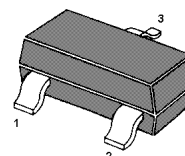
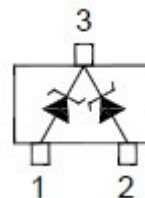


SILICON PLANAR ZENER DIODES

This 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 – 2.7V to 51 V
- Package designed for optimal automated board assembly
- Small package size for high density applications



1. Anode 2. Anode 3. Cathode

SOT-23

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

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	350	mW
Thermal Resistance, Junction to Ambient ¹⁾	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_S	- 65 to + 150	$^\circ\text{C}$

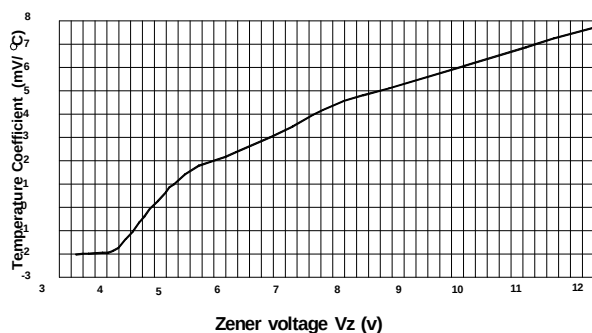
¹⁾ Alumina = 0.4 X 0.3 X 0.024 in, 99.5% alumina

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

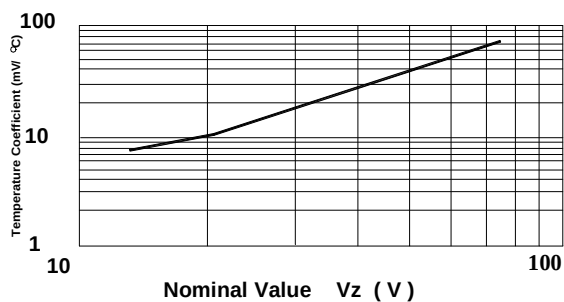
Type	Marking Code	Zener Voltage Range ¹⁾				Dynamic Resistance	Reverse Leakage Current	
		Min.	Nom.	Max.	I_{ZT} (mA)	Z_{ZT} Max. (Ω)	I_R Max. (μA)	at V_R (V)
DZ23C2V7	KV1	2.5	2.7	2.9	5	100	20	1
DZ23C3V0	KV2	2.8	3	3.2	5	95	10	1
DZ23C3V3	KV3	3.1	3.3	3.5	5	95	5	1
DZ23C3V6	KV4	3.4	3.6	3.8	5	90	5	1
DZ23C3V9	KV5	3.7	3.9	4.1	5	90	3	1
DZ23C4V3	KV6	4	4.3	4.6	5	90	3	1
DZ23C4V7	KV7	4.4	4.7	5	5	80	3	2
DZ23C5V1	KV8	4.8	5.1	5.4	5	60	2	2
DZ23C5V6	KV9	5.2	5.6	6	5	40	1	2
DZ23C6V2	KVA	5.8	6.2	6.6	5	10	3	4
DZ23C6V8	KVB	6.4	6.8	7.2	5	15	2	4
DZ23C7V5	KVC	7	7.5	7.9	5	15	1	5
DZ23C8V2	KVD	7.7	8.2	8.7	5	15	0.7	5
DZ23C9V1	KVE	8.5	9.1	9.6	5	15	0.5	6
DZ23C10	KVF	9.4	10	10.6	5	20	0.2	7
DZ23C11	KVG	10.4	11	11.6	5	20	0.1	8
DZ23C12	KVH	11.4	12	12.7	5	25	0.1	8
DZ23C13	KVI	12.4	13	14.1	5	30	0.1	8
DZ23C15	KVJ	14.3	15	15.8	5	30	0.05	10.5
DZ23C16	KVK	15.3	16	17.1	5	40	0.05	11.2
DZ23C18	KVL	16.8	18	19.1	5	45	0.05	12.6
DZ23C20	KVM	18.8	20	21.2	5	55	0.05	14
DZ23C22	KVN	20.8	22	23.3	5	55	0.05	15.4
DZ23C24	KVO	22.8	24	25.6	5	70	0.05	16.8
DZ23C27	KVP	25.1	27	28.9	2	80	0.05	18.9
DZ23C30	KVQ	28	30	32	2	80	0.05	21
DZ23C33	KVR	31	33	35	2	80	0.05	23.1
DZ23C36	KVS	34	36	38	2	90	0.05	25.2
DZ23C39	KVT	37	39	41	2	130	0.05	27.3
DZ23C43	KVU	40	43	46	2	150	0.05	30.1
DZ23C47	KVV	44	47	50	2	170	0.05	32.9
DZ23C51	KVW	48	51	54	2	180	0.05	35.7

¹⁾ Tested with pulses $t_p = 20\text{ ms}$.

