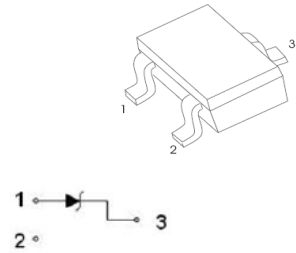


SOT-523 Plastic-Encapsulate Diodes**BZX84C2V4T-BZX84C39T****Zener Diodes**

SOT-523

**FEATURES**

- Zener Voltages From 2.4V - 39V
- 150mW Power Dissipation
- Planar Die Construction

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

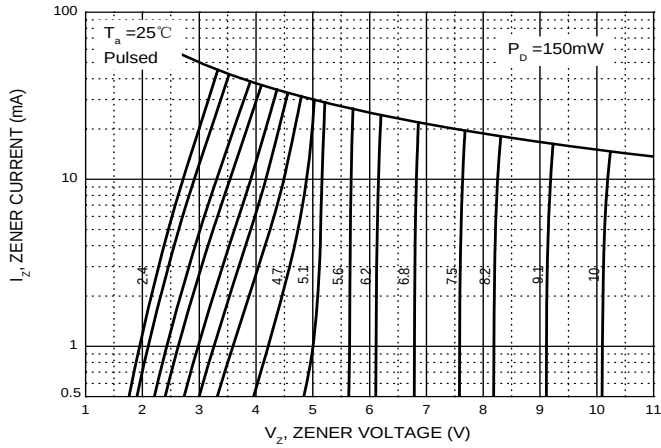
Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F=10\text{mA}$	V_F	0.9	V
Power Dissipation(Note 2)	P_D	150	mW
Thermal Resistance from Junction to Ambient (Note 2)	$R_{\theta JA}$	833	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

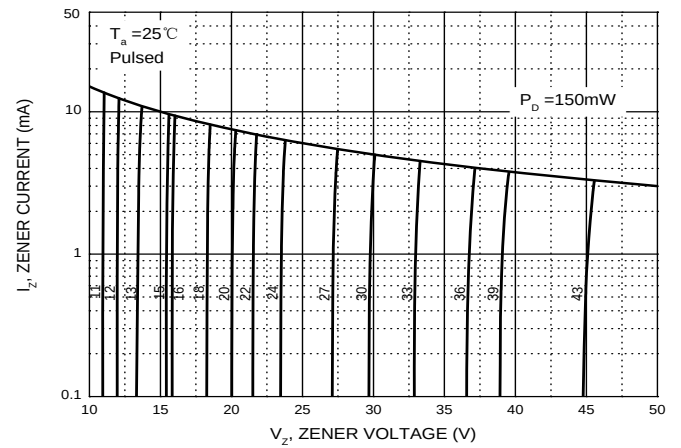
Type Number	Marking Code	Zener Voltage Range (Note 3)				Maximum Zener Impedance (Note 4)			Maximum Reverse Current (Note 3)		Temperature Coefficient of Zener Voltage @ $I_{ZT}=5\text{mA}$ ($\text{mV}/^{\circ}\text{C}$)	
		V_Z @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R	@ V_R	Min	Max
		Nom (V)	Min (V)	Max (V)	mA	Ω		mA	μA	V		
BZX84C2V4T	RB	2.4	2.2	2.6	5.0	100	600	1.0	50	1.0	-3.5	0
BZX84C2V7T	RC	2.7	2.5	2.9	5.0	100	600	1.0	20	1.0	-3.5	0
BZX84C3V0T	RD	3.0	2.8	3.2	5.0	95	600	1.0	20	1.0	-3.5	0
BZX84C3V3T	RE	3.3	3.1	3.5	5.0	95	600	1.0	5.0	1.0	-3.5	0
BZX84C3V6T	RF	3.6	3.4	3.8	5.0	90	600	1.0	5.0	1.0	-3.5	0
BZX84C3V9T	RG	3.9	3.7	4.1	5.0	90	600	1.0	3.0	1.0	-3.5	0
BZX84C4V3T	RH	4.3	4.0	4.6	5.0	90	600	1.0	3.0	1.0	-3.5	0
BZX84C4V7T	R1	4.7	4.4	5.0	5.0	80	600	1.0	3.0	2.0	-3.5	0.2
BZX84C5V1T	R2	5.1	4.8	5.4	5.0	60	500	1.0	2.0	2.0	-2.7	1.2
BZX84C5V6T	R3	5.6	5.2	6.0	5.0	40	480	1.0	1.0	2.0	-2.0	2.5
BZX84C6V2T	R4	6.2	5.8	6.6	5.0	10	400	1.0	3.0	4.0	0.4	3.7
BZX84C6V8T	R5	6.8	6.4	7.2	5.0	15	150	1.0	2.0	4.0	1.2	4.5
BZX84C7V5T	R6	7.5	7.0	7.9	5.0	15	80	1.0	1.0	5.0	2.5	5.3
BZX84C8V2T	R7	8.2	7.7	8.7	5.0	15	80	1.0	0.7	5.0	3.2	6.2
BZX84C9V1T	R8	9.1	8.5	9.6	5.0	15	80	1.0	0.5	6.0	3.8	7.0
BZX84C10T	R9	10	9.4	10.6	5.0	20	100	1.0	0.2	7.0	4.5	8.0
BZX84C11T	P1	11	10.4	11.6	5.0	20	150	1.0	0.1	8.0	5.4	9.0
BZX84C12T	P2	12	11.4	12.7	5.0	25	150	1.0	0.1	8.0	6.0	10.0
BZX84C13T	P3	13	12.4	14.1	5.0	30	150	1.0	0.1	8.0	7.0	11.0
BZX84C15T	P4	15	13.8	15.6	5.0	30	170	1.0	0.1	10.5	9.2	13.0
BZX84C16T	P5	16	15.3	17.1	5.0	40	200	1.0	0.1	11.2	10.4	14.0
BZX84C18T	P6	18	16.8	19.1	5.0	45	200	1.0	0.1	12.6	12.4	16.0
BZX84C20T	P7	20	18.8	21.2	5.0	55	225	1.0	0.1	14.0	14.4	18.0
BZX84C22T	P8	22	20.8	23.3	5.0	55	225	1.0	0.1	15.4	16.4	20.0
BZX84C24T	P9	24	22.8	25.6	5.0	70	250	1.0	0.1	16.8	18.4	22.0
BZX84C27T	PA	27	25.1	28.9	2.0	80	250	0.5	0.1	18.9	21.4	25.3
BZX84C30T	PB	30.0	28.0	32.0	2.0	80	300	0.5	0.1	21.0	24.4	29.4
BZX84C33T	PC	33.0	31.0	35.0	2.0	80	300	0.5	0.1	23.1	27.4	33.4
BZX84C36T	PD	36.0	34.0	38.0	2.0	90	325	0.5	0.1	25.2	30.4	37.4
BZX84C39T	PE	39.0	37.0	41.0	2.0	130	350	0.5	0.1	27.3	33.4	41.2

