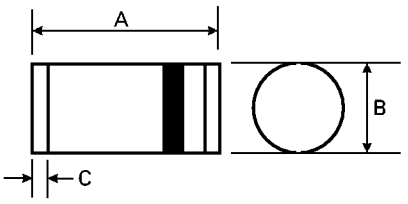
ZMM2V4 - ZMM75

500mW SURFACE MOUNT ZENER DIODES

Features

- Planar Die Construction
- Sealed Glass Case
- Ideally Suited for Automated Insertion
- 2.4V - 75V Nominal Zener Voltages



MiniMELF		
Dim	**Min**	**Max**
A	3.30	3.70
B	1.30	1.60
C	0.28	0.50
All Dimensions in mm		

Mechanical Data

- Case: MiniMELF, Glass
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Approx. Weight: 0.05 grams

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Zener Current (see table on page 2)	I_Z	P_d/V_Z	mA
Power Dissipation (Note 2)	P_d	500	mW
Forward Voltage @ I_F = 200mA	V_F	1.5	V
Thermal Resistance, Junction to Ambient Air (Note 2)	$R_{\theta JA}$	300	K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +175	°C

Notes: 1. Tested with Pulses, tp = 20ms.
2. Valid provided that Electrodes are kept at Ambient Temperature.

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Type Number	Nominal Zener Voltage (Note 1)		Zener Voltage Range	Zener Impedance	Zener Impedance		Leakage Current @ V_R			Temperature Coefficient
	V_Z @ I_{ZT}		V_Z @ I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}		I_R@ T_J = 25°C	I_R@ T_J = 150°C	V_R	
	(V)	(mA)	(V)	(Ω)	(Ω)	(mA)	(μA)	(μA)	(V)	(%/K)
ZMM2V4	2.4	5.0	2.28 to 2.56	<85	<600	1.0	<50	<100	1.0	-0.09 to -0.06
ZMM2V7	2.7	5.0	2.5 to 2.9	<85	<600	1.0	<10	<50	1.0	-0.09 to -0.06
ZMM3V0	3.0	5.0	2.8 to 3.2	<90	<600	1.0	<4.0	<40	1.0	-0.08 to -0.05
ZMM3V3	3.3	5.0	3.1 to 3.5	<90	<600	1.0	<2.0	<40	1.0	-0.08 to -0.05
ZMM3V6	3.6	5.0	3.4 to 3.8	<90	<600	1.0	<2.0	<40	1.0	-0.08 to -0.05
ZMM3V9	3.9	5.0	3.7 to 4.1	<90	<600	1.0	<2.0	<40	1.0	-0.08 to -0.05
ZMM4V3	4.3	5.0	4.0 to 4.6	<90	<600	1.0	<1.0	<20	1.0	-0.06 to -0.03
ZMM4V7	4.7	5.0	4.4 to 5.0	<80	<600	1.0	<0.5	<10	1.0	-0.05 to +0.02
