

BZT52C2V0S THRU BZT52C75S

POWERDISSIPATION 200 mW
VOLTAGE 2.0 to 75 V

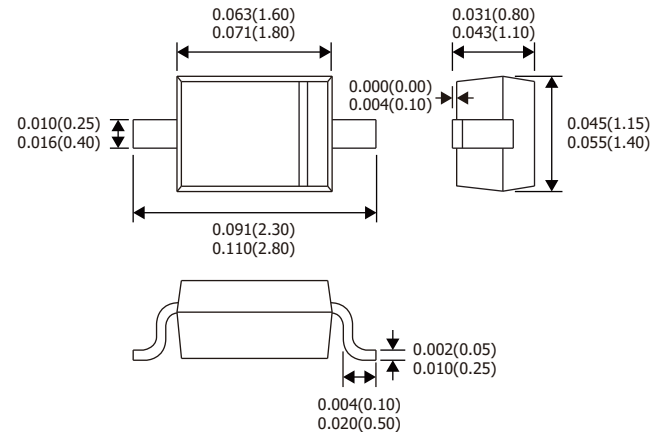
Features

- Low Zener Impedance
- Power Dissipation of 200mW
- High Stability and High Reliability

Mechanical Data

- Case : SOD-323 Small Outline Plastic Package
- Polarity : Color band denotes cathode end
- Mounting position : Any

SOD-323



Dimensions in inches and (millimeters)

Maximum Ratings and Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Items	Symbols	Value	Units
Power Dissipation ⁽¹⁾	P _D	200	mW
Forward Voltage @ I _F =10mA ⁽²⁾	V _F	0.9	V
Storage Temperature Range	T _S	-65+150	°C

Note :

(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

ELECTRICAL CHARACTERISTICS BZT52C2V0S THRU BZT52C75S

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified)

Device	Zener Voltage Range			Maximum Zener ⁽¹⁾ Impedance			Maximum Reverse Current		Typical Temperature Coefficient@ IzTC=mV/°C		Test Current IzTC
	Vz@IzT			IzT	ZzT@IzT	Zzk@Izk	IzK	Ir	Vr		
	Nom (V)	Min (V)	Max (V)	mA	Ω	Ω	mA	uA	V	Min	Max
BZT52C2V0S	2.0	1.80	2.15	5	150	600	1.0	100	1.0	-3.5	0
BZT52C2V4S	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0
BZT52C2V7S	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0
BZT52C3V0S	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0
BZT52C3V3S	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0
BZT52C3V6S	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0
BZT52C3V9S	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0
BZT52C4V3S	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0
BZT52C4V7S	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2
BZT52C5V1S	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2
BZT52C5V6S	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5
BZT52C6V2S	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7
BZT52C6V8S	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5
BZT52C7V5S	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3
BZT52C8V2S	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2
BZT52C9V1S	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0
BZT52C10S	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0
BZT52C11S	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0
BZT52C12S	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0
BZT52C13S	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0
BZT52C15S	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0
BZT52C16S	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0
BZT52C18S	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0
BZT52C20S	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0
BZT52C22S	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0
BZT52C24S	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0
BZT52C27S	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3
BZT52C30S	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4
BZT52C33S	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4
BZT52C36S	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4
BZT52C39S	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2
BZT52C43S	43	40.0	46.0	2	100	700	1.0	0.1	32.0	10.0	12.0
BZT52C47S	47	44.0	50.0	2	100	750	1.0	0.1	35.0	10.0	12.0
BZT52C51S	51	48.0	54.0	2	100	750	1.0	0.1	38.0	10.0	12.0
BZT52C56S	56	52.0	60.0	2	135	700	1.0	0.1	39.0	10.0	12.0
BZT52C62S	62	58.0	66.0	2	200	1000	1.0	0.2	47.0	10.0	12.0
BZT52C68S	68	64.0	72.0	2	250	1000	1.0	0.2	52.0	10.0	12.0
BZT52C75S	75	70.0	79.0	2	300	1000	1.0	0.2	57.0	10.0	12.0

Note : (1) f=1KHz

FIG.1-BREAKDOWN CHARACTERISTICS
at $T_J = \text{constant}$ (pulsed)

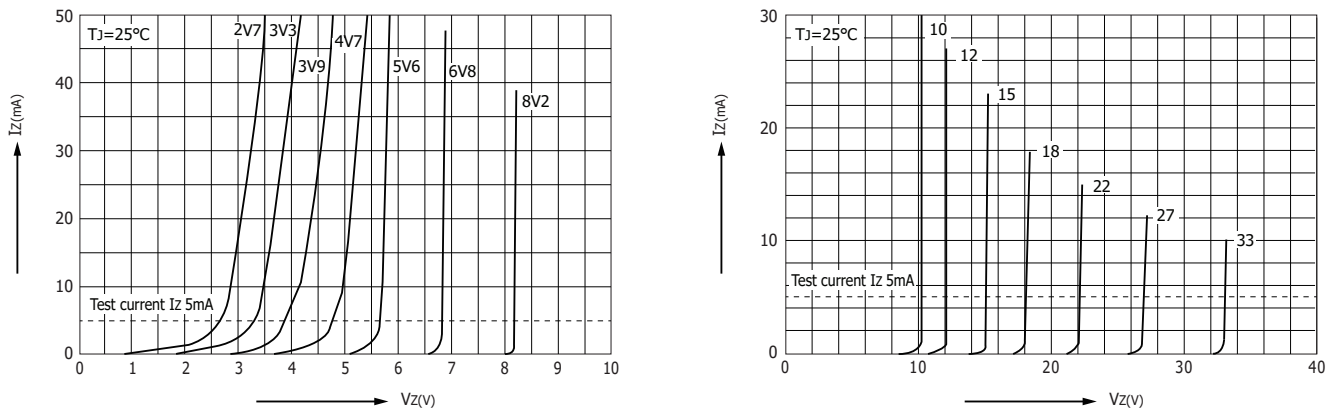


FIG.2-FORWARD CHARACTERISTICS

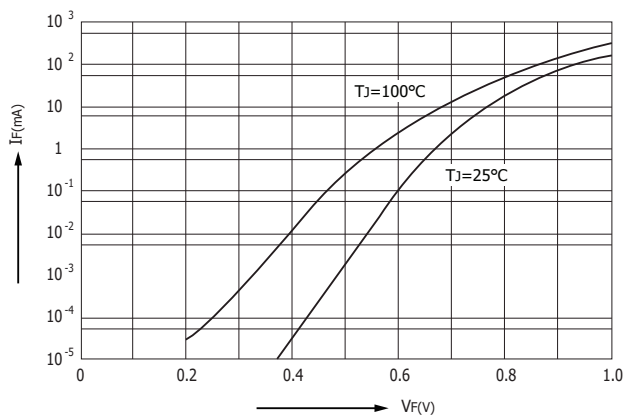


FIG.3-ADMISSIBLE POWER DISSIPATION VS. AMBIENT TEMPERATURE

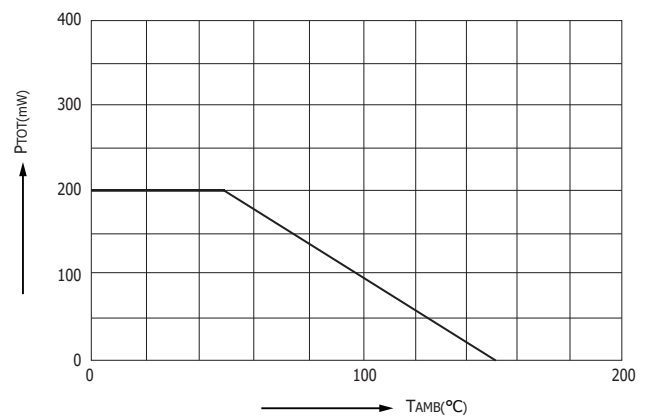


FIG.4-PULSE THERMAL RESISTANCE VS. PULSE DURATION

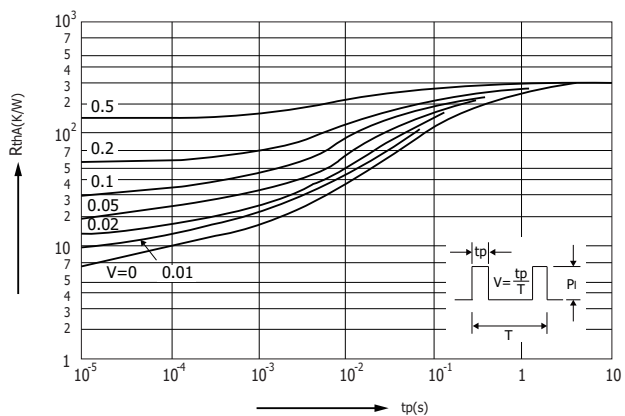
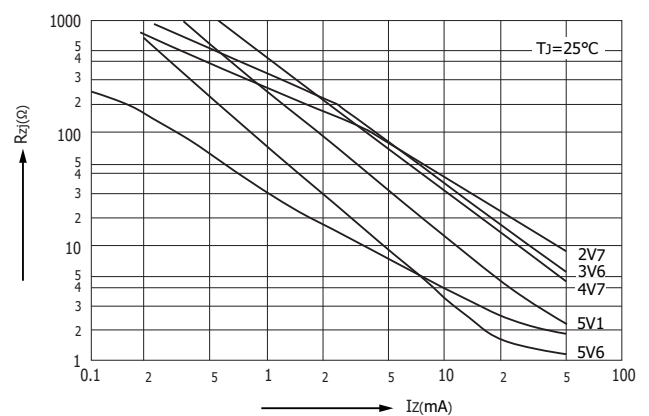


FIG.5-DYNAMIC RESISTANCE VS. ZENER CURRENT



RATINGS AND CHARACTERISTIC CURVES BZT52C2V0S THRU BZT52C75S

FIG.6-CAPACITANCE VS. ZENER VOLTAGE

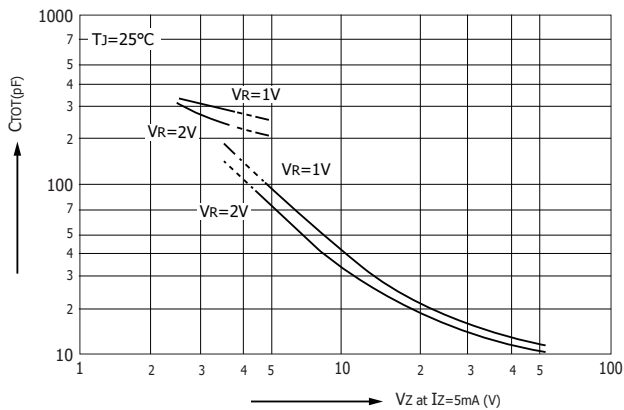


FIG.7-DYNAMIC RESISTANCE VS. ZENER CURRENT

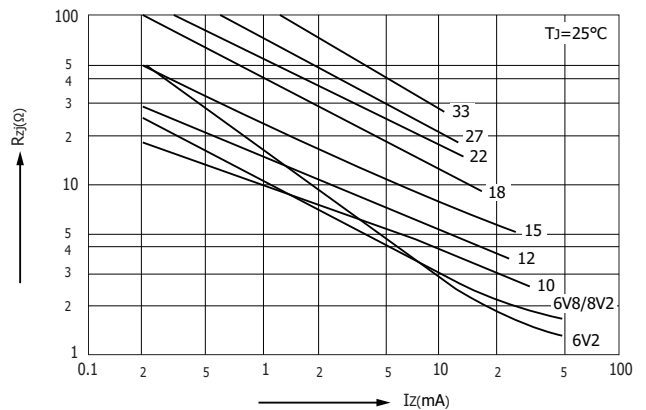


FIG.8-DYNAMIC RESISTANCE VS. ZENER CURRENT

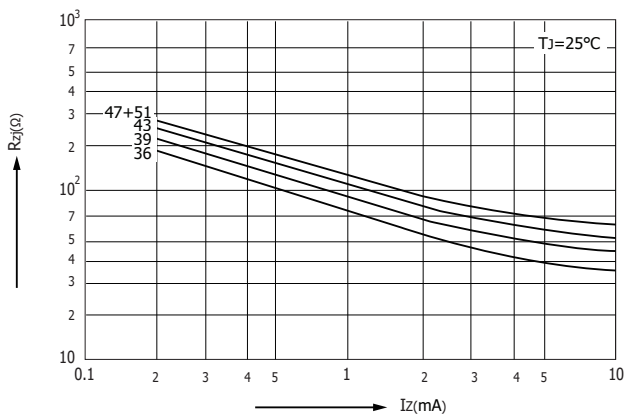


FIG.9-THERMAL DIFFERENTIAL RESISTANCE VS. ZENER VOLTAGE

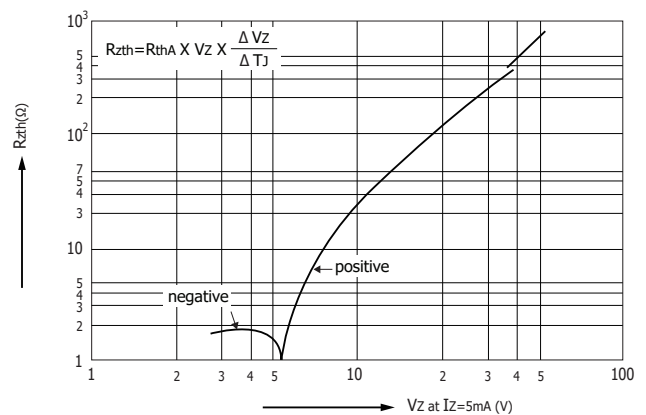


FIG.10-DYNAMIC RESISTANCE VS. ZENER VOLTAGE

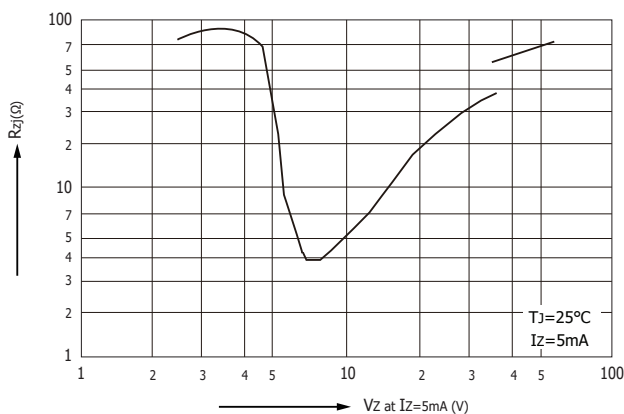
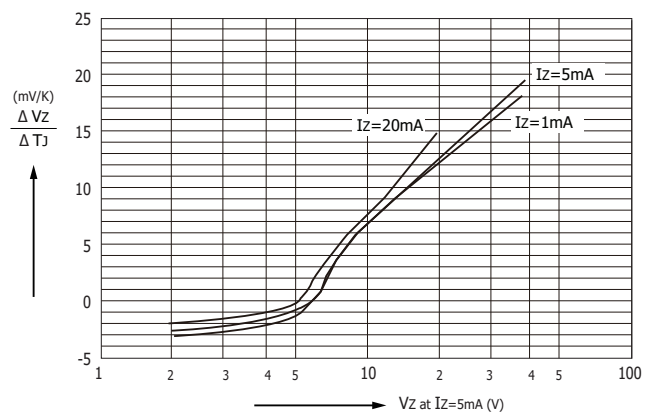


FIG.11-TEMPERATURE DEPENDENCE OF ZENER VOLTAGE VS. ZENER VOLTAGE



RATINGS AND CHARACTERISTIC CURVES BZT52C2V0S THRU BZT52C75S

FIG.12-TEMPERATURE DEPENDENCE OF ZENER VOLTAGE VS. ZENER VOLTAGE

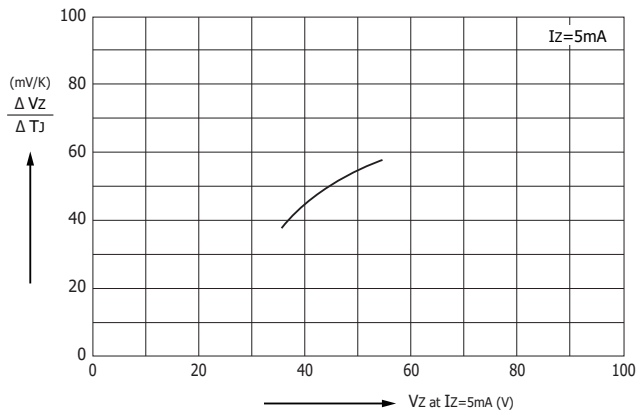


FIG.13-CHANGE OF ZENER VOLTAGE VS. JUNCTION TEMPERATURE

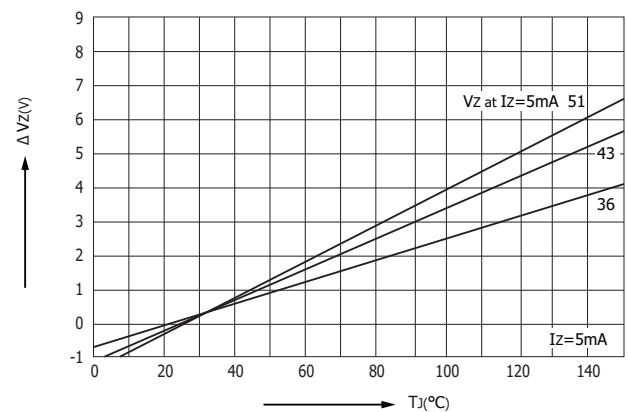


FIG.14-CHANGE OF ZENER VOLTAGE VS. JUNCTION TEMPERATURE

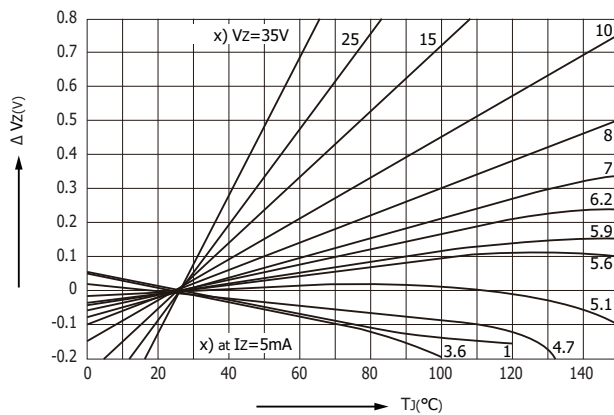


FIG.15-CHANGE OF ZENER VOLTAGE FROM TURN-ON UP TO THE POINT OF THERMAL EQUILIBRIUM VS. ZENER VOLTAGE

