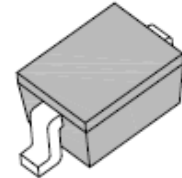


## 0.2W Surface Mount Zener Diodes

### Features

- 200mW Power Dissipation
- Zener Voltage 2.4v to 75v
- Ideal for Surface Mounted Application
- RoHS Compliance



SOD-323



### Mechanical Data

<b>Case:</b>	SOD-323, molded plastic
<b>Epoxy:</b>	Plastic package has UL flammability 94V-0
<b>Terminals:</b>	Solderable per MIL-STD-202, Method 208
<b>Polarity:</b>	Color band denotes cathode
<b>Approx Weight:</b>	0.0041 grams

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

Symbol	Description	Value	Unit	Conditions
<b>P<sub>tot</sub></b>	Total Power Dissipation on FR-5 Board	200	mW	T <sub>A</sub> =25 °C (Note)
<b>V<sub>F</sub></b>	Maximum Instantaneous Forward Voltage	0.9	V	I <sub>F</sub> =10mA
<b>R<sub>th(j-a)</sub></b>	Thermal Resistance Junction to Ambient Air	625	°C/W	(Note)
<b>T<sub>J</sub>, T<sub>STG</sub></b>	Operating Junction and Storage Temperature Range	-65 to 150	°C	

**Note:** FR-4 Minimum Pad

## 0.2W Surface Mount Zener Diodes

### BZX384C2V4 - BZX384C75

**Electrical Characteristics** ( $T_A=25^\circ\text{C}$  unless noted otherwise,  $V_F=0.9\text{V}$  Max. @  $I_F=10\text{mA}$  for all types)

Part NO.	Marking Code	Nominal Zener Voltage @ $I_{ZT}$			Test Current	Max. Zener Impedance			Max. Reverse Leakage Current $I_R$ @ $V_R$	
		$V_Z(\text{V})$				$I_{ZT}(\text{mA})$	$Z_{ZT}@ I_{ZT}$	$Z_{ZK}@ I_{ZK}$	$I_{ZK}(\text{mA})$	$I_R (\mu\text{A})$
		Nom.	Min.	Max.						
BZX384C2V4	00	2.4	2.2	2.6	5.0	100	1000	0.5	50.0	1.0
BZX384C2V7	01	2.7	2.5	2.9	5.0	100	1000	0.5	20.0	1.0
BZX384C3V0	02	3.0	2.8	3.2	5.0	100	1000	0.5	10.0	1.0
BZX384C3V3	05	3.3	3.1	3.5	5.0	95	1000	0.5	5.00	1.0
BZX384C3V6	06	3.6	3.4	3.8	5.0	90	1000	0.5	5.00	1.0
BZX384C3V9	07	3.9	3.7	4.1	5.0	90	1000	0.5	3.00	1.0
BZX384C4V3	08	4.3	4.0	4.6	5.0	90	1000	0.5	3.00	1.0
BZX384C4V7	09	4.7	4.4	5.0	5.0	80	800	0.5	3.00	2.0
BZX384C5V1	0A	5.1	4.8	5.4	5.0	60	500	0.5	2.00	2.0
BZX384C5V6	0C	5.6	5.2	6.0	5.0	40	200	0.5	1.00	2.0
BZX384C6V2	0E	6.2	5.8	6.6	5.0	10	100	0.5	3.00	4.0
BZX384C6V8	0F	6.8	6.4	7.2	5.0	15	160	0.5	2.00	4.0
BZX384C7V5	0G	7.5	7.0	7.9	5.0	15	160	0.5	1.00	5.0
BZX384C8V2	0H	8.2	7.7	8.7	5.0	15	160	0.5	0.70	5.0
BZX384C9V1	0K	9.1	8.5	9.6	5.0	15	160	0.5	0.20	7.0
BZX384C10	0L	10	9.4	10.6	5.0	20	160	0.5	0.10	8.0
BZX384C11	0M	11	10.4	11.6	5.0	20	160	0.5	0.10	8.0
BZX384C12	0N	12	11.4	12.7	5.0	25	80	0.5	0.10	8.0
BZX384C13	0P	13.25	12.4	14.1	5.0	30	80	0.5	0.10	8.0
BZX384C15	0T	15	14.3	15.8	5.0	30	80	0.5	0.05	10.5
BZX384C16	0U	16.2	15.3	17.1	5.0	40	80	0.5	0.05	11.2
BZX384C18	0W	18	16.8	19.1	5.0	45	80	0.5	0.05	12.6
BZX384C20	0Z	20	18.8	21.2	5.0	55	100	0.5	0.05	14.0
BZX384C22	10	22	20.8	23.3	5.0	55	100	0.5	0.05	15.4
BZX384C24	11	24.2	22.8	25.6	5.0	70	120	0.5	0.05	16.8
BZX384C27	12	27	25.1	28.9	2.0	80	300	0.5	0.05	18.9
BZX384C30	14	30	28.0	32.0	2.0	80	300	0.5	0.05	21.0
BZX384C33	18	33	31.0	35.0	2.0	80	300	0.5	0.05	23.2
BZX384C36	19	36	34.0	38.0	2.0	90	500	0.5	0.05	25.2
BZX384C39	20	39	37.0	41.0	2.0	130	500	0.5	0.05	27.3
BZX384C43	21	43	40.0	46.0	2.0	150	500	0.5	0.05	30.1
BZX384C47	1A	47	44.0	50.0	2.0	170	500	0.5	0.05	32.9

