

0.5W SMD Zener Diodes

Features

- Planar Die Construction
- 0.5W Power Dissipation
- Zener Voltage: 2.0V to 56V
- Ideally Suited for Automated Assembly Processes
- RoHS Compliant



Micro-Melf



Mechanical Data

Case:	Molded Glass Micro-Melf
Terminals:	Solderable per MIL-STD-750, Method 2026
Polarity:	Color band denotes cathode end
Weight:	Approx. 0.01 grams

Maximum Ratings *(T_{Ambient}=25°C unless noted otherwise)*

Symbol	Description	Value	Unit	Conditions
P_{tot}	Power Dissipation at T _a =25°C	500	mW	
V_F	Forward Voltage	1	V	I _F =100mA
R_{thJA}	Thermal Resistance Junction to Ambient Air	0.3	°C/mW	
T_J	Junction Temperature	175	°C	
T_{STG}	Storage Temperature Range	-65 to +175	°C	

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

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TMZ2.0A-TMZ56

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

0.5W	Normal Zener Voltage @ IZT			Test Current	Max. Zener Impedance (Ω)			Maximum Reverse Leakage Current IR @ VR	
	Nom.	Min.	Max.		ZZT @IZT	Zzk @Izk	Izk(mA)	IR(μ A)	VR(V)
P/N	Vz(V)	Vz(V)	Vz(V)	IZT(mA)	ZZT @IZT	Zzk @Izk	Izk(mA)	IR(μ A)	VR(V)
TMZ2.0A	2.0	1.88	2.10	20	140	2000	1.0	120	0.5
TMZ2.0B		2.02	2.20						
TMZ2.2A	2.2	2.12	2.30	20	120	2000	1.0	120	0.7
TMZ2.2B		2.22	2.41						
TMZ2.4A	2.4	2.33	2.52	20	100	2000	1.0	120	1.0
TMZ2.4B		2.43	2.63						
TMZ2.7A	2.7	2.54	2.75	20	100	1000	1.0	120	1.0
TMZ2.7B		2.69	2.91						
TMZ3.0A	3.0	2.85	3.07	20	80	1000	1.0	50	1.0
TMZ3.0B		3.01	3.22						
TMZ3.3A	3.3	3.16	3.38	20	70	1000	1.0	20	1.0
TMZ3.3B		3.32	3.53						
TMZ3.6A	3.6	3.46	3.69	20	60	1000	1.0	10	1.0
TMZ3.6B		3.60	3.84						
TMZ3.9A	3.9	3.74	4.01	20	50	1000	1.0	5	1.0
TMZ3.9B		3.89	4.16						
TMZ4.3A	4.3	4.04	4.29	20	40	1000	1.0	5	1.0
TMZ4.3B		4.17	4.43						
TMZ4.3C		4.30	4.57						
TMZ4.7A	4.7	4.44	4.68	20	25	900	1.0	5	1.0
TMZ4.7B		4.55	4.80						
TMZ4.7C		4.68	4.93						
TMZ5.1A	5.1	4.81	5.07	20	20	800	1.0	5	1.5
TMZ5.1B		4.94	5.20						
TMZ5.1C		5.09	5.37						
TMZ5.6A	5.6	5.28	5.55	20	13	500	1.0	5	2.5
TMZ5.6B		5.45	5.73						
TMZ5.6C		5.61	5.91						
TMZ6.2A	6.2	5.78	6.09	20	10	300	1.0	5	3.0
TMZ6.2B		5.96	6.27						
TMZ6.2C		6.12	6.44						

