

# MAZL068D

## Silicon planer type

Constant voltage, constant current, waveform clipper and surge absorption circuit

### ■ Features

- Mini type package (5-pin)
- Four anode-common element wiring of MA8068

### ■ Absolute Maximum Ratings (Ta= 25°C)

| Parameter                     | Symbol                   | Rating             | Unit |
|-------------------------------|--------------------------|--------------------|------|
| Average forward current       | $I_{F(AV)}$              | 100 * <sup>1</sup> | mA   |
| Instantaneous forward current | $I_{FRM}$                | 200 * <sup>1</sup> | mA   |
| Total power dissipation       | $P_{tot}$ * <sup>2</sup> | 200 * <sup>1</sup> | mW   |
| Junction temperature          | $T_j$                    | 150                | °C   |
| Storage temperature           | $T_{stg}$                | - 55 to + 150      | °C   |

\*<sup>1</sup> Working value in a single piece

\*<sup>2</sup> With a printed-circuit board

### ■ Electrical Characteristics (Ta= 25°C)\*<sup>1</sup>

| Parameter                                | Symbol               | Condition         | min  | typ  | max  | Unit     |
|--|----------------------|-------------------|------|------|------|----------|
| Forward voltage                          | $V_F$                | $I_F=10mA$        |      | 0.9  | 1.0  | V        |
| Zener voltage                            | $V_Z$ * <sup>2</sup> | $I_Z= 5mA$        | 6.40 | 6.80 | 7.20 | V        |
| Operating resistance                     | $R_{ZK}$             | $I_Z= 0.5mA$      |      |      | 60   | $\Omega$ |
|  | $R_Z$                | $I_Z= 5mA$        |      |      | 20   | $\Omega$ |
| Reverse current                          | $I_R$                | $V_R= 4V$         |      |      | 0.1  | $\mu A$  |
| Temperature coefficient of zener voltage | $S_Z$ * <sup>3</sup> | $I_Z= 5mA$        |      | 3.0  |      | mV/°C    |
| Terminal capacitance                     | $C_t$                | $V_R= 0V, f=1MHz$ |      |      | 40   | pF       |

Note 1. Test method : Depend on JIS C7031 testing

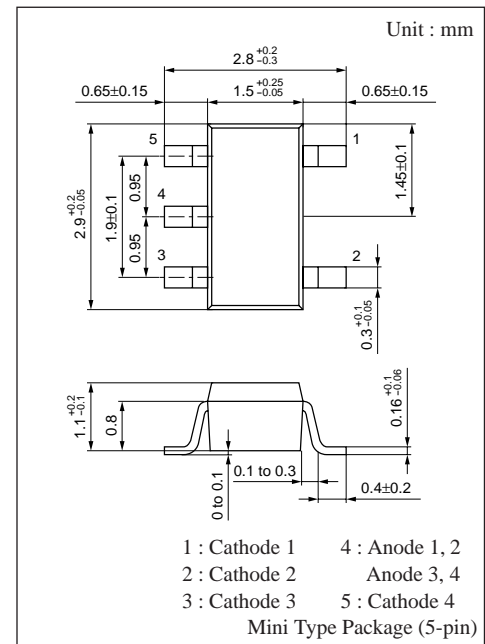
2. Rated input/output frequency : 5MHz

3. \*<sup>1</sup> : The  $V_Z$  value is for the temperature of 25°C. In other cases, carry out the temperature compensation.

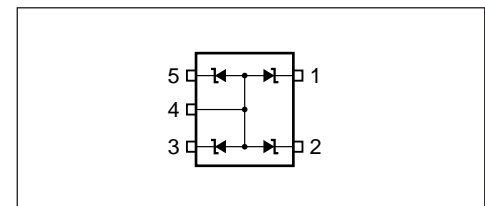
\*<sup>2</sup> : Guaranteed at 20ms after power application

