DESCRIPTION

The BZT52C2V0~BZT52C75 are available in SOD-123 Package.

FEATURES

- Total power dissipation: Max. 500mW.
- Wide zener reverse voltage range 2.0V to 75V.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately±5%
- Available in SOD-123 Package

ORDERING INFORMATION

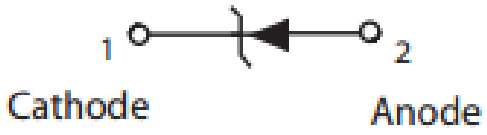
Package Type	Part Number	
SOD-123	BZT52C2V0	BZT52C13
	BZT52C2V2	BZT52C15
	BZT52C2V4	BZT52C16
	BZT52C2V7	BZT52C18
	BZT52C3V0	BZT52C20
	BZT52C3V3	BZT52C22
	BZT52C3V6	BZT52C24
	BZT52C3V9	BZT52C27
	BZT52C4V3	BZT52C30
	BZT52C4V7	BZT52C33
	BZT52C5V1	BZT52C36
	BZT52C5V6	BZT52C39
	BZT52C6V2	BZT52C43
	BZT52C6V8	BZT52C47
	BZT52C7V5	BZT52C51
	BZT52C8V2	BZT52C56
	BZT52C9V1	BZT52C62
	BZT52C10	BZT52C68
	BZT52C11	BZT52C75
	BZT52C12	
Note	SPQ: 3,000pcs/Reel	
AiT provides all RoHS Compliant Products		

MECHANICAL DATA

Case : SOD-123

Terminals: Solderable per MIL-STD-750,
Method 2026

PIN DESCRIPTION



ABSOLUTE MAXIMUM RATINGS

T_A = 25℃

P_{tot}, Power Dissipation	500mW
V_F, Forward Voltage @ I_F = 10mA	0.9V
$R_{\theta JA}$, Typical Thermal Resistance Junction to Ambient[NOTE1]	340℃/W
T_J, T_{STG}, Operating and Storage Temperature Range	-55℃ ~ +150℃

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: Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

ELECTRICAL CHARACTERISTICS

T_A = 25℃ unless otherwise specified, V_F = 0.9V Max@ I_F =10mA

Part Number	Zener Voltage Range[NOTE2]				Dynamic Impedance	Reverse Current	
	V_Z@I_{ZT}(V)			@I_{ZT}	Z_{ZT}@I_{ZT}(Ω)	I_R(uA)	@V_R
	Min	Nom	Max	mA	Max	Max	V
BZT52C2V0	1.8	2.0	2.15	5	100	120	0.5
BZT52C2V2	2.08	2.2	2.33	5	100	120	0.7
BZT52C2V4	2.28	2.4	2.56	5	100	120	1.0
BZT52C2V7	2.5	2.7	2.9	5	110	120	1.0
BZT52C3V0	2.8	3.0	3.2	5	120	50	1.0
BZT52C3V3	3.1	3.3	3.5	5	130	20	1.0
BZT52C3V6	3.4	3.6	3.8	5	130	10	1.0
BZT52C3V9	3.7	3.9	4.1	5	130	5.0	1.0
BZT52C4V3	4.0	4.3	4.6	5	130	5.0	1.0
BZT52C4V7	4.4	4.7	5.0	5	130	2.0	1.0
BZT52C5V1	4.8	5.1	5.4	5	130	2.0	1.5
BZT52C5V6	5.2	5.6	6.0	5	80	1.0	2.5
BZT52C6V2	5.8	6.2	6.6	5	50	1.0	3.0
BZT52C6V8	6.4	6.8	7.2	5	30	0.5	3.5
BZT52C7V5	7.0	7.5	7.9	5	30	0.5	4.0
BZT52C8V2	7.7	8.2	8.7	5	30	0.5	5.0
BZT52C9V1	8.5	9.1	9.6	5	30	0.5	6.0
BZT52C10	9.4	10.0	10.6	5	30	0.1	7.0
BZT52C11	10.4	11.0	11.6	5	30	0.1	8.0
BZT52C12	11.4	12.0	12.7	5	35	0.1	9.0
BZT52C13	12.4	13.0	14.1	5	35	0.1	10.0
BZT52C15	13.8	15.0	15.6	5	40	0.1	11.0
BZT52C16	15.3	16.0	17.1	5	40	0.1	12.0
BZT52C18	16.8	18.0	19.1	5	45	0.1	13.0
BZT52C20	18.8	20.0	21.2	5	50	0.1	15.0
BZT52C22	20.8	22.0	23.3	5	55	0.1	17.0
BZT52C24	22.8	24.0	25.6	5	60	0.1	19.0
BZT52C27	25.1	27.0	28.9	5	70	0.1	21.0
BZT52C30	28.0	30.0	32.0	5	80	0.1	23.0
BZT52C33	31.0	33.0	35.0	5	80	0.1	25.0
BZT52C36	34.0	36.0	38.0	5	90	0.1	27.0
BZT52C39	37.0	39.0	41.0	2.5	100	2.0	30.0
BZT52C43	40.0	43.0	46.0	2.5	130	2.0	33.0
BZT52C47	44.0	47.0	50.0	2.5	150	2.0	36.0
BZT52C51	48.0	51.0	54.0	2.5	180	1.0	39.0
BZT52C56	52.0	56.0	60.0	2.5	180	1.0	43.0
BZT52C62	58.0	62.0	66.0	2.5	200	0.2	47.0
BZT52C68	64.0	68.0	72.0	2.5	250	0.2	52.0
BZT52C75	70.0	75.0	79.0	2.5	300	0.2	57.0

