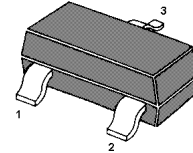
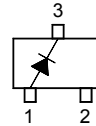


Silicon Epitaxial Planar Switching Diode

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	
Repetitive Peak Reverse Voltage	V_{RRM}	85	V	
Continuous Reverse Voltage	V_R	75	V	
Continuous Forward Current	I_F	215	mA	
Repetitive Peak Forward Current	I_{FRM}	500	mA	
Non-Repetitive Peak Forward Surge Current	I_{FSM}	$t = 1\ \mu\text{s}$	4	A
		$t = 1\ \text{ms}$	1	
		$t = 1\ \text{s}$	0.5	
Power Dissipation	P_{tot}	350	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	V_F	-	at $I_F = 1\ \text{mA}$	715	mV
			at $I_F = 10\ \text{mA}$	855	mV
			at $I_F = 50\ \text{mA}$	1	V
			at $I_F = 150\ \text{mA}$	1.25	V
Reverse Current	I_R	-	at $V_R = 25\ \text{V}$	30	nA
			at $V_R = 75\ \text{V}$	1	μA
			at $V_R = 25\ \text{V}, T_j = 150\text{ }^\circ\text{C}$	30	μA
			at $V_R = 75\ \text{V}, T_j = 150\text{ }^\circ\text{C}$	50	μA
Reverse Breakdown Voltage	$V_{(BR)R}$	75	-	V	
Diode Capacitance	C_d	-	2	pF	
Reverse Recovery Time	t_{rr}	-	4	ns	
at $I_F = I_R = 10\ \text{mA}, R_L = 50\ \Omega$					

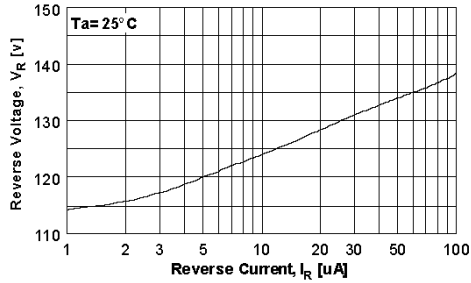


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100 uA

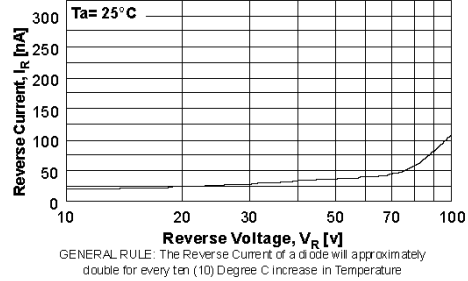


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100 V

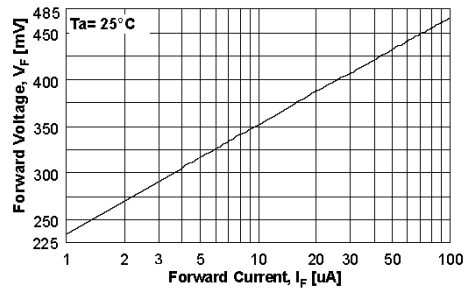


Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 uA

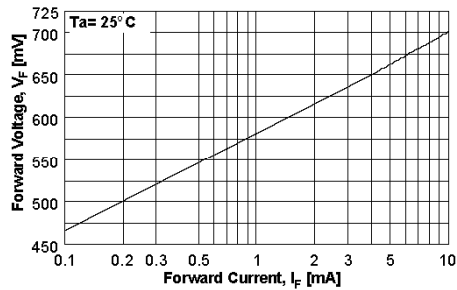


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10 mA

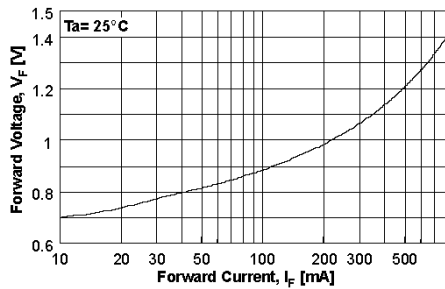


Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800 mA

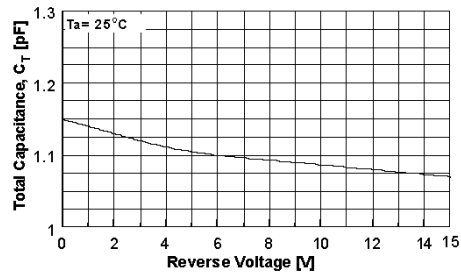
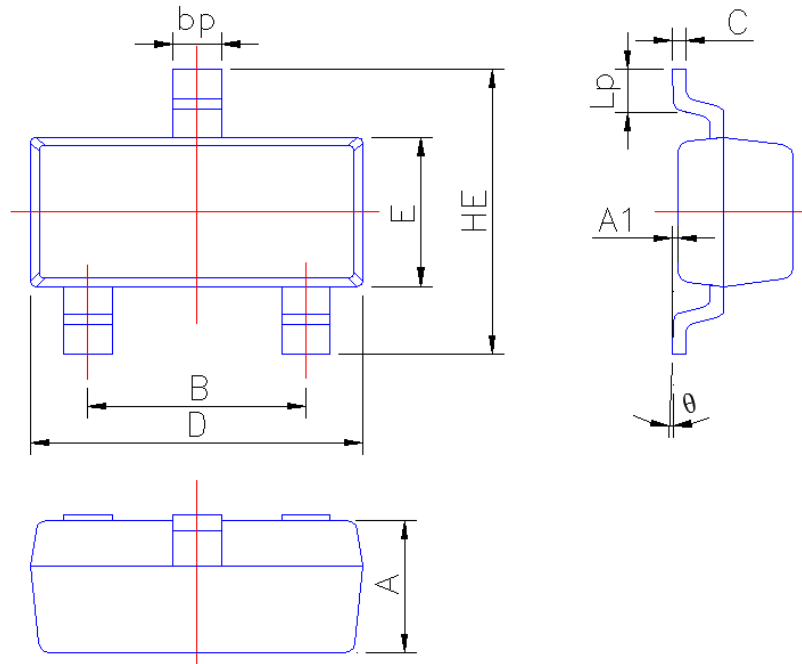


Figure 6. Total Capacitance

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-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°