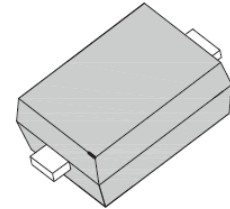


## 410mW Two Terminals SMD Zener Diodes

### Features

- Planar Die Construction
- 410mW Power Dissipation
- Zener Voltage 2.4v to 51v
- RoHS Compliance



SOD-123F



### Mechanical Data

<b>Case:</b>	SOD-123F, molded plastic
<b>Epoxy:</b>	Plastic package has UL flammability 94V-0
<b>Terminals:</b>	Solderable per MIL-STD-202G, Method 208
<b>Polarity:</b>	Color band denotes cathode
<b>Approx Weight:</b>	0.01 grams

### Maximum Ratings *(T<sub>Ambient</sub>=25°C unless noted otherwise)*

Symbol	Description	Value	Unit	Conditions
<b>V<sub>F</sub></b>	Forward Voltage Drop	0.9	V	IF=10mA
<b>P<sub>tot</sub></b>	Power Dissipation	410	mW	Ta=25 °C (Note 1)
<b>I<sub>FSM</sub></b>	Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	2.0	A	(Note 2)
<b>T<sub>J</sub></b>	Operating Junction Temperature	150	°C	
<b>T<sub>STG</sub></b>	Storage Temperature Range	-55 to 150	°C	

**Note:** 1. Mounted on 5.0mm<sup>2</sup> (0.13mm thick ) land areas

2. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum

## 410mW Two Terminals SMD Zener Diodes

### BZT52C2V4-F - BZT52C51-F

#### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Part NO.	Marking Code	Nominal Zener Voltage @ I <sub>ZT</sub>			Test Current I <sub>ZT</sub> (mA)	Max. Zener Impedance			Max. Reverse Leakage Current I <sub>R</sub> @ V <sub>R</sub>	
		V <sub>Z</sub> (V)				Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub> (mA)	I <sub>R</sub> (μA)	V <sub>R</sub> (V)
		Nom.	Min.	Max.						
BZT52C2V4-F	W1	2.4	2.28	2.56	5	85	600	1	-	-
BZT52C2V7-F	W2	2.7	2.5	2.9	5	83	500	1	-	-
BZT52C3V0-F	W3	3.0	2.8	3.2	5	95	500	1	-	-
BZT52C3V3-F	W4	3.3	3.1	3.5	5	95	500	1	-	-
BZT52C3V6-F	W5	3.6	3.4	3.8	5	95	500	1	-	-
BZT52C3V9-F	W6	3.9	3.7	4.1	5	95	500	1	-	-
BZT52C4V3-F	W7	4.3	4.0	4.6	5	95	500	1	-	-
BZT52C4V7-F	W8	4.7	4.4	5.0	5	78	500	1	-	-
BZT52C5V1-F	W9	5.1	4.8	5.4	5	60	480	1	0.1	0.8
BZT52C5V6-F	WA	5.6	5.2	6.0	5	40	400	1	0.1	1
BZT52C6V2-F	WB	6.2	5.8	6.6	5	10	200	1	0.1	2
BZT52C6V8-F	WC	6.8	6.4	7.2	5	8	150	1	0.1	3
BZT52C7V5-F	WD	7.5	7.0	7.9	5	7	50	1	0.1	5
BZT52C8V2-F	WE	8.2	7.7	8.7	5	7	50	1	0.1	6
BZT52C9V1-F	WF	9.1	8.5	9.6	5	10	50	1	0.1	7
BZT52C10-F	WG	10	9.4	10.6	5	15	70	1	0.1	7.5
BZT52C11-F	WH	11	10.4	11.6	5	20	70	1	0.1	8.5
BZT52C12-F	WI	12	11.4	12.7	5	20	90	1	0.1	9
BZT52C13-F	WK	13	12.4	14.1	5	25	110	1	0.1	10
BZT52C15-F	WL	15	13.8	15.6	5	30	110	1	0.1	11
BZT52C16-F	WM	16	15.3	17.1	5	40	170	1	0.1	12
BZT52C18-F	WN	18	16.8	19.1	5	50	170	1	0.1	14
BZT52C20-F	WO	20	18.8	21.2	5	50	220	1	0.1	15
BZT52C22-F	WP	22	20.8	23.3	5	55	220	1	0.1	17
BZT52C24-F	WR	24	22.8	25.6	5	80	220	1	0.1	18
BZT52C27-F	WS	27	25.1	28.9	5	80	250	1	0.1	20
BZT52C30-F	WT	30	28	32	5	80	250	1	0.1	22.5
BZT52C33-F	WU	33	31	35	5	80	250	1	0.1	25
BZT52C36-F	WW	36	34	38	5	90	250	1	0.1	27
BZT52C39-F	WX	39	37	41	5	90	300	1	0.1	29
BZT52C43-F	WY	43	40	46	5	100	700	1	0.1	32
BZT52C47-F	WZ	47	44	50	5	100	750	1	0.1	35

# 410mW Two Terminals SMD Zener Diodes

## BZT52C2V4-F - BZT52C51-F

Part NO.	Marking Code	Nominal Zener Voltage @ I <sub>ZT</sub>			Test Current I <sub>ZT</sub> (mA)	Max. Zener Impedance			Max. Reverse Leakage Current I <sub>R</sub> @ V <sub>R</sub>	
		V <sub>Z</sub> (V)				Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub> (mA)	I <sub>R</sub> (μA)	V <sub>R</sub> (V)
		Nom.	Min.	Max.						
BZT52C51-F	XA	51	48	54	5	100	750	1	0.1	38

