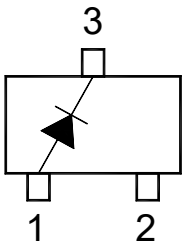
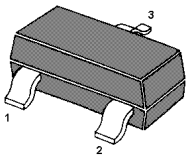
AMMBD914

SEMTECH SEMICONDUCTOR (DONGGUAN) CO., LTD.

Silicon Epitaxial Planar Switching Diode





1. Anode 2. NC 3. Cathode
SOT-23 Plastic Package

Features

- AEC-Q101 Qualified
- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance
- Halogen and Antimony Free(HAF), RoHS compliant

Applications

- Ultra high speed switching application

Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Reverse Voltage		V_R	100	V
Forward Current		I_F	200	mA
Non-repetitive Peak Forward Surge Current	at t = 1 μs at t = 1 s	I_{FSM}	4 1	A
Power Dissipation [1)]		P_D	350	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)]	$R_{\theta JA}$	357	℃/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 = 100 μA	$V_{(BR)R}$	100	-	V
Forward Voltage at I_F = 10 mA	V_F	-	1	V
Reverse Current at V_R = 20 V at V_R = 75 V	I_R	- -	25 5	nA μA
Total Capacitance at V_R = 0 , f = 1 MHz	C_T	-	4	pF
Reverse Recovery Time at I_F = 10 mA ,V_R = 6 V, I_{rr} = 0.1 X I_R , R_L = 100 Ω	t_{rr}	-	4	ns

