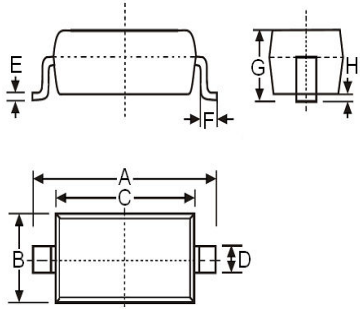




SURFACE MOUNT ZENER DIODE	REVERSE VOLTAGE – 2.4 to 43 Volts POWER DISSIPATION – 0.5 Watts																														
<p>FEATURES</p> <ul style="list-style-type: none"> • Planar die construction • 500mW power dissipation rating • Ultra-small surface mount package <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case: SOD-123 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 	<p style="text-align: center;">SOD-123</p> <div style="display: flex; align-items: center;">  <table border="1" style="margin-left: 20px; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="3">SOD-123</th> </tr> <tr> <th>Dim.</th> <th>Min.</th> <th>Max.</th> </tr> </thead> <tbody> <tr><td>A</td><td>3.55</td><td>3.85</td></tr> <tr><td>B</td><td>1.50</td><td>1.70</td></tr> <tr><td>C</td><td>2.60</td><td>2.80</td></tr> <tr><td>D</td><td>0.45</td><td>0.65</td></tr> <tr><td>E</td><td>0.08</td><td>0.15</td></tr> <tr><td>F</td><td>0.25</td><td>0.45</td></tr> <tr><td>G</td><td>1.05</td><td>1.25</td></tr> <tr><td>H</td><td>0.00</td><td>0.10</td></tr> </tbody> </table> </div> <p style="text-align: center; font-size: small;">Dimensions in millimeter</p>	SOD-123			Dim.	Min.	Max.	A	3.55	3.85	B	1.50	1.70	C	2.60	2.80	D	0.45	0.65	E	0.08	0.15	F	0.25	0.45	G	1.05	1.25	H	0.00	0.10
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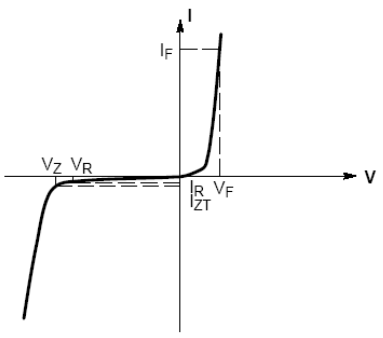
Maximum Ratings & Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ I _F =10mA	V _F	0.9	V
Power Dissipation	P _D	500	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	357	°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
BZT52C2V4	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
BZT52C2V4	WX	2.4	2.2	2.6	5.0	100	600	1.0	50	1.0	-3.5	0	5.0
BZT52C2V7	W1	2.7	2.5	2.9	5.0	100	600	1.0	20	1.0	-3.5	0	5.0
BZT52C3V0	W2	3.0	2.8	3.2	5.0	95	600	1.0	20	1.0	-3.5	0	5.0
BZT52C3V3	W3	3.3	3.1	3.5	5.0	95	600	1.0	5.0	1.0	-3.5	0	5.0
BZT52C3V6	W4	3.6	3.4	3.8	5.0	90	600	1.0	5.0	1.0	-3.5	0	5.0
BZT52C3V9	W5	3.9	3.7	4.1	5.0	90	600	1.0	3.0	1.0	-3.5	0	5.0
BZT52C4V3	W6	4.3	4.0	4.6	5.0	90	600	1.0	3.0	1.0	-3.5	0	5.0
BZT52C4V7	W7	4.7	4.4	5.0	5.0	80	600	1.0	3.0	2.0	-3.5	0.2	5.0
BZT52C5V1	W8	5.1	4.8	5.4	5.0	60	500	1.0	2.0	2.0	-2.7	1.2	5.0
BZT52C5V6	W9	5.6	5.2	6.0	5.0	40	480	1.0	1.0	2.0	-2.0	2.5	5.0
BZT52C6V2	WA	6.2	5.8	6.6	5.0	10	400	1.0	3.0	4.0	0.4	3.7	5.0
BZT52C6V8	WB	6.8	6.4	7.2	5.0	15	150	1.0	2.0	4.0	1.2	4.5	5.0
BZT52C7V5	WC	7.5	7.0	7.9	5.0	15	80	1.0	1.0	5.0	2.5	5.3	5.0
BZT52C8V2	WD	8.2	7.7	8.7	5.0	15	80	1.0	0.7	5.0	3.2	6.2	5.0
BZT52C9V1	WE	9.1	8.5	9.6	5.0	15	80	1.0	0.5	6.0	3.8	7.0	5.0
BZT52C10	WF	10	9.4	10.6	5.0	20	100	1.0	0.2	7.0	4.5	8.0	5.0
BZT52C11	WG	11	10.4	11.6	5.0	20	150	1.0	0.1	8.0	5.4	9.0	5.0
BZT52C12	WH	12	11.4	12.7	5.0	25	150	1.0	0.1	8.0	6.0	10.0	5.0
BZT52C13	WI	13	12.4	14.1	5.0	30	150	1.0	0.1	8.0	7.0	11.0	5.0
BZT52C15	WJ	15	13.8	15.6	5.0	30	170	1.0	0.1	10.5	9.2	13.0	5.0
BZT52C16	WK	16	15.3	17.1	5.0	40	200	1.0	0.1	11.2	10.4	14.0	5.0
BZT52C18	WL	18	16.8	19.1	5.0	45	200	1.0	0.1	12.6	12.4	16.0	5.0
BZT52C20	WM	20	18.8	21.2	5.0	55	225	1.0	0.1	14.0	14.4	18.0	5.0
BZT52C22	WN	22	20.8	23.3	5.0	55	225	1.0	0.1	15.4	16.4	20.0	5.0
BZT52C24	WO	24	22.8	25.6	5.0	70	250	1.0	0.1	16.8	18.4	22.0	5.0
BZT52C27	WP	27	25.1	28.9	2.0	80	250	0.5	0.1	18.9	21.4	25.3	2.0
BZT52C30	WQ	30	28.0	32.0	2.0	80	300	0.5	0.1	21.0	24.4	29.4	2.0
BZT52C33	WR	33	31.0	35.0	2.0	80	300	0.5	0.1	23.1	27.4	33.4	2.0
BZT52C36	WS	36	34.0	38.0	2.0	90	325	0.5	0.1	25.2	30.4	37.4	2.0
BZT52C39	WT	39	37.0	41.0	2.0	130	350	0.5	0.1	27.3	33.4	41.2	2.0
BZT52C43	WU	43	40.0	46.0	5.0	100	700	1.0	0.1	32.0	10.0	12.0	5.0

