



# 1N5338B SERIES

## SILICON ZENER DIODES

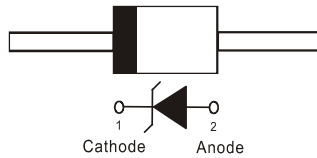
**VOLTAGE** 5.1 to 51 Volt **DCK 9F** **5 Watt**

### FEATURES

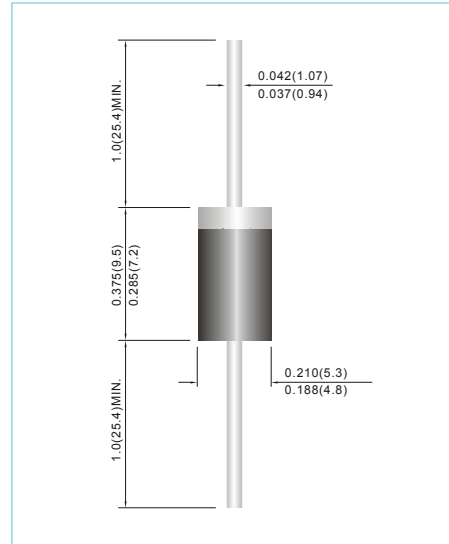
- Low inductance
- Typical  $I_D$  less than 1 $\mu$ A above 13V
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Lead free in compliance with EU RoHS 2.0

### MECHANICAL DATA

- Case: JEDEC DO-201AE molded plastic
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.0395 ounce, 1.122 gram



### DO-201AE Unit : inch(mm)



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter  | Symbol         | Value       | Units            |
|--|----------------|-------------|------------------|
| DC Power Dissipation on $T_c = 75^\circ\text{C}$ , Measure at Zero Lead Length Derate above 75°C ( NOTE 1) | $P_D$          | 5           | Watts            |
| Operating Junction and Storage Temperature Range   | $T_J, T_{STG}$ | -55 to +150 | $^\circ\text{C}$ |

