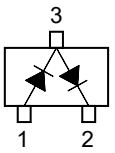
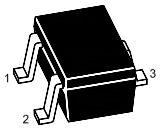
ABAV99W

SEMTECH SEMICONDUCTOR (DONGGUAN) CO., LTD.

Silicon Epitaxial Planar Switching Diode





SOT-323 Plastic Package

1. Anode 2. Cathode 3.Cathode / Anode

Features

- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF), RoHS compliant

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	100	V
Continuous Forward Current Single Diode Load Double Diode Load	I_F	150 130	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current at t = 1 μs at t = 1 ms at t = 1 s	I_{FSM}	4 1 0.5	A
Power Dissipation [1)]	P_D	200	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient [1)]	$R_{\theta JA}$	625	℃/W

[1)] Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at I_R = 10 μA	$V_{BR(R)}$	100	-	V
Forward Voltage at I_F = 1 mA at I_F = 10 mA at I_F = 50 mA at I_F = 150 mA	V_F	 - - - -	 0.715 0.855 1 1.25	V
Reverse Current at V_R = 25 V at V_R = 80 V at V_R = 25 V, T_j = 150 °C at V_R = 80 V, T_j = 150 °C	I_R	 - - - -	 30 0.5 30 50	 nA μA μA μA
Diode Capacitance at V_R = 0, f = 1 MHz	C_d	-	1.5	pF
Reverse Recovery Time at I_F = 10 mA, V_R = 6 V, R_L = 100 Ω, I_{RR} = 0.1 × I_R	t_{rr}	-	4	ns

Electrical Characteristics Curves

Fig. 1 Power Derating Curve

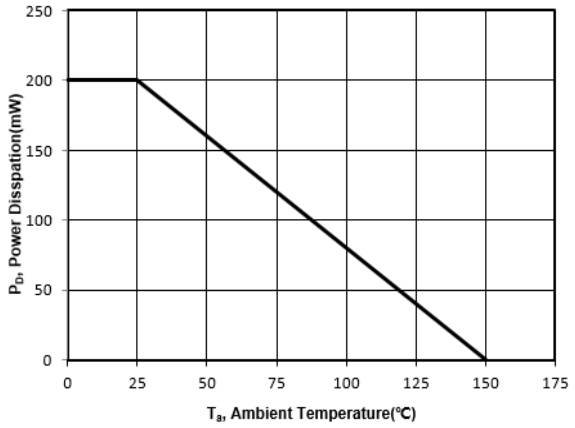


Fig. 2 Capacitance Characteristics

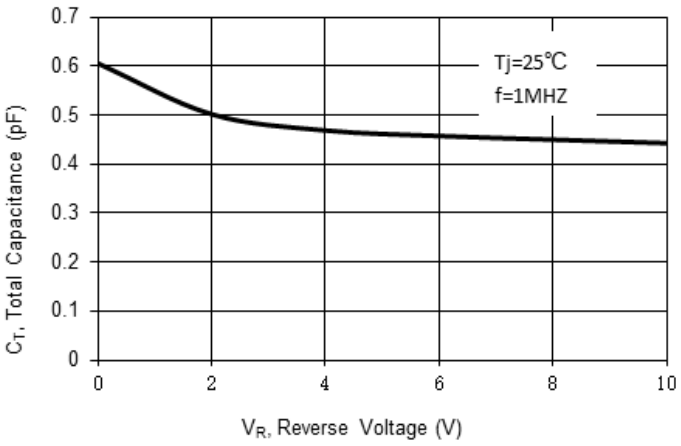


Fig. 3 Reverse Characteristics

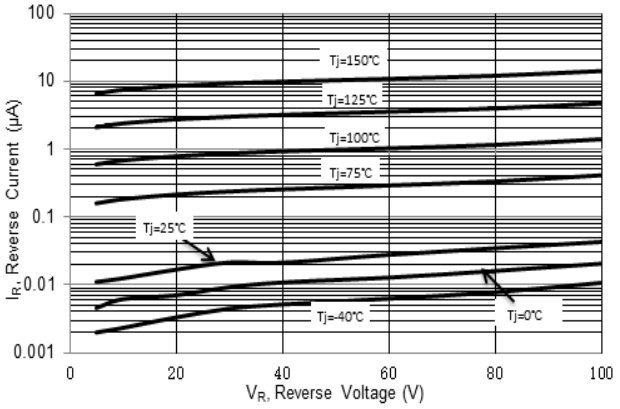
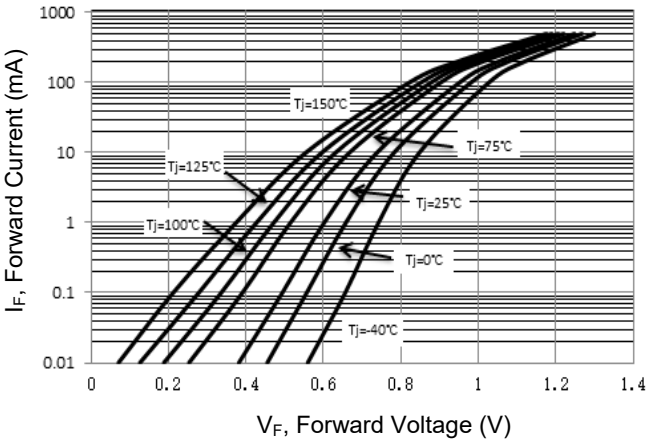
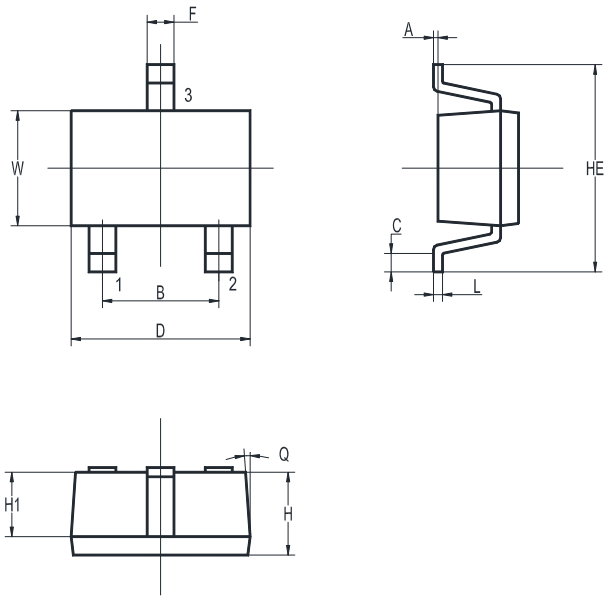


Fig. 4 Forward Characteristics

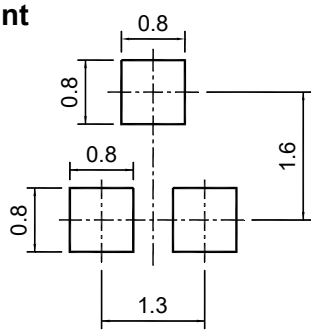


Package Outline Dimensions (Units: mm) SOT-323



UNIT	A	B	C	D	H	H1	HE	F	L	W	Q
mm	0.1 MAX.	1.4 1.2	0.2 MIN.	2.1 1.9	1.0 0.8	0.7 TYP.	2.4 2.0	0.35 0.25	0.15 0.05	1.35 1.15	5° MAX.

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

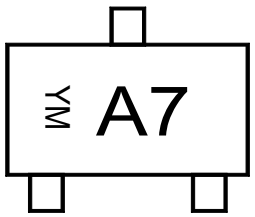
" A7 " = Part No.

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial



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