



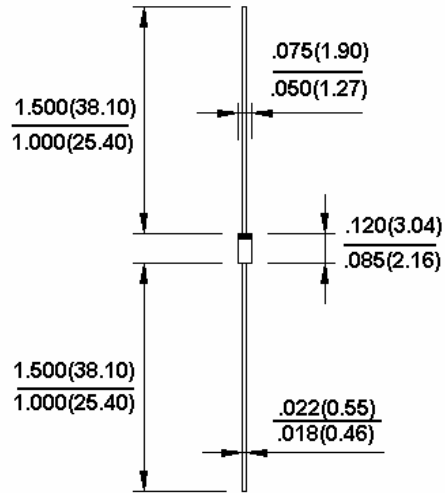
# MTZJ SERIES

## 500mW Hermetically Sealed Glass Zener Diodes

### DO-34

#### Features

- ✧ Zener voltage range 2.0 to 39 volts
- ✧ DO-34 package (JEDEC DO-204)
- ✧ Through-hole device type mounting
- ✧ Hermetically sealed glass
- ✧ Compression bonded construction
- ✧ All external surfaces are corrosion resistant and leads are readily solderable
- ✧ RoHS compliant
- ✧ Solder hot dip Tin (Sn) lead finish
- ✧ Cathode indicated by polarity band



Dimensions in inches and (millimeters)

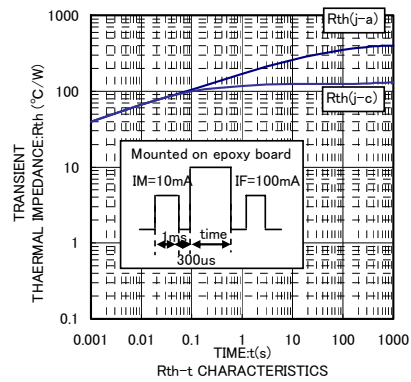
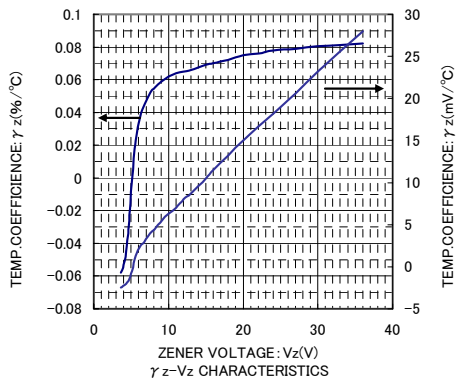
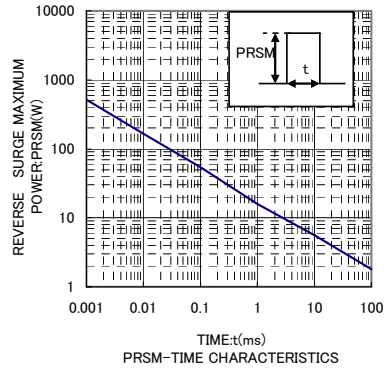
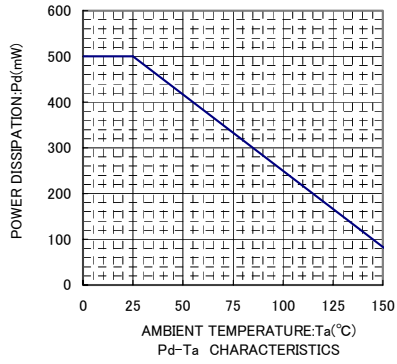
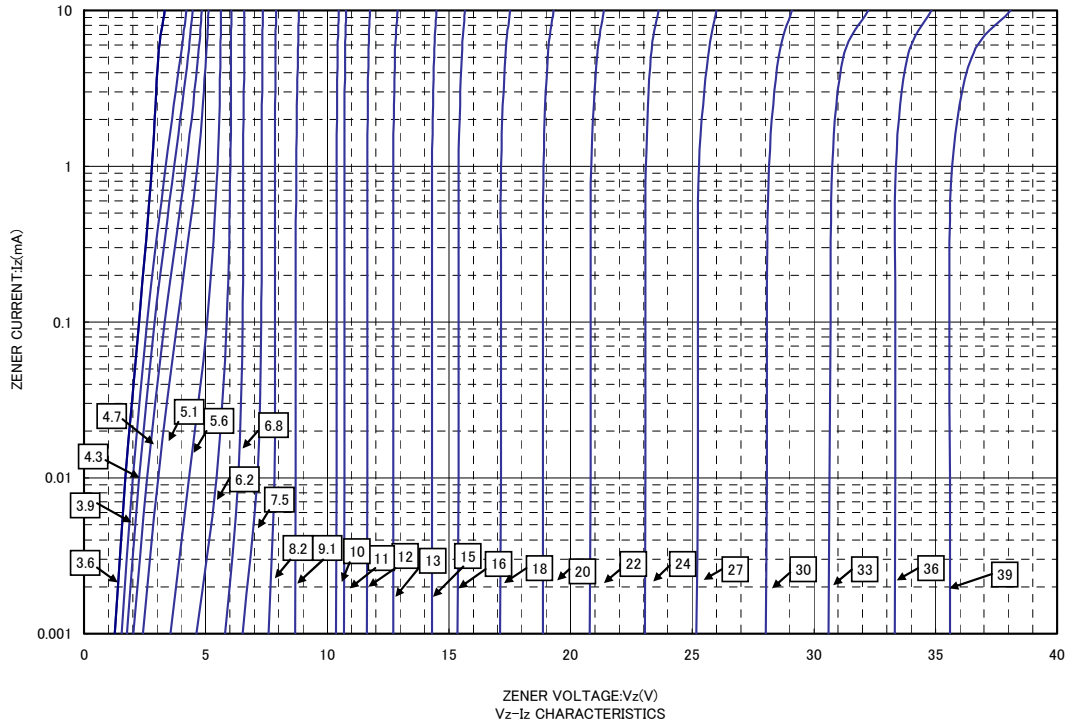
#### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

