

FrelTec

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Zener Diode
DO35

DO-35

SPECIFICATION

| | | | |
|---------------------|------------|---------|---|
| 601 | TC1N____xx | DO35 | B05 |
| Type | Type | Package | Packing |
| 601: Zener Diode | TC1N____ | DO35 | B05: tape in box (paper tape) for 5k pc |

All products according to RoHS (2015/863/EU)

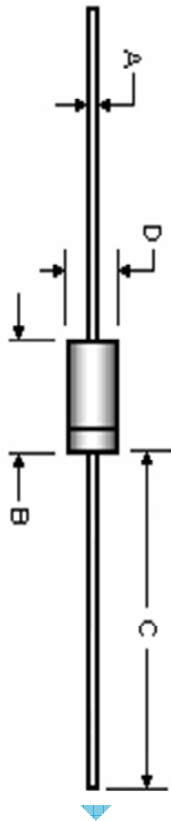
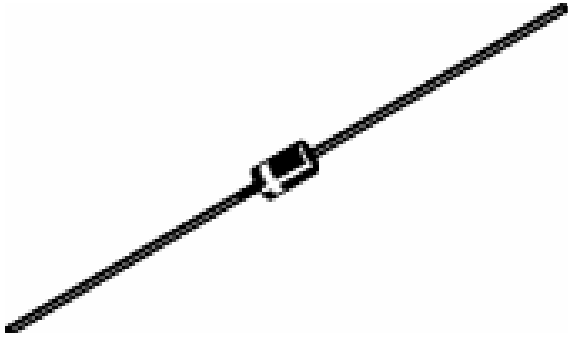


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Zener Diode

TC1N____

PACKAGE OUTLINE



| DIM. | Unit (mm) | |
|------|-----------|-------|
| | Min | Max |
| A | 0,46 | 0,55 |
| B | 3,05 | 5,08 |
| C | 25,4 | 38,10 |
| D | 1,53 | 2,28 |

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Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

| Parameter | Value | Units |
|--------------------------------|-------------|------------------|
| Power Dissipation | 500 | mW |
| Storage Temperature Range | -65 to +200 | $^\circ\text{C}$ |
| Operating Junction Temperature | +200 | $^\circ\text{C}$ |

These ratings are limiting values above which the serviceability of the diode may be impaired.

