

RoHS
Compliant



Description

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

- 350mW power dissipation
- Zener voltages from 2.4V - 51V
- Package designed for optimal automated board assembly
- Small package size for high density applications

Absolute Maximum Ratings (TA = 25°C)

Parameter	Symbol	Rating	Units
Power Dissipation	P _D	350	mW
Thermal Resistance, Junction to Ambient ¹⁾	R _{θJA}	417	°C/W
Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

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

Electrical Characteristics (TA = 25°C unless otherwise specified.)

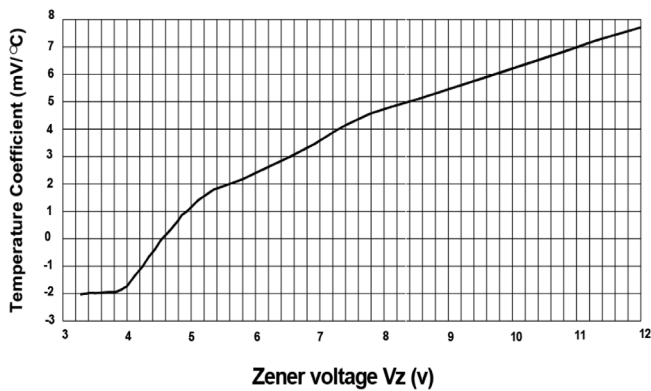
Part Number	Marking	Zener Voltage Range ¹⁾				Dynamic Impedance		Maximum Reverse Leakage Current	
		VZT			at I _{ZT}	ZZT	at I _{ZT}	I _R	at V _R
		V(Nom.)	V (Min.)	V (Max.)	mA	Max.(Ω)	mA	Max. μA	V
BZX84C10	Z9	10	9.4	10.6	5	20	5	0.2	7
BZX84C11	Y1•	11	10.4	11.6	5	20	5	0.1	8
BZX84C12	Y2•	12	11.4	12.7	5	25	5	0.1	8
BZX84C13	Y3	13	12.4	14.1	5	30	5	0.1	8
BZX84C15	Y4	15	13.8	15.6	5	30	5	0.05	10.5
BZX84C16	Y5	16	15.3	17.1	5	40	5	0.05	11.2
BZX84C18	Y6•	18	16.8	19.1	5	45	5	0.05	12.6
BZX84C22	Y8	22	20.8	23.3	5	55	5	0.05	15.4
BZX84C24	Y9	24	22.8	25.6	5	70	5	0.05	16.8
BZX84C27	Y10	27	25.1	28.9	2	80	2	0.05	18.9
BZX84C30	Y11•	30	28	32	2	80	2	0.05	21
BZX84C33	Y12	33	31	35	2	80	2	0.05	23.1
BZX84C36	Y13	36	34	38	2	90	2	0.05	25.2

Part Number	Marking	Zener Voltage Range ¹⁾				Dynamic Impedance		Maximum Reverse Leakage Current	
		VZT			at I _{ZT}	ZZT	at I _{ZT}	I _R	at V _R
		V (Nom.)	V (Min.)	V (Max.)	mA	Max.(Ω)	mA	Max. μA	V
BZX84C39	Y14	39	37	41	2	130	2	0.05	27.3
BZX84C3V3+	Z14	3.3	3.1	3.5	5	95	5	5	1
BZX84C47	B0	47	44	50	2	170	2	0.05	32.9
BZX84C4V7	Z1	4.7	4.4	5	5	80	5	3	2
BZX84C5V1	Z2	5.1	4.8	5.4	5	60	5	2	2
BZX84C5V6	Z3	5.6	5.2	6	5	40	5	1	2
BZX84C6V2	Z4	6.2	5.8	6.6	5	10	5	3	4
BZX84C7V5	Z6	7.5	7	7.9	5	15	5	1	5
BZX84C8V2	Z7	8.2	7.7	8.7	5	15	5	0.7	5
BZX84C9V1	Z8	9.1	8.5	9.6	5	15	5	0.5	6

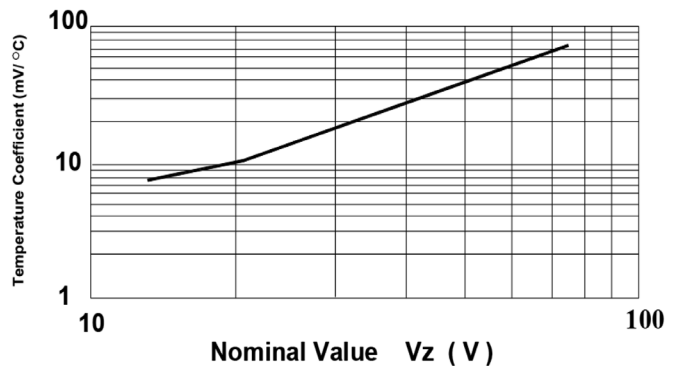
Note: Tested with pulses tp = 20 ms.

