



# Frontier Electronics Corp.

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## 1 WATT ZENER DIODE

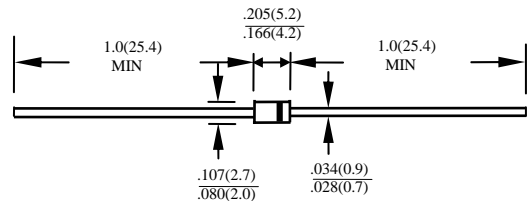
### IN4736A-LFR THRU IN4764A-LFR

#### FEATURES

- LOW COST
- SMALL SIZE
- ROHS

#### MECHANICAL DATA

- CASE: DO-41 DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: AXIAL LEADS, SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: COLOR BAND DENOTES CATHODE
- MOUNTING POSITION: ANY
- WEIGHT: 0.34 GRAMS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED  
STORAGE AND OPERATING TEMPERATURE RANGE -55°C TO + 150°C

| ELECTRICAL CHARACTERISTICS (TA=25°C UNLESS OTHERWISE NOTED) VF=1.2V MAX, IF = 200mA FOR ALL TYPES |  |                                       |   |   |                       |                          |                         |   |
|---|--|---------------------------------------|---|---|-----------------------|--------------------------|-------------------------|---|
| JEDEC TYPE NO   | NOMINAL ZENER VOLTAGE<br>V <sub>Z</sub> @ I <sub>ZT</sub><br>VOLTS | TEST CURRENT<br>I <sub>ZT</sub><br>mA | MAXIMUM ZENER IMPEDANCE                   |   |                       | LEAKAGE CURRENT          |                         | SURGE CURRENT<br>@ TA=25°C<br>I <sub>R</sub> - mA |
|   |  |                                       | Z <sub>ZT</sub> @ I <sub>ZT</sub><br>OHMS | Z <sub>ZK</sub> @ I <sub>ZK</sub><br>OHMS | I <sub>ZK</sub><br>mA | I <sub>R</sub><br>μA MAX | V <sub>R</sub><br>VOLTS |   |
| IN4736A-LFR   | 6.8  | 37                                    | 3.5                                       | 700                                       | 1                     | 10                       | 4                       | 660   |
| IN4737A-LFR   | 7.5  | 34                                    | 4   | 700                                       | 0.5                   | 10                       | 5                       | 605   |
| IN4738A-LFR   | 8.2  | 31                                    | 4.5                                       | 700                                       | 0.5                   | 10                       | 6                       | 550   |
| IN4739A-LFR   | 9.1  | 28                                    | 5   | 700                                       | 0.5                   | 10                       | 7                       | 500   |
| IN4740A-LFR   | 10   | 25                                    | 7   | 700                                       | 0.25                  | 10                       | 7.6                     | 454   |
| IN4741A-LFR   | 11   | 23                                    | 8   | 700                                       | 0.25                  | 5                        | 8.4                     | 414   |
| IN4742A-LFR   | 12   | 21                                    | 9   | 700                                       | 0.25                  | 5                        | 9.1                     | 380   |
| IN4743A-LFR   | 13   | 19                                    | 10  | 700                                       | 0.25                  | 5                        | 9.9                     | 344   |
| IN4744A-LFR   | 15   | 17                                    | 14  | 700                                       | 0.25                  | 5                        | 11.4                    | 304   |
| IN4745A-LFR   | 16   | 15.5                                  | 16  | 700                                       | 0.25                  | 5                        | 12.2                    | 285   |
| IN4746A-LFR   | 18   | 14                                    | 20  | 750                                       | 0.25                  | 5                        | 13.7                    | 250   |
| IN4747A-LFR   | 20   | 12.5                                  | 22  | 750                                       | 0.25                  | 5                        | 15.2                    | 225   |
| IN4748A-LFR   | 22   | 11.5                                  | 23  | 750                                       | 0.25                  | 5                        | 16.7                    | 205   |
| IN4749A-LFR   | 24   | 10.5                                  | 25  | 750                                       | 0.25                  | 5                        | 18.2                    | 190   |
| IN4750A-LFR   | 27   | 9.5                                   | 35  | 750                                       | 0.25                  | 5                        | 20.6                    | 170   |
| IN4751A-LFR   | 30   | 8.5                                   | 40  | 1000                                      | 0.25                  | 5                        | 22.8                    | 150   |
| IN4752A-LFR   | 33   | 7.5                                   | 45  | 1000                                      | 0.25                  | 5                        | 25.1                    | 135   |
| IN4753A-LFR   | 36   | 7                                     | 50  | 1000                                      | 0.25                  | 5                        | 27.4                    | 125   |
| IN4754A-LFR   | 39   | 6.5                                   | 60  | 1000                                      | 0.25                  | 5                        | 29.7                    | 115   |
| IN4755A-LFR   | 43   | 6                                     | 70  | 1500                                      | 0.25                  | 5                        | 32.7                    | 110   |
| IN4756A-LFR   | 47   | 5.5                                   | 80  | 1500                                      | 0.25                  | 5                        | 35.8                    | 95  |
| IN4757A-LFR   | 51   | 5                                     | 95  | 1500                                      | 0.25                  | 5                        | 38.8                    | 90  |
| IN4758A-LFR   | 56   | 4.5                                   | 110                                       | 2000                                      | 0.25                  | 5                        | 42.6                    | 80  |
| IN4759A-LFR   | 62   | 4                                     | 125                                       | 2000                                      | 0.25                  | 5                        | 47.1                    | 70  |
| IN4760A-LFR   | 68   | 3.7                                   | 150                                       | 2000                                      | 0.25                  | 5                        | 51.7                    | 65  |
| IN4761A-LFR   | 75   | 3.3                                   | 175                                       | 2000                                      | 0.25                  | 5                        | 56                      | 60  |
| IN4762A-LFR   | 82   | 3                                     | 200                                       | 3000                                      | 0.25                  | 5                        | 62.2                    | 55  |
| IN4763A-LFR   | 91   | 2.8                                   | 250                                       | 3000                                      | 0.25                  | 5                        | 69.2                    | 50  |
| IN4764A-LFR   | 100  | 2.5                                   | 350                                       | 3000                                      | 0.25                  | 5                        | 76                      | 45  |

