

# MAZ8000 Series (MA8000 Series)

## Silicon planar type

For stabilization of power supply

### ■ Features

- Extremely low noise voltage caused from the diode (2.4 V to 39 V, 1/3 to 1/10 of our conventional MAZ3000 series)
- Extremely good rising performance (in the low-current range)
- Easy-to-select the optimum diode because of their finely divided zener-voltage ranks
- Guaranteed reliability, equivalent to that of conventional products (Mini type package)
- Allowing to reduce the mounting area, thickness and weight substantially, compared with those of the conventional products
- Allowing both reflow and flow mode of automatic soldering
- Allowing automatic mounting by an existing chip mounter

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

| Parameter                       | Symbol           | Rating      | Unit             |
|---------------------------------|------------------|-------------|------------------|
| Repetitive peak forward current | $I_{\text{FRM}}$ | 200         | mA               |
| Total power dissipation *       | $P_{\text{tot}}$ | 150         | mW               |
| Junction temperature            | $T_j$            | 150         | $^\circ\text{C}$ |
| Storage temperature             | $T_{\text{stg}}$ | -55 to +150 | $^\circ\text{C}$ |

Note) \*: With a printed circuit board

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

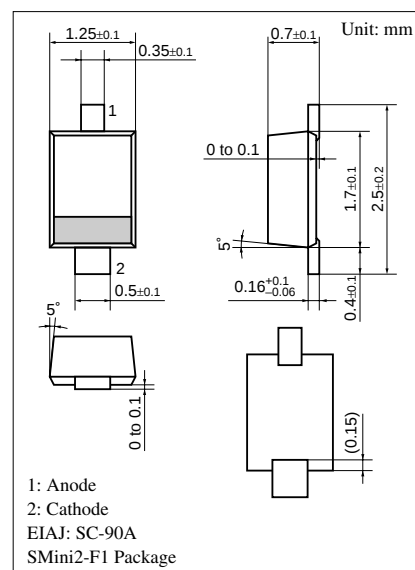
| Parameter                                   | Symbol   | Conditions            | Min | Typ | Max | Unit                 |
|---------------------------------------------|----------|-----------------------|-----|-----|-----|----------------------|
| Forward voltage                             | $V_F$    | $I_F = 10 \text{ mA}$ |     | 0.9 | 1.0 | V                    |
| Zener voltage *2                            | $V_Z$    | $I_Z$ Specified value |     |     |     | V                    |
| Zener knee operating resistance             | $R_{ZK}$ | $I_Z$ Specified value |     |     |     | $\Omega$             |
| Zener operating resistance                  | $R_Z$    | $I_Z$ Specified value |     |     |     | $\Omega$             |
| Reverse current                             | $I_R$    | $V_R$ Specified value |     |     |     | $\mu\text{A}$        |
| Temperature coefficient of zener voltage *3 | $S_Z$    | $I_Z$ Specified value |     |     |     | 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) MAZ80820H : 8 $\wedge$ 2

Note) L/M/H marked products will be supplied unless other wise specified

Note) The part number in the parenthesis shows conventional part number.

