

# MTZJ Series

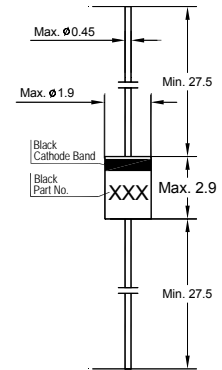
## ZENER DIODES

Constant Voltage Control Applications

### Features

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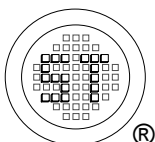
- Glass sealed envelope
- High reliability



Glass Case DO-34  
Dimensions in mm

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

Parameter	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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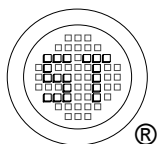
ISO/TS 16949 : 2002 Certificate No. 05103  
 ISO 14004:2004 Certificate No. 7116  
 ISO 9001:2000 Certificate No. 0506088

Dated : 25/06/2007

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

Type	Zener Voltage <sup>1)</sup>			Operating Resistance		Rising Operating Resistance		Reverse Current	
	$V_Z$ (V)		$I_Z$ (mA)	$Z_Z$ ( $\Omega$ )		$Z_{ZK}$ ( $\Omega$ )		$I_R$ ( $\mu\text{A}$ )	
	Min.	Max.		Max.	$I_Z$ (mA)	Max.	$I_Z$ (mA)	Max.	$V_R$ (V)
MTZJ2V0A	1.88	2.1	5	100	5	1000	0.5	120	0.5
MTZJ2V0B	2.02	2.2							
MTZJ2V2A	2.12	2.3	5	100	5	1000	0.5	120	0.7
MTZJ2V2B	2.22	2.41							
MTZJ2V4A	2.33	2.52	5	100	5	1000	0.5	120	1
MTZJ2V4B	2.43	2.63							
MTZJ2V7A	2.54	2.75	5	110	5	1000	0.5	100	1
MTZJ2V7B	2.69	2.91							
MTZJ3V0A	2.85	3.07	5	120	5	1000	0.5	50	1
MTZJ3V0B	3.01	3.22							
MTZJ3V3A	3.16	3.38	5	120	5	1000	0.5	20	1
MTZJ3V3B	3.32	3.53							
MTZJ3V6A	3.455	3.695	5	100	5	1000	1	10	1
MTZJ3V6B	3.6	3.845							
MTZJ3V9A	3.74	4.01	5	100	5	1000	1	5	1
MTZJ3V9B	3.89	4.16							
MTZJ4V3A	4.04	4.29	5	100	5	1000	1	5	1
MTZJ4V3B	4.17	4.43							
MTZJ4V3C	4.3	4.57							
MTZJ4V7A	4.44	4.68	5	80	5	900	0.5	5	1
MTZJ4V7B	4.55	4.8							
MTZJ4V7C	4.68	4.93							
MTZJ5V1A	4.81	5.07	5	70	5	1200	0.5	5	1.5
MTZJ5V1B	4.94	5.2							
MTZJ5V1C	5.09	5.37							
MTZJ5V6A	5.28	5.55	5	40	5	900	0.5	5	2.5
MTZJ5V6B	5.45	5.73							
MTZJ5V6C	5.61	5.91							
MTZJ6V2A	5.78	6.09	5	30	5	500	0.5	5	3
MTZJ6V2B	5.96	6.27							
MTZJ6V2C	6.12	6.44							
MTZJ6V8A	6.29	6.63	5	20	5	150	0.5	2	3.5
MTZJ6V8B	6.49	6.83							
MTZJ6V8C	6.66	7.01							
MTZJ7V5A	6.85	7.22	5	20	5	120	0.5	0.5	4
MTZJ7V5B	7.07	7.45							
MTZJ7V5C	7.29	7.67							
MTZJ8V2A	7.53	7.92	5	20	5	120	0.5	0.5	5
MTZJ8V2B	7.78	8.19							
MTZJ8V2C	8.03	8.45							
MTZJ9V1A	8.29	8.73	5	20	5	120	0.5	0.5	6
MTZJ9V1B	8.57	9.01							
MTZJ9V1C	8.83	9.3							
MTZJ10A	9.12	9.59	5	20	5	120	0.5	0.2	7
MTZJ10B	9.41	9.9							
MTZJ10C	9.7	10.2							
MTZJ10D	9.94	10.44							



