

■ Features

- Wide zener reverse voltage range 2.40V to 100V.
- Small package size for high density applications.
- Ideally suited for automated assembly processes.
- Lead free in compliance with EU RoHS.

■ Mechanical data

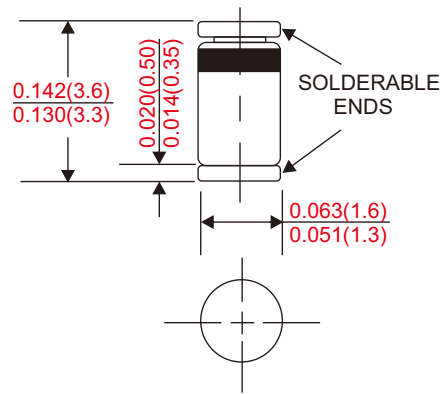
- Case : GLASS MINI-MELF / SOD-80
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.030 gram

■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

■ Outline

SOD-80



Dimensions in inches and (millimeters)

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Power dissipation		P_D			500	mW
Forward voltage	$I_F = 200\text{mA}$	V_F			1.5	V
Storage temperature		T_{STG}	-55		+150	°C
Operating Junction temperature		T_J	-55		+175	°C



ZMM55C SERIES

Chip Integration Technology Corporation

500mW Surface Mount Zener Diodes

■ Electrical characteristics

Part No.	Zener voltage			Test current	Zener impedance			Leakage current		Typical Temperature Coefficient
	V _z @ I _{zT}			I _{zT}	Z _{zT} @ I _{zT}	Z _{zK} @ I _{zK}	I _{zK}	I _R	V _R	TK _{Vz}
	Min.	Nom.	Max.	mA	OHMs	OHMs	mA	uA	Volts	% / W
ZMM55C2V0	1.9	2.0	2.1	5.0	100	600	1.0	150	1.0	-0.09~-0.06
ZMM55C2V2	2.09	2.2	2.31	5.0	100	600	1.0	150	1.0	-0.09~-0.06
ZMM55C2V4	2.28	2.4	2.56	5.0	85	600	1.0	50	1.0	-0.09~-0.06
ZMM55C2V7	2.5	2.7	2.9	5.0	85	600	1.0	10	1.0	-0.09~-0.06
ZMM55C3V0	2.8	3.0	3.2	5.0	85	600	1.0	4.0	1.0	-0.08~-0.05
ZMM55C3V3	3.1	3.3	3.5	5.0	85	600	1.0	2.0	1.0	-0.08~-0.05
ZMM55C3V6	3.4	3.6	3.8	5.0	85	600	1.0	2.0	1.0	-0.08~-0.05
ZMM55C3V9	3.7	3.9	4.1	5.0	85	600	1.0	2.0	1.0	-0.08~-0.05
ZMM55C4V3	4.0	4.3	4.6	5.0	75	600	1.0	1.0	1.0	-0.06~-0.03
ZMM55C4V7	4.4	4.7	5.0	5.0	60	600	1.0	0.5	1.0	-0.05~+0.02
