

Small Signal Product

500mW, Hermetically Sealed Glass Zener Diodes

FEATURES

- Zener voltage range: 2.0V to 56V
- Through-hole mount device type
- Hermetically sealed glass
- Compression bonded construction
- All external surfaces are corrosion resistant and leads are readily solderable
- Solder hot dip Tin (Sn) lead finish
- Cathode indicated by polarity band
- Packing code with suffix "G" means Halogen-free



DO-34



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P _D	500	mW
Operating junction temperature	T _J	175	°C
Storage temperature range	T _{STG}	-65 ~ 175	°C

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RATINGS AND CHARACTERISTICS CURVES

 (T_A=25°C unless otherwise noted)

Type Number	Marking code	V _Z @ I _{ZT} (Volt)		I _{ZT} (mA)	Z _{ZT} @ I _{ZT} (Ω) Max	Z _{ZK} @ I _{ZK} (Ω) Max	I _{ZK} (mA)	I _R (μA) Max	V _R (V)	
		Min	Max							
MTZJ2V0S	A	2V0A	1.88	2.10	5	100	1000	0.5	120	0.5
	B	2V0B	2.02	2.20						
MTZJ2V2S	A	2V2A	2.12	2.30	5	100	1000	0.5	120	0.7
	B	2V2B	2.22	2.41						
MTZJ2V4S	A	2V4A	2.33	2.52	5	100	1000	0.5	120	1.0
	B	2V4B	2.43	2.63						
MTZJ2V7S	A	2V7A	2.54	2.75	5	110	1000	0.5	100	1.0
	B	2V7B	2.69	2.91						
MTZJ3V0S	A	3V0A	2.85	3.07	5	120	1000	0.5	50	1.0
	B	3V0B	3.01	3.22						
MTZJ3V3S	A	3V3A	3.16	3.38	5	120	1000	0.5	20	1.0
	B	3V3B	3.32	3.53						
MTZJ3V6S	A	3V6A	3.455	3.695	5	100	1000	1.0	10	1.0
	B	3V6B	3.60	3.845						
MTZJ3V9S	A	3V9A	3.74	4.01	5	100	1000	1.0	5	1.0
	B	3V9B	3.89	4.16						
MTZJ4V3S	A	4V3A	4.04	4.29	5	100	1000	1.0	5	1.0
	B	4V3B	4.17	4.43						
	C	4V3C	4.30	4.57						
MTZJ4V7S	A	4V7A	4.44	4.68	5	80	900	0.5	5	1.0
	B	4V7B	4.55	4.80						
	C	4V7C	4.68	4.93						
MTZJ5V1S	A	5V1A	4.81	5.07	5	80	1,200	0.5	5.0	1.5
	B	5V1B	4.94	5.20						
	C	5V1C	5.09	5.37						
MTZJ5V6S	A	5V6A	5.28	5.55	5	60	900	0.5	5.0	2.5
	B	5V6B	5.45	5.73						
	C	5V6C	5.61	5.91						
MTZJ6V2S	A	6V2A	5.78	6.09	5	60	500	0.5	5.0	3.0
	B	6V2B	5.96	6.27						
	C	6V2C	6.12	6.44						
MTZJ6V8S	A	6V8A	6.29	6.63	5	20	150	0.5	2.0	3.5
	B	6V8B	6.49	6.83						
	C	6V8C	6.66	7.01						
MTZJ7V5S	A	7V5A	6.85	7.22	5	20	120	0.5	0.5	4.0
	B	7V5B	7.07	7.45						
	C	7V5C	7.29	7.67						
MTZJ8V2S	A	8V2A	7.53	7.92	5	20	120	0.5	0.5	5.0
	B	8V2B	7.78	8.19						
	C	8V2C	8.03	8.45						
MTZJ9V1S	A	9V1A	8.29	8.73	5	25	120	0.5	0.5	6.0
	B	9V1B	8.57	9.01						
	C	9V2C	8.83	9.30						