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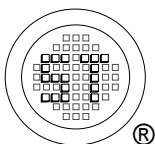
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## Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Type	Zener Voltage <sup>1)</sup>			Operating Resistance		Rising Operating Resistance		Reverse Current	
	$V_Z$ (V)		$I_Z$ (mA)	$Z_Z$ ( $\Omega$ )		$Z_{ZK}$ ( $\Omega$ )		$I_R$ ( $\mu\text{A}$ )	
	Min.	Max.		Max.	$I_Z$ (mA)	Max.	$I_Z$ (mA)	Max.	$V_R$ (V)
MTZJ11A	10.18	10.71	5	20	5	120	0.5	0.2	8
MTZJ11B	10.5	11.05							
MTZJ11C	10.82	11.38							
MTZJ12A	11.13	11.71	5	25	5	110	0.5	0.2	9
MTZJ12B	11.44	12.03							
MTZJ12C	11.74	12.35							
MTZJ13A	12.11	12.75	5	25	5	110	0.5	0.2	10
MTZJ13B	12.55	13.21							
MTZJ13C	12.99	13.66							
MTZJ15A	13.44	14.13	5	25	5	110	0.5	0.2	11
MTZJ15B	13.89	14.62							
MTZJ15C	14.35	15.09							
MTZJ16A	14.8	15.57	5	25	5	150	0.5	0.2	12
MTZJ16B	15.25	16.04							
MTZJ16C	15.69	16.51							
MTZJ18A	16.22	17.06	5	30	5	150	0.5	0.2	13
MTZJ18B	16.82	17.7							
MTZJ18C	17.42	18.33							
MTZJ20A	18.02	18.96	5	30	5	200	0.5	0.2	15
MTZJ20B	18.63	19.59							
MTZJ20C	19.23	20.22							
MTZJ20D	19.72	20.72	5	30	5	200	0.5	0.2	17
MTZJ22A	20.15	21.2							
MTZJ22B	20.64	21.71							
MTZJ22C	21.08	22.17							
MTZJ22D	21.52	22.63	5	35	5	200	0.5	0.2	19
MTZJ24A	22.05	23.18							
MTZJ24B	22.61	23.77							
MTZJ24C	23.12	24.31							
MTZJ24D	23.63	24.85	5	45	5	250	0.5	0.2	21
MTZJ27A	24.26	25.52							
MTZJ27B	24.97	26.26							
MTZJ27C	25.63	26.95							
MTZJ27D	26.29	27.64	5	55	5	250	0.5	0.2	23
MTZJ30A	26.99	28.39							
MTZJ30B	27.7	29.13							
MTZJ30C	28.36	29.82							
MTZJ30D	29.02	30.51	5	65	5	250	0.5	0.2	25
MTZJ33A	29.68	31.22							
MTZJ33B	30.32	31.88							
MTZJ33C	30.9	32.5							
MTZJ33D	31.49	33.11	5	75	5	250	0.5	0.2	27
MTZJ36A	32.14	33.79							
MTZJ36B	32.79	34.49							
MTZJ36C	33.4	35.13							
MTZJ36D	34.01	35.77							



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

Type	Zener Voltage <sup>1)</sup>			Operating Resistance		Rising Operating Resistance		Reverse Current	
	$V_Z$ (V)		$I_Z$ (mA)	$Z_Z$ ( $\Omega$ )		$Z_{ZK}$ ( $\Omega$ )		$I_R$ ( $\mu\text{A}$ )	
	Min.	Max.		Max.	$I_Z$ (mA)	Max.	$I_Z$ (mA)	Max.	$V_R$ (V)
MTZJ39A	34.68	36.47	5	85	5	250	0.5	0.2	30
MTZJ39B	35.36	37.19							
MTZJ39C	36	37.85							
MTZJ39D	36.63	38.52							
MTZJ39E	37.36	39.29							
MTZJ39F	38.14	40.11							
MTZJ39G	38.94	40.8							
MTZJ43	40	45	5	90	5	250	0.5	0.2	33
MTZJ47	44	49	5	90	5	250	0.5	0.2	36
MTZJ51	48	54	5	110	5	250	0.5	0.2	39
MTZJ56	53	60	5	110	5	250	0.5	0.2	43

<sup>1)</sup> Tested with pulses  $t_p = 20$  ms.