NOTE : SUFFIX "A" FOR ± 5%

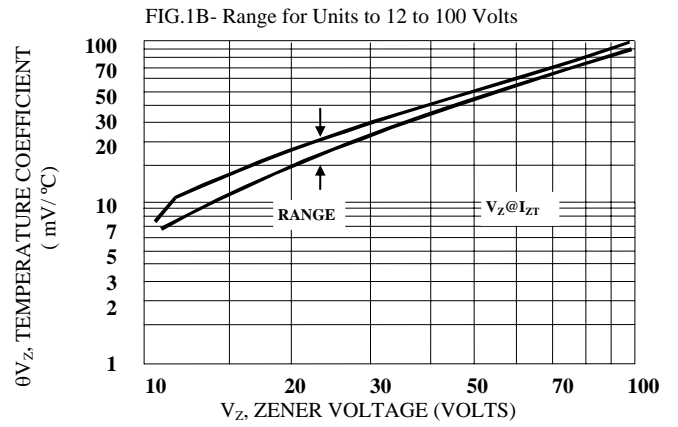
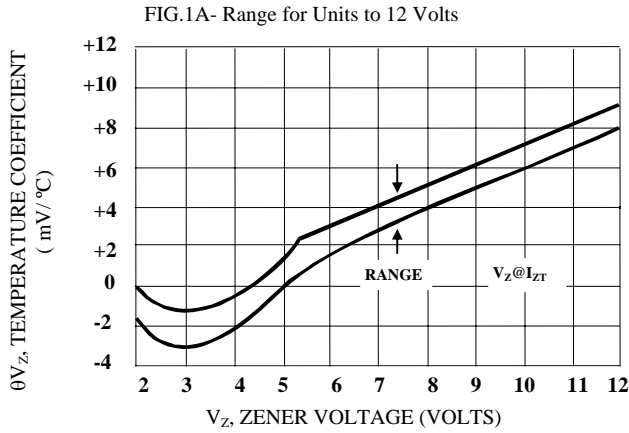


Figure 2. Temperature Coefficients (-55°C to +150°C temperature change; 90% of the units are in the ranges indicated.)

