



# BZT52C2V4 - BZT52C43

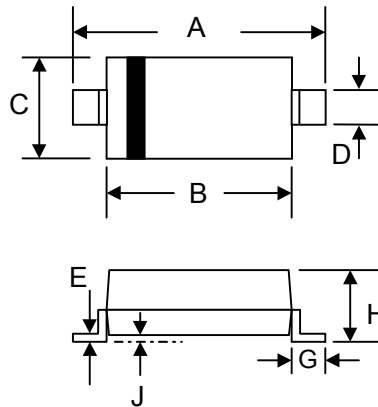
## SURFACE MOUNT ZENER DIODE

### Features

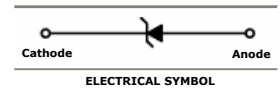
- Planar Die Construction
- 500mW Power Dissipation on Ceramic PCB
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes

### Mechanical Data

- Case: SOD-123, Plastic
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: See Below
- Weight: 0.01 grams (approx.)



SOD-123		
Dim	Min	Max
A	3.6	3.9
B	2.5	2.8
C	1.4	1.8
D	0.5	0.7
E	—	0.2
G	0.4	—
H	0.95	1.35
J	—	0.12
All Dimensions in mm		



### Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Type Number	Symbol	Value	Units
Forward Voltage @ $I_F = 10\text{mA}$	$V_F$	0.9	V
Power Dissipation (Note 1)	$P_d$	500	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	305	$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150	$^{\circ}\text{C}$

- Notes:
1. Device Mounted on Ceramic PCB, 7.6mm x 9.4mm x 0.87mm with Pad Areas 25mm<sup>2</sup>.
  2. Tested with Pulses. Period = 5ms, Pulse Width = 300us.
  3. When Provided, Otherwise, Parts are Provided with Date Code only, and Type Number Identifications Appears on reel only.
  4.  $f = 1\text{KHz}$ .



