

**BZX584B2V4  
 THRU  
 BZX584B39**

**Silicon  
 150 mWatt  
 Zener Diodes**

**Features**

- Planar Die construction
- 150mW Power Dissipation
- Zener Voltages from 2.4V - 39V
- Ideally Suited for Automated Assembly Processes
- Halogen free available upon request by adding suffix "-HF"

**Mechanical Data**

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

**Maximum Ratings @ 25°C Unless Otherwise Specified**

Maximum Forward Voltage@IF=10mA	V <sub>F</sub>	0.9	V
Power Dissipation (Note A)	P <sub>D</sub>	150	mWatt
Operation And Storage Temperature	T <sub>J</sub> , T <sub>STG</sub>	-55°C to +150°C	
Thermal Resistance	R <sub>thja</sub>	833	° C/W

NOTES:

A. Valid provided that device terminals are kept at ambient temperature.

**SOD523**

**DIMENSIONS**

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.059	.067	1.50	1.70	
B	.043	.051	1.10	1.30	
C	.030	.033	0.75	0.85	
D	.001	.003	0.01	0.07	
E	.010	.014	0.25	0.35	
F	.003	.006	0.08	0.15	
G	.020	.028	0.50	0.70	
H	.020	.031	0.51	0.77	

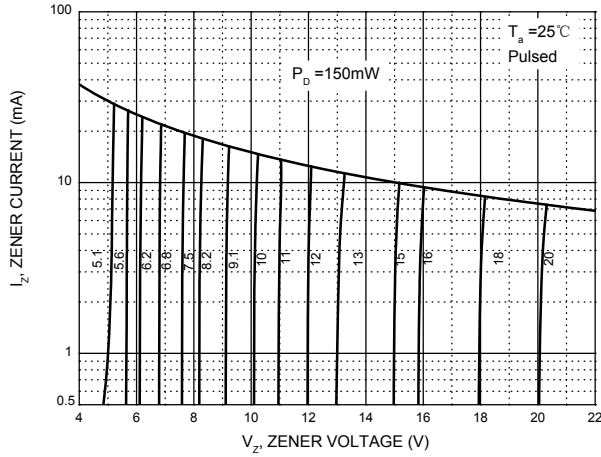
**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25 unless otherwise specified)**

Type Number	Type Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Typical Temperature Coefficient @I <sub>ZT</sub> =5 mA mV/°C	
		V <sub>Z</sub> @I <sub>ZT</sub>			I <sub>ZT</sub>	Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub>	V <sub>R</sub>	Min	Max
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V		
BZX584B2V4	2V1/05	2.4	2.35	2.45	5	100	600	1.0	50	1.0	-3.5	0
BZX584B2V7	2V2/15	2.7	2.65	2.75	5	100	600	1.0	20	1.0	-3.5	0
BZX584B3V0	2V3/25	3	2.94	3.06	5	95	600	1.0	10	1.0	-3.5	0
BZX584B3V3	2V4/35	3.3	3.23	3.37	5	95	600	1.0	5	1.0	-3.5	0
BZX584B3V6	2V5/45	3.6	3.53	3.67	5	90	600	1.0	5	1.0	-3.5	0
BZX584B3V9	2V6/55	3.9	3.82	3.98	5	90	600	1.0	3	1.0	-3.5	0
BZX584B4V3	2V7/65	4.3	4.21	4.39	5	90	600	1.0	3	1.0	-3.5	0
BZX584B4V7	2Z1/75	4.7	4.61	4.79	5	80	500	1.0	3	2.0	-3.5	0.2
BZX584B5V1	2Z2/85	5.1	5.00	5.20	5	60	480	1.0	2	2.0	-2.7	1.2
BZX584B5V6	2Z3/95	5.6	5.49	5.71	5	40	400	1.0	1	2.0	-2.0	2.5
BZX584B6V2	2Z4/A5	6.2	6.08	6.32	5	10	150	1.0	3	4.0	0.4	3.7
BZX584B6V8	2Z5/B5	6.8	6.66	6.94	5	15	80	1.0	2	4.0	1.2	4.5
BZX584B7V5	2Z6/C5	7.5	7.35	7.65	5	15	80	1.0	1	5.0	2.5	5.3
BZX584B8V2	2Z7/D5	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2
BZX584B9V1	2Z8/E5	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0
BZX584B10	2Z9/F5	10	9.80	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0
BZX584B11	2Y1/G5	11	10.78	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0
BZX584B12	2Y2/H5	12	11.76	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0
BZX584B13	2Y3/J5	13	12.74	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0
BZX584B15	2Y4/K5	15	14.70	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0
BZX584B16	2Y5/L5	16	15.68	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0
BZX584B18	2Y6/M5	18	17.64	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0
BZX584B20	2Y7/N5	20	19.60	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0
BZX584B22	2Y8/P5	22	21.56	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0
BZX584B24	2Y9/R5	24	23.52	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0
BZX584B27	2X1/S5	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3
BZX584B30	2X2/T5	30	29.40	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4
BZX584B33	2X3/U5	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4
BZX584B36	2X4/V5	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4
BZX584B39	2X5/X5	39	38.22	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2