■ 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 | Conventional products |
|-------------|--------------------|------|------|---------------------|---------------------|--------------------|----------------------------|---------------------|---------------------|---------------------|------------------------------------------|---------------------|----------------|-----------------------|
|             | V <sub>Z</sub> (V) |      |      |                     | I <sub>R</sub> (μA) | V <sub>R</sub> (V) | R <sub>Z</sub> (Ω)         | I <sub>Z</sub> (mA) | R <sub>ZK</sub> (Ω) | I <sub>Z</sub> (mA) | S <sub>Z</sub> (mV/°C)                   |                     |                |                       |
|             | Min                | Nom  | Max  | I <sub>Z</sub> (mA) | Max                 |                    | Max                        |                     | Max                 |                     | Typ                                      | I <sub>Z</sub> (mA) |                |                       |
| MAZ8024     | 2.28               | 2.40 | 2.60 | 5                   | 120                 | 1.0                | 100                        | 5                   | —                   | —                   | −1.6                                     | 5                   | 2.4            | MAZ3024               |
| MAZ8027     | 2.50               | 2.70 | 2.90 | 5                   | 120                 | 1.0                | 110                        | 5                   | —                   | —                   | −2.0                                     | 5                   | 2_7or2^7       | MAZ3027               |
| MAZ80270L   | 2.50               | 2.60 | 2.75 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 2_7            | MAZ30270L             |
| MAZ80270H   | 2.65               | 2.80 | 2.90 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 2^7            | MAZ30270H             |
| MAZ8030     | 2.80               | 3.00 | 3.20 | 5                   | 50                  | 1.0                | 120                        | 5                   | —                   | —                   | −2.1                                     | 5                   | 3_0or3^0       | MAZ3030               |
| MAZ80300L   | 2.80               | 2.90 | 3.05 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 3_0            | MAZ30300L             |
| MAZ80300H   | 2.95               | 3.10 | 3.20 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 3^0            | MAZ30300H             |
| MAZ8033     | 3.10               | 3.30 | 3.50 | 5                   | 20                  | 1.0                | 130                        | 5                   | —                   | —                   | −2.4                                     | 5                   | 3_3or3^3       | MAZ3033               |
| MAZ80330L   | 3.10               | 3.20 | 3.35 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 3_3            | MAZ30330L             |
| MAZ80330H   | 3.25               | 3.40 | 3.50 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 3^3            | MAZ30330H             |
| MAZ8036     | 3.40               | 3.60 | 3.80 | 5                   | 10                  | 1.0                | 130                        | 5                   | —                   | —                   | −2.4                                     | 5                   | 3_6or3^6       | MAZ3036               |
| MAZ80360L   | 3.40               | 3.50 | 3.65 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 3_6            | MAZ30360L             |
| MAZ80360H   | 3.55               | 3.70 | 3.80 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 3^6            | MAZ30360H             |
| MAZ8039     | 3.70               | 3.90 | 4.10 | 5                   | 10                  | 1.0                | 130                        | 5                   | —                   | —                   | −2.5                                     | 5                   | 3_9or3^9       | MAZ3039               |
| MAZ80390L   | 3.70               | 3.80 | 3.97 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 3_9            | MAZ30390L             |
| MAZ80390H   | 3.87               | 4.00 | 4.10 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 3^9            | MAZ30390H             |
| MAZ8043     | 4.00               | 4.30 | 4.60 | 5                   | 10                  | 1.0                | 130                        | 5                   | —                   | —                   | −2.5                                     | 5                   | 4_3or4−3or4^3  | MAZ3043               |
| MAZ80430L   | 4.03               | 4.10 | 4.26 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 4_3            | MAZ30430L             |
| MAZ80430M   | 4.17               | 4.30 | 4.40 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 4−3            | MAZ30430M             |
| MAZ80430H   | 4.31               | 4.40 | 4.54 | 5                   | 2.0                 | 1.0                | 80                         | 5                   | 800                 | 1.0                 | −1.4                                     | 5                   | 4^3            | MAZ30430H             |
| MAZ8047     | 4.40               | 4.70 | 5.00 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 4_7or4−7or4^7  | MAZ3047               |
| MAZ80470L   | 4.45               | 4.60 | 4.69 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 4_7            | MAZ30470L             |