Rating and Characteristic Curves

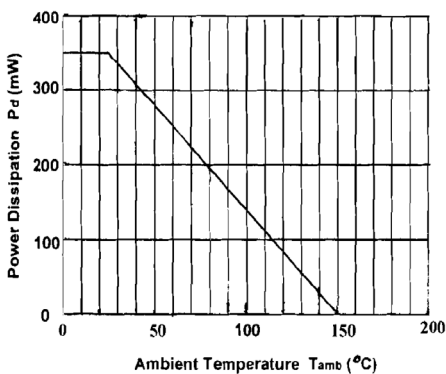
Temperature Coefficient



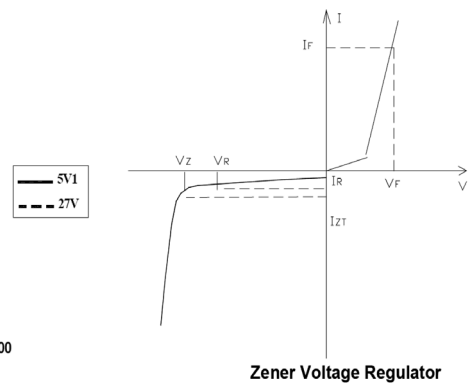
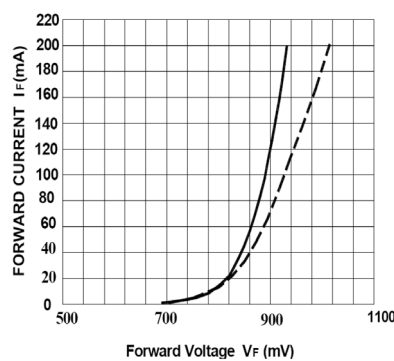
Temperature Coefficient



Power Derating Curve



Typical Forward Voltage

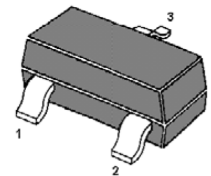
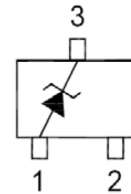
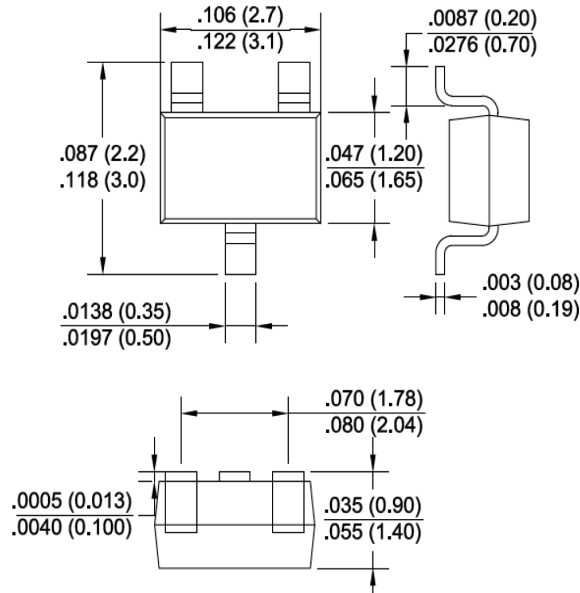


Silicon Planar Zener Diode

multicomp PRO

Diagram

SOT-23



1. Anode 3. Cathode

Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Zener Diode, 0.3W, 10V, SOT-23	BZX84C10
Zener Diode, 0.3W, 11V, SOT-23	BZX84C11
Zener Diode, 0.3W, 12V, SOT-23	BZX84C12
Zener Diode, 0.35W, 13V, SOT-23	BZX84C13
Zener Diode, 0.3W, 15V, SOT-23	BZX84C15
Zener Diode, 0.3W, 16V, SOT-23	BZX84C16
Zener Diode, 0.3W, 18V, SOT-23	BZX84C18
Zener Diode, 0.3W, 22V, SOT-23	BZX84C22
Zener Diode, 0.3W, 24V, SOT-23	BZX84C24
Zener Diode, 0.3W, 27V, SOT-23	BZX84C27
Zener Diode, 0.3W, 30V, SOT-23	BZX84C30
Zener Diode, 0.3W, 33V, SOT-23	BZX84C33

Description	Part Number
Zener Diode, 0.3W, 36V, SOT-23	BZX84C36
Zener Diode, 0.3W, 39V, SOT-23	BZX84C39
Zener Diode, 0.35W, 3.3V, SOT-23	BZX84C3V3+
Zener Diode, 0.3W, 47V, SOT-23	BZX84C47
Zener Diode, 0.3W, 4.7V, SOT-23	BZX84C4V7
Zener Diode, 0.3W, 5.1V, SOT-23	BZX84C5V1
Zener Diode, 0.3W, 5.6V, SOT-23	BZX84C5V6
Zener Diode, 0.3W, 6.2V, SOT-23	BZX84C6V2
Zener Diode, 0.35W, 7.5V, SOT-23	BZX84C7V5
Zener Diode, 0.3W, 8.2V, SOT-23	BZX84C8V2
Zener Diode, 0.3W, 9.1V, SOT-23	BZX84C9V1

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