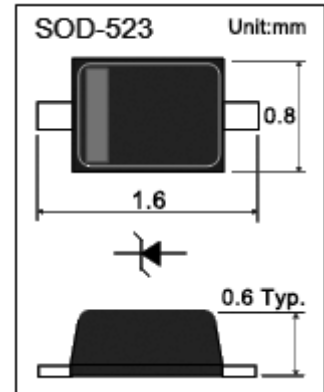


Zener Diodes / DATA SHEET

BZX584B Series

- ◇ Constant Voltage control
- ◇ Wide Voltage Range Selection 2.4V to 75V
- ◇ **SOD523 Thin** SMD package
- ◇ RoHS compliant / Green EMC
- ◇ Matte Tin (Sn) Lead finish
- ◇ Cathode Band / Device marking
Refer to table list



Maximum Ratings (Ta = 25 °C)

Symbol	Parameter	Value	Units
P_D	Power Dissipation	200	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 to +150	°C
I_{ZM}	Maximum Regulator Current	P_D/V_Z	mA

Electrical Characteristics (Ta = 25 °C)

Type Number	Device Marking	V_Z (V) *1			I_{ZT} mA	$Z_{ZT}@I_{ZT}$ Ω	$Z_{ZK}@I_{ZK}$ Ω	I_{ZK} (mA)	I_R (μ A)	V_R (V)
		Nom(V)	Min(V)	Max(V)						
BZX584B2V4	Z1.	2.4	2.35	2.45	5	100	600	1.0	50	1.0
BZX584B2V7	Z2.	2.7	2.65	2.75	5	100	600	1.0	20	1.0
BZX584B3V0	Z3.	3.0	2.94	3.06	5	95	600	1.0	10	1.0
BZX584B3V3	Z4.	3.3	3.23	3.37	5	95	600	1.0	5	1.0
BZX584B3V6	Z5.	3.6	3.53	3.67	5	90	600	1.0	5	1.0
BZX584B3V9	Z6.	3.9	3.82	3.98	5	90	600	1.0	3	1.0
BZX584B4V3	Z7.	4.3	4.21	4.39	5	90	600	1.0	3	1.0
BZX584B4V7	X1.	4.7	4.61	4.79	5	80	500	1.0	3	2.0
BZX584B5V1	2Z2	5.1	5.00	5.20	5	60	480	1.0	2	2.0
BZX584B5V6	2Z3	5.6	5.49	5.71	5	40	400	1.0	1	2.0
BZX584B6V2	2Z4	6.2	6.08	6.32	5	10	150	1.0	3	4.0

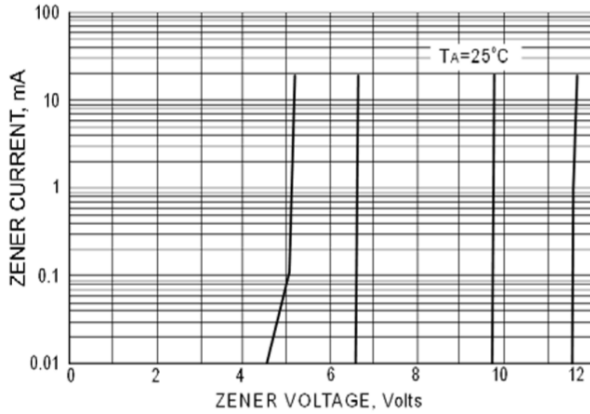
Continued next page

Electrical Characteristics (Ta = 25 °C)

