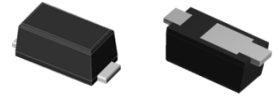


## Features

- Heatsink structure
- Low profile, typical thickness 0.8mm
- Low leakage current
- Super low forward voltage
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds



Package: iSGA  
 (SOD-123HS)



## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	30	V
Maximum RMS Voltage	V <sub>RMS</sub>	21	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	30	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	1	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load	I <sub>FSM</sub>	40	A
Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	6.67	A <sup>2</sup> sec
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

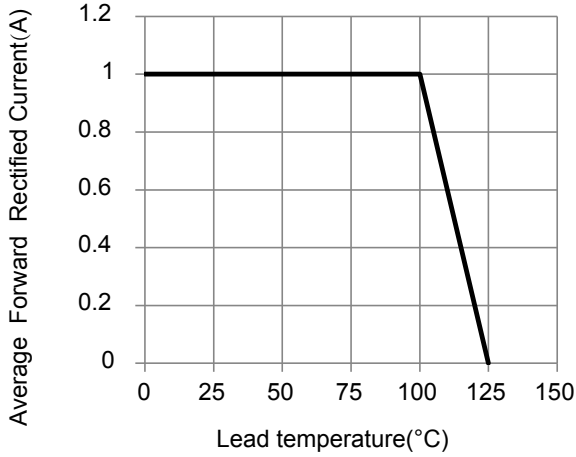
## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	Typ.	Max	Unit
Instantaneous Forward Voltage	0.5A, T <sub>A</sub> =25°C	V <sub>F</sub>	0.35	-	V
	1A, T <sub>A</sub> =25°C		0.38	0.42	V
	1A, T <sub>A</sub> =125°C		0.27	0.35	V
Reverse Current at Rated DC Blocking Voltage	T <sub>A</sub> =25°C	I <sub>R</sub>	67	200	uA
	T <sub>A</sub> =100°C		5.28	20	mA
Typical Junction Capacitance	4.0V, 1 MHz	C <sub>J</sub>	85	-	pF
Typical Thermal Resistance	Junction to Ambient <sup>1</sup>	R <sub>θJA1</sub>	65	-	°C/W
	Junction to Lead <sup>1</sup>	R <sub>θJL1</sub>	9	-	
	Junction to Case <sup>2</sup>	R <sub>θJC2</sub>	35	-	

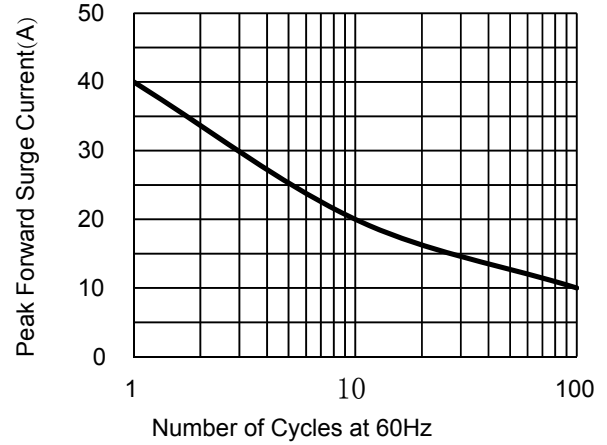
Note:

- 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

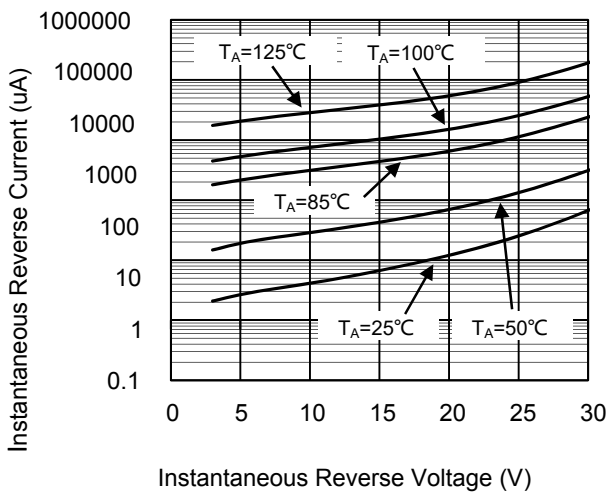
## Typical Electrical Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)



