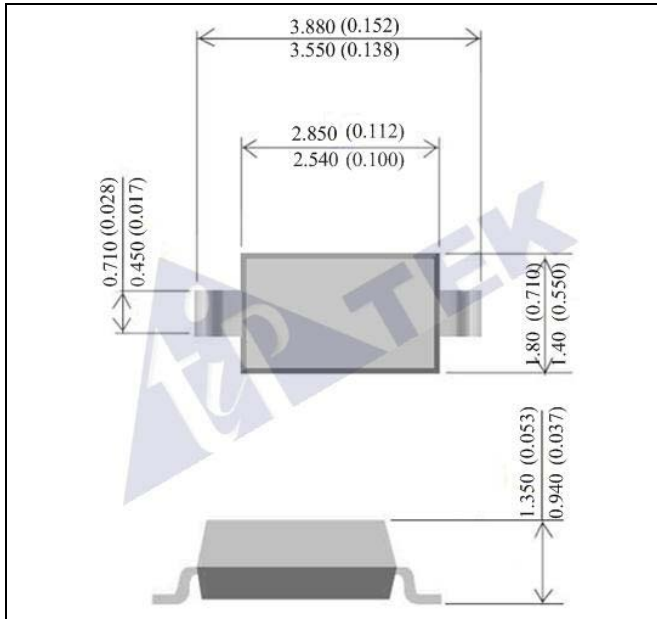


SURFACE MOUNT ZENER DIODES



CASE : SOD-123

DIMENSIONS IN MILLIMETERS AND (INCHES)

FEATURES

- PLANAR DIE CONSTRUCTION
- POWER DISSIPATION
- ZENER VOLTAGES FROM 2.4~51V
- IDEALLY SUITED FOR AUTOMATED ASSEMBLY PROCESSES
- BOTH NORMAL AND Pb FREE PRODUCT ARE AVAILABLE:
 NORMAL: 80~95% Sn , 5~20%Pb
 Pb FREE: 98.5% Sn ABOVE

MECHANICAL DATA

- CASE: SOD-123, MOLDED PLASTIC
- TERMINALS: SOLDERABLE PER MIL-STD-202, METHOD 208
- Pb-Free : BZT52-C2V4 ~BZT52-C51
 Halogen Free : BZT52-C2V4-H ~ BZT52-C51-H

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED

PARAMETER	SYMBOL	VALUE	UNITS
MAXIMUM FORWARD VOLTAGE DROP AT IF=10mA	V_F	0.9	V
MAXIMUM POWER DISSIPATION AT 25°C (NOTE 1)	P_D	500	mW
JUNCTION TEMPERATURE	T_J	-55to+125	°C
STORAGE TEMPERATURE RANGE	T_{STG}	-55to+125	°C
THERMAL RESISTANCE, JUNCTION TO AMBIENT AIR(NOTE 1)	$R_{\theta JA}$	305	°C/W

NOTE: 1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87 mm with pad areas 25mm²

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted, V_F=0.9V Max@ I_F=10mA)

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	Ω	mA	Ω	mA	μA	V
BZT52-C2V4	2.4	2.20	2.60	100	5.0	600	1.00	50	1.0
BZT52-C2V7	2.7	2.50	2.90	100	5.0	600	1.00	20	1.0
BZT52-C3V0	3.0	2.80	3.20	95	5.0	600	1.00	10	1.0
BZT52-C3V3	3.3	3.10	3.50	95	5.0	600	1.00	5	1.0
BZT52-C3V6	3.6	3.40	3.80	90	5.0	600	1.00	5	1.0
BZT52-C3V9	3.9	3.70	4.10	90	5.0	600	1.00	3	1.0
BZT52-C4V3	4.3	4.00	4.60	90	5.0	600	1.00	3.0	1.0
BZT52-C4V7	4.7	4.40	5.00	80	5.0	500	1.00	3.0	2.0
BZT52-C5V1	5.1	4.80	5.40	60	5.0	480	1.00	2.0	2.0
BZT52-C5V6	5.6	5.20	6.00	40	5.0	400	1.00	1.0	2.0
BZT52-C6V2	6.2	5.80	6.60	10	5.0	150	1.00	3.0	4.0
BZT52-C6V8	6.8	6.40	7.20	15	5.0	80	1.00	2.0	4.0
BZT52-C7V5	7.5	7.00	7.90	15	5.0	80	1.00	1.0	5.0
BZT52-C8V2	8.2	7.70	8.70	15	5.0	80	1.00	0.7	5.0
BZT52-C9V1	9.1	8.50	9.60	15	5.0	100	1.00	0.5	6.0
BZT52-C10	10	9.40	10.60	20	5.0	150	1.00	0.2	7.0
BZT52-C11	11	10.40	11.60	20	5.0	150	1.00	0.1	8.0
BZT52-C12	12	11.40	12.70	25	5.0	150	1.00	0.1	8.0
BZT52-C13	13	12.40	14.10	30	5.0	170	1.00	0.1	8.0
BZT52-C15	15	13.80	15.80	30	5.0	200	1.00	0.1	10.5
BZT52-C16	16	15.30	17.10	40	5.0	200	1.00	0.1	11.2
BZT52-C18	18	16.80	19.10	45	5.0	225	1.00	0.1	12.6
BZT52-C20	20	18.80	21.20	55	5.0	225	1.00	0.1	14.0
BZT52-C22	22	20.80	23.30	55	5.0	250	1.00	0.1	15.4
BZT52-C24	24	22.80	25.60	70	5.0	250	1.00	0.1	16.8
BZT52-C27	27	25.10	28.90	80	2.0	300	0.50	0.1	18.9
BZT52-C30	30	28.00	32.00	80	2.0	300	0.50	0.1	21.0
BZT52-C33	33	31.00	35.00	80	2.0	325	0.50	0.1	23.1
BZT52-C36	36	34.00	38.00	90	2.0	350	0.50	0.1	25.2
BZT52-C39	39	37.00	41.00	130	2.0	350	0.50	0.1	27.3
BZT52-C43	43	40.00	46.00	100	2.0	700	1.00	0.1	32.0
BZT52-C47	47	44.00	50.00	100	2.0	750	1.00	0.1	35.0
BZT52-C51	51	48.00	54.00	100	2.0	750	1.00	0.1	38.0

Note:

1. Tested with pulsed, period = 5ms, pulse width = 300us.
2. When provided, otherwise, parts are provided with date code only, and type number identifications appears on reel only.
3. f=1KHz.

