

## Features

1. Saving space
2. Fits onto SOD 323/SOT 23 footprints
3. Micro Melf package

## Applications

Voltage stabilization

## Absolute Maximum Ratings

$T_j=25^{\circ}\text{C}$

Parameter	Test Conditions	Type	Symbol	Value	Unit
Power dissipation	$R_{thJA} \leq 300\text{K/W}$		$P_V$	500	mW
Z-current			$I_Z$	$P_V/V_Z$	mA
Junction temperature			$T_j$	175	$^{\circ}\text{C}$
Storage temperature range			$T_{stg}$	-65~+175	$^{\circ}\text{C}$

## Maximum Thermal Resistance

$T_j=25^{\circ}\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mm×50mm×1.6mm	$R_{thJA}$	500	K/W

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

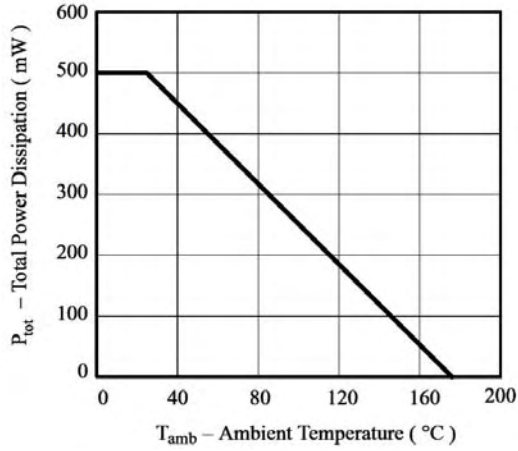
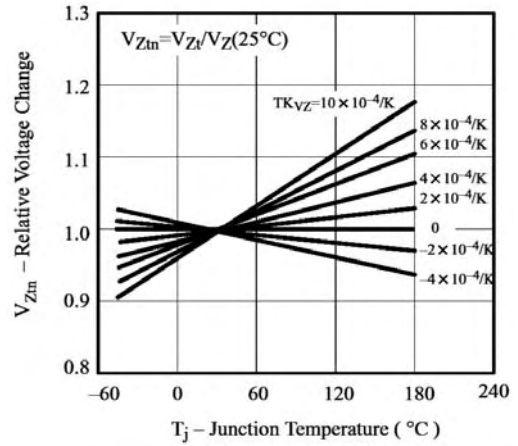
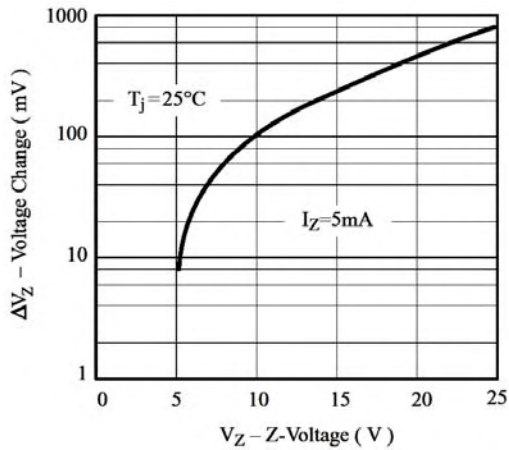
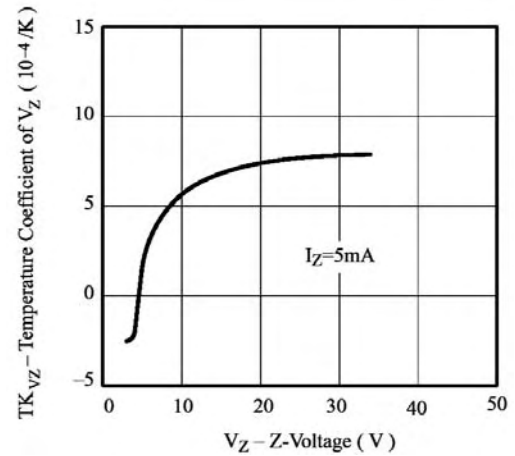
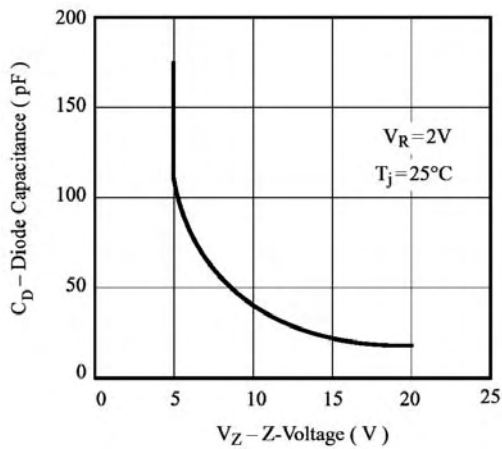
## Electrical Characteristics

