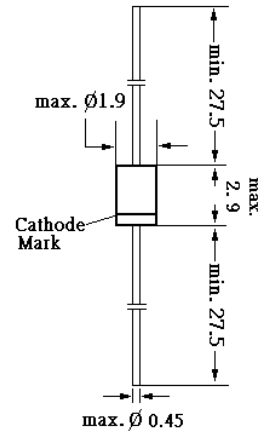


MTZ Series

SILICON EPITAXIAL PLANAR ZENER DIODES Constant Voltage Control Applications

Features

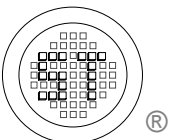
- Glass sealed envelope. (MSD)
- High reliability.



Glass case JEDEC DO-34
Dimensions in mm

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

	Symbol	Value	Unit
Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_s	-65 to +175	$^\circ\text{C}$



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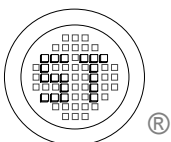


Dated : 16/07/2004

MTZ Series

Characteristics at $T_a = 25^\circ\text{C}$

TYPE	Zener Voltage			Operating resistance		Rising operating resistance		Reverse current	
	V_Z (V)		I_Z (mA)	Z_Z (Ω)		Z_{ZK} (Ω)		I_R (μA)	
	Min.	Max.		Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	V_R (V)
MTZ 2.0	1.880	2.200	20	100	20	1000	0.5	120	0.5
MTZ 2.0A	1.880	2.100							
MTZ 2.0B	2.020	2.200							
MTZ 2.2	2.090	2.410	20	100	20	1000	0.5	120	0.7
MTZ 2.2A	2.120	2.300							
MTZ 2.2B	2.220	2.410							
MTZ 2.4	2.300	2.640	20	100	20	1000	0.5	120	1.0
MTZ 2.4A	2.330	2.520							
MTZ 2.4B	2.430	2.630							
MTZ 2.7	2.500	2.900	20	110	20	1000	0.5	100	1.0
MTZ 2.7A	2.540	2.750							
MTZ 2.7B	2.690	2.910							
MTZ 3.0	2.800	3.200	20	120	20	1000	0.5	50	1.0
MTZ 3.0A	2.850	3.070							
MTZ 3.0B	3.010	3.220							
MTZ 3.3	3.100	3.500	20	120	20	1000	0.5	20	1.0
MTZ 3.3A	3.160	3.380							
MTZ 3.3B	3.320	3.530							
MTZ 3.6	3.400	3.800	20	100	20	1000	1	10	1.0
MTZ 3.6A	3.455	3.695							
MTZ 3.6B	3.600	3.845							
MTZ 3.9	3.700	4.100	20	100	20	1000	1	5	1.0
MTZ 3.9A	3.740	4.010							
MTZ 3.9B	3.890	4.160							
MTZ 4.3	4.000	4.500	20	100	20	1000	1	5	1.0
MTZ 4.3A	4.040	4.290							
MTZ 4.3B	4.170	4.430							
MTZ 4.3C	4.300	4.570							
MTZ 4.7	4.400	4.900	20	80	20	900	0.5	5	1.0
MTZ 4.7A	4.440	4.680							
MTZ 4.7B	4.550	4.800							
MTZ 4.7C	4.680	4.930							
MTZ 5.1	4.800	5.400	20	70	20	1200	0.5	5	1.5
MTZ 5.1A	4.810	5.070							
MTZ 5.1B	4.940	5.200							
MTZ 5.1C	5.090	5.370							
MTZ 5.6	5.300	6.000	20	40	20	900	0.5	5	2.5
MTZ 5.6A	5.280	5.550							
MTZ 5.6B	5.450	5.730							
MTZ 5.6C	5.610	5.910							
MTZ 6.2	5.800	6.600	20	30	20	500	0.5	5	3.0
MTZ 6.2A	5.780	6.090							
MTZ 6.2B	5.960	6.270							
MTZ 6.2C	6.120	6.440							
MTZ 6.8	6.400	7.200	20	20	20	150	0.5	2	3.5
MTZ 6.8A	6.290	6.630							
MTZ 6.8B	6.490	6.830							
MTZ 6.8C	6.660	7.010							
MTZ 7.5	7.000	7.900	20	20	20	120	0.5	0.5	4.0
MTZ 7.5A	6.850	7.220							
MTZ 7.5B	7.070	7.450							
MTZ 7.5C	7.290	7.670							



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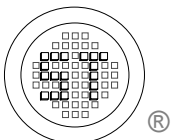


