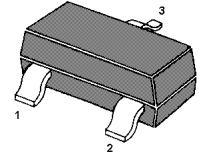
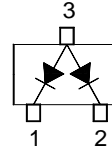


Silicon Epitaxial Planar Switching Diode

Features

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



Marking Code: **A1**
SOT-23 Plastic Package

Applications

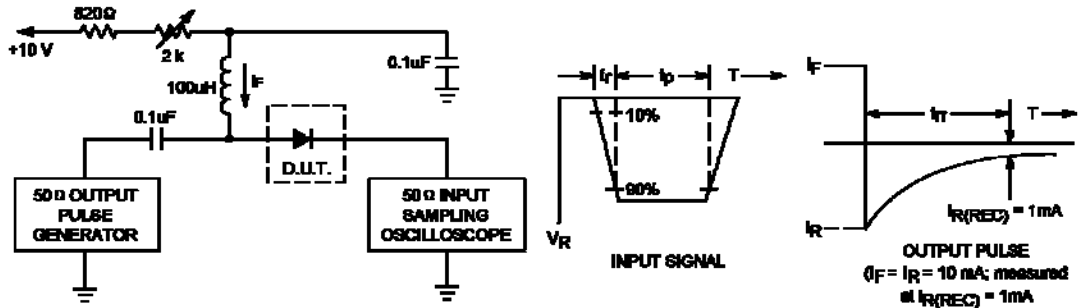
- Ultra high speed switching application

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

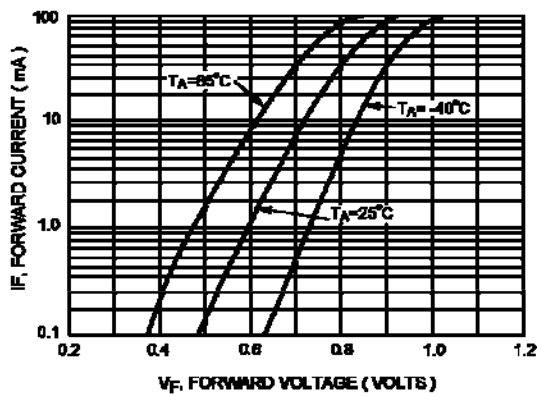
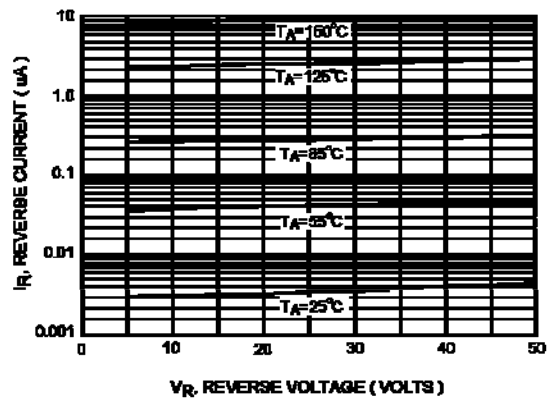
Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	35 75	V
Forward Current	I_F	100	mA
Power Dissipation	P_{tot}	350	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage	V_F	-	1	V
at $I_F = 10\text{ mA}$	V_F	-	1	V
at $I_F = 50\text{ mA}$	V_F	-	1.2	V
at $I_F = 100\text{ mA}$	V_F	-	1.2	V
Reverse Current	I_R	-	100	nA
at $V_R = 30\text{ V}$	I_R	-	100	nA
at $V_R = 50\text{ V}$	I_R	-	100	nA
Reverse Breakdown Voltage	$V_{(BR)R}$	35 75	- -	V
at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	35 75	- -	V
Diode Capacitance	C_T	-	4	pF
at $V_R = 0$, $f = 1\text{ MHz}$	C_T	-	4	pF
Reverse Recovery Time	t_{rr}	-	4	ns
at $I_F = I_R = 10\text{ mA}$, $I_{R(REC)} = 1\text{ mA}$	t_{rr}	-	4	ns

FIGURE 1. RECOVERY TIME EQUIVALENT TEST CIRCUIT


- Notes: 1. A 2.0kΩ variable resistor adjusted for a Forward Current (I_F) of 10mA.
 2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10mA.
 3. $t_p \gg t_r$

FIGURE 2. FORWARD VOLTAGE

FIGURE 3. LEAKAGE CURRENT

FIGURE 4. CAPACITANCE