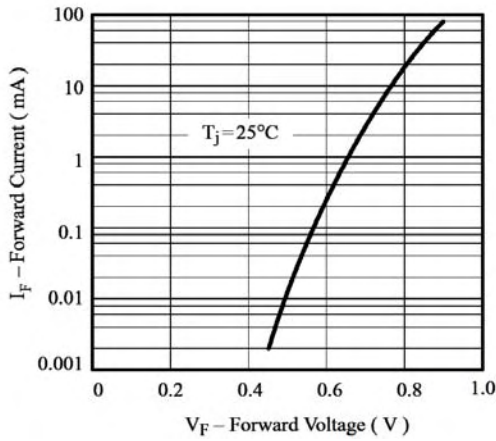
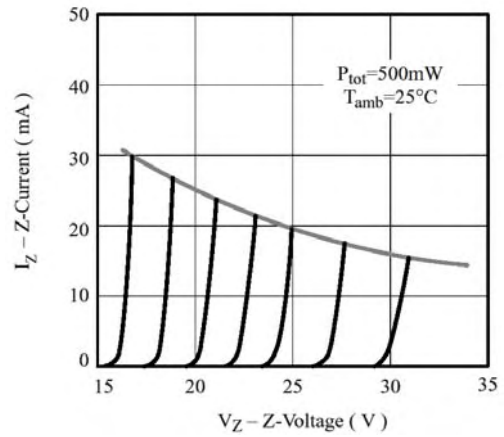
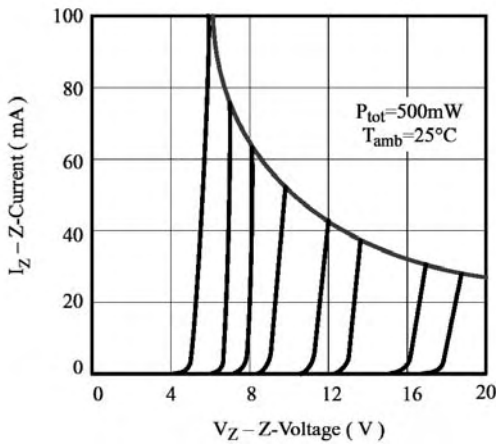
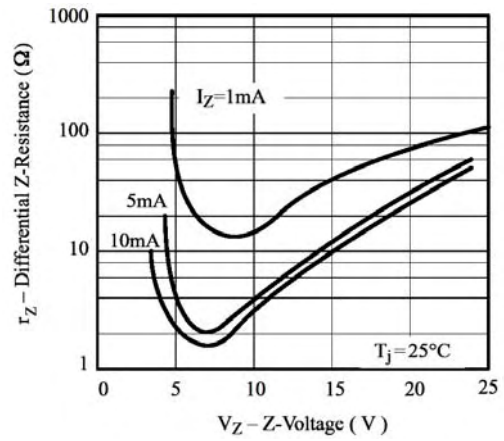
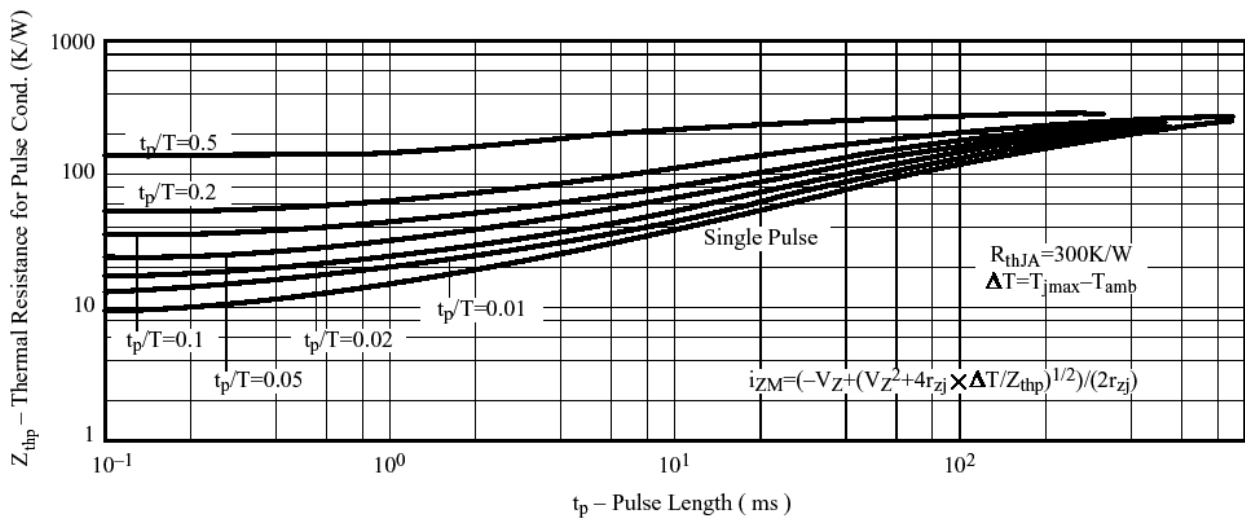
$T_j=25^{\circ}\text{C}$