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

| Device | Zener Voltage | | | Zener Impedance | | | | Leakage Current | |
|----------|------------------------|-----|-------|-------------------|-----------------------------------|-----------------------------------|---------------------------------|-------------------|---------|
| | V _Z (Volts) | | | @ I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _R @ V _R | | |
| | Min | Nom | Max | (mA) | (Ω) | (Ω) | (mA) | (μA) | (Volts) |
| TC1N5985 | 2,280 | 2,4 | 2,520 | 5 | 100 | 1800 | 0,25 | 100 | 1 |
| TC1N5986 | 2,565 | 2,7 | 2,835 | 5 | 100 | 1900 | 0,25 | 75 | 1 |
| TC1N5987 | 2,850 | 3 | 3,150 | 5 | 95 | 2000 | 0,25 | 50 | 1 |
| TC1N5988 | 3,135 | 3,3 | 3,465 | 5 | 95 | 2200 | 0,25 | 25 | 1 |
| TC1N5989 | 3,420 | 3,6 | 3,780 | 5 | 90 | 2300 | 0,25 | 15 | 1 |
| TC1N5990 | 3,705 | 3,9 | 4,095 | 5 | 90 | 2400 | 0,25 | 10 | 1 |
| TC1N5991 | 4,085 | 4,3 | 4,515 | 5 | 88 | 2500 | 0,25 | 5 | 1 |
| TC1N5992 | 4,465 | 4,7 | 4,935 | 5 | 70 | 2200 | 0,25 | 3 | 1,5 |
| TC1N5993 | 4,845 | 5,1 | 5,355 | 5 | 50 | 2050 | 0,25 | 2 | 2 |
| TC1N5994 | 5,320 | 5,6 | 5,880 | 5 | 25 | 1800 | 0,25 | 2 | 3 |
| TC1N5995 | 5,890 | 6,2 | 6,510 | 5 | 10 | 1300 | 0,25 | 1 | 4 |
| TC1N5996 | 6,460 | 6,8 | 7,140 | 5 | 8 | 750 | 0,25 | 1 | 5,2 |
| TC1N5997 | 7,125 | 7,5 | 7,875 | 5 | 7 | 600 | 0,25 | 0,5 | 6 |
| TC1N5998 | 7,790 | 8,2 | 8,610 | 5 | 7 | 600 | 0,25 | 0,5 | 6,5 |
| TC1N5999 | 8,645 | 9,1 | 9,555 | 5 | 10 | 600 | 0,25 | 0,1 | 7 |
| TC1N6000 | 9,50 | 10 | 10,50 | 5 | 15 | 600 | 0,25 | 0,1 | 8 |
| TC1N6001 | 10,45 | 11 | 11,55 | 5 | 18 | 600 | 0,25 | 0,1 | 8,4 |
| TC1N6002 | 11,40 | 12 | 12,60 | 5 | 22 | 600 | 0,25 | 0,1 | 9,1 |
| TC1N6003 | 12,35 | 13 | 13,65 | 5 | 25 | 600 | 0,25 | 0,1 | 9,9 |
| TC1N6004 | 14,25 | 15 | 15,75 | 5 | 32 | 600 | 0,25 | 0,1 | 11 |
| TC1N6005 | 15,20 | 16 | 16,80 | 5 | 36 | 600 | 0,25 | 0,1 | 12 |
| TC1N6006 | 17,10 | 18 | 18,90 | 5 | 42 | 600 | 0,25 | 0,1 | 14 |
| TC1N6007 | 19,00 | 20 | 21,00 | 5 | 48 | 600 | 0,25 | 0,1 | 15 |
| TC1N6008 | 20,90 | 22 | 23,10 | 5 | 55 | 600 | 0,25 | 0,1 | 17 |
| TC1N6009 | 22,80 | 24 | 25,20 | 5 | 62 | 600 | 0,25 | 0,1 | 18 |
| TC1N6010 | 25,65 | 27 | 28,35 | 5 | 70 | 600 | 0,25 | 0,1 | 21 |
| TC1N6011 | 28,50 | 30 | 31,50 | 5 | 78 | 600 | 0,25 | 0,1 | 23 |
| TC1N6012 | 31,35 | 33 | 34,65 | 5 | 88 | 700 | 0,25 | 0,1 | 25 |
| TC1N6013 | 34,20 | 36 | 37,80 | 5 | 95 | 700 | 0,25 | 0,1 | 27 |
| TC1N6014 | 37,05 | 39 | 40,95 | 2 | 130 | 800 | 0,25 | 0,1 | 30 |
| TC1N6015 | 40,85 | 43 | 45,15 | 2 | 150 | 900 | 0,25 | 0,1 | 33 |
| TC1N6016 | 44,65 | 47 | 49,35 | 2 | 170 | 1000 | 0,25 | 0,1 | 36 |
| TC1N6017 | 48,45 | 51 | 53,55 | 2 | 180 | 1300 | 0,25 | 0,1 | 39 |

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| | | | | | | | | | |
|----------|-------|----|-------|---|-----|------|------|-----|----|
| TC1N6018 | 53,20 | 56 | 58,80 | 2 | 200 | 1400 | 0,25 | 0,1 | 43 |
| TC1N6019 | 58,90 | 62 | 65,10 | 2 | 225 | 1400 | 0,25 | 0,1 | 47 |
| TC1N6020 | 64,60 | 68 | 71,40 | 2 | 240 | 1600 | 0,25 | 0,1 | 52 |
| TC1N6021 | 71,25 | 75 | 78,75 | 2 | 265 | 1700 | 0,25 | 0,1 | 56 |

Notes:

1. TOLERANCE AND VOLTAGE DESIGNATION

The type numbers listed have zener voltage as shown and have a standard tolerance on the nominal zener voltage of $\pm 5\%$. Suffix A = $\pm 10\%$, C = $\pm 2\%$ and D = $\pm 1\%$.

2. ZENER VOLTAGE (VZ) MEASUREMENT The zener voltage (VZ) is tested under pulse conditions such that TJ is no more than 2°C above TA.

