

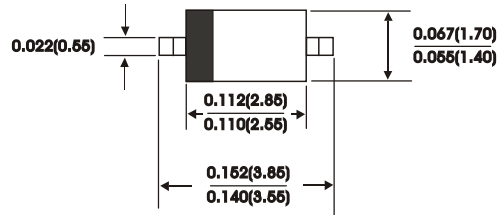
# BZT52C(B)2V4      THRU      BZT52C(B)75

## SURFAC MOUNT ZENER DIODES

### SOD-123

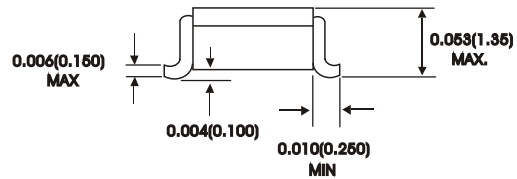
#### FEATURES:

- Silicon planar power zener diodes
- Standard Zener voltage tolerance is  $\pm 5\%$  AND  
   SUFFIX "ZMM55B" FOR  $\pm 2\%$  of  $V_{ZNOM}$   
   SUFFIX "ZMM55C" FOR  $\pm 5\%$  of  $V_{ZNOM}$



#### MECHANICAL DATA

Case: SOD-123 Molded plastic  
 Weigh: 0.01 grams(approx)



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temp. unless otherwise specified.

Characteristic	Symbol	Value	Units
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	$0.41^{(1)}$	W
Z-current	$I_Z$	See Table"Characteristic)	mA
Thermal Resistance Junction to Ambient Air	$R_{thJ-A}$	$300^{(2)}$	K/W
Junction temperature	$T_J$	150	°C
Storage temperature range	$T_{stg}$	-65 to +150	°C

NOTE:

(1) Diode on ceramic substrate 0.7mm; 2.5mm<sup>2</sup> area

(2) Valid provided that electrodes are kept at ambient temperature

## SURFACE MOUNT ZENER DIODES BZT52C(B)2V4 THRU BZT52C(B)75

Device Type	Nominal Zener Voltage V <sub>ZNOM</sub>	Nominal Zener Voltage V <sub>Z</sub> <sup>(1)</sup> at I <sub>ZT</sub>	Test Current I <sub>ZT</sub> <sup>(3)</sup>	Maximum Zener Impedance			Reverse Voltage at I <sub>R</sub> =0.1uA	Admissible Zener Current <sup>(2)</sup>		Temp. Coeff. Of Zener current at I <sub>Z</sub> =5mA V <sub>Z</sub> 10 <sup>-4</sup> /K
				R <sub>Zj</sub> at I <sub>ZT</sub> f=1KHZ	R <sub>Zj</sub> at I <sub>ZK</sub> F=1KHZ	I <sub>ZK</sub>		At T <sub>amb</sub> =45°C I <sub>Z</sub>	At T <sub>amb</sub> =25°C I <sub>Z</sub>	
	Volts	Volts	mA	Ω	Ω	mA	Volts	mA	mA	
BZT52C2V4	2.4	2.28-2.56	5	85	600	1.0	-	-	-	TYP.-1.8
BZT52C2V7	2.7	2.5-2.9	5	75(<83)	<500	1.0	-	113	134	-9~-4
BZT52C3V0	3.0	2.8-3.2	5	80(<95)	<500	1.0	-	98	118	-9~-3
BZT52C3V3	3.3	3.1-3.5	5	80(<95)	<500	1.0	-	92	109	-8~-3
BZT52C3V6	3.6	3.4-3.8	5	80(<95)	<500	1.0	-	85	100	-8~-3
BZT52C3V9	3.9	3.7-4.1	5	80(<95)	<500	1.0	-	77	92	-7~-3
BZT52C4V3	4.3	4.0-4.6	5	80(<95)	<500	1.0	-	71	84	-6~-1
BZT52C4V7	4.7	4.4-5.0	5	70(<78)	<500	1.0	-	64	76	-5~+2
BZT52C5V1	5.1	4.8-5.4	5	30(<60)	<480	1.0	>0.8	56	67	-3~+4
BZT52C5V6	5.6	5.2-6.0	5	10(<40)	<400	1.0	>1	50	59	-2~+6
BZT52C6V2	6.2	5.8-6.6	5	4.8(<10)	<200	1.0	>2	45	54	-1~+7
BZT52C6V8	6.8	6.4-7.2	5	4.5(<8)	<150	1.0	>3	41	49	+2~+7
BZT52C7V5	7.5	7.0-7.9	5	4(<7)	<50	1.0	>5	37	44	+3~+7
BZT52C8V2	8.2	7.7-8.7	5	4.5(<7)	<50	1.0	>6	34	40	+4~+7
BZT52C9V1	9.1	8.5-9.6	5	4.8(<10)	<50	1.0	>7	30	36	+5~+8
BZT55C10	10	9.4-10.6	5	5.2(<15)	<70	1.0	>7.5	28	33	+5~+8
BZT52C11	11	10.4-11.6	5	6(<20)	<70	1.0	>8.5	25	30	+5~+9
BZT52C12	12	11.4-12.7	5	7(<20)	<90	1.0	>9	23	28	+6~+9
BZT52C13	13	12.4-14.1	5	9(<25)	<110	1.0	>10	21	25	+7~+9
BZT52C15	15	13.8-15.6	5	11(<30)	<110	1.0	>11	19	23	+7~+9
BZT52C16	16	15.3-17.1	5	13(<40)	<170	1.0	>12	17	20	+8~+9.5
BZT52C18	18	16.8-19.1	5	18(<50)	<170	1.0	>14	15	18	+8~+9.5
BZT52C20	20	18.8-21.2	5	20(<50)	<220	1.0	>15	14	17	+8~+10
BZT52C22	22	20.8-23.3	5	25(<55)	<220	1.0	>17	13	16	+8~+10
BZT52C24	24	22.8-25.6	5	28(<80)	<220	1.0	>18	11	13	+8~+10
BZT52C27	27	25.1-28.9	5	30(<80)	<250	1.0	>20	10	12	+8~+10
BZT52C30	30	28-32	5	35(<80)	<250	1.0	>22.5	9	10	+8~+10
BZT52C33	33	31-35	5	40(<80)	<250	1.0	>25	8	9	+8~+10
BZT52C36	36	34-38	5	40(<90)	<250	1.0	>27	8	9	+8~+10
BZT52C39	39	37-41	5	50(<90)	<300	1.0	>29	7	8	+10~+12
BZT52C43	43	40-46	5	60(<100)	<700	1.0	>32	6	7	+10~+12
BZT52C47	47	44-50	5	70(<100)	<750	1.0	>35	5	6	+10~+12
BZT52C51	51	48-54	5	70(<100)	<750	1.0	>38	5	6	+10~+12
BZT52C56	56	52-60	2.5	<135	<1000	0.5	-	-	-	Type.+10 <sup>(4)</sup>
BZT52C62	62	58-66	2.5	<150	<1000	0.5	-	-	-	Type.+10 <sup>(4)</sup>
BZT52C68	68	64-72	2.5	<200	<1000	0.5	-	-	-	Type.+10 <sup>(4)</sup>
BZT52C75	75	70-79	2.5	<250	<1500	0.5	-	-	-	Type.+10 <sup>(4)</sup>

(1) Tighter tolerances available request :

