

## DATA SHEET

### BZT52-C2V4S SERIES

SURFACE MOUNT ZENER DIODE

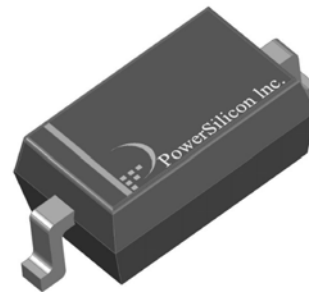
**VOLTAGE** 2.4~39 V **POWER** 200 mW

#### FEATURES

- PLANAR DIE CONSTRUCTION
- 200mW POWER DISSIPATION
- ZENER VOLTAGES FROM 2.4~39V
- IDEALLY SUITED FOR AUTOMATED ASSEMBLY PROCESSES
- LEAD FREE AND HALOGEN-FREE

#### MECHANICAL DATA

- CASE: SOD-323, MOLDED PLASTIC
- TERMINALS: SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: SEE DIAGRAM BELOW
- APPROX. WEIGHT: 0.0041 GRAMS
- MOUNTING POSITION: ANY



CASE: SOD-323

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

**RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED.**

PARAMETER	SYMBOL	VALUE	UNITS
MAXIMUM FORWARD VOLTAGE DROP AT $I_F=10\text{mA}$	$V_F$	0.9	V
MAXIMUM POWER DISSIPATION AT 25°C (NOTE.1)	$P_D$	200	mW
JUNCTION TEMPERATURE	$T_J$	-55 to +150	°C
STORAGE TEMPERATURE RANGE	$T_{STG}$	-55 to +150	°C
THERMAL RESISTANCE, JUNCTION TO AMBIENT	$R_{\theta JA}$	625	°C/W

**NOTE:**

1. VALID PROVIDED THAT DEVICE TERMINALS ARE KEPT AT AMBIENT TEMPERATURE.

Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current	
	$V_Z @ I_{ZT}$			$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$	
	Nom. V	Min. V	Max. V	$\Omega$	mA	$\Omega$	mA	$\mu A$	V
<b>200 mWatts Zener Diodes</b>									
BZT52-C2V4S	2.4	2.2	2.6	100	5	600	1	50	1
BZT52-C2V7S	2.7	2.5	2.9	100	5	600	1	20	1
BZT52-C3V0S	3.0	2.8	3.2	95	5	600	1	10	1
BZT52-C3V3S	3.3	3.1	3.5	95	5	600	1	5	1
BZT52-C3V6S	3.6	3.4	3.8	90	5	600	1	5	1
BZT52-C3V9S	3.9	3.7	4.1	90	5	600	1	3	1
BZT52-C4V3S	4.3	4.0	4.6	90	5	600	1	3	1
BZT52-C4V7S	4.7	4.4	5.0	80	5	500	1	3	2
BZT52-C5V1S	5.1	4.8	5.4	60	5	480	1	2	2
BZT52-C5V6S	5.6	5.2	6.0	40	5	400	1	1	2
BZT52-C6V2S	6.2	5.8	6.6	10	5	150	1	3	4
BZT52-C6V8S	6.8	6.4	7.2	15	5	80	1	2	4
BZT52-C7V5S	7.5	7.0	7.9	15	5	80	1	1	5
BZT52-C8V2S	8.2	7.7	8.7	15	5	80	1	0.7	5
BZT52-C9V1S	9.1	8.5	9.6	15	5	100	1	0.5	6
BZT52-C10S	10	9.4	10.6	20	5	150	1	0.2	7
BZT52-C11S	11	10.4	11.6	20	5	150	1	0.1	8
BZT52-C12S	12	11.4	12.7	25	5	150	1	0.1	8
BZT52-C13S	13	12.4	14.1	30	5	170	1	0.1	8
BZT52-C15S	15	13.8	15.6	30	5	200	1	0.1	10.5
BZT52-C16S	16	15.3	17.1	40	5	200	1	0.1	11.2
BZT52-C18S	18	16.8	19.1	45	5	225	1	0.1	12.6
BZT52-C20S	20	18.8	21.2	55	5	225	1	0.1	14
BZT52-C22S	22	20.8	23.3	55	5	250	1	0.1	15.4
BZT52-C24S	24	22.8	25.6	70	5	250	1	0.1	16.8
BZT52-C27S	27	25.1	28.9	80	2	300	0.5	0.1	18.9
BZT52-C30S	30	28.0	32.0	80	2	300	0.5	0.1	21
BZT52-C33S	33	31.0	35.0	80	2	325	0.5	0.1	23.1
BZT52-C36S	36	34.0	38.0	90	2	350	0.5	0.1	25.2
BZT52-C39S	39	37.0	41.0	130	2	350	0.5	0.1	27.3

