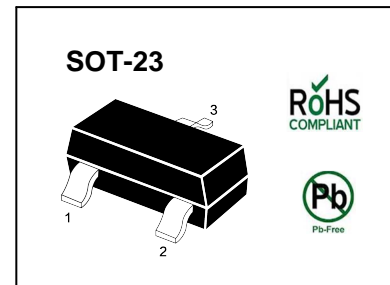


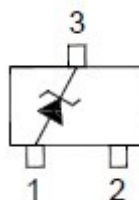
### Silicon Planar Zener Diodes

This series of Zener diodes is offered in the convenient, surface mount plastic SOT-23 package. These devices are designed to provide voltage regulation with minimum space requirement. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.



#### Features

- Zener breakdown voltage range - 2.4 V to 75 V
- Package designed for optimal automated board assembly
- Small package size for high density applications



#### Absolute Maximum Ratings (T<sub>a</sub> = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	350	mW
Thermal Resistance, Junction to Ambient <sup>1)</sup>	R <sub>θJA</sub>	417	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	- 65 to + 150	°C

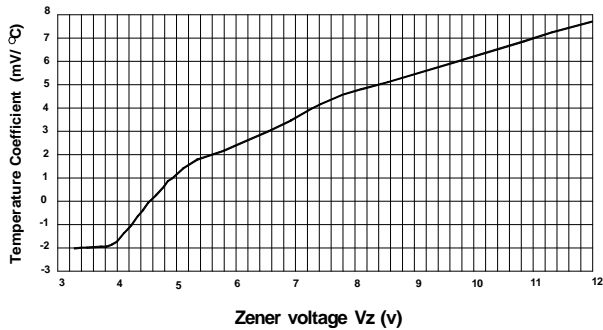
<sup>1)</sup> Alumina = 0.4 X 0.3 X 0.024 in, 99.5% alumina

## Electrical Characteristics ( $T_a = 25\text{ }^\circ\text{C}$ unless otherwise noted, $V_F < 0.9\text{ V}$ at $I_F = 10\text{ mA}$ )

