

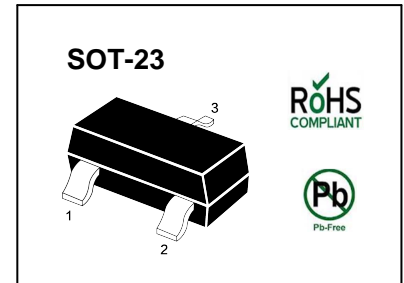
Silicon Epitaxial Planar Switching Diode

Features

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

Applications

- Ultra high speed switching application



Marking Code: 5D

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}	4 1 0.5	A
	$t = 1\text{ }\mu\text{s}$ $t = 1\text{ ms}$ $t = 1\text{ s}$		
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				
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	-	2	pF
at $V_R = 0, f = 1\text{ MHz}$				
Reverse Recovery Time	t_{rr}	-	4	ns
at $I_F = I_R = 10\text{ mA}, R_L = 50\text{ }\Omega$				

Typical Characteristics

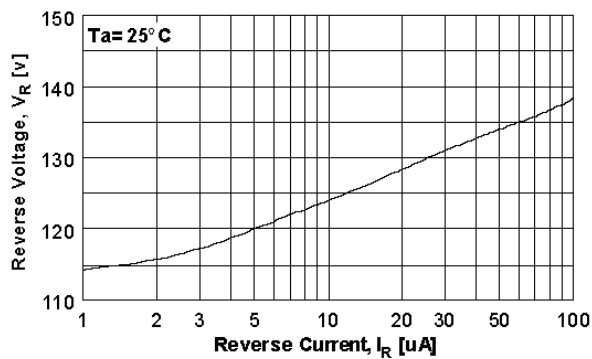