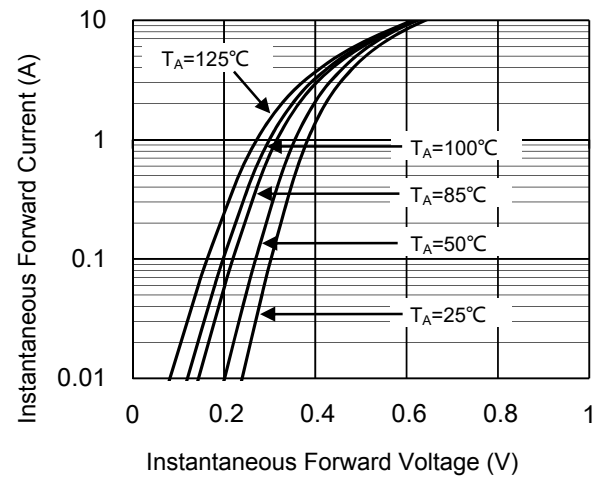
**Figure 1. Forward Current Derating Curve**



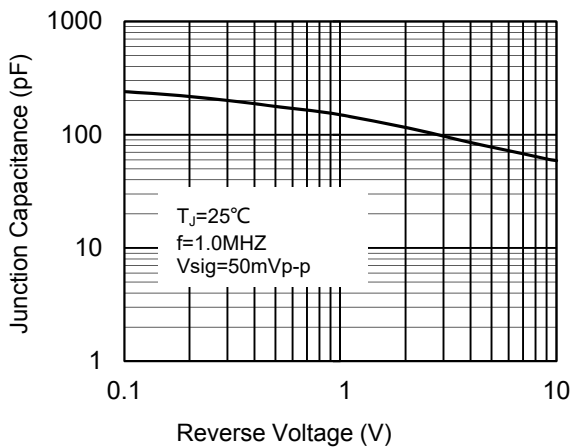
**Figure 2. Maximum Non-Repetitive Peak Forward Surge Current**



**Figure 3. Typical Reverse Characteristics**

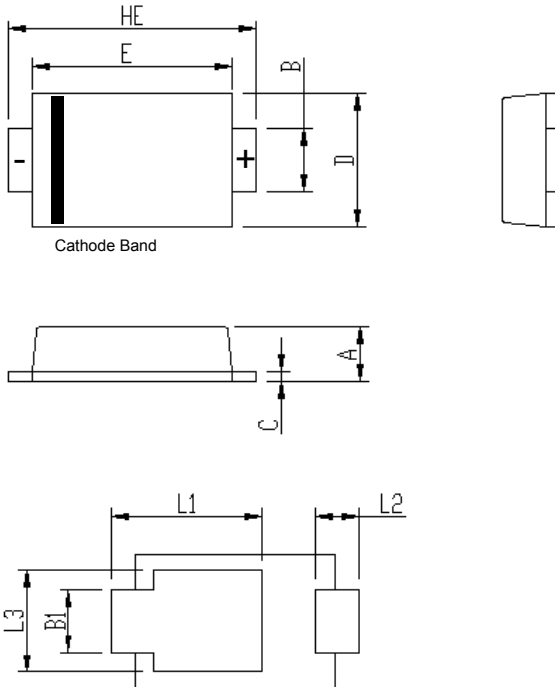


**Figure 4. Typical Instantaneous Forward Characteristics**



**Figure 5. Typical Junction Capacitance**

## 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

## Recommended Pad Layout

