2% Zener Voltage Tolerance SMD Zener Diode

FEATURES

- Wide zener voltage range selection: 2.4V to 75V
- V_Z Tolerance Selection of ± 2%
- Surface device type mounting
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
P_D	150	mW
V_Z	2.4 - 75	V
$T_{J\ MAX}$	150	°C

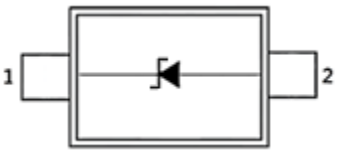
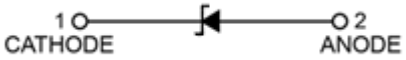
APPLICATIONS

- General regulation functions

MECHANICAL DATA

- Case: SOD-523F
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: 1.30mg (approximately)

Pb-Free RoHS COMPLIANT HALOGEN FREE

PACKAGE: SOD-523F	PIN CONFIGURATION	CIRCUIT DIAGRAM
		

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P_D	150	mW
Junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	833	°C/W

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ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PART NUMBER	DEVICE MARKING	ZENER VOLTAGE			TEST CURRENT	REGULAR IMPEDANCE		TEST CURRENT	LEAKAGE CURRENT		TYPICAL TEMPERATURE COEFFICIENT		TEST CURRENT
		V_Z @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R		@ I_{ZTC}		I_{ZTC}
		V			mA	Ω	Ω	mA	μA	V	mV/°C		mA
		Min	Nom	Max		Max	Max		Max		Min	Max	
BZX584B2V4	Z0	2.35	2.4	2.45	5	100	600	1.0	50	1.0	-3.5	0	5
BZX584B2V7	Z2.	2.65	2.7	2.75	5	100	600	1.0	20	1.0	-3.5	0	5
BZX584B3V0	Z3.	2.94	3.0	3.06	5	95	600	1.0	10	1.0	-3.5	0	5
BZX584B3V3	Z4.	3.23	3.3	3.37	5	95	600	1.0	5	1.0	-3.5	0	5
BZX584B3V6	Z5.	3.53	3.6	3.67	5	90	600	1.0	5	1.0	-3.5	0	5
BZX584B3V9	Z6.	3.82	3.9	3.98	5	90	600	1.0	3	1.0	-3.5	0	5
BZX584B4V3	Z7.	4.21	4.3	4.39	5	90	600	1.0	3	1.0	-3.5	0	5
BZX584B4V7	Z1.	4.61	4.7	4.79	5	80	500	1.0	3	2.0	-3.5	0.2	5
BZX584B5V1	2Z2	5.00	5.1	5.20	5	60	480	1.0	2	2.0	-2.7	1.2	5
BZX584B5V6	2Z3	5.49	5.6	5.71	5	40	400	1.0	1	2.0	-2.0	2.5	5
BZX584B6V2	2Z4	6.08	6.2	6.32	5	10	150	1.0	3	4.0	0.4	3.7	5
BZX584B6V8	2Z5	6.66	6.8	6.94	5	15	80	1.0	2	4.0	1.2	4.5	5
BZX584B7V5	2Z6	7.35	7.5	7.65	5	15	80	1.0	1	5.0	2.5	5.3	5
BZX584B8V2	2Z7	8.04	8.2	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2	5
BZX584B9V1	2Z8	8.92	9.1	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0	5
BZX584B10	2Z9	9.80	10	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0	5
BZX584B11	2Y1	10.78	11	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0	5
BZX584B12	2Y2	11.76	12	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0	5
BZX584B13	2Y3	12.74	13	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0	5
BZX584B15	2Y4	14.70	15	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0	5
BZX584B16	2Y5	15.68	16	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0	5
BZX584B18	2Y6	17.64	18	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0	5
BZX584B20	2Y7	19.60	20	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0	5
BZX584B22	W8.	21.56	22	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0	5
BZX584B24	W9.	23.52	24	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0	5
BZX584B27	Y1.	26.46	27	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3	2
BZX584B30	Y2.	29.40	30	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4	2
BZX584B33	Y3.	32.34	33	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4	2
BZX584B36	Y4.	35.28	36	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4	2
BZX584B39	Y5.	38.22	39	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2	2
BZX584B43	Y6.	42.14	43	43.86	2	130	350	0.5	0.1	29.4	37.6	46.6	2
BZX584B47	V1.	45.83	47	48.17	2	170	1000	0.25	0.1	36.0.	42.0	51.8	2
BZX584B51	V2.	49.73	51	52.27	2	180	1300	0.25	0.1	39.0	46.6	57.2	2
BZX584B56	V3.	54.60	56	57.40	2	200	1400	0.25	0.1	43.0	52.2	63.8	2
BZX584B62	V4.	60.45	62	63.55	2	225	1400	0.25	0.1	47.0	58.8	71.6	2
BZX584B68	V5.	66.30	68	69.70	2	240	1600	0.25	0.1	52.0	65.6	79.8	2
BZX584B75	V6.	73.13	75	76.87	2	265	1700	0.25	0.1	56.0	73.4	88.6	2