0.5W SMD Zener Diodes

TMZ2.0A-TMZ56

0.5W	Normal Zener Voltage @ IZT			Test Current	Max. Zener Impedance (Ω)			Maximum Reverse Leakage Current IR @ VR	
	Nom.	Min.	Max.		ZZT @IZT	Zzk @Izk	Izk(mA)	IR(μ A)	VR(V)
P/N	Vz(V)	Vz(V)	Vz(V)	IZT(mA)	ZZT @IZT	Zzk @Izk	Izk(mA)	IR(μ A)	VR(V)
TMZ6.8A	6.8	6.29	6.63	20	8	150	0.5	2	3.5
TMZ6.8B		6.49	6.83						
TMZ6.8C		6.66	7.01						
TMZ7.5A	7.5	6.85	7.22	20	8	120	0.5	0.5	4.0
TMZ7.5B		7.07	7.45						
TMZ7.5C		7.29	7.67						
TMZ8.2A	8.2	7.53	7.92	20	8	120	0.5	0.5	5.0
TMZ8.2B		7.78	8.19						
TMZ8.2C		8.03	8.45						
TMZ9.1A	9.1	8.29	8.73	20	8	120	0.5	0.5	6.0
TMZ9.1B		8.57	9.01						
TMZ9.1C		8.83	9.30						
TMZ10A	10	9.12	9.59	20	8	120	0.5	0.2	7.0
TMZ10B		9.41	9.90						
TMZ10C		9.70	10.20						
TMZ10D		9.94	10.44						
TMZ11A	11	10.18	10.71	10	10	120	0.5	0.2	8.0
TMZ11B		10.50	11.05						
TMZ11C		10.82	11.38						
TMZ12A	12	11.13	11.71	10	12	110	0.5	0.2	9.0
TMZ12B		11.44	12.03						
TMZ12C		11.74	12.35						
TMZ13A	13	12.11	12.75	10	14	110	0.5	0.2	10
TMZ13B		12.55	13.21						
TMZ13C		12.99	13.66						
TMZ15A	15	13.44	14.13	10	16	110	0.5	0.2	11
TMZ15B		13.89	14.62						
TMZ15C		14.35	15.09						
TMZ16A	16	14.80	15.57	10	18	150	0.5	0.2	12
TMZ16B		15.25	16.04						
TMZ16C		15.69	16.51						
TMZ18A	18	16.22	17.06	10	23	150	0.5	0.2	13
TMZ18B		16.82	17.70						
TMZ18C		17.42	18.33						

0.5W SMD Zener Diodes

TMZ2.0A-TMZ56

0.5W	Normal Zener Voltage @ IZT			Test Current	Max. Zener Impedance (Ω)			Maximum Reverse Leakage Current IR @ VR	
	Nom.	Min.	Max.		ZZT @IZT	Zzk @Izk	Izk(mA)	IR(μ A)	VR(V)
P/N	Vz(V)	Vz(V)	Vz(V)	IZT(mA)					
TMZ20A	20	18.02	18.96	10	28	200	0.5	0.2	15
TMZ20B		18.63	19.59						
TMZ20C		19.23	20.22						
TMZ20D		19.72	20.72						
TMZ22A	22	20.15	21.20	5	30	200	0.5	0.2	17
TMZ22B		20.64	21.71						
TMZ22C		21.08	22.17						
TMZ22D		21.52	22.63						
TMZ24A	24	22.05	23.18	5	35	200	0.5	0.2	19
TMZ24B		22.61	23.77						
TMZ24C		23.12	24.31						
TMZ24D		23.63	24.85						
TMZ27A	27	24.26	25.52	5	45	250	0.5	0.2	21
TMZ27B		24.97	26.26						
TMZ27C		25.63	26.95						
TMZ27D		26.29	27.64						
TMZ30A	30	26.99	28.39	5	55	250	0.5	0.2	23
TMZ30B		27.70	29.13						
TMZ30C		28.36	29.82						
TMZ30D		29.02	30.51						
TMZ33A	33	29.68	31.22	5	65	250	0.5	0.2	25
TMZ33B		30.32	31.88						
TMZ33C		30.90	32.50						
TMZ33D		31.49	33.11						
TMZ36A	36	32.14	33.79	5	75	250	0.5	0.2	27
TMZ36B		32.79	34.49						
TMZ36C		33.40	35.13						
TMZ36D		34.01	35.77						
TMZ39A	39	34.68	36.47	5	85	250	0.5	0.2	30
TMZ39B		35.36	37.19						
TMZ39C		36.00	37.85						
TMZ39D		36.63	38.52						
TMZ43	43	40.00	45.00	5	90			0.2	33
TMZ47	47	44.00	49.00	5	90			0.2	36
TMZ51	51	48.00	54.00	5	110			0.2	39
TMZ56	56	53.00	60.00	5	110			0.2	43

