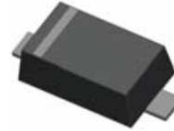


Small Signal Product

2% Zener Voltage Tolerance SMD Zener Diode

FEATURES

- Wide zener voltage range selection: 4.7V to 20V
- Surface Mount Device type
- Moisture sensitivity level 1
- Pb free and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code



SOD-523F



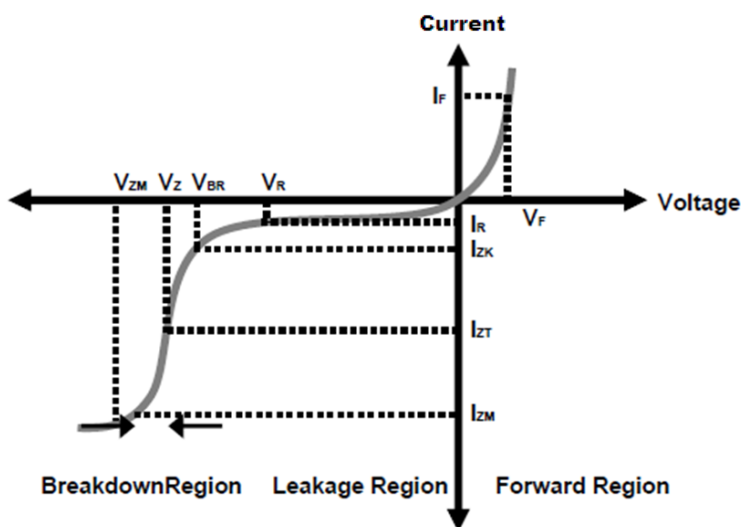
MECHANICAL DATA

- Case: SOD-523F small outline plastic package
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/10s
- Polarity: Indicated by cathode band
- Weight: 1.3mg ± 20 %

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P _D	150	mW
Forward Voltage	V _F	0.9	V
Thermal Resistance (Junction to Ambient)	R _{θJA}	833	°C/W
Junction Temperature	T _J	150	°C
Junction and Storage Temperature Range	T _{STG}	- 55 to + 150	°C

Note1: Valid provided that electrodes are kept at ambient temperature

Zener I vs. V Characteristics



- V_{BR} : Voltage at I_{ZK}
- I_{ZK} : Test current for voltage V_{BR}
- Z_{ZK} : Dynamic impedance at I_{ZK}
- I_{ZT} : Test current for voltage V_Z
- V_Z : Voltage at current I
- Z_{ZT} : Dynamic impedance at I_{ZT}
- I_{ZM} : Maximum steady state current
- V_{ZM} : Voltage at I_{ZM}

Small Signal Product
Electrical Characteristics

 (Ratings at $T_A=25^{\circ}\text{C}$ ambient temperature unless otherwise specified)

Part Number	Marking	Zener Voltage Range			Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature Coefficient		
		$V_Z @ I_{ZT}$ (V)			I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω)	I_{ZK} (mA)	$Z_{ZK} @ I_{ZK}$ (Ω)	$I_R @ V_R$ (μA)	V_R (V)	$T_c @ I_{ZT}$ (mV/ $^{\circ}\text{C}$)	
		Min	Nom	Max							Min	Max
BZX584B4V7	2Z1	4.61	4.7	4.79	5	80	1	500	3	2.0	-3.5	0.2
BZX584B5V1	2Z2	5.00	5.1	5.20	5	60	1	480	2	2.0	-2.7	1.2
BZX584B5V6	2Z3	5.49	5.6	5.71	5	40	1	400	1	2.0	-2.0	2.5
BZX584B6V2	2Z4	6.08	6.2	6.32	5	10	1	150	3	4.0	0.4	3.7
BZX584B6V8	2Z5	6.66	6.8	6.94	5	15	1	80	2	4.0	1.2	4.5
BZX584B7V5	2Z6	7.35	7.5	7.65	5	15	1	80	1	5.0	2.5	5.3
BZX584B8V2	2Z7	8.04	8.2	8.36	5	15	1	80	0.7	5.0	3.2	6.2
BZX584B9V1	2Z8	8.92	9.1	9.28	5	15	1	100	0.5	6.0	3.8	7.0
BZX584B10	2Z9	9.80	10	10.20	5	20	1	150	0.2	7.0	4.5	8.0
BZX584B11	2Y1	10.78	11	11.22	5	20	1	150	0.1	8.0	5.4	9.0
BZX584B12	2Y2	11.76	12	12.24	5	25	1	150	0.1	8.0	6.0	10.0
BZX584B13	2Y3	12.74	13	13.26	5	30	1	170	0.1	8.0	7.0	11.0
BZX584B15	2Y4	14.70	15	15.30	5	30	1	200	0.1	10.5	9.2	13.0
BZX584B16	2Y5	15.68	16	16.32	5	40	1	200	0.1	11.2	10.4	14.0
BZX584B18	2Y6	17.64	18	18.36	5	45	1	225	0.1	12.6	12.4	16.0
BZX584B20	2Y7	19.60	20	20.40	5	55	1	225	0.1	14.0	14.4	18.0

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RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