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ORDERING INFORMATION		
ORDERING CODE[1]	**PACKAGE**	**PACKING**
BZX584Bx RSG	SOD-523F	8K / 7" Reel

Notes:

1. "x" defines voltage from 2.4V(BZX584B2V4) to 75V(BZX584B75)

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CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

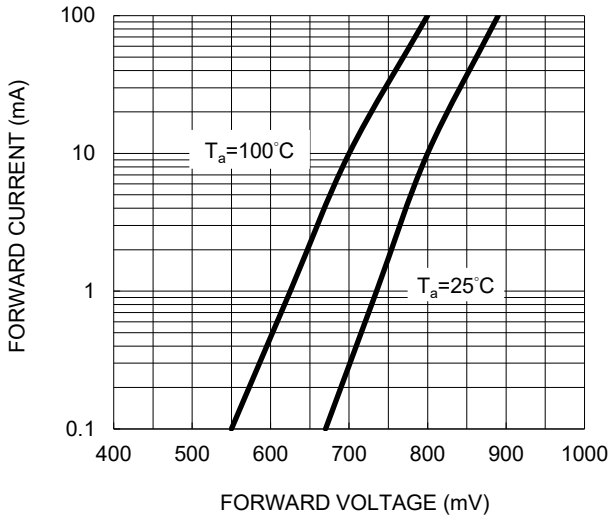


Fig.2 Admissible Power Dissipation Curve

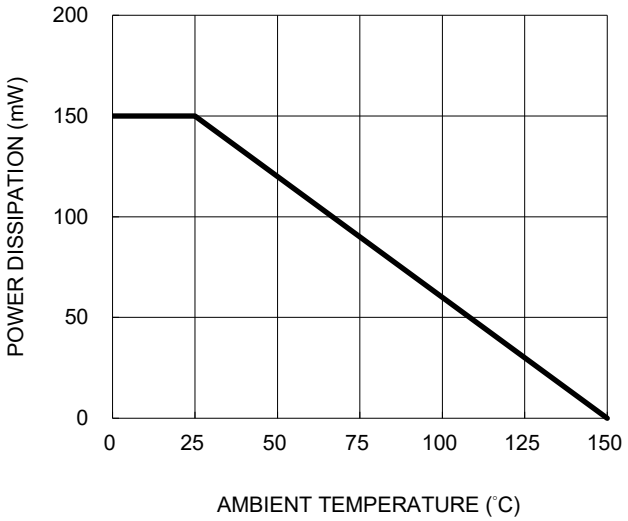
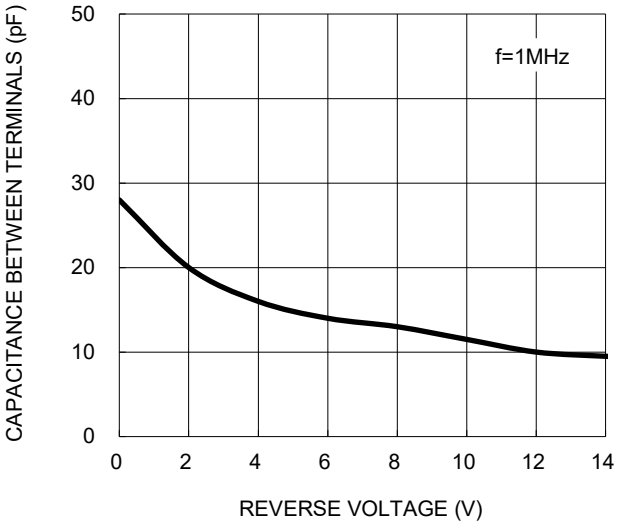