REV. 3, Apr-2011, KSJR03

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.

BZT52Cx Series Typical Characteristics

Fig.1 Power Derating Curve

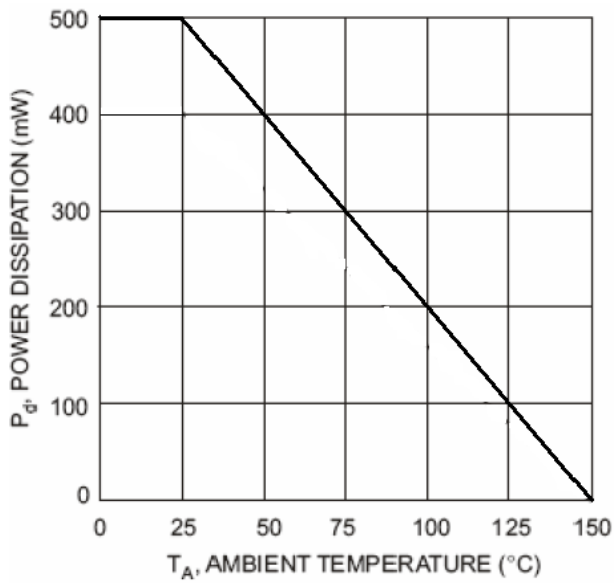


Fig. 1 Power Derating Curve

Fig.2 Typical Zener Breakdown Characteristics

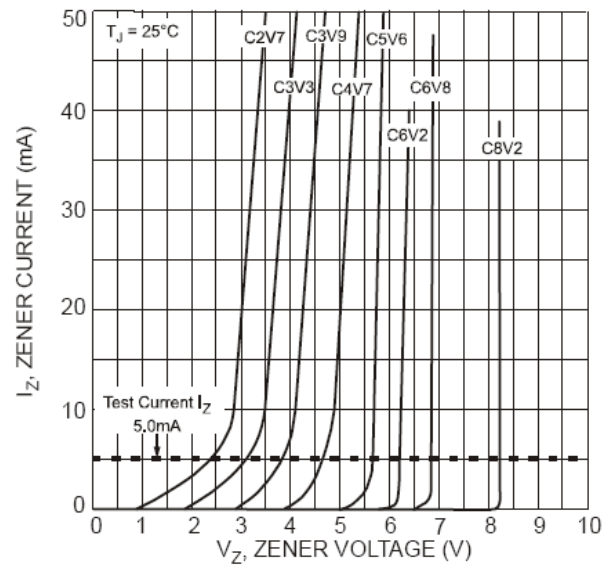


