

Zener diode

MTZ J Series

●Applications

Constant voltage control

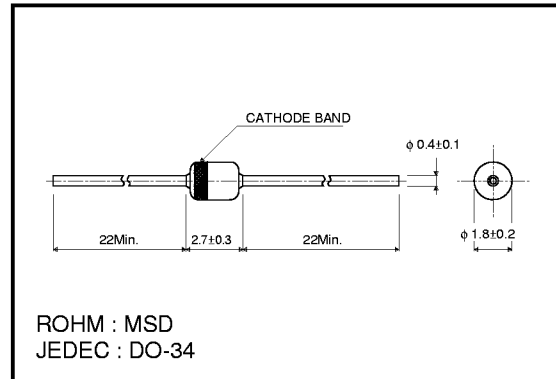
●Features

- 1) Glass sealed envelope. (JEDEC : DO-34)
- 2) High reliability.

●Construction

Silicon epitaxial planer

●External dimensions (Units : mm)



●Absolute maximum ratings (Ta=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

●Cathode band colors

Type	Color
MTZ J Series	Black

The Zener voltage value is stamped on the body as a digital marking.

●Electrical characteristics (Ta=25°C)

Type	Rank	Zener voltage			Operating resistance		Rising operating resistance		Reverse current	
		$V_Z(V)$		$I_Z(mA)$	$Z_Z(\Omega)$		$Z_{rK}(\Omega)$		$I_R(\mu A)$	
		Min.	Max.		Max.	$I_Z(mA)$	Max.	$I_Z(mA)$	Max.	$V_R(V)$
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	3.740	4.010	5	100	5	1000	1	5	1.0
	B	3.890	4.160							
MTZ J 4.3	A	4.040	4.290	5	100	5	1000	1	5	1.0
	B	4.170	4.430							
	C	4.300	4.570							
MTZ J 4.7	A	4.440	4.680	5	80	5	900	0.5	5	1.0
	B	4.550	4.800							
	C	4.680	4.930							

Diodes

Type	Zener voltage			Operating resistance		Rising operating resistance		Reverse current		
	Rank	V _Z (V)		Z _Z (W)		Z _{ZK} (W)		I _R (μA)		
		Min.	Max.	I _Z (mA)	Max.	I _Z (mA)	Max.	I _Z (mA)	Max.	V _R (V)
MTZ J 5.1	A	4.810	5.070	5	70	5	1200	1	0.5	1.5
	B	4.940	5.200							
	C	5.090	5.370							
MTZ J 5.6	A	5.280	5.550	5	40	5	900	1	0.5	2.5
	B	5.450	5.730							
	C	5.610	5.910							
MTZ J 6.2	A	5.780	6.090	5	30	5	500	1	0.5	3.0
	B	5.960	6.270							
	C	6.120	6.440							
MTZ J 6.8	A	6.290	6.630	5	20	5	150	0.5	2	3.5
	B	6.490	6.830							
	C	6.660	7.010							
MTZ J 7.5	A	6.850	7.220	5	20	5	120	0.5	0.5	4.0
	B	7.070	7.450							
	C	7.290	7.670							
MTZ J 8.2	A	7.530	7.920	5	20	5	120	0.5	0.5	5.0
	B	7.780	8.190							
	C	8.030	8.450							
MTZ J 9.1	A	8.290	8.730	5	20	5	120	0.5	0.5	6.0
	B	8.570	9.010							
	C	8.830	9.300							
MTZ J 10	A	9.120	9.590	5	20	5	120	0.5	0.2	7.0
	B	9.410	9.900							
	C	9.700	10.200							
	D	9.940	10.440							
MTZ J 11	A	10.180	10.710	5	20	5	120	0.5	0.2	8.0
	B	10.500	11.050							
	C	10.820	11.380							
MTZ J 12	A	11.130	11.710	5	25	5	110	0.5	0.2	9.0
	B	11.440	12.030							
	C	11.740	12.350							
MTZ J 13	A	12.110	12.750	5	25	5	110	0.5	0.2	10
	B	12.550	13.210							
	C	12.990	13.660							
MTZ J 15	A	13.440	14.130	5	25	5	110	0.5	0.2	11
	B	13.890	14.620							
	C	14.350	15.090							
MTZ J 16	A	14.800	15.570	5	25	5	150	0.5	0.2	12
	B	15.250	16.040							
	C	15.690	16.510							
MTZ J 18	A	16.220	17.060	5	30	5	150	0.5	0.2	13
	B	16.820	17.700							
	C	17.420	18.330							
MTZ J 20	A	18.020	18.960	5	30	5	200	0.5	0.2	15
	B	18.630	19.590							
	C	19.230	20.220							
	D	19.720	20.720							
MTZ J 22	A	20.150	21.200	5	30	5	200	0.5	0.2	17
	B	20.640	21.710							
	C	21.080	22.170							
	D	21.520	22.630							
MTZ J 24	A	22.050	23.180	5	35	5	200	0.5	0.2	19
	B	22.610	23.770							
	C	23.120	24.310							
	D	23.630	24.850							
MTZ J 27	A	24.260	25.520	5	45	5	250	0.5	0.2	21
	B	24.970	26.260							
	C	25.630	26.950							
	D	26.290	27.640							