Fig.3 Typical Capacitance Characteristics



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CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.4 Zener Breakdown Characteristics

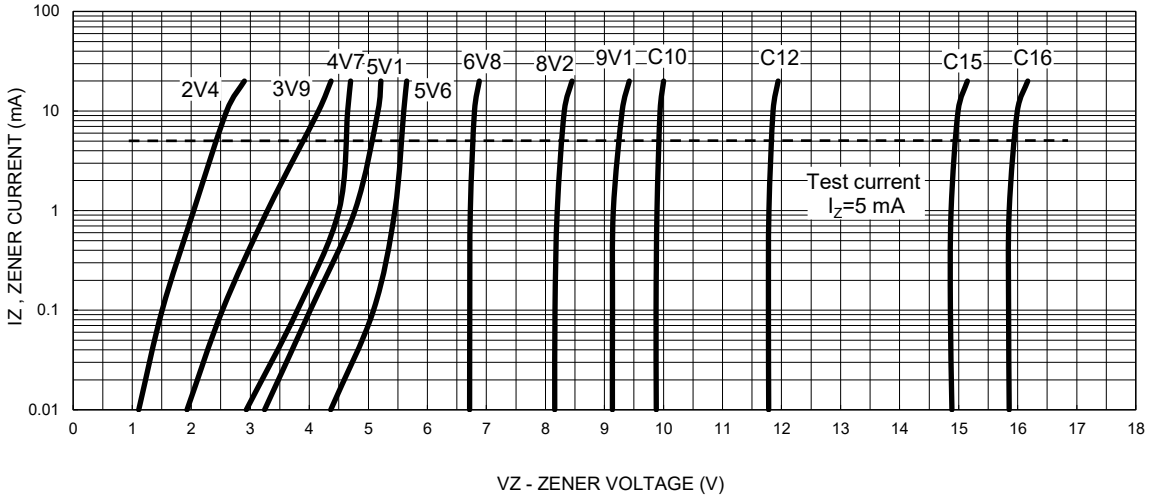
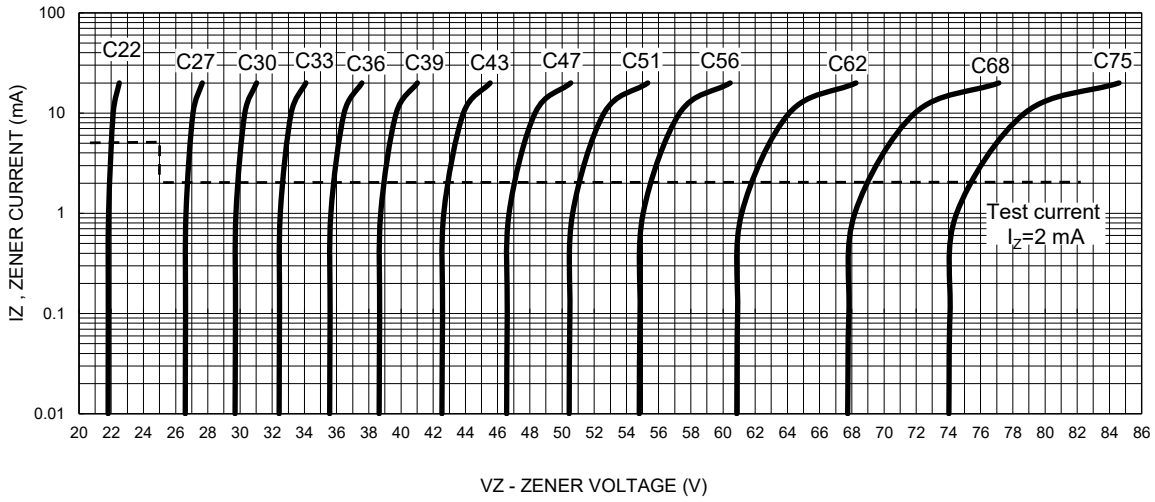


