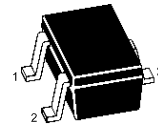
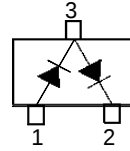


Silicon Epitaxial Planar Switching Diode



SOT-323 Plastic Package

Marking Code: **A7**

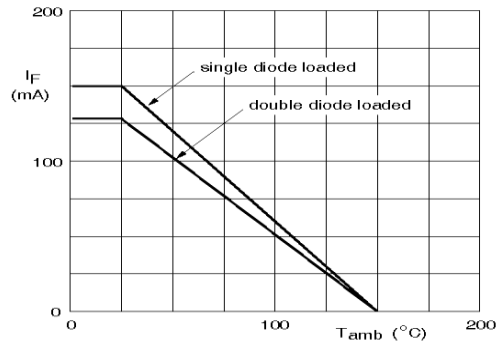
Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Reverse Voltage	V_R	75	V
Continuous Forward Current	I_F	150	mA
Single Diode Load		130	
Double Diode Load			
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	4	A
at $t = 1\text{ }\mu\text{s}$		1	
at $t = 1\text{ ms}$		0.5	
at $t = 1\text{ s}$			
Total Power Dissipation	P_{tot}	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C/W}$
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^{\circ}\text{C}$

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

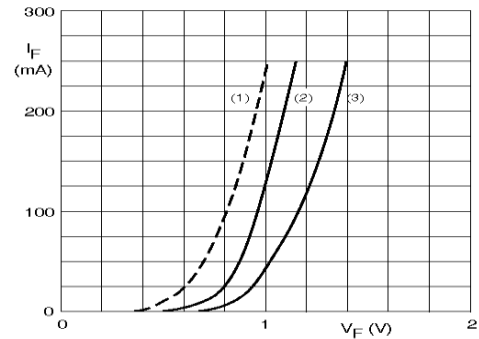
Parameter	Symbol	Max.	Unit
Forward Voltage	V_F		V
at $I_F = 1\text{ mA}$		0.715	
at $I_F = 10\text{ mA}$		0.855	
at $I_F = 50\text{ mA}$		1	
at $I_F = 150\text{ mA}$		1.25	
Reverse Current	I_R		nA μA μA μA
at $V_R = 25\text{ V}$		30	
at $V_R = 75\text{ V}$		1	
at $V_R = 25\text{ V}$, $T_j = 150\text{ }^{\circ}\text{C}$		30	
at $V_R = 75\text{ V}$, $T_j = 150\text{ }^{\circ}\text{C}$		50	
Diode Capacitance	C_d		pF
at $V_R = 0$, $f = 1\text{ MHz}$		1.5	
Reverse Recovery Time	t_{rr}		ns
at $I_F = I_R = 10\text{ mA}$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\text{ }\Omega$		4	

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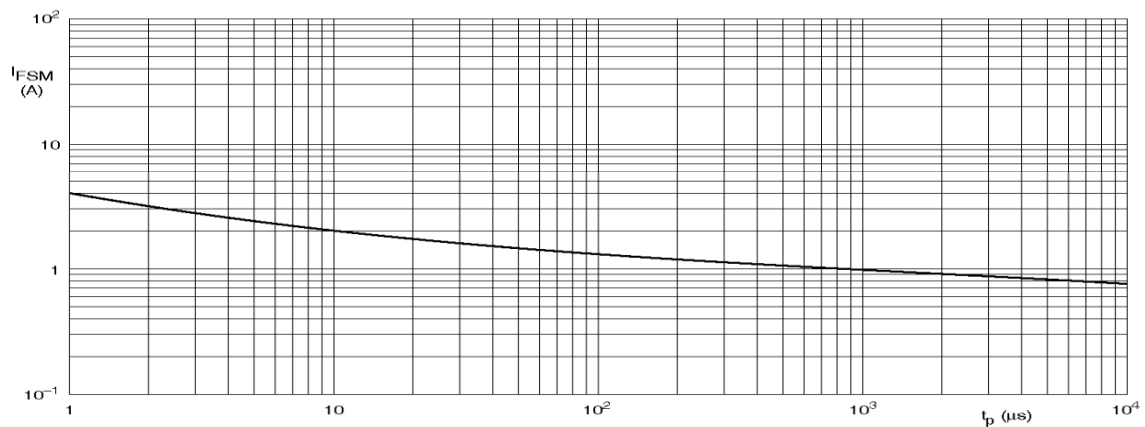
Device mounted on an FR4 printed-circuit board.

Maximum permissible continuous forward current as a function of ambient temperature.



