

# 1N5342 THRU 1N5388

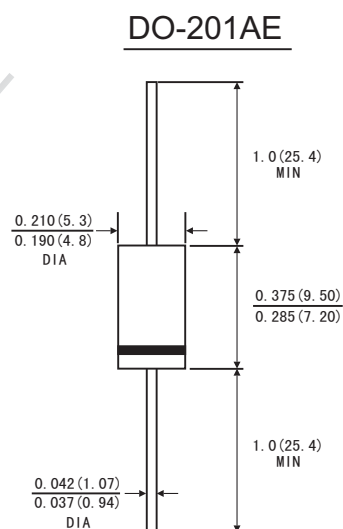
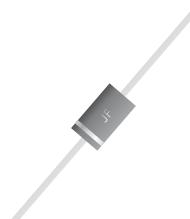
## 5W SILICON PLANAR ZENER DIODES

### FEATURES

- Low leakage, low zener impedance at low current
- Maximum power dissipation of 5W is ideally suited for stabilized power supply, etc.
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Standard zener voltage tolerance available is  $\pm 20\%$ . Suffix "A" indicates  $\pm 10\%$  tolerance. Suffix "B" indicates  $\pm 5\%$  tolerance.

### MECHANICAL DATA

- Case: DO-201AE molded plastic
- Terminals: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end



### ABSOLUTE MAXIMUM RATINGS(LIMITING VALUES) (T<sub>A</sub>=25°C)

|                                           | Symbols          | Value       | Units |
|-------------------------------------------|------------------|-------------|-------|
| Zener current see table "Characteristics" |                  |             |       |
| Power dissipation                         | P <sub>tot</sub> | 5           | W     |
| Junction temperature                      | T <sub>J</sub>   | -55 to +150 | °C    |
| Storage temperature range                 | T <sub>STG</sub> | -55 to +150 | °C    |

1) Valid provided that a distance of 8mm from case is kept at ambient temperature

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

|                                          | Symbols          | Min | Typ | Max | Units |
|------------------------------------------|------------------|-----|-----|-----|-------|
| Thermal resistance junction to ambient   | R <sub>θJA</sub> |     |     | 100 | °C/W  |
| Forward voltage at I <sub>F</sub> =200mA | V <sub>F</sub>   |     |     | 1.2 | V     |

