BZT52C2V0 THRU BZT52C47

SOD-123 BZT52CXX稳压管系列

Features

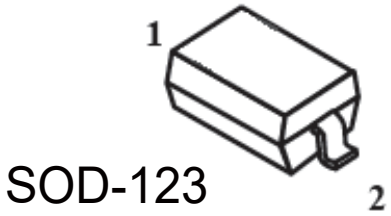
- Total power dissipation: Max. 500mW
- Wide zener reverse voltage range 2.0 V to 47V
- Small plastic package suitable for surface mounted design
- 5% high-precision regulated voltage stability
- High reliability chip and packaging process

SOD-123

Applications

Low-power voltage regulator is mainly used for circuit voltage adjustment of mobile phones, hand-held devices and high-density computer motherboards.

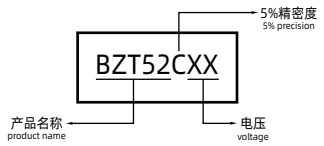
Schematic diagram of package die



Schematic diagram of package die

Parameter	Symbol	Value	Value
Power Dissipation	P_D	500	mW
Forward Voltage at IF = 10 mA	V_F	0.9	V
Typical thermal resistance juncting to ambient (1)	$R_{\theta JA}$	305	°C/W
Operating and Storage Temperature Range	T_J,T_{stg}	-55 ~ +150	°C

Ordering information

Product ID	Pack	Naming rule	voltage	Qty(PCS)
BZT52CXX	SOD-123		2V-47V	3000

Electrical Characteristics (T_A=25℃, unless otherwise noted)

Type	Marking	Zener Voltage Range (2)				Maximum Zener (3) mpedance			Reverse Current (2)		Typical temperature coefficient @I_{ZTC} mV/°C		Test current I_{ZTC}
		V_{ZT}（at I_{ZT}）			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R	@V_R			
		Min（V）	Nom（V）	Max（V）	(mA)	(Ω)		(mA)	μA	V	MIN	MAX	mA
BZT52C2V0	WY	1.91	2.0	2.09	5	100	600	1	150	1.0	-3.5	0	5
BZT52C2V4	WX	2.2	2.4	2.6	5	100	600	1	50	1.0	-3.5	0	5
BZT52C2V7	W1	2.5	2.7	2.9	5	100	600	1	20	1.0	-3.5	0	5
BZT52C3V0	W2	2.8	3.0	3.2	5	95	600	1	10	1.0	-3.5	0	5
BZT52C3V3	W3	3.1	3.3	3.5	5	95	600	1	5.0	1.0	-3.5	0	5
BZT52C3V6	W4	3.4	3.6	3.8	5	90	600	1	5.0	1.0	-3.5	0	5
BZT52C3V9	W5	3.7	3.9	4.1	5	90	600	1	3.0	1.0	-3.5	0	5
BZT52C4V3	W6	4.0	4.3	4.6	5	90	600	1	3.0	1.0	-3.5	0	5
BZT52C4V7	W7	4.4	4.7	5.0	5	80	500	1	3.0	2.0	-3.5	0.2	5
BZT52C5V1	W8	4.8	5.1	5.4	5	60	480	1	2.0	2.0	-2.7	1.2	5
BZT52C5V6	W9	5.2	5.6	6.0	5	40	400	1	1.0	2.0	-2	2.5	5
BZT52C6V2	WA	5.8	6.2	6.6	5	10	150	1	3.0	4.0	0.4	3.7	5
BZT52C6V8	WB	6.4	6.8	7.2	5	15	80	1	2.0	4.0	1.2	4.5	5
BZT52C7V5	WC	7.0	7.5	7.9	5	15	80	1	1.0	5.0	2.5	5.3	5
BZT52C8V2	WD	7.7	8.2	8.7	5	15	80	1	0.7	5.0	3.2	6.2	5
BZT52C9V1	WE	8.5	9.1	9.6	5	15	100	1	0.5	6.0	3.8	7.0	5
BZT52C10	WF	9.4	10	10.6	5	20	150	1	0.2	7.0	4.5	8.0	5
BZT52C11	WG	10.4	11	11.6	5	20	150	1	0.1	8.0	5.4	9.0	5
BZT52C12	WH	11.4	12	12.7	5	25	150	1	0.1	8.0	6.0	10.0	5
BZT52C13	WI	12.4	13	14.1	5	30	170	1	0.1	8.0	7.0	11.0	5
BZT52C15	WJ	13.8	15	15.6	5	30	200	1	0.1	10.5	9.2	13.0	5
BZT52C16	WK	15.3	16	17.1	5	40	200	1	0.1	11.2	10.4	14.0	5
BZT52C18	WL	16.8	18	19.1	5	45	225	1	0.1	12.6	12.4	16.0	5
BZT52C20	WM	18.8	20	21.2	5	55	225	11	0.1	14.0	14.4	18.0	5
BZT52C22	WN	20.8	22	23.3	5	55	250	1	0.1	15.4	16.4	20.0	5
BZT52C24	WO	22.8	24	25.6	5	70	250	1	0.1	16.8	18.4	22.0	5
BZT52C27	WP	25.1	27	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
BZT52C30	WQ	28.0	30	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
BZT52C33	WR	31.0	33	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
BZT52C36	WS	34.0	36	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
BZT52C39	WT	37.0	39	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2
BZT52C43	WU	40.0	43	46.0	2.5	130	500	1	2	33	37.6	46.6	2.5
BZT52C47	WV	44.0	47	50.0	2.5	150	500	1	2	36	42.0	51.8	2.5

NOTES:

（1）f=1KHz

（2）Short duration test pulse used to minimize self-heating effect.

（3）VZT is tested with pulses 20ms.