Electrical Characteristics Curves

Fig 1. Power Derating Curve

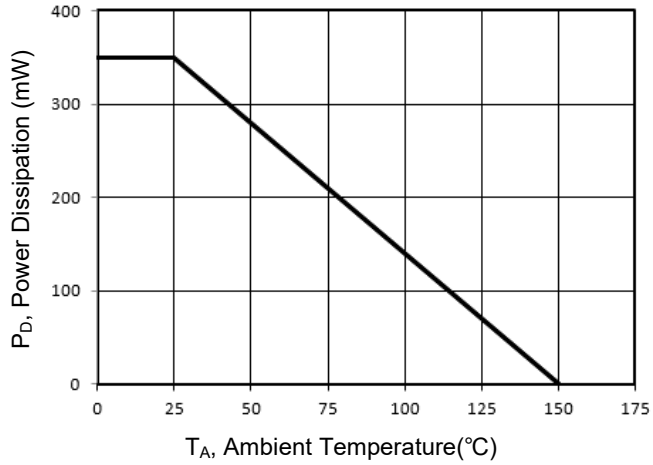


Fig 2. Capacitance Characteristics

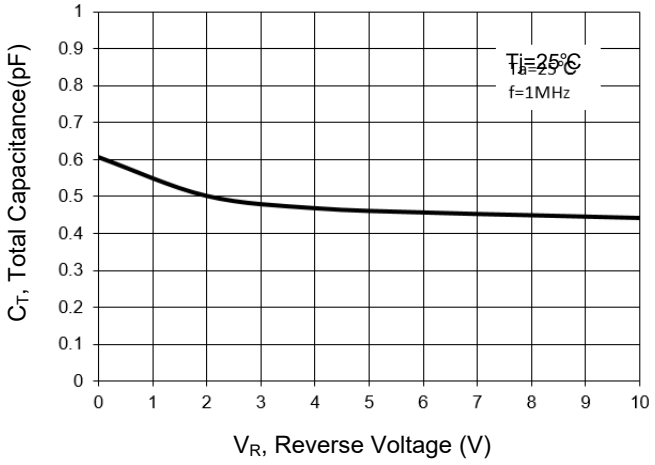


Fig 3. Reverse Characteristics

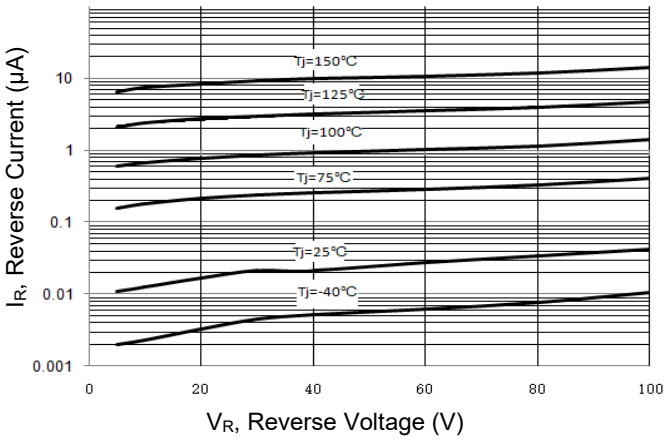
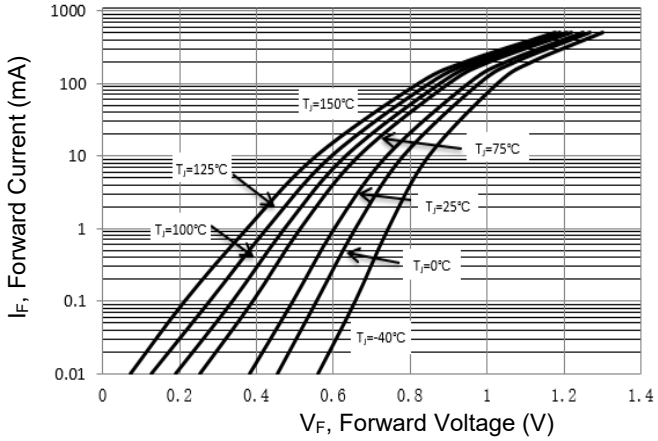
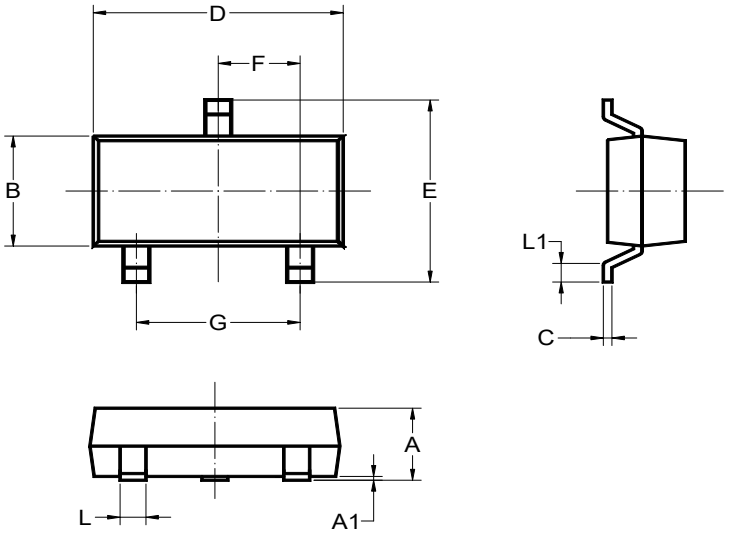


Fig 4. Forward Characteristics

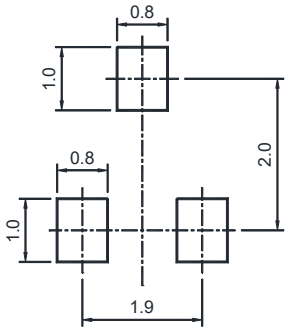


Package Outline (Dimensions in mm) SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20 0.89	0.100 0.013	1.40 1.20	0.19 0.08	3.04 2.80	2.6 2.2	1.02 0.89	2.04 1.78	0.51 0.37	0.2 MIN

Recommended Soldering Footprint

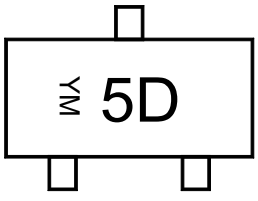


Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" 5D " = Part No.
" YM " = Date Code Marking
" Y " = Year
" M " = Month
Font type: Arial



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