MTZ J series

Diode, Zener, 500 mW, leaded

These glass-sealed Zener diodes are suitable for lead mounting on printed circuit boards. They can be used to regulate voltages between 2.0 and 39 V.

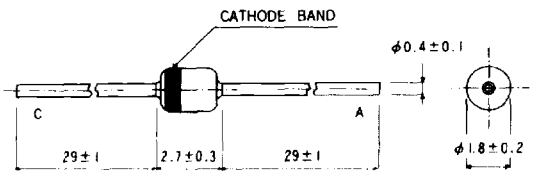
Features

- available in DO-34 package
- all MTZJ series have a single black cathode band. In addition, the significant digits of the part no. and the class are marked on the diode body, for instance, thebody of MTZJ2.0A is marked 2.0A.

Applications

- voltage regulating

Dimensions (Units : mm)



Absolute maximum ratings (T_a=25°C)

Parameter	Symbol	Limits	Unit
Power dissipation	P_d	500	mW
Junction temperature	T_j	175	°C
Storage temperature	T_{stg}	−65 ~ +175	°C

Electrical characteristics (unless otherwise noted, T_a = 25°C) (Sheet 1 of 3)

Part no.	Zener voltage subdivision[1]				Operating resistance[2]		Rising operating resistance		Reverse current	
	Class[3]	V_Z (V)		I_Z (mA)	Z_Z (Ω) Max	I_Z (mA)	Z_{ZK} (Ω) Max	I_Z (mA)	I_R (μA) Max	V_R (V)
		Min	Max							
MTZ J 2.0	A	1.880	2.100	5	100	5	1000	0.5	120	0.5
	B	2.020	2.200							
MTZ J 2.2	A	2.120	2.300	5	100	5	1000	0.5	100	0.7
	B	2.220	2.410							
MTZ J 2.4	A	2.330	2.520	5	100	5	1000	0.5	120	1.0
	B	2.430	2.630							
MTZ J 2.7	A	2.540	2.750	5	110	5	1000	0.5	100	1.0
	B	2.690	2.910							
MTZ J 3.0	A	2.850	3.070	5	120	5	1000	0.5	50	1.0
	B	3.010	3.220							
MTZ J 3.3	A	3.160	3.380	5	120	5	1000	0.5	20	1.0
	B	3.320	3.530							
MTZ J 3.6	A	3.455	3.695	5	100	5	1000	1	10	1.0
	B	3.600	3.845							
MTZ J 3.9	A	3.74	4.01	5	100	5	1000	1	5	1.0
	B	3.89	4.16							
MTZ J 4.3	A	4.04	4.29	5	100	5	1000	1	5	1.0
	B	4.17	4.43							
	C	4.30	4.57							
MTZ J 4.7	A	4.44	4.68	5	80	5	900	1	5	1.0
	B	4.55	4.80							
	C	4.68	4.93							
MTZ J 5.1	A	4.81	5.07	5	80	5	800	1	5	1.5
	B	4.94	5.20							
	C	5.09	5.37							
MTZ J 5.6	A	5.28	5.55	5	60	5	500	1	5	2.5
	B	5.45	5.73							
	C	5.61	5.91							
MTZ J 6.2	A	5.78	6.09	5	60	5	300	1	5	3.0
	B	5.96	6.27							
	C	6.12	6.44							
MTZ J 6.8	A	6.29	6.63	5	20	5	150	0.5	2	3.5
	B	6.49	6.83							
	C	6.66	7.01							

Electrical characteristics (unless otherwise noted, T_a = 25°C) (Sheet 2 of 3)

Part no.	Zener voltage subdivision[1]				Operating resistance[2]		Rising operating resistance		Reverse current	
	Class[3]	V_Z (V)		I_Z (mA)	Z_Z (Ω) Max	I_Z (mA)	Z_{ZK} (Ω) Max	I_Z (mA)	I_R (μA) Max	V_R (V)
		Min	Max							
MTZ J 7.5	A	6.85	7.22	5	20	5	120	0.5	0.5	4.0
	B	7.07	7.45							
	C	7.29	7.67							
MTZ J 8.2	A	7.53	7.92	5	20	5	120	0.5	0.5	5.0
	B	7.78	8.19							
	C	8.03	8.45							
MTZ J 9.1	A	8.29	8.73	5	25	5	120	0.5	0.5	6.0
	B	8.57	9.01							
	C	8.83	9.30							
MTZ J 10	A	9.12	9.59	5	30	5	120	0.5	0.2	7.0
	B	9.41	9.90							
	C	9.70	10.20							
	D	9.94	10.44							
MTZ J 11	A	10.18	10.71	5	30	5	120	0.5	0.2	8.0
	B	10.50	11.05							
	C	10.82	11.38							
MTZ J 12	A	11.13	11.71	5	30	5	110	0.5	0.2	9.0
	B	11.44	12.03							
	C	11.74	12.35							
MTZ J 13	A	12.11	12.75	5	35	5	110	0.5	0.2	10
	B	12.55	13.21							
	C	12.99	13.66							
MTZ J 15	A	13.44	14.13	5	40	5	110	0.5	0.2	11
	B	13.89	14.62							
	C	14.35	15.09							
MTZ J 16	A	14.80	15.57	5	40	5	150	0.5	0.2	12
	B	15.25	16.04							
	C	15.69	16.51							
MTZ J 18	A	16.22	17.06	5	45	5	150	0.5	0.2	13
	B	16.82	17.70							
	C	17.42	18.33							
MTZ J 20	A	18.02	18.96	5	55	5	200	0.5	0.2	15
	B	18.63	19.59							
	C	19.23	20.22							
	D	19.72	20.72							

