

SURFACE MOUNT ZENER DIODE

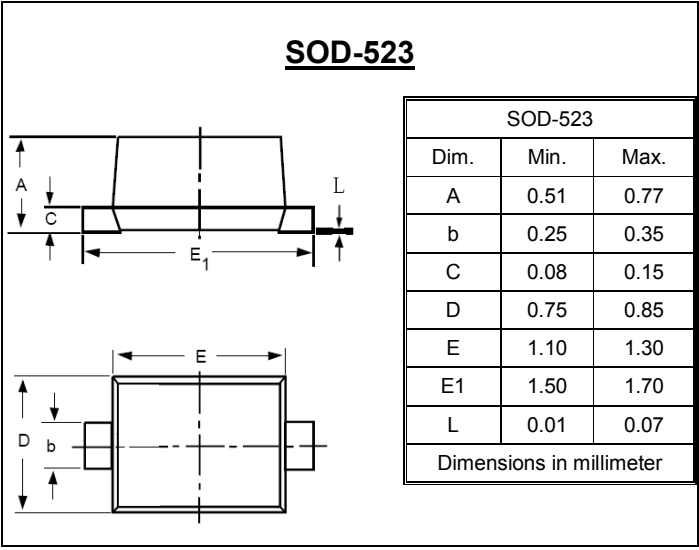
**REVERSE VOLTAGE – 2.4 to 39 Volts
POWER DISSIPATION – 0.15 Watts**

FEATURES

- Planar die construction
- 150mW power dissipation rating
- Ultra-small surface mount package

MECHANICAL DATA

- Case: SOD-523 Plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture Sensitivity: Level 1 per J-STD-020D
- Lead Free in RoHS 2002/95/EC Compliant



Maximum Ratings & Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @IF=10mA	V _F	0.9	V
Power Dissipation	P _D	150	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	833	°C/W
Operating Temperature Range	T _J	150	°C
Storage Temperature Range	T _{STG}	-65~+150	°C

Device Marking :

Device P/N	Marking	Pin Diagram	Equivalent Circuit Diagram
BZX584C2V4	XXX=Specific device code (See below table)		

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Symbol	Parameter
V _Z	Reverse Zener Voltage @ I _{ZT}
I _{ZT}	Reverse Current
Z _{ZT}	Maximum Zener Impedance @ I _{ZT}
I _{ZK}	Reverse Current
Z _{ZK}	Maximum Zener Impedance @ I _{ZK}
I _R	Reverse Leakage Current @ V _R
V _R	Reverse Voltage
I _F	Forward Current
V _F	Forward Voltage @ I _F

