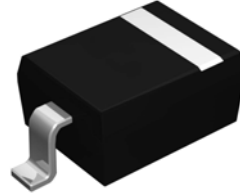


GSBAT42W-GSBAT43W Schottky Diode

Features

- Low forward voltage schottky diode
- RoHS compliant/Green EMC
- SOD-123 thin SMD package
- Matte Tin (Sn) lead finish
- Cathode band/Device marking



SOD-123



Schematic Diagram

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

Parameter	Symbol	Value	Units
Peak Repetitive Peak Reverse Voltage Working	V _{RRM}	30	V
Peak Reverse Voltage	V _{RM}	30	V
DC Blocking Voltage	V _R	30	V
RMS Reverse Voltage	V _{R(RMS)}	21	V
Forward Continuous Current	I _{FM}	200	mA
Repetitive Peak Forward Current @ t<1.0s	I _{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current ¹	I _{FSM}	4.0	A
Power Dissipation	P _D	200	mW
Thermal Resistance Junction to Ambient	R _{θJA}	625	mW/°C
Junction Temperature	T _J	-55 to +125	°C
Storage Temperature	T _{STG}	-55 to +125	°C

Note:

1. 8.3ms single half sine-wave.

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Breakdown Voltage	V _{BR}	I _R =100μA	30	-	-	V
Forward Voltage	Both Types	I _F =200mA	-	-	1.0	V
	GSBAT42W	I _F =10mA	-	-	0.40	
	GSBAT42W	I _F =50mA	-	-	0.65	
	GSBAT43W	I _F =2.0mA	0.26	-	0.33	
	GSBAT43W	I _F =15mA	-	-	0.45	
Reverse Current	I _R	V _R =25V	-	-	0.5	μA
		V _R =25V, T _J =100°C	-	-	100	
Capacitance	C _T	V _R =1V, f=1MHz	-	-	10	pF
Reverse Recovery Time	t _{rr}	I _F =I _R =10mA, I _{rr} =0.1×I _R , R _L =100Ω	-	-	5.0	nS

