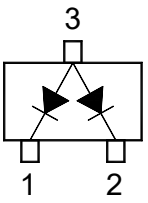
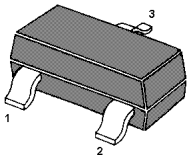
ABAW156

SEMTECH SEMICONDUCTOR (DONGGUAN) CO., LTD.

Silicon Epitaxial Planar Switching Diode

Low leakage switching double diode





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

Feature

- AEC-Q101 Qualified
- Very low leakage current
- Medium speed switching times
- Series pair configuration
- Halogen and Antimony Free(HAF), RoHS compliant

Applications

- For low leakage current applications

Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Peak Repetitive Reverse Voltage		V_{RRM}	85	V
Continuous Reverse Voltage		V_R	85	V
Continuous Forward Current	Single Diode Double Diode	I_F	160 140	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	250	mW
Operating Junction Temperature Range		T_j	- 55 to + 150	℃
Storage Temperature Range		T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient [1)]	$R_{\theta JA}$	500	℃/W

[1)] Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Characteristics (T_a = 25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at I_R = 100 μA	$V_{(BR)R}$	85	-	-	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	 - - - -	 - - - -	 0.9 1 1.1 1.25	V
Reverse Current at V_R = 75 V at V_R = 75 V, T_j = 150℃	 I_R I_R	 - -	 - -	 5 80	nA
Total Capacitance at V_R = 0, f = 1 MHz	C_T	-	2	-	pF
Reverse Recovery Time at I_F = I_R = 10 mA, I_{rr} = 0.1 X I_R, R_L = 100 Ω	t_{rr}	-	-	3	μs

Electrical Characteristics Curves

Fig 1. Power Derating Curve

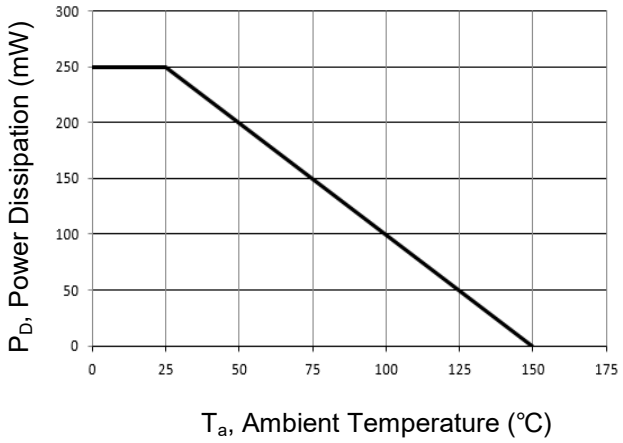


Fig 2. Capacitance Characteristics Curve

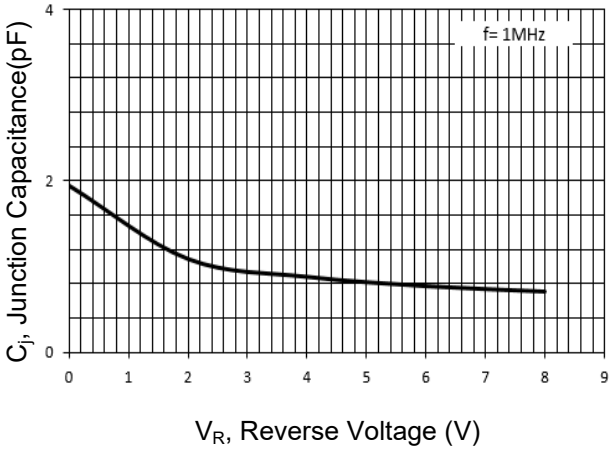


Fig 3. Reverse Characteristics Curve

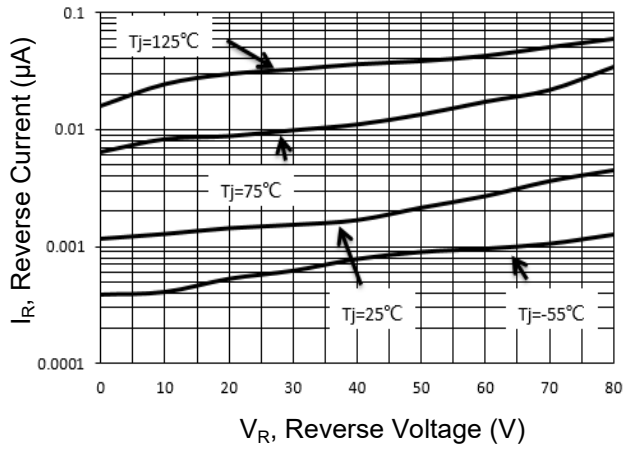
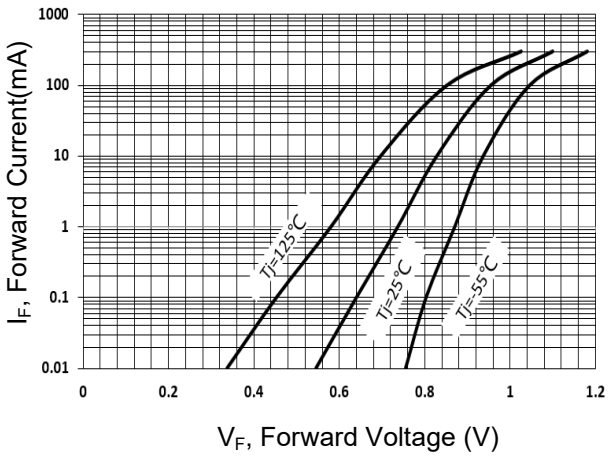
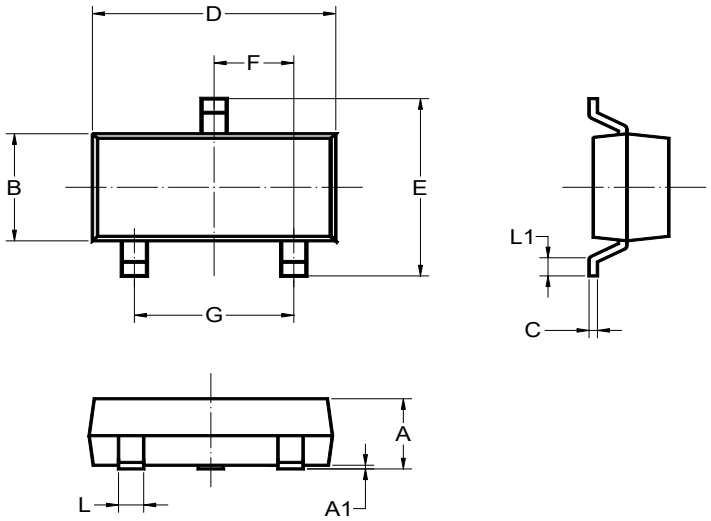


Fig 4. Forward Characteristics Curve

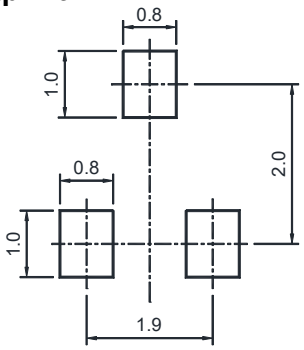


Package Outline (Dimensions in mm) SOT-23



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

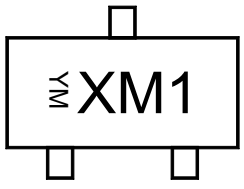


Packing information

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

" XM1 " = Part No.
" YM " = Date Code Marking
" Y " = Year
" M " = Month
Font type: Arial



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