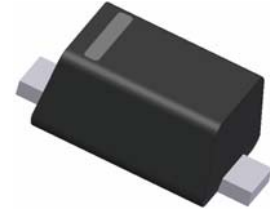


## 200mW SOD-523 SURFACE MOUNT Very Small Outline Flat Lead Plastic Package Zener Voltage Regulators

Green Product



SOD-523 Flat Lead

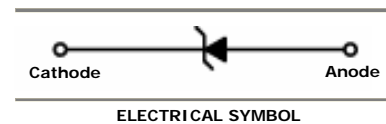
### Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	200	mW
$T_{STG}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
$T_{OPR}$	Operating Temperature Range	-55 to +150	$^\circ\text{C}$

These ratings are limiting values above which the serviceability of the diode may be impaired.

### Specification Features:

- Wide Zener Voltage Range Selection, 2.4V to 75V
- Flat Lead SOD-523 Small Outline Plastic Package
- Extremely Small SOD-523 Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Terminal Finish
- Band Indicates Cathode



### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$I_{ZK}$ (mA)	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) Max	$V_R$ (Volts)
		Min	Nom	Max						
BZX584B2V4	05	2.35	2.4	2.45	5	100	1	564	45	1
BZX584B2V7	15	2.65	2.7	2.75	5	100	1	564	18	1
BZX584B3V0	25	2.94	3.0	3.06	5	100	1	564	9	1
BZX584B3V3	35	3.23	3.3	3.37	5	95	1	564	4.5	1
BZX584B3V6	45	3.53	3.6	3.67	5	90	1	564	4.5	1
BZX584B3V9	+5	3.82	3.9	3.98	5	90	1	564	2.7	1
BZX584B4V3	65	4.21	4.3	4.39	5	90	1	564	2.7	1
BZX584B4V7	75	4.61	4.7	4.79	5	80	1	470	2.7	2
BZX584B5V1	85	5.00	5.1	5.20	5	60	1	451	1.8	2
BZX584B5V6	95	5.49	5.6	5.71	5	40	1	376	0.9	2
BZX584B6V2	A5	6.08	6.2	6.32	5	10	1	141	2.7	4
BZX584B6V8	B5	6.66	6.8	6.94	5	15	1	75	1.8	4
BZX584B7V5	C5	7.35	7.5	7.65	5	15	1	75	0.9	5
BZX584B8V2	D5	8.04	8.2	8.36	5	15	1	75	0.63	5
BZX584B9V1	E5	8.92	9.1	9.28	5	15	1	94	0.45	6
BZX584B10V	F5	9.80	10	10.20	5	20	1	141	0.18	7
BZX584B11V	G5	10.78	11	11.22	5	20	1	141	0.09	8
BZX584B12V	H5	11.76	12	12.24	5	25	1	141	0.09	8
BZX584B13V	J5	12.74	13	13.26	5	30	1	160	0.09	8
BZX584B15V	K5	14.70	15	15.30	5	30	1	188	0.045	10.5
BZX584B16V	L5	15.68	16	16.32	5	40	1	188	0.045	11.2
BZX584B18V	M5	17.64	18	18.36	5	45	1	212	0.045	12.6