Typical Characteristics

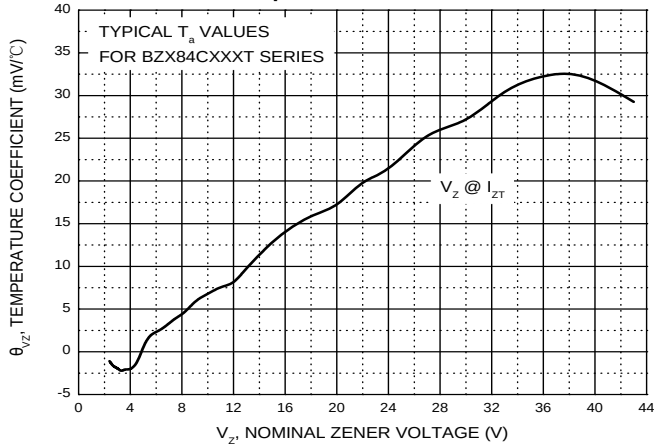
Zener Characteristics (V_Z Up to 10 V)



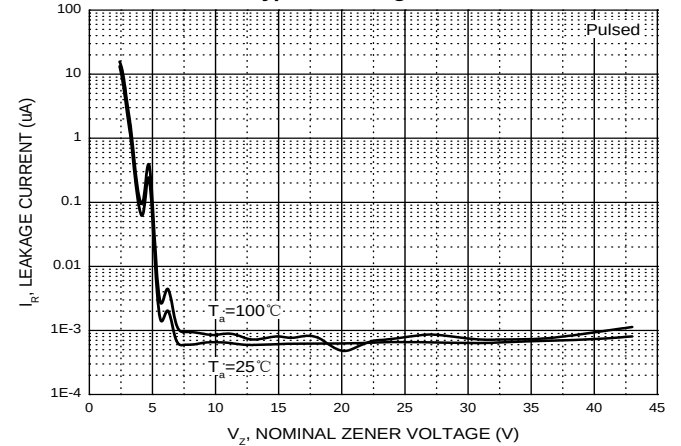
Zener Characteristics (11 V to 43 V)



