

# MAZY000 Series (MA1Z000 Series)

## Silicon planar type

For stabilization of power supply

### ■ Features

- Large power dissipation:  $P_D = 1 \text{ W}$
- Zener voltage  $V_Z$ : 4.7 V to 51 V
- Zener voltage allowable deviation: 10%
- Auto mounting possible

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

Parameter	Symbol	Rating	Unit
Repetitive peak forward current	$I_{F\text{RM}}$	500	mA
Total power dissipation <sup>*1</sup>	$P_{\text{tot}}$	1.0	W
Non-repetitive reverse surge power dissipation <sup>*2</sup>	$P_{Z\text{SM}}$	100	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-40 to +150	$^\circ\text{C}$

Note) \*1:  $P_{\text{tot}} = 1.0 \text{ W}$  achieved with a printed circuit board(alumina)

$t = 50 \mu\text{s}$  for the product of  $V_Z \leq 6.8 \text{ V}$

\*2:  $t = 100 \mu\text{s}$ ,  $T_j = 150^\circ\text{C}$

### ■ Common Electrical Characteristics $T_a = 25^\circ\text{C}$ <sup>\*1</sup>

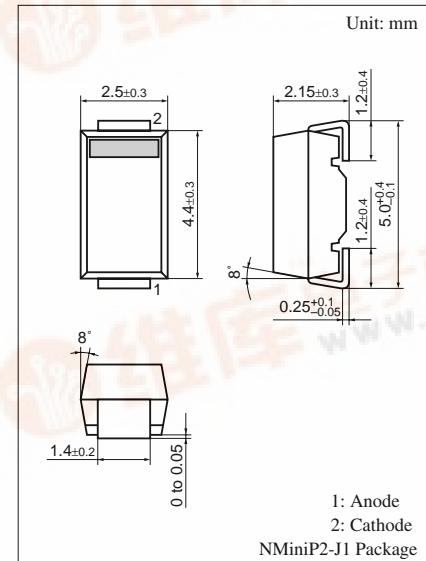
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F = 200 \text{ mA}$			1.2	V
Zener voltage <sup>*2</sup>	$V_Z$	$I_Z$ Specified value				V
Zener operating resistance	$R_Z$	$I_Z$ Specified value	Refer to the list of the electrical characteristics within part numbers			
Reverse current	$I_R$	$V_R$ Specified value				$\mu\text{A}$
Temperature coefficient of zener voltage <sup>*3</sup>	$S_Z$	$I_Z$ Specified value				$\text{mV}/^\circ\text{C}$

Note) 1. Rated input/output frequency: 5 MHz

2. \*1: The  $V_Z$  value is for the temperature of  $25^\circ\text{C}$ . In other cases, carry out the temperature compensation.

\*2: Guaranteed at 20 ms after power application.

\*3:  $T_j = 25^\circ\text{C}$  to  $150^\circ\text{C}$

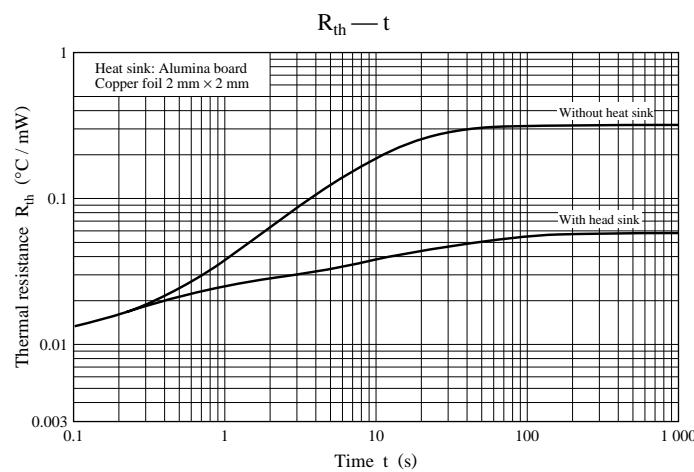
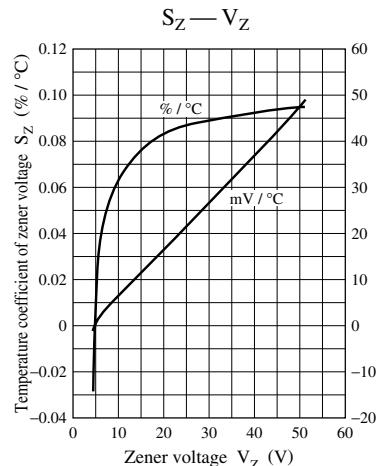
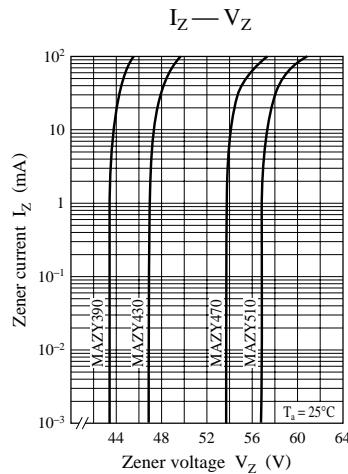
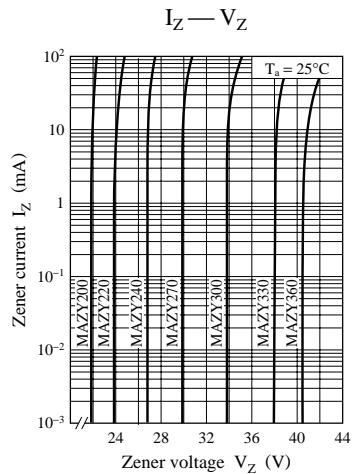
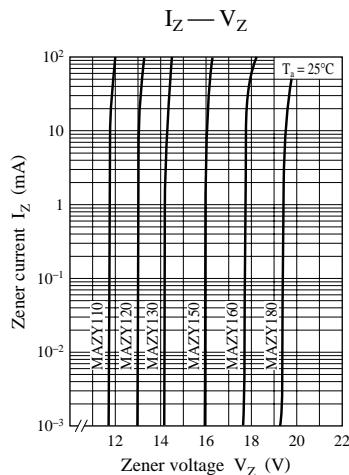
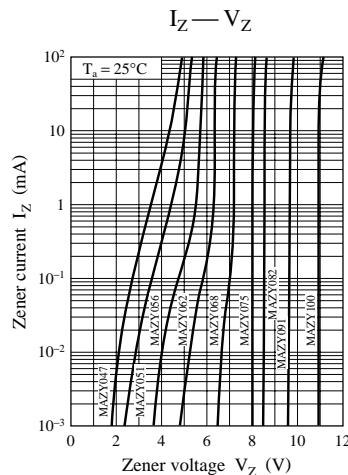
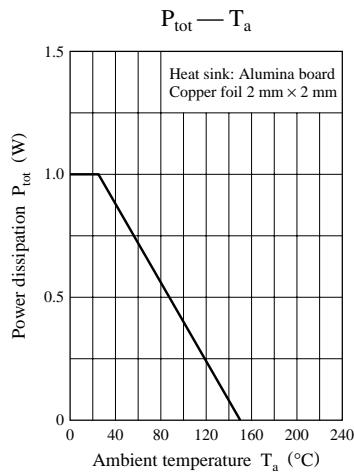


