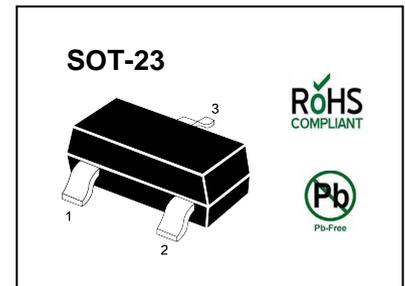
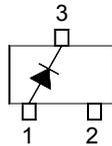


### Silicon Epitaxial Planar Switching Diode

#### 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 ( $T_a = 25\text{ }^\circ\text{C}$ )

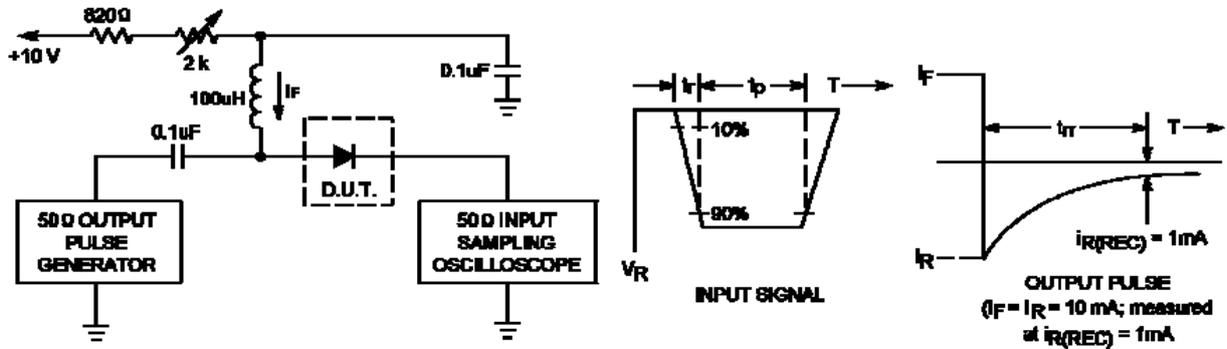
Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	70	V
Forward Current	$I_F$	200	mA
Non-repetitive Peak Forward Surge Current ( $t = 1\text{ }\mu\text{s}$ )	$I_{FSM}$	4	A
Power Dissipation	$P_{tot}$	350	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

#### 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

## Typical Characteristics

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  $t_{R(peak)}$  is equal to 10mA.
3.  $t_p \gg t_r$