Device	Device marking	Zener Voltage				Maximum Zener Impedance			Maximum Reverse Current		Temperature Coefficient of Zener Voltage @IZT		
		VZ@IZT			IZT	ZZT@IZT	ZZK@IZK	IZK	IR	VR	mV/°C		IZT
		Nom	Min	Max	mA	Ω	Ω	mA	uA	V	Min	Max	mA
BZX584C2V4	WX	2.4	2.2	2.6	5.0	100	600	1.0	50	1.0	-3.5	0	5.0
BZX584C2V7	W1	2.7	2.5	2.9	5.0	100	600	1.0	20	1.0	-3.5	0	5.0
BZX584C3V0	W2	3.0	2.8	3.2	5.0	95	600	1.0	20	1.0	-3.5	0	5.0
BZX584C3V3	W3	3.3	3.1	3.5	5.0	95	600	1.0	5.0	1.0	-3.5	0	5.0
BZX584C3V6	W4	3.6	3.4	3.8	5.0	90	600	1.0	5.0	1.0	-3.5	0	5.0
BZX584C3V9	W5	3.9	3.7	4.1	5.0	90	600	1.0	3.0	1.0	-3.5	0	5.0
BZX584C4V3	W6	4.3	4.0	4.6	5.0	90	600	1.0	3.0	1.0	-3.5	0	5.0
BZX584C4V7	W7	4.7	4.4	5.0	5.0	80	600	1.0	3.0	2.0	-3.5	0.2	5.0
BZX584C5V1	W8	5.1	4.8	5.4	5.0	60	500	1.0	2.0	2.0	-2.7	1.2	5.0
BZX584C5V6	W9	5.6	5.2	6.0	5.0	40	480	1.0	1.0	2.0	-2.0	2.5	5.0
BZX584C6V2	WA	6.2	5.8	6.6	5.0	10	400	1.0	3.0	4.0	0.4	3.7	5.0
BZX584C6V8	WB	6.8	6.4	7.2	5.0	15	150	1.0	2.0	4.0	1.2	4.5	5.0
BZX584C7V5	WC	7.5	7.0	7.9	5.0	15	80	1.0	1.0	5.0	2.5	5.3	5.0
BZX584C8V2	WD	8.2	7.7	8.7	5.0	15	80	1.0	0.7	5.0	3.2	6.2	5.0
BZX584C9V1	WE	9.1	8.5	9.6	5.0	15	80	1.0	0.5	6.0	3.8	7.0	5.0
BZX584C10	WF	10	9.4	10.6	5.0	20	100	1.0	0.2	7.0	4.5	8.0	5.0
BZX584C11	WG	11	10.4	11.6	5.0	20	150	1.0	0.1	8.0	5.4	9.0	5.0
BZX584C12	WH	12	11.4	12.7	5.0	25	150	1.0	0.1	8.0	6.0	10.0	5.0
BZX584C13	WI	13	12.4	14.1	5.0	30	150	1.0	0.1	8.0	7.0	11.0	5.0
BZX584C15	WJ	15	13.8	15.6	5.0	30	170	1.0	0.1	10.5	9.2	13.0	5.0
BZX584C16	WK	16	15.3	17.1	5.0	40	200	1.0	0.1	11.2	10.4	14.0	5.0
BZX584C18	WL	18	16.8	19.1	5.0	45	200	1.0	0.1	12.6	12.4	16.0	5.0
BZX584C20	WM	20	18.8	21.2	5.0	55	225	1.0	0.1	14.0	14.4	18.0	5.0
BZX584C22	WN	22	20.8	23.3	5.0	55	225	1.0	0.1	15.4	16.4	20.0	5.0
BZX584C24	WO	24	22.8	25.6	5.0	70	250	1.0	0.1	16.8	18.4	22.0	5.0
BZX584C27	WP	27	25.1	28.9	2.0	80	250	0.5	0.1	18.9	21.4	25.3	2.0
BZX584C30	WQ	30	28.0	32.0	2.0	80	300	0.5	0.1	21.0	24.4	29.4	2.0
BZX584C33	WR	33	31.0	35.0	2.0	80	300	0.5	0.1	23.1	27.4	33.4	2.0
BZX584C36	WS	36	34.0	38.0	2.0	90	325	0.5	0.1	25.2	30.4	37.4	2.0
BZX584C39	WT	39	37.0	41.0	2.0	130	350	0.5	0.1	27.3	33.4	41.2	2.0

REV. 1, Oct-2010, KSJR05

Notes:

1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
2. Short duration test pulse used to minimize self-heating effect.
3. f = 1KHz.

