

9097250 TOSHIBA (DISCRETE/OPTO)

67C 09383

D. T-11-13

**1Z6.2 ~ 1Z30**

Silicon Diffused Type

Zener Diode

## APPLICATIONS:

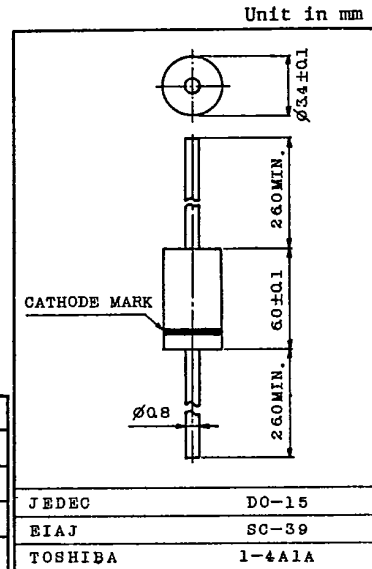
- . CONSTANT VOLTAGE REGULATION
- . TRANSIENT SUPPRESSORS

## FEATURES:

- . Average Power Dissipation : P=1W
- . Peak Reverse Power Dissipation  
: PRSM=200W at  $t_w=200\mu s$
- . Zener Voltage :  $V_Z=6.2 \sim 30V$
- . Tolerance of Zener Voltage ( $V_Z$ ) :  $\pm 10\%$
- . Plastic Mold Package

MAXIMUM RATINGS ( $T_a=25^\circ C$ )

| CHARACTERISTIC            | SYMBOL    | RATING    | UNIT       |
|---------------------------|-----------|-----------|------------|
| Power Dissipation         | P         | 1         | W          |
| Maximum Zener Current     | $I_{ZM}$  | (Note 1)  | -          |
| Junction Temperature      | $T_j$     | 150       | $^\circ C$ |
| Storage Temperature Range | $T_{stg}$ | -40 ~ 150 | $^\circ C$ |



Weight : 0.424g

Note 1 : See Electrical characteristics

2 : Soldering : 5mm is the minimum to be kept between case and soldering part.

3 : Lead Bending : 5mm is the minimum to be kept from the case to the bend lead wire.

ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

| TYPE  | ZENER VOLTAGE     |      |      | ZENER IMPEDANCE $r_d$ @ $I_Z$ ( $\Omega$ ) | ZENER CURRENT $I_Z$ (mA) | MAXIMUM ZENER CURRENT $I_{ZM}$ (mA) | TEMPERATURE COEFFICIENT OF ZENER VOLTAGE $r_Z$ (mV/ $^\circ C$ ) |      | FORWARD VOLTAGE $V_F$ @ $I_F$ (V) | FORWARD CURRENT $I_F$ (A) | REVERSE CURRENT $I_R$ @ $V_R$ ( $\mu A$ ) | REVERSE VOLTAGE $V_R$ (V) |
|-------|-------------------|------|------|--|--------------------------|-------------------------------------|--|------|-----------------------------------|---------------------------|---|---------------------------|
|       | $V_Z$ @ $I_Z$ (V) |      |      |  |                          |                                     | TYP.   | MAX. |                                   |                           |   |                           |
|       | MIN.              | TYP. | MAX. |  |                          |                                     |  |      |                                   |                           |   |                           |
| 1Z6.2 | 5.6               | 6.2  | 6.8  | 60   | 10                       | 150                                 | 1.5  | 2    | 2                                 | 0.2                       | 10  | 2.0                       |
| 1Z6.8 | 6.2               | 6.8  | 7.4  | 60   | 10                       | 135                                 | 3  | 4    | 2                                 | 0.2                       | 10  | 3.0                       |
| 1Z7.5 | 6.8               | 7.5  | 8.3  | 30   | 10                       | 120                                 | 4  | 5    | 2                                 | 0.2                       | 10  | 4.5                       |
| 1Z8.2 | 7.4               | 8.2  | 9.1  | 30   | 10                       | 115                                 | 4  | 6    | 2                                 | 0.2                       | 10  | 4.9                       |
| 1Z9.1 | 8.2               | 9.1  | 10.1 | 30   | 10                       | 105                                 | 5  | 8    | 2                                 | 0.2                       | 10  | 5.5                       |
| 1Z10  | 9.0               | 10   | 11.0 | 30   | 10                       | 95                                  | 6  | 9    | 2                                 | 0.2                       | 10  | 6.0                       |
| 1Z11  | 9.9               | 11   | 12.1 | 30   | 10                       | 85                                  | 7  | 11   | 2                                 | 0.2                       | 10  | 7.0                       |
| 1Z12  | 10.8              | 12   | 13.2 | 30   | 10                       | 80                                  | 8  | 13   | 2                                 | 0.2                       | 10  | 8.0                       |
| 1Z13  | 11.7              | 13   | 14.3 | 30   | 10                       | 70                                  | 9  | 14   | 2                                 | 0.2                       | 10  | 9.0                       |