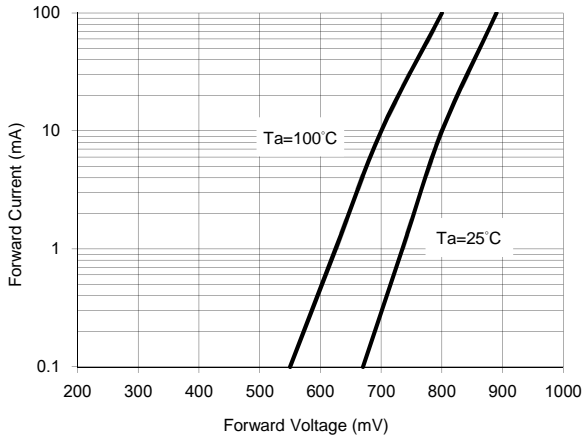


Fig. 2 Reverse Current vs Reverse Voltage

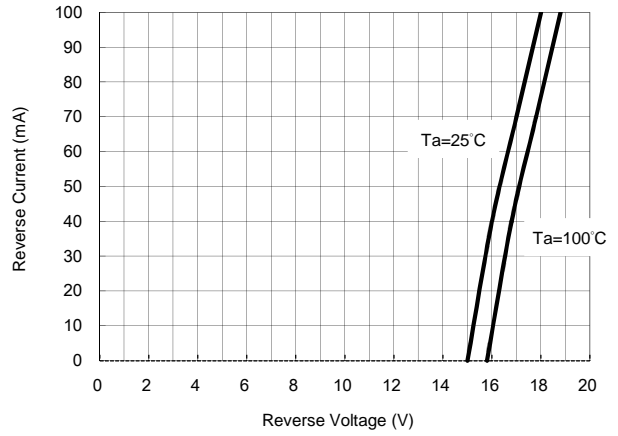


Fig. 3 Admissible Power Dissipation Curve

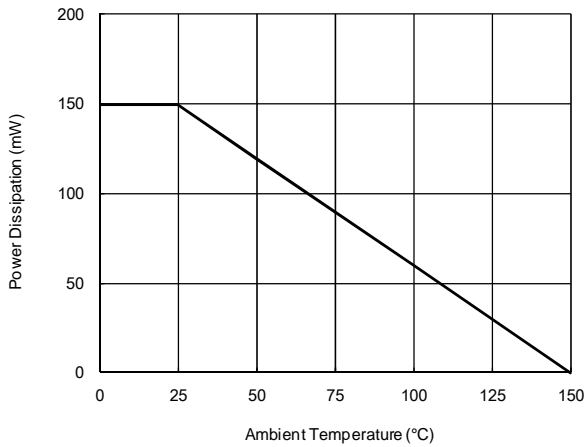
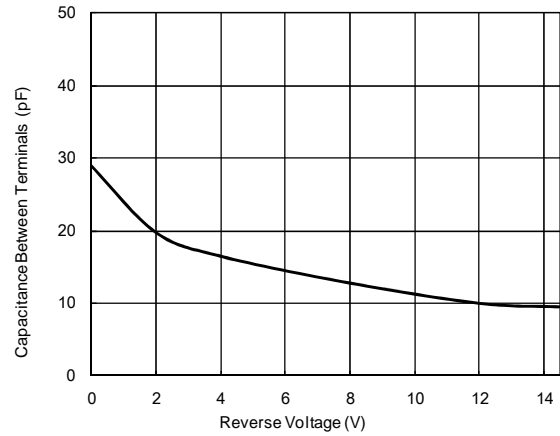


Fig. 4 Typical Capacitance Characteristics



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ORDERING INFORMATION					
PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND	PACKAGE	PACKING
BZX584Bxxx (Note1)	(Note 2)	RS	G	SOD-523F	3K / 7" Reel

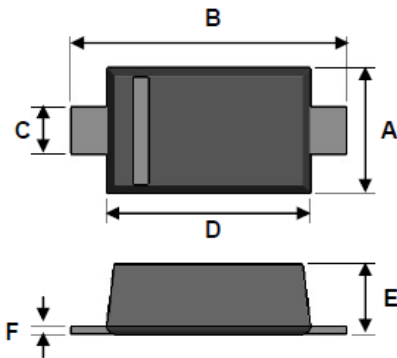
Note 1: "xxx" is Device Code from "4V7" through "20".

Note 2: Manufacture special control, if empty means no special control requirement.

EXAMPLE					
PREFERRED P/N	PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
BZX584B4V7 RSG	BZX584B4V7		RS	G	Green compound
BZX584B4V7-M0 RSG	BZX584B4V7	M0	RS	G	Green compound

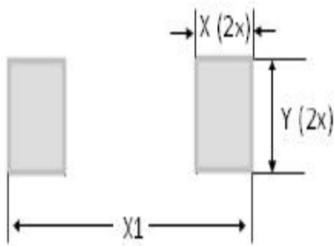
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PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.70	0.90	0.028	0.035
B	1.50	1.70	0.059	0.067
C	0.25	0.40	0.010	0.016
D	1.10	1.30	0.043	0.051
E	0.50	0.77	0.020	0.030
F	0.07	0.20	0.003	0.008

SUGGESTED PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
X	0.60	0.024
X1	2.30	0.091
Y	0.80	0.031

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