GW ZMM55Bxx-SERIES

ZENER DIODES

Zener Voltage:2.4-36V

Peak Pulse Power:500mW

Features

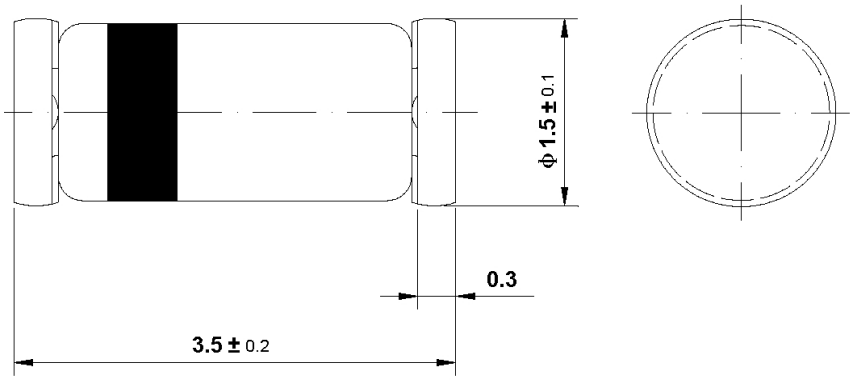
High reliability

Applications

Voltage stabilization

Construction

Silicon epitaxial planar



Dimensions in mm

Standard Glass Case

JEDEC L L 3 4

Absolute Maximum Ratings

T_j=25℃

Parameter	Test Conditions	Type	Symbol	Value	Unit
Power dissipation	I=4mm T_L≤25℃		P_V	500	mW
Z-current			I_Z	P_V/V_Z	mA
Junction temperature			T_j	175	℃
Storage temperature range			T_{stg}	-65~+175	℃

Maximum Thermal Resistance

T_j=25℃

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	I=4mm T_L=constant	R_{thJA}	350	K/W

Electrical Characteristics

T_j=25℃

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

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Type	V_{Znom}	I_{ZT} for V_{ZT} and		r_{zjT}	r_{zjK} at I_{ZK}		I_R and I_R at V_R			TK_{VZ}
ZMM55B	V	mA	V[1)]	Ω	Ω	mA	μA	μA[2)]	V	%/K
2V4	2.4	5	2.35~2.44	<85	<600	1	<50	<100	1	-0.09~-0.06
2V7	2.7	5	2.6~2.8	<85	<600	1	<10	<50	1	-0.09~-0.06
3V0	3	5	2.9~3.1	<85	<600	1	<4	<40	1	-0.08~-0.05
3V3	3.3	5	3.2~3.4	<85	<600	1	<2	<40	1	-0.08~-0.05
3V6	3.6	5	3.5~3.7	<85	<600	1	<2	<40	1	-0.08~-0.05
3V9	3.9	5	3.8~4.0	<85	<600	1	<2	<40	1	-0.08~-0.05
4V3	4.3	5	4.2~4.4	<75	<600	1	<1	<20	1	-0.06~-0.03
4V7	4.7	5	4.6~4.8	<60	<600	1	<0.5	<10	1	-0.05~+0.02
5V1	5.1	5	5.0~5.2	<35	<550	1	<0.1	<2	1	-0.02~+0.02
5V6	5.6	5	5.5~5.7	<25	<450	1	<0.1	<2	1	-0.05~+0.05
6V2	6.2	5	6.1~6.3	<10	<200	1	<0.1	<2	2	0.03~0.06
6V8	6.8	5	6.7~6.9	<8	<150	1	<0.1	<2	3	0.03~0.07
7V5	7.5	5	7.4~7.7	<7	<50	1	<0.1	<2	5	0.03~0.07
8V2	8.2	5	8.0~8.4	<7	<50	1	<0.1	<2	6.2	0.03~0.08
9V1	9.1	5	8.9~9.3	<10	<50	1	<0.1	<2	6.8	0.03~0.09
10	10	5	9.8~10.2	<15	<70	1	<0.1	<2	7.5	0.03~0.1
11	11	5	10.8~11.2	<20	<70	1	<0.1	<2	8.2	0.03~0.11
12	12	5	11.8~12.2	<20	<90	1	<0.1	<2	9.1	0.03~0.11
13	13	5	12.7~13.3	<26	<110	1	<0.1	<2	10	0.03~0.11
15	15	5	14.7~15.3	<30	<110	1	<0.1	<2	11	0.03~0.11
16	16	5	15.7~16.3	<40	<170	1	<0.1	<2	12	0.03~0.11
18	18	5	17.6~18.4	<50	<170	1	<0.1	<2	13	0.03~0.11
20	20	5	19.6~20.4	<55	<220	1	<0.1	<2	15	0.03~0.11
22	22	5	21.6~22.4	<55	<220	1	<0.1	<2	16	0.04~0.12
24	24	5	23.5~24.5	<80	<220	1	<0.1	<2	18	0.04~0.12
27	27	5	26.5~27.5	<80	<220	1	<0.1	<2	20	0.04~0.12
30	30	5	29.4~30.6	<80	<220	1	<0.1	<2	22	0.04~0.12
33	33	5	32.3~33.7	<80	<220	1	<0.1	<2	24	0.04~0.12
36	36	5	35.3~36.7	<80	<220	1	<0.1	<2	27	0.04~0.12

