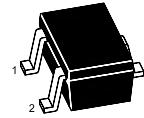
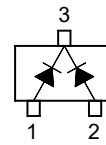


1SS301CCW

Silicon Epitaxial Planar Switching Diode

Applications

- Ultra high speed switching



SOT-323 Plastic Package
1. Anode 2. Anode 3. Cathode

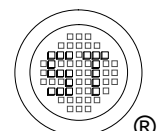
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Maximum (Peak) Reverse Voltage	V_{RM}	85	V
Reverse Voltage	V_R	80	V
Average Rectified Forward Current	$I_{F(AV)}$	100	mA
Maximum (Peak) Forward Current	I_{FM}	300	mA
Non-repetitive Peak Forward Surge Current ($t_p = 10$ ms)	I_{FSM}	2	A
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	625	$^\circ\text{C/W}$

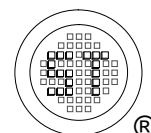
¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	80	-	V
Forward Voltage at $I_F = 100 \text{mA}$	V_F	-	1.2	V
Reverse Current at $V_R = 30 \text{V}$ at $V_R = 80 \text{V}$	I_R	- -	0.1 0.5	μA
Total Capacitance at $V_R = 0 \text{V}$, $f = 1 \text{MHz}$	C_T	-	3	pF
Reverse Recovery Time at $I_F = 10 \text{mA}$, $I_{rr} = 0.1 \times I_R$, $V_R = 6 \text{V}$, $R_L = 100 \Omega$	t_{rr}	-	4	ns



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Electrical Characteristics Curves

Fig 1. Power Derating Curve

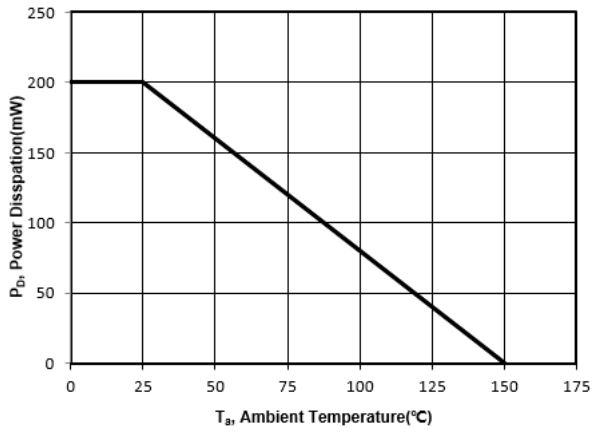


Fig 2. Total Capacitance vs. Reverse Voltage

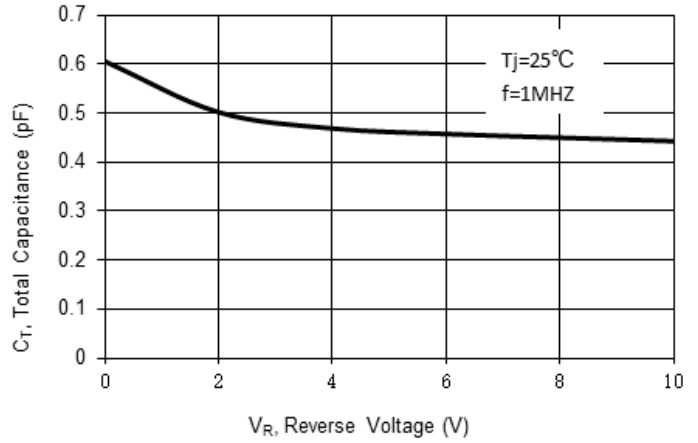


Fig 3. Reverse Current vs. Reverse Voltage

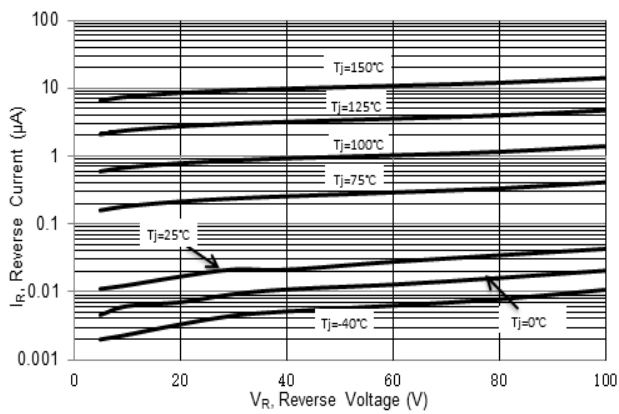
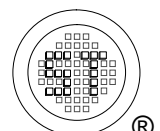
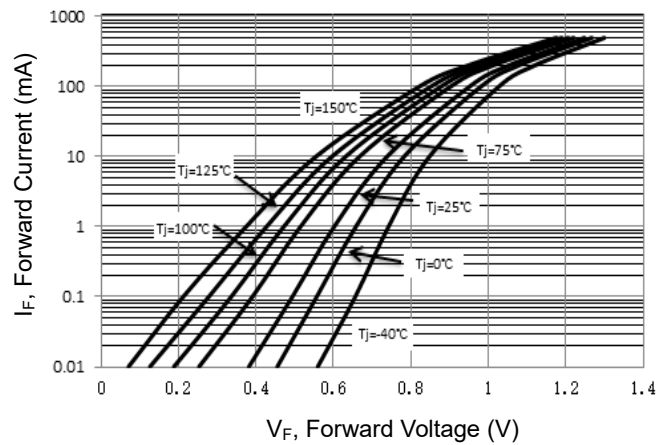


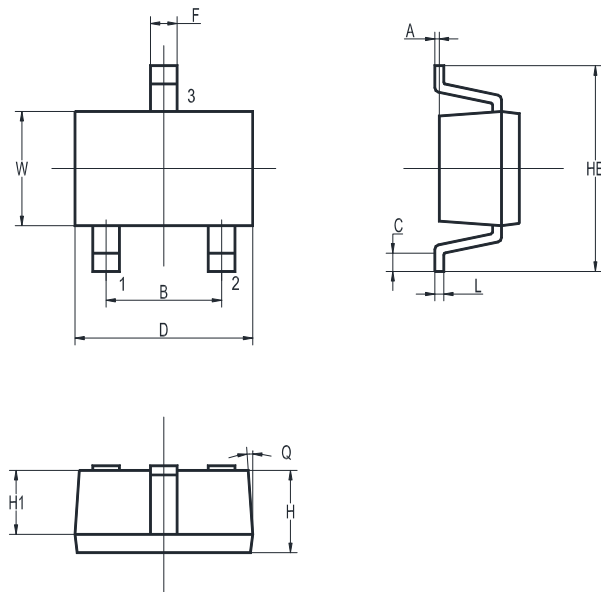
Fig 4. Forward Characteristics



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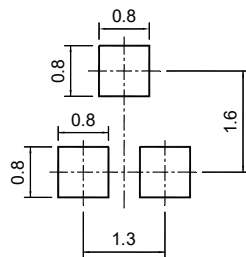
Package Outline Dimensions (Units: mm)

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

"PH" = Part No.

"YM" = Date Code Marking

"Y" = Year

"M" = Month

Font type: Arial