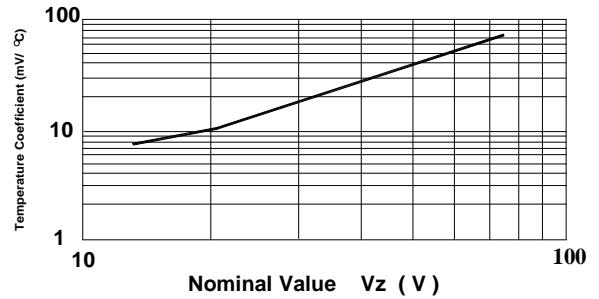
Type	Marking Code	Zener Voltage Range <sup>1)</sup>				Dynamic Impedance		Reverse Current	
		$V_{ZT}$			at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$I_R$	at $V_R$
		Nom. (V)	Min. (V)	Max. (V)	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\mu\text{A}$ )	(V)
BZX84B2V4	CR	2.4	2.35	2.45	5	100	5	50	1
BZX84B2V7	CX	2.7	2.65	2.75	5	100	5	20	1
BZX84B3V0	CY	3	2.94	3.06	5	95	5	10	1
BZX84B3V3	CZ	3.3	3.23	3.37	5	95	5	5	1
BZX84B3V6	DA	3.6	3.53	3.67	5	90	5	5	1
BZX84B3V9	DB	3.9	3.82	3.98	5	90	5	3	1
BZX84B4V3	DC	4.3	4.21	4.39	5	90	5	3	1
BZX84B4V7	DD	4.7	4.61	4.79	5	80	5	3	2
BZX84B5V1	DE	5.1	5	5.2	5	60	5	2	2
BZX84B5V6	DF	5.6	5.49	5.71	5	40	5	1	2
BZX84B6V2	DH	6.2	6.08	6.32	5	10	5	3	4
BZX84B6V8	DJ	6.8	6.66	6.94	5	15	5	2	4
BZX84B7V5	DK	7.5	7.35	7.65	5	15	5	1	5
BZX84B8V2	DM	8.2	8.04	8.36	5	15	5	0.7	5
BZX84B9V1	DN	9.1	8.92	9.28	5	15	5	0.5	6
BZX84B10	DP	10	9.8	10.2	5	20	5	0.2	7
BZX84B11	DR	11	10.8	11.2	5	20	5	0.1	8
BZX84B12	DX	12	11.8	12.2	5	25	5	0.1	8
BZX84B13	DY	13	12.7	13.3	5	30	5	0.1	8
BZX84B15	DZ	15	14.7	15.3	5	30	5	0.05	10.5
BZX84B16	EA	16	15.7	16.3	5	40	5	0.05	11.2
BZX84B18	EB	18	17.6	18.4	5	45	5	0.05	12.6
BZX84B20	EC	20	19.6	20.4	5	55	5	0.05	14
BZX84B22	ED	22	21.6	22.4	5	55	5	0.05	15.4
BZX84B24	EE	24	23.5	24.5	5	70	5	0.05	16.8
BZX84B27	EF	27	26.5	27.5	2	80	2	0.05	18.9
BZX84B30	EH	30	29.4	30.6	2	80	2	0.05	21
BZX84B33	EJ	33	32.3	33.7	2	80	2	0.05	23.1
BZX84B36	EK	36	35.3	36.7	2	90	2	0.05	25.2
BZX84B39	EM	39	38.2	39.8	2	130	2	0.05	27.3
BZX84B43	EN	43	42.1	43.9	2	150	2	0.05	30.1
BZX84B47	EP	47	46.1	47.9	2	170	2	0.05	32.9
BZX84B51	ER	51	50	52	2	180	2	0.05	35.7
BZX84B56	EX	56	54.9	57.1	2	200	2	0.05	39.2
BZX84B62	EY	62	60.8	63.2	2	215	2	0.05	43.4
BZX84B68	EZ	68	66.6	69.4	2	240	2	0.05	47.6
BZX84B75	FA	75	73.5	76.5	2	255	2	0.05	52.5

<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .

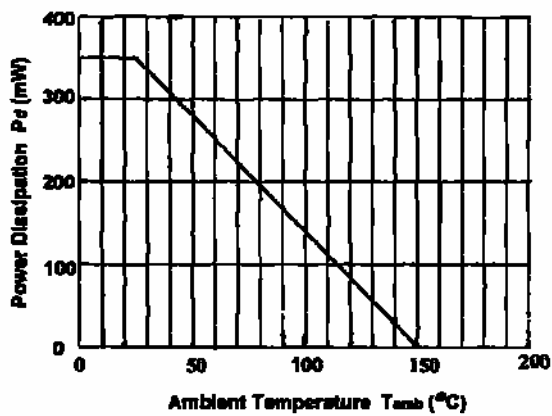
Temperature Coefficient



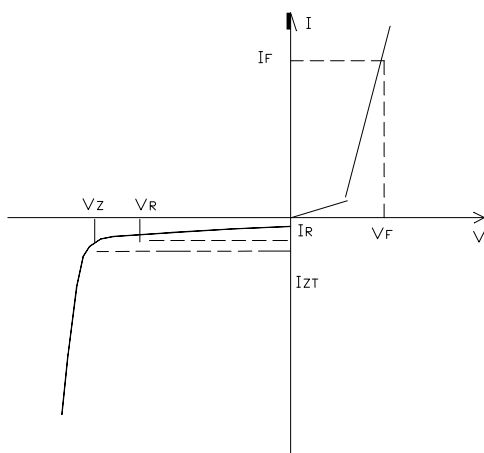
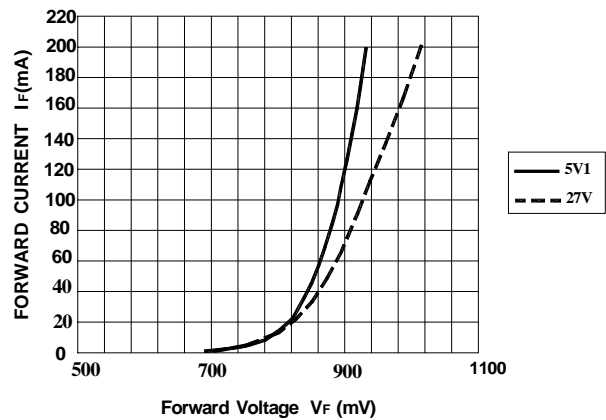
Temperature Coefficient