Typical Characteristics

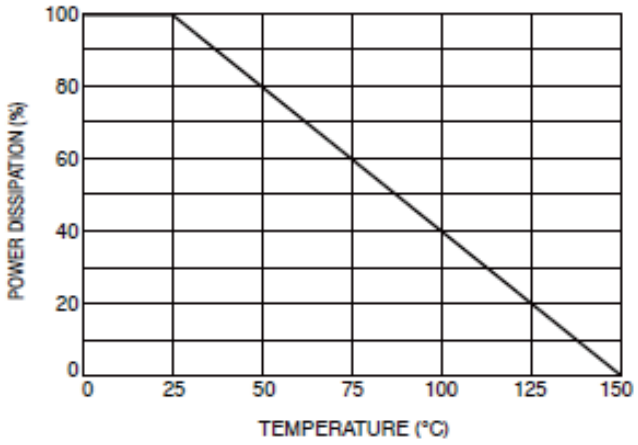


Fig.1 Maximum continuous power loss

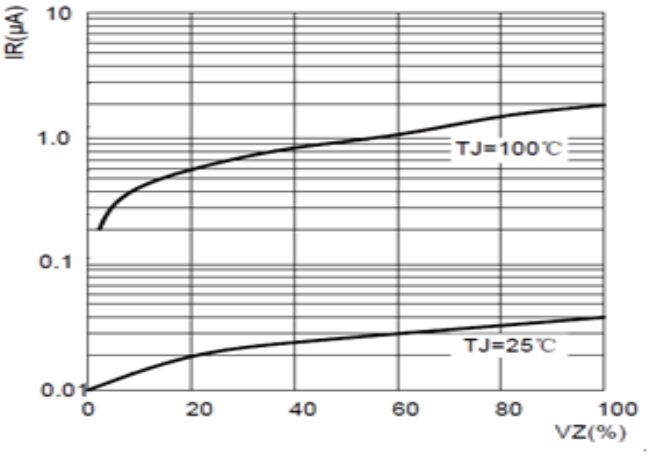


Fig.2 Typical reverse characteristic

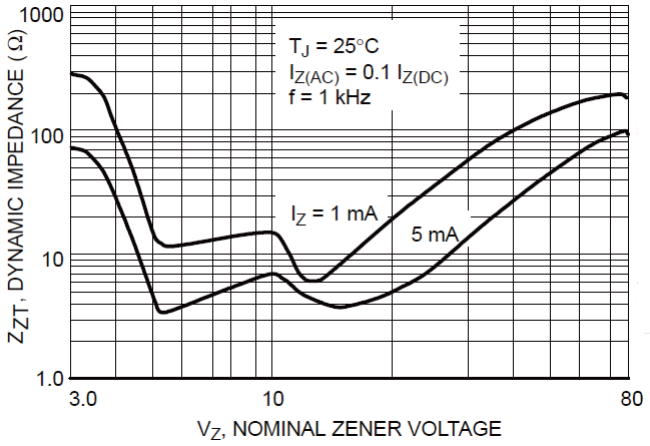


Fig.3 Reverse voltage and impedance characteristic curve

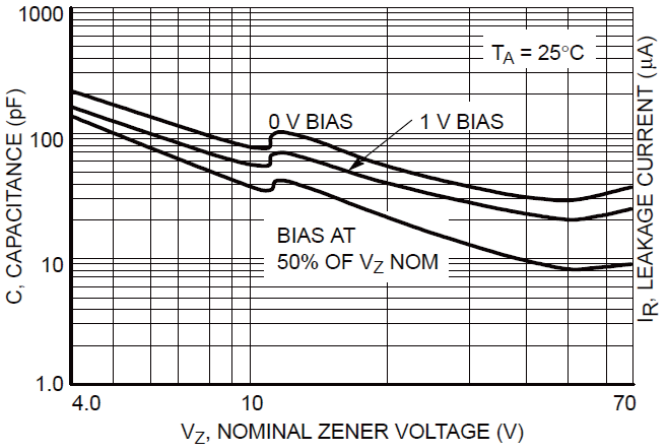
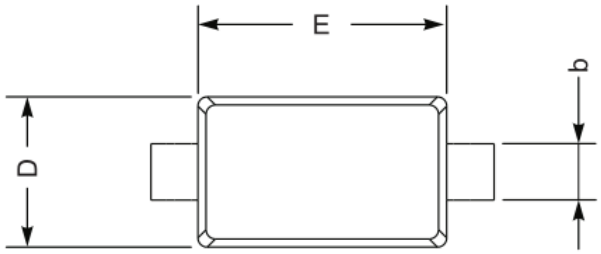
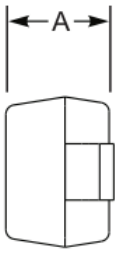
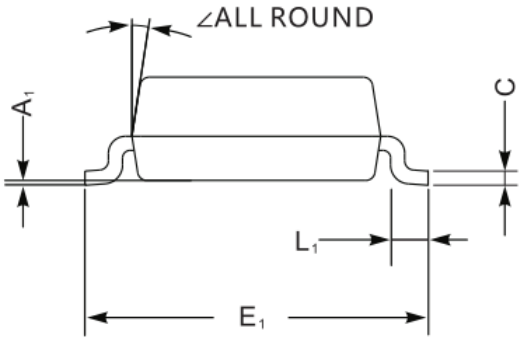


Fig.4 Typical capacitance characteristic curve

SOD-123 Package Outline Dimensions







Symbol	mm		mil	
	min	max	min	max
A	0.9	1.3	35	51
C	0.09	0.22	3.5	8.7
D	1.5	1.8	59	71
E	2.5	2.8	98	110
E1	3.6	3.9	142	154
L1	0.25	0.45	10	18
b	0.5	0.7	20	28
A1		0.2		8
∠	9°			