FIGURE 2. FORWARD VOLTAGE

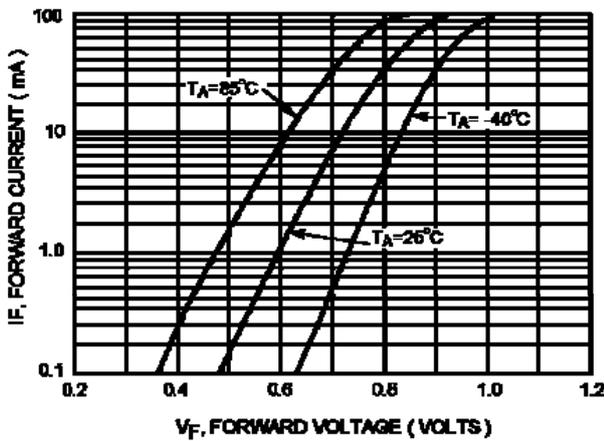


FIGURE 3. LEAKAGE CURRENT

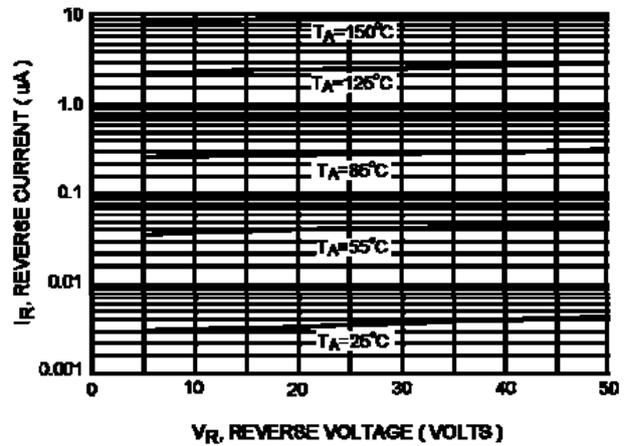
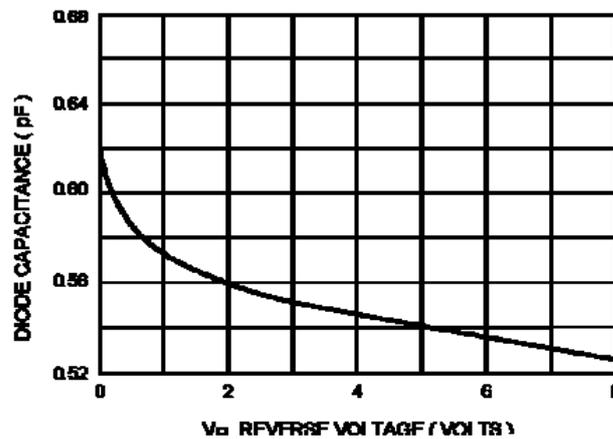
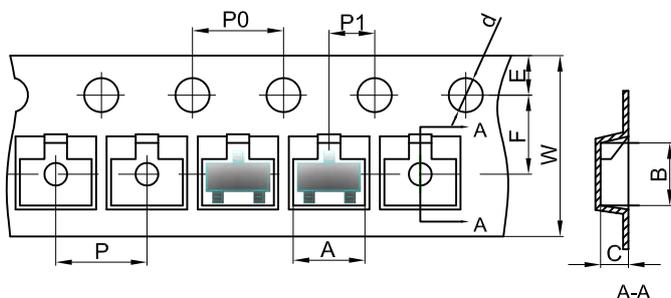