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100 μA

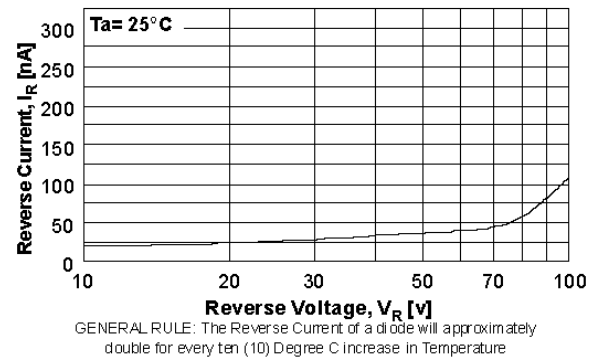


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100 V

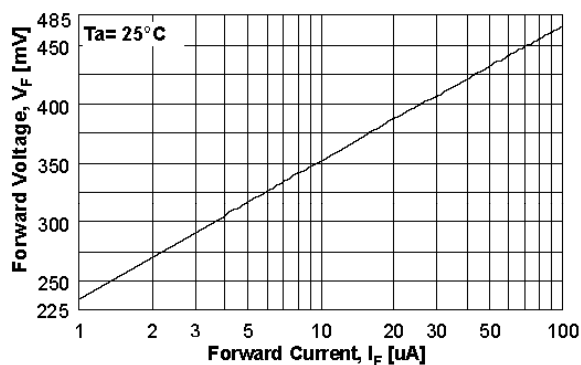


Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 μA

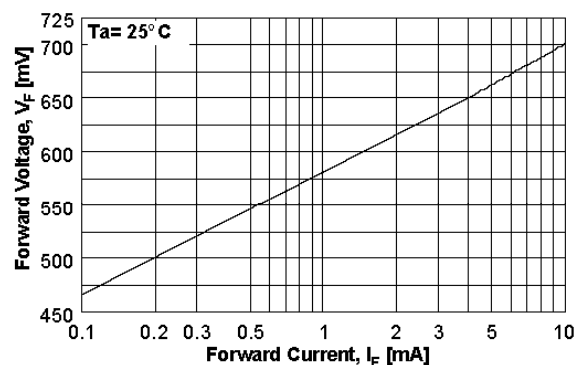


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10 mA

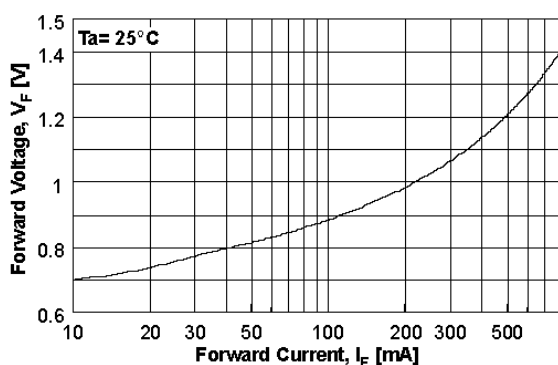


Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800 mA

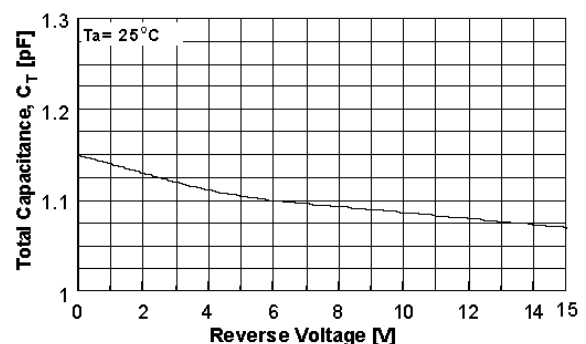
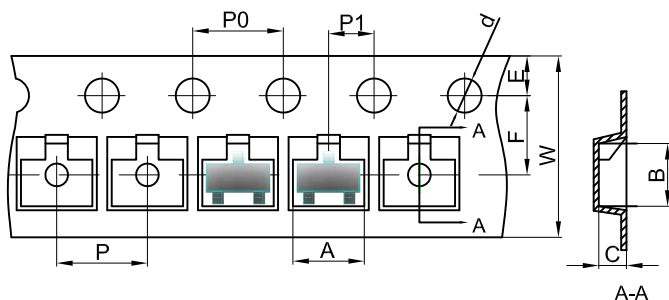


Figure 6. Total Capacitance

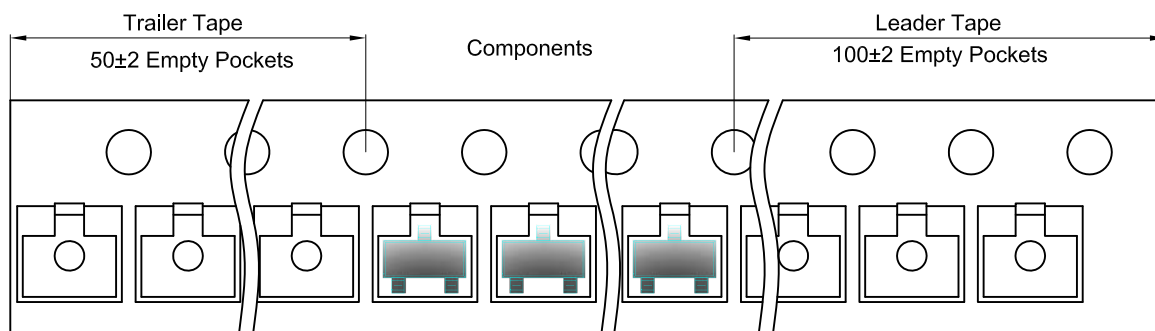
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

