

Zener diode

Features

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



Applications

Voltage stabilization

Construction

Silicon epitaxial planar

Absolute Maximum Ratings

T_j=25°C

Parameter	Test Conditions	Type	Symbol	Value	Unit
Power dissipation	R _{thJA} ≤ 300K/W		P _V	500	mW
Z-current			I _Z	P _V /V _Z	mA
Junction temperature			T _j	175	°C
Storage temperature range			T _{stg}	-65~+175	°C

Maximum Thermal Resistance

T_j=25°C

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

Electrical Characteristics

T_j=25°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I _F =200mA		V _F			1.5	V

Type	V _{Znom}	I _{ZT}	for V _{ZT} and	r _{zT}	r _{zK} at	I _{ZK}	I _R and	I _R at	V _R	TK _{VZ}
BZM55C.	V	mA	V ¹⁾	Ω	Ω	mA	μ A	μ A ²⁾	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

¹⁾ BZM55B... ±2% of V_{Znom}
BZM55C... ±5% of V_{Znom}

²⁾ at T_J=150°C

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

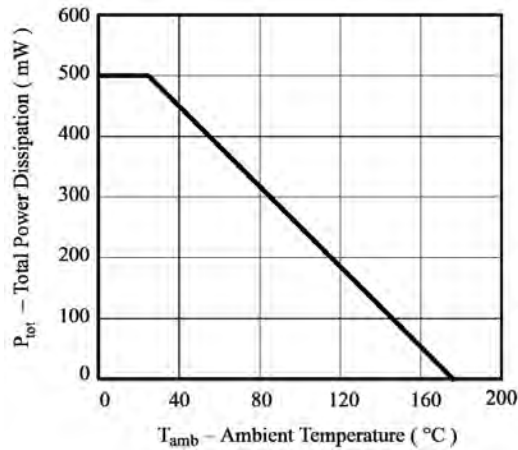


Figure 1. Total Power Dissipation vs. Ambient Temperature

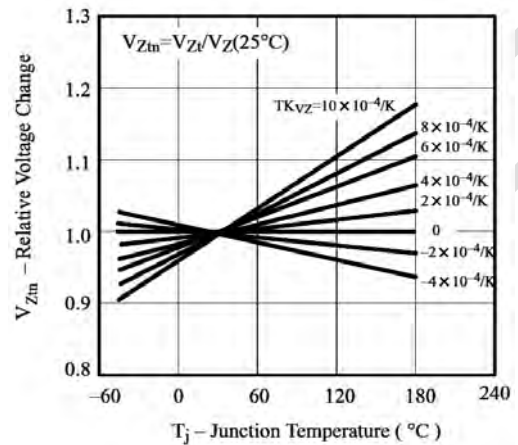


Figure 4. Typical Change of Working Voltage Vs. Junction Temperature

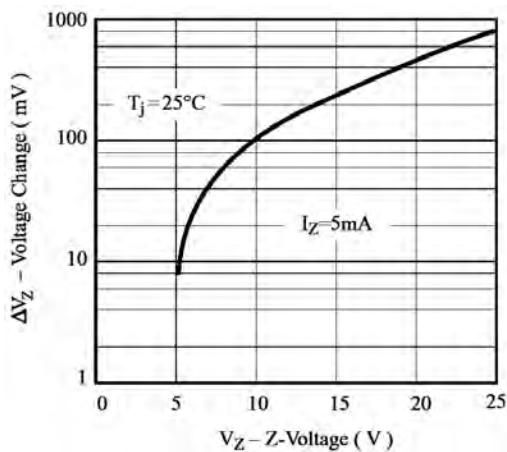


Figure 2. Typical Change of Working Voltage under Operating Conditions at $T_{\text{amb}}=25^\circ\text{C}$