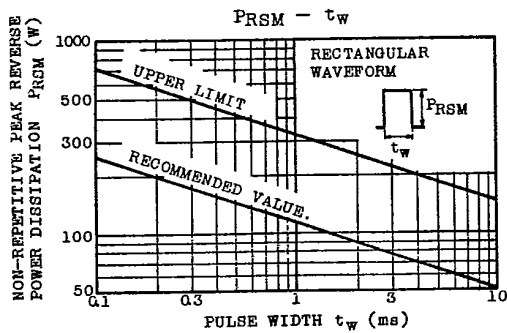
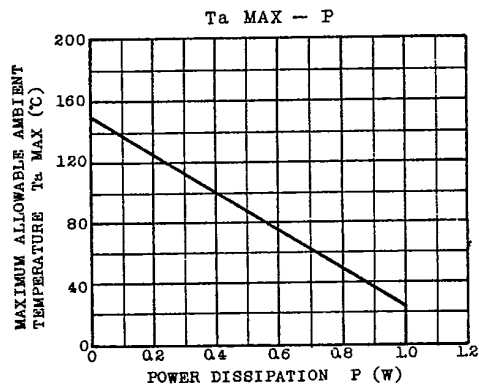
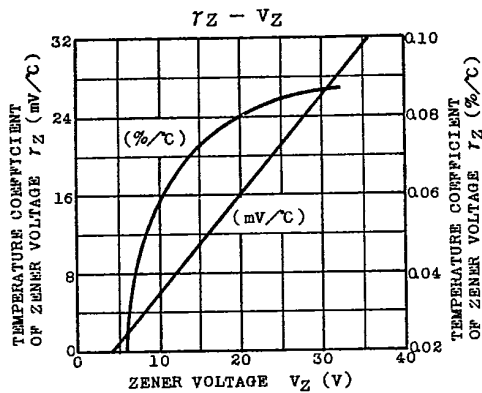
TOSHIBA CORPORATION

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| TYPE | ZENER VOLTAGE     |      |      | ZENER IMPEDANCE $r_d$ @ $I_Z$ ( $\Omega$ ) | ZENER CURRENT $I_Z$ (mA) | MAXIMUM ZENER CURRENT $I_{ZM}$ (mA) | TEMPERATURE COEFFICIENT OF ZENER VOLTAGE $\gamma_Z$ (mV/ $^{\circ}$ C) |      | FORWARD VOLTAGE $V_F$ @ $I_F$ (V) | FORWARD CURRENT $I_F$ (A) | REVERSE CURRENT $I_R$ @ $V_R$ ( $\mu$ A) | REVERSE VOLTAGE $V_R$ (V) |
|------|-------------------|------|------|--|--------------------------|-------------------------------------|--|------|-----------------------------------|---------------------------|--|---------------------------|
|      | $V_Z$ @ $I_Z$ (V) |      |      |  |                          |                                     | TYP.   | MAX. |                                   |                           |  |                           |
|      | MIN.              | TYP. | MAX. |  |                          |                                     |  |      |                                   |                           |  |                           |
| 1Z15 | 13.5              | 15   | 16.5 | 30   | 10                       | 63                                  | 11   | 17   | 2                                 | 0.2                       | 10                                       | 10.0                      |
| 1Z16 | 14.4              | 16   | 17.6 | 30   | 10                       | 58                                  | 12   | 19   | 2                                 | 0.2                       | 10                                       | 11.0                      |
| 1Z18 | 16.2              | 18   | 19.8 | 30   | 10                       | 52                                  | 14   | 23   | 2                                 | 0.2                       | 10                                       | 13.0                      |
| 1Z20 | 18.0              | 20   | 22.0 | 30   | 10                       | 47                                  | 16   | 26   | 2                                 | 0.2                       | 10                                       | 14.0                      |
| 1Z22 | 19.8              | 22   | 24.2 | 30   | 10                       | 43                                  | 18   | 28   | 2                                 | 0.2                       | 10                                       | 16.0                      |
| 1Z24 | 21.6              | 24   | 26.4 | 30   | 10                       | 38                                  | 20   | 32   | 2                                 | 0.2                       | 10                                       | 17.0                      |
| 1Z27 | 24.3              | 27   | 29.7 | 30   | 10                       | 34                                  | 23   | 36   | 2                                 | 0.2                       | 10                                       | 19.0                      |
| 1Z30 | 27.0              | 30   | 33.0 | 30   | 10                       | 31                                  | 25   | 40   | 2                                 | 0.2                       | 10                                       | 21.0                      |



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