**NOTE :**

1. Mounted on 8mm<sup>2</sup> copper pads to each terminal.



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| Part Number | Nominal Zener Voltage            |        |        | Maximum Zener Impedance           |     |                                   |    | Maximum Leakage Current |                |
|-------------|----------------------------------|--------|--------|-----------------------------------|-----|-----------------------------------|----|-------------------------|----------------|
|             | V <sub>Z</sub> @ I <sub>ZT</sub> |        |        | Z <sub>ZT</sub> @ I <sub>ZT</sub> |     | Z <sub>ZK</sub> @ I <sub>ZK</sub> |    | I <sub>R</sub>          | V <sub>R</sub> |
|             | Nom. V                           | Min. V | Max. V | Ω                                 | mA  | Ω                                 | mA | μA                      | V              |
| 1N5338B     | 5.1                              | 4.85   | 5.36   | 2                                 | 240 | 400                               | 1  | 10                      | 1              |
| 1N5339B     | 5.6                              | 5.32   | 5.88   | 1                                 | 220 | 400                               | 1  | 10                      | 2              |
| 1N5340B     | 6                                | 5.7    | 6.30   | 1                                 | 200 | 300                               | 1  | 10                      | 3              |
| 1N5341B     | 6.2                              | 5.89   | 6.51   | 1                                 | 200 | 200                               | 1  | 10                      | 3              |
| 1N5342B     | 6.8                              | 6.46   | 7.14   | 1                                 | 175 | 200                               | 1  | 10                      | 5.2            |
| 1N5343B     | 7.5                              | 7.13   | 7.88   | 2                                 | 175 | 200                               | 1  | 10                      | 5.7            |
| 1N5344B     | 8.2                              | 7.79   | 8.61   | 2                                 | 150 | 200                               | 1  | 10                      | 6.2            |
| 1N5345B     | 8.7                              | 8.27   | 9.14   | 2                                 | 150 | 200                               | 1  | 10                      | 6.6            |
| 1N5346B     | 9.1                              | 8.65   | 9.56   | 2                                 | 150 | 150                               | 1  | 7.5                     | 6.9            |
| 1N5347B     | 10                               | 9.5    | 10.5   | 2                                 | 125 | 125                               | 1  | 5                       | 7.6            |
| 1N5348B     | 11                               | 10.45  | 11.55  | 3                                 | 125 | 125                               | 1  | 5                       | 8.4            |
| 1N5349B     | 12                               | 11.4   | 12.6   | 3                                 | 100 | 125                               | 1  | 2                       | 9.1            |
| 1N5350B     | 13                               | 12.35  | 13.65  | 3                                 | 100 | 100                               | 1  | 1                       | 9.9            |
| 1N5351B     | 14                               | 13.3   | 14.7   | 3                                 | 100 | 75                                | 1  | 1                       | 10.6           |
| 1N5352B     | 15                               | 14.25  | 15.75  | 3                                 | 75  | 75                                | 1  | 1                       | 11.5           |
| 1N5353B     | 16                               | 15.2   | 16.8   | 3                                 | 75  | 75                                | 1  | 1                       | 12.2           |
| 1N5354B     | 17                               | 16.15  | 17.85  | 3                                 | 70  | 75                                | 1  | 0.5                     | 12.9           |
| 1N5355B     | 18                               | 17.1   | 18.9   | 3                                 | 65  | 75                                | 1  | 0.5                     | 13.7           |
| 1N5356B     | 19                               | 18.05  | 19.95  | 3                                 | 65  | 75                                | 1  | 0.5                     | 14.4           |
| 1N5357B     | 20                               | 19     | 21     | 3                                 | 65  | 75                                | 1  | 0.5                     | 15.2           |
| 1N5358B     | 22                               | 20.9   | 23.1   | 4                                 | 50  | 75                                | 1  | 0.5                     | 16.7           |
| 1N5359B     | 24                               | 22.8   | 25.2   | 4                                 | 50  | 100                               | 1  | 0.5                     | 18.2           |
| 1N5360B     | 25                               | 23.75  | 26.25  | 4                                 | 50  | 110                               | 1  | 0.5                     | 19             |
| 1N5361B     | 27                               | 25.65  | 28.35  | 5                                 | 50  | 120                               | 1  | 0.5                     | 20.6           |
| 1N5362B     | 28                               | 26.6   | 29.4   | 6                                 | 50  | 130                               | 1  | 0.5                     | 21.2           |
| 1N5363B     | 30                               | 28.5   | 31.5   | 8                                 | 40  | 140                               | 1  | 0.5                     | 22.8           |
| 1N5364B     | 33                               | 31.35  | 34.65  | 10                                | 40  | 150                               | 1  | 0.5                     | 25.1           |
| 1N5365B     | 36                               | 34.2   | 37.8   | 11                                | 30  | 160                               | 1  | 0.5                     | 27.4           |
| 1N5366B     | 39                               | 37.05  | 40.95  | 14                                | 30  | 170                               | 1  | 0.5                     | 29.7           |
| 1N5367B     | 43                               | 40.85  | 45.15  | 20                                | 30  | 190                               | 1  | 0.5                     | 32.7           |
| 1N5368B     | 47                               | 44.65  | 49.35  | 25                                | 25  | 210                               | 1  | 0.5                     | 35.8           |
| 1N5369B     | 51                               | 48.45  | 53.55  | 27                                | 25  | 230                               | 1  | 0.5                     | 38.8           |



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## RATING AND CHARACTERISTIC CURVES