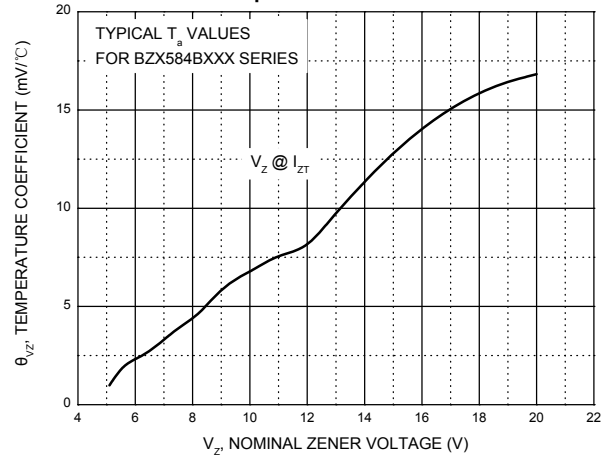
**Note:**

1. Tested with pulses, period=5ms,pulse width =300us.
2. f = 1KHz

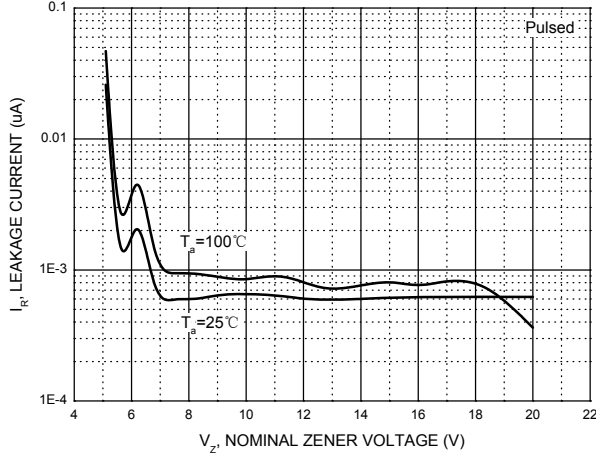
**Zener Characteristics ( $V_z$  5.1V to 20 V)**



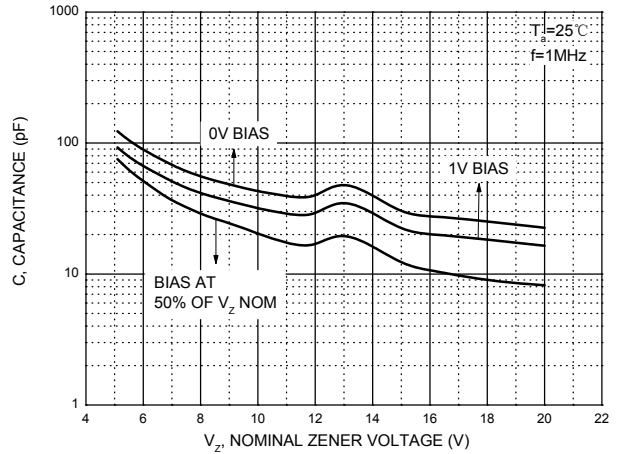
**Temperature Coefficients**



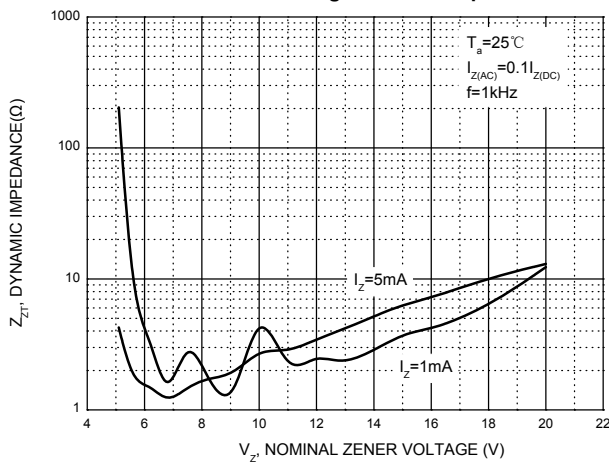
**Typical Leakage Current**



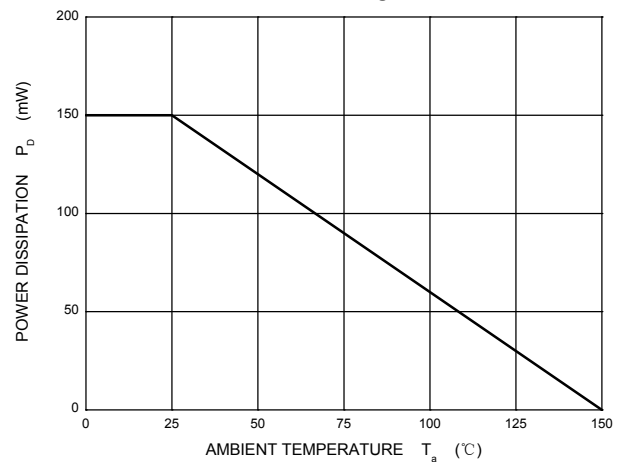
**Typical Capacitance**



**Effect of Zener Voltage on Zener Impedance**



**Power Derating Curve**





**Ordering Information :**

Device	Packing
Part Number-TP	Tape&Reel: 8Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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