# 0.2W Surface Mount Zener Diodes

## BZX384C2V4 - BZX384C75

Part NO.	Marking Code	Nominal Zener Voltage @ I <sub>ZT</sub>			Test Current	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.						
BZX384C51	1C	51	48.0	54.0	2.0	180	500	0.5	0.05	35.7
BZX384C56	1D	56	52.0	60.0	2.0	200	500	0.5	0.05	39.2
BZX384C62	1E	62	58.0	66.0	2.0	215	500	0.5	0.05	43.4
BZX384C68	1F	68	64.0	72.0	2.0	240	500	0.5	0.05	47.6
BZX384C75	1G	75	70.0	79.0	2.0	255	500	0.5	0.05	52.5

**Note:** Zener voltage is measured with a pulse test current I<sub>Z</sub> at an ambient temperature of 25°C.

### Typical Characteristics Curves

Fig.1- Steady State Power Derating

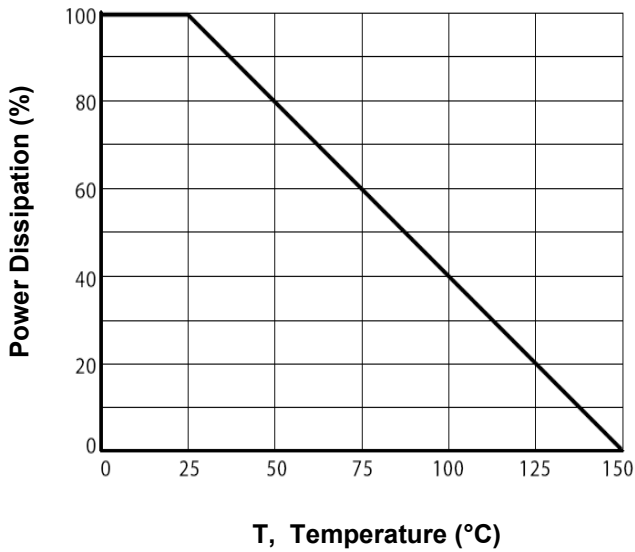
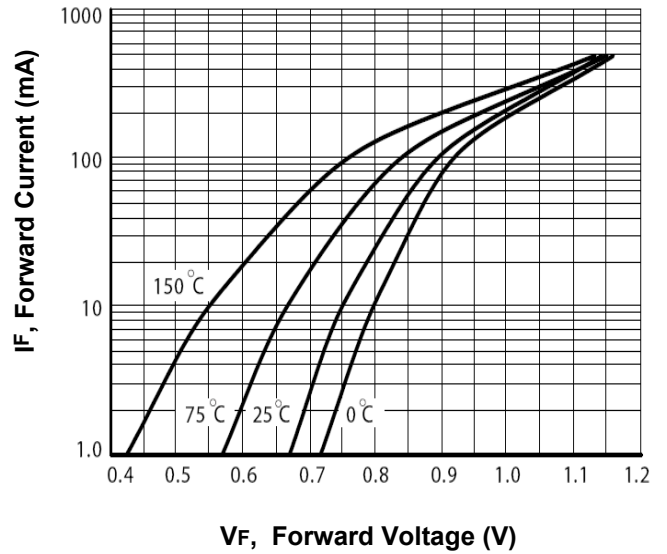