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Type Number	Marking code	V _Z @ I _{ZT} (Volt)		I _{ZT} (mA)	Z _{ZT} @ I _{ZT} (Ω) Max	Z _{ZK} @ I _{ZK} (Ω) Max	I _{ZK} (mA)	I _R (uA) Max	V _R (V)	
		Min	Max							
MTZJ10S	A	10A	9.12	9.59	5	30	120	0.5	0.2	7
	B	10B	9.41	9.90						
	C	10C	9.70	10.20						
	D	10D	9.97	10.44						
MTZJ11S	A	11A	10.18	10.71	5	30	120	0.5	0.2	8
	B	11B	10.50	11.05						
	C	11C	10.82	11.38						
MTZJ12S	A	12A	11.13	11.71	5	30	110	0.5	0.2	9
	B	12B	11.44	12.03						
	C	12C	11.74	12.35						
MTZJ13S	A	13A	12.11	12.75	5	35	110	0.5	0.2	10
	B	13B	12.55	13.21						
	C	13C	12.99	13.66						
MTZJ15S	A	15A	13.44	14.13	5	40	110	0.5	0.2	11
	B	15B	13.89	14.62						
	C	15C	14.35	15.09						
MTZJ16S	A	16A	14.80	15.57	5	40	150	0.5	0.2	12
	B	16B	15.25	16.04						
	C	16C	15.69	16.51						
MTZJ18S	A	18A	16.22	17.06	5	45	150	0.5	0.2	13
	B	18B	16.82	17.70						
	C	18C	17.42	18.33						
MTZJ20S	A	20A	18.02	18.96	5	55	200	0.5	0.2	15
	B	20B	18.63	19.59						
	C	20C	19.23	20.22						
	D	20D	19.72	20.72						
MTZJ22S	A	22A	20.15	21.2	5	30	200	0.5	0.2	17
	B	22B	20.64	21.71						
	C	22C	21.08	22.17						
	D	22D	21.52	22.63						
MTZJ24S	A	24A	22.05	23.18	5	35	200	0.5	0.2	19
	B	24B	22.61	23.77						
	C	24C	23.12	24.31						
	D	24D	23.63	24.85						
MTZJ27S	A	27A	24.26	25.52	5	45	250	0.5	0.2	21
	B	27B	24.97	26.26						
	C	27C	25.63	26.95						
	D	27D	26.29	27.64						
MTZJ30S	A	30A	26.99	28.39	5	55	250	0.5	0.2	23
	B	30B	27.70	29.13						
	C	30C	28.36	29.82						
	D	30D	29.02	30.51						

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Type Number	Marking code	$V_Z @ I_{ZT}$ (Volt)		I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	$Z_{ZK} @ I_{ZK}$ (Ω) Max	I_{ZK} (mA)	I_R (μ A) Max	V_R (V)	
		Min	Max							
MTZJ33S	A	33A	29.68	31.22	5	65	250	0.5	0.2	25
	B	33B	30.32	31.88						
	C	33C	30.90	32.50						
	D	33D	31.49	33.11						
MTZJ36S	A	36A	32.14	33.79	5	75	250	0.5	0.2	27
	B	36B	32.79	34.49						
	C	36C	33.40	35.13						
	D	36D	34.01	35.77						
MTZJ39S	A	39A	34.68	36.47	5	85	250	0.5	0.2	30
	B	39B	35.36	37.19						
	C	39C	36.00	37.85						
	D	39D	36.63	38.52						
	E	39E	37.36	39.29						
	F	39F	38.14	40.11						
	G	39G	38.94	40.80						
MTZJ43S	/	43S	40	45	5	90	250	0.5	0.2	33
MTZJ47S	/	47S	44	49		90	250	0.5	0.2	36
MTZJ51S	/	51S	48	54		110	250	0.5	0.2	39
MTZJ56S	/	56S	53	60		110	250	0.5	0.2	43

- Notes: 1. The Zener Voltage subdivision (V_Z) is measured 40ms after diode is powered up.
 2. The operating resistance (Z_{ZT} or Z_{ZK}) is measured by superimposing a minute alternation current in the regulated current (I_Z).
 3. When ordering, please specify tolerance A, B, C, D, E, F, G