Typical Characteristics Curves

Fig.1 Power Derating Curve

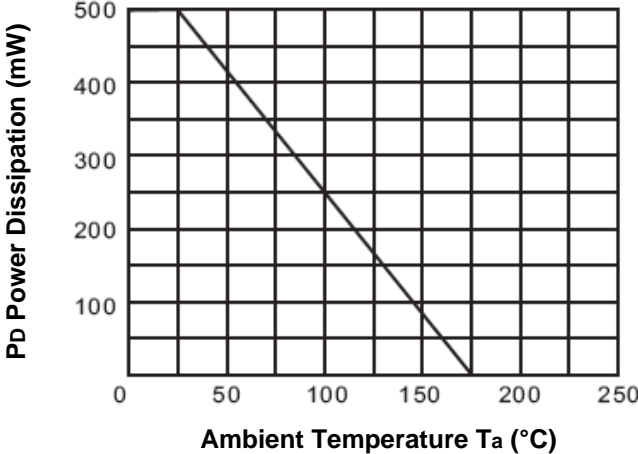
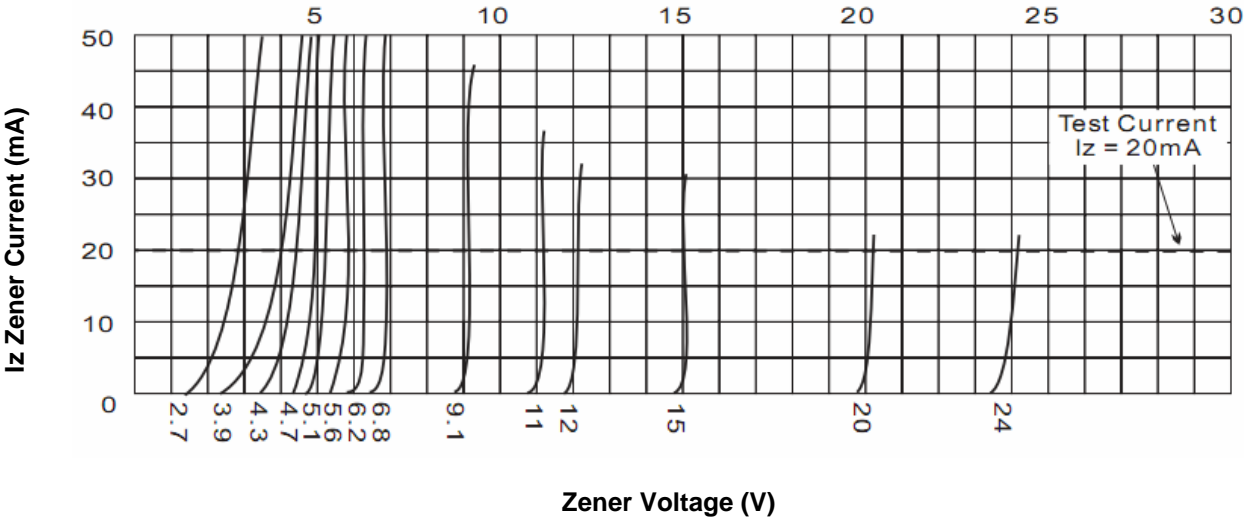


