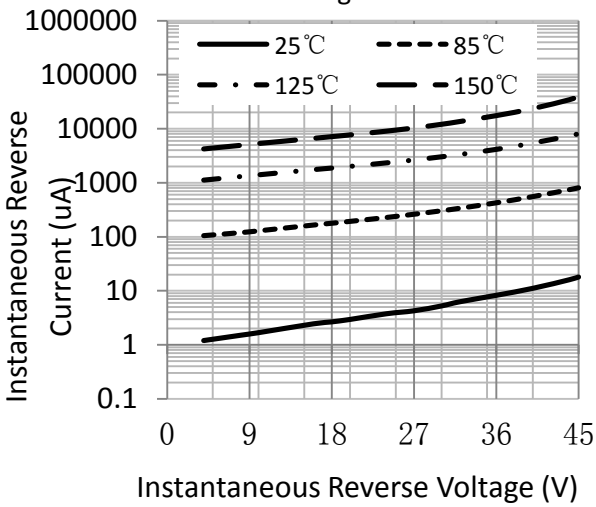


Figure 4. Typical Reverse Characteristics

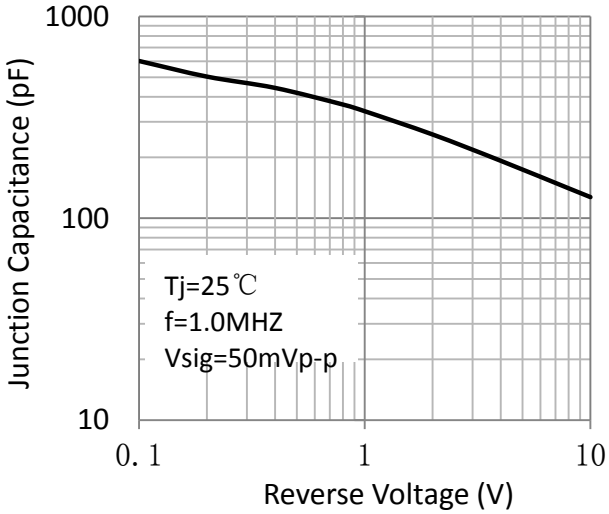


Figure 5. Typical Junction Capacitance

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Package Outline Dimensions

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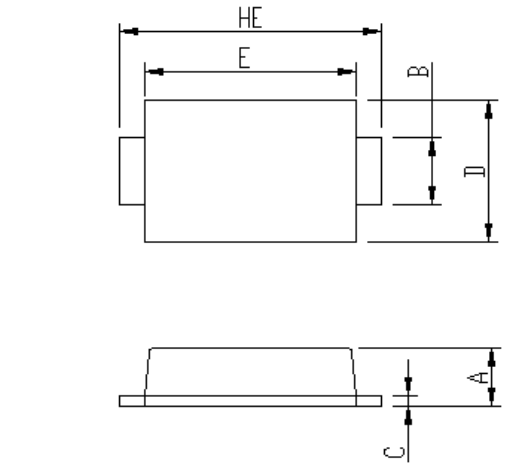
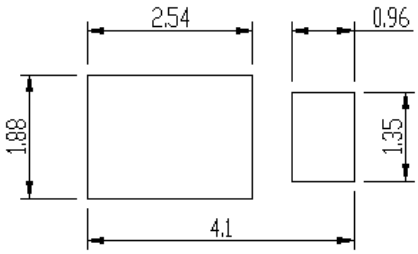


Package	iSGA	
Unit:mm	MIN	MAX
A	0.75	0.90
B	0.85	1.05
B1	0.85	1.05
C	0.1	0.25
D	1.9	2.1
E	2.9	3.1
L1	2.0	2.45
L2	0.4	0.85
L3	1.3	1.7
HE	3.5	3.9

Soldering footprint



Packing Information

Packing Quantities

Reel size	Quantity/reel	Quantity/inner Box	Quantity/Carton
7"	3K	30K	120K
13"	10K	20K	180K

Tape & Reel Specification