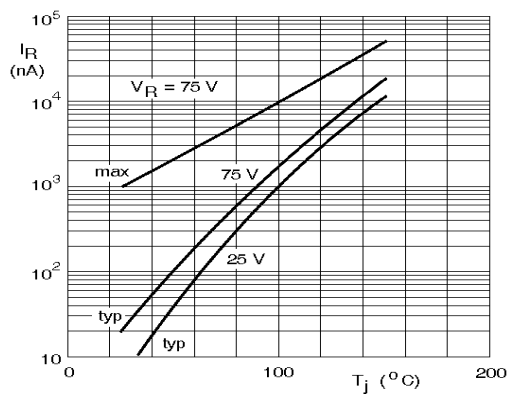
- (1) $T_J = 150^\circ\text{C}$; typical values.
- (2) $T_J = 25^\circ\text{C}$; typical values.
- (3) $T_J = 25^\circ\text{C}$; maximum values.

Forward current as a function of forward voltage.

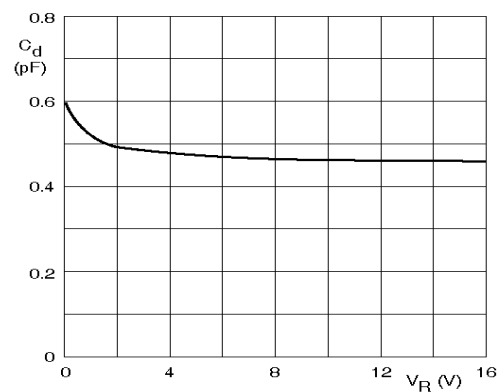


Based on square wave currents.
 $T_J = 25^\circ\text{C}$ prior to surge.

Maximum permissible non-repetitive peak forward current as a function of pulse duration.



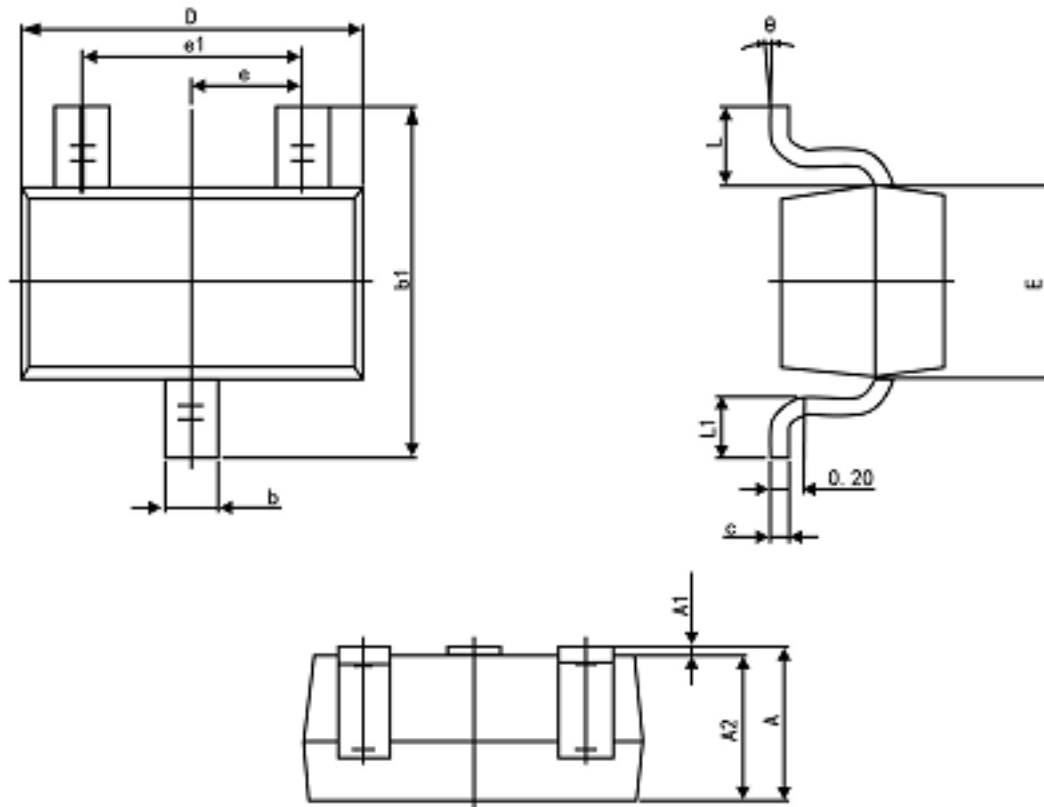
Reverse current as a function of junction temperature.



$f = 1\text{ MHz}$; $T_J = 25^\circ\text{C}$.

Diode capacitance as a function of reverse voltage; typical values.

SOT-323 Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.200	0.400
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.460
θ	0°	8°