Power Derating Curve



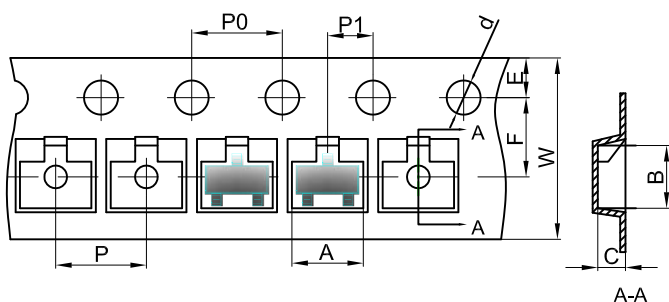
Typical Forward Voltage



Zener Voltage Regulator

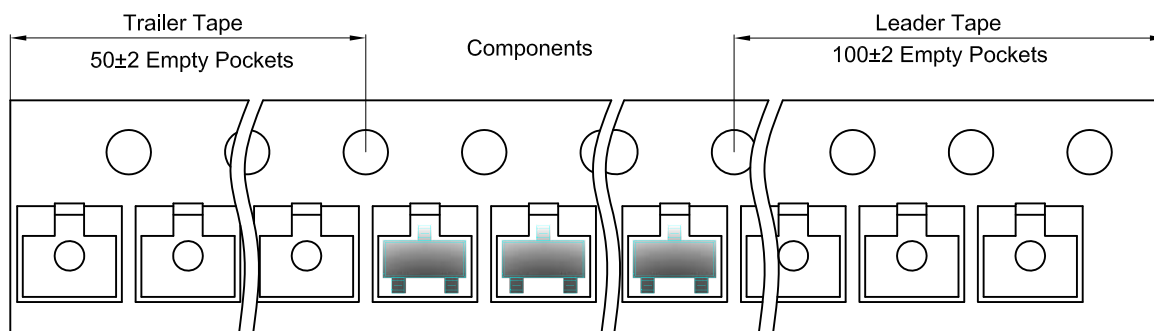
## SOT-23 Tape and Reel

### SOT-23 Embossed Carrier Tape

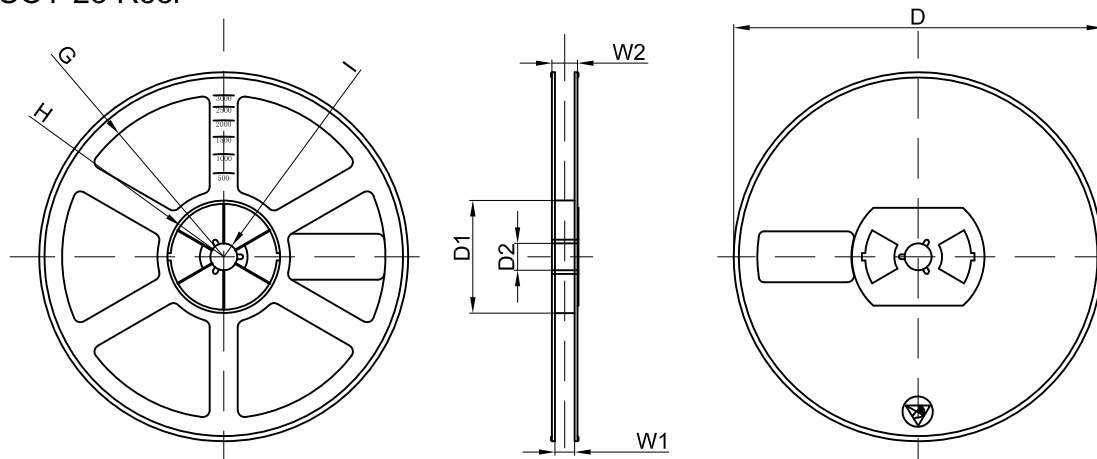


