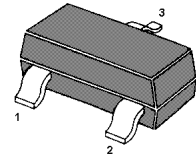
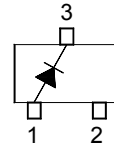


Silicon Epitaxial Planar Switching Diode

Features

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



Marking Code: **5D**
SOT-23 Plastic Package

Applications

- Ultra high speed switching application

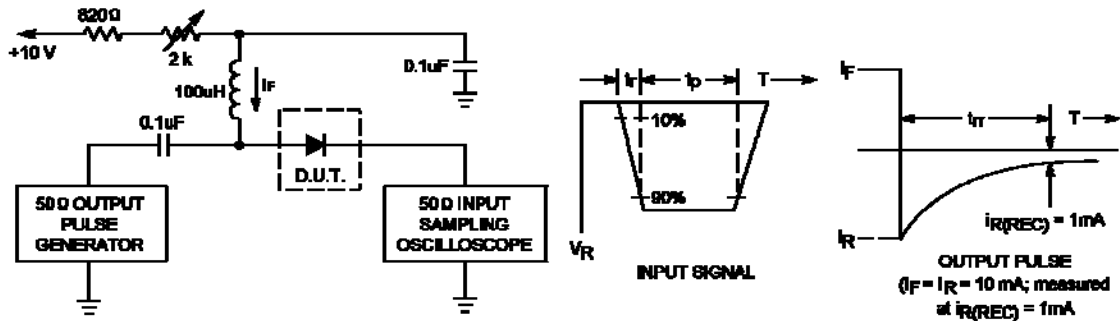
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	70	V
Forward Current	I_F	200	mA
Non-repetitive Peak Forward Surge Current ($t = 1\text{ }\mu\text{s}$)	I_{FSM}	4	A
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 at $I_F = 1\text{ mA}$ at $I_F = 100\text{ mA}$	V_F	0.55 0.85	0.7 1.1	V
Reverse Current at $V_R = 50\text{ V}$	I_R	-	100	nA
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	70	-	V
Diode Capacitance at $V_R = 0$, $f = 1\text{ MHz}$	C_T	-	2.5	pF
Reverse Recovery Time 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 $I_{R(\text{peak})}$ is equal to 10mA.
3. $t_p \gg t_{rr}$

FIGURE 2. FORWARD VOLTAGE

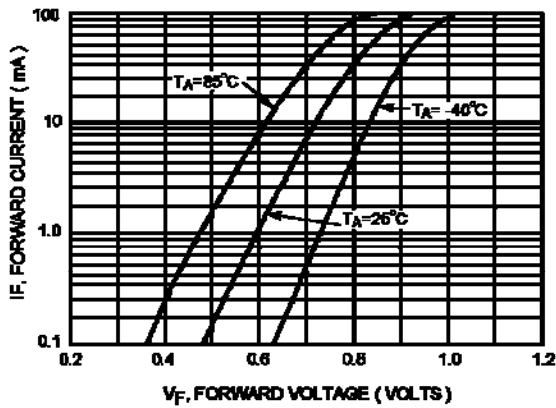


FIGURE 3. LEAKAGE CURRENT

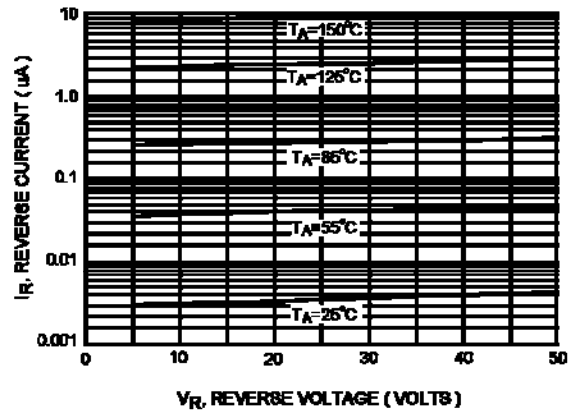
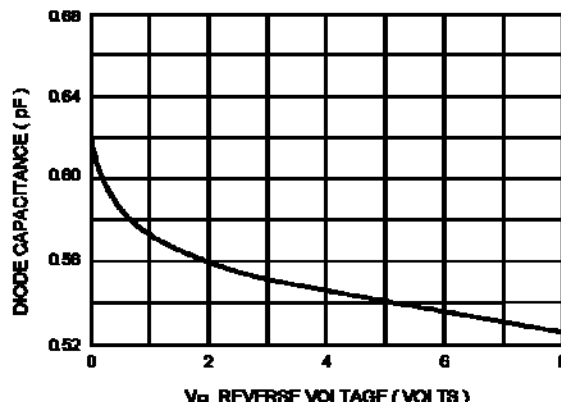


FIGURE 4. CAPACITANCE

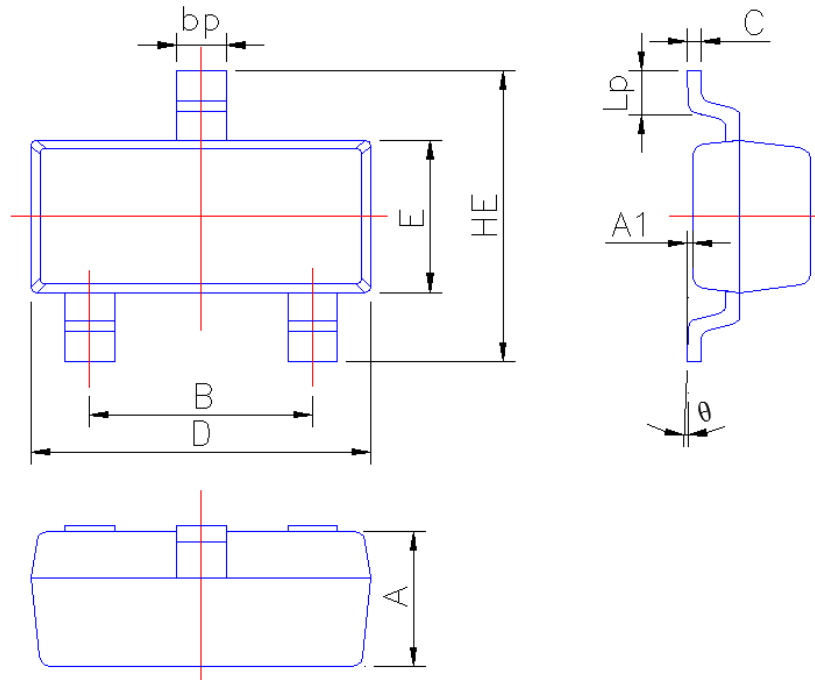




PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.10
A1	0.013	0.100
B	1.80	2.00
bp	0.35	0.50
C	0.09	0.150
D	2.80	3.00
E	1.20	1.40
HE	2.20	2.80
Lp	0.20	0.50
θ	0°	5°