### Marking Symbol

Refer to the list of the electrical characteristics within part numbers  
(Example) MAZY047 : 4.7

■ Electrical characteristics within part numbers  $T_a = 25^\circ\text{C}$ 

Part number	Zener voltage			Reverse current		Zener operating resistance		Temperature coefficient of zener voltage		Marking symbol	
	V <sub>Z</sub> (V)			I <sub>R</sub> ( $\mu\text{A}$ )		R <sub>Z</sub> ( $\Omega$ )		S <sub>Z</sub> (mV/ $^\circ\text{C}$ )			
	Min	Nom	Max	I <sub>Z</sub> (mA)	Max	V <sub>R</sub> (V)	Max	I <sub>Z</sub> (mA)	Typ	I <sub>Z</sub> (mA)	
MAZY047	4.4	4.7	5.0	20	40	1.0	60	20	0	20	4.7
MAZY051	4.8	5.1	5.4	20	20	1.0	50	20	0	20	5.1
MAZY056	5.2	5.6	6.0	20	20	2.0	40	20	1.5	20	5.6
MAZY062	5.6	6.2	6.8	10	20	3.0	30	10	2.4	10	6.2
MAZY068	6.2	6.8	7.4	10	10	3.0	30	10	3.1	10	6.8
MAZY075	6.8	7.5	8.3	10	10	3.0	30	10	3.8	10	7.5
MAZY082	7.4	8.2	9.1	10	10	4.0	30	10	4.5	10	8.2
MAZY091	8.2	9.1	10.1	10	10	5.0	30	10	5.4	10	9.1
MAZY100	9.0	10.0	11.0	10	10	7.0	30	10	6.3	10	10
MAZY110	9.9	11.0	12.1	10	10	7.0	30	10	7.4	10	11
MAZY120	10.8	12.0	13.2	10	10	8.0	30	10	8.4	10	12
MAZY130	11.7	13.0	14.3	10	10	9.0	30	10	9.4	10	13
MAZY150	13.5	15.0	16.5	10	10	10.0	30	10	11.4	10	15
MAZY160	14.4	16.0	17.6	10	10	11.0	30	10	12.5	10	16
MAZY180	16.2	18.0	19.9	10	10	13.0	30	10	14.5	10	18
MAZY200	18.0	20.0	22.0	10	10	14.0	30	10	16.6	10	20
MAZY220	19.8	22.0	24.2	10	10	16.0	30	10	18.6	10	22
MAZY240	21.6	24.0	26.4	10	10	17.0	30	10	20.7	10	24
MAZY270	24.3	27.0	29.7	10	10	19.0	30	10	23.8	10	27
MAZY300	27.0	30.0	33.0	10	10	21.0	30	10	26.9	10	30
MAZY330	29.7	33.0	36.3	10	10	26.4	30	10	30.0	10	33
MAZY360	32.4	36.0	39.6	5	10	28.8	30	5	33.4	5	36
MAZY390	35.1	39.0	42.9	5	10	31.8	65	5	36.3	5	39
MAZY430	38.7	43.0	47.3	5	10	35.8	65	5	41.1	5	43
MAZY470	42.3	47.0	51.7	5	10	37.6	65	5	44.9	5	47
MAZY510	45.9	51.0	56.1	5	10	40.8	65	5	48.6	5	51



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