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=200\text{mA}$		$V_F$			1.5	V

Type	V <sub>Znom</sub>	I <sub>ZT</sub>	for V <sub>ZT</sub> and	r <sub>ZT</sub>	r <sub>ZJK</sub> at	I <sub>ZK</sub>	I <sub>R</sub> and	I <sub>R</sub> at	V <sub>R</sub>	TK <sub>VZ</sub>
BZM55C.	V	mA	V	Ω	Ω	mA	μA	μA <sup>1)</sup>	V	%/K
2V0	2.0	5	1.9~2.1	100	<600	1	<150	<300	1	-0.09~-0.06
2V2	2.2	5	2.09~2.31	100	<600	1	<150	<300	1	-0.09~-0.06
2V4	2.4	5	2.28~2.56	<85	<600	1	<50	<100	1	-0.09~-0.06
2V7	2.7	5	2.5~2.9	<85	<600	1	<10	<50	1	-0.09~-0.06
3V0	3.0	5	2.8~3.2	<85	<600	1	<4	<40	1	-0.08~-0.05
3V3	3.3	5	3.1~3.5	<85	<600	1	<2	<40	1	-0.08~-0.05
3V6	3.6	5	3.4~3.8	<85	<600	1	<2	<40	1	-0.08~-0.05
3V9	3.9	5	3.7~4.1	<85	<600	1	<2	<40	1	-0.08~-0.05
4V3	4.3	5	4.0~4.6	<75	<600	1	<1	<20	1	-0.06~-0.03
4V7	4.7	5	4.4~5.0	<60	<600	1	<0.5	<10	1	-0.05~+0.02
5V1	5.1	5	4.8~5.4	<35	<550	1	<0.1	<2	1	-0.02~+0.02
5V6	5.6	5	5.2~6.0	<25	<450	1	<0.1	<2	1	-0.05~+0.05
6V2	6.2	5	5.8~6.6	<10	<200	1	<0.1	<2	2	0.03~0.06
6V8	6.8	5	6.4~7.2	<8	<150	1	<0.1	<2	3	0.03~0.07
7V5	7.5	5	7.0~7.9	<7	<50	1	<0.1	<2	5	0.03~0.07
8V2	8.2	5	7.7~8.7	<7	<50	1	<0.1	<2	6.2	0.03~0.08
9V1	9.1	5	8.5~9.6	<10	<50	1	<0.1	<2	6.8	0.03~0.09
10	10	5	9.4~10.6	<15	<70	1	<0.1	<2	7.5	0.03~0.1
11	11	5	10.4~11.6	<20	<70	1	<0.1	<2	8.2	0.03~0.11
12	12	5	11.4~12.7	<20	<90	1	<0.1	<2	9.1	0.03~0.11
13	13	5	12.4~14.1	<26	<110	1	<0.1	<2	10	0.03~0.11
15	15	5	13.8~15.6	<30	<110	1	<0.1	<2	11	0.03~0.11
16	16	5	15.3~17.1	<40	<170	1	<0.1	<2	12	0.03~0.11
18	18	5	16.8~19.1	<50	<170	1	<0.1	<2	13	0.03~0.11
20	20	5	18.8~21.2	<55	<220	1	<0.1	<2	15	0.03~0.11