ZMM55C5V1	4.8	5.1	5.4	5.0	35	550	1.0	0.1	1.0	-0.02~+0.02
ZMM55C5V6	5.2	5.6	6.0	5.0	25	450	1.0	0.1	1.0	-0.05~+0.05
ZMM55C6V2	5.8	6.2	6.6	5.0	10	200	1.0	0.1	2.0	0.03~0.06
ZMM55C6V8	6.4	6.8	7.2	5.0	8	150	1.0	0.1	3.0	0.03~0.07
ZMM55C7V5	7.0	7.5	7.9	5.0	7	50	1.0	0.1	5.0	0.03~0.07
ZMM55C8V2	7.7	8.2	8.7	5.0	7	50	1.0	0.1	6.2	0.03~0.08
ZMM55C9V1	8.5	9.1	9.6	5.0	10	50	1.0	0.1	6.8	0.03~0.09
ZMM55C10	9.4	10	10.6	5.0	15	70	1.0	0.1	7.5	0.03~0.10
ZMM55C11	10.4	11	11.6	5.0	20	70	1.0	0.1	8.2	0.03~0.11
ZMM55C12	11.4	12	12.7	5.0	20	90	1.0	0.1	9.1	0.03~0.11
ZMM55C13	12.4	13	14.1	5.0	26	110	1.0	0.1	10	0.03~0.11
ZMM55C15	13.8	15	15.6	5.0	30	110	1.0	0.1	11	0.03~0.11
ZMM55C16	15.3	16	17.1	5.0	40	170	1.0	0.1	12	0.03~0.11
ZMM55C18	16.8	18	19.1	5.0	50	170	1.0	0.1	13	0.03~0.11
ZMM55C20	18.8	20	21.2	5.0	55	220	1.0	0.1	15	0.03~0.11
ZMM55C22	20.8	22	23.3	5.0	55	220	1.0	0.1	16	0.04~0.12
ZMM55C24	22.8	24	25.6	5.0	80	220	1.0	0.1	18	0.04~0.12
ZMM55C27	25.1	27	28.9	5.0	80	220	1.0	0.1	20	0.04~0.12
ZMM55C30	28	30	32	5.0	80	220	1.0	0.1	22	0.04~0.12
ZMM55C33	31	33	35	5.0	80	220	1.0	0.1	24	0.04~0.12
ZMM55C36	34	36	38	5.0	80	220	1.0	0.1	27	0.04~0.12
ZMM55C39	37	39	41	2.5	90	500	1.0	0.1	30	0.04~0.12
ZMM55C43	40	43	46	2.5	90	600	0.5	0.1	33	0.04~0.12
ZMM55C47	44	47	50	2.5	110	700	0.5	0.1	36	0.04~0.12
ZMM55C51	48	51	54	2.5	125	700	0.5	0.1	39	0.04~0.12
ZMM55C56	52	56	60	2.5	135	1000	0.5	0.1	43	0.04~0.12
ZMM55C62	58	62	66	2.5	150	1000	0.5	0.1	47	0.04~0.12
ZMM55C68	64	68	72	2.5	200	1000	0.5	0.1	51	0.04~0.12
ZMM55C75	70	75	79	2.5	250	1500	0.5	0.1	56	0.04~0.12
ZMM55C82	77	82	87	2.5	300	2000	0.5	0.1	62	0.04~0.12
ZMM55C91	85	91	96	1.0	450	5000	0.1	0.1	68	0.04~0.12
ZMM55C100	94	100	106	1.0	450	5000	0.1	0.1	75	0.04~0.12