ZMM5V1	5.1	5.0	4.8 to 5.4	<60	<550	1.0	<0.1	<2.0	1.0	-0.02 to +0.02
ZMM5V6	5.6	5.0	5.2 to 6.0	<40	<450	1.0	<0.1	<2.0	1.0	-0.05 to +0.05
ZMM6V2	6.2	5.0	5.8 to 6.6	<10	<200	1.0	<0.1	<2.0	2.0	0.03 to 0.06
ZMM6V8	6.8	5.0	6.4 to 7.2	<8.0	<150	1.0	<0.1	<2.0	3.0	0.03 to 0.07
ZMM7V5	7.5	5.0	7.0 to 7.9	<7.0	<50	1.0	<0.1	<2.0	5.0	0.03 to 0.07
ZMM8V2	8.2	5.0	7.7 to 8.7	<7.0	<50	1.0	<0.1	<2.0	6.2	0.03 to 0.08
ZMM9V1	9.1	5.0	8.5 to 9.6	<10	<50	1.0	<0.1	<2.0	6.8	0.03 to 0.09
ZMM10	10	5.0	9.4 to 10.6	<15	<70	1.0	<0.1	<2.0	7.5	0.03 to 0.01
ZMM11	11	5.0	10.4 to 11.6	<20	<70	1.0	<0.1	<2.0	8.2	0.03 to 0.11
ZMM12	12	5.0	11.4 to 12.7	<20	<90	1.0	<0.1	<2.0	9.1	0.03 to 0.11
ZMM13	13	5.0	12.4 to 14.1	<26	<110	1.0	<0.1	<2.0	10	0.03 to 0.11
ZMM15	15	5.0	13.8 to 15.6	<30	<110	1.0	<0.1	<2.0	11	0.03 to 0.11
ZMM16	16	5.0	15.3 to 17.1	<40	<170	1.0	<0.1	<2.0	12	0.03 to 0.11
ZMM18	18	5.0	16.8 to 19.1	<50	<170	1.0	<0.1	<2.0	13	0.03 to 0.11
ZMM20	20	5.0	18.8 to 21.2	<55	<220	1.0	<0.1	<2.0	15	0.03 to 0.11
ZMM22	22	5.0	20.8 to 23.3	<55	<220	1.0	<0.1	<2.0	16	0.04 to 0.12
ZMM24	24	5.0	22.8 to 25.6	<80	<220	1.0	<0.1	<2.0	18	0.04 to 0.12
ZMM27	27	5.0	25.1 to 28.9	<80	<220	1.0	<0.1	<2.0	20	0.04 to 0.12
ZMM30	30	5.0	28 to 32	<80	<220	1.0	<0.1	<2.0	22	0.04 to 0.12
ZMM33	33	5.0	31 to 35	<80	<220	1.0	<0.1	<2.0	24	0.04 to 0.12
ZMM36	36	5.0	34 to 38	<80	<220	1.0	<0.1	<2.0	27	0.04 to 0.12
ZMM39	39	2.5	37 to 41	<90	<500	0.5	<0.1	<5.0	30	0.04 to 0.12
ZMM43	43	2.5	40 to 46	<90	<600	0.5	<0.1	<5.0	33	0.04 to 0.12
ZMM47	47	2.5	44 to 50	<110	<700	0.5	<0.1	<5.0	36	0.04 to 0.12
ZMM51	51	2.5	48 to 54	<125	<700	0.5	<0.1	<10	39	0.04 to 0.12
ZMM56	56	2.5	52 to 72	<135	<1000	0.5	<0.1	<10	43	0.04 to 0.12
ZMM62	62	2.5	58 to 66	<150	<1000	0.5	<0.1	<10	47	0.04 to 0.12
ZMM68	68	2.5	64 to 72	<200	<1000	0.5	<0.1	<10	51	0.04 to 0.12

