

IV. Zener Diode

SMD Zener Diode (500mW)

ZMM55 Series

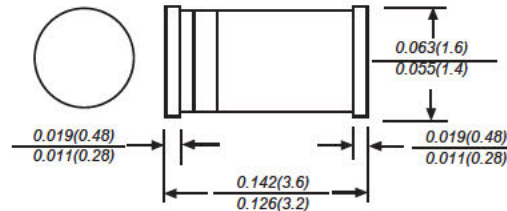
(Package: Mini-MELF)

FEATURES

- Low zener impedance
- Low regulation factor
- Glass passivated junction
- High temperature soldering guaranteed : 260°C/10 seconds at terminals

MECHANICAL DATA

- Case : Mini-MELF molded glass body
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.002 ounce, 0.05 gram



Case: Mini-MELF
Dimensions in inches and (millimeters)

Electrical Characteristics (Ta = 25°C unless otherwise noted)

Device Type	Nominal Zener Voltage		Test Current I _{ZT}	Maximum Zener Impedance			Maximum Reverse Leakage Current		Typical Temperature Coefficient (%/°C)	Maximum Regulator Current I _{ZM}
	V _Z @I _{ZT}			Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	@V _R		
	Min	Max		Ohms	Ohms	mA	µA	Volts		
ZMM55C2V4	2.28	2.56	5.0	85	600	1.0	50	1.0	-0.085	155
ZMM55C2V7	2.5	2.9	5.0	85	600	1.0	10	1.0	-0.080	135
ZMM55C3V0	2.8	3.2	5.0	85	600	1.0	4.0	1.0	-0.075	125
ZMM55C3V3	3.1	3.5	5.0	85	600	1.0	2.0	1.0	-0.070	115
ZMM55C3V6	3.4	3.8	5.0	85	600	1.0	2.0	1.0	-0.065	105
ZMM55C3V9	3.7	4.1	5.0	85	600	1.0	2.0	1.0	-0.060	95
ZMM55C4V3	4.0	4.6	5.0	75	600	1.0	1.0	1.0	±0.055	90
ZMM55C4V7	4.4	5.0	5.0	60	600	1.0	0.5	1.0	±0.030	85
ZMM55C5V1	4.8	5.4	5.0	35	550	1.0	0.1	1.0	±0.030	80
ZMM55C5V6	5.2	6.0	5.0	25	450	1.0	0.1	1.0	+0.038	70
ZMM55C6V2	5.8	6.6	5.0	10	200	1.0	0.1	2.0	+0.045	64
ZMM55C6V8	6.4	7.2	5.0	8.0	150	1.0	0.1	3.0	+0.050	58
ZMM55C7V5	7.0	7.9	5.0	7.0	50	1.0	0.1	5.0	+0.058	53
ZMM55C8V2	7.7	8.7	5.0	7.0	50	1.0	0.1	6.2	+0.062	74
ZMM55C9V1	8.5	9.6	5.0	10	50	1.0	0.1	6.8	+0.068	43
ZMM55C10	9.4	10.6	5.0	15	70	1.0	0.1	7.5	+0.075	40
ZMM55C11	10.4	11.6	5.0	20	70	1.0	0.1	8.2	+0.076	36
ZMM55C12	11.4	12.7	5.0	20	90	1.0	0.1	9.1	+0.077	32
ZMM55C13	12.4	14.1	5.0	26	110	1.0	0.1	10	+0.079	29
ZMM55C15	13.8	15.6	5.0	30	110	1.0	0.1	11	+0.082	27
ZMM55C16	15.3	17.1	5.0	40	170	1.0	0.1	12	+0.083	24
ZMM55C18	16.8	19.1	5.0	50	170	1.0	0.1	13	+0.085	21
ZMM55C20	18.8	21.2	5.0	55	220	1.0	0.1	15	+0.086	20
ZMM55C22	20.8	23.3	5.0	55	220	1.0	0.1	16	+0.087	18
ZMM55C24	22.8	25.6	5.0	80	220	1.0	0.1	18	+0.088	16
ZMM55C27	25.1	28.9	5.0	80	220	1.0	0.1	20	+0.090	14
ZMM55C30	28	32	5.0	80	220	1.0	0.1	22	+0.091	13
ZMM55C33	31	35	5.0	80	220	1.0	0.1	24	+0.092	12
ZMM55C36	34	38	5.0	80	220	1.0	0.1	27	+0.093	11
ZMM55C39	37	41	2.5	90	500	0.5	0.1	30	+0.094	10
ZMM55C43	40	46	2.5	90	600	0.5	0.1	33	+0.095	9.2
ZMM55C47	44	50	2.5	110	700	0.5	0.1	36	+0.095	8.5

