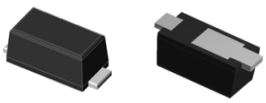
GOOD-ARK SEMICONDUCTOR

GSPS17 thru GSPS1100

Surface Mount Schottky Rectifier
Reverse Voltage 70-100V Forward Current 1.0A

Features

- Super Low VF Schottky barrier diodes
- 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	GSPS17	GSPS18	GSPS19	GSPS1100	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	70	80	90	100	V
Maximum RMS Voltage	V_{RMS}	49	56	63	70	V
Maximum DC Blocking Voltage	V_{DC}	70	80	90	100	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0				A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	30				A
Rating For Fusing (t＜8.3ms)	I^2t	3.8				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}	100	V
Maximum Instantaneous Forward Voltage	I_F=1A T_A=25℃	V_F	0.80	V
	I_F=1A T_A=125℃		0.65	
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A=25℃	I_R	1.0	uA
	T_A=125℃		150	
Typical Junction Capacitance	4.0V, 1 MHz	C_J	28	pF
Typical Thermal Resistance	Junction to Ambient	$R_{\theta JA}$[1]	65	℃/W
	Junction to Lead	$R_{\theta JL}$[1]	9	
	Junction 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

Typical Electrical and Thermal Characteristic Curves

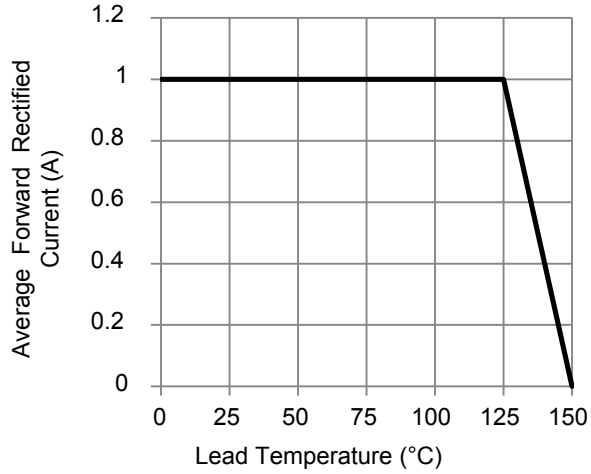


Figure 1.Forward Current Derating Curve

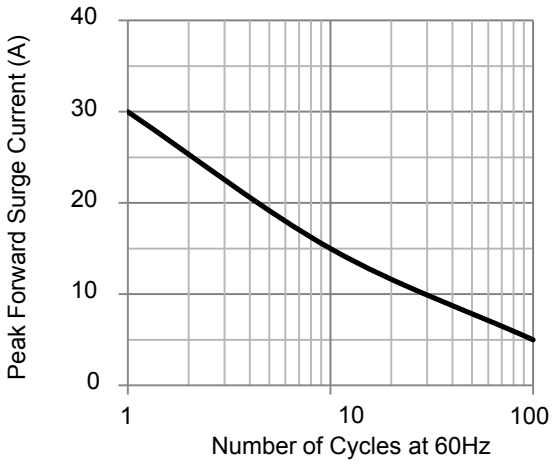


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

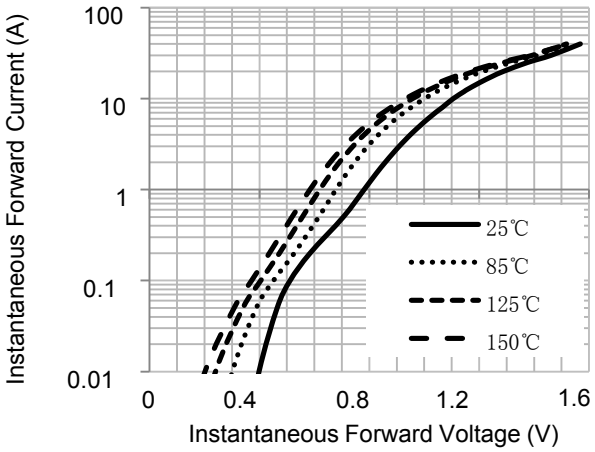


Figure 3. Typical Instantaneous Forward Characteristics

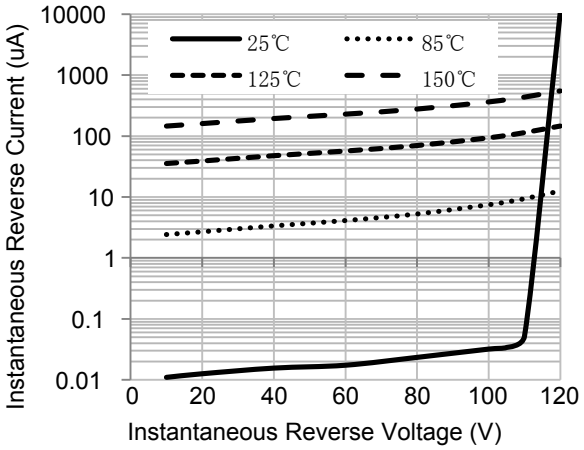


Figure 4. Typical Reverse Characteristics

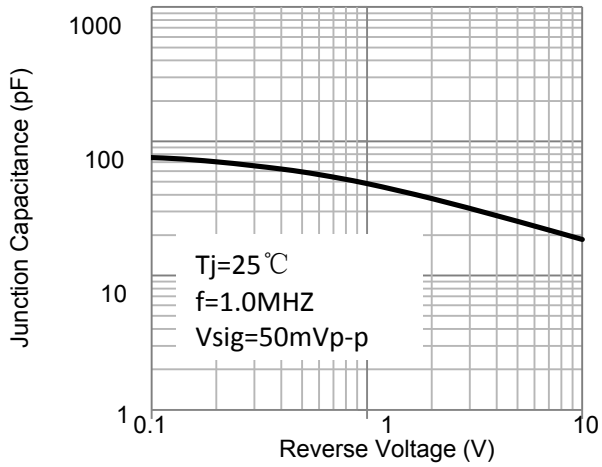


Figure 5. Typical Junction Capacitance

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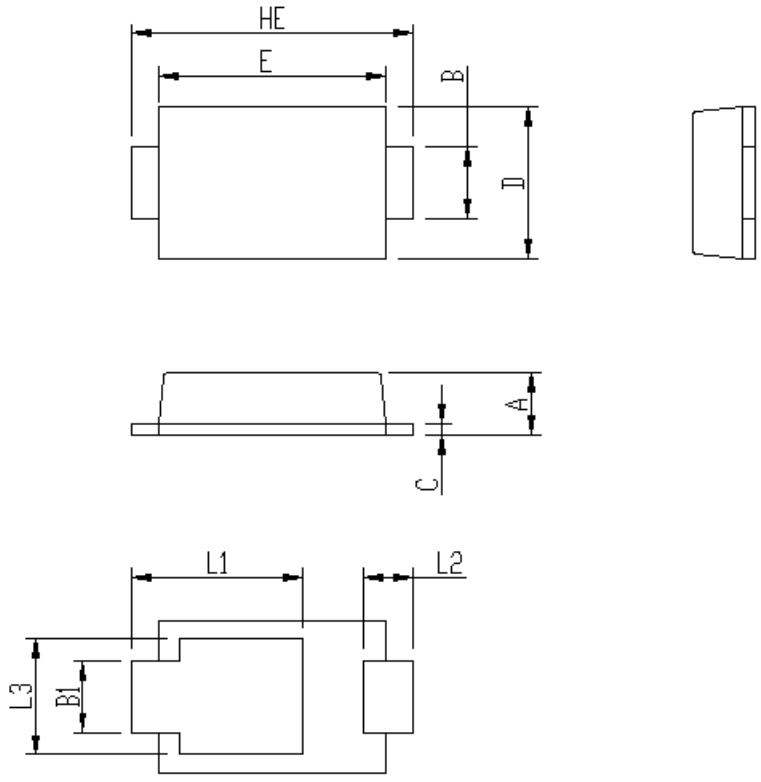
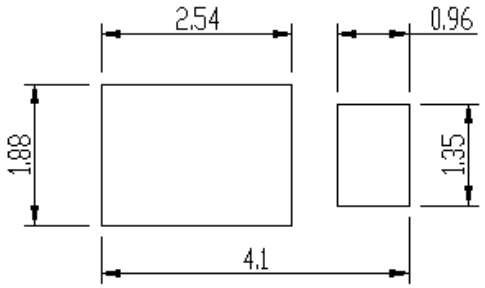
Package Outline Dimensions iSGA (SOD-123HS)

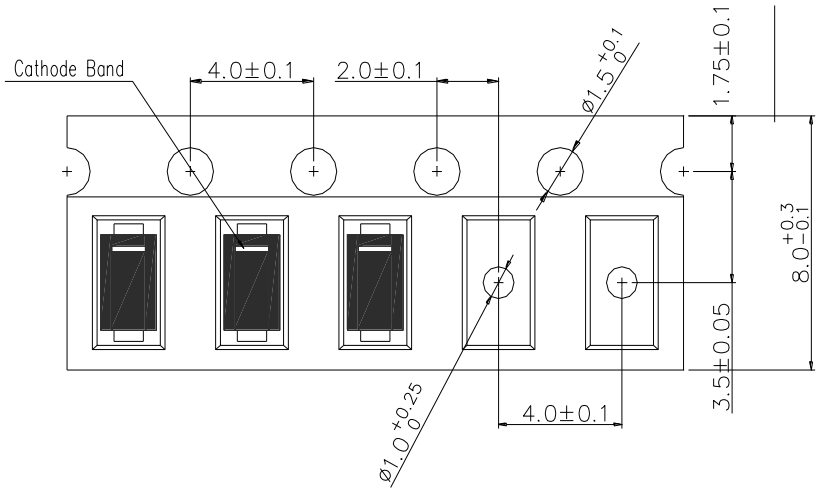


Package	iSGA	
Unit:mm	MIN	MAX
A	0.75	0.90
B	0.85	1.05
B1	0.85	1.05
C	0.1	0.25
D	1.9	2.1
E	2.9	3.1
L1	2.0	2.45
L2	0.4	0.85
L3	1.3	1.7
HE	3.5	3.9

Soldering footprint Unit: mm



Tape & Reel Specification



Unit: mm

Ordering Information

Device	Package	Marking	Quantity	HSF Status
GSPS17	SOD-123HS	PS17	3,000 pcs/Reel	RoHS Compliant
GSPS18	SOD-123HS	PS18	3,000 pcs/Reel	RoHS Compliant
GSPS19	SOD-123HS	PS19	3,000 pcs/Reel	RoHS Compliant
GSPS1100	SOD-123HS	PS1100	3,000 pcs/Reel	RoHS Compliant