GSBAT42W-GSBAT43W Schottky Diode

Typical Characteristic Curves

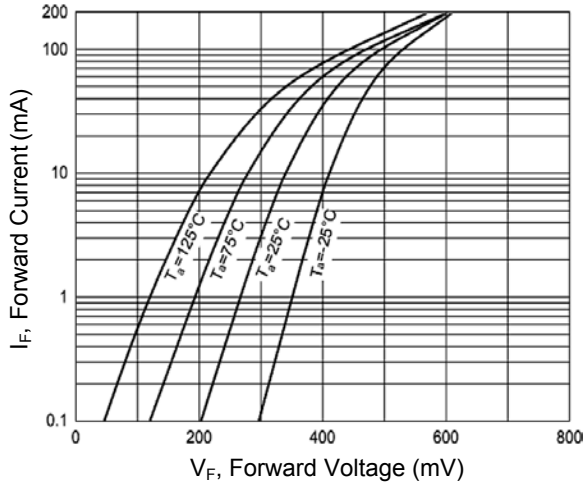


Figure 1. Forward Characteristics

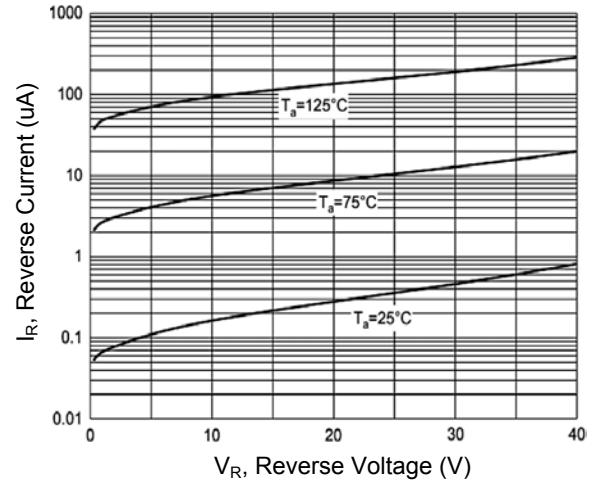


Figure 2. Reverse Characteristics

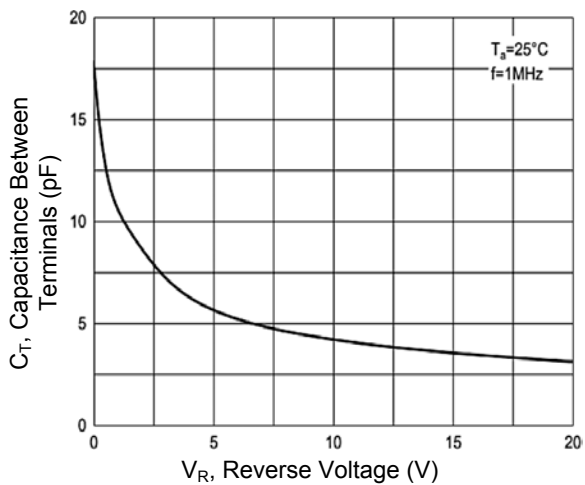


Figure 3. Capacitance Characteristics

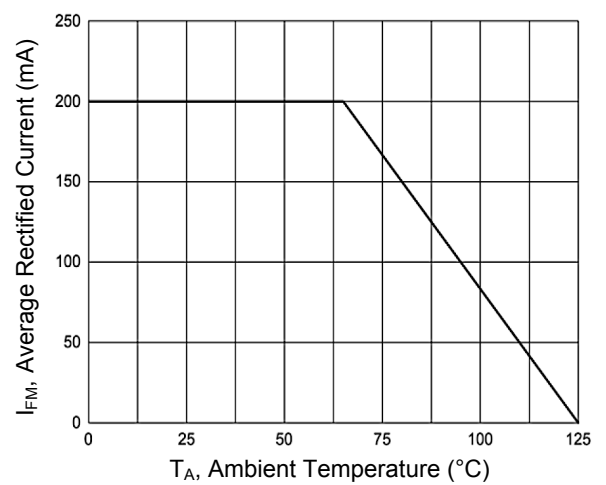
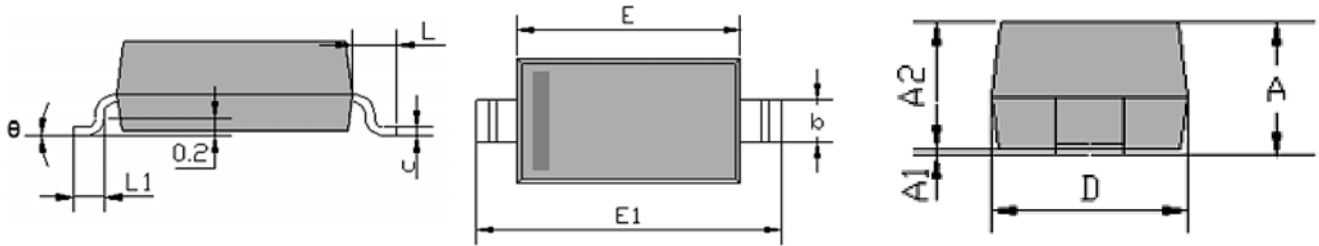


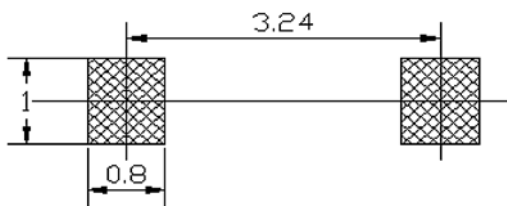
Figure 4. Forward Current Derating Curve

Package Outline Dimensions (SOD-123)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.05	1.25	0.041	0.049
A1	0.00	0.10	0.000	0.004
A2	1.05	1.15	0.041	0.045
b	0.45	0.65	0.018	0.026
c	0.08	0.15	0.003	0.006
D	1.50	1.70	0.059	0.067
E	2.60	2.80	0.102	0.110
E1	3.55	3.85	0.140	0.152
L	0.50 REF		0.020 REF	
L1	0.25	0.45	0.010	0.018
θ	0°	8°	0°	8°

Recommended Pad Layout



Note:

1. Controlling dimension: In millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

Order Information

Device	Package	Marking	Carrier	Quantity
GSBAT42W	SOD-123	S7	Tape & Reel	3,000 Pcs / Reel
GSBAT43W	SOD-123	S8	Tape & Reel	3,000 Pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com