



BZT52C2V0S THRU BZT52C75VS

Surface Mount Zener Diode

Features

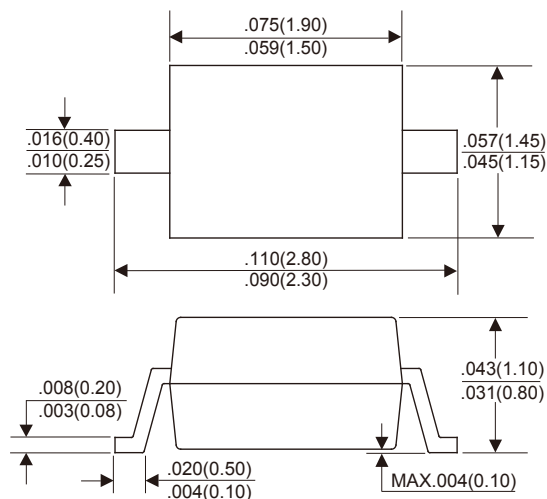
- ★ Small surface mount package
- ★ Ideally suited for automated assembly processes
- ★ Low zener impedance
- ★ High stability and high reliability

Mechanical Data

- ★ Case: Molded plastic, SOD-323
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202, method 208
- ★ Polarity: Color band denotes cathode end
- ★ Mounting position: Any

Zener Voltage 2.0 to 75 V
Power Dissipation 200 mW

SOD-323



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation (Note 1)	P_D	200	mW
Forward voltage @ $I_F=10\text{mA}$ (Note 2)	V_F	0.9	V
Thermal resistance from junction to ambient	$R_{\theta JA}$	625	°C/W
Junction temperature range	T_J	-65 to +150	°C
Storage temperature range	T_{STG}	-65 to +150	°C

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

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

Part Number	Device Marking Code	Nominal Zener Voltage $V_Z@I_{ZT}$			Maximum Zener Impedance $f = 1\text{kHz}$			Maximum Reverse Leakage Current $I_R@V_R$		Temperature Coefficient of Zener Voltage $@I_{ZT} = 5\text{mA}$ $\text{mV}/^\circ\text{C}$	
		Min(V)	Max(V)	$I_{ZT}(\text{mA})$	$Z_{ZT}@I_{ZT}$ (Ω)	$Z_{ZK}@I_{ZK}$ (Ω)	I_{ZK} (mA)	I_R (μA)	V_R (V)	Min	Max
BZT52C2V0S	WY	1.8	2.15	5	150	600	1	100	1	-3.5	0
BZT52C2V4S	WX	2.2	2.6	5	100	600	1	50	1	-3.5	0
BZT52C2V7S	W1	2.5	2.9	5	100	600	1	20	1	-3.5	0
BZT52C3V0S	W2	2.8	3.2	5	95	600	1	10	1	-3.5	0
BZT52C3V3S	W3	3.1	3.5	5	95	600	1	5	1	-3.5	0
BZT52C3V6S	W4	3.4	3.8	5	90	600	1	5	1	-3.5	0
BZT52C3V9S	W5	3.7	4.1	5	90	600	1	3	1	-3.5	0
BZT52C4V3S	W6	4	4.6	5	90	600	1	3	1	-3.5	0
BZT52C4V7S	W7	4.4	5	5	80	500	1	3	2	-3.5	0.2
BZT52C5V1S	W8	4.8	5.4	5	60	480	1	2	2	-2.7	1.2
BZT52C5V6S	W9	5.2	6	5	40	400	1	1	2	-2	2.5
BZT52C6V2S	WA	5.8	6.6	5	10	150	1	3	4	0.4	3.7
BZT52C6V8S	WB	6.4	7.2	5	15	80	1	2	4	1.2	4.5
BZT52C7V5S	WC	7	7.9	5	15	80	1	1	5	2.5	5.3
BZT52C8V2S	WD	7.7	8.7	5	15	80	1	0.7	5	3.2	6.2
BZT52C9V1S	WE	8.5	9.6	5	15	100	1	0.5	6	3.8	7
BZT52C10VS	WF	9.4	10.6	5	20	150	1	0.2	7	4.5	8
BZT52C11VS	WG	10.4	11.6	5	20	150	1	0.1	8	5.4	9
BZT52C12VS	WH	11.4	12.7	5	25	150	1	0.1	8	6	10
BZT52C13VS	WI	12.4	14.1	5	30	170	1	0.1	8	7	11
BZT52C15VS	WJ	13.8	15.6	5	30	200	1	0.1	10.5	9.2	13
BZT52C16VS	WK	15.3	17.1	5	40	200	1	0.1	11.2	10.4	14
BZT52C18VS	WL	16.8	19.1	5	45	225	1	0.1	12.6	12.4	16
BZT52C20VS	WM	18.8	21.2	5	55	225	1	0.1	14	14.4	18
BZT52C22VS	WN	20.8	23.3	5	55	250	1	0.1	15.4	16.4	20
BZT52C24VS	WO	22.8	25.6	5	70	250	1	0.1	16.8	18.4	22
BZT52C27VS	WP	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3
BZT52C30VS	WQ	28	32	2	80	300	0.5	0.1	21	24.4	29.4
BZT52C33VS	WR	31	35	2	80	325	0.5	0.1	23.1	27.4	33.4
BZT52C36VS	WS	34	38	2	90	350	0.5	0.1	25.2	30.4	37.4
BZT52C39VS	WT	37	41	2	130	350	0.5	0.1	27.3	33.4	41.2
BZT52C43VS	WU	40	46	2	100	700	1	0.1	32	10	12
BZT52C47VS	WV	44	50	2	100	750	1	0.1	35	10	12
BZT52C51VS	WW	48	54	2	100	750	1	0.1	38	10	12
BZT52C56VS	XW	42	60	2	135	700	1	0.1	39	10	12
BZT52C62VS	6E	58	66	2	200	1000	1	0.2	47	10	12
BZT52C68VS	6F	64	72	2	250	1000	1	0.2	52	10	12
BZT52C75VS	6H	70	79	2	300	1000	1	0.2	57	10	12