22	22	5	20.8~23.3	<55	<220	1	<0.1	<2	16	0.04~0.12
24	24	5	22.8~25.6	<80	<220	1	<0.1	<2	18	0.04~0.12
27	27	5	25.1~28.9	<80	<220	1	<0.1	<2	20	0.04~0.12
30	30	5	28~32	<80	<220	1	<0.1	<2	22	0.04~0.12
33	33	5	31~35	<80	<220	1	<0.1	<2	24	0.04~0.12
36	36	5	34~38	<80	<220	1	<0.1	<2	27	0.04~0.12
39	39	2.5	37~41	<90	<500	0.5	<0.1	<5	30	0.04~0.12
43	43	2.5	40~46	<90	<600	0.5	<0.1	<5	33	0.04~0.12
47	47	2.5	44~50	<110	<700	0.5	<0.1	<5	36	0.04~0.12
51	51	2.5	48~54	<125	<700	0.5	<0.1	<10	39	0.04~0.12
56	56	2.5	52~60	<135	<1000	0.5	<0.1	<10	43	0.04~0.12
62	62	2.5	58~66	<150	<1000	0.5	<0.1	<10	47	0.04~0.12
68	68	2.5	64~72	<200	<1000	0.5	<0.1	<10	51	0.04~0.12
75	75	2.5	70~79	<250	<1500	0.5	<0.1	<10	56	0.04~0.12
82	82	2.5	77~87	<300	<2000	0.5	<0.1	<10	62	0.04~0.12
91	91	1.0	85~96	<450	<5000	0.1	<0.1	<10	68	0.04~0.12
100	100	1.0	94~106	<450	<5000	0.1	<0.1	<10	75	0.04~0.12

<sup>1)</sup> at T<sub>J</sub>=150°C

**Characteristics ( $T_j=25^\circ\text{C}$  unless otherwise specified)**

**Figure 1. Total Power Dissipation vs. Ambient Temperature**

**Figure 4. Typical Change of Working Voltage Vs. Junction Temperature**

**Figure 2. Typical Change of Working Voltage under Operating Conditions at  $T_{\text{amb}}=25^\circ\text{C}$** 

**Figure 5. Temperature Coefficient of  $V_Z$  vs. Z-Voltage**

**Figure 3. Diode Capacitance vs. Z-voltage**


**Figure 6. Forward Current vs. Forward Voltage**

**Figure 8. Z-Current vs. Z-Voltage**

**Figure 7. Z-Current vs. Z-Voltage**

**Figure 9. Differential Z-Resistance Vz vs. Z-Voltage**

**Figure 10. Thermal Response**

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