

TOSHIBA ZENER DIODE SILICON DIFFUSE TYPE

1ZC12A~1ZC120A

CONSTANT VOLTAGE REGULATION

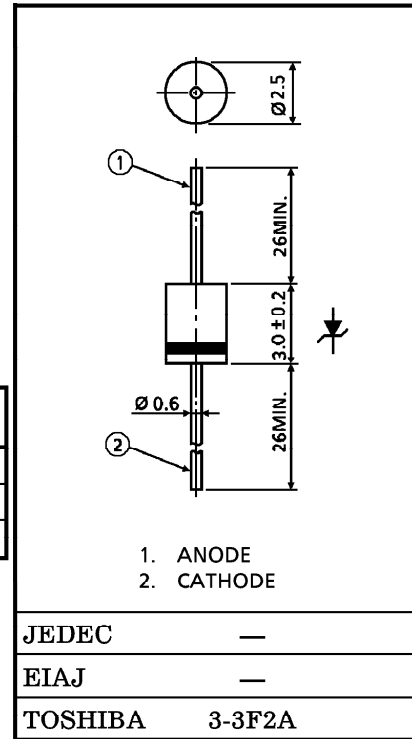
TELEPHONE, PRINTER USES

- Average Power Dissipation : $P=1.0W$
- Zener Voltage : $V_Z=12\sim120V$
- Tolerance of Zener Voltage (V_Z) : $\pm 5\%$
- Plastic Mold Package

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

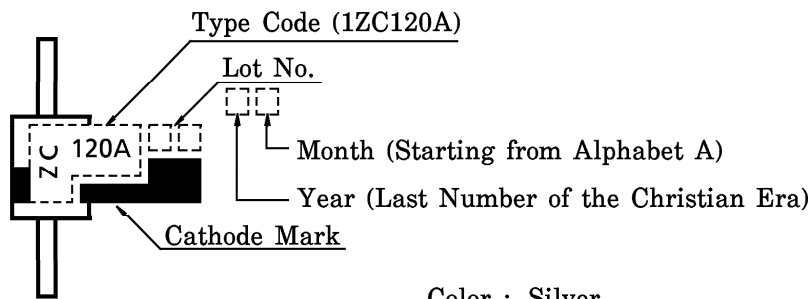
| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---------------------------|-----------|---------|------------|
| Power Dissipation | P | 1.0 | W |
| Junction Temperature | T_j | -40~150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -40~150 | $^\circ C$ |

Unit in mm



Weight : 0.18g (Typ.)

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| TYPE | ZENER CHARACTERISTICS | | | | | TEMPERATURE COEFFICIENT OF ZENER VOLTAGE α_T (mV/°C) | | FORWARD VOLTAGE | | REVERSE CURRENT | |
|---------|-------------------------|------|-------|------------------------------------|--------------------------------|---|------|-----------------|-------------------------------|------------------|-------------------------------|
| | ZENER VOLTAGE V_Z (V) | | | ZENER IMPEDANCE r_d (Ω) | MEASUREMENT CURRENT I_Z (mA) | TYP. | MAX. | V_F (V) | MEASUREMENT CURRENT I_F (A) | I_R (μ A) | MEASUREMENT VOLTAGE V_R (V) |
| | MIN. | TYP. | MAX. | MAX. | MAX. | | | | | | |
| 1ZC12A | 11.4 | 12 | 12.6 | 30 | 10 | 8 | 13 | 1.2 | 0.2 | 10 | 8.0 |
| 1ZC13A | 12.4 | 13 | 13.6 | 30 | 10 | 9 | 14 | 1.2 | 0.2 | 10 | 9.0 |
| 1ZC15A | 14.3 | 15 | 15.8 | 30 | 10 | 11 | 17 | 1.2 | 0.2 | 10 | 10.0 |
| 1ZC16A | 15.2 | 16 | 16.8 | 30 | 10 | 12 | 19 | 1.2 | 0.2 | 10 | 11.0 |
| 1ZC18A | 17.1 | 18 | 18.9 | 30 | 10 | 14 | 23 | 1.2 | 0.2 | 10 | 13.0 |
| 1ZC20A | 19.0 | 20 | 21.0 | 30 | 10 | 16 | 26 | 1.2 | 0.2 | 10 | 14.0 |
| 1ZC22A | 20.9 | 22 | 23.1 | 30 | 10 | 18 | 28 | 1.2 | 0.2 | 10 | 16.0 |
| 1ZC24A | 22.8 | 24 | 25.2 | 30 | 10 | 20 | 32 | 1.2 | 0.2 | 10 | 17.0 |
| 1ZC27A | 25.7 | 27 | 28.3 | 30 | 10 | 23 | 36 | 1.2 | 0.2 | 10 | 19.0 |
| 1ZC30A | 28.5 | 30 | 31.5 | 30 | 10 | 25 | 40 | 1.2 | 0.2 | 10 | 21.0 |
| 1ZC33A | 31.4 | 33 | 34.6 | 30 | 10 | 26 | 41 | 1.2 | 0.2 | 10 | 26.4 |
| 1ZC36A | 34.2 | 36 | 37.8 | 30 | 9 | 28 | 45 | 1.2 | 0.2 | 10 | 28.8 |
| 1ZC39A | 37.1 | 39 | 40.9 | 35 | 8 | 30 | 48 | 1.2 | 0.2 | 10 | 31.2 |
| 1ZC43A | 40.9 | 43 | 45.1 | 40 | 7 | 33 | 53 | 1.2 | 0.2 | 10 | 34.4 |
| 1ZC47A | 44.7 | 47 | 49.3 | 65 | 6 | 38 | 60 | 1.2 | 0.2 | 10 | 37.6 |
| 1ZC51A | 48.5 | 51 | 53.5 | 65 | 6 | 43 | 68 | 1.2 | 0.2 | 10 | 40.8 |
| 1ZC56A | 53.2 | 56 | 58.8 | 85 | 5 | 48 | 77 | 1.2 | 0.2 | 10 | 44.8 |
| 1ZC62A | 58.9 | 62 | 65.1 | 105 | 5 | 53 | 85 | 1.2 | 0.2 | 10 | 49.6 |
| 1ZC68A | 64.6 | 68 | 71.4 | 120 | 4 | 57 | 90 | 1.2 | 0.2 | 10 | 54.4 |
| 1ZC75A | 71.3 | 75 | 78.7 | 150 | 4 | 66 | 104 | 1.2 | 0.2 | 10 | 60.0 |
| 1ZC82A | 77.9 | 82 | 86.1 | 170 | 3 | 71 | 113 | 1.2 | 0.2 | 10 | 65.4 |
| 1ZC91A | 81.5 | 91 | 95.5 | 240 | 3 | 79 | 127 | 1.2 | 0.2 | 10 | 72.8 |
| 1ZC100A | 95.0 | 100 | 105.0 | 300 | 3 | 87 | 138 | 1.2 | 0.2 | 10 | 80.0 |
| 1ZC110A | 104.5 | 110 | 115.5 | 300 | 3 | 96 | 152 | 1.2 | 0.2 | 10 | 88.0 |
| 1ZC120A | 114.0 | 120 | 126.0 | 350 | 2.5 | 106 | 171 | 1.2 | 0.2 | 10 | 96.0 |

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