### Typical Characteristics Curves

Fig.1- Power Dissipation

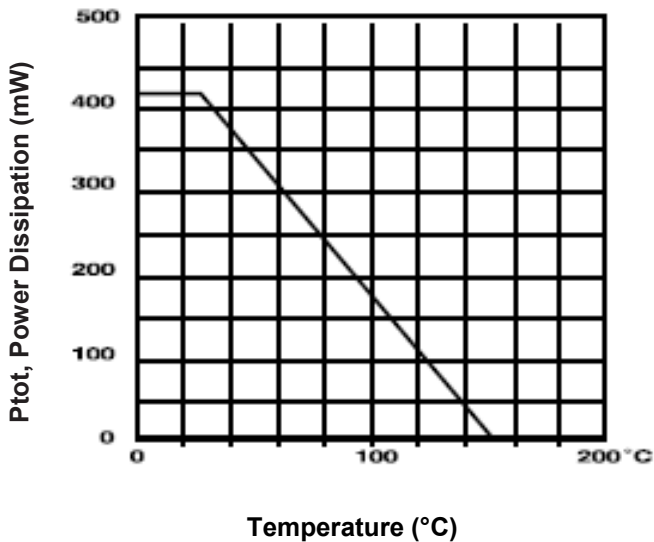


Fig.2- Typical Forward Characteristic

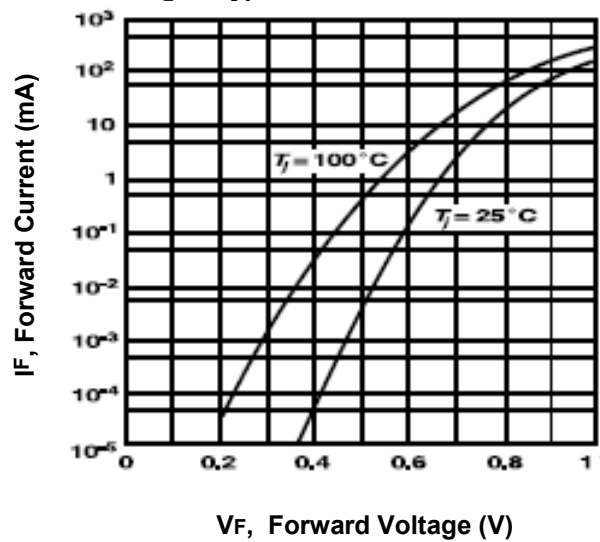
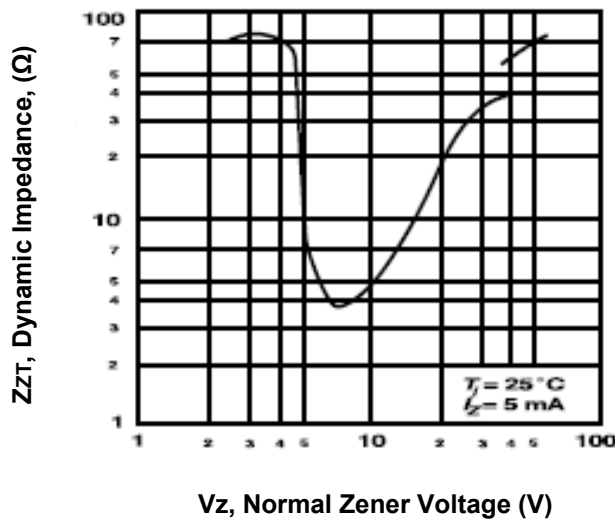


Fig.3-Typical Zener Impedance

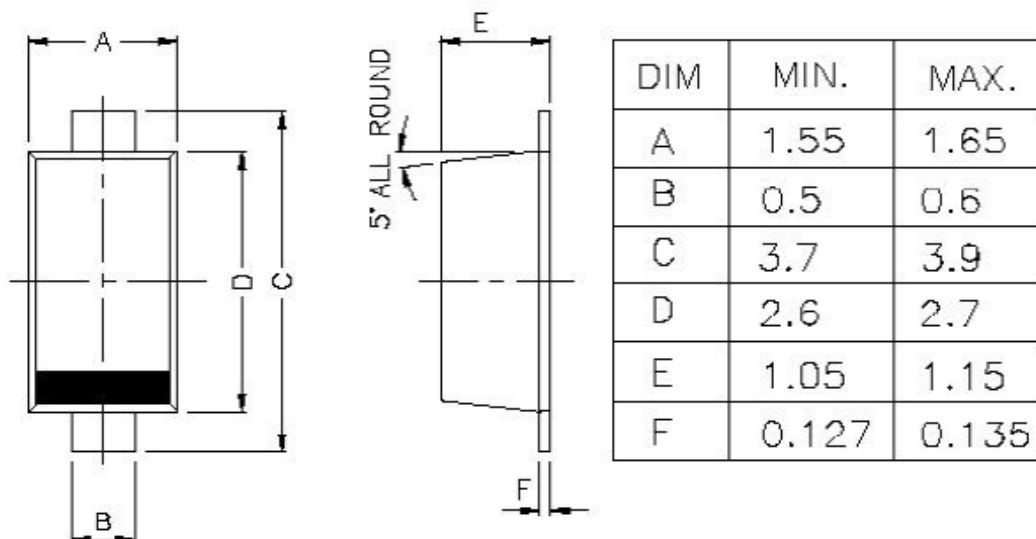


## 410mW Two Terminals SMD Zener Diodes

### BZT52C2V4-F - BZT52C51-F

#### Dimensions in mm

#### SOD-123F



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