

General Description:

The high breakdown voltage, fast switching speed and high forward conductance of this diode packaged in a DO-35 miniature Glass Axial leaded package makes it desirable also as a general purpose diode.

High Conductance Fast Diode

Features:

- 500 milliwatt Power Dissipation package.
- Fast Switching Speed,
- Typical capacitance less than 1.0 picofarad.

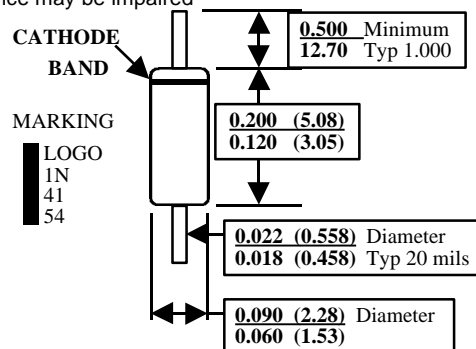
Ordering:

- 13 inch reel, 50 mm (T50R) & 26 mm (T26R) Tape; 10,000 units per reel.

Absolute Maximum Ratings* TA = 25°C unless otherwise noted

| Sym | Parameter | Value | Units |
|-----------------------|---|-------------|-------|
| T _{stg} | Storage Temperature | -65 to +200 | °C |
| T _J | Operating Junction Temperature | 175 | °C |
| P _D | Total Power Dissipation at T _A = 25°C | 500 | mW |
| | Linear Derating Factor from T _A = 25°C | 3.33 | mW/°C |
| R _{OJA} | Thermal Resistance Junction-to-Ambient | 300 | °C/W |
| W _{iv} | Working Inverse Voltage | 35 | V |
| I _O | Average Rectified Current | 100 | mA |
| I _F | DC Forward Current (I _F) | 300 | mA |
| i _f | Recurrent Peak Forward Current (I _F) | 400 | mA |
| i _{F(surge)} | Peak Forward Surge Current (I _{FSM}) Pulse Width = 1.0 second | 1.0 | Amp |
| | Pulse Width = 1.0 microsecond | 4.0 | Amp |

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired



Electrical Characteristics TA = 25°C unless otherwise noted

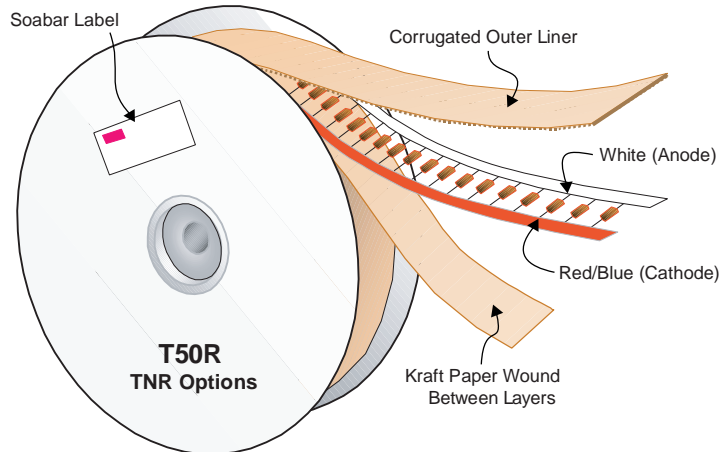
| SYM | CHARACTERISTICS | MIN | MAX | UNITS | TEST CONDITIONS |
|-----------------|-----------------------|-----|------------|----------|--|
| B _V | Breakdown Voltage | 35 | | V | I _R = 5.0 uA |
| I _R | Reverse Leakage | | 100 100 | nA uA | V _R = 25 V V _R = 25 V, T _A = 150°C |
| V _F | Forward Voltage | | 1.0 | V | I _F = 30 mA |
| C _T | Capacitance | | 4.0 | pF | V _R = 0.0 V, f = 1.0 MHz |
| T _{RR} | Reverse Recovery Time | | 4.0 | ns | I _F = 10 mA V _R = 6.0 V I _{RR} = 1.0 mA, R _L = 100 ohms |

DO-35 Tape and Reel Data



DO-35 Packaging

Configuration: Figure 1.0



DO-35 Packaging

Information Table: Figure 2.0

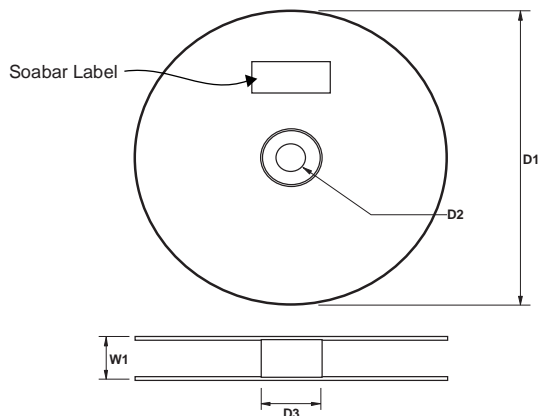
| DO-35 Packaging Information | | | |
|-----------------------------|------------|-------------|-------------------------|
| Packaging Option | T50R | T50A | Standard (no flow code) |
| Packaging type | TNR | Ammo | Bag |
| Qty per Reel/Tube/Bag | 10,000 | 5,000 | 500 |
| Reel Size (inch diameter) | 13 | - | - |
| Inside Tape Spacing (mm) | 52 | 52 | - |
| Int Box Dimension (mm) | 254x79x794 | 406x267x184 | 279x133x108 |
| Max qty per Box | 30,000 | 50,000 | 5,000 |
| Weight per unit (gm) | 0.137 | 0.137 | 0.137 |
| Weight per Reel/Ammo (kg) | 2.23 | 0.800 | - |
| Note/Comments | | | Bulk |