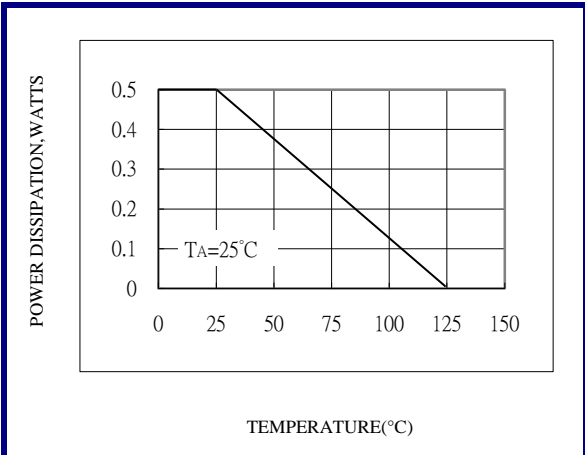


Fig.1-STEADY STATE POWER DERATING

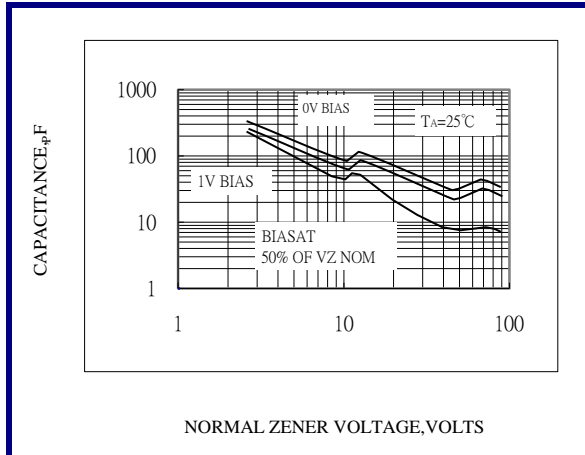


Fig.2-TYPICAL CAPACITANCE

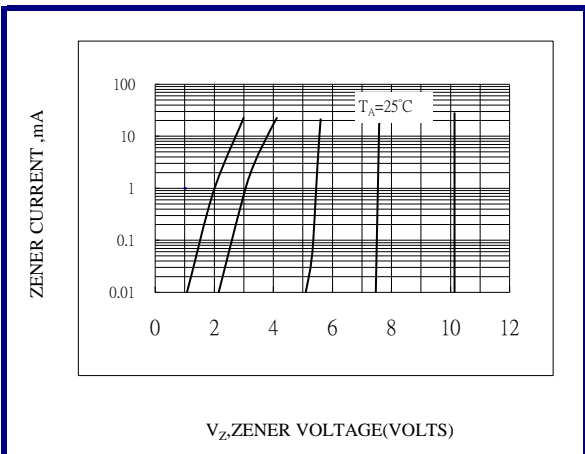


Fig.3A-V_Z=2.4 THRU 11.0 VOLTS

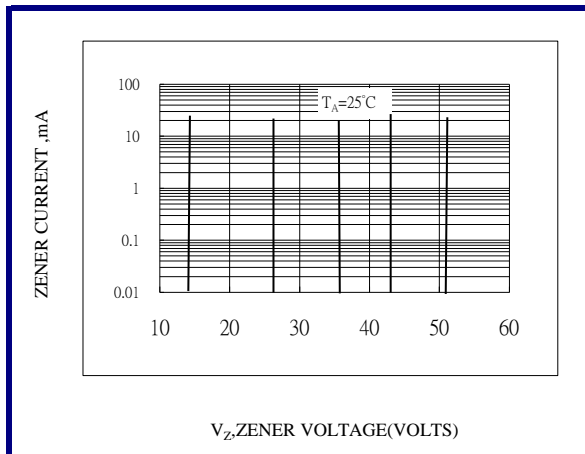


Fig.3B-V_Z=12 THRU 51 VOLTS

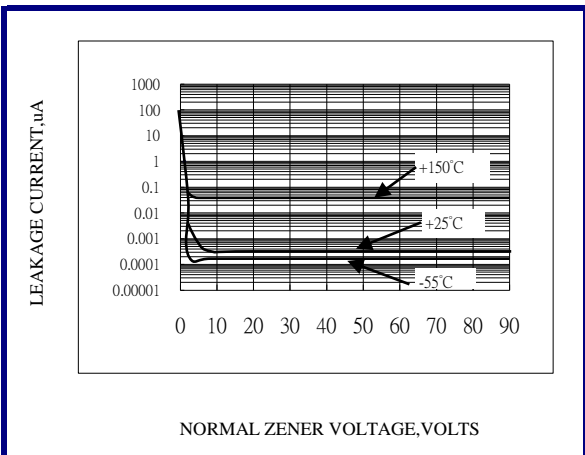


Fig.4-TYPICAL LEAKAGE CURRENT