Fig.3 Typical Zener Breakdown Characteristics

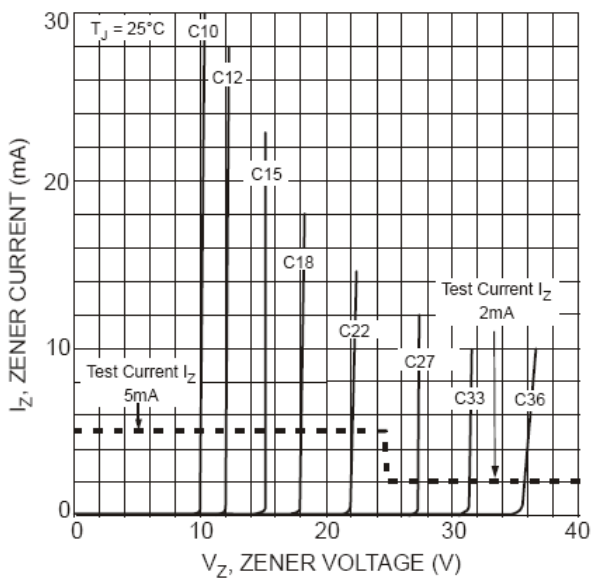


Fig.4 Typical Zener Breakdown Characteristics

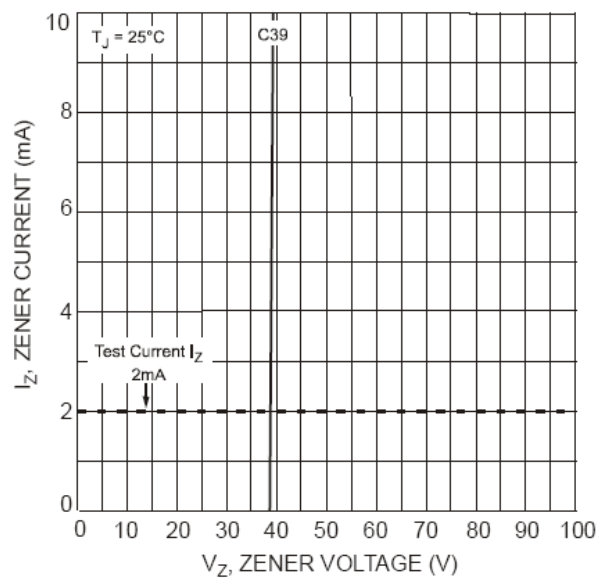
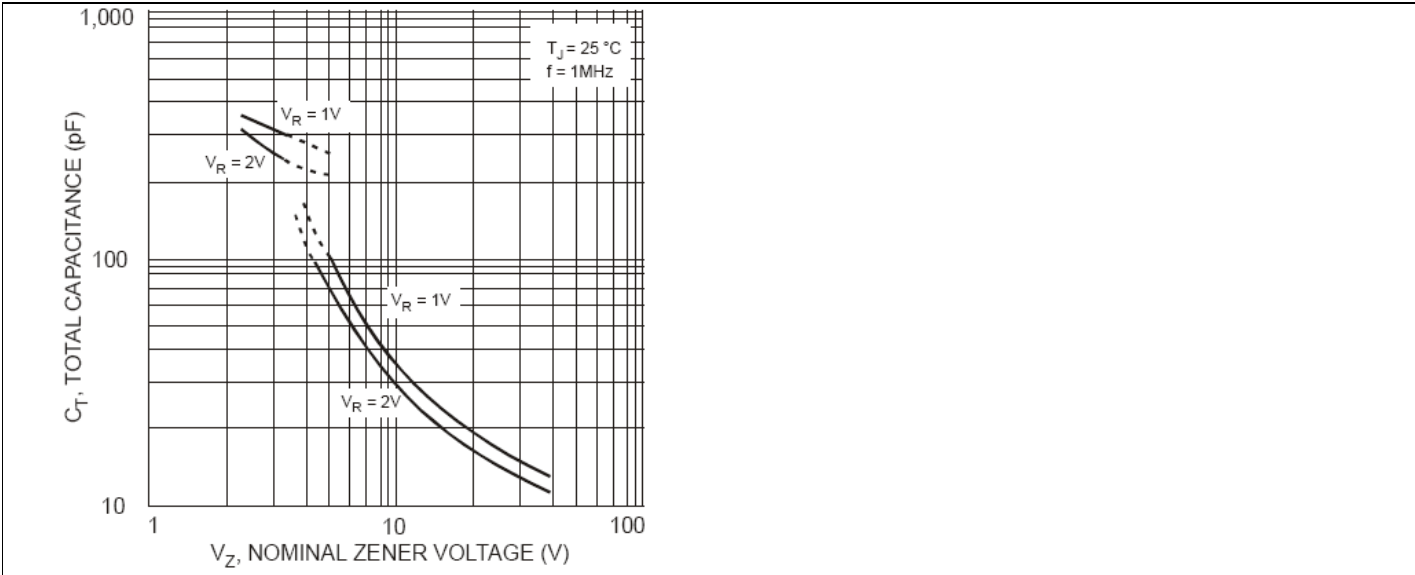


Fig.5 Typical Total Capacitance vs. Nominal Zener Voltage



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