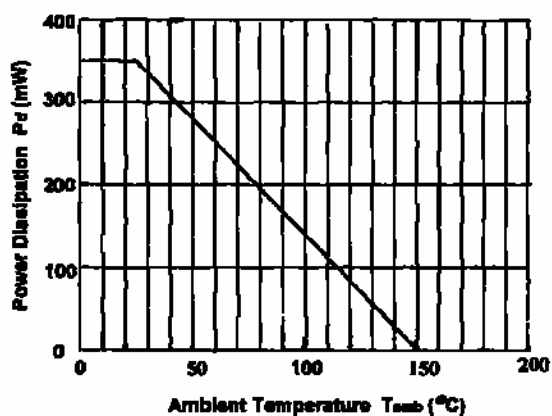
Temperature Coefficient



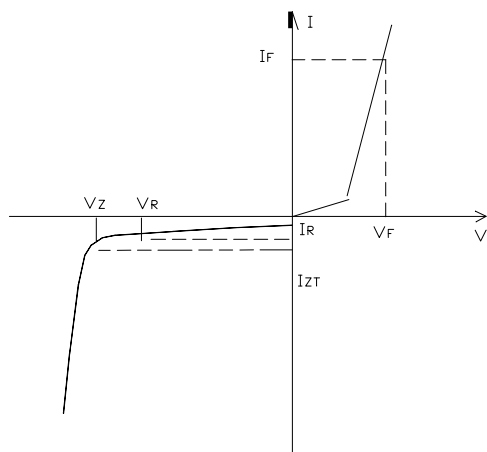
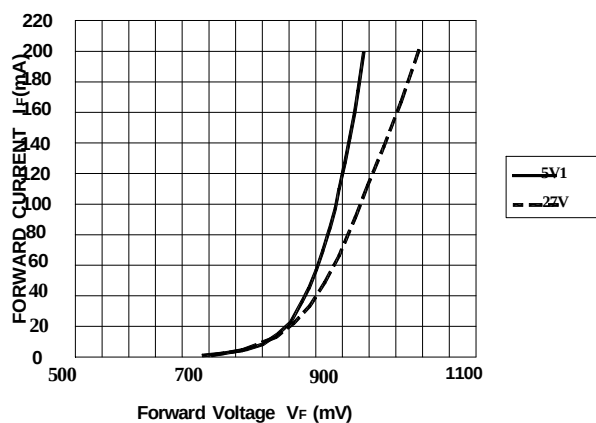
Temperature Coefficient



Power Derating Curve



Typical Forward Voltage

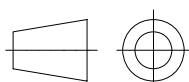
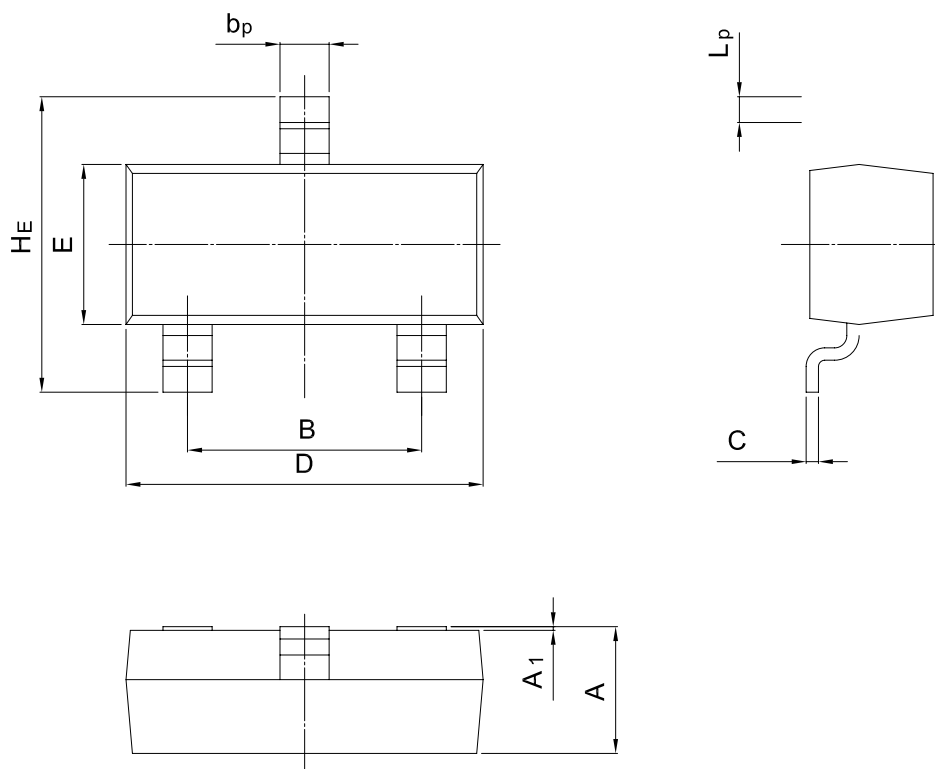


Zener Voltage Regulator

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20