RATINGS AND CHARACTERISTICS CURVES

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Fig.1 - Power Derating Curve

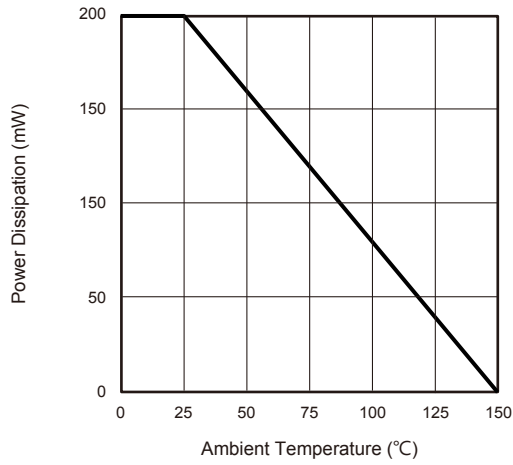


Fig.2 - Typical Zener Breakdown Characteristics

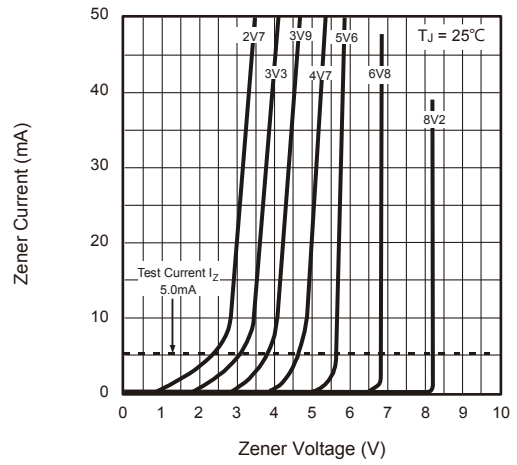


Fig.3 - Typical Zener Breakdown Characteristics

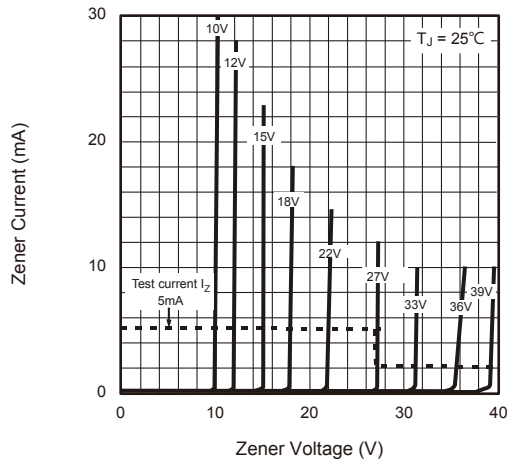


Fig.4 - Typical Total Capacitance vs. Nominal Zener Voltage