Soabar Label sample

| | | | |
|--|---------|----------|------------|
| FAIRCHILD SEMICONDUCTOR | | P.O. No. | |
| TYPE | IN5225A | MARK | BLK-BRN |
| REV | A2 | PART No. | |
| PKG | | EC No. | |
| QTY | 10,000 | M.O. No. | OX5046F035 |
| Q.C. | | DATE | D9903 |
| MFD. UNDER US PAT 3,025,589 & OTHER US PATS & APPLICATIONS | | | |

DO-35 Reel Dimensions:

Figure 3.0



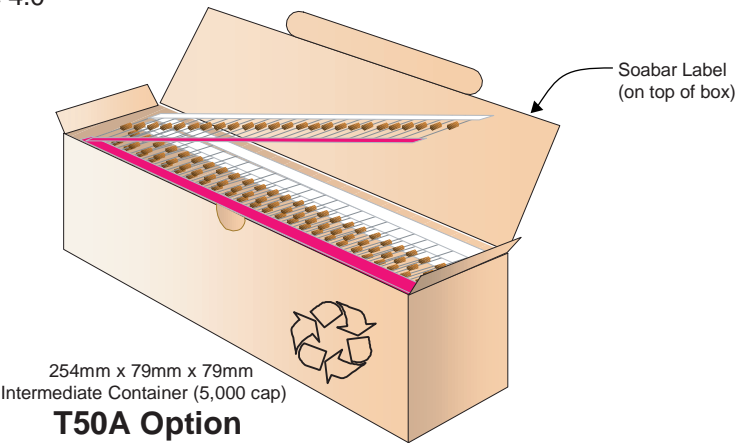
REEL DIMENSIONS

| ITEM DESCRIPTION | SYMBOL | MINIMUM | MAXIMUM |
|--------------------------------|--------|---------|---------|
| Reel Diameter | D1 | 10.375 | 10.625 |
| Arbor Hole Diameter (Standard) | D2 | 1.245 | 1.255 |
| Core Diameter | D3 | 3.190 | 3.310 |
| Flange to Flange Inner Width | W1 | | 3.400 |

