



Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

TEL: (805) 522-9998 FAX: (805) 522-9989

E-mail: frontiersales@frontierusa.com

Web: <http://www.frontierusa.com>

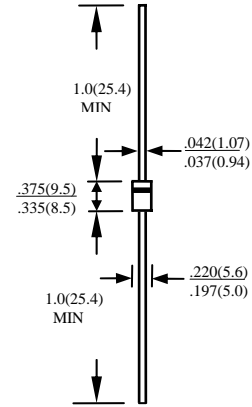
5 WATT SILICON ZENER DIODE IN5342B-LFR THRU IN5388B-LFR

FEATURES

- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94V-0
- LOW ZENER IMPEDANCE
- EXCELLENT CLAMPING CAPABILITY
- ROHS

MECHANICAL DATA

- CASE: MOLDED PLASTIC, DO-201AE, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: AXIAL LEADS SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: COLOR BAND DENOTES CATHODE
- MOUNTING POSITION: ANY
- WEIGHT: 1.2 GRAM



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 = 1A FOR ALL TYPES) | | | | | | | | | |
|--|---|---------------------------------|--|---|--|------|---------------------------------------|--|--|
| JEDEC TYPE NO | NOMINAL ZENER VOLTS V _Z @I _{ZT} VOLTS | TEST CURRENT I _{ZT} mA | MAXIMUM ZENER IMPEDANCE | | MAX. REVERSE LEAKAGE CURRENT | | MAX SURGE CURRENT I _R AMPS | MAX VOLTAGE REGULATION V _Z VOLT | MAXIMUM REGULATOR CURRENT I _{ZM} mA |
| | | | Z _{ZT} @ I _{ZT} Ohms | Z _{ZK} @ I _{ZK} =1mA Ohms | I _R @ V _R μA VOLTS | | | | |
| 1N5342B-LFR | 6.8 | 175 | 1 | 200 | 10 | 5.2 | 11.5 | 0.15 | 700 |
| 1N5343B-LFR | 7.5 | 175 | 1.5 | 200 | 10 | 5.7 | 10.7 | 0.15 | 630 |
| 1N5344B-LFR | 8.2 | 150 | 1.5 | 200 | 10 | 6.2 | 10 | 0.2 | 580 |
| 1N5345B-LFR | 8.7 | 150 | 2 | 200 | 10 | 6.6 | 9.5 | 0.2 | 545 |
| 1N5346B-LFR | 9.1 | 150 | 2 | 150 | 7.5 | 6.9 | 9.2 | 0.22 | 520 |
| 1N5347B-LFR | 10 | 125 | 2 | 125 | 5 | 7.6 | 8.6 | 0.22 | 475 |
| 1N5348B-LFR | 11 | 125 | 2.5 | 125 | 5 | 8.4 | 8 | 0.25 | 430 |
| 1N5349B-LFR | 12 | 100 | 2.5 | 125 | 2 | 9.1 | 7.5 | 0.25 | 395 |
| 1N5350B-LFR | 13 | 100 | 2.5 | 100 | 1 | 9.9 | 7 | 0.25 | 365 |
| 1N5351B-LFR | 14 | 100 | 2.5 | 75 | 1 | 10.6 | 6.7 | 0.25 | 340 |
| 1N5352B-LFR | 15 | 75 | 2.5 | 75 | 1 | 11.5 | 6.3 | 0.25 | 315 |
| 1N5353B-LFR | 16 | 75 | 2.5 | 75 | 1 | 12.2 | 6 | 0.3 | 295 |
| 1N5354B-LFR | 17 | 70 | 2.5 | 75 | 0.5 | 12.9 | 5.8 | 0.35 | 280 |
| 1N5355B-LFR | 18 | 65 | 2.5 | 75 | 0.5 | 13.7 | 5.5 | 0.4 | 265 |
| 1N5356B-LFR | 19 | 65 | 3 | 75 | 0.5 | 14.4 | 5.3 | 0.4 | 250 |
