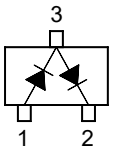
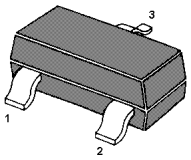
Silicon Epitaxial Planar Switching Diode

Fast switching in thick and thin-film circuits diode





SOT-23 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
Continuous Reverse Voltage	V_R	100	V
Continuous Forward Current (Double Diode Loaded)	I_F	125	mA
Continuous Forward Current (Single Diode Loaded)	I_F	215	mA
Repetitive Peak Forward Current	I_{FRM}	450	mA
Non-repetitive Peak Forward Surge Current at t = 1 s at t = 1 ms at t = 1 µs	I_{FSM}	0.5 1 4.5	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 - Junction to Ambient [1)]	$R_{\theta JA}$	357	℃/W

[1)] Device mounted on FR-4 substrate PC board, 2oz copper, 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 = 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 = 75 V at V_R = 25 V, T_j = 150℃ at V_R = 75 V, T_j = 150℃	I_R	 - - - -	 30 1 30 50	 nA μA μA μA
Total Capacitance at V_R = 0 , f = 1 MHz	C_T	-	1.5	pF
Reverse Recovery Time at I_F = 10 mA, I_{rr} = 0.1 X I_R , V_R = 6 V, R_L = 100 Ω	t_{rr}	-	4	ns

Electrical Characteristics Curves

Fig 1. Power Derating Curve

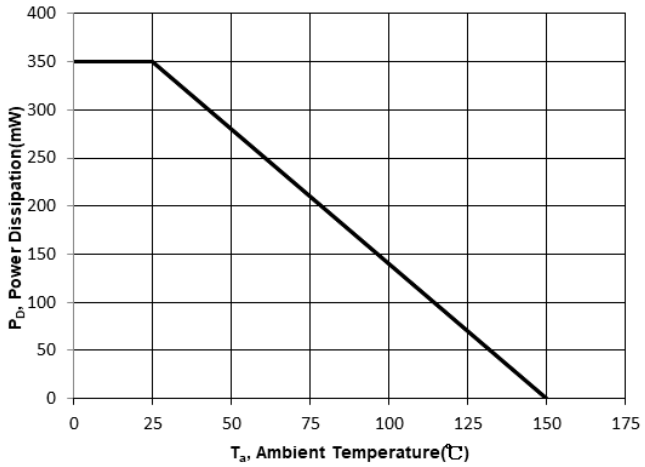


Fig 2. Forward Characteristics

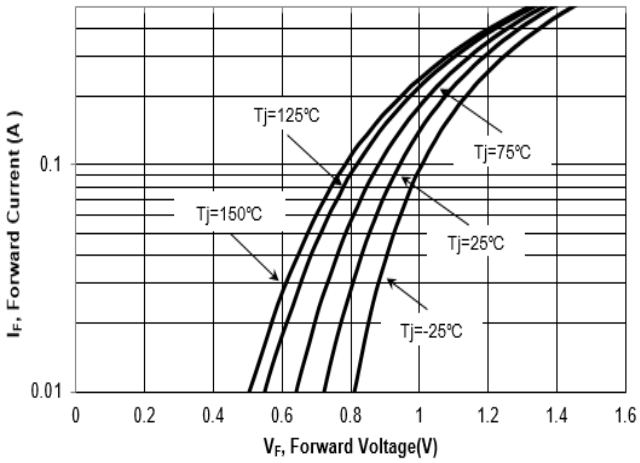


Fig 3. Reverse Current vs. Reverse Voltage

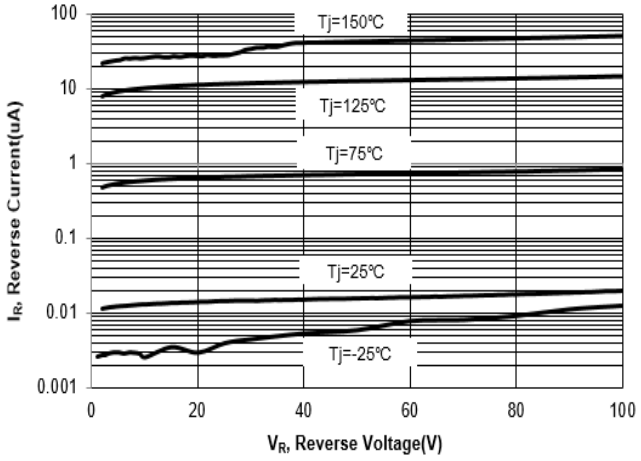
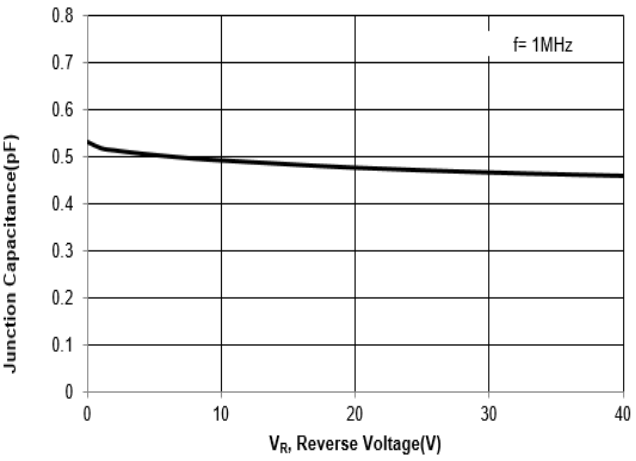
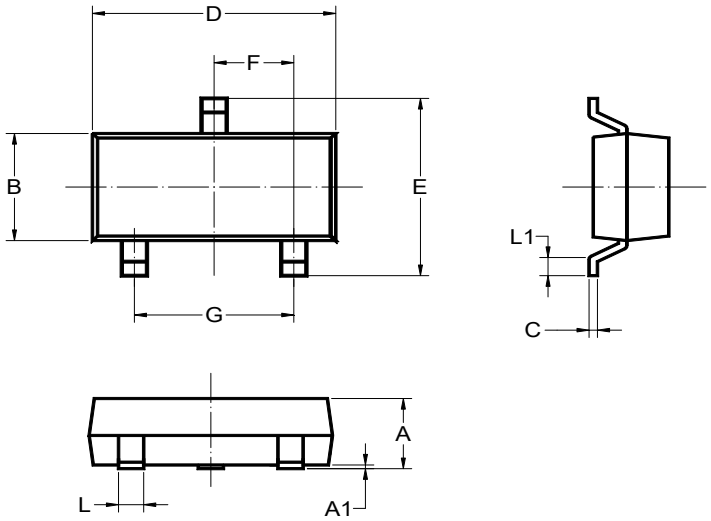


Fig 4. Total Capacitance vs. Reverse Voltage

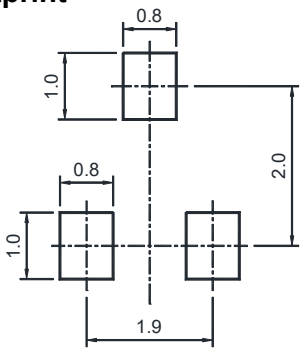


Package Outline (Dimensions in mm) SOT-23



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

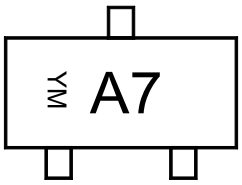


Packing information

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

" A7 " = Part No.
" YM " = Date Code Marking
" Y " = Year
" M " = Month
Font type: Arial



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