Dated : 16/07/2004

MTZ Series

Characteristics at $T_a = 25^\circ\text{C}$

TYPE	Zener Voltage			Operating resistance		Rising operating resistance		Reverse current	
	V_Z (V)		I_Z (mA)	Z_Z (Ω)		Z_{ZK} (Ω)		I_R (μA)	
	Min.	Max.		Max.	I_Z (mA)	Max	I_Z (mA)	Max	V_R (V)
MTZ 8.2	7.700	8.700	20	20	20	120	0.5	0.5	5.0
MTZ 8.2A	7.530	7.920							
MTZ 8.2B	7.780	8.190							
MTZ 8.2C	8.030	8.450							
MTZ 9.1	8.500	9.600	20	20	20	120	0.5	0.5	6.0
MTZ 9.1A	8.290	8.730							
MTZ 9.1B	8.570	9.010							
MTZ 9.1C	8.830	9.300							
MTZ 10	9.400	10.60	20	20	20	120	0.5	0.2	7.0
MTZ 10A	9.120	9.590							
MTZ 10B	9.410	9.900							
MTZ 10C	9.700	10.20							
MTZ 10D	9.940	10.44							
MTZ 11	10.40	11.60	10	20	10	120	0.5	0.2	8.0
MTZ 11A	10.18	10.71							
MTZ 11B	10.50	11.05							
MTZ 11C	10.82	11.38							
MTZ 12	11.40	12.60	10	25	10	110	0.5	0.2	9.0
MTZ 12A	11.13	11.71							
MTZ 12B	11.44	12.03							
MTZ 12C	11.74	12.35							
MTZ 13	12.40	14.10	10	25	10	110	0.5	0.2	10
MTZ 13A	12.11	12.75							
MTZ 13B	12.55	13.21							
MTZ 13C	12.99	13.66							
MTZ 15	13.80	15.60	10	25	10	110	0.5	0.2	11
MTZ 15A	13.44	14.13							
MTZ 15B	13.89	14.62							
MTZ 15C	14.35	15.09							
MTZ 16	15.30	17.10	10	25	10	150	0.5	0.2	12
MTZ 16A	14.80	15.57							
MTZ 16B	15.25	16.04							
MTZ 16C	15.69	16.51							
MTZ 18	16.80	19.10	10	30	10	150	0.5	0.2	13
MTZ 18A	16.22	17.06							
MTZ 18B	16.82	17.70							
MTZ 18C	17.42	18.33							
MTZ 20	18.80	21.20	10	30	10	200	15	0.2	15
MTZ 20A	18.02	18.96							
MTZ 20B	18.63	19.59							
MTZ 20C	19.23	20.22							
MTZ 20D	19.72	20.72							
MTZ 22	20.8	23.3	10	30	10	200	17	0.2	17
MTZ 22A	20.15	21.20							
MTZ 22B	20.64	21.71							
MTZ 22C	21.08	22.17							
MTZ 22D	21.52	22.63							
MTZ 24	22.56	25.44	10	35	10	200	19	0.2	19
MTZ 24A	22.05	23.18							
MTZ 24B	22.61	23.77							
MTZ 24C	23.12	24.31							



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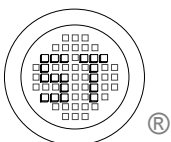
Dated : 16/07/2004

MTZ Series

Characteristics at $T_a = 25^\circ\text{C}$

TYPE	Zener Voltage			Operating resistance		Rising operating resistance		Reverse current	
	V_Z (V)			Z_Z (Ω)		Z_{ZK} (Ω)		I_R (μA)	
	Min.	Max.	I_Z (mA)	Max.	I_Z (mA)	Max	I_Z (mA)	Max	V_R (V)
MTZ 24D	23.63	24.85	10	35	10	200	19	0.2	19
MTZ 27	25.38	28.62	10	45	10	250	21	0.2	21
MTZ 27A	24.26	25.52							
MTZ 27B	24.97	26.26							
MTZ 27C	25.63	26.95							
MTZ 27D	26.29	27.64							
MTZ 30	28.20	31.80	10	55	10	250	23	0.2	23
MTZ 30A	26.99	28.39							
MTZ 30B	27.70	29.13							
MTZ 30C	28.36	29.82							
MTZ 30D	29.02	30.51	10	65	10	250	25	0.2	25
MTZ 33	31.02	34.98							
MTZ 33A	29.68	31.22							
MTZ 33B	30.32	31.88							
MTZ 33C	30.90	32.50							
MTZ 33D	31.49	33.11	10	75	10	250	27	0.2	27
MTZ 36	33.84	38.16							
MTZ 36A	32.14	33.79							
MTZ 36B	32.79	34.49							
MTZ 36C	33.40	35.13							
MTZ 36D	34.01	35.77	10	85	10	250	30	0.2	30
MTZ 39	36.66	41.34							
MTZ 39A	34.68	36.47							
MTZ 39B	35.36	37.19							
MTZ 39C	36.00	37.85							
MTZ 39D	36.63	38.52							
MTZ 39E	37.36	39.29							
MTZ 39F	38.14	40.11							
MTZ 39G	38.94	40.80							

- Notes:
- (1) Zener voltage (V_Z) is measured 40ms applying the current.
 - (2) The min & max zener voltages (V_Z) without alphabetical suffix are large-clagtion values for the same numerical group.
 - (3) Zener voltage in main category is mea when stationary. When ordering please specify the suffix.



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