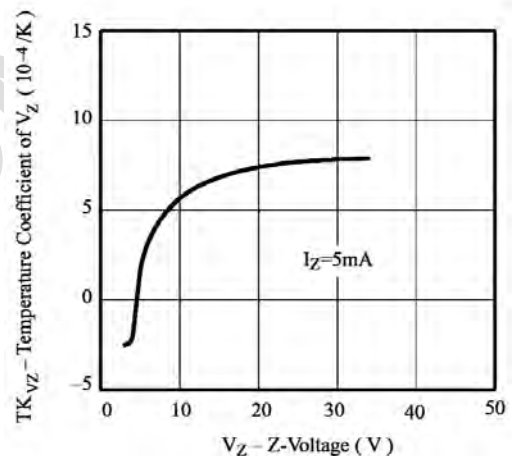


Figure 5. Temperature Coefficient of V_Z vs. Z-Voltage

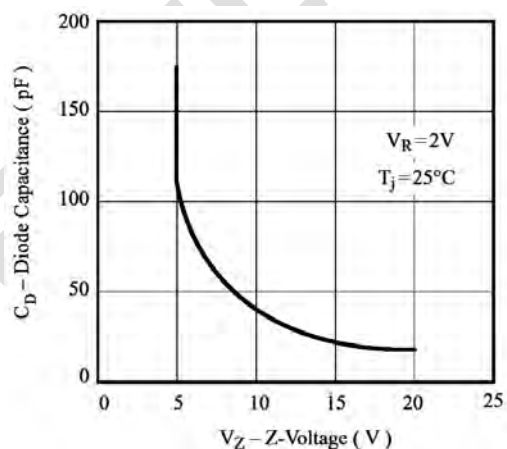


Figure 3. Diode Capacitance vs. Z-voltage

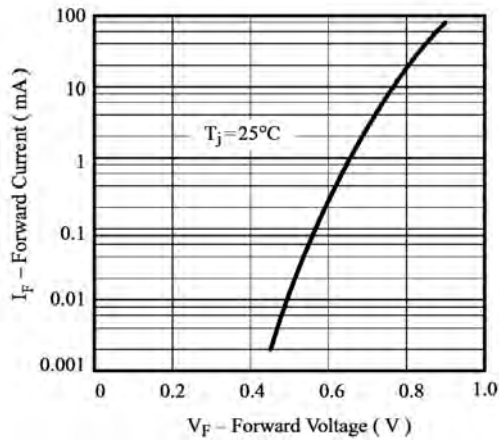


Figure 6. Forward Current vs. Forward Voltage

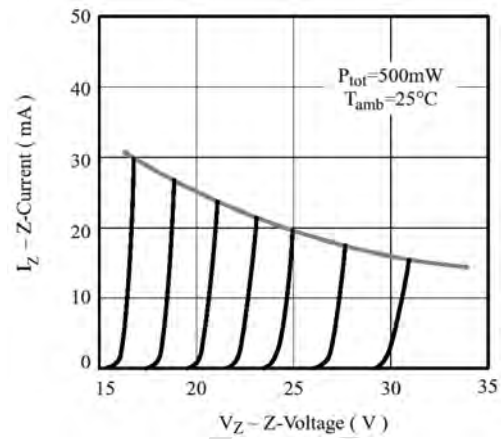


Figure 8. Z-Current vs. Z-Voltage