| 1N5357B-LFR | 20 | 65 | 3 | 75 | 0.5 | 15.2 | 5.1 | 0.4 | 237 |
| 1N5358B-LFR | 22 | 50 | 3.5 | 75 | 0.5 | 16.7 | 4.7 | 0.45 | 216 |
| 1N5359B-LFR | 24 | 50 | 3.5 | 100 | 0.5 | 18.2 | 4.4 | 0.55 | 198 |
| 1N5360B-LFR | 25 | 50 | 4 | 110 | 0.5 | 19 | 4.3 | 0.55 | 190 |
| 1N5361B-LFR | 27 | 50 | 5 | 120 | 0.5 | 20.6 | 4.1 | 0.6 | 176 |
| 1N5362B-LFR | 28 | 50 | 6 | 130 | 0.5 | 21.2 | 3.9 | 0.6 | 170 |
| 1N5363B-LFR | 30 | 40 | 8 | 140 | 0.5 | 22.8 | 3.7 | 0.6 | 158 |
| 1N5364B-LFR | 33 | 40 | 10 | 150 | 0.5 | 25.1 | 3.5 | 0.6 | 144 |
| 1N5365B-LFR | 36 | 30 | 11 | 160 | 0.5 | 27.4 | 3.3 | 0.65 | 132 |
| 1N5366B-LFR | 39 | 30 | 14 | 170 | 0.5 | 29.7 | 3.1 | 0.65 | 122 |
| 1N5367B-LFR | 43 | 30 | 20 | 190 | 0.5 | 32.7 | 2.8 | 0.7 | 110 |
| 1N5368B-LFR | 47 | 25 | 25 | 210 | 0.5 | 35.8 | 2.7 | 0.8 | 100 |
| 1N5369B-LFR | 51 | 25 | 27 | 230 | 0.5 | 38.8 | 2.5 | 0.9 | 93 |
| 1N5370B-LFR | 56 | 20 | 35 | 280 | 0.5 | 42.6 | 2.3 | 1 | 86 |
| 1N5371B-LFR | 60 | 20 | 40 | 350 | 0.5 | 42.5 | 2.2 | 1.2 | 79 |
| 1N5372B-LFR | 62 | 20 | 42 | 400 | 0.5 | 47.1 | 2.1 | 1.35 | 76 |
| 1N5373B-LFR | 68 | 20 | 44 | 500 | 0.5 | 51.7 | 2 | 1.5 | 70 |
| 1N5374B-LFR | 75 | 20 | 45 | 620 | 0.5 | 56 | 1.9 | 1.6 | 63 |
| 1N5375B-LFR | 82 | 15 | 65 | 720 | 0.5 | 62.2 | 1.8 | 1.8 | 58 |
| 1N5376B-LFR | 87 | 15 | 75 | 760 | 0.5 | 66 | 1.7 | 2 | 54.5 |
| 1N5377B-LFR | 91 | 15 | 75 | 760 | 0.5 | 69.2 | 1.6 | 2.2 | 52.5 |
| 1N5378B-LFR | 100 | 12 | 90 | 800 | 0.5 | 76 | 1.5 | 2.5 | 47.5 |
| 1N5379B-LFR | 110 | 12 | 125 | 1000 | 0.5 | 83.6 | 1.4 | 2.5 | 43 |
| 1N5380B-LFR | 120 | 10 | 170 | 1150 | 0.5 | 91.2 | 1.3 | 2.5 | 39.5 |
| 1N5381B-LFR | 130 | 10 | 190 | 1250 | 0.5 | 98.8 | 1.2 | 2.5 | 36.6 |
| 1N5382B-LFR | 140 | 8 | 230 | 1500 | 0.5 | 106 | 1.2 | 2.5 | 34 |
| 1N5383B-LFR | 150 | 8 | 330 | 1500 | 0.5 | 114 | 1.1 | 3 | 31.6 |
| 1N5384B-LFR | 160 | 8 | 350 | 1650 | 0.5 | 122 | 1.1 | 3 | 29.4 |
| 1N5385B-LFR | 170 | 8 | 380 | 1750 | 0.5 | 129 | 1.0 | 3 | 28 |
| 1N5386B-LFR | 180 | 5 | 430 | 1750 | 0.5 | 137 | 1.0 | 4 | 26.4 |
| 1N5387B-LFR | 190 | 5 | 450 | 1850 | 0.5 | 144 | 0.9 | 5 | 25 |
| 1N5388B-LFR | 200 | 5 | 480 | 1850 | 0.5 | 152 | 0.9 | 5 | 23.6 |