| MAZ80470M   | 4.59               | 4.70 | 4.83 | 5                   | 1.0                 | 2.0                | 60                         | 5                   | 500                 | 1.0                 | −0.8                                     | 5                   | 4−7            | MAZ30470M             |
| MAZ80470H   | 4.74               | 4.90 | 4.99 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 4^7            | MAZ30470H             |
| MAZ8051     | 4.80               | 5.10 | 5.40 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 5_1or5−1or5^1  | MAZ3051               |
| MAZ80510L   | 4.87               | 5.00 | 5.12 | 5                   | 1.0                 | 2.0                | 60                         | 5                   | 500                 | 1.0                 | −0.8                                     | 5                   | 5_1            | MAZ30510L             |
| MAZ80510M   | 5.00               | 5.10 | 5.26 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 5-1            | MAZ30510M             |
| MAZ80510H   | 5.14               | 5.30 | 5.40 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 5^1            | MAZ30510H             |
| MAZ8056     | 5.30               | 5.60 | 6.00 | 5                   | 0.5                 | 2.5                | 40                         | 5                   | 200                 | 0.5                 | 1.2                                      | 5                   | 5_6or5−6or5^6  | MAZ3056               |
| MAZ80560L   | 5.30               | 5.40 | 5.58 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 5_6            | MAZ30560L             |
| MAZ80560M   | 5.48               | 5.60 | 5.76 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 5−6            | MAZ30560M             |
| MAZ80560H   | 5.66               | 5.80 | 5.95 | 5                   | 0.2                 | 4.0                | 30                         | 5                   | 100                 | 0.5                 | 2.3                                      | 5                   | 5^6            | MAZ30560H             |
| MAZ8062     | 5.80               | 6.20 | 6.60 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 6_2or6−2or6^2  | MAZ3062               |
| MAZ80620L   | 5.85               | 6.00 | 6.15 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 6_2            | MAZ30620L             |
| MAZ80620M   | 6.05               | 6.20 | 6.36 | 5                   | 0.2                 | 4.0                | 30                         | 5                   | 100                 | 0.5                 | 2.3                                      | 5                   | 6−2            | MAZ30620M             |
| MAZ80620H   | 6.24               | 6.40 | 6.56 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 6^2            | MAZ30620H             |
| MAZ8068     | 6.40               | 6.80 | 7.20 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 6_8or6−8or6^8  | MAZ3068               |
| MAZ80680L   | 6.44               | 6.60 | 6.77 | 5                   | 0.1                 | 4.0                | 20                         | 5                   | 60                  | 0.5                 | 3.0                                      | 5                   | 6_8            | MAZ30680L             |
| MAZ80680M   | 6.64               | 6.80 | 6.98 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 6−8            | MAZ30680M             |
| MAZ80680H   | 6.85               | 7.00 | 7.20 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 6^8            | MAZ30680H             |
| MAZ8075     | 7.00               | 7.50 | 7.90 | 5                   | 0.1                 | 5.0                | 20                         | 5                   | 60                  | 0.5                 | 4.0                                      | 5                   | 7_5or7−5or7^5  | MAZ3075               |
| MAZ80750L   | 7.07               | 7.30 | 7.43 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 7_5            | MAZ30750L             |
| MAZ80750M   | 7.29               | 7.50 | 7.67 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 7−5            | MAZ30750M             |
| MAZ80750H   | 7.51               | 7.70 | 7.89 | 5                   | 0.1                 | 5.0                | 20                         | 5                   | 60                  | 0.5                 | 4.0                                      | 5                   | 7^5            | MAZ30750H             |
| MAZ8082     | 7.70               | 8.20 | 8.70 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 8_2or8−2or8^2  | MAZ3082               |
| MAZ80820L   | 7.77               | 7.90 | 8.17 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 8_2            | MAZ30820L             |
| MAZ80820M   | 8.03               | 8.20 | 8.43 | 5                   | 0.1                 | 5.0                | 20                         | 5                   | 60                  | 0.5                 | 4.6                                      | 5                   | 8−2            | MAZ30820M             |
| MAZ80820H   | 8.29               | 8.50 | 8.70 |                     |                     |                    |                            |                     |                     |                     |                                          |                     | 8^2            | MAZ30820H             |