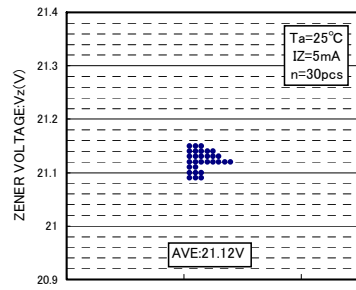
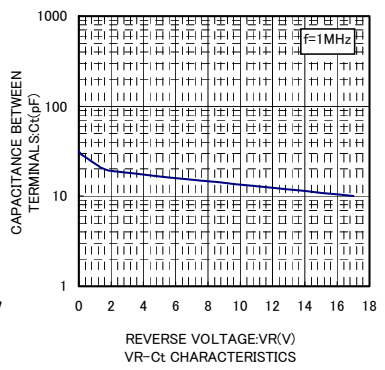
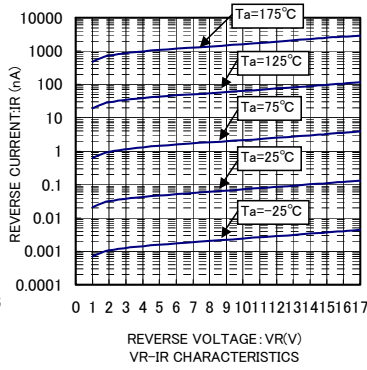
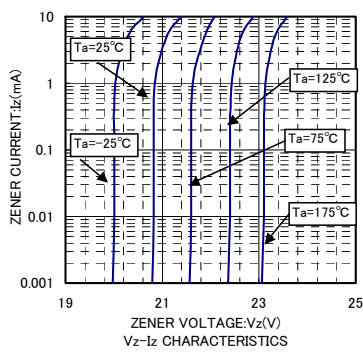
##### Maximum Ratings

Type Number	Symbol	Value	Units
Power Dissipation	P <sub>d</sub>	500	mW
Lead temperature (1/16" from case for 10 seconds)	L <sub>t</sub>	230	°C
Operating Junction Temperature	T <sub>J</sub>	+ 175	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to + 200	°C

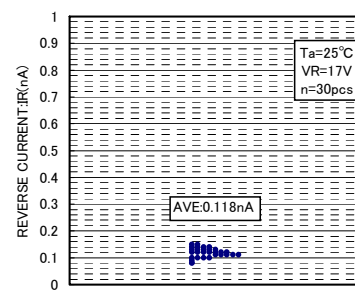
### RATINGS AND CHARACTERISTIC CURVES (MTZJ SERIES)