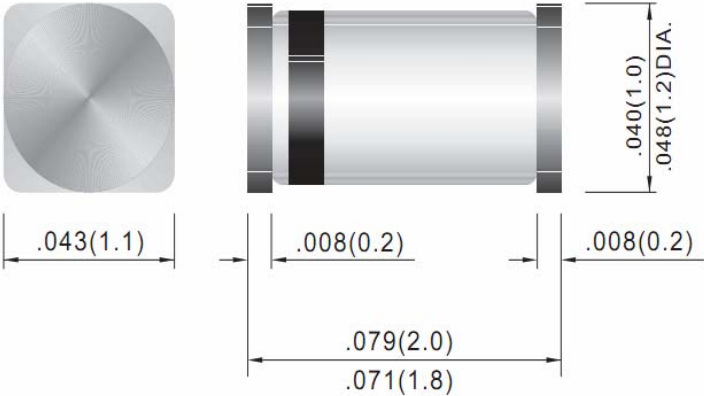
Fig.2 Breakdown Characteristics



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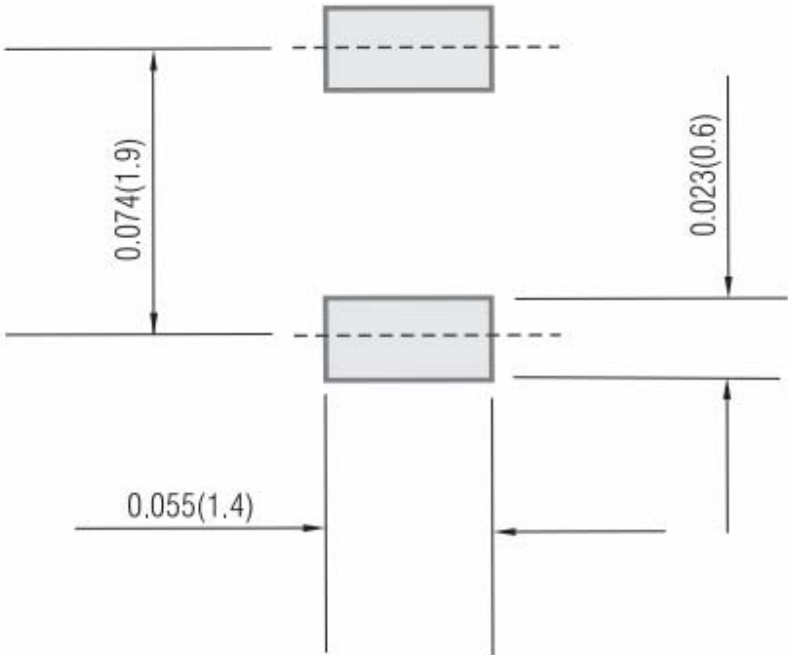
TMZ2.0A-TMZ56

Dimensions in inch (mm)



Micro-Melf

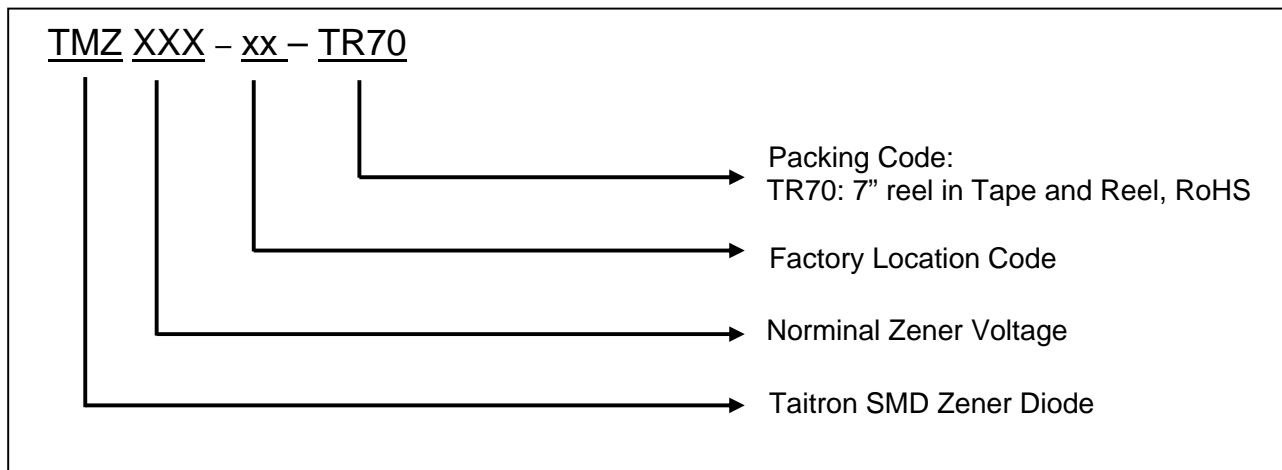
Mounting Pad Layout in inch (mm)



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TMZ2.0A-TMZ56

Ordering Information



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