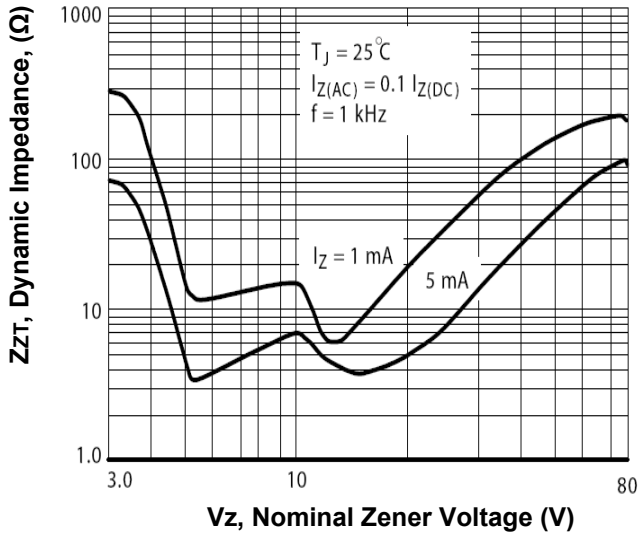
Fig.2- Typical Forward Characteristic



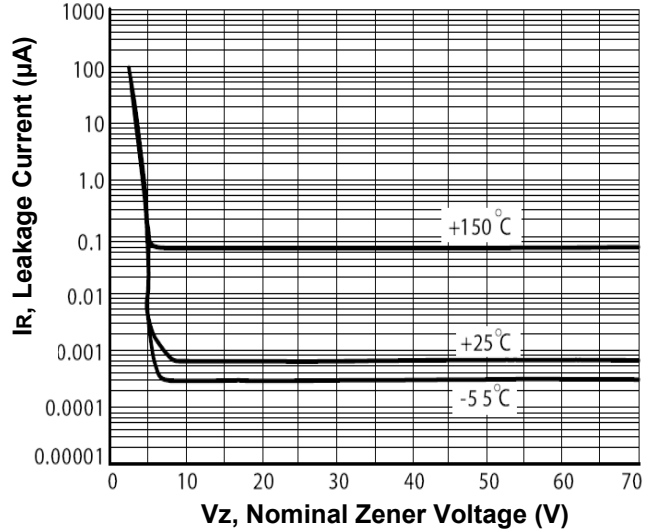
# 0.2W Surface Mount Zener Diodes

## BZX384C2V4 - BZX384C75

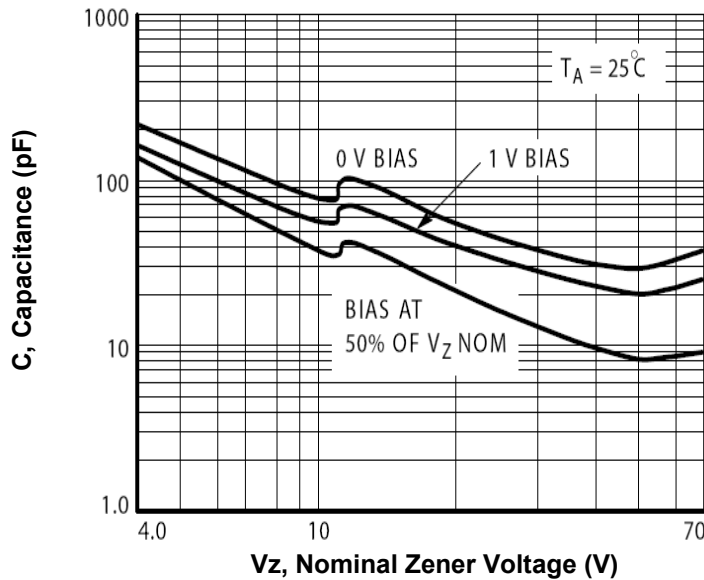
**Fig.3-Effect of Zener Voltage on Zener Impedance**



**Fig.4-Typical Leakage Current**



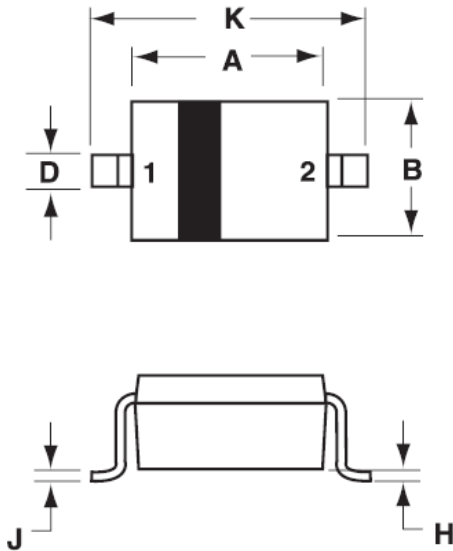
**Fig.4-Typical Capacitance**



# 0.2W Surface Mount Zener Diodes

## BZX384C2V4 - BZX384C75

### Dimensions in mm



Dim	MILLIMETERS	
	Min	Max
A	1.60	1.80
B	1.15	1.35
C	0.80	1.00
D	0.25	0.40
E	0.15REF	
H	0.00	0.10
J	0.089	0.177
K	2.30	2.70

PIN 1.CATHODE  
2.ANODE

SOD-323

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