BZT52B--- ± 2% of V<sub>ZNOM</sub>  
 BZT52C---- ± 5% of V<sub>ZNOM</sub>

(2) Valid provided that electrodes are kept at ambient temperature

(3) Tested pulses tp=5ms

(4) at I<sub>Z</sub>=2.5mA

**SURFACE MOUNT ZENER DIODES BZT52C(B)2V4 THRU BZT52C(B)75**

FIGURE.1-MAXIMUM ADMISSIBLE POWER DISSIPATION CHARACTERISTICS

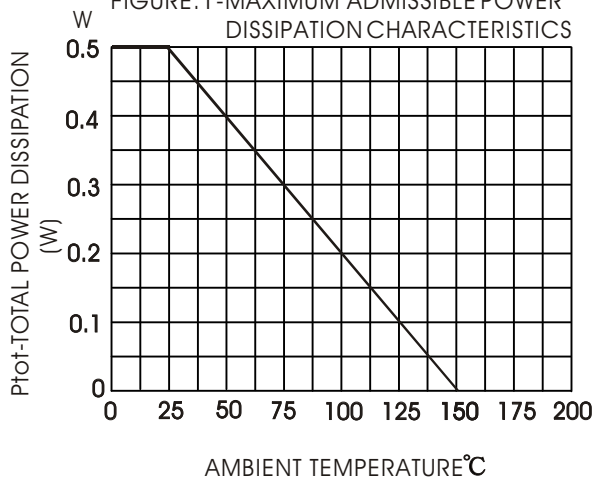


FIGURE.6-FORWARD CURRENT CHARACTERISTICS

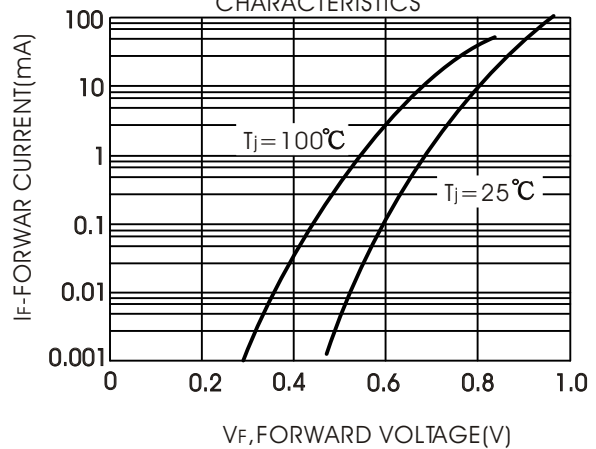


FIGURE.3-BREAKDOWN CHARACTERISTICS

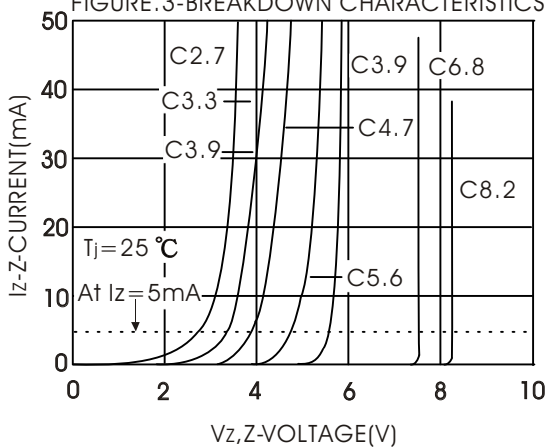


FIGURE.4-BREAKDOWN CHARACTERISTICS

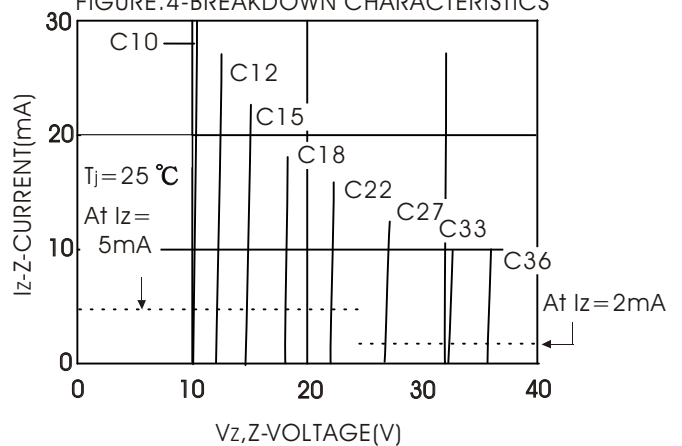


FIGURE.5-BREAKDOWN CHARACTERISTICS