[1)] Tighter tolerances available request:

ZMM55A… ±1% of V_{Znom}

ZMM55B… ±2% of V_{Znom}

[2)] at T_j=150℃

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Characteristics (T_j=25℃ unless otherwise specified)

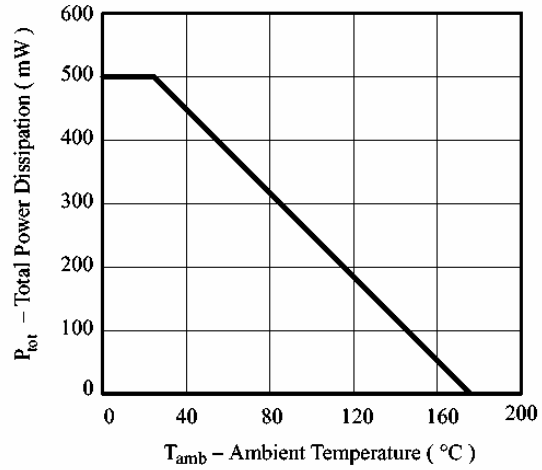

Figure 1. Total Power Dissipation vs. Ambient Temperature

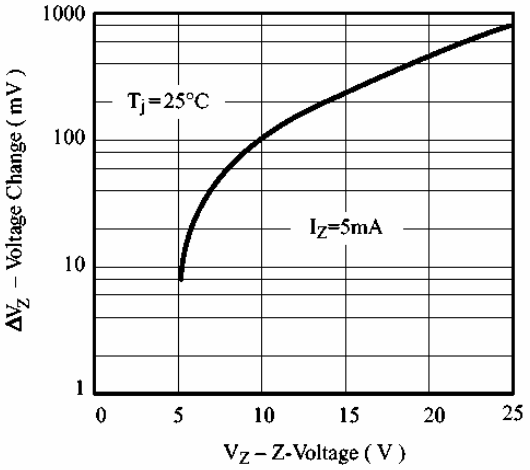

Figure 2. Typical Change of Working Voltage under Operating Conditions at T_{amb}=25_C