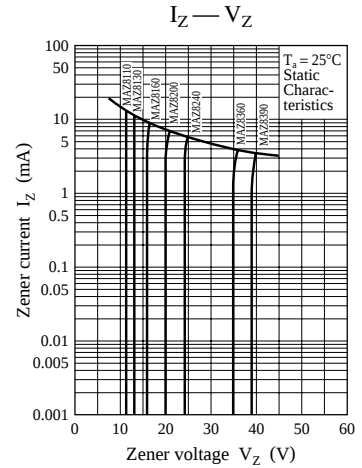
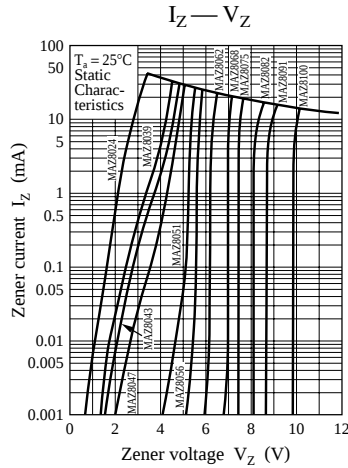
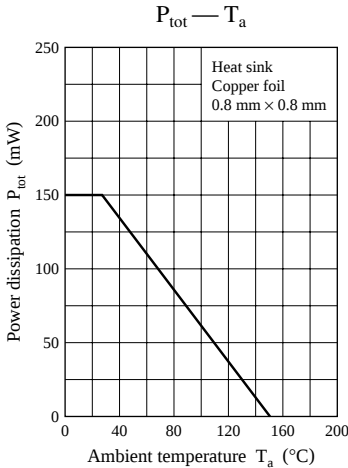
■ Electrical characteristics within part numbers (continued)  $T_a = 25^\circ\text{C}$