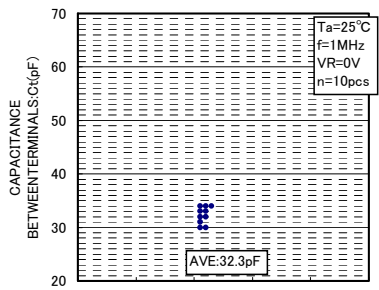
## RATINGS AND CHARACTERISTIC CURVES (MTZJ SERIES)



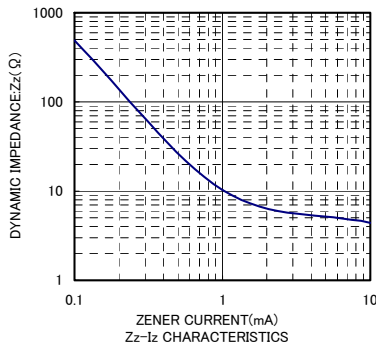
$V_Z$  DISRESION MAP



$I_R$  DISRESION MAP



$C_t$  DISRESION MAP



ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

Type Number	T Tolerance		Vz @ Izt			Izt mA	Zzt @ Izt Ohms Max.	Zzk @ Izk Ohms Max.	Izk mA	Ir uA Max.	VR V
			Nom (V)	Min (V)	Max (V)						
MTZJ2V0	A	5.5%	1.990	1.88	2.10	5	100	1000	0.5	120	0.5
	B	4.3%	2.110	2.02	2.20						
MTZJ2V2	A	4.0%	2.210	2.12	2.30	5	100	1000	0.5	100	0.7
	B	4.1%	2.315	2.22	2.41						
MTZJ2V4	A	3.9%	2.425	2.33	2.52	5	100	1000	0.5	120	1.0
	B	4.0%	2.530	2.43	2.63						
MTZJ2V7	A	4.0%	2.645	2.54	2.75	5	110	1000	0.5	100	1.0
	B	3.9%	2.800	2.69	2.91						
MTZJ3V0	A	3.7%	2.960	2.85	3.07	5	120	1000	0.5	50	1.0
	B	3.4%	3.115	3.01	3.22						
MTZJ3V3	A	3.4%	3.270	3.16	3.38	5	120	1000	0.5	20	1.0
	B	3.1%	3.425	3.32	3.53						
MTZJ3V6	A	3.6%	3.575	3.455	3.695	5	100	1000	1.0	10	1.0
	B	3.3%	3.723	3.60	3.845						
MTZJ3V9	A	3.5%	3.875	3.74	4.01	5	100	1000	1.0	5	1.0
	B	3.3%	4.025	3.89	4.16						
MTZJ4V3	A	3.0%	4.165	4.04	4.29	5	100	1000	1.0	5.0	1.0
	B	3.0%	4.300	4.17	4.43						
	C	3.0%	4.435	4.30	4.57						
MTZJ4V7	A	2.6%	4.56	4.44	4.68	5	80	900	1.0	5.0	1.0
	B	2.8%	4.68	4.55	4.80						
	C	2.7%	4.81	4.68	4.93						
MTZJ5V1	A	2.6%	4.94	4.81	5.07	5	80	800	1.0	5.0	1.5
	B	2.6%	5.07	4.94	5.20						
	C	2.7%	5.23	5.09	5.37						
MTZJ5V6	A	2.4%	5.41	5.28	5.55	5	60	500	1.0	5.0	2.5
	B	2.5%	5.59	5.45	5.73						
	C	2.6%	5.76	5.61	5.91						
MTZJ6V2	A	2.7%	5.94	5.78	6.09	5	60	300	1.0	5.0	3.0
	B	2.6%	6.12	5.96	6.27						
	C	2.5%	6.28	6.12	6.44						
MTZJ6V8	A	2.6%	6.46	6.29	6.63	5	20	150	0.5	2.0	3.5
	B	2.6%	6.66	6.49	6.83						
	C	2.6%	6.84	6.66	7.01						
MTZJ7V5	A	2.7%	7.04	6.85	7.22	5	20	120	0.5	0.5	4.0
	B	2.6%	7.26	7.07	7.45						
	C	2.5%	7.48	7.29	7.67						
MTZJ8V2	A	2.6%	7.73	7.53	7.92	5	20	120	0.5	0.5	5.0
	B	2.6%	7.99	7.78	8.19						
	C	2.5%	8.24	8.03	8.45						
MTZJ9V1	A	2.6%	8.51	8.29	8.73	5	25	120	0.5	0.5	6.0
	B	2.5%	8.79	8.57	9.01						
	C	2.6%	9.07	8.83	9.30						
MTZJ10	A	2.6%	9.36	9.12	9.59	5	30	120	0.5	0.2	7.0
	B	2.6%	9.66	9.41	9.90						
	C	2.5%	9.95	9.70	10.2						
MTZJ11	A	2.6%	10.45	10.18	10.71	5	30	120	0.5	0.2	8.0
	B	2.6%	10.78	10.500	11.05						
	C	2.5%	11.10	10.82	11.38						
MTZJ12	A	2.5%	11.42	11.13	11.71	5	30	110	0.5	0.2	9.0
	B	2.6%	11.74	11.44	12.03						
	C	2.6%	12.05	11.74	12.35						