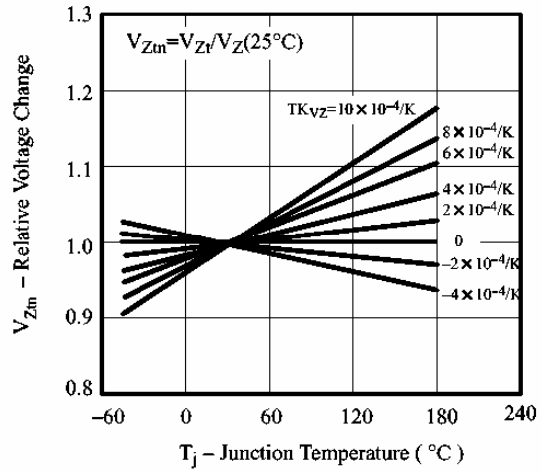

Figure 3. Typical Change of Working Voltage vs. Junction Temperature

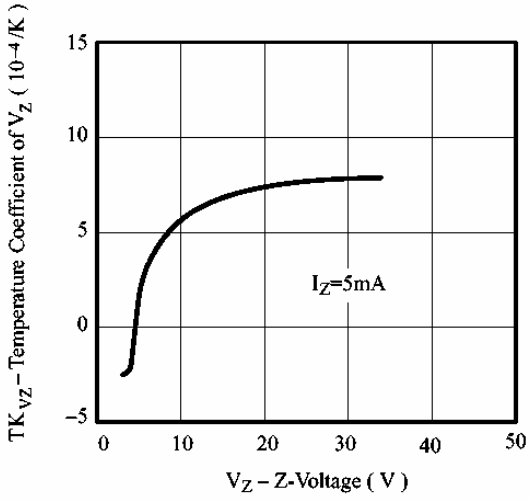

Figure 4. Temperature Coefficient of Vz vs. Z–Voltage

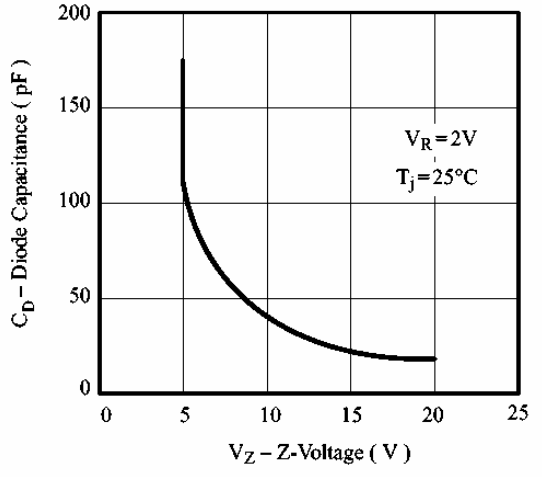

Figure 5. Diode Capacitance vs. Z–Voltage

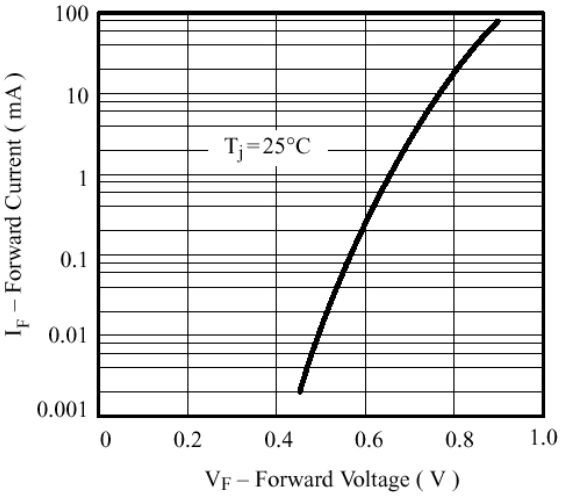

