DESCRIPTION

The BZT52C2V4~ BZT52C51 are available in SOD-123 Package.

FEATURES

- 500mW Power Dissipation
- Ideal for Surface Mountted Application
- Zener Breakdown Voltage Range 2.4V to 51V
- RoHS Compliant
- Available in SOD-123 Package

ORDERING INFORMATION

Package Type	Part Number
SOD-123	BZT52C2V4
	BZT52C2V7
	BZT52C3V0
	BZT52C3V3
	BZT52C3V6
	BZT52C3V9
	BZT52C4V3
	BZT52C4V7
	BZT52C5V1
	BZT52C5V6
	BZT52C6V2
	BZT52C6V8
	BZT52C7V5
	BZT52C8V2
	BZT52C9V1
	BZT52C10
	BZT52C11
	BZT52C12
	BZT52C13
	BZT52C15
	BZT52C16
	BZT52C18
	BZT52C20
	BZT52C22
	BZT52C24
	BZT52C27
	BZT52C30
	BZT52C33
	BZT52C36
	BZT52C39
	BZT52C43
	BZT52C47
	BZT52C51
Note	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

MECHANICAL DATA

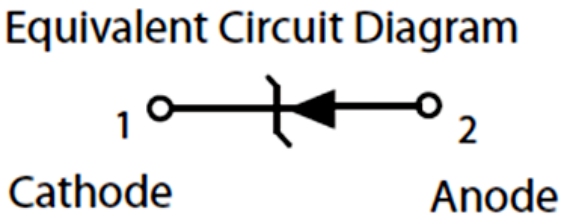
Case : SOD-123 Molded plastic

Terminals: Solderable per MIL-STD-202, Method 208

Polarity: Cathode Indicated by Polarity Band

Weigh: 0.01grams(approx)

PINDESCRIPTION



ABSOLUTE MAXIMUM RATINGS

T_A = 25℃ Unless Otherwise Noted

P_D, Total Power Dissipation on FR-5 Board NOTE1	500mW
$R_{\theta JA}$, Thermal Resistance Junction to Ambient Air NOTE1	305℃/W
V_F, Forward Voltage @ I_F = 10mA	0.9V
T_J, T_{STG}, Junction and Storage Temperature Range	-55℃ to + 125℃

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE1: Device mounted on ceramic PCB; 7.6mm 9.4mm 0.87mm with pad areas 25mm^2