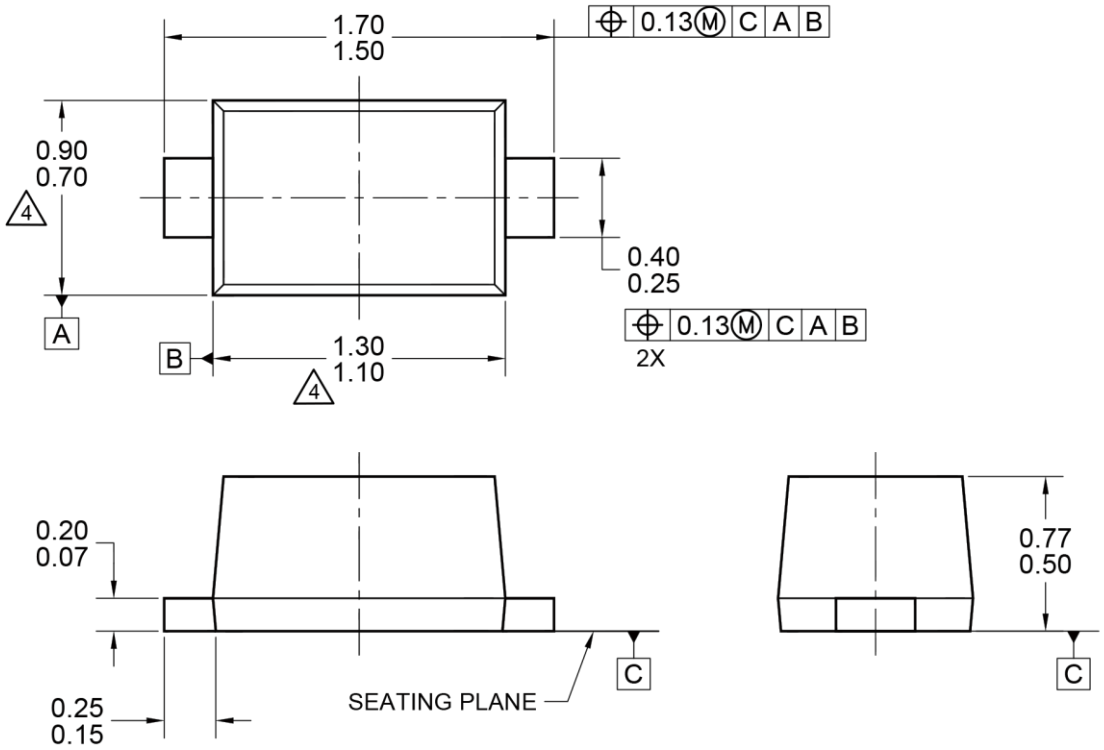
Fig.5 Zener Breakdown Characteristics

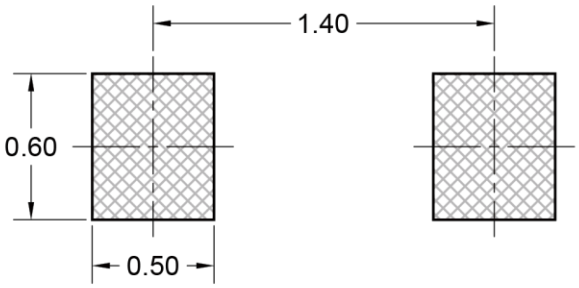


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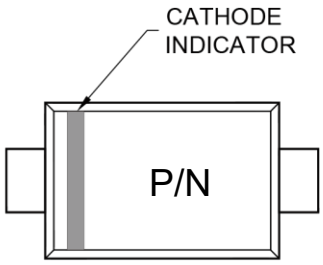
PACKAGE OUTLINE DIMENSION

SOD-523F





SUGGESTED PAD LAYOUT



MARKING DIAGRAM

P/N = Device marking

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: EIAJ ED-7500A, SC-79.
4. MOLDED PLASTIC BODY LATERAL DIMENSIONS DO NOT INCLUDE MOLD FLASH.
5. DWG NO. REF: HQ2SD07-SOD523F-047 REV A.

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