Fig.1- Zener Characteristics

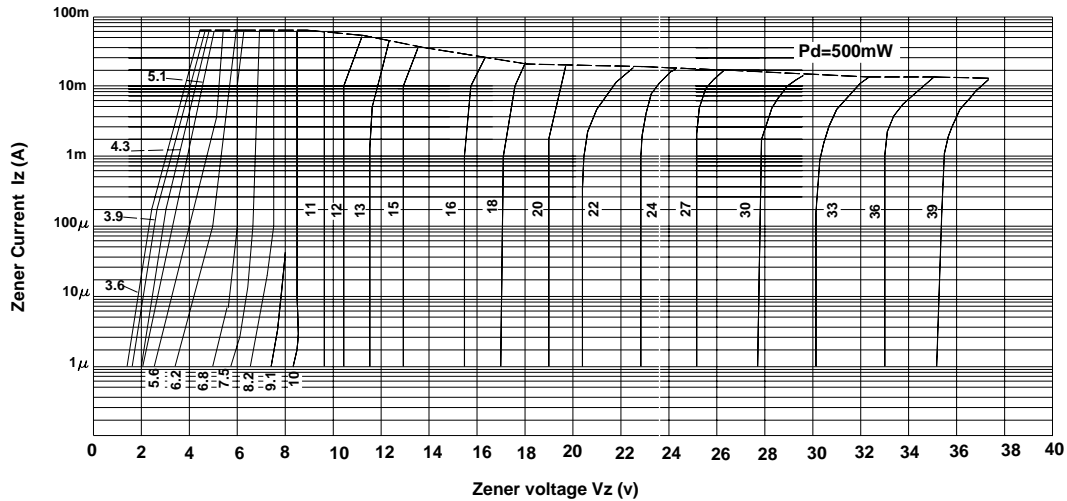


Fig. 2 Derating curve

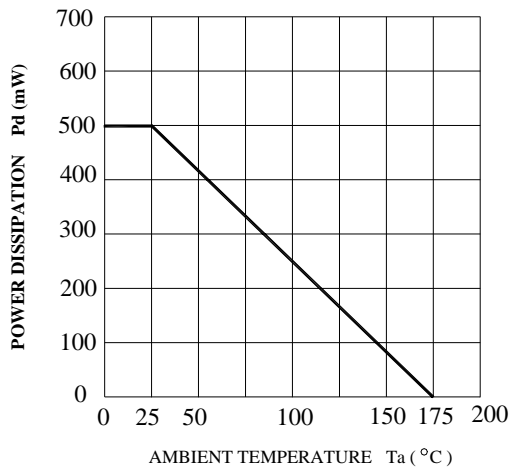
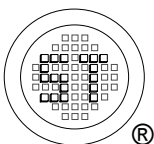
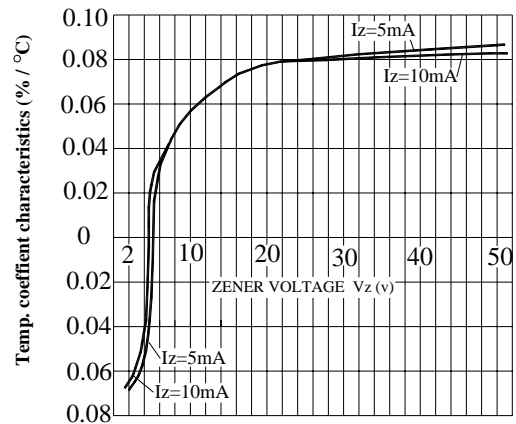


Fig. 3 Zener voltage temp. coefficient characteristics



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