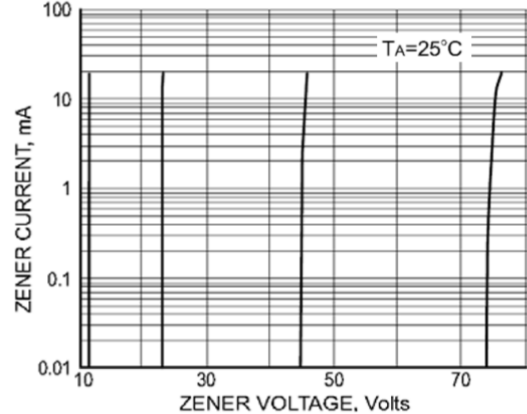
Type Number	Device Marking	Vz (V) ^{*1}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R
		Nom(V)	Min(V)	Max(V)	mA	Ω		(mA)	(uA)	(V)
BZX584B6V8	2Z5	6.8	6.66	6.94	5	15	80	1.0	2	4.0
BZX584B7V5	2Z6	7.5	7.35	7.65	5	15	80	1.0	1	5.0
BZX584B8V2	2Z7	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0
BZX584B9V1	2Z8	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0
BZX584B10	2Z9	10	9.80	10.20	5	20	150	1.0	0.2	7.0
BZX584B11	2Y1	11	10.78	11.22	5	20	150	1.0	0.1	8.0
BZX584B12	2Y2	12	11.76	12.24	5	25	150	1.0	0.1	8.0
BZX584B13	2Y3	13	12.74	13.26	5	30	170	1.0	0.1	8.0
BZX584B15	2Y4	15	14.70	15.30	5	30	200	1.0	0.1	10.5
BZX584B16	2Y5	16	15.68	16.32	5	40	200	1.0	0.1	11.2
BZX584B18	2Y6	18	17.64	18.36	5	45	225	1.0	0.1	12.6
BZX584B20	2Y7	20	19.60	20.40	5	55	225	1.0	0.1	14.0
BZX584B22	W8.	22	21.56	22.44	5	55	250	1.0	0.1	15.4
BZX584B24	W9.	24	23.52	24.48	5	70	250	1.0	0.1	16.8
BZX584B27	Y1.	27	26.46	27.54	2	80	300	0.5	0.1	18.9
BZX584B30	Y2.	30	29.40	30.60	2	80	300	0.5	0.1	21.0
BZX584B33	Y3.	33	32.34	33.66	2	80	325	0.5	0.1	23.1
BZX584B36	Y4.	36	35.28	36.72	2	90	350	0.5	0.1	25.2
BZX584B39	Y5.	39	38.22	39.78	2	130	350	0.5	0.1	27.3
BZX584B43	Y6.	43	42.14	43.86	2	130	350	0.5	0.1	29.4
BZX584B47	V1.	47	45.83	48.17	2	170	1000	0.25	0.1	36
BZX584B51	V2.	51	49.73	52.27	2	180	1300	0.25	0.1	39
BZX584B56	V3.	56	54.60	57.40	2	200	1400	0.25	0.1	43
BZX584B62	V4.	62	60.45	63.55	2	225	1400	0.25	0.1	47
BZX584B68	V5.	68	66.30	69.70	2	240	1600	0.25	0.1	52
BZX584B75	V6.	75	73.13	76.87	2	265	1700	0.25	0.1	56