Note : 5% tolerance of Zener voltage

■ Rating and characteristic curves

FIG. 1-TOTAL POWER DISSIPATION VS. AMBIENT TEMPERATURE

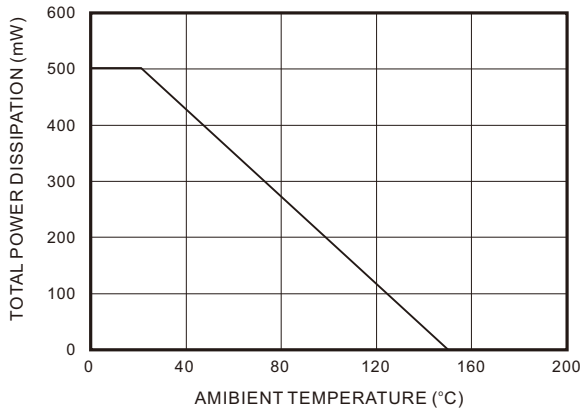


FIG. 2-TYPICAL CHANGE OF WORKING VOLTAGE UNDER OPERATING CONDITIONS AT $T_A = 25^\circ\text{C}$

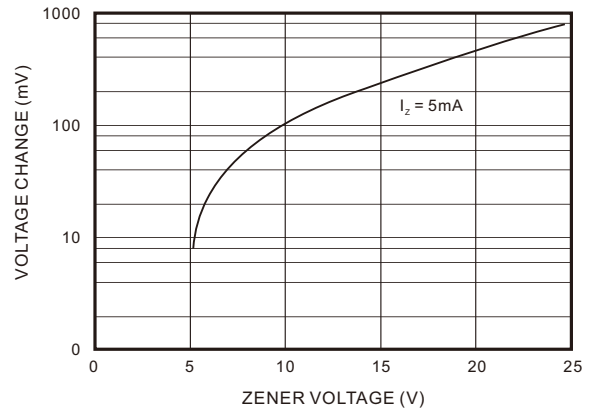


FIG. 3-TYPICAL CHANGE OF WORKING VOLTAGE VS. JUNCTION TEMPERATURE

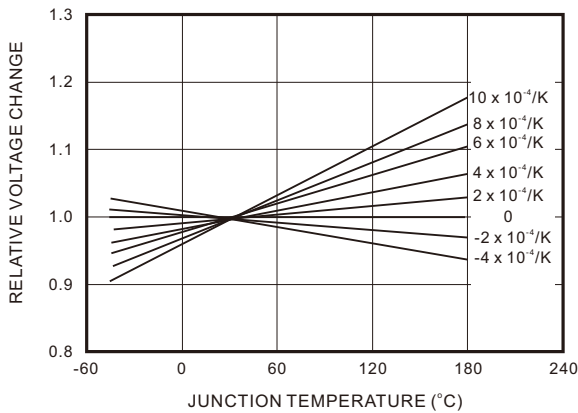


FIG. 4-TEMPERATURE COEFFICIENT OF V_Z VS. Z-VOLTAGE

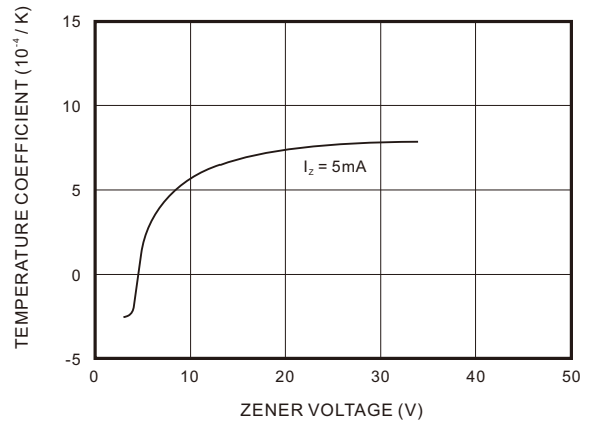
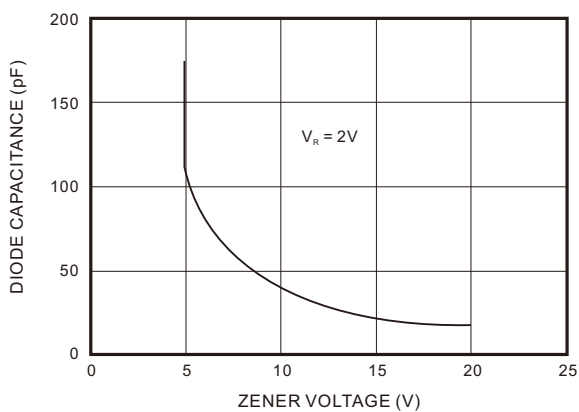