Diodes

Type	Rank	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 J 30	A	26.990	28.390	5	55	5	250	0.5	0.2	23
	B	27.700	29.130							
	C	28.360	29.820							
	D	29.020	30.510							
MTZ J 33	A	29.680	31.220	5	65	5	250	0.5	0.2	25
	B	30.320	31.880							
	C	30.900	32.500							
	D	31.490	33.110							
MTZ J 36	A	32.140	33.790	5	75	5	250	0.5	0.2	27
	B	32.790	34.490							
	C	33.400	35.130							
	D	34.010	35.770							
MTZ J 39	A	34.680	36.470	5	85	5	250	0.5	0.2	30
	B	35.360	37.190							
	C	36.000	37.850							
	D	36.630	38.520							

Note) 1. The Zener voltage is measured 40 ms after power is supplied.
 2. Specify Zener voltage rank (A, B or C) when ordering the parts.

Diodes

●Electrical characteristics curves (Ta=25°C)

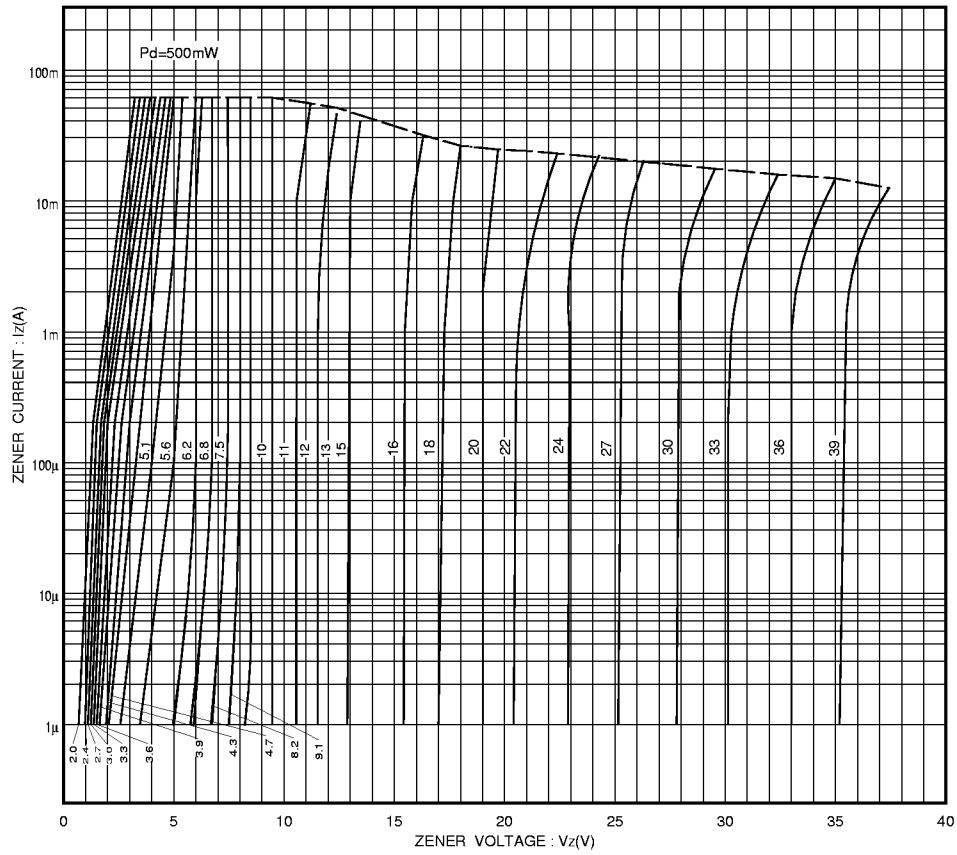


Fig. 1 Zener characteristics

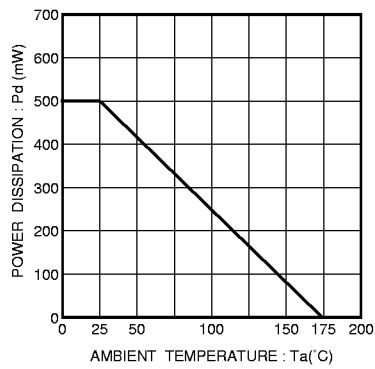


Fig. 2 Derating curve