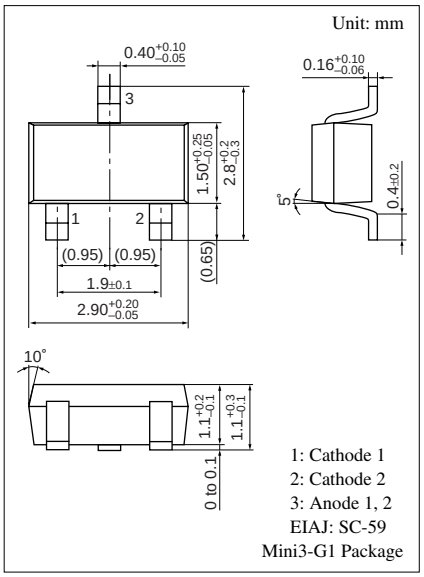
# MAZ9000H Series

## Silicon planar type

For surge absorption circuit

### ■ Features

- Mini type 3-pin package (Mini3-G1)
- Two elements anode-common type
- $P_{tot}$ = 200 mW

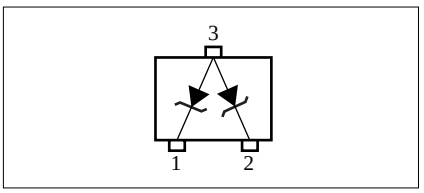



### ■ Absolute Maximum Ratings $T_a$ = 25°C

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Total power dissipation * | $P_{tot}$ | 200 | mW |
| Junction temperature | $T_j$ | 150 | °C |
| Storage temperature | $T_{stg}$ | −55 to +150 | °C |

Note) ∗: With a printed circuit board

Internal Connection




### ■ Common Electrical Characteristics $T_a$ = 25°C *1

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Zener voltage*2 | $V_Z$ | $I_Z$ Specified value | Refer to the list of the electrical characteristics within part numbers | | | V |
| Zener knee operating resistance | $R_{ZK}$ | $I_Z$ Specified value | | | | Ω |
| Zener operating resistance | $R_Z$ | $I_Z$ Specified value | | | | Ω |
| Reverse current | $I_R$ | $V_R$ Specified value | | | | μA |

Note) 1. Test method according to the JIS C7031 testing

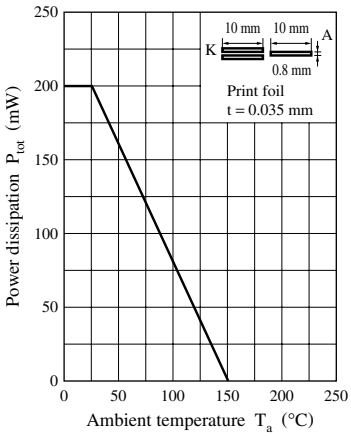
2. Electrostatic breakdown voltage is ±10 kV
   Test method: IEC1000-4-2 (C = 150 pF, R = 330 Ω, Contact discharge: 10 times)
3. ∗1: The $V_Z$ value is for the temperature of 25°C. In other cases, carry out the temperature compensation.
   ∗2: Guaranteed at 20 ms after power application.

## ■ Electrical characteristics within part numbers $T_a = 25°C$

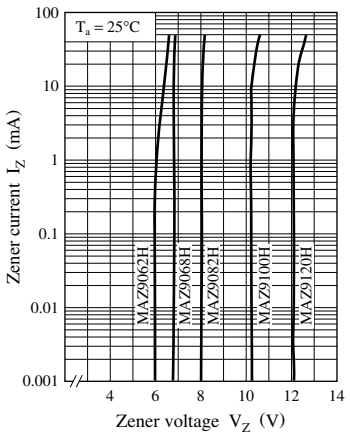
| Part number | Zener voltage | | | | Reverse current | | Zener operating resistance | | Marking symbol |
|---|---|---|---|---|---|---|---|---|---|
| | $V_Z$ (V) | | | $I_Z$ (mA) | $I_R$ (μA) | $V_R$ (V) | $R_Z$ (Ω) $I_Z$ = 5 mA | $R_{ZK}$ (Ω) $I_Z$ = 0.5 mA | |
| | Min | Nom | Max | | Max | | Max | Max | |
| MAZ9062H | 5.8 | 6.2 | 6.6 | 5 | 0.2 | 4 | 50 | 100 | 6.2Z |
| MAZ9068H | 6.4 | 6.8 | 7.2 | 5 | 0.1 | 4 | 30 | 60 | 6.8Z |
| MAZ9082H | 7.7 | 8.2 | 8.7 | 5 | 0.1 | 5 | 30 | 60 | 8.2Z |
| MAZ9100H | 9.4 | 10.0 | 10.6 | 5 | 0.05 | 7 | 30 | 60 | 10Z |
| MAZ9120H | 11.4 | 12.0 | 12.7 | 5 | 0.05 | 9 | 30 | 80 | 12Z |

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

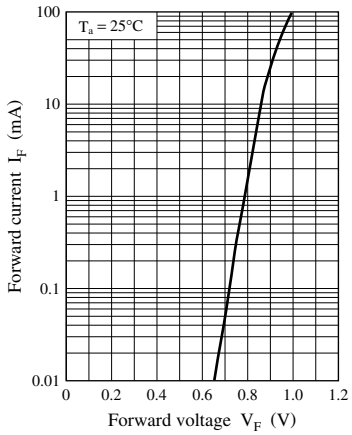
$P_{tot} — T_a$



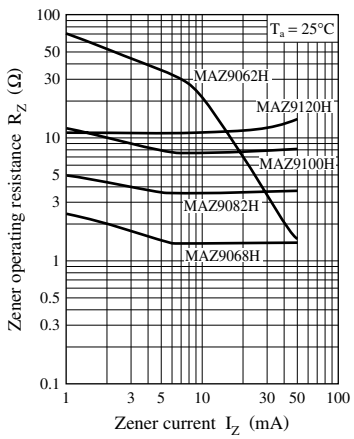

$I_Z — V_Z$



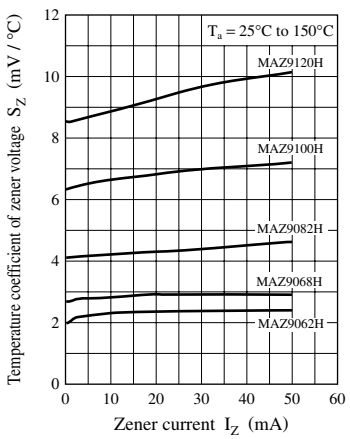

$I_F — V_F$



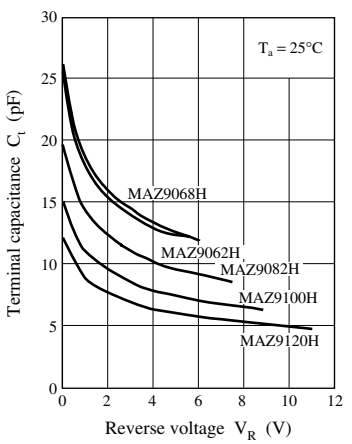

$R_Z — I_Z$




$S_Z — I_Z$




$C_t — V_R$



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