3. ZENER IMPEDANCE (ZZ) DERIVATION

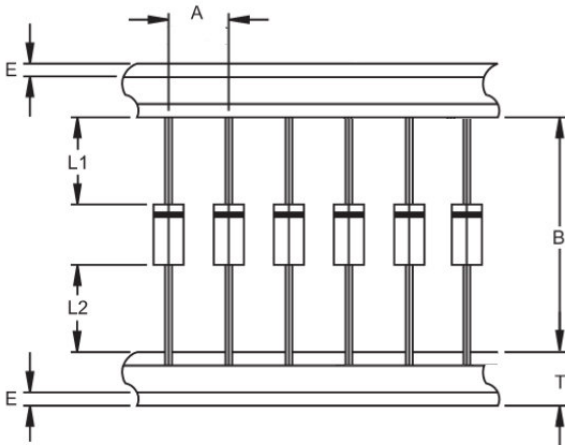
Zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an RMS value equal to 10% of the dc zener current (IZT) is superimposed to IZT .

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Tape in box (paper tape)

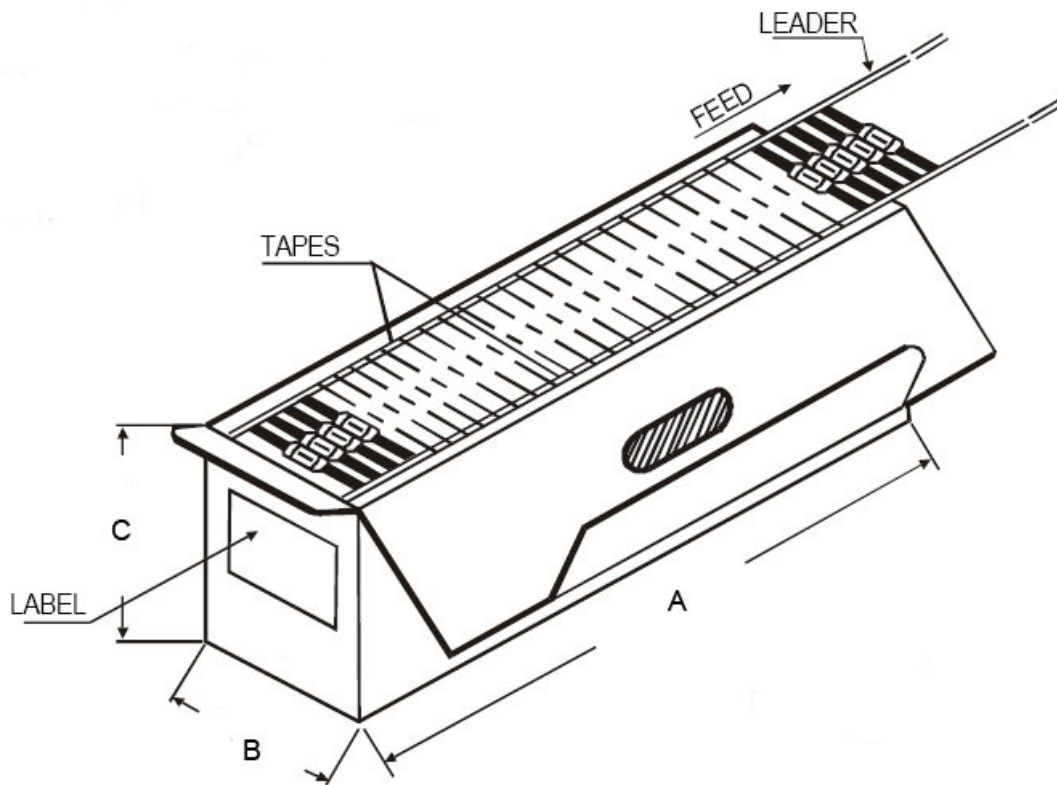


| Taping Dimensions | A +/- 0,5mm | B +/- 1,5mm | T | E | L1-L2 |
|-------------------|-------------------|-------------------|----------|--------|-------|
| DO-35 | 0,5mm | 52,4mm | 2,75~6,4 | 0,8max | ±1,2 |

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This axial-lead component's packaging requirements use in automatic testing and assembly equipment. And this standard practices for lead-tape packaging of axial-lead components meets the requirements of EIA Standard RS-296-D "Lead-taping of Components on Axial Lead Configuration for Automatic Insertion".