Figure 6. Forward Current vs. Forward Voltage

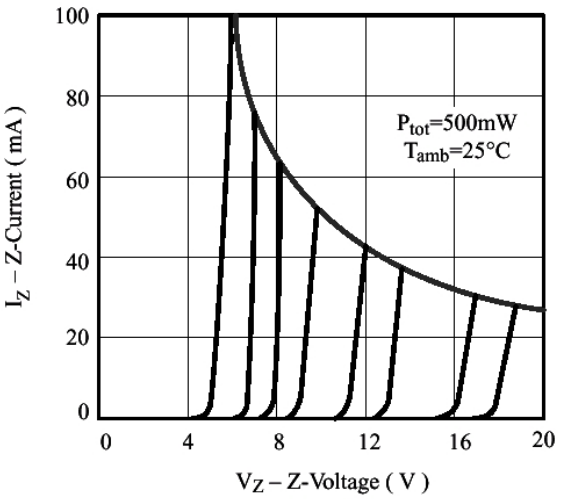

Figure 7. Z–Current vs. Z–Voltage

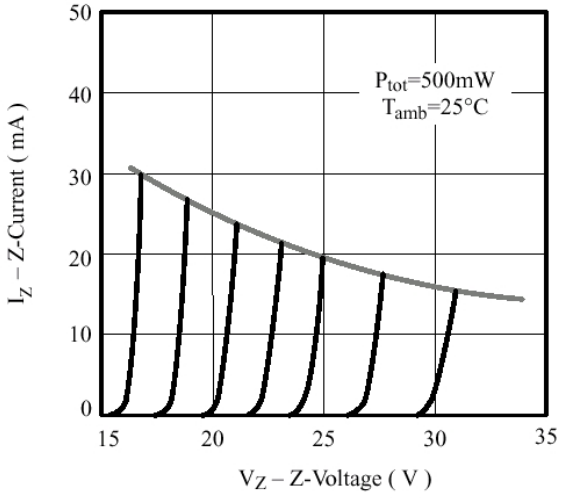

Figure 8. Z–Current vs. Z–Voltage

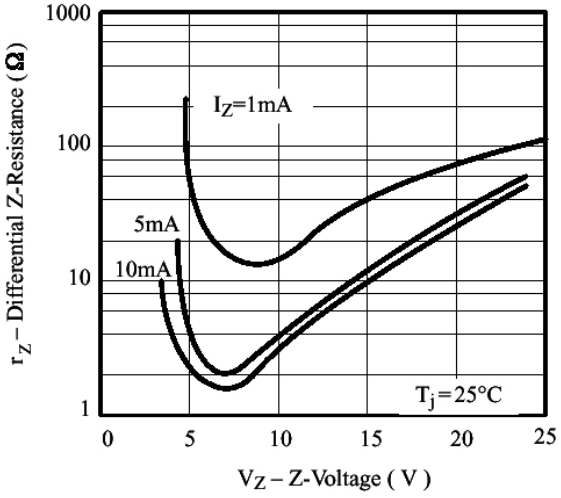

Figure 9. Differential Z–Resistance vs. Z–Voltage

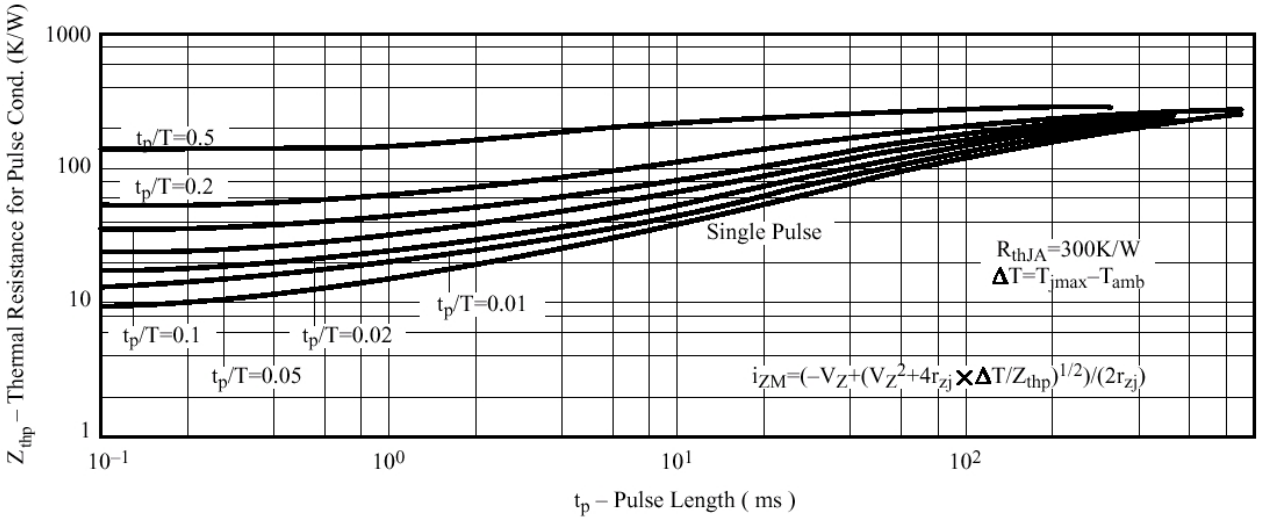

Figure 10. Thermal Response