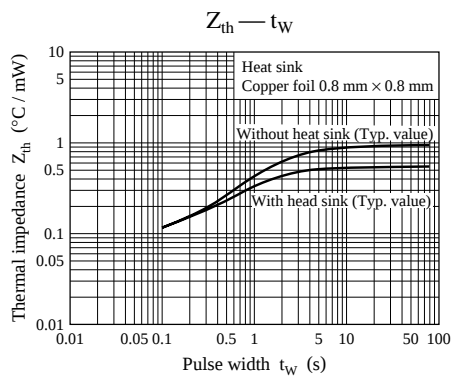
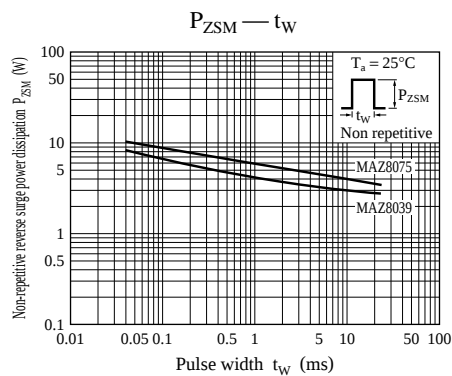
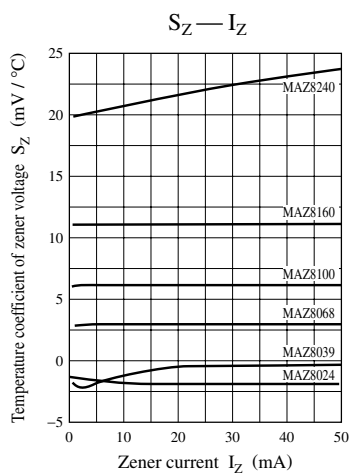
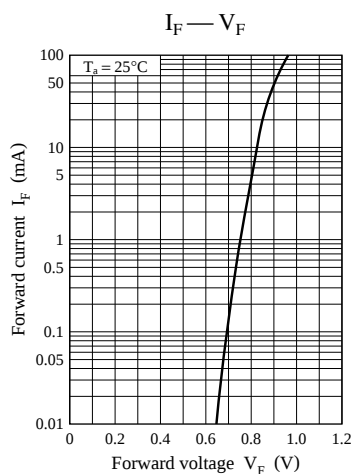
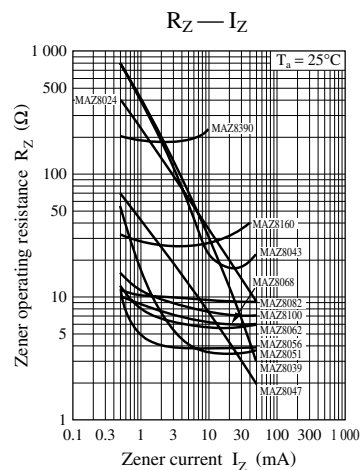
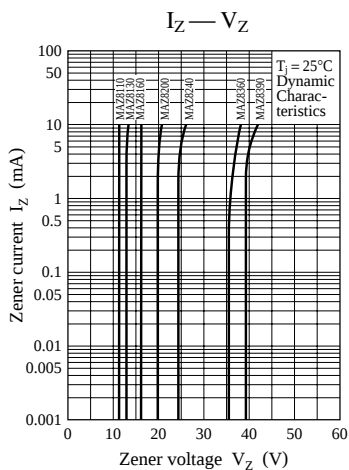
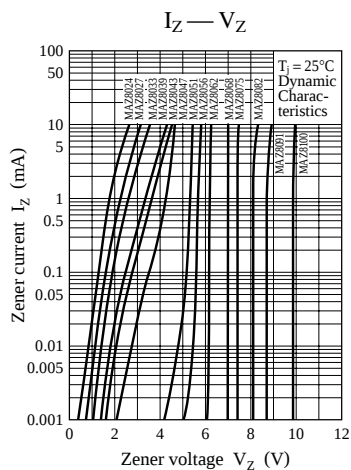
| Part number | Zener voltage      |       |       |                     | Reverse current            |                    | Zener operating resistance |                     |                            |                     | Temperature coefficient of zener voltage |                     | Marking symbol | Conventional products |
|-------------|--------------------|-------|-------|---------------------|----------------------------|--------------------|----------------------------|---------------------|----------------------------|---------------------|------------------------------------------|---------------------|----------------|-----------------------|
|             | V <sub>Z</sub> (V) |       |       |                     | I <sub>R</sub> (μA)<br>Max | V <sub>R</sub> (V) | R <sub>Z</sub> (Ω)         |                     | R <sub>ZK</sub> (Ω)<br>Max | I <sub>Z</sub> (mA) | S <sub>Z</sub> (mV/°C)                   |                     |                |                       |
|             | Min                | Nom   | Max   | I <sub>Z</sub> (mA) |                            |                    | Max                        | I <sub>Z</sub> (mA) |                            |                     | Typ                                      | I <sub>Z</sub> (mA) |                |                       |
| MAZ8091     | 8.50               | 9.10  | 9.60  | 5                   | 0.1                        | 6.0                | 20                         | 5                   | 60                         | 0.5                 | 5.5                                      | 5                   | 9_1or9-1or9^1  | MAZ3091               |
| MAZ80910L   | 8.58               | 8.80  | 9.02  |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 9_1            | MAZ30910L             |
| MAZ80910M   | 8.87               | 9.10  | 9.33  |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 9-1            | MAZ30910M             |
| MAZ80910H   | 9.14               | 9.40  | 9.60  |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 9^1            | MAZ30910H             |
| MAZ8100     | 9.40               | 10.00 | 10.60 | 5                   | 0.05                       | 7.0                | 30                         | 5                   | 60                         | 0.5                 | 6.4                                      | 5                   | 10_or10-1or10^ | MAZ3100               |
| MAZ81000L   | 9.44               | 9.70  | 9.92  |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 10_            | MAZ31000L             |
| MAZ81000M   | 9.75               | 10.00 | 10.25 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 10-            | MAZ31000M             |
| MAZ81000H   | 10.07              | 10.30 | 10.59 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 10^            | MAZ31000H             |
| MAZ8110     | 10.40              | 11.00 | 11.60 | 5                   | 0.05                       | 8.0                | 30                         | 5                   | 60                         | 0.5                 | 7.4                                      | 5                   | 11_or11-1or11^ | MAZ3110               |
| MAZ81100L   | 10.40              | 10.70 | 10.94 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 11_            | MAZ31100L             |
| MAZ81100M   | 10.73              | 11.00 | 11.28 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 11-            | MAZ31100M             |
| MAZ81100H   | 11.05              | 11.30 | 11.60 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 11^            | MAZ31100H             |
| MAZ8120     | 11.40              | 12.00 | 12.70 | 5                   | 0.05                       | 9.0                | 30                         | 5                   | 80                         | 0.5                 | 8.4                                      | 5                   | 12_or12-1or12^ | MAZ3120               |
| MAZ81200L   | 11.40              | 11.70 | 11.96 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 12_            | MAZ31200L             |
| MAZ81200M   | 11.73              | 12.00 | 12.33 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 12-            | MAZ31200M             |
| MAZ81200H   | 12.06              | 12.30 | 12.68 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 12^            | MAZ31200H             |
| MAZ8130     | 12.40              | 13.00 | 14.10 | 5                   | 0.05                       | 10.0               | 35                         | 5                   | 80                         | 0.5                 | 9.4                                      | 5                   | 13_or13-1or13^ | MAZ3130               |
| MAZ81300L   | 12.40              | 12.70 | 12.99 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 13_            | MAZ31300L             |
| MAZ81300M   | 12.73              | 13.00 | 13.40 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 13-            | MAZ31300M             |
| MAZ81300H   | 13.25              | 13.70 | 14.08 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 13^            | MAZ31300H             |
| MAZ81400M   | 13.65              | 14.00 | 14.35 | 5                   | 0.05                       | 10.0               | 40                         | 5                   | 80                         | 0.5                 | 10.0                                     | 5                   | 14-            | MAZ31400M             |