# 1N5342... PLASTIC PACKAGE ZENER DIODES

| Electrical characteristics (TA=25°C) |                       |     |                         |         |     |                                 |      |                             |
|--------------------------------------|-----------------------|-----|-------------------------|---------|-----|---------------------------------|------|-----------------------------|
| Type                                 | Nominal Zener voltage |     | Maximum Zener impedance |         |     | Maximum reverse leakage current |      | Max regulator zener current |
|                                      | Vz@IzT                | IzT | ZzT@IzT                 | Zzx@Izx | Izx | IR@VR                           | VR   | IzM@50°C                    |
|                                      | V                     | mA  | Ω                       | Ω       | mA  | uA                              | V    | mA                          |
| 1N5342                               | 6.8                   | 175 | 1.0                     | 200     | 1.0 | 10                              | 4.9  | 700                         |
| 1N5343                               | 7.5                   | 175 | 1.5                     | 200     | 1.0 | 10                              | 5.4  | 630                         |
| 1N5344                               | 8.2                   | 150 | 1.5                     | 200     | 1.0 | 10                              | 5.9  | 580                         |
| 1N5345                               | 8.7                   | 125 | 2.0                     | 200     | 1.0 | 10                              | 6.3  | 545                         |
| 1N5346                               | 9.1                   | 125 | 2.0                     | 150     | 1.0 | 7.5                             | 6.6  | 520                         |
| 1N5347                               | 10                    | 100 | 2.0                     | 125     | 1.0 | 5.0                             | 7.2  | 475                         |
| 1N5348                               | 11                    | 100 | 2.5                     | 125     | 1.0 | 5.0                             | 8.0  | 430                         |
| 1N5349                               | 12                    | 100 | 2.5                     | 125     | 1.0 | 2.0                             | 8.6  | 395                         |
| 1N5350                               | 13                    | 75  | 2.5                     | 100     | 1.0 | 1.0                             | 9.4  | 365                         |
| 1N5351                               | 14                    | 75  | 2.5                     | 75      | 1.0 | 1.0                             | 10.1 | 340                         |
| 1N5352                               | 15                    | 70  | 2.5                     | 75      | 1.0 | 1.0                             | 10.8 | 315                         |
| 1N5353                               | 16                    | 65  | 2.5                     | 75      | 1.0 | 1.0                             | 11.5 | 295                         |
| 1N5354                               | 17                    | 65  | 2.5                     | 75      | 1.0 | 0.5                             | 12.2 | 280                         |
| 1N5355                               | 18                    | 65  | 2.5                     | 75      | 1.0 | 0.5                             | 13.0 | 265                         |
| 1N5356                               | 19                    | 50  | 3.0                     | 75      | 1.0 | 0.5                             | 13.7 | 250                         |
| 1N5357                               | 20                    | 50  | 3.0                     | 75      | 1.0 | 0.5                             | 14.4 | 237                         |
| 1N5358                               | 22                    | 50  | 3.5                     | 75      | 1.0 | 0.5                             | 15.8 | 216                         |
| 1N5359                               | 24                    | 50  | 3.5                     | 100     | 1.0 | 0.5                             | 17.3 | 198                         |
| 1N5360                               | 25                    | 50  | 4.0                     | 110     | 1.0 | 0.5                             | 18.0 | 190                         |
| 1N5361                               | 27                    | 50  | 5.0                     | 120     | 1.0 | 0.5                             | 19.4 | 176                         |
| 1N5362                               | 28                    | 50  | 6.0                     | 130     | 1.0 | 0.5                             | 20.1 | 170                         |
| 1N5363                               | 30                    | 40  | 8.0                     | 140     | 1.0 | 0.5                             | 21.6 | 158                         |
| 1N5364                               | 33                    | 40  | 10                      | 150     | 1.0 | 0.5                             | 23.8 | 144                         |
| 1N5365                               | 36                    | 30  | 11                      | 160     | 1.0 | 0.5                             | 25.9 | 132                         |
| 1N5366                               | 39                    | 30  | 14                      | 170     | 1.0 | 0.5                             | 28.1 | 122                         |
| 1N5367                               | 43                    | 30  | 20                      | 190     | 1.0 | 0.5                             | 31.0 | 110                         |
| 1N5368                               | 47                    | 25  | 25                      | 210     | 1.0 | 0.5                             | 33.8 | 100                         |
| 1N5369                               | 51                    | 25  | 27                      | 230     | 1.0 | 0.5                             | 36.7 | 93.0                        |
| 1N5370                               | 56                    | 20  | 35                      | 280     | 1.0 | 0.5                             | 40.3 | 86.0                        |
| 1N5371                               | 60                    | 20  | 40                      | 350     | 1.0 | 0.5                             | 43.0 | 79.0                        |
| 1N5372                               | 62                    | 20  | 42                      | 400     | 1.0 | 0.5                             | 44.6 | 76.0                        |
| 1N5373                               | 68                    | 20  | 44                      | 500     | 1.0 | 0.5                             | 49.0 | 70.0                        |
| 1N5374                               | 75                    | 20  | 45                      | 620     | 1.0 | 0.5                             | 54.0 | 63.0                        |
| 1N5375                               | 82                    | 15  | 65                      | 720     | 1.0 | 0.5                             | 59.0 | 58.0                        |
| 1N5376                               | 87                    | 15  | 75                      | 760     | 1.0 | 0.5                             | 63.0 | 54.5                        |
| 1N5377                               | 91                    | 15  | 75                      | 760     | 1.0 | 0.5                             | 65.0 | 52.5                        |
| 1N5378                               | 100                   | 12  | 90                      | 800     | 1.0 | 0.5                             | 72.0 | 47.5                        |
| 1N5379                               | 110                   | 12  | 125                     | 1000    | 1.0 | 0.5                             | 79.2 | 43.0                        |
| 1N5380                               | 120                   | 10  | 170                     | 1150    | 1.0 | 0.5                             | 86.4 | 39.5                        |
| 1N5381                               | 130                   | 10  | 190                     | 1250    | 1.0 | 0.5                             | 93.2 | 36.6                        |
| 1N5382                               | 140                   | 8   | 230                     | 1500    | 1.0 | 0.5                             | 101  | 34.0                        |
| 1N5383                               | 150                   | 8   | 330                     | 1500    | 1.0 | 0.5                             | 108  | 31.6                        |
| 1N5384                               | 160                   | 8   | 350                     | 1650    | 1.0 | 0.5                             | 115  | 29.4                        |
| 1N5385                               | 170                   | 8   | 380                     | 1750    | 1.0 | 0.5                             | 122  | 28.0                        |
| 1N5386                               | 180                   | 5   | 430                     | 1750    | 1.0 | 0.5                             | 130  | 26.4                        |
| 1N5387                               | 190                   | 5   | 450                     | 1850    | 1.0 | 0.5                             | 137  | 25.0                        |
| 1N5388                               | 200                   | 5   | 480                     | 1850    | 1.0 | 0.5                             | 144  | 23.6                        |