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### Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Type	ZENER VOLTAGE $V_Z^{(1)}$ VOLTS			Maximum Zener Impedance <sup>(2)</sup> $Z_{ZT}$ (OHMS)		Maximum Zener Impedance <sup>(2)</sup> $Z_{ZK}$ (OHMS)		REVERSE CURRENT $I_R$ (Max) @ $V_R$		Typical Temperature Coefficient @ $I_{ZTC}$		Marking
	Min.	Nom	Max.	$I_{ZT}$ (mA)	Max.	$I_{ZK}$ (mA)	Max.	$\mu\text{A}$	V	mV/ $^\circ\text{C}$		
BZT52C2V4	2.28	2.4	2.56	5	100	1.0	600	50	1.0	-3.5	0	WX
BZT52C2V7	2.5	2.7	2.9	5	100	1.0	600	20	1.0	-3.5	0	W1
BZT52C3V0	2.8	3.0	3.2	5	95	1.0	600	10	1.0	-3.5	0	W2
BZT52C3V3	3.1	3.3	3.5	5	95	1.0	600	5	1.0	-3.5	0	W3
BZT52C3V6	3.4	3.6	3.8	5	90	1.0	600	5	1.0	-3.5	0	W4
BZT52C3V9	3.7	3.9	4.1	5	90	1.0	600	3	1.0	-3.5	0	W5
BZT52C4V3	4.0	4.3	4.6	5	90	1.0	600	3	1.0	-3.5	0	W6
BZT52C4V7	4.4	4.7	5.0	5	80	1.0	500	3	2.0	-3.5	0.2	W7
BZT52C5V1	4.8	5.1	5.4	5	60	1.0	480	2	2.0	-2.7	1.2	W8
BZT52C5V6	5.2	5.6	6.0	5	40	1.0	400	1	2.0	-2.0	2.5	W9
BZT52C6V2	5.8	6.2	6.6	5	10	1.0	150	3	4.0	0.4	3.7	WA
BZT52C6V8	6.4	6.8	7.2	5	15	1.0	80	2	4.0	1.2	4.5	WB
BZT52C7V5	7.0	7.5	7.9	5	15	1.0	80	1	5.0	2.5	5.3	WC
BZT52C8V2	7.7	8.2	8.7	5	15	1.0	80	0.7	5.0	3.2	6.2	WD
BZT52C9V1	8.5	9.1	9.6	5	15	1.0	100	0.5	6.0	3.8	7.0	WE
BZT52C10	9.4	10	10.6	5	20	1.0	150	0.2	7.0	4.5	8.0	WF
BZT52C11	10.4	11	11.6	5	20	1.0	150	0.1	8.0	5.4	9.0	WG
BZT52C12	11.4	12	12.7	5	25	1.0	150	0.1	8.0	6.0	10.0	WH
BZT52C13	12.4	13	14.1	5	30	1.0	170	0.1	8.0	7.0	11.0	WI
BZT52C15	13.8	15	15.6	5	30	1.0	200	0.1	10.5	9.2	13.0	WJ
BZT52C16	15.3	16	17.1	5	40	1.0	200	0.1	11.2	10.4	14.0	WK
BZT52C18	16.8	18	19.1	5	45	1.0	225	0.1	12.6	12.4	16.0	WL
BZT52C20	18.8	20	21.2	5	55	1.0	225	0.1	14.0	14.4	18.0	WM
BZT52C22	20.8	22	23.3	5	55	1.0	250	0.1	15.4	16.4	20.0	WN
BZT52C24	22.8	24	25.6	5	70	1.0	250	0.1	16.8	18.4	22.0	WO
BZT52C27	25.1	27	28.9	2	80	0.5	300	0.1	18.9	21.4	25.3	WP
BZT52C30	28	30	32	2	80	0.5	300	0.1	21.0	24.4	29.4	WQ
BZT52C33	31	33	35	2	80	0.5	325	0.1	23.1	27.4	33.4	WR
BZT52C36	34	36	38	2	90	0.5	350	0.1	25.2	30.4	37.4	WS
BZT52C39	37	39	41	2	130	0.5	350	0.1	27.3	33.4	41.2	WT
BZT52C43	40	43	46	5	100	1.0	700	0.1	32.0	10.0	12.0	WU

(1) Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25 mm<sup>2</sup>

(2) f=1KHz



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## RATINGS AND CHARACTERISTIC CURVES