| MAZ8150     | 13.90              | 15.00 | 15.60 | 5                   | 0.05                       | 11.0               | 40                         | 5                   | 80                         | 0.5                 | 11.4                                     | 5                   | 15_or15-1or15^ | MAZ3150               |
| MAZ81500L   | 13.90              | 14.30 | 14.76 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 15_            | MAZ31500L             |
| MAZ81500M   | 14.60              | 15.00 | 15.35 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 15-            | MAZ31500M             |
| MAZ81500H   | 14.95              | 15.30 | 15.60 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 15^            | MAZ31500H             |
| MAZ8160     | 15.30              | 16.00 | 17.10 | 5                   | 0.05                       | 12.0               | 50                         | 5                   | 80                         | 0.5                 | 12.4                                     | 5                   | 16_or16-1or16^ | MAZ3160               |
| MAZ81600L   | 15.30              | 15.70 | 16.09 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 16_            | MAZ31600L             |
| MAZ81600M   | 15.70              | 16.00 | 16.50 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 16-            | MAZ31600M             |
| MAZ81600H   | 16.26              | 16.70 | 17.10 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 16^            | MAZ31600H             |
| MAZ8180     | 16.90              | 18.00 | 19.10 | 5                   | 0.05                       | 13.0               | 60                         | 5                   | 80                         | 0.5                 | 14.4                                     | 5                   | 18_or18-1or18^ | MAZ3180               |
| MAZ81800L   | 16.90              | 17.30 | 17.76 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 18_            | MAZ31800L             |
| MAZ81800M   | 17.55              | 18.00 | 18.45 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 18-            | MAZ31800M             |
| MAZ81800H   | 18.20              | 18.70 | 19.10 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 18^            | MAZ31800H             |
| MAZ8200     | 18.80              | 20.00 | 21.20 | 5                   | 0.05                       | 15.0               | 80                         | 5                   | 100                        | 0.5                 | 16.4                                     | 5                   | 20_or20-1or20^ | MAZ3200               |
| MAZ82000L   | 18.85              | 19.30 | 19.81 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 20_            | MAZ32000L             |
| MAZ82000M   | 19.50              | 20.00 | 20.50 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 20-            | MAZ32000M             |
| MAZ82000H   | 20.15              | 20.70 | 21.19 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 20^            | MAZ32000H             |
| MAZ8220     | 20.80              | 22.00 | 23.30 | 5                   | 0.05                       | 17.0               | 80                         | 5                   | 100                        | 0.5                 | 18.4                                     | 5                   | 22_or22-1or22^ | MAZ3220               |
| MAZ82200L   | 20.80              | 21.30 | 21.86 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 22_            | MAZ32200L             |
| MAZ82200M   | 21.45              | 22.00 | 22.55 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 22-            | MAZ32200M             |
| MAZ82200H   | 22.10              | 22.70 | 23.24 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 22^            | MAZ32200H             |
| MAZ8240     | 22.80              | 24.00 | 25.60 | 5                   | 0.05                       | 19.0               | 100                        | 5                   | 120                        | 0.5                 | 20.4                                     | 5                   | 24_or24-1or24^ | MAZ3240               |
| MAZ82400L   | 22.80              | 23.30 | 23.97 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 24_            | MAZ32400L             |
| MAZ82400M   | 23.50              | 24.00 | 24.70 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 24-            | MAZ32400M             |
| MAZ82400H   | 24.35              | 25.00 | 25.60 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 24^            | MAZ32400H             |
| MAZ8270     | 25.10              | 27.00 | 28.90 | 2                   | 0.05                       | 21.0               | 120                        | 2                   | 120                        | 0.5                 | 23.4                                     | 2                   | 27_or27-1or27^ | MAZ3270               |
| MAZ82700L   | 25.30              | 26.00 | 26.70 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 27_            | MAZ32700L             |
| MAZ82700M   | 26.30              | 27.00 | 27.70 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 27-            | MAZ32700M             |
| MAZ82700H   | 27.30              | 28.00 | 28.70 |                     |                            |                    |                            |                     |                            |                     |                                          |                     | 27^            | MAZ32700H             |

