



ZENER DIODE

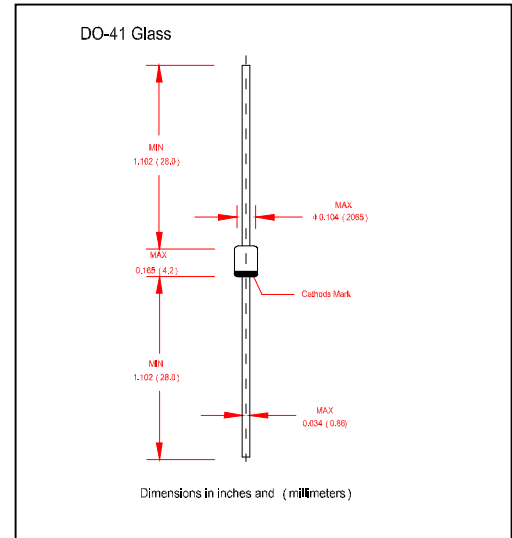
MZ1.0GD3V3 THRU MZ1.0GD100

FEATURES

- Silicon Planar Power Zener Diodes
- For use in stabilizing and clipping circuits with High power rating
- Standard Zener Voltage tolerance is $\pm 5\%$, Add suffix "A" FOR $\pm 10\%$ tolerance Other Zener voltages and Tolerances are available upon request
- These diodes are also available in the MELF case with type Designation MZ1.0GM3V3 thru MZ1.0GM100

MECHANICAL DATA

- Case: DO-41 Glass Case
- Weight: approx.0.35g



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified

	Symbols	Limits	Unit
Zener Current (see Table "characteristics")			
Power Dissipation at Tamb=°C	P _{tot}	1.0 ⁽¹⁾	Watts
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _s	-50to+150	°C

Characteristics at Tamb=25°C

	Symbols	Min	Typ	Max	Unit
Thermal Resistance Junction to Ambient Air	R _{thJA}	-	-	170 ⁽¹⁾	°C/W
Forward Voltage at I _F =100mA	V _F	-	-	1.2	Volts

Notes

1. Valid provided that electrodes at a distance of 10mm from case are kept at ambient temperature.



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ELECTRICAL CHARACTERISTIC

Ratings at 25°C ambient temperature unless otherwise specified

Type	Device Marking Code	Zener Voltage ⁽³⁾ at I _{ZT} V _Z (V) ($\Delta V_Z \leq 5\%$) ⁽⁴⁾		Test Current I _{ZT} (mA)	Maximum Zener Impedance ⁽¹⁾			Maximum Reverse Leakage Current		Surge Current at T _A =25°C I _R (mA)	Maximum Regulator Current ⁽²⁾ I _{ZM} (mA)
		MIN	MAX		Z _{ZT} At I _{ZT} (Ω)	Z _{ZK} (Ω)	at I _{ZK} (mA)	I _R (μ A)	at V _R (V)		
MZ1.0GD3V-76	3V3-76	3.14	3.47	76.0	10	400	1	100	1	1380	276
MZ1.0GD3V-69	3V6-69	3.42	3.78	69.0	10	400	1	100	1	1260	252
MZ1.0GD3V-64	3V9-64	3.7	4.1	64.0	9	400	1	50	1	1190	234
MZ1.0GD4V-58	4V3-58	4.08	4.52	58.0	9	400	1	10	1	1070	217
MZ1.0GD4V-57	4V7-57	4.46	4.94	53.0	8	500	1	10	1	970	193
MZ1.0GD5V-49	5V1-49	4.84	5.36	49.0	7	550	1	10	1	890	178
MZ1.0GD5V-45	5V6-45	5.32	5.88	45.0	5	600	1	10	2	810	162
MZ1.0GD6V-41	6V2-41	5.89	6.51	41.0	2	700	1	10	3	730	146
MZ1.0GD6V-37	6V8-37	6.46	7.14	37.0	3.5	700	1	10	4	660	133
MZ1.0GD7V-34	7V5-34	7.13	7.88	34.0	4	700	0.5	10	5	605	121
MZ1.0GD8V-31	8V2-31	7.79	8.61	31.0	4.5	700	0.5	10	6	550	110
MZ1.0GD9V-28	9V1-28	8.65	9.56	28.0	5	700	0.5	10	7	500	100
MZ1.0GD10V-25	10V-25	9.5	10.5	25.0	7	700	0.25	10	7.6	454	91
MZ1.0GD11V-23	11V-23	10.45	11.5	23.0	8	700	0.25	5	8.4	414	83
MZ1.0GD12V-21	12V-21	11.4	12.6	21.0	9	700	0.25	5	9.1	380	76
MZ1.0GD13V-19	13V-19	12.35	13.65	19.0	10	700	0.25	5	9.9	344	69
MZ1.0GD15V-17	15V-17	14.25	15.75	17.0	14	700	0.25	5	11.4	304	61
MZ1.0GD16V-15.5	16V-15.5	15.2	16.8	15.5	16	700	0.25	5	12.2	285	57
MZ1.0GD18V-14	18V-14	17.1	18.9	14.0	20	750	0.25	5	13.7	250	50
MZ1.0GD20V-12.5	20V-12.5	19	21	12.5	22	750	0.25	5	15.2	225	45
MZ1.0GD22V-11.5	22V-11.5	20.9	23.1	11.5	23	750	0.25	5	16.7	205	41
MZ1.0GD24V-106	10.624V-	22.8	25.2	10.5	25	750	0.25	5	18.2	190	38
MZ1.0GD27V-9.5	27.9.5V-	25.65	28.35	9.5	35	750	0.25	5	20.6	170	34
MZ1.0GD30V-8.5	30V8.5-	28.5	31.5	8.5	40	1000	0.25	5	22.8	150	30
MZ1.0GD33V-7.5	33V-7.5	31.35	34.65	7.5	45	1000	0.25	5	25.1	135	27
MZ1.0GD36V-7.0	36V-7.0	34.4	37.6	7.0	50	1000	0.25	5	27.4	125	25
MZ1.0GD39V-6.5	39V-6.5	37.05	40.95	6.5	60	1000	0.25	5	29.7	115	23
MZ1.0GD43V-6.0	43V-6.0	40.85	45.15	6.0	70	1500	0.25	5	32.7	110	22
MZ1.0GD47V-5.5	47V-5.5	44.65	49.35	5.5	80	1500	0.25	5	35.8	95	19
MZ1.0GD51V-5.0	51V-5.0	48.46	53.55	5.0	95	1500	0.25	5	38.8	90	18
MZ1.0GD56V-4.5	56V-4.45	53.2	58.8	4.5	110	2000	0.25	5	42.6	80	16
MZ1.0GD62V-4.0	62V-4.0	58.9	65.1	4.0	125	2000	0.25	5	47.1	70	14
MZ1.0GD68V-3.7	68V-3.7	64.6	71.4	3.7	150	2000	0.25	5	51.7	65	13
MZ1.0GD75V-3.3	75V-3.3	71.25	78.75	3.3	175	2000	0.25	5	56	60	12
MZ1.0GD82V-3.0	82V-3.0	77.9	86.1	3.0	200	3000	0.25	5	62.2	55	11
MZ1.0GD91V-2.8	91V-2.8	86.45	85.55	2.8	250	3000	0.25	5	69.2	50	10
MZ1.0GD100V-2.5	100V-2.5	95	105	2.5	350	3000	0.25	5	76	45	9