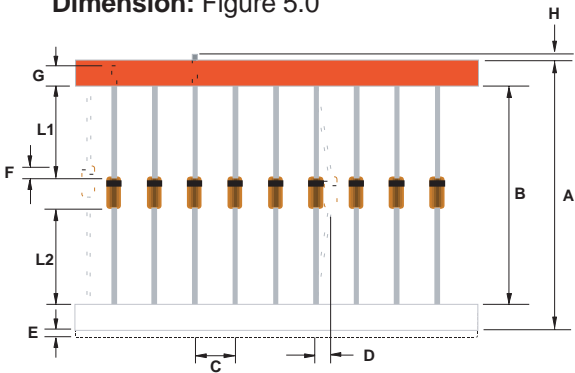
Note: All Dimensions are in inches

DO-35 Tape and Ammo Data

DO-35 Ammo Packing
Configuration: Figure 4.0



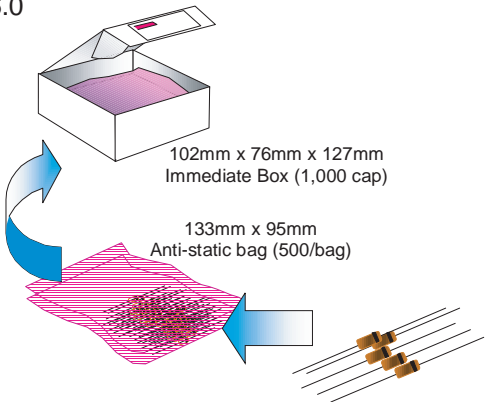
DO-35 Taping
Dimension: Figure 5.0



TAPING DIMENSIONS

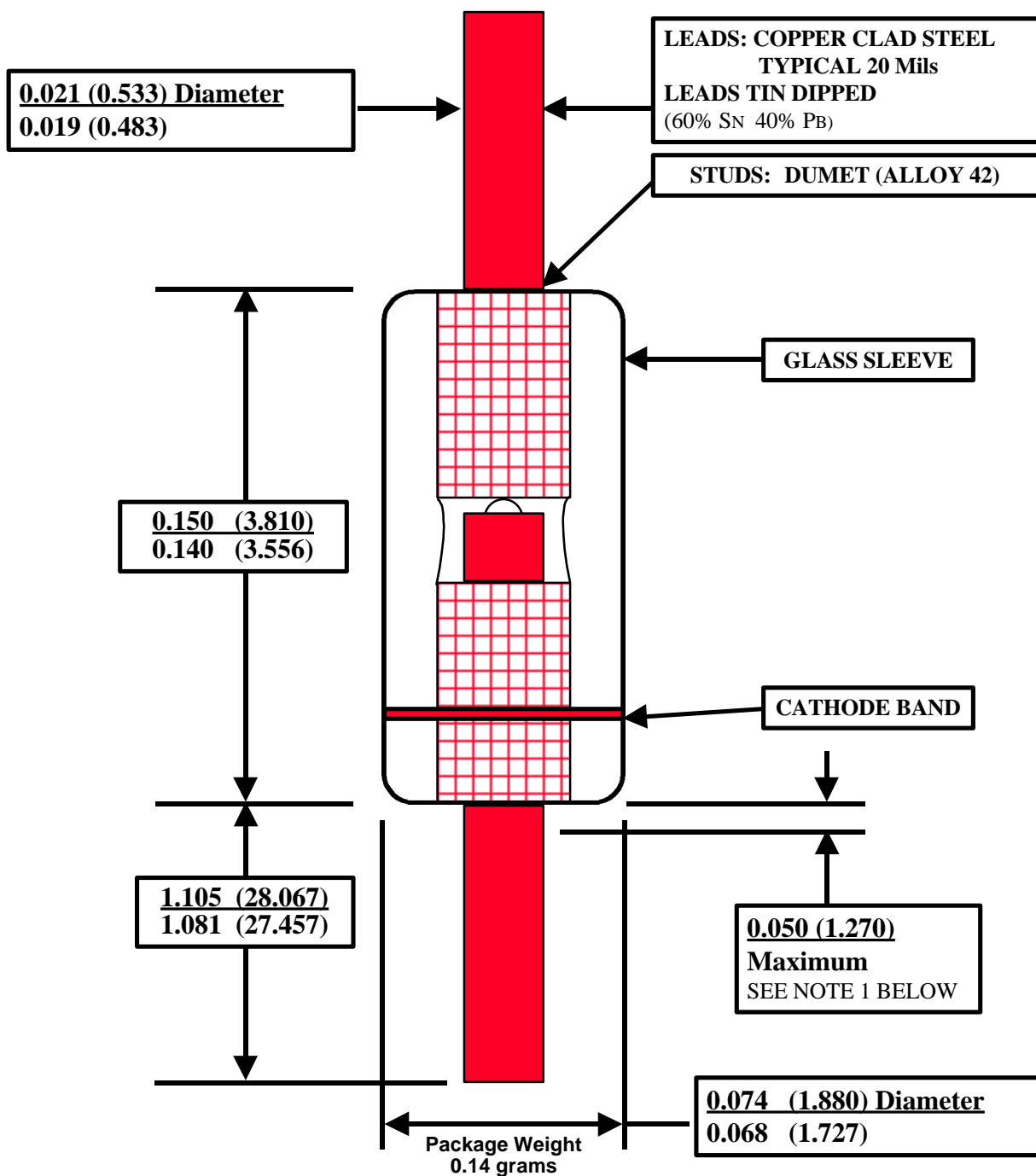
| | INCH | MM | MILS | NOTES |
|-------|----------------------------|--------------------------|-------------------------|------------------------------|
| A | 2.520 +0.066/ -0.027 | 64.00 +1.69/ -0.69 | 2519 +66.5/ -27.0 | Overall width |
| B | 2.047±0.027 | 52 ±0.69 | 2047±27 | Inside Tape Spacing |
| C | 0.200 ±0.0157 | 5.08 ±0.40 | 200 ±15.7 | Component Pitch |
| D | 0.047(max) | 1.2(max) | 47(max) | Component Misalignment |
| E | 0.022(max) | 0.55(max) | 22(max) | Tape Mismatch |
| F | 0.027(max) | ±0.69 | ±27 | Units in line w/ one another |
| G | 0.126(min) | 3.2(min) | 126(min) | Lead amount between tapes |
| H | 0 | 0 | 0 | Lead amount beyond tapes |
| L1-L2 | ±0.027 | ±0.69 | ±27 | Delta between two leads |

DO-35 Bulk Packing
Configuration: Figure 6.0



STANDARD DIGITAL MARKING CRITERIA

MAXIMUM CHARACTERS PER LINE: 3 MAXIMUM NUMBER OF LINES: 4
LOGO AND CHARACTERS M & W COUNT AS 2 CHARACTERS EACH



NOTE 1:

LEAD DIAMETER NOT CONTROLLED IN THIS ZONE TO ALLOW FOR FLASH, LEAD FINISH BUILD-UP, & MINOR IRREGULARITIES OTHER THAN SLUGS.

DO-35 PACKAGE
Fairchild Semiconductor's Criteria
11-MAR-97

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PRODUCT STATUS DEFINITIONS

Definition of Terms

| Datasheet Identification | Product Status | Definition |
|--------------------------|------------------------|---|
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