



## 1. 主要用途与主要特点

### 1.1 主要用途

小功率稳压管主要用于移动电话，手持设备和高密度电脑主板等产品的电路电压调整。

### 1.2 主要特点

- 适合高密度应用的小型化封装尺寸
- 5%的高精度稳压电压稳定性
- 高可靠性芯片和封装工艺

## 2. 封装管芯示意图



## 3. 电参数极限值

除非另有规定， $T_{amb} = 25^{\circ}\text{C}$

参数名称	符号	额定值	单位
正向电压 (IF=10mA)	VF	0.85	V
总耗散功率 (FR-5 版, 注 1)	$P_D$	500	mW
热阻 (FR-5 Board, 注 1)	$R_{\theta JA}$	556	$^{\circ}\text{C}/\text{W}$
热阻 (AL 基板, 注 2)	$R_{\theta JA}$	417	$^{\circ}\text{C}/\text{W}$
最高工作结温	$T_j$	150	$^{\circ}\text{C}$
贮存温度	$T_{stg}$	-55~150	$^{\circ}\text{C}$

注 1:FR-5=1.0\*0.75\*0.62 in.

注 2:Alumina=0.4\*0.3\*0.024 in., 99.5% alumina



#### 4. 电参数特性表

除非另有规定,  $T_{amb} = 25^{\circ}\text{C}$

DEVICE	VZ(V) @ IZ=5mA			ZZ@ IZ1=1mA	ZZ @ IZ2 = 5 mA	ZZ @ IZ3 = 20mA	IR@VR	VR	Typical Temperature Coefficient(mV/°C)@ IZ=5mA	
	MIN	NOM	MAX	(Ω)	(Ω)	(Ω)	(uA)	V	Min	Max
BZT52 C2V4	2.28	2.4	2.52	570	95	47.5	40	1	-3.5	0
BZT52 C2V7	2.57	2.7	2.84	570	95	47.5	16	1	-3.5	0
BZT52 C3V0	2.85	3	3.15	570	90	47.5	8	1	-3.5	0
BZT52 C3V3	3.14	3.3	3.47	570	90	38	4	1	-3.5	0
BZT52 C3V6	3.42	3.6	3.78	570	85	38	4	1	-3.5	0
BZT52 C3V9	3.72	3.9	4.08	570	85	28.5	2.4	1	-3.5	0
BZT52 C4V3	4.09	4.3	4.52	570	85	28.5	2.4	1	-3.5	0
BZT52 C4V7	4.47	4.7	4.94	475	75	14	2.4	2	-3.5	0.2
BZT52 C5V1	4.85	5.1	5.36	455	57	14	1.6	2	-2.7	1.2
BZT52 C5V6	5.32	5.6	5.88	380	38	9.5	0.8	2	-2	2.5
BZT52 C6V2	5.89	6.2	6.51	150	9.5	5.7	2.4	4	0.4	3.7
BZT52 C6V8	6.46	6.8	7.14	76	14.2	5.7	1.6	4	1.2	4.5
BZT52 C7V5	7.13	7.5	7.88	76	14.2	5.7	0.8	5	2.5	5.3
BZT52 C8V2	7.79	8.2	8.61	76	14.2	5.7	0.56	5	3.2	6.2
BZT52 C9V1	8.65	9.1	9.56	95	14.2	7.6	0.16	7	3.8	7.0
BZT52 C10	9.50	10	10.50	142.5	19	9.5	0.08	8	4.5	8.0
BZT52 C11	10.45	11	11.55	142.5	19	9.5	0.08	8	5.4	9.0
BZT52 C12	11.4	12	12.60	150	23.7	9.5	0.08	8	6.0	10.0
BZT52 C13	12.35	13	13.65	170	28.5	14.2	0.08	8	7.0	11.0
BZT52 C15	14.25	15	15.75	190	28.5	19	0.04	11	9.2	13.0
BZT52 C16	15.2	16	16.80	190	38	19	0.04	11	10.4	14.0
BZT52 C18	17.10	18	18.90	213	42.7	19	0.04	13	12.4	16.0
BZT52 C20	19.0	20	21.0	213	52.2	19	0.04	14	14.4	18.0
BZT52 C22	20.9	22	23.10	237	52.2	23.7	0.04	15	16.4	20.0
BZT52 C24	22.8	24	25.2	250	66.5	23.7	0.04	17	18.4	22.0