*1 Pulse width = 10 ms

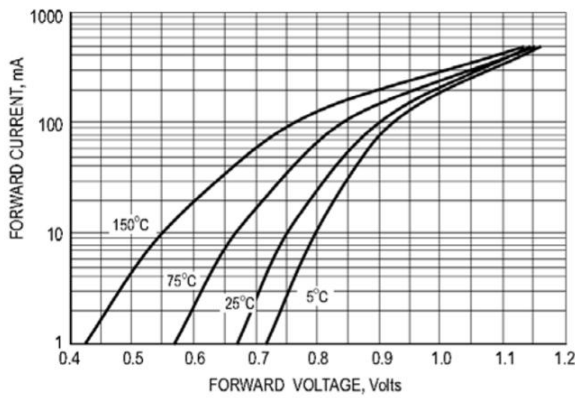
Typical Characteristics



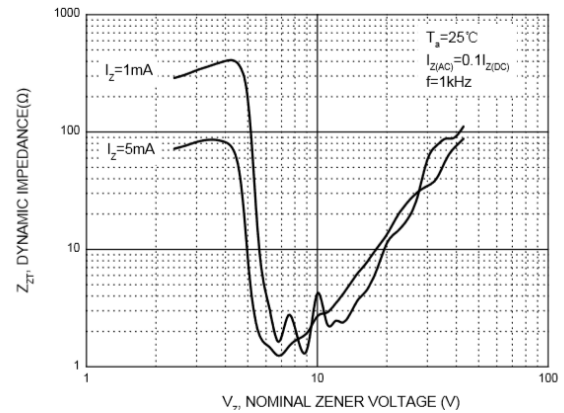
ZENER BREAKDOWN CHARACTERISTIC



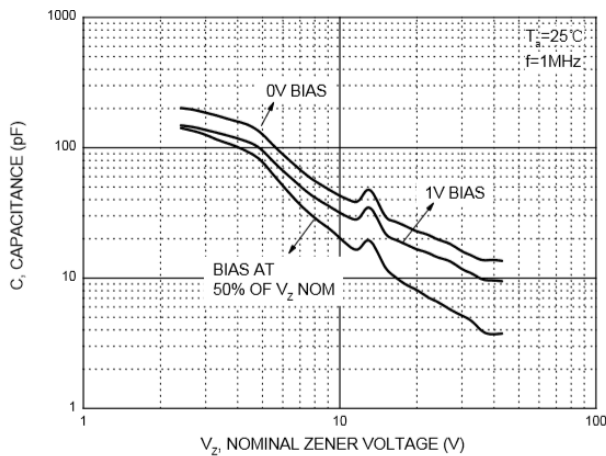
ZENER BREAKDOWN CHARACTERISTICS



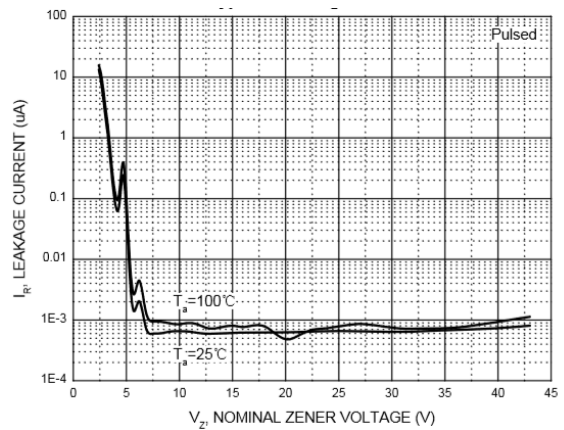
TYPICAL FORWARD VOLTAGE



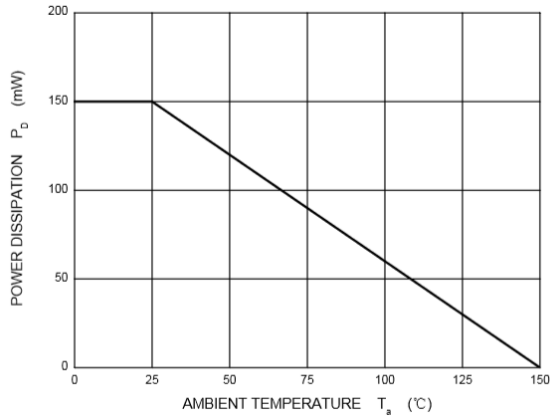
Effect of Zener Voltage on Zener Impedance



Typical Capacitance



Typical Leakage Current



Power Derating Curve

Ordering Information

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
BZX584B Series	SOD523	Tape & Reel 8000pcs /7" Reel	8 mm	4 mm	Conductive	

Package Dimensions

Package outline : SOD-523

Unit	A	A1	b	c	D	E	E1	E2	L	θ
Max.	0.77	0.70	0.35	0.15	0.85	1.30	1.70	0.20	0.07	7°
Min.	0.51	0.50	0.25	0.08	0.75	1.10	1.50	REF.	0.01	REF.

SOD523 Package Outline

Lead Pattern Recommendation

Note:

1. Halogen free, EMC
2. Pb free solder
3. Lead thickness includes solder plating
4. Lead frame: Cu
5. Other Tolerance: ± 0.05
6. Dimensions are exclusive of Burrs, Mold Flash and Tie Bar extrusions
7. Unit: mm

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