BZX584CxS Series Typical Characteristics

Fig.1 Power Derating Curve

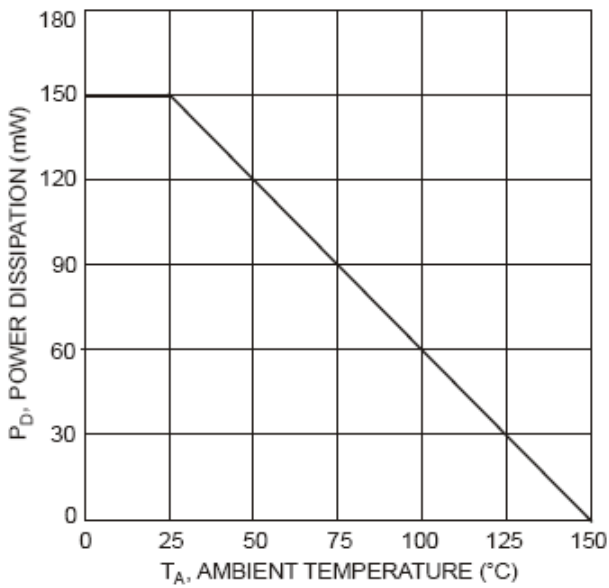


Fig.2 Typical Zener Breakdown Characteristics

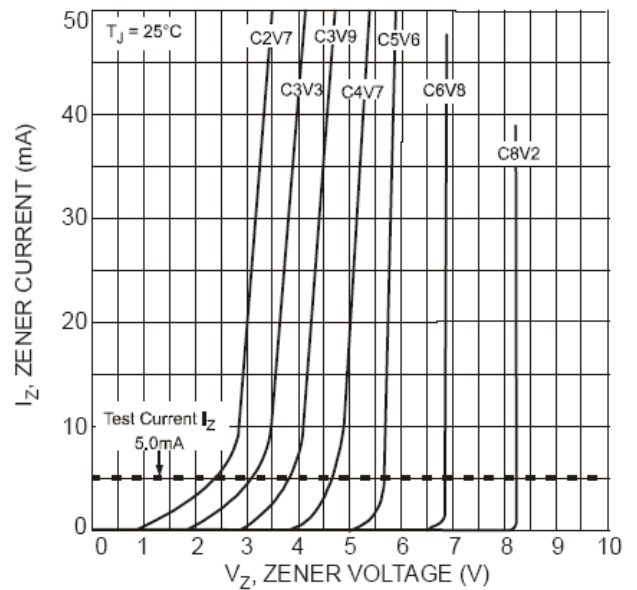


Fig.3 Typical Zener Breakdown Characteristics

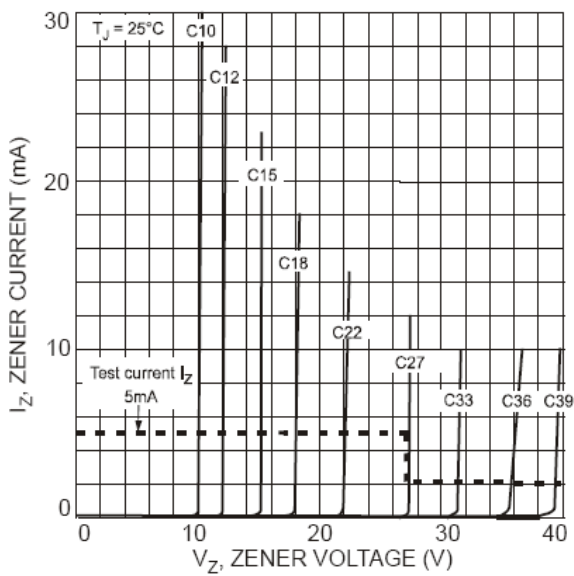
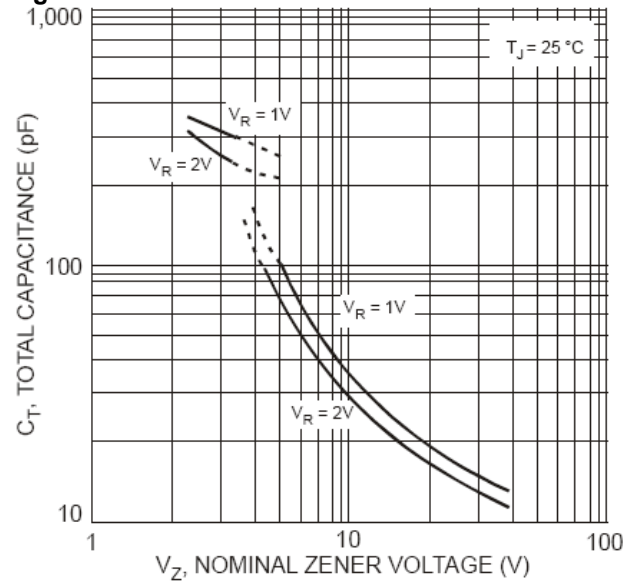


Fig.4 Typical Total Capacitance vs. Nominal Zener Voltage



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