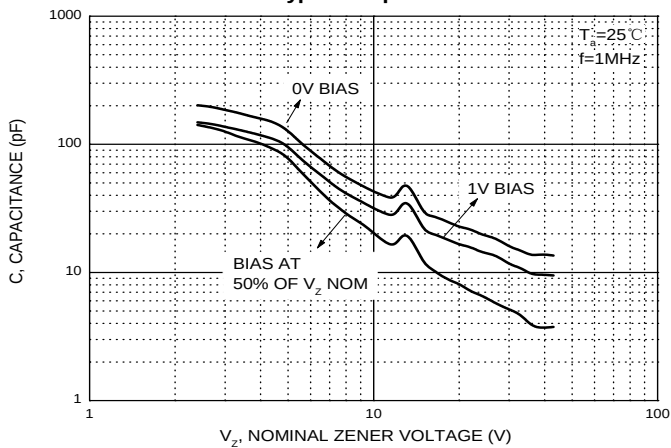
Temperature Coefficients



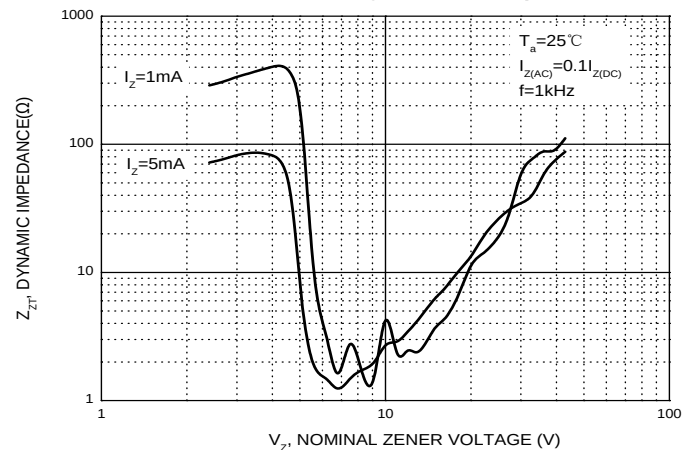
Typical Leakage Current



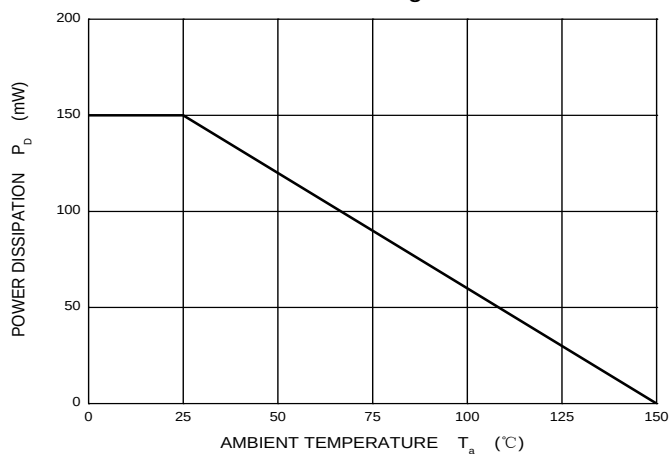
Typical Capacitance



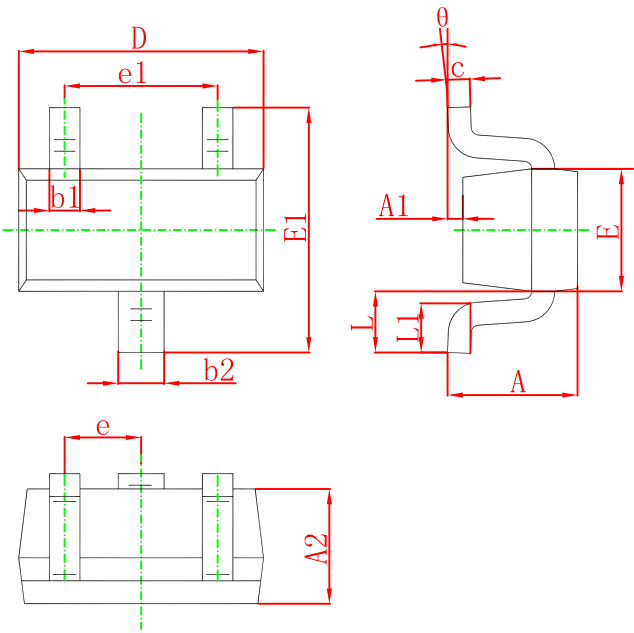
Effect of Zener Voltage on Zener Impedance



Power Derating Curve

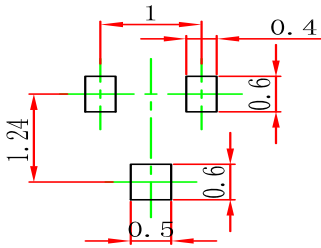


Package Outline Dimensions (SOT-523)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

Suggested Pad Layout (SOT-523)



- Note:
- 1.Controlling dimension:in millimeters.
 - 2.General tolerance:± 0.05mm.
 - 3.The pad layout is for reference purposes only.