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

Type Number	T Tolerance		Vz @ Izt			Izt mA	Zzt @ Izt Ohms Max.	Zzk @ Izk Ohms Max.	Izk mA	IR uA Max.	VR V
			Nom (V)	Min (V)	Max (V)						
MTZJ13	A	2.6%	12.43	12.11	12.75	5	35	110	0.5	0.2	10
	B	2.6%	12.88	12.55	13.21						
	C	2.6%	13.33	12.99	13.66						
MTZJ15	A	2.5%	13.79	13.44	14.13	5	40	110	0.5	0.2	11
	B	2.6%	14.26	13.89	14.62						
	C	2.5%	14.72	14.35	15.09						
MTZJ16	A	2.6%	15.19	14.80	15.57	5	40	150	0.5	0.2	12
	B	2.6%	15.65	15.25	16.04						
	C	2.5%	16.10	15.69	16.51						
MTZJ18	A	2.5%	16.64	16.22	17.06	5	45	150	0.5	0.2	13
	B	2.5%	17.26	16.82	17.70						
	C	2.6%	17.88	17.42	18.33						
MTZJ20	A	2.5%	18.49	18.02	18.96	5	55	200	0.5	0.5	15
	B	2.5%	19.11	18.63	19.59						
	C	2.5%	19.73	19.23	20.22						
	D	2.5%	20.22	19.72	20.72						
MTZJ22	A	2.2%	20.68	20.15	21.2	5	30	200	0.5	0.2	17
	B	2.5%	21.18	20.64	21.71						
	C	2.5%	21.63	21.08	22.17						
	D	2.5%	22.08	21.52	22.63						
MTZJ24	A	2.5%	22.62	22.05	23.18	5	35	200	0.5	0.2	19
	B	2.5%	23.19	22.61	23.77						
	C	2.5%	23.72	23.12	24.31						
	D	2.5%	24.24	23.63	24.85						
MTZJ27	A	2.5%	24.89	24.26	25.52	5	45	250	0.5	0.2	21
	B	2.5%	25.62	24.97	26.26						
	C	2.5%	26.29	25.63	26.95						
	D	2.5%	26.97	26.29	27.64						
MTZJ30	A	2.5%	27.69	26.99	28.39	5	55	250	0.5	0.2	23
	B	2.5%	28.42	27.70	29.13						
	C	2.5%	29.09	28.36	29.82						
	D	2.5%	29.77	29.02	30.51						
MTZJ33	A	2.5%	30.45	29.68	31.22	5	65	250	0.5	0.2	25
	B	2.5%	31.10	30.32	31.88						
	C	2.5%	31.70	30.90	32.50						
	D	2.5%	32.30	31.49	33.11						
MTZJ36	A	2.5%	32.97	32.14	33.79	5	75	250	0.5	0.2	27
	B	2.5%	33.64	32.79	34.49						
	C	2.5%	34.27	33.40	35.13						
	D	2.5%	34.89	34.01	35.77						
MTZJ39	A	2.5%	35.58	34.68	36.47	5	85	250	0.5	0.2	30
	B	2.5%	36.28	35.36	37.19						
	C	2.5%	36.93	36.00	37.85						
	D	2.5%	37.58	36.63	38.52						

- Notes: 1. The zener voltage subdivision (V<sub>Z</sub>) is measured 40mS after diode is powered up.  
 2. The operating resistance (Z<sub>ZT</sub> and Z<sub>ZK</sub>) is measured by superimposing a minute alternation current in the regulated current (I<sub>Z</sub>).  
 3. when ordering, please specify tolerance A,B,C or D.