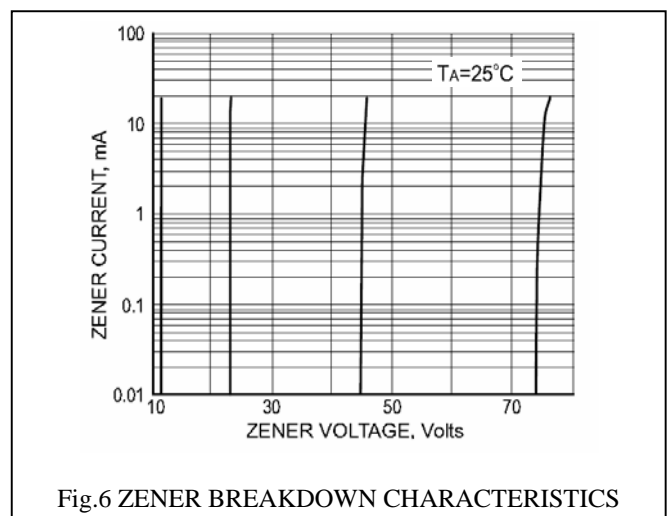
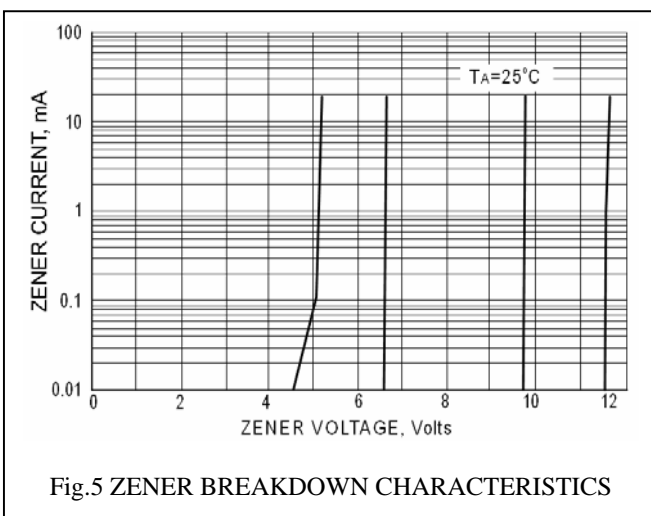
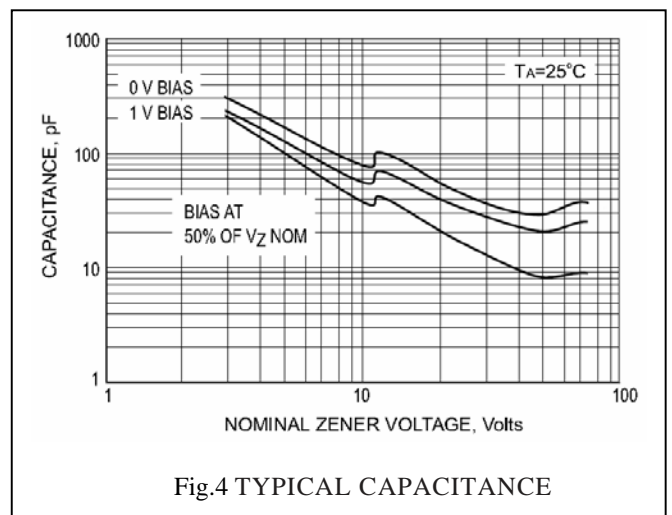
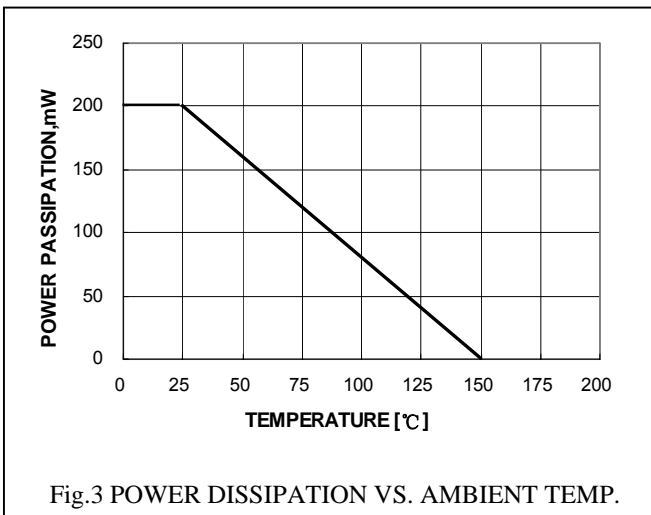
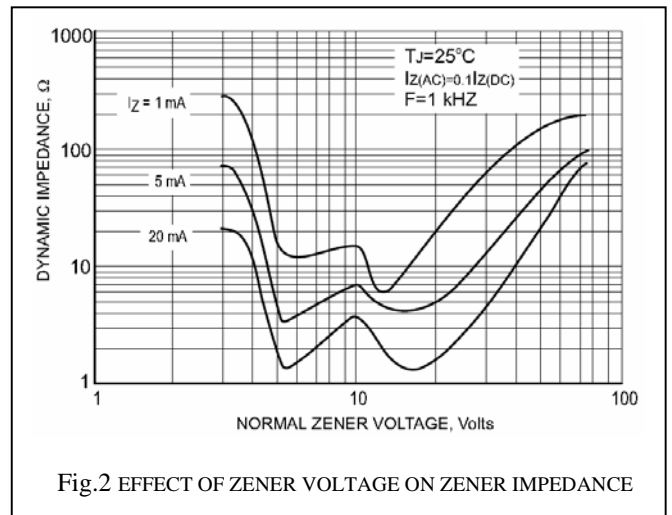
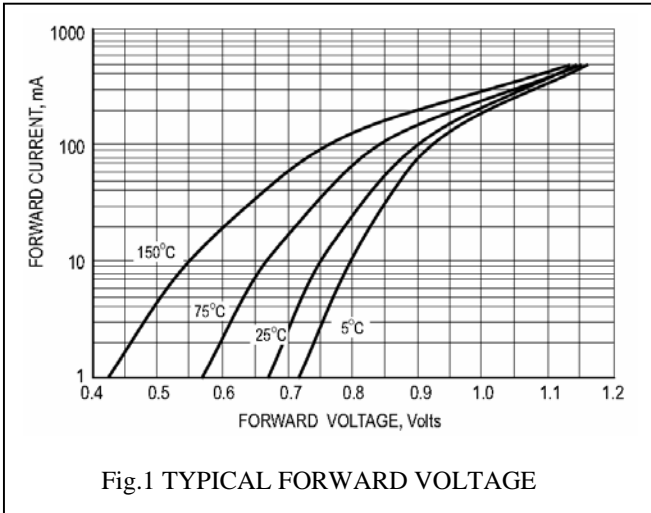
**Electrical Characteristics**  $T_A = 25^\circ\text{C}$  unless otherwise noted