NOTE: SUFFIX "B" OR ±5%

RATING AND CHARACTERISTIC CURVES 1N5342B-LF THRU 1N5388B-LF

TEMPERATURE COEFFICIENTS

Figure 1. Temperature Coefficient-Range for Units 3 to 10 Volts

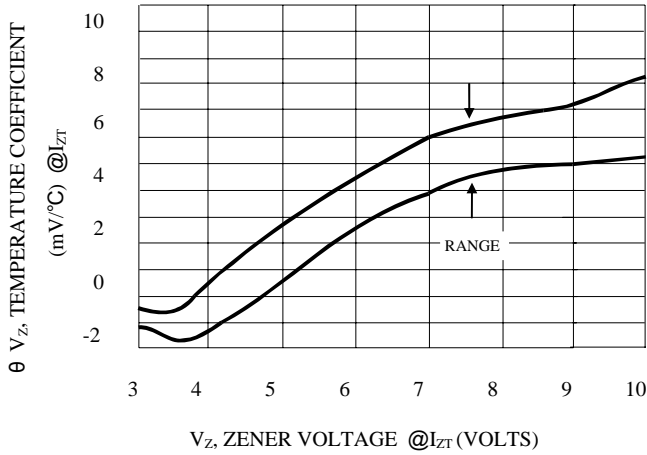


Figure 2. Power Temperature Derating Curve

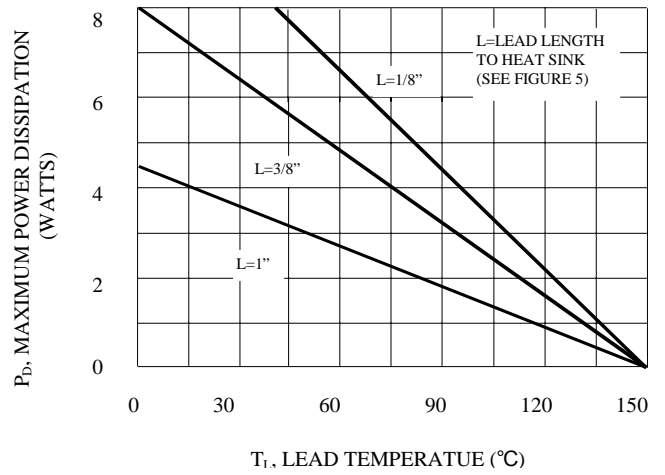


Figure 3. Typical Thermal Response L, Lead Length=3/8 Inch

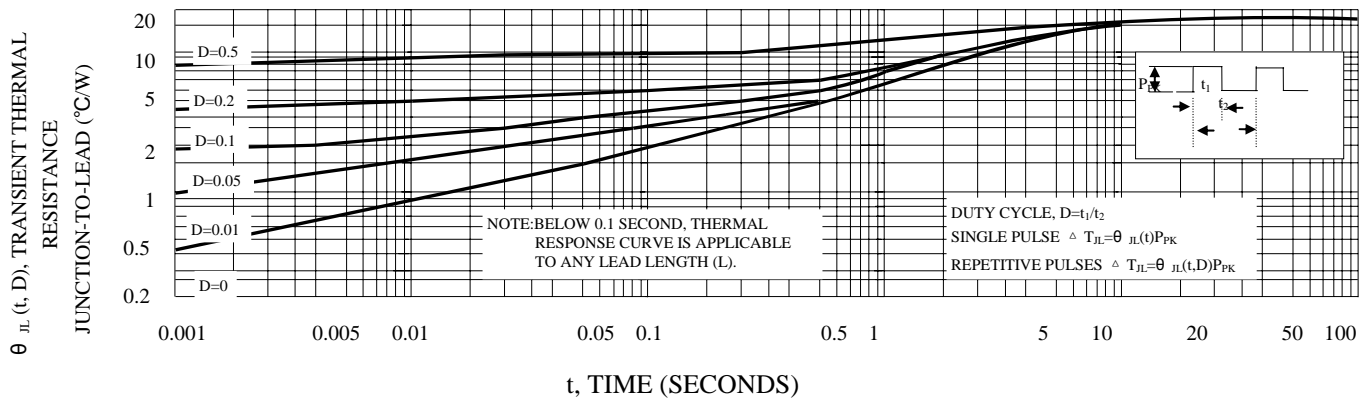


Figure 4. Temperature Coefficient-Range for Units 10 to 220 Volts

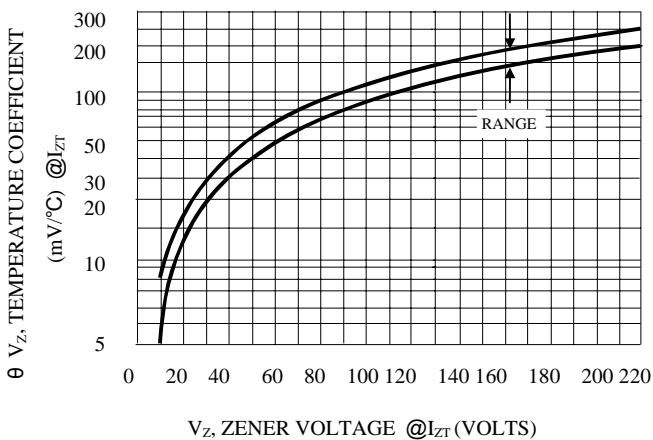
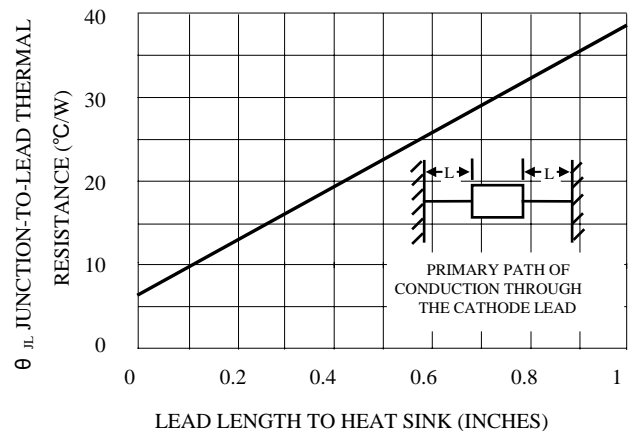