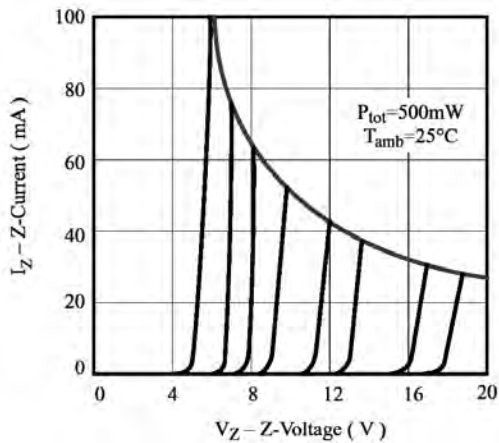


Figure 7. Z-Current vs. Z-Voltage

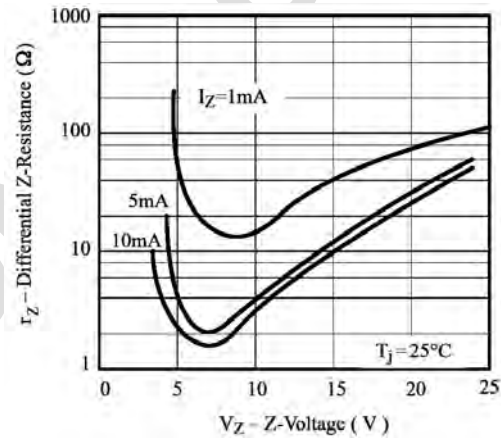


Figure 9. Differential Z-Resistance vs. Z-Voltage

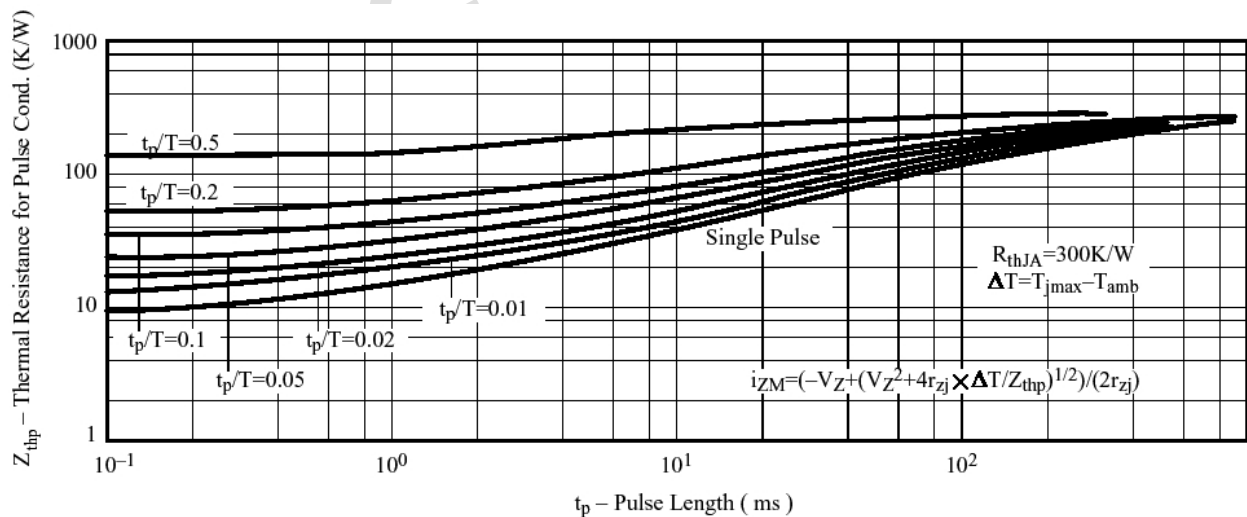
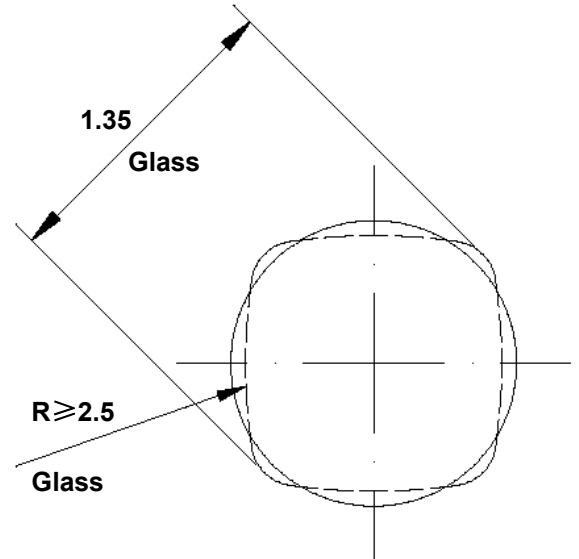
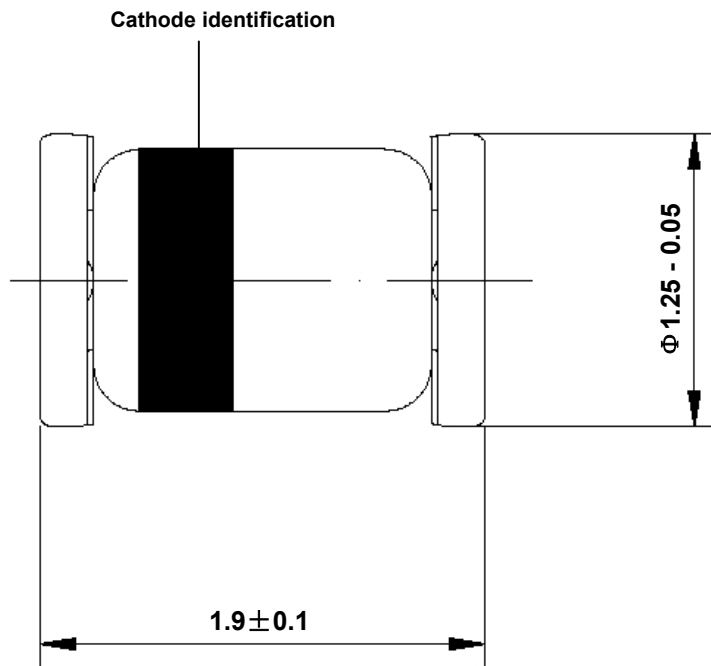


Figure 10. Thermal Response

Dimensions in mm



Glass Case
Micro Melf