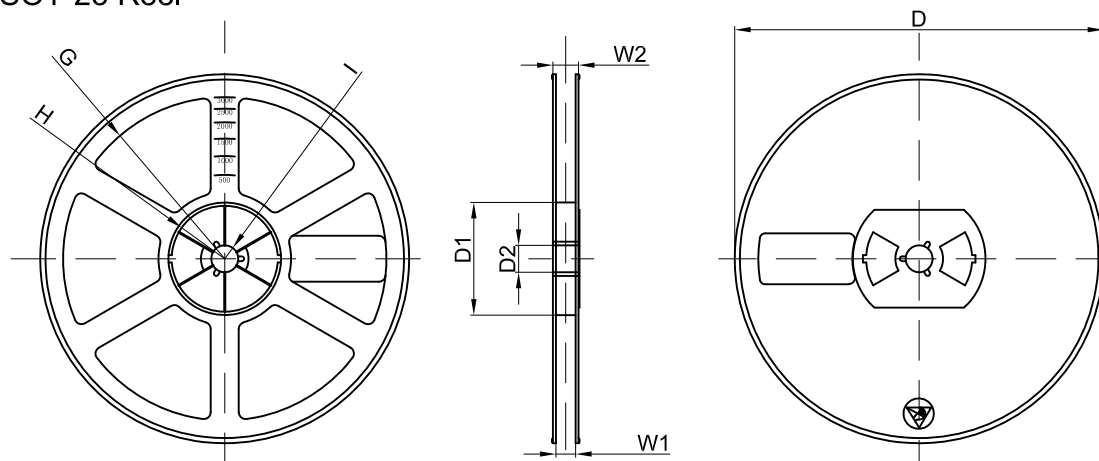


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

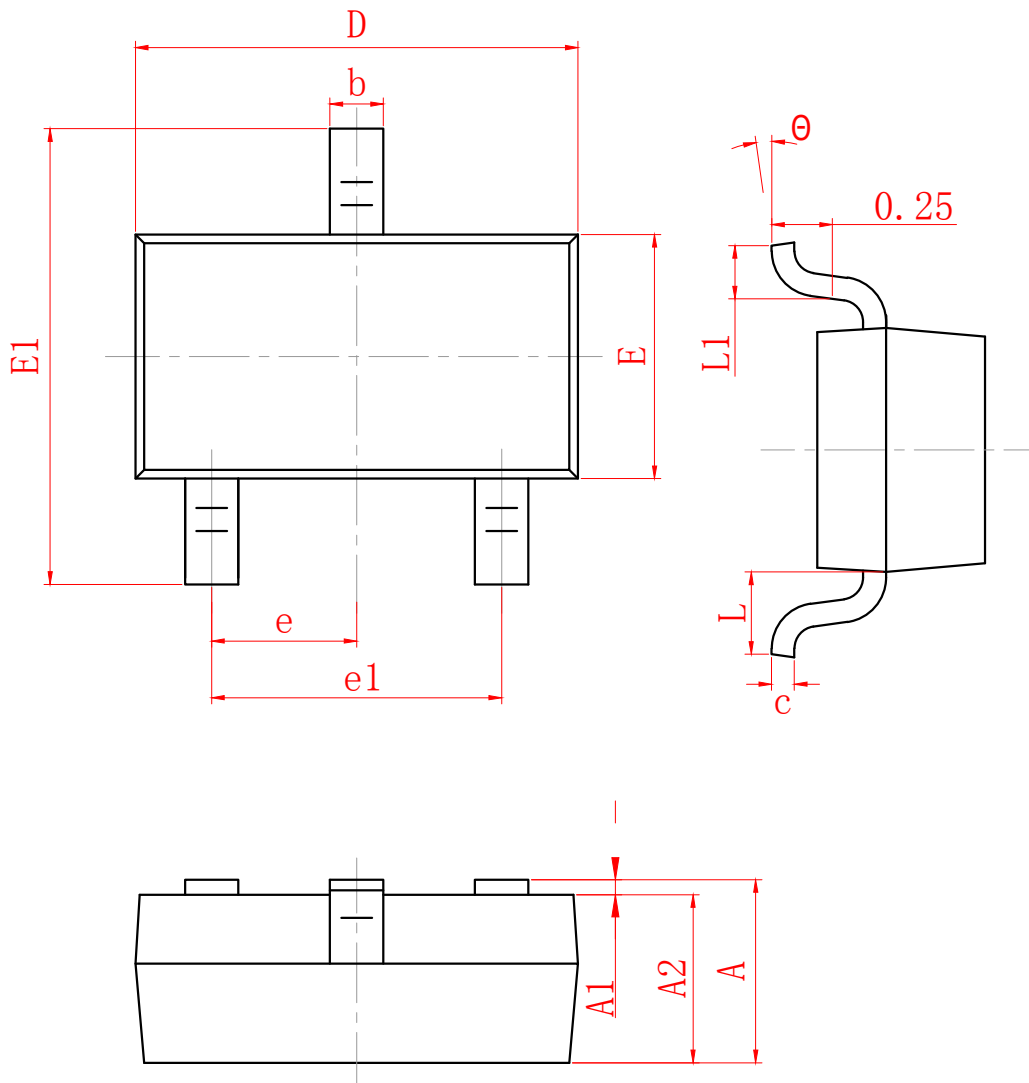


SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	



SYMBOL	MILLIMETER	
	MIN	MAX
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950 TYP	
e1	1.800	2.000
L	0.550 REF	
L1	0.300	0.500
θ	0°	8°

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