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

### SOT-23 Tape Leader and Trailer

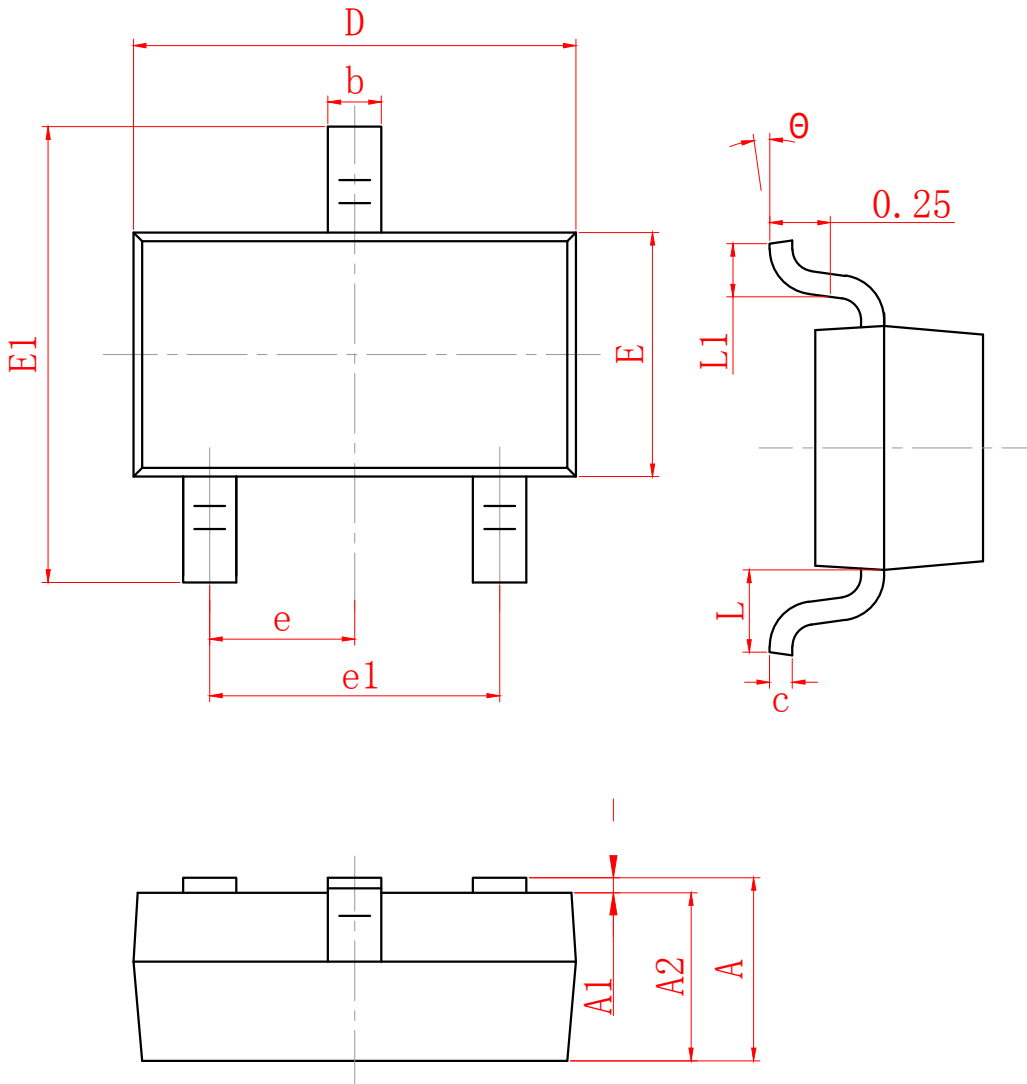


### SOT-23 Reel



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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