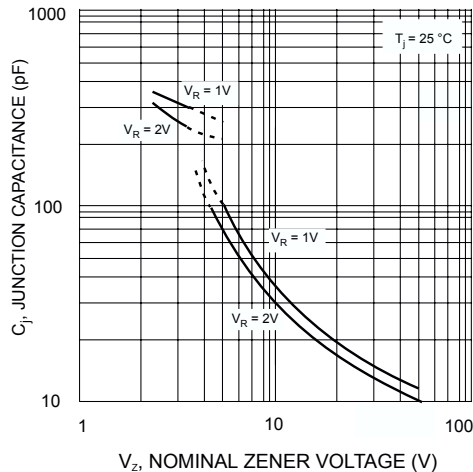
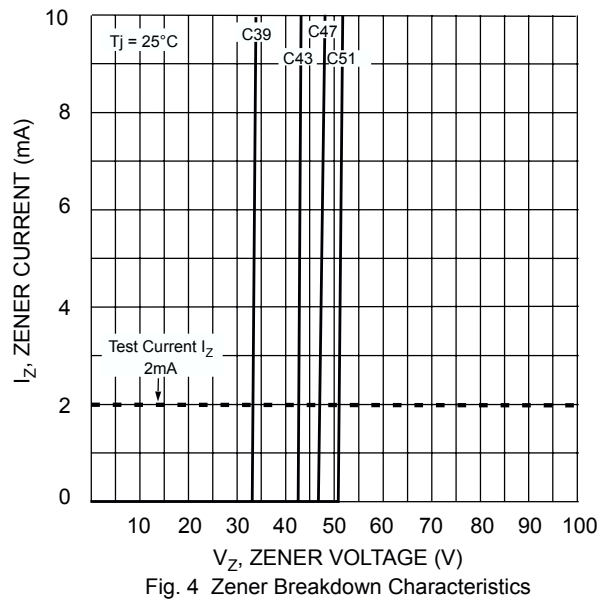
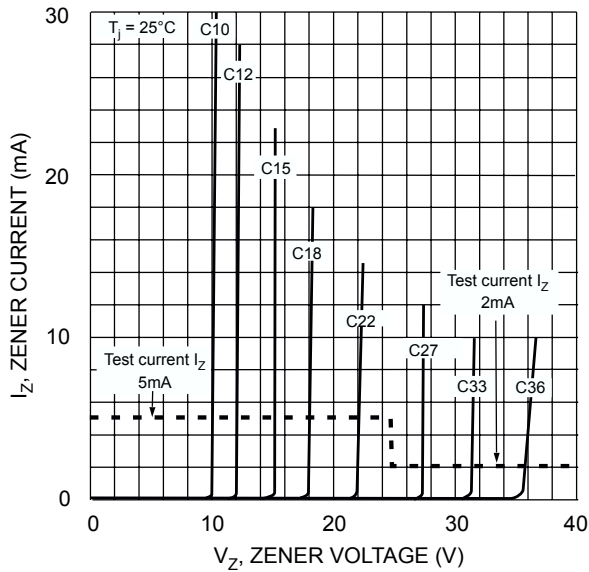
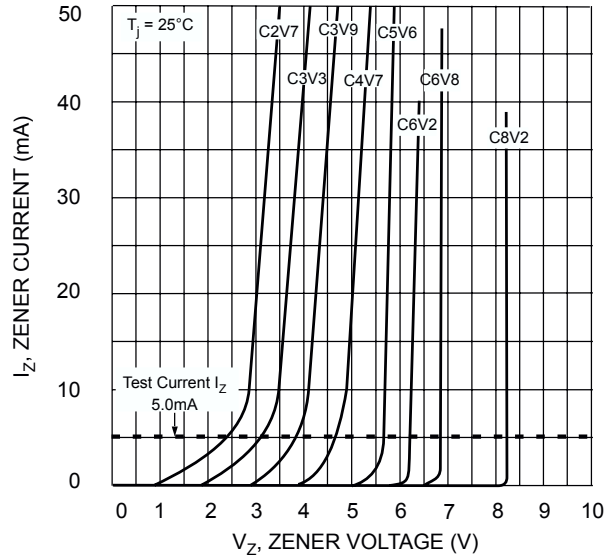
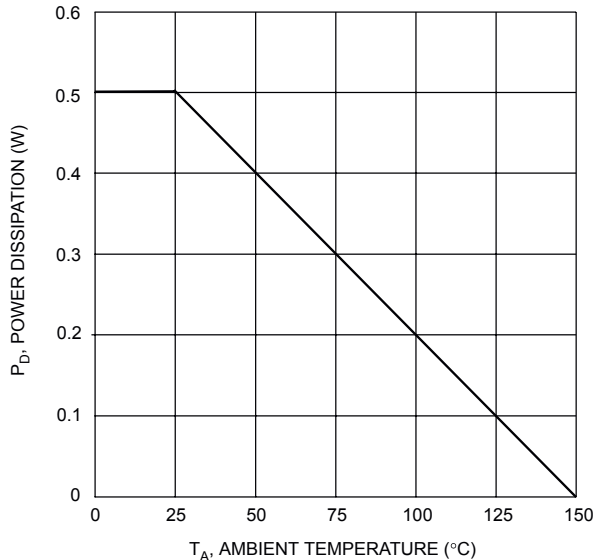


Fig. 5 Junction Capacitance vs Nominal Zener Voltage