Notes:

- (1). The Zener impedance is derived from the 1KHz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}. Zener impedances is measured at two point to insure a sharp knee on the breakdown
- (2). Valid provided that electrodes are kept at ambient temperature.
- (3). Measured under thermal equilibrium and DC test fonditions.
- (4). Standard Zener Voltage tolerance is $\pm 5\%$. Add suffix "A" for $\pm 10\%$ tolerance.

MZ1.0GD3V3 THRU MZ1.0GD100

RATING AND CHARACTERISTIC CURVES MZ1.0GD3V3 THRU MZ1.0GD100

FIG.1-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

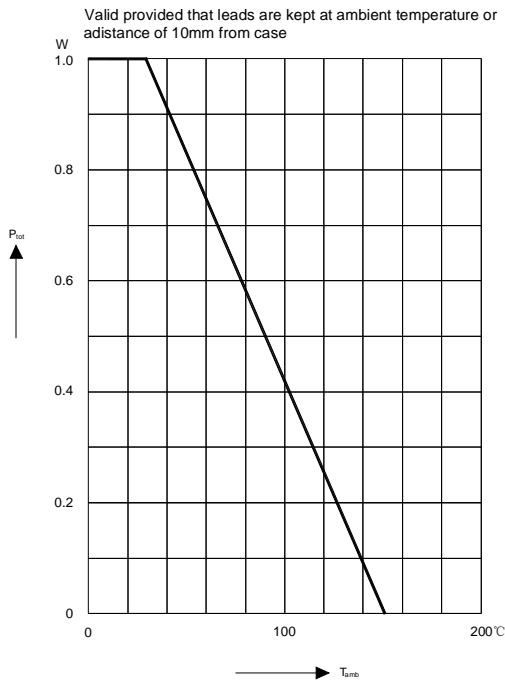


FIG.2-BREAKDOWN CHARACTERISTICS

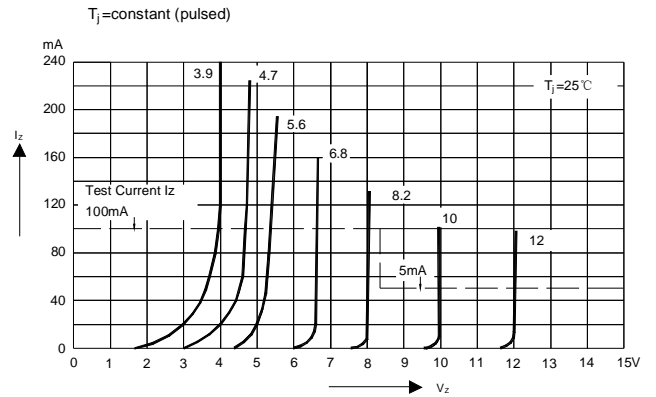


FIG.3-BREAKDOWN CHARACTERISTICS

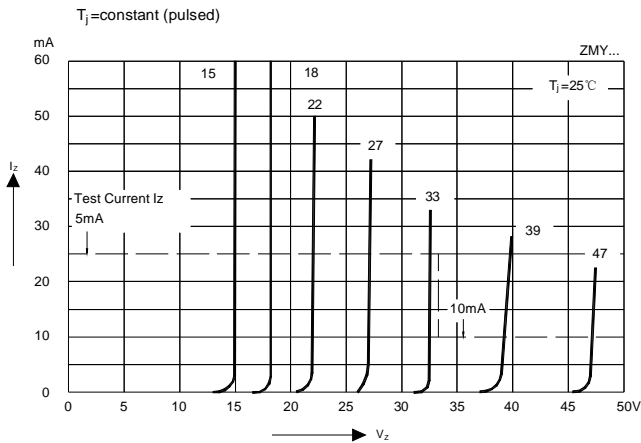


FIG.4-BREAKDOWN CHARACTERISTICS