Notes:

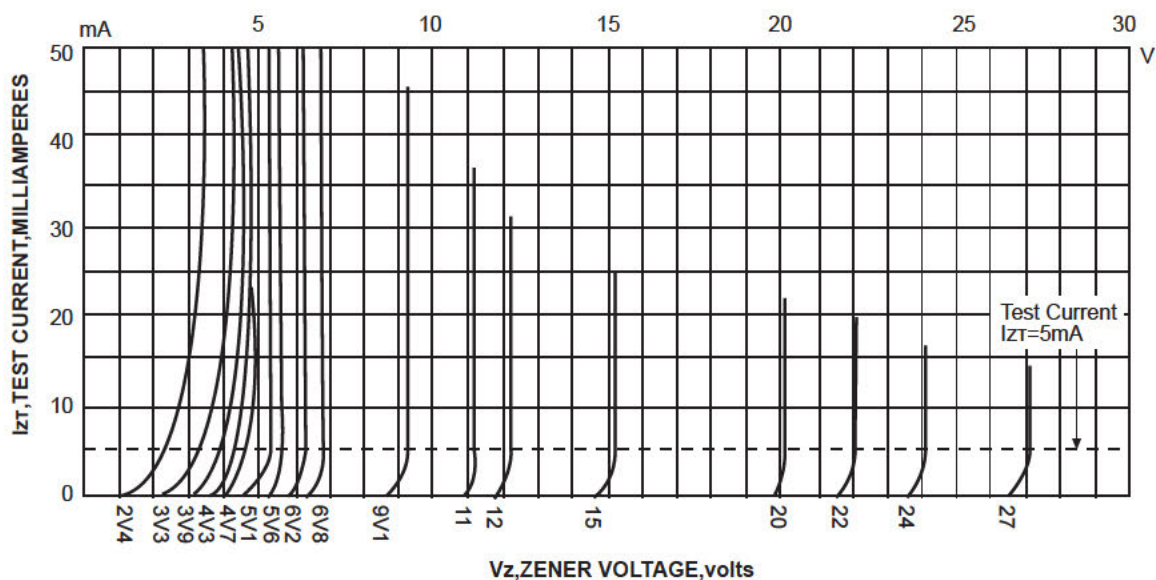
1. Forward voltage at I_F = 100mA, V_F = 1.0 Volts
2. Junction temperature, T_J : 200°C
3. Storage temperature range, T_{stg} : -65°C to +200°C
4. Non-repetitive peak reverse power dissipation (P_{zsm}) : 40W

Electrical Characteristics of ZMM55 Series (Cont'd)

Device Type	Nominal Zener Voltage $V_Z@I_{ZT}$		Test Current I_{ZT}	Maximum Zener Impedance			Maximum Reverse Leakage Current		Typical Temperature Coefficient (%/°C)	Maximum Regulator Current I_{ZM}
	Min	Max		$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	I_{ZK}	I_R	@ V_R		
			mA	Ohms	Ohms	mA	µA	Volts		
ZMM55C51	48	54	2.5	125	700	0.5	0.1	39	+0.096	7.8
ZMM55C56	52	60	2.5	135	1000	0.5	0.1	43	+0.096	7.0
ZMM55C62	58	66	2.5	150	1000	0.5	0.1	47	+0.096	6.4
ZMM55C68	64	72	2.5	200	1000	0.5	0.1	51	+0.096	5.9
ZMM55C75	70	80	2.5	250	1500	0.5	0.1	56	+0.096	5.3
ZMM55C82	77	87	2.5	300	2000	0.5	0.1	62	+0.096	4.8
ZMM55C91	85	96	1.0	450	5000	0.1	0.1	68	+0.096	4.4

Ratings and Characteristic Curves of ZMM55 Series

Breakdown characteristics



Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient temperature at a distance of 10mm from case

