

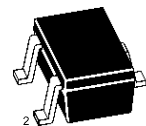
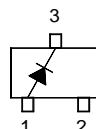
Silicon Epitaxial Planar Switching Diode

Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance

Applications

- Ultra high speed switching application



Marking Code: **A6**
SOT-323 Plastic Package

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Continuous Reverse Voltage	V_R	75	V
Continuous Forward Current	I_F	155	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	4.5 1 0.5	A
	$t = 1\text{ }\mu\text{s}$ $t = 1\text{ ms}$ $t = 1\text{ s}$		
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^{\circ}\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage				
at $I_F = 1\text{ mA}$	V_F	-	715	mV
at $I_F = 10\text{ mA}$	V_F	-	855	mV
at $I_F = 50\text{ mA}$	V_F	-	1	V
at $I_F = 150\text{ mA}$	V_F	-	1.25	V
Reverse Current				
at $V_R = 25\text{ V}$	I_R		30	nA
at $V_R = 75\text{ V}$	I_R	-	1	μA
at $V_R = 25\text{ V}$, $T_J = 150\text{ }^{\circ}\text{C}$	I_R	-	30	μA
at $V_R = 75\text{ V}$, $T_J = 150\text{ }^{\circ}\text{C}$	I_R	-	50	μA
Reverse Breakdown Voltage	$V_{(BR)R}$	75	-	V
at $I_R = 100\text{ }\mu\text{A}$				
Diode Capacitance	C_d	-	1.5	pF
at $V_R = 0$, $f = 1\text{ MHz}$				
Reverse Recovery Time	t_{rr}	-	4	ns
at $I_F = I_R = 10\text{ mA}$, $R_L = 50\text{ }\Omega$				

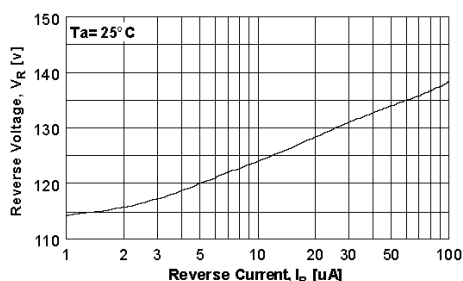


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100 μ A

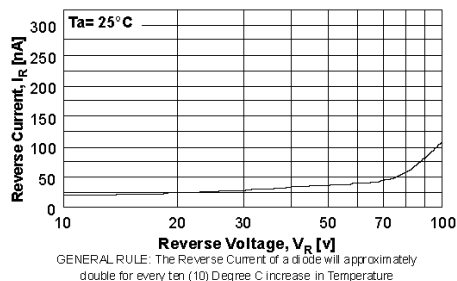


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100 V

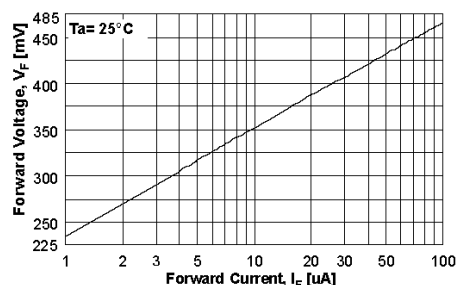


Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 μ A

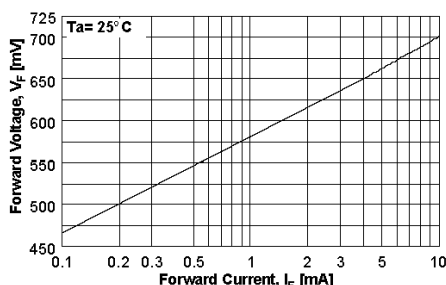


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10 mA

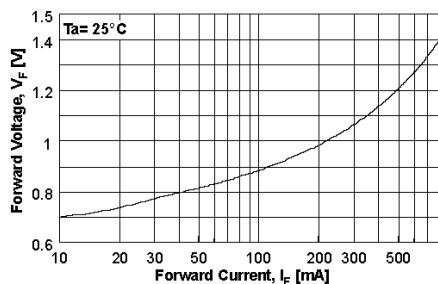


Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800 mA

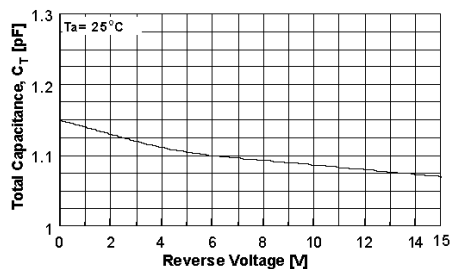
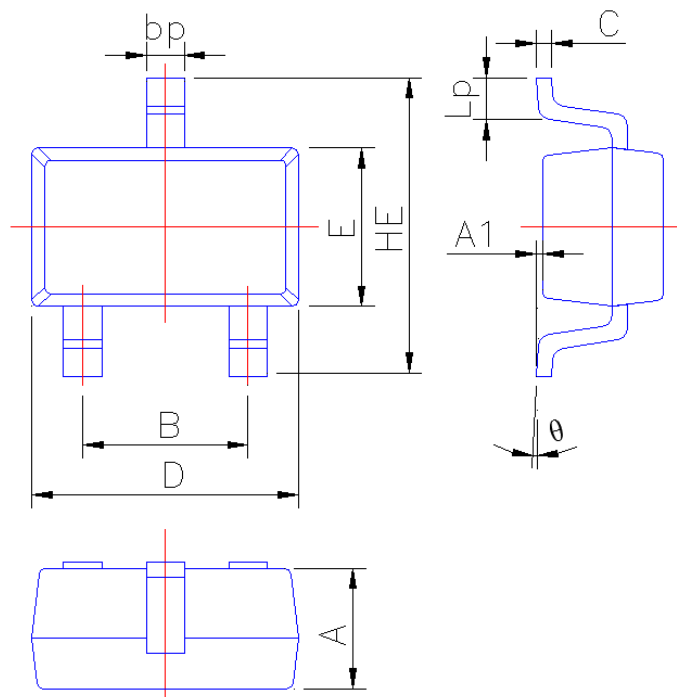


Figure 6. Total Capacitance

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-323



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.00
A1	0.010	0.100
B	1.20	1.40
bp	0.25	0.45
C	0.09	0.15
D	2.00	2.20
E	1.15	1.35
HE	2.15	2.55
Lp	0.25	0.46
θ	0°	6°