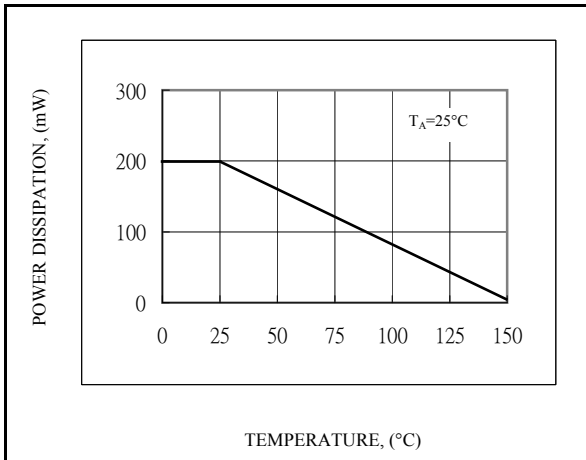


Fig.1-STEADY STATE POWER DERATING

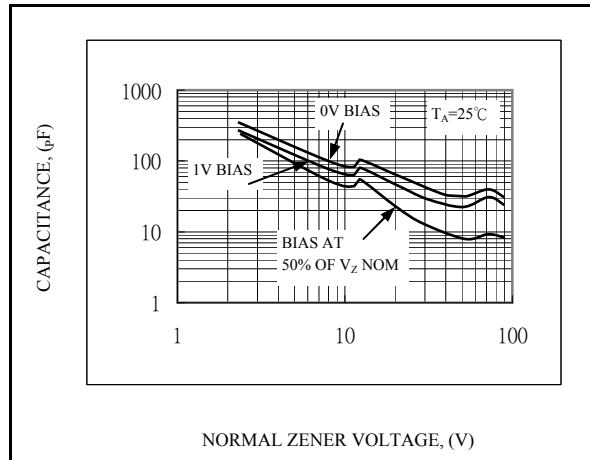


Fig.2-TYPICAL CAPACITANCE

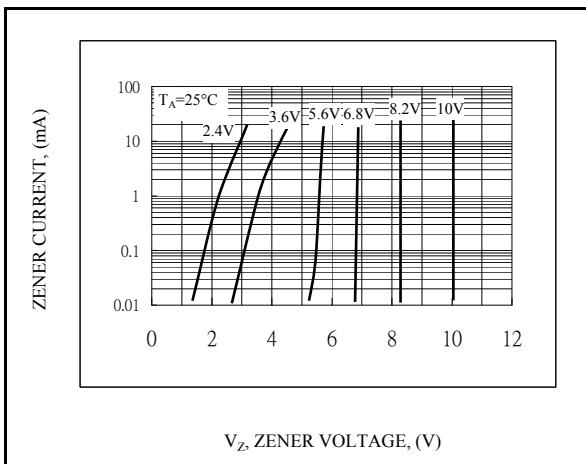


Fig.3-V<sub>Z</sub>=2.4 THRU 10 VOLTS

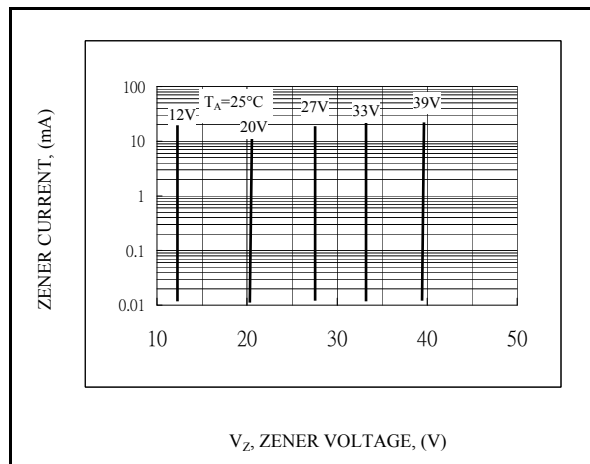


Fig.4-V<sub>Z</sub>=12 THRU 39 VOLTS

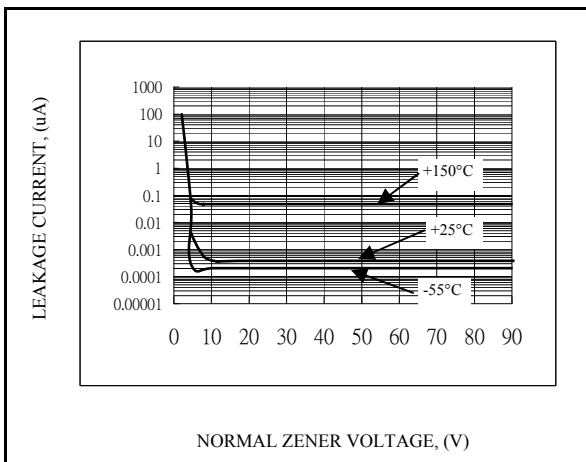
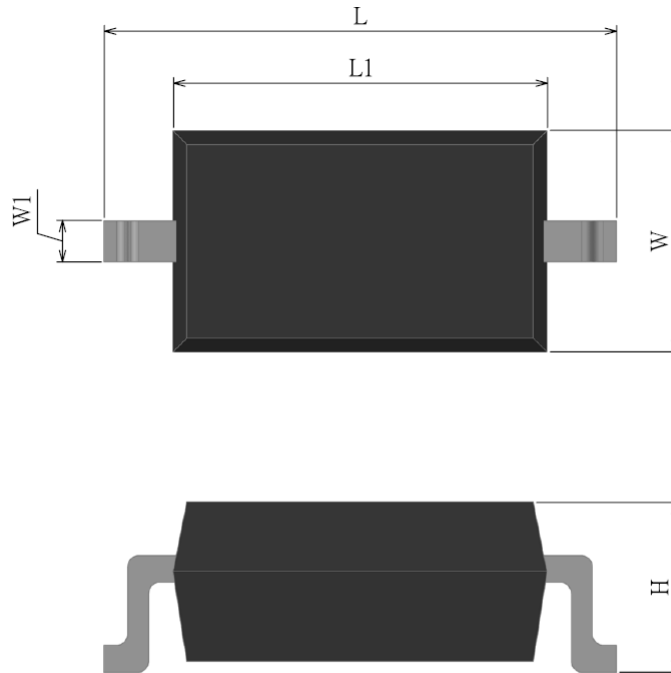


Fig.5-TYPICAL LEAKAGE CURRENT

## SOD-323 DIMENSION



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
L	2.50	2.70	0.098	0.106
L1	1.60	1.80	0.063	0.071
W	1.20	1.40	0.047	0.055
W1	0.25	0.35	0.010	0.014
H	0.80	1.00	0.031	0.039