Figure 5. Typical Thermal Resistance



RATING AND CHARACTERISTIC CURVE 1N5342B-LF THRU 1N5388B-LF

Figure 6. Maximum Non-Repetitive Surge Current versus Nominal Zener Voltage

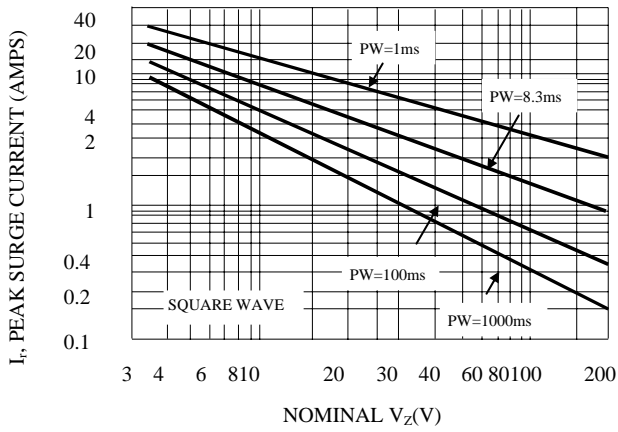


Figure 7. Peak Surge Current versus Pulse Width

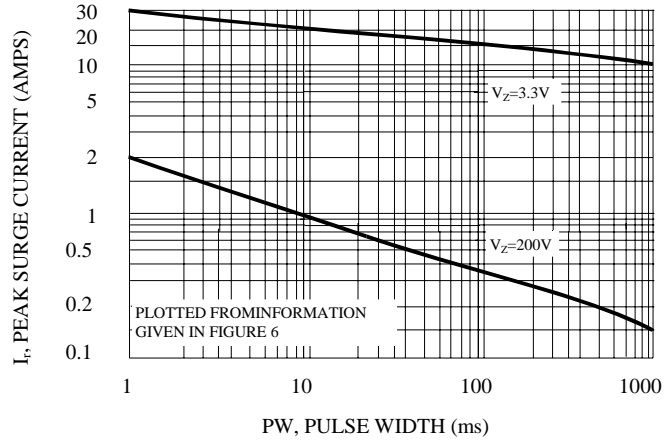


Figure 8. Zener Voltage versus Zener Current $V_z=3.3$ thru 10 Volts

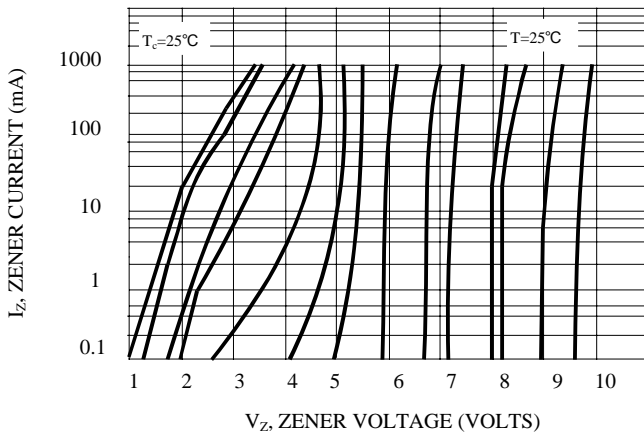


Figure 9. Zener Voltage versus Zener Current $V_z=11$ thru 75 Volts

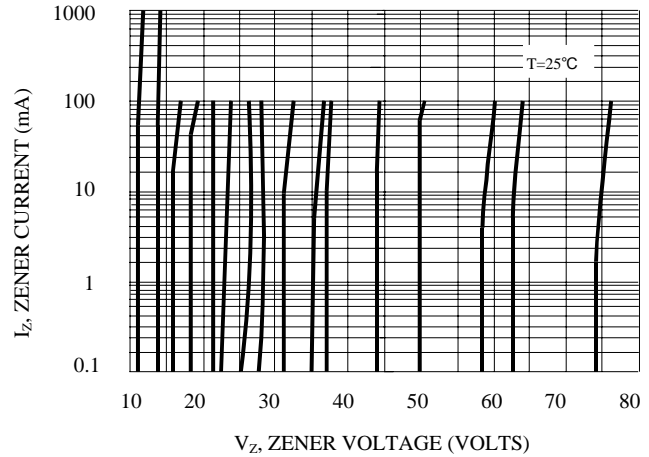


Figure 10. Zener Voltage versus Zener Current $V_z=82$ thru 200 Volts