Electrical characteristics (unless otherwise noted, T_a = 25°C) (Sheet 3 of 3)

Part no.	Zener voltage subdivision[1]				Operating resistance[2]		Rising operating resistance		Reverse current	
	Class[3]	V_Z (V) Min	V_Z (V) Max	I_Z (mA)	Z_Z (Ω) Max	I_Z (mA)	Z_{ZK} (Ω) Max	I_Z (mA)	I_R (μA) Max	V_R (V)
MTZ J 22	A	22.15	21.20	5	30	5	200	0.5	0.2	17
	B	20.64	21.71							
	C	21.08	22.17							
	D	21.52	22.63							
MTZ J 24	A	22.05	23.18	5	35	5	200	0.5	0.2	19
	B	22.61	23.77							
	C	23.12	24.31							
	D	23.63	24.85							
MTZ J 27	A	24.26	25.52	5	45	5	250	0.5	0.2	21
	B	24.97	26.26							
	C	25.63	26.95							
	D	26.29	27.64							
MTZ J 30	A	26.99	28.39	5	55	5	250	0.5	0.2	23
	B	27.70	29.13							
	C	28.36	29.82							
	D	29.02	30.51							
MTZ J 33	A	29.68	31.22	5	65	5	250	0.5	0.2	25
	B	30.32	31.88							
	C	30.90	32.50							
	D	31.49	33.11							
MTZ J 36	A	32.14	33.79	5	75	5	250	0.5	0.2	27
	B	32.79	34.49							
	C	33.40	35.13							
	D	34.01	35.77							
MTZ J 39	A	34.68	36.47	5	85	5	250	0.5	0.2	30
	B	35.36	37.19							
	C	36.00	37.85							
	D	36.63	38.52							

1. The Zener voltage subdivision (V_Z) is measured 40 ms after diode is powered up.

2. The operating resistance (Z_Z and Z_{ZK}) is measured by superimposing a minute alternating current in the regulated current (I_Z).

3. When ordering, please specify class A , B, C, or D.

Electrical characteristic curves

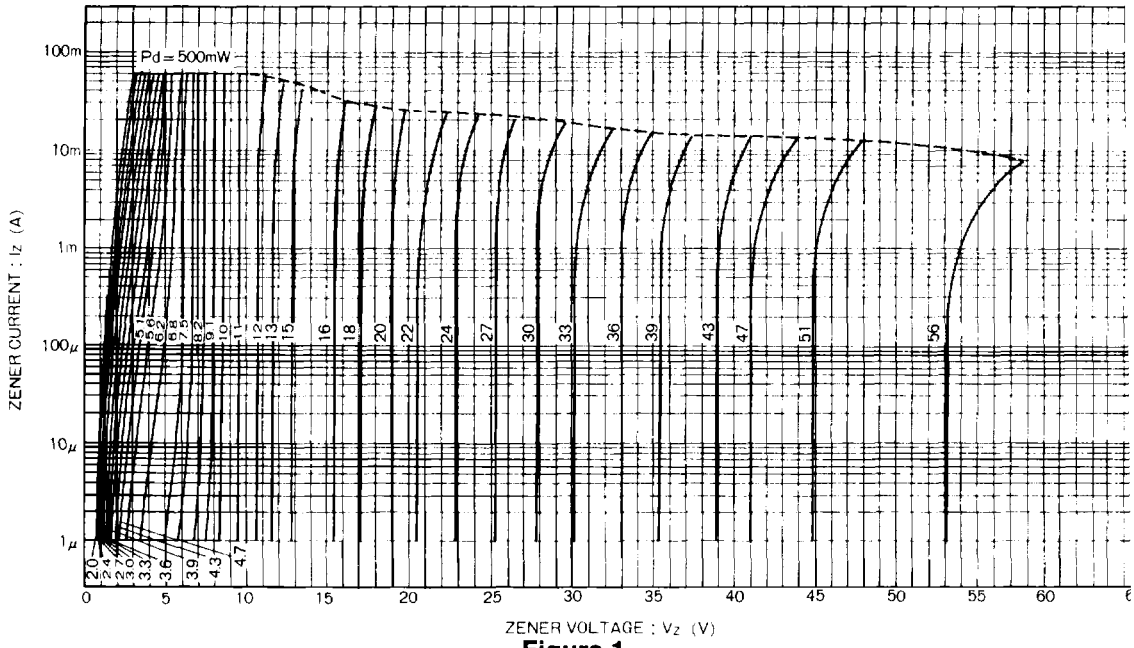


Figure 1

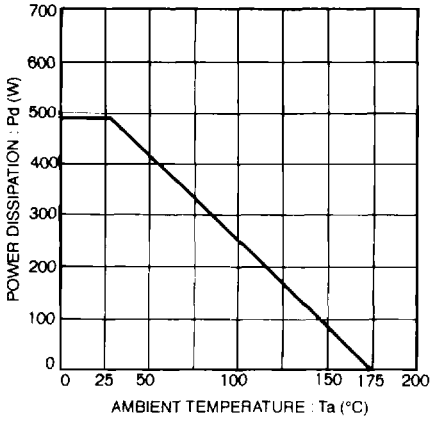


Figure 2