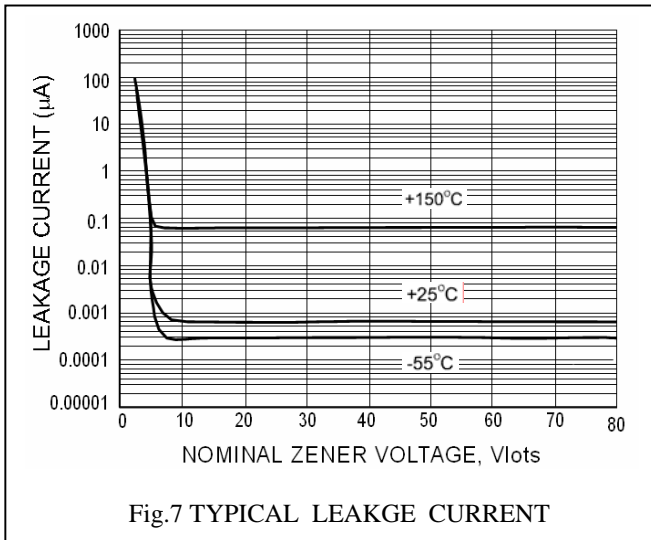
Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$I_{ZK}$ (mA)	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) Max	$V_R$ (Volts)
		Min	Nom	Max						
BZX584B20V	N5	19.60	20	20.40	5	55	1	212	0.045	14.0
BZX584B22V	P5	21.56	22	22.44	5	55	1	235	0.045	15.4
BZX584B24V	R5	23.52	24	24.48	5	70	1	235	0.045	16.8
BZX584B27V	S5	26.46	27	27.54	2	80	0.5	282	0.045	18.9
BZX584B30V	T5	29.40	30	30.60	2	80	0.5	282	0.045	21.0
BZX584B33V	U5	32.34	33	33.66	2	80	0.5	306	0.045	23.0
BZX584B36V	V5	35.28	36	36.72	2	90	0.5	329	0.045	25.2
BZX584B39V	X5	38.22	39	39.78	2	130	0.5	329	0.045	27.3
BZX584B43V	Y5	42.14	43	43.86	2	150	0.5	353	0.045	30.1
BZX584B47V	Z5	46.06	47	47.94	2	170	0.5	353	0.045	33.0
BZX584B51V	-5	49.98	51	52.02	2	180	0.5	376	0.045	35.7
BZX584B56V	=5	54.88	56	57.12	2	200	0.5	400	0.045	39.2
BZX584B62V	≅5	60.76	62	63.24	2	215	0.5	423	0.045	43.4
BZX584B68V	>5	66.64	68	69.36	2	240	0.5	447	0.045	47.6
BZX584B75V	<5	73.50	75	76.50	2	255	0.5	470	0.045	52.5

 $V_F$  Forward Voltage = 1 V Maximum @  $I_F = 10$  mA for all types

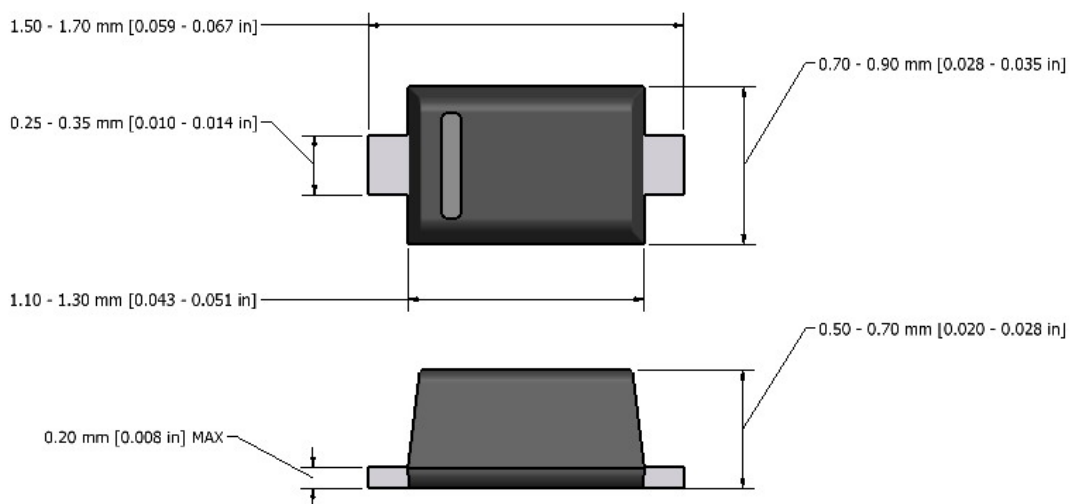
**Notes:**

1. The Zener Voltage ( $V_Z$ ) is tested under pulse condition of 10mS.
2. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Tak Cheong Electronics representative.
3. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed to  $I_{ZT}$  or  $I_{ZK}$ .

**Rating and Characteristic Curves**




**Flat Lead SOD-523 Package Outline**



**Note:** Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

## **NOTICE**

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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