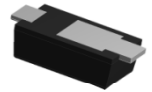
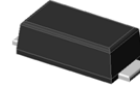


Features

- Low leakage current
- Schottky barrier rectifiers
- Low forward voltage drop
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



SOD-123HS

Applications

For use in low voltage, high frequency inverters, free-wheeling and polarity protection application.

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

Parameter	Symbol	GSPS1B5H	GSPS1CH	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	150	200	V
Maximum RMS Voltage	V _{RMS}	105	140	V
Maximum DC Blocking Voltage	V _{DC}	150	200	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}	40		A
Thermal Resistance, Junction to Ambient ¹	R _{θJA}	65		°C/W
Thermal Resistance, Junction to Case ²	R _{θJC}	35		°C/W
Thermal Resistance, Junction to Lead ¹	R _{θJL}	9		°C/W
Operating Junction Temperature Range	T _J	-55 to +150		°C
Storage Temperature Range	T _{STG}	-55 to +150		°C

Notes:

1. The thermal resistance from junction to ambient or lead, mounted on copper pad area of 5.0 x 5.0mm to each terminal.
2. The thermal resistance from junction to case, mounted on recommended copper pad to each terminal.

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

Parameter	Symbol	Test Conditions	GSPS1B5H	GSPS1CH	Unit
Forward Drop Voltage	V _F	I _F =0.5A	0.80		V
		I _F =1A	0.85		
Reverse Leakage Current @ V _R	I _R	T _J =25°C	2		μA
		T _J =125°C	200		

Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

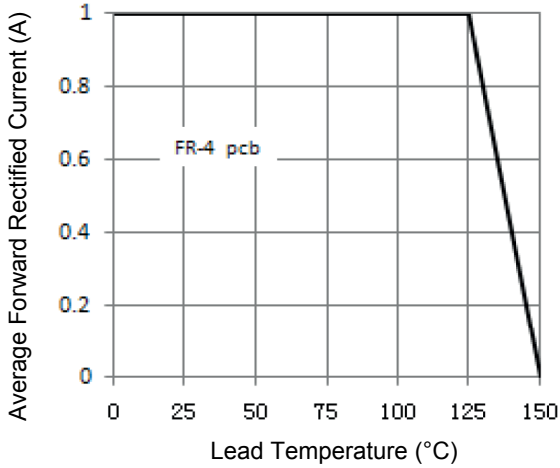


Figure 1. Forward Current Derating Curve

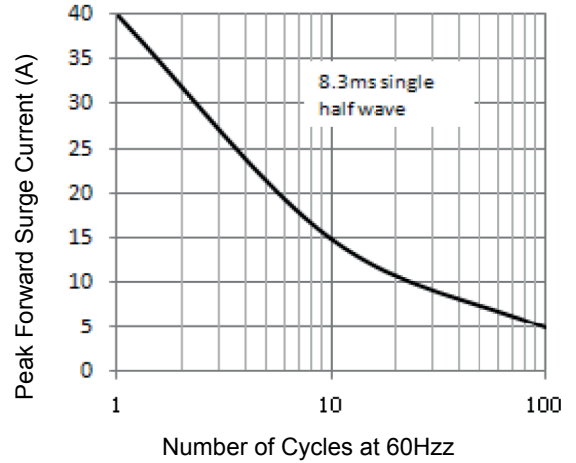


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

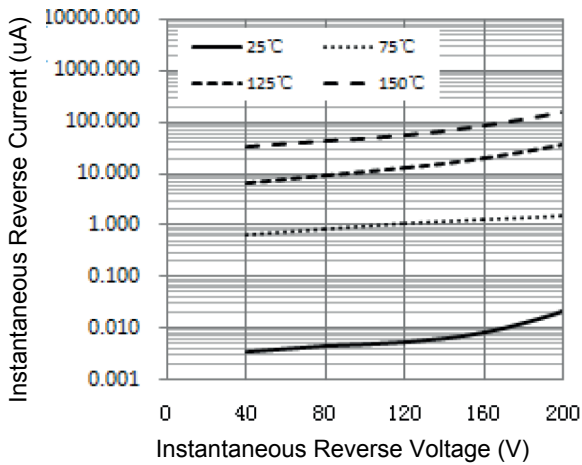


Figure 3. Typical Instantaneous Reverse Characteristics

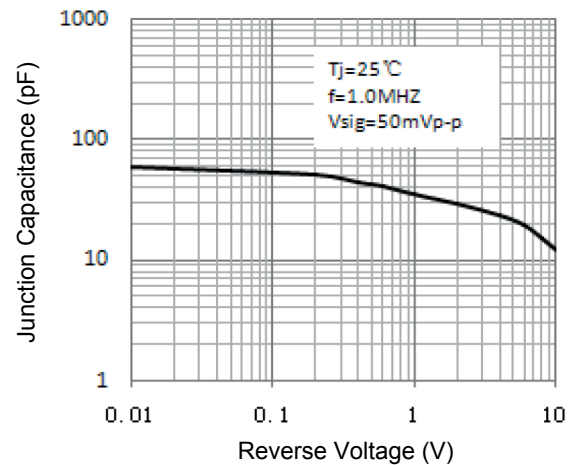


Figure 4. Typical Junction Capacitance

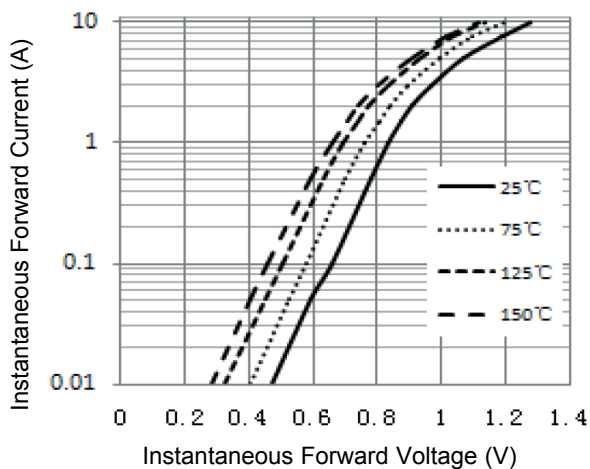
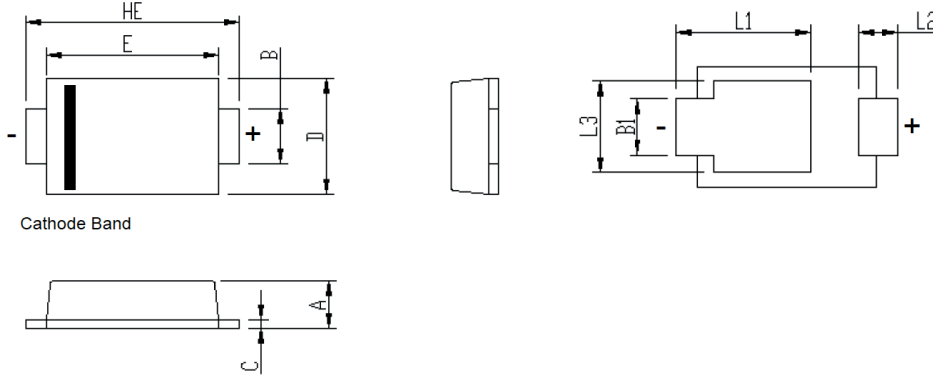


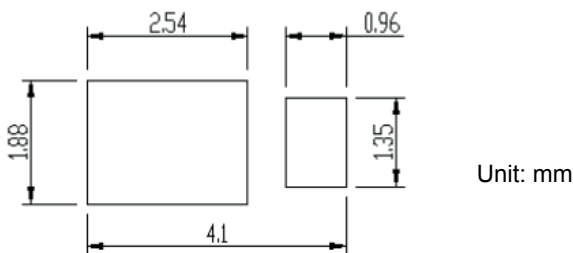
Figure 5. Typical Instantaneous Forward Characteristics

Package Outline Dimensions (SOD-123HS)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.75	0.90	0.030	0.035
B	0.85	1.05	0.033	0.041
B1	0.85	1.05	0.033	0.041
C	0.10	0.25	0.004	0.010
D	1.90	2.10	0.075	0.083
E	2.90	3.10	0.114	0.122
L1	2.00	2.45	0.079	0.096
L2	0.40	0.85	0.016	0.033
L3	1.30	1.70	0.051	0.067
HE	3.50	3.90	0.138	0.154

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GSPS1B5H	SOD-123HS	PS1B5H	Tape & Reel	3,000pcs / Reel
GSPS1CH	SOD-123HS	PS1CH	Tape & Reel	3,000pcs / Reel