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Fig. 1 $V_Z - I_Z$ Characteristics

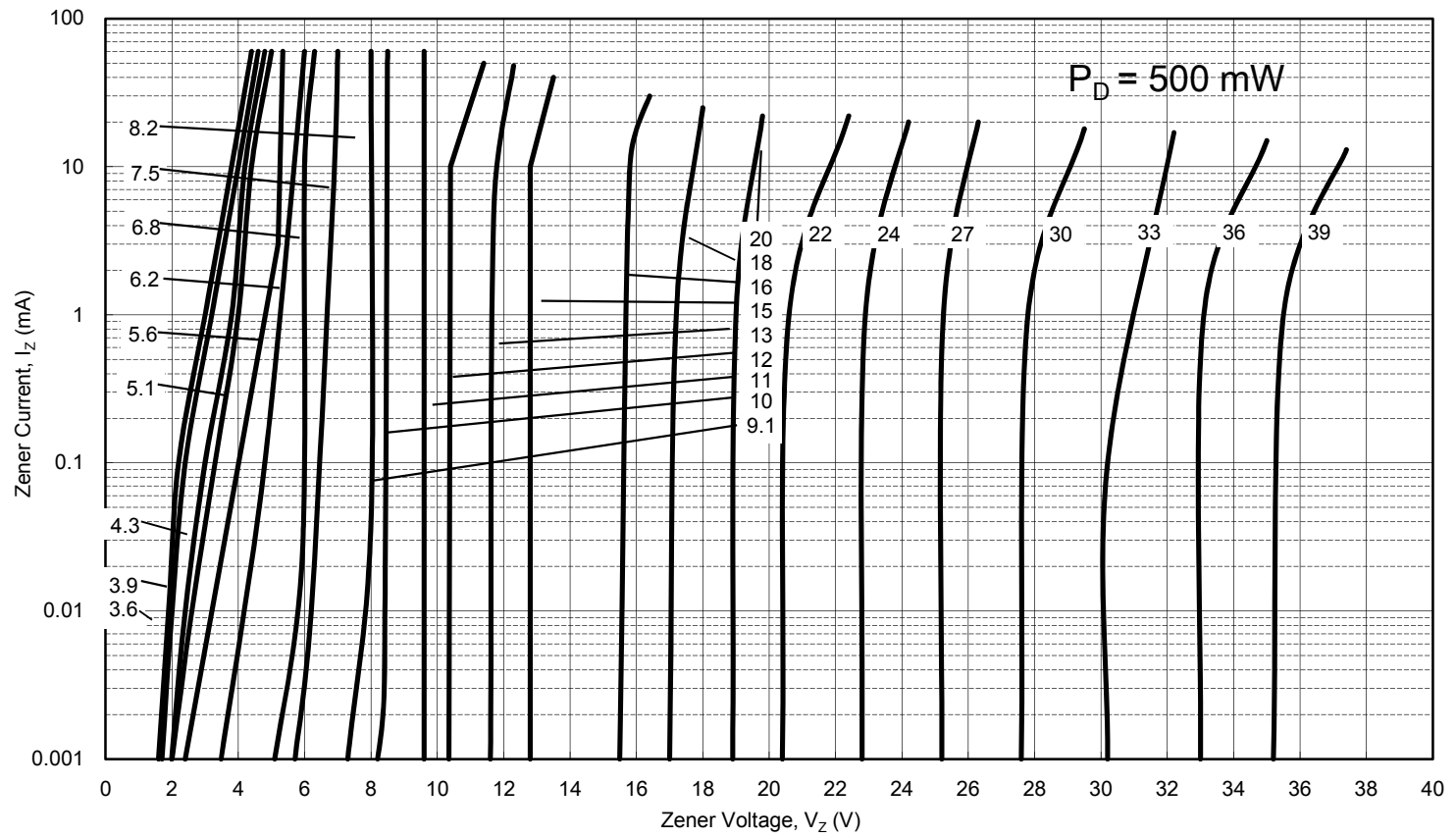


Fig. 2 $P_D - T_A$ Characteristics

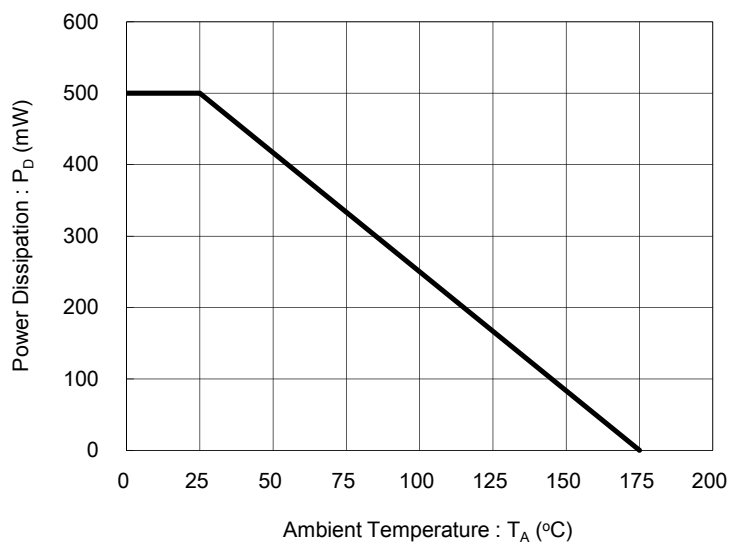
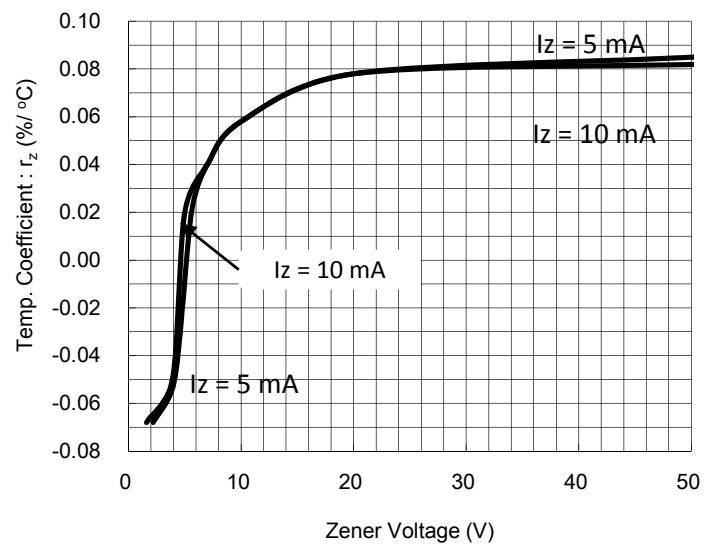


Fig. 4 $r_z - V_Z$ Characteristics



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ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX (Note 2)	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
MTZJxxxSx (Note 1)	-xx	R0	G	DO-34	10K / 14" Reel
		A0			5K / Box (Ammo)

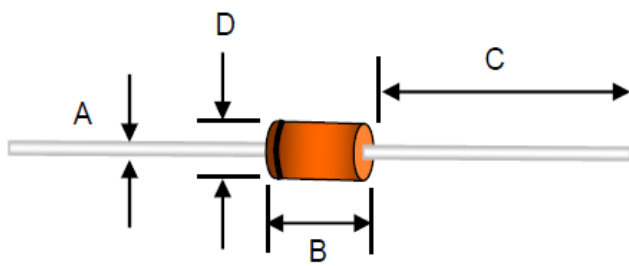
Note 1: "xxxSx" is device code from "2V0SA" to "56S"

Note 2: Part No. Suffix „-xx “ would be used for special requirement

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MTZJ2V0SA R0G	MTZJ2V0SA		R0	G	Multiple manufacture source Green compound
MTZJ2V0SA-B0 R0G	MTZJ2V0SA	B0	R0	G	Defined manufacture source Green compound

PACKAGE OUTLINE DIMENSIONS

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DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.30	0.55	0.012	0.022
B	2.16	3.04	0.085	0.120
C	25.40	38.10	1.000	1.500
D	1.27	2.00	0.050	0.079

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