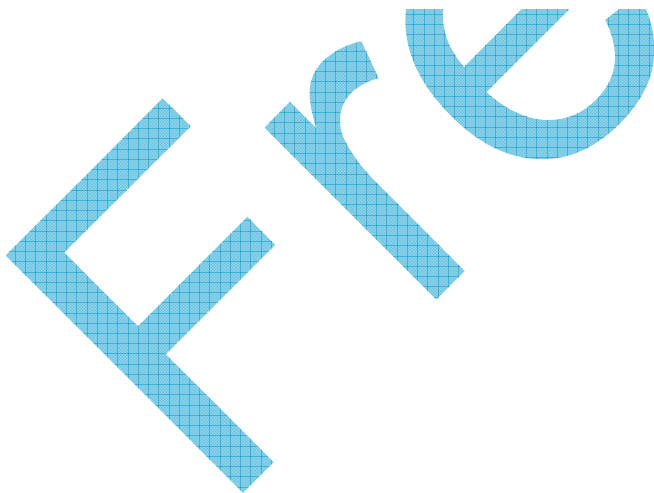
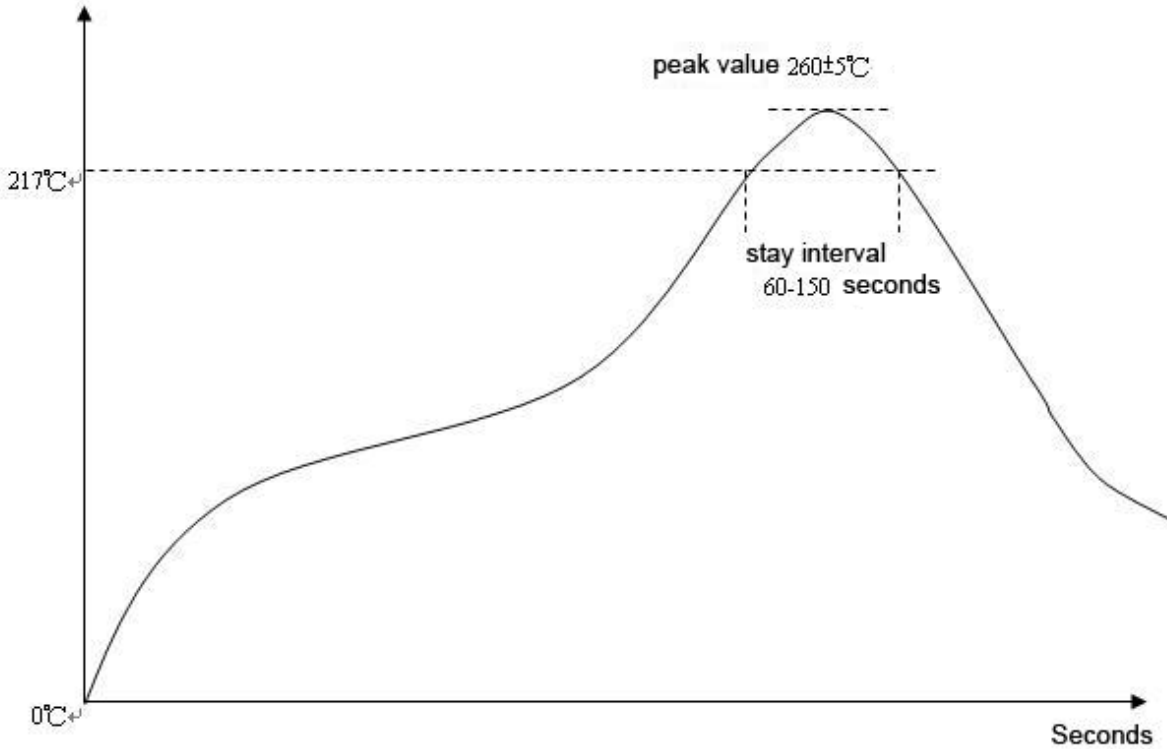
Tape & Ammo Outline



| Packaging | Available Product Outlines | Dimension "A" | Dimension "B" | Dimension "C" | Quantity Box |
|---------------------------|----------------------------|---------------|---------------|---------------|--------------|
| 52mm Horizontal Ammo Pack | DO-35 | 250mm | 80mm | 80mm | 5K |

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Lead Free Reflow Soldering Profile



Stock period

The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of 25°C ± 3°C and a relative humidity less than 80%RH

3/4/2020

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Please read cautions and warnings and important notes at the end of this document.

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