NOTE2: V_{ZT} is tested with pulses (20 ms)

TYPICAL CHARACTERISTICS

Figure 1. Maximum Continuous Power Derating

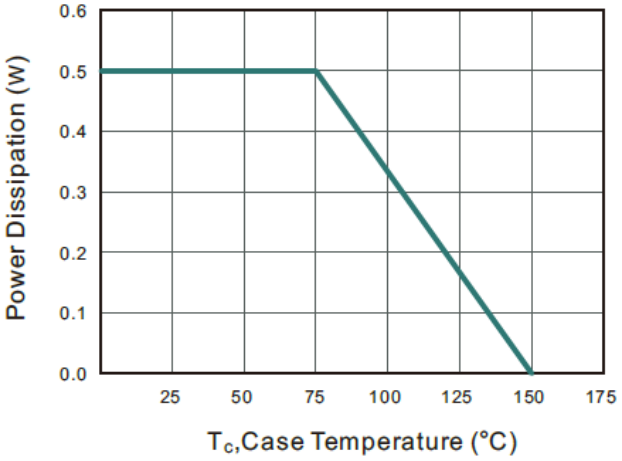
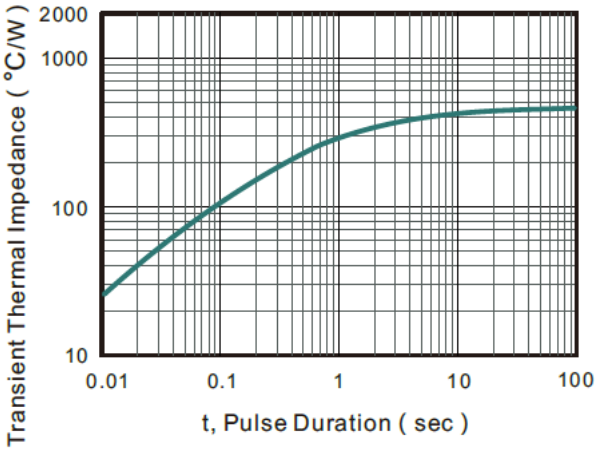
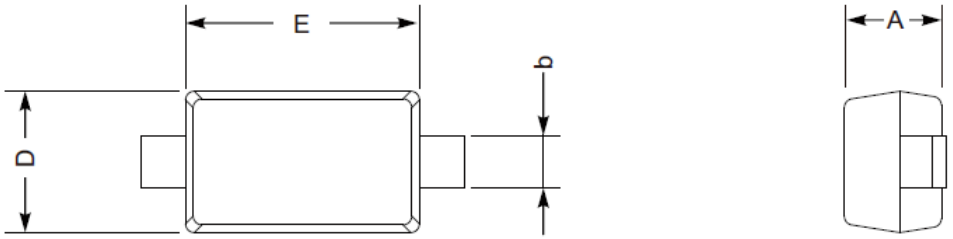


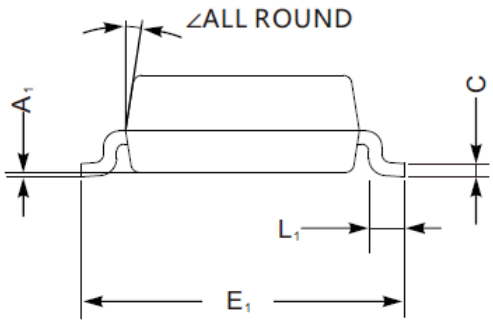
Figure 2.Typical Transient Thermal Impedance



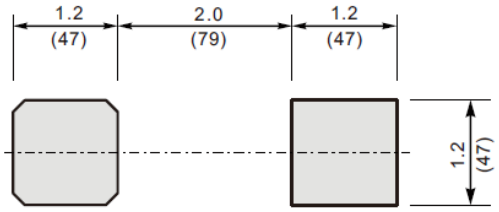
PACKAGE INFORMATION

Dimension in SOD-123 Package (Unit: mm)





The recommended mounting pad size



Unit: mm (mil)

UNIT		A	C	D	E	E_1	L_1	b	A_1	∠
mm	Max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	Min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	-	
mil	Max	51	8.7	71	110	154	18	28	8	
	Min	35	3.5	59	98	142	10	20	-	

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