

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 (T_A = 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 (T_A = 25°C unless otherwise noted, V_F < 0.9V at I_F = 10mA)

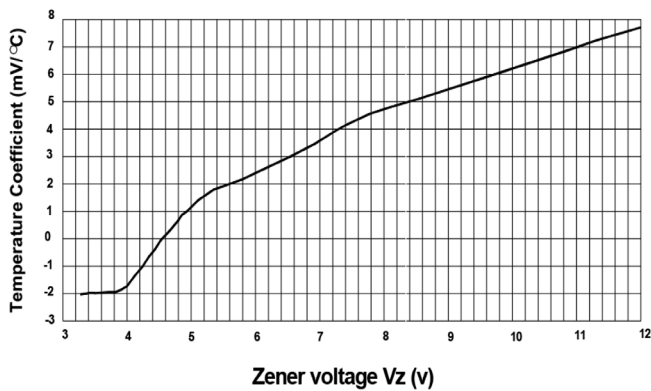
Part Number	Marking	Zener Voltage Range ¹⁾				Dynamic Impedance		Maximum Reverse Leakage Current	
		V _{ZT}			at I _{ZT}	Z _{ZT}	at I _{ZT}	I _R	at V _R
		V(Nom.)	V (Min.)	V (Max.)	mA	Max.(Ω)	mA	Max. μA	V
BZX84C10	B9	10	9.4	10.6	5	20	5	0.2	7
BZX84C11	C9	11	10.4	11.6	5	20	5	0.1	8
BZX84C12	D9	12	11.4	12.7	5	25	5	0.1	8
BZX84C13	E9	13	12.4	14.1	5	30	5	0.1	8
BZX84C15	F9	15	13.8	15.6	5	30	5	0.05	10.5
BZX84C16	H9	16	15.3	17.1	5	40	5	0.05	11.2
BZX84C18	J9	18	16.8	19.1	5	45	5	0.05	12.6
BZX84C22	M9	22	20.8	23.3	5	55	5	0.05	15.4
BZX84C24	N9	24	22.8	25.6	5	70	5	0.05	16.8
BZX84C27	P9	27	25.1	28.9	2	80	2	0.05	18.9
BZX84C30	R9	30	28	32	2	80	2	0.05	21
BZX84C33	X9	33	31	35	2	80	2	0.05	23.1
BZX84C36	Y9	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	Z9	39	37	41	2	130	2	0.05	27.3
BZX84C3V3+	F8	3.3	3.1	3.5	5	95	5	5	1
BZX84C47	B0	47	44	50	2	170	2	0.05	32.9
BZX84C4V7	M8	4.7	4.4	5	5	80	5	3	2
BZX84C5V1	N8	5.1	4.8	5.4	5	60	5	2	2
BZX84C5V6	P8	5.6	5.2	6	5	40	5	1	2
BZX84C6V2	R8	6.2	5.8	6.6	5	10	5	3	4
BZX84C7V5	Y8	7.5	7	7.9	5	15	5	1	5
BZX84C8V2	Z8	8.2	7.7	8.7	5	15	5	0.7	5
BZX84C9V1	A9	9.1	8.5	9.6	5	15	5	0.5	6

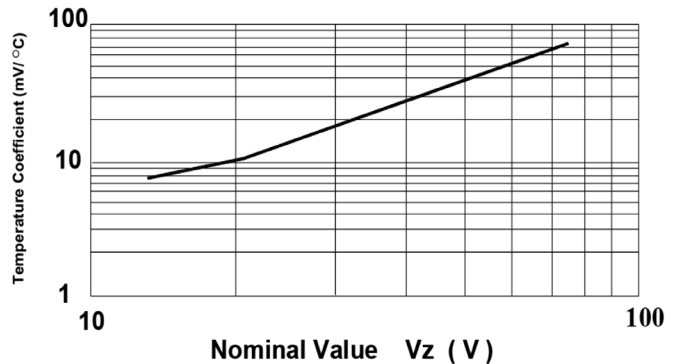
Note: Tested with pulses tp = 20 ms.

Rating and Characteristic Curves

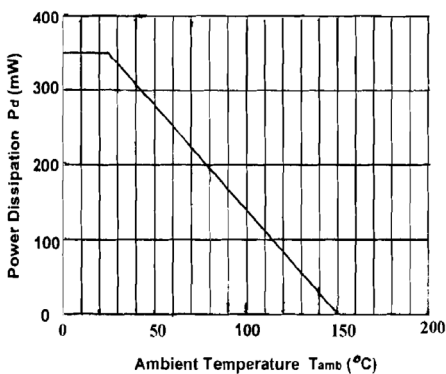
Temperature Coefficient



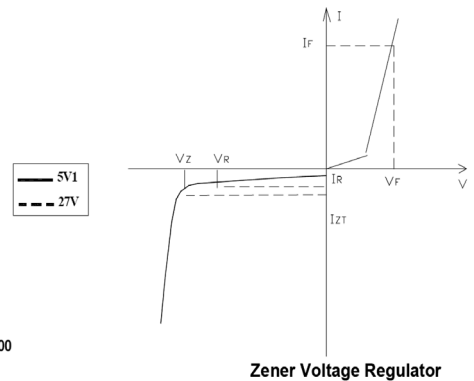
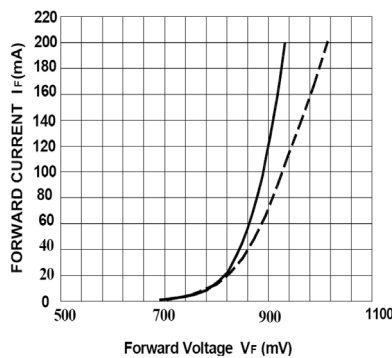
Temperature Coefficient



Power Derating Curve



Typical Forward Voltage

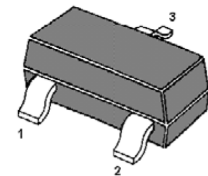
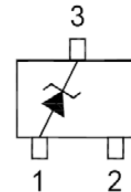
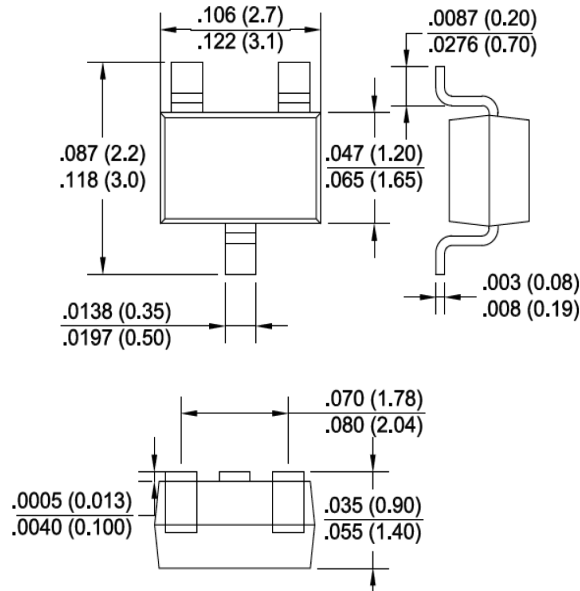


Silicon Planar Zener Diode



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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