FIG. 5-DIODE CAPACITANCE VS. Z-VOLTAGE



Rating and characteristic curves

FIG. 6-FORWARD CURRENT VS. FORWARD VOLTAGE

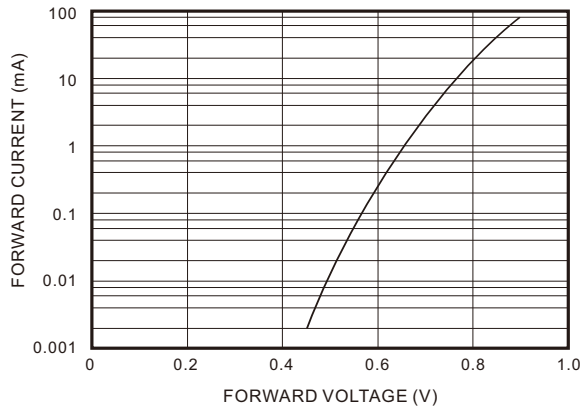


FIG. 7-Z-CURRENT VS. Z-VOLTAGE

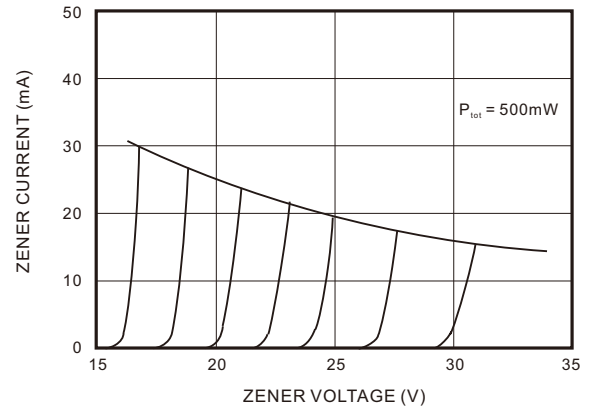


FIG. 8-Z-CURRENT VS. Z-VOLTAGE

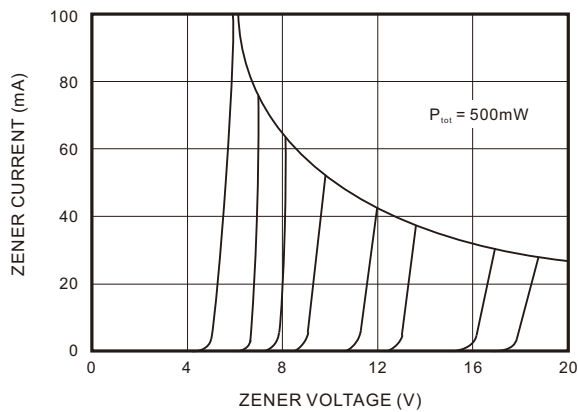


FIG. 9-DIFFERENTIAL Z-RESISTANCE VS. Z-VOLTAGE

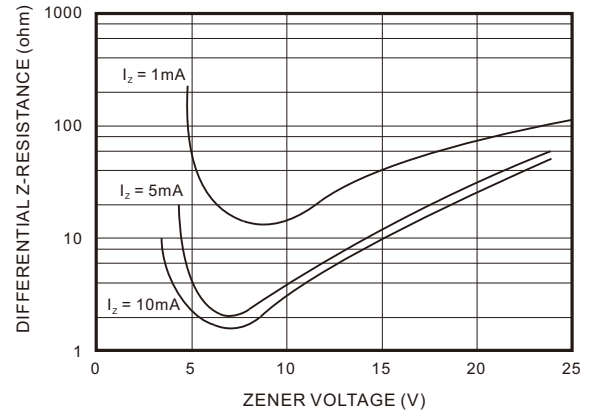
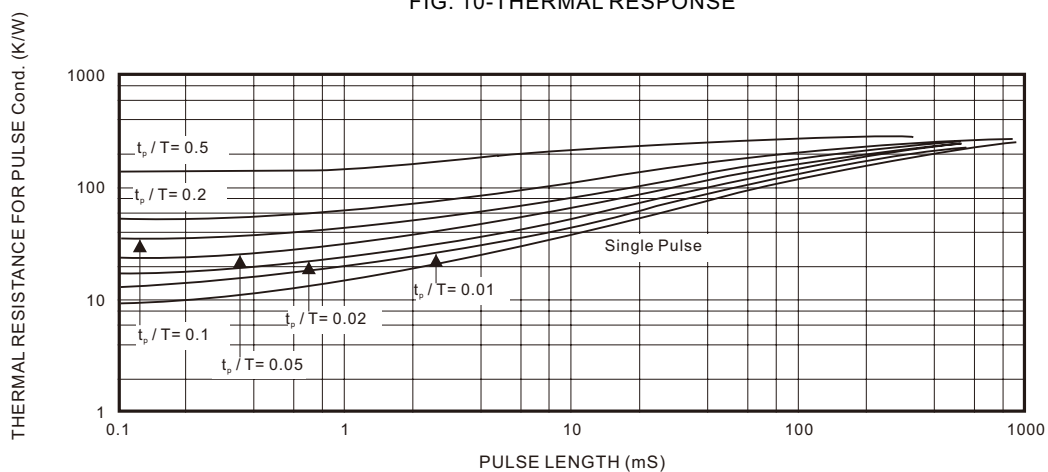
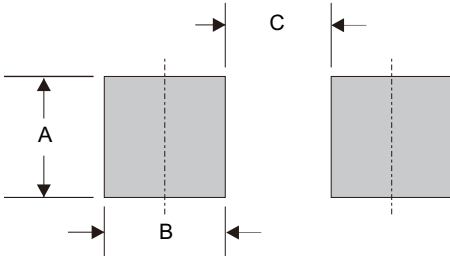


FIG. 10-THERMAL RESPONSE



■ SOD-80 foot print



A	B	C
0.071 (1.80)	0.035 (0.90)	0.102 (2.60)

Dimensions in inches and (millimeters)

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