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

| Part number | Zener voltage      |       |       |                     | Reverse current            |                    | Operating resistance |                     |                     |                     | Temperature coefficient of zener voltage |                     | Marking symbol | Conventional products |
|-------------|--------------------|-------|-------|---------------------|----------------------------|--------------------|----------------------|---------------------|---------------------|---------------------|------------------------------------------|---------------------|----------------|-----------------------|
|             | V <sub>Z</sub> (V) |       |       |                     | I <sub>R</sub> (μA)<br>Max | V <sub>R</sub> (V) | R <sub>Z</sub> (Ω)   |                     | R <sub>ZK</sub> (Ω) |                     | S <sub>Z</sub> (mV/°C)                   |                     |                |                       |
|             | Min                | Nom   | Max   | I <sub>Z</sub> (mA) |                            |                    | Max                  | I <sub>Z</sub> (mA) | Max                 | I <sub>Z</sub> (mA) | Typ                                      | I <sub>Z</sub> (mA) |                |                       |
| MAZ8300     | 28.00              | 30.00 | 32.00 | 2                   | 0.05                       | 23.0               | 160                  | 2                   | 160                 | 0.5                 | 26.6                                     | 2                   | 30_or30—or30^  | MAZ3300               |
| MAZ83000L   | 28.30              | 29.00 | 29.70 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 30_            | MAZ33000L             |
| MAZ83000M   | 29.30              | 30.00 | 30.80 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 30—            | MAZ33000M             |
| MAZ83000H   | 30.20              | 31.00 | 31.80 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 30^            | MAZ33000H             |
| MAZ8330     | 31.00              | 33.00 | 35.00 | 2                   | 0.05                       | 25.0               | 200                  | 2                   | 200                 | 0.5                 | 29.7                                     | 2                   | 33_or33—or33^  | MAZ3330               |
| MAZ83300L   | 31.20              | 32.00 | 32.80 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 33_            | MAZ33300L             |
| MAZ83300M   | 32.20              | 33.00 | 33.80 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 33—            | MAZ33300M             |
| MAZ83300H   | 33.20              | 34.00 | 34.90 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 33^            | MAZ33300H             |
| MAZ8360     | 34.00              | 36.00 | 38.00 | 2                   | 0.05                       | 27.0               | 250                  | 2                   | 250                 | 0.5                 | 33.0                                     | 2                   | 36_or36—or36^  | MAZ3360               |
| MAZ83600L   | 34.10              | 35.00 | 35.90 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 36_            | MAZ33600L             |
| MAZ83600M   | 35.10              | 36.00 | 36.90 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 36—            | MAZ33600M             |
| MAZ83600H   | 36.10              | 37.00 | 37.90 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 36^            | MAZ33600H             |
| MAZ8390     | 37.00              | 39.00 | 41.00 | 2                   | 0.05                       | 30.0               | 300                  | 2                   | 300                 | 0.5                 | 35.6                                     | 2                   | 39_or39—or39^  | —                     |
| MAZ83900L   | 37.10              | 38.00 | 39.00 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 39_            | —                     |
| MAZ83900M   | 38.00              | 39.00 | 40.00 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 39—            | —                     |
| MAZ83900H   | 39.00              | 40.00 | 41.00 |                     |                            |                    |                      |                     |                     |                     |                                          |                     | 39^            | —                     |

Note) 1. The  $V_Z$  value is the one after power application for 20 ms at  $T_a = 25^\circ\text{C}$ .  
 2. The zener voltage temperature coefficient is the one for  $T_j = 25^\circ\text{C}$  to  $150^\circ\text{C}$ .





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