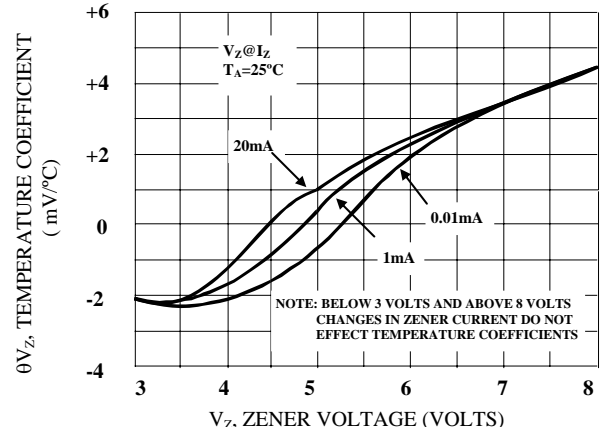
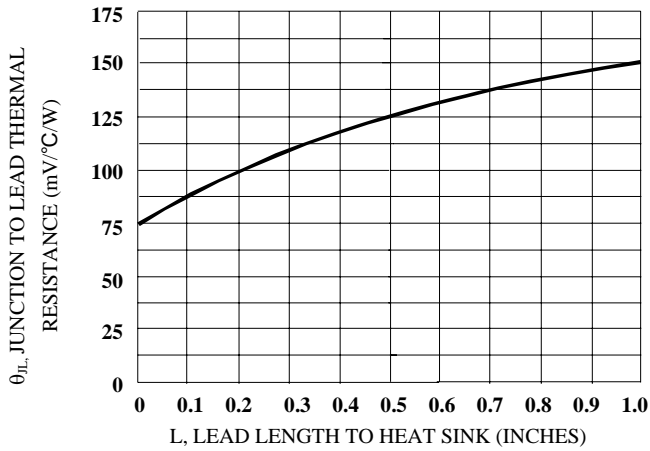


Figure 3. Typical Thermal Resistance versus Lead Length

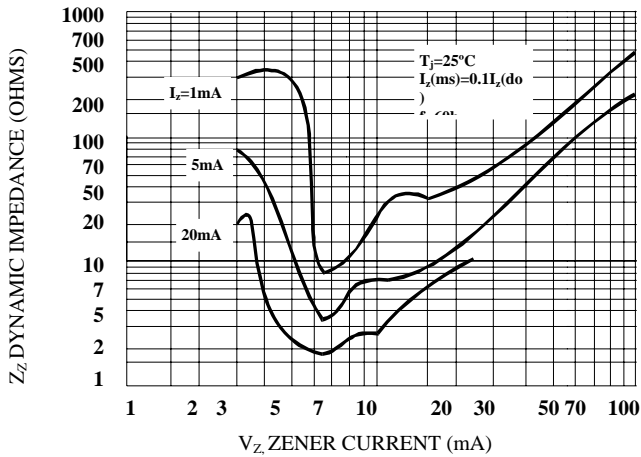


Figure 4. Effect of Zener Current

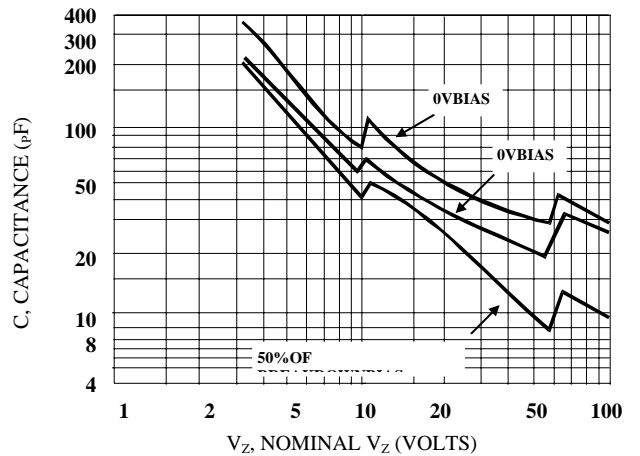


Figure 7 - Power Temperature De-rating Curve