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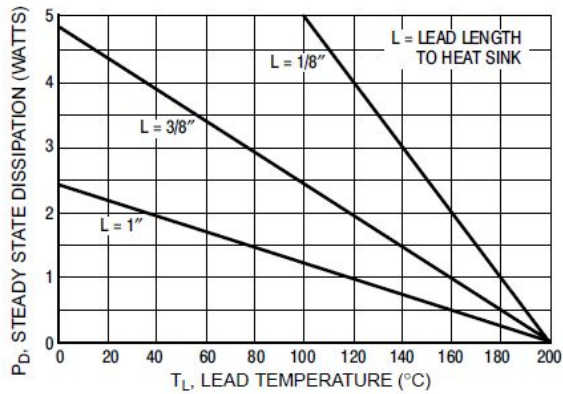


Figure 1. Power Temperature Derating Curve

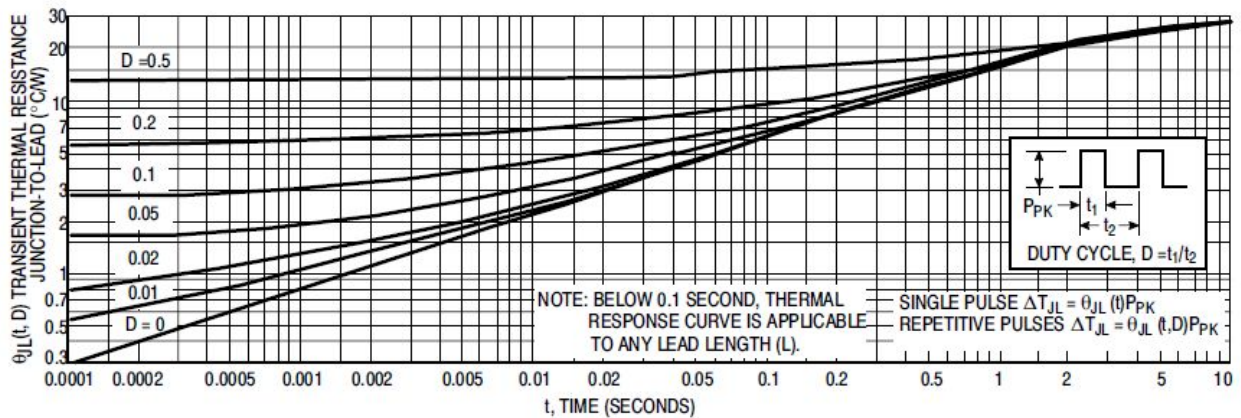


Figure 2. Typical Thermal Response L, Lead Length = 3/8 Inch

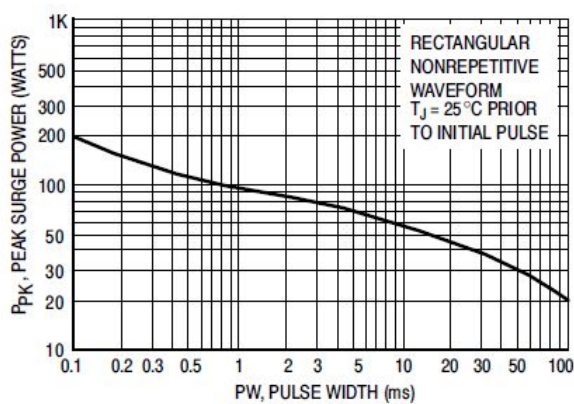


Figure 3. Maximum Surge Power

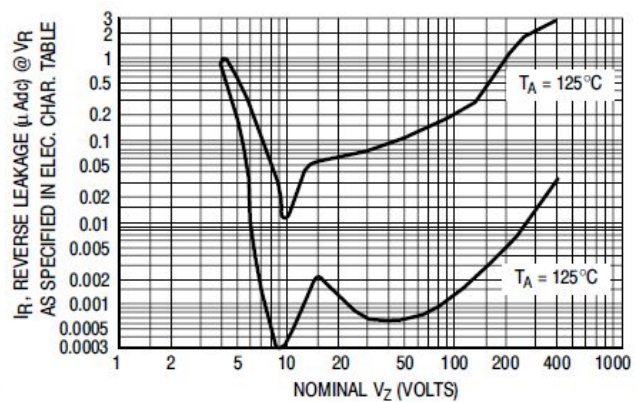


Figure 4. Typical Reverse Leakage