ELECTRICAL CHARACTERISTICS

T_A = 25°C unless otherwise noted, V_F = 0.9V Max@ I_F = 10mA

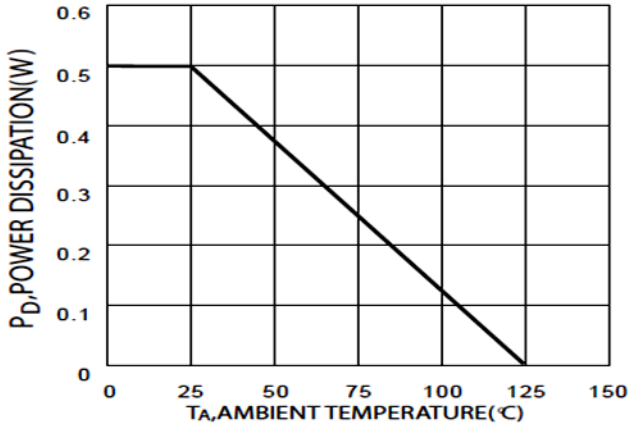
Part Number	Zener voltage Range NOTE2				Maximum Zener Impedance NOTE3			Maximum Reverse Current		Typical Temperature Coefficient @ I_{ZT} mV/°C		Test Current I_{ZTC}
	V_Z@ I_{ZT}			@I_{ZT}	Z_{ZT}@ I_{ZT}	Z_{ZK}@ I_{ZK}	I_{zk}	I_R	@V_R			
	Nom (V)	Min (V)	Max (V)	mA	Ω		mA	uA	V	Min	Max	mA
BZT52C2V4	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0	5
BZT52C2V7	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
BZT52C3V0	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
BZT52C3V3	3.3	3.1	3.5	5	95	600	1.0	5.0	1.0	-3.5	0	5
BZT52C3V6	3.6	3.4	3.8	5	90	600	1.0	5.0	1.0	-3.5	0	5
BZT52C3V9	3.9	3.7	4.1	5	90	600	1.0	3.0	1.0	-3.5	0	5
BZT52C4V3	4.3	4.0	4.6	5	90	600	1.0	3.0	1.0	-3.5	0	5
BZT52C4V7	4.7	4.4	5.0	5	80	500	1.0	3.0	2.0	-3.5	0.2	5
BZT52C5V1	5.1	4.8	5.4	5	60	480	1.0	2.0	2.0	-2.7	1.2	5
BZT52C5V6	5.6	5.2	6.0	5	40	400	1.0	1.0	2.0	-2.0	2.5	5
BZT52C6V2	6.2	5.8	6.6	5	10	150	1.0	3.0	4.0	0.4	3.7	5
BZT52C6V8	6.8	6.4	7.2	5	15	80	1.0	2.0	4.0	1.2	4.5	5
BZT52C7V5	7.5	7.0	7.9	5	15	80	1.0	1.0	5.0	2.5	5.3	5
BZT52C8V2	8.2	7.7	8.7	5	15	80	1.0	1.0	5.0	3.2	6.2	5
BZT52C9V1	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
BZT52C10	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
BZT52C11	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
BZT52C12	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
BZT52C13	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
BZT52C15	15	13.8	15.8	5	30	200	1.0	0.1	10.5	9.2	13.0	5
BZT52C16	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
BZT52C18	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
BZT52C20	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
BZT52C22	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
BZT52C24	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
BZT52C27	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
BZT52C30	30	28.0	32	2	80	300	0.5	0.1	21.0	24.4	29.4	2
BZT52C33	33	31.0	35	2	80	325	0.5	0.1	23.1	27.4	33.4	2
BZT52C36	36	34.0	38	2	90	350	0.5	0.1	25.2	30.4	37.4	2
BZT52C39	39	37.0	41	2	130	350	0.5	0.1	27.3	33.4	41.2	2
BZT52C43	43	40.0	46	2	100	700	1.0	0.1	32	10.0	12.0	5
BZT52C47	47	44.0	50	2	100	750	1.0	0.1	35	10.0	12.0	5
BZT52C51	51	48.0	54	2	100	750	1.0	0.1	38	10.0	12.0	5

NOTE2: Tested with pulses, period = 5ms, pulse width = 300us.

NOTE3: f = 1KHz.

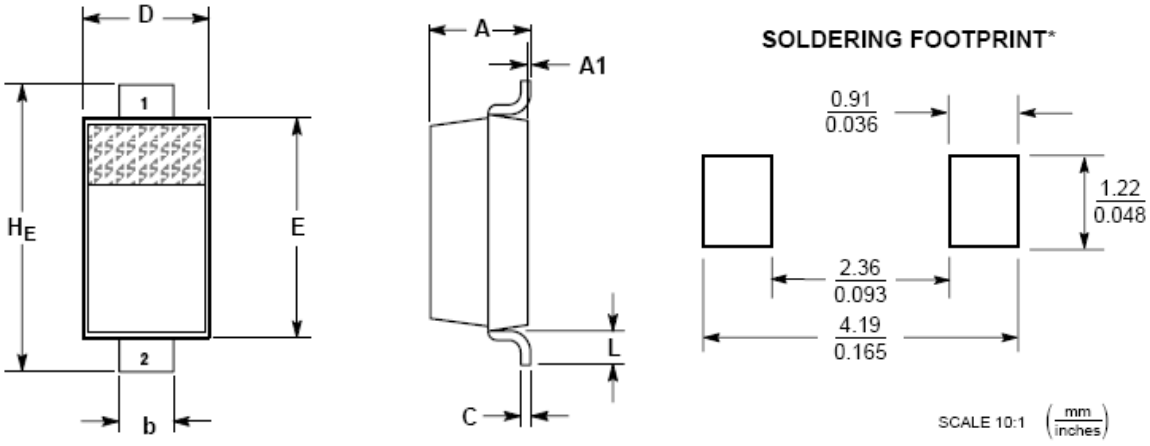
TYPICAL CHARACTERISTICS

Figure 1. Power Dissipation vs. Ambient temperaute



PACKAGE INFORMATION

Dimension in SOD-123 Package (Unit: mm)



DIM	MILLIMETERS	
	MIN	MAX
A	0.94	1.35
A1	0.00	0.10
b	0.51	0.71
c	-	0.15
D	1.40	1.80
E	2.54	2.84
H_E	3.56	3.86
L	0.25	-

IMPORTANT NOTICE

AiT Components (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Components' integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or servere property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Components assumes to no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.