DEVICE	VZ(V) @ IZ=2mA			ZZ @ IZ = 0.5 mA	ZZ @ IZ = 2 mA	ZZ @ IZ = 10mA	IR@VR	VR	Typical Temperature Coefficient(mV/°C)@ IZ=2mA	
	MIN	NOM	MAX	(Ω)	(Ω)	(Ω)	(uA)	V	Min	Max
BZT52 C27	25.65	27	28.35	295	75	43	0.04	19	21.4	25.3
BZT52 C30	28.50	30	31.50	295	75	48	0.04	21	24.4	29.4
BZT52 C33	31.35	33	34.65	320	75	53	0.04	23	27.4	33.4
BZT52 C36	34.20	36	37.80	345	85	58	0.04	25	30.4	37.4
BZT52 C39	37.05	39	40.95	345	125	68	0.04	27	33.4	41.2
BZT52 C43	40.85	43	45.15	370	145	78	0.04	30	37.6	46.6
BZT52 C47	44.65	47	49.35	370	165	88	0.04	33	42.0	51.8
BZT52 C51	48.45	51	53.55	395	175	98	0.04	36	46.6	57.2
BZT52 C56	52.2	56	58.8	420	195	108	0.04	39	52.2	63.8
BZT52 C62	58.9	62	65.1	445	210	118	0.04	43	58.8	71.6
BZT52 C68	64.6	68	71.4	470	235	128	0.04	48	65.6	79.8
BZT52 C75	71.25	75	78.75	495	250	138	0.04	53	73.4	88.6