Notes: 1. Tested with pulses t_p = 20 ms.
2. Valid provided that electrodes are kept at ambient temperature.

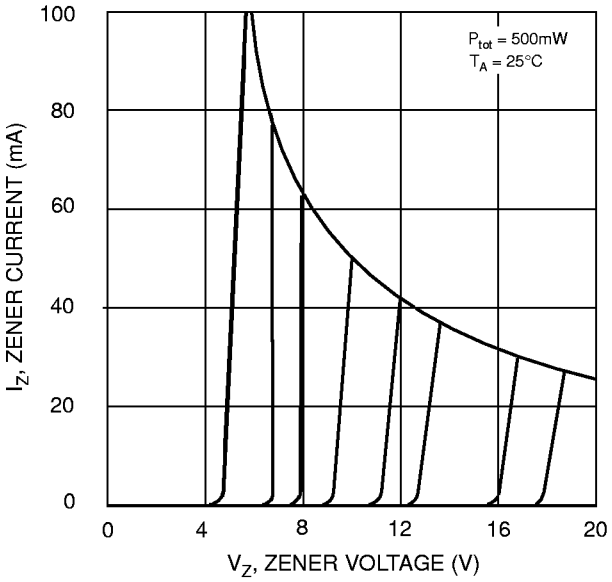


Fig. 1, Zener Current vs Zener Voltage

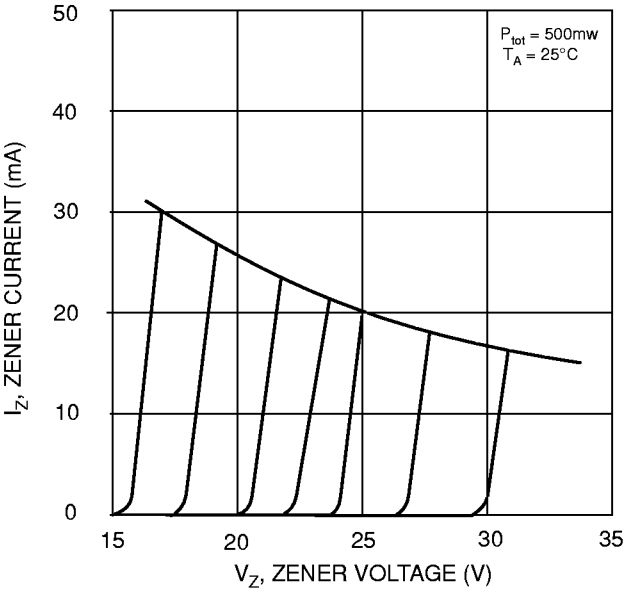


Fig. 8, Zener Current vs Zener Voltage

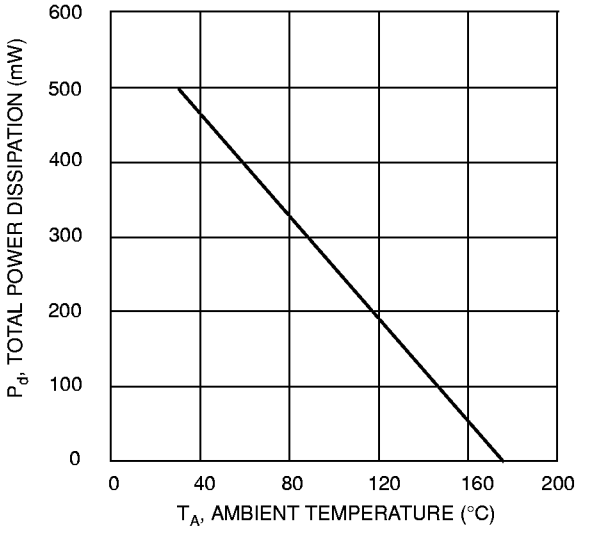


Fig. 3, Total Power Dissipation vs Ambient Temperature

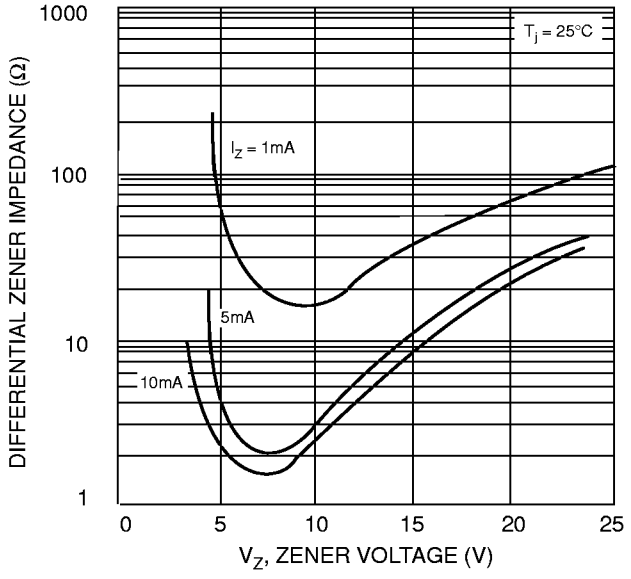


Fig. 4, Differential Zener Impedance

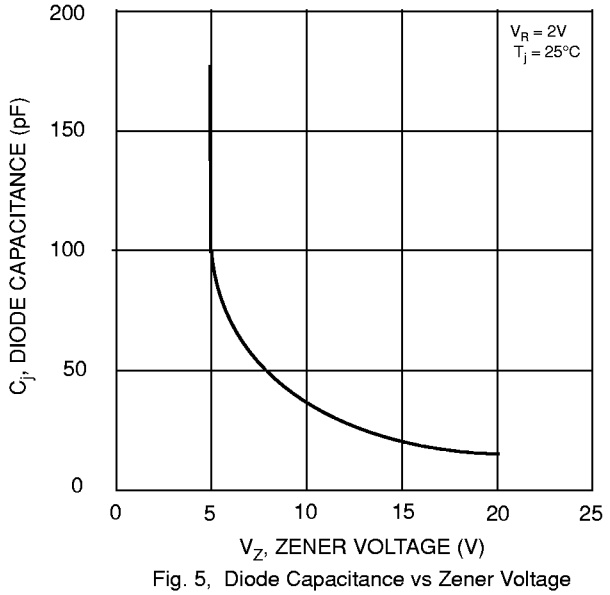


Fig. 5, Diode Capacitance vs Zener Voltage