FIGURE 4. CAPACITANCE



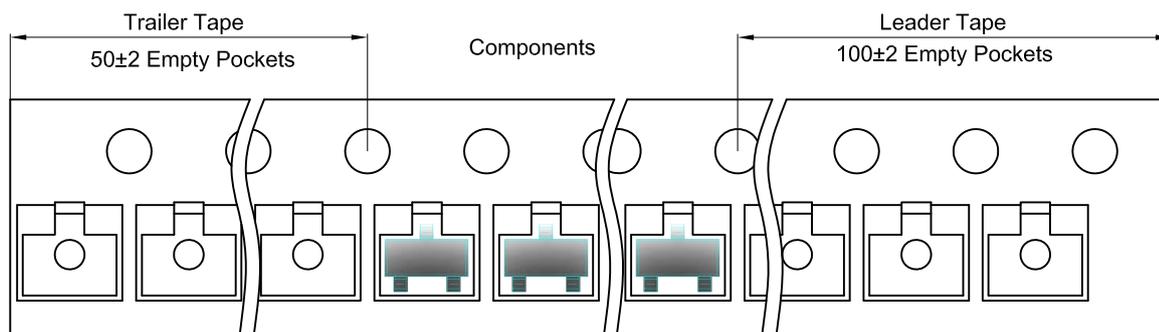
## SOT-23 Tape and Reel

### SOT-23 Embossed Carrier Tape

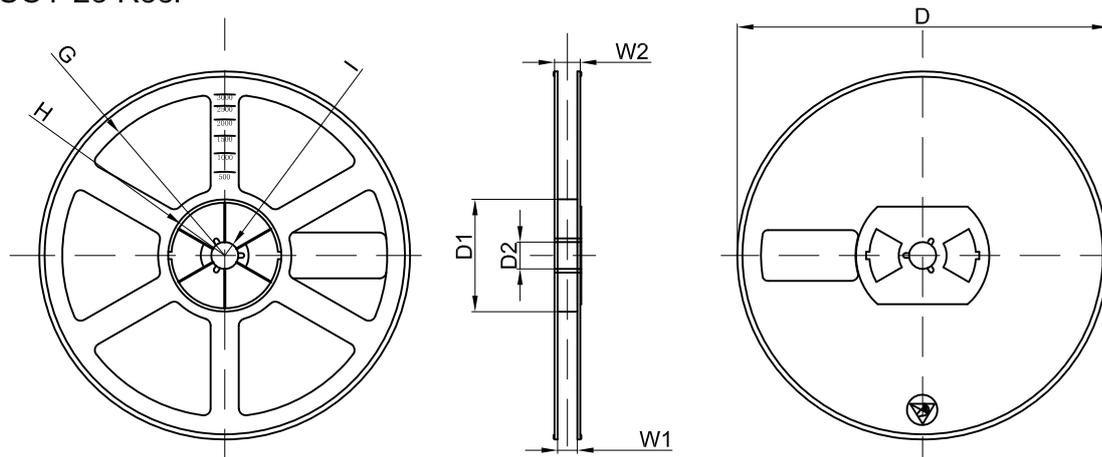


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

### SOT-23 Tape Leader and Trailer

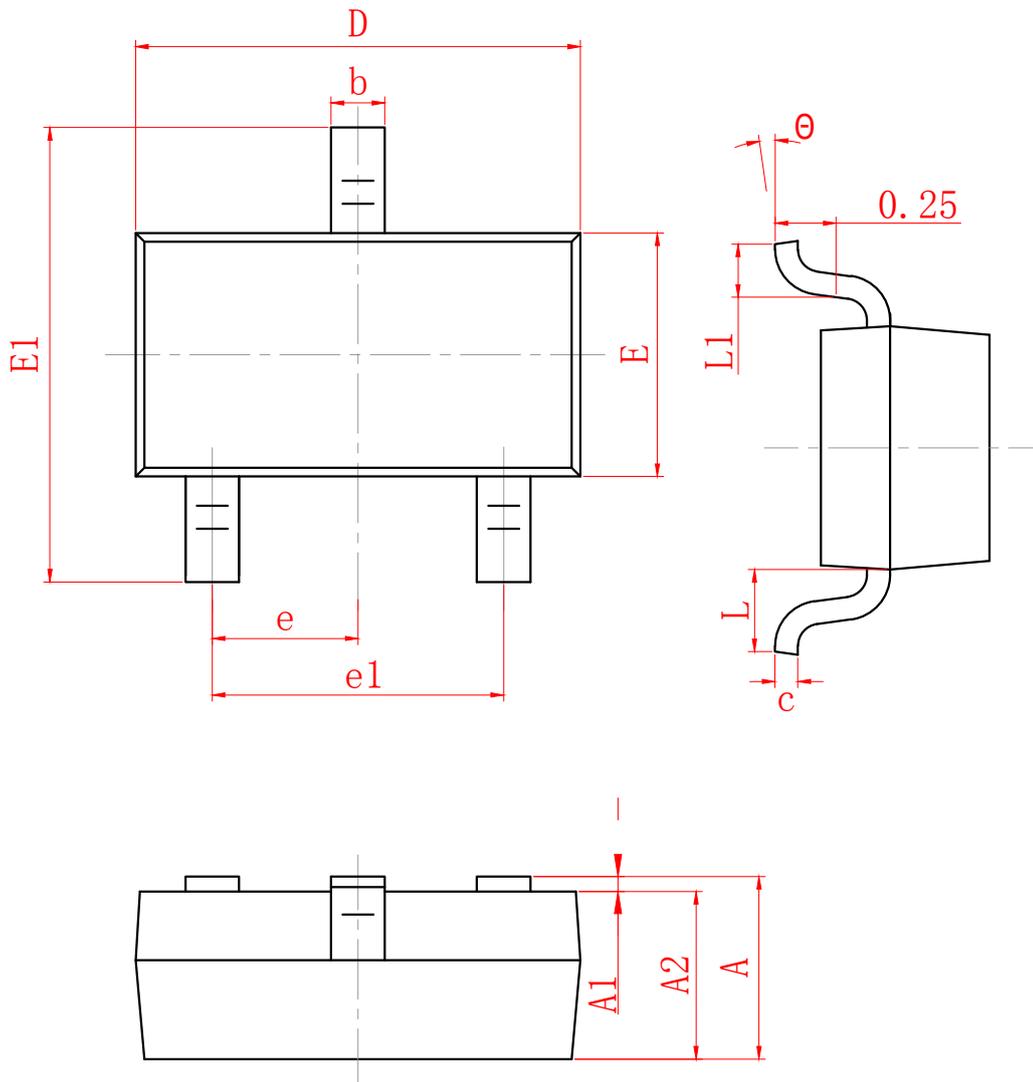


### SOT-23 Reel



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
$\theta$	0°	8°

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