\*<sup>3</sup> :  $T_j= 25$  to 150°C

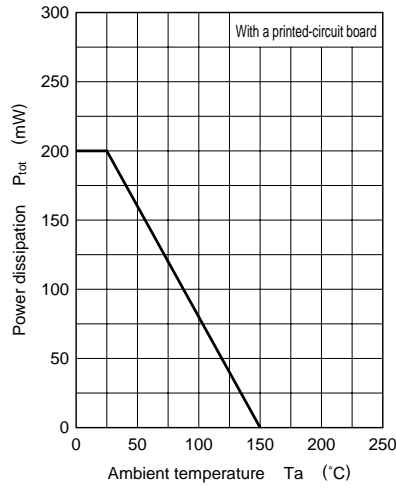
### ■ Marking



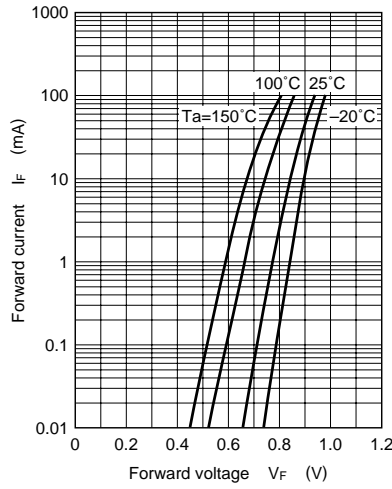
### ■ Internal Connection



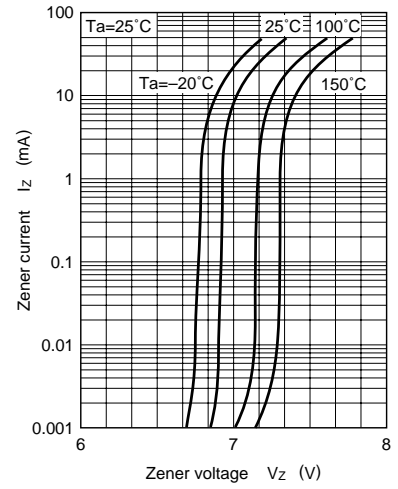
$P_{tot} - T_a$



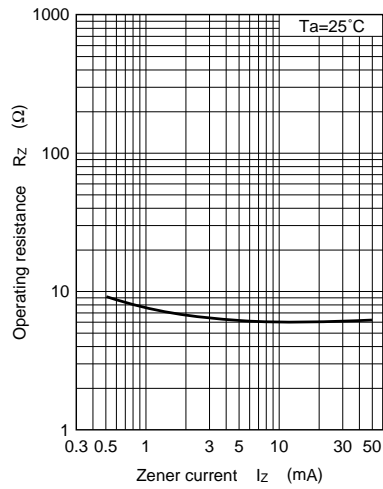
$I_F - V_F$



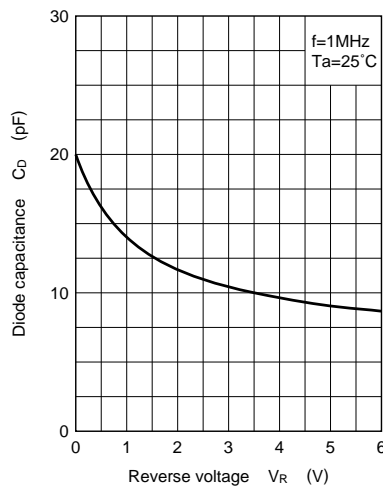
$I_Z - V_Z$



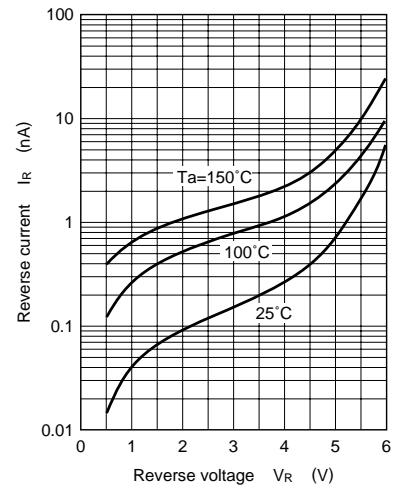
$R_Z - I_Z$



$C_t - V_R$



$I_R - V_R$



Noise -  $I_Z$