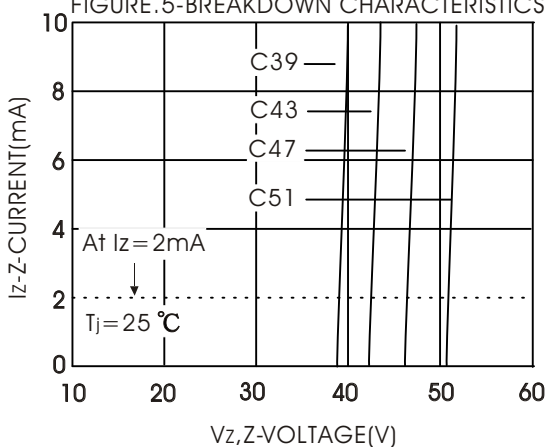
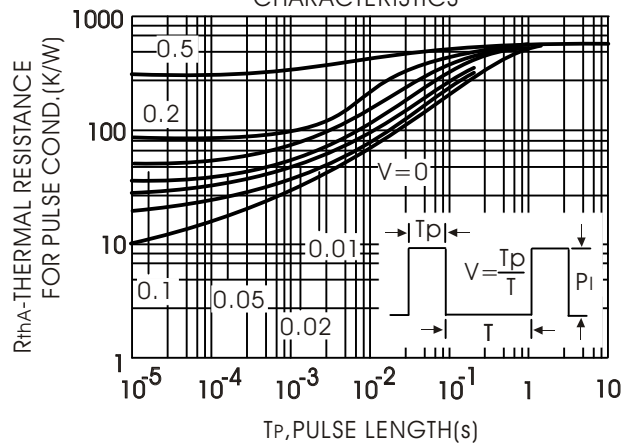
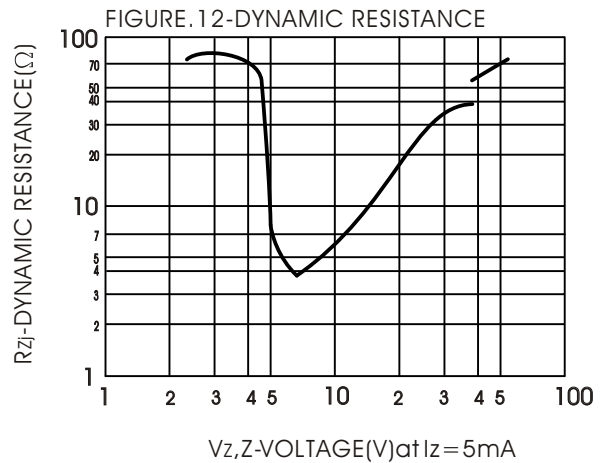
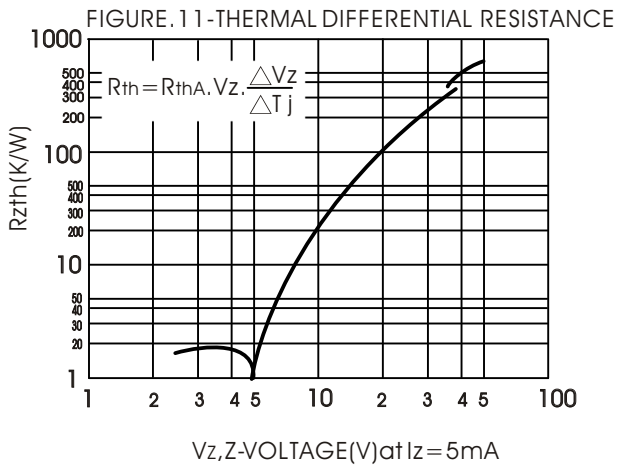
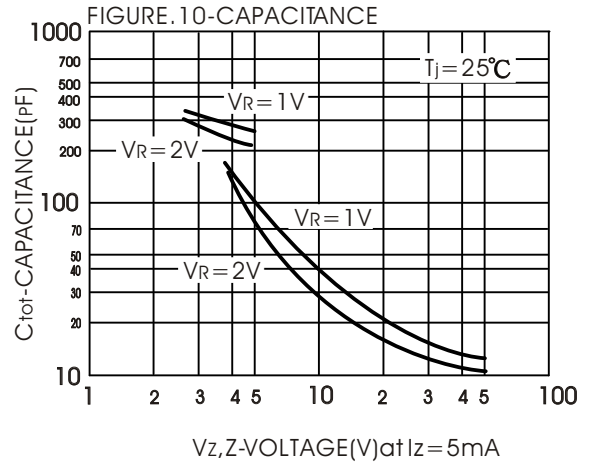
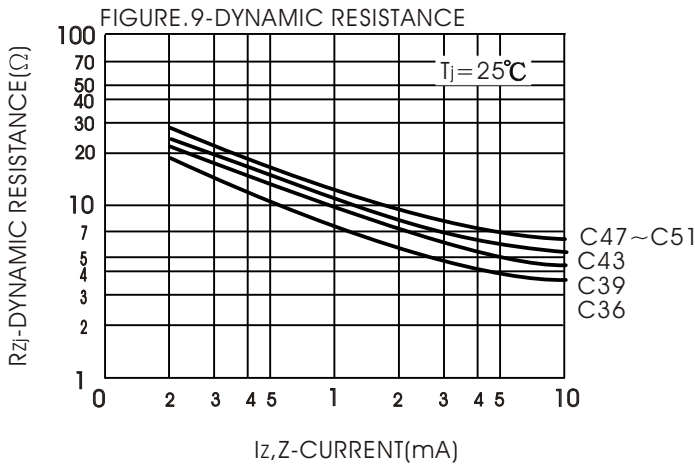
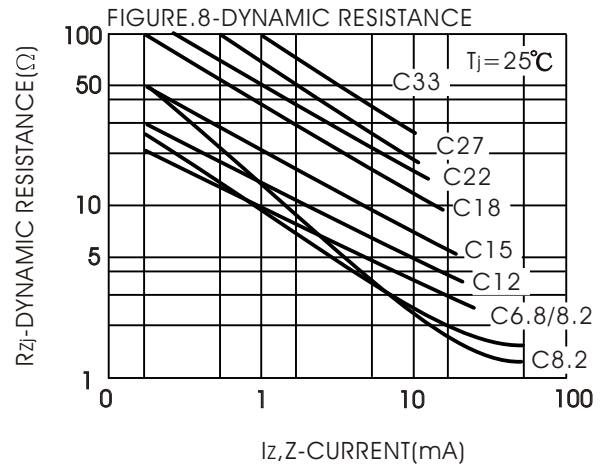
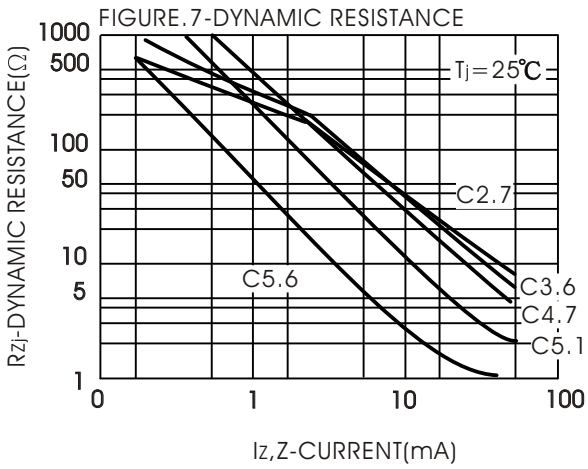


