

CZRL5225B-G Thru. CZRL5267B-G

Voltage: 3.0 ~ 75V

Power Dissipation: 500mW

RoHS Device