### 5. 特性曲线图表

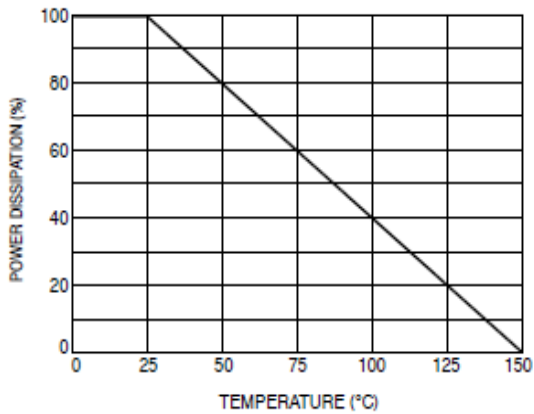


图 1 最大连续功率损耗

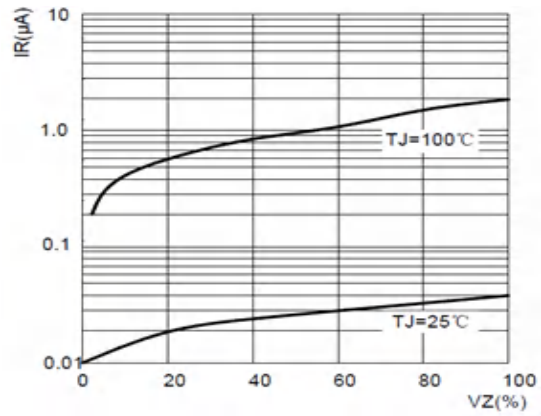


图 2 典型反向特性

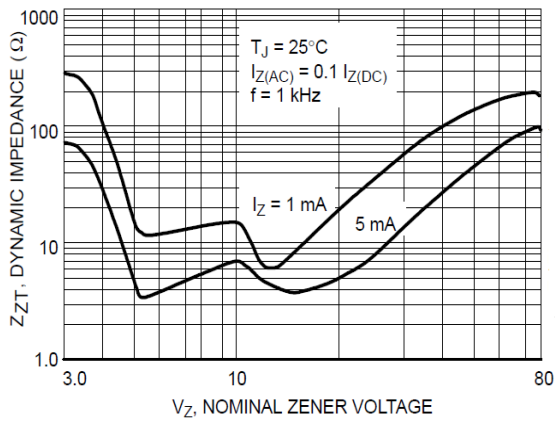


图 3 反向电压与阻抗特性曲线

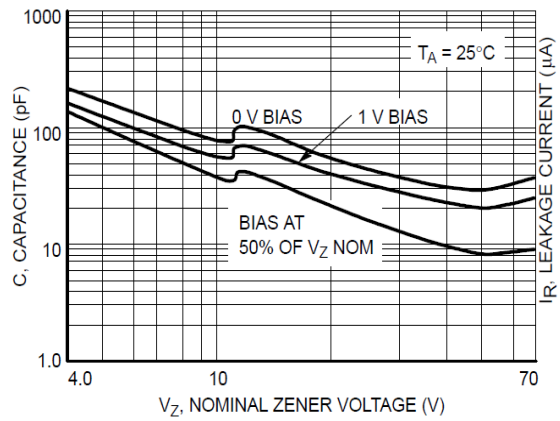
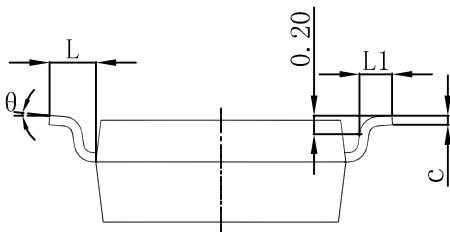
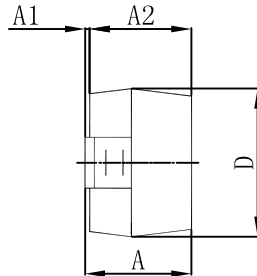
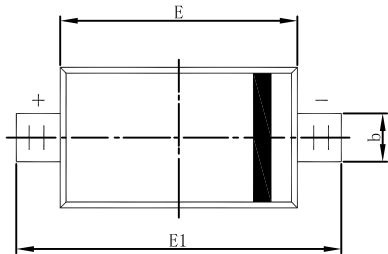


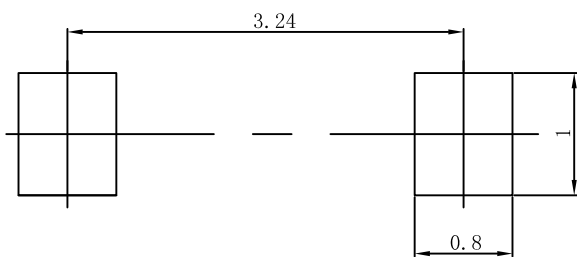
图 4 典型电容特性曲线



### SOD-123 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°



- Note:**
1. Controlling dimension: in millimeters.
  2. General tolerance:  $\pm 0.05\text{mm}$ .
  3. The pad layout is for reference purposes only.



### Attention

- Any and all HUA XUAN YANG ELECTRONICS products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your HUA XUAN YANG ELECTRONICS representative nearest you before using any HUA XUAN YANG ELECTRONICS products described or contained herein in such applications.
- HUA XUAN YANG ELECTRONICS assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein.
- Specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- HUA XUAN YANG ELECTRONICS CO.,LTD. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.
- In the event that any or all HUA XUAN YANG ELECTRONICS products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.
- No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of HUA XUAN YANG ELECTRONICS CO.,LTD.
- Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. HUA XUAN YANG ELECTRONICS believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the HUA XUAN YANG ELECTRONICS product that you intend to use.