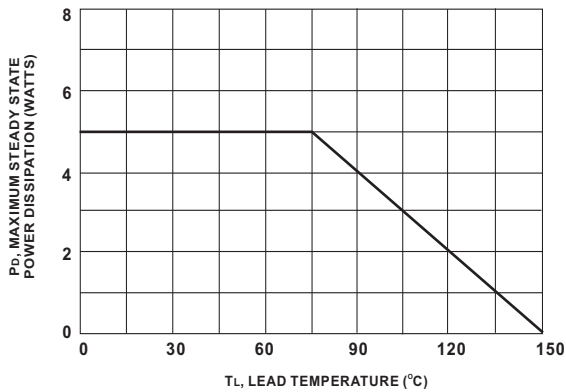


Fig.1 Power temperature Derating Curve

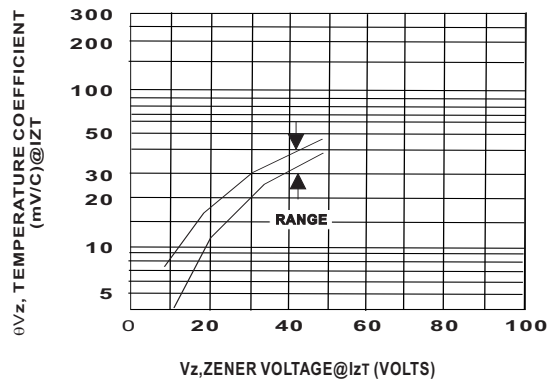


Fig.2 Temperature Coefficient-Range for Units 11 to 39 Volts

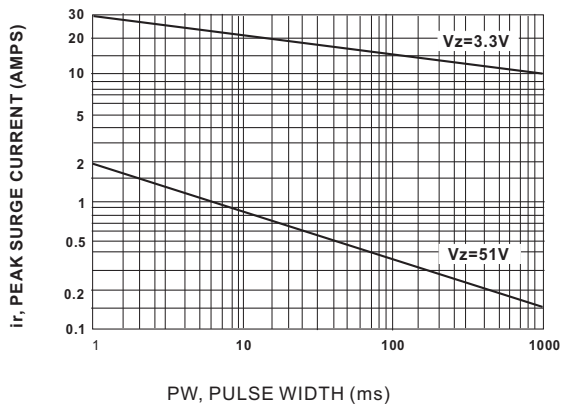


Fig.3 Peak Surge Current versus Pulse Width

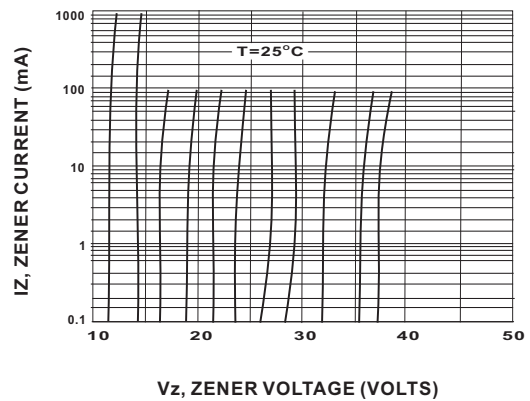


Fig.4 Zener Voltage versus Zener Current Vz=11 thru 39 Volts



## 1N5338B SERIES

### Part No\_packing code\_Version

1N5338B\_AY\_00001  
 1N5338B\_AY\_10001  
 1N5338B\_B0\_00001  
 1N5338B\_B0\_10001  
 1N5338B\_R2\_00001  
 1N5338B\_R2\_10001

For example :

**RB500V-40\_R2\_00001**



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| Tape and Ammunition Box (T/B)        | <b>A</b>             | N/A                              | <b>0</b>             | <b>HF</b>                 | <b>0</b>             | serial number                         |
| Tape and Reel (T/R)                  | <b>R</b>             | 7"                               | <b>1</b>             | <b>RoHS</b>               | <b>1</b>             | serial number                         |
| Bulk Packing (B/P)                   | <b>B</b>             | 13"                              | <b>2</b>             |                           |                      |                                       |
| Tube Packing (T/P)                   | <b>T</b>             | 26mm                             | <b>X</b>             |                           |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | <b>S</b>             | 52mm                             | <b>Y</b>             |                           |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | <b>L</b>             | PANASERT T/B CATHODE UP (PBCU)   | <b>U</b>             |                           |                      |                                       |
| FORMING                              | <b>F</b>             | PANASERT T/B CATHODE DOWN (PBCD) | <b>D</b>             |                           |                      |                                       |



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