FIGURE.6-THERMAL RESISTANCE CHARACTERISTICS



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FIGURE. 13-TEMPERATURE DEPENDENCE OF ZENER VOLTAGE

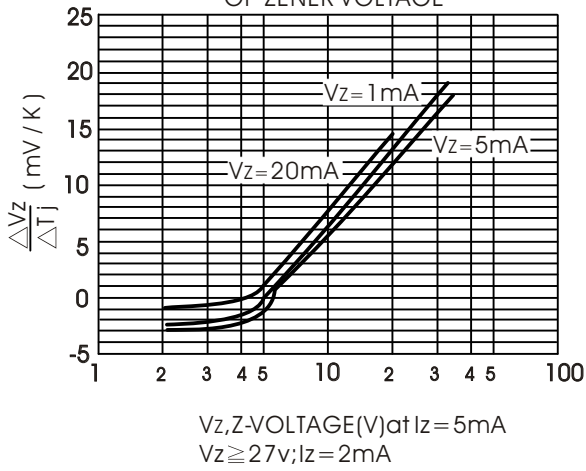


FIGURE. 14-CHANGE OF ZENER VOLTAGE CHARACTERISTICS

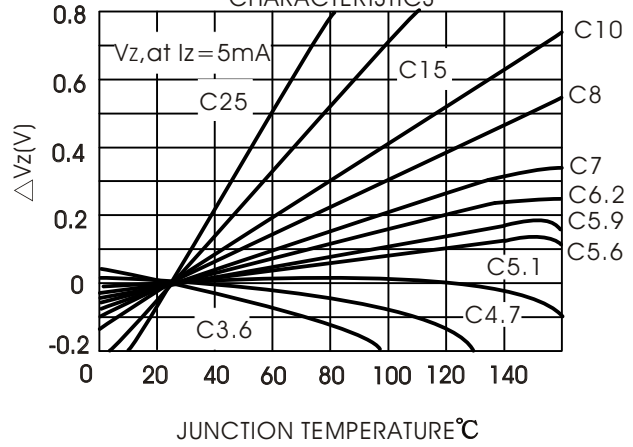


FIGURE. 15-CHANGE OF ZENER VOLTAGE CHARACTERISTICS

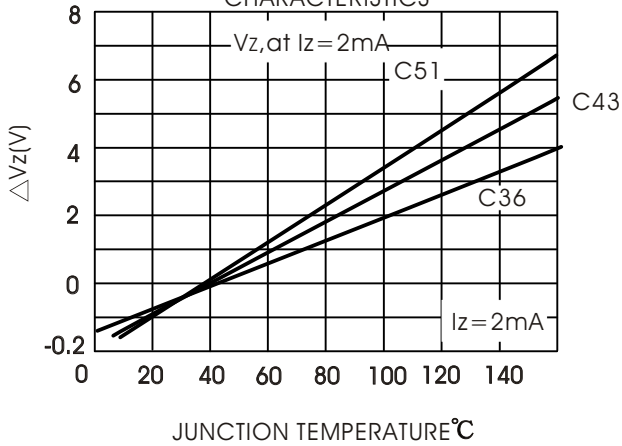


FIGURE. 16-TEMPERATURE DEPENDENCE OF ZENER VOLTAGE

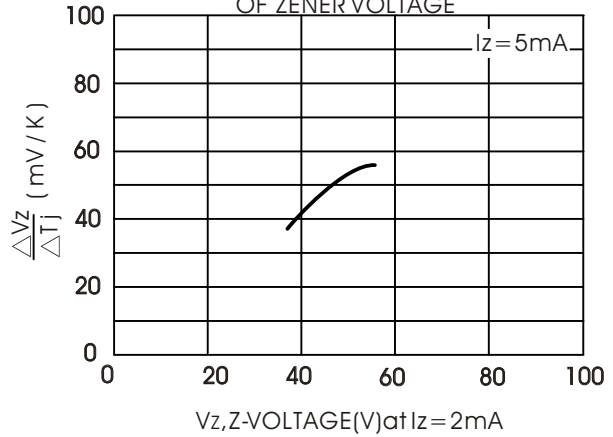


FIGURE. 15-CHANGE OF ZENER VOLTAGE FROM TURN-ON UP TO THE POINT OF THERMAL EQUILIBRIUM

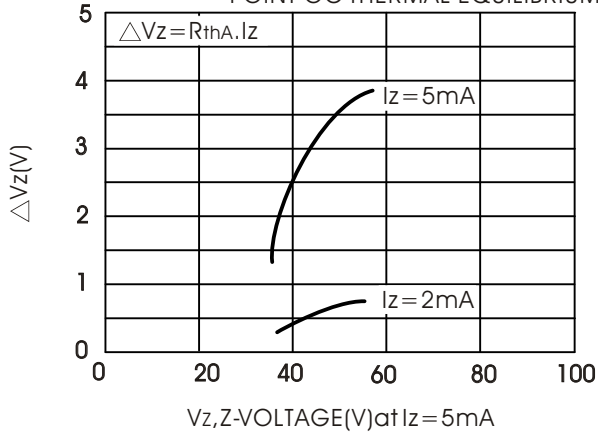


FIGURE. 15-CHANGE OF ZENER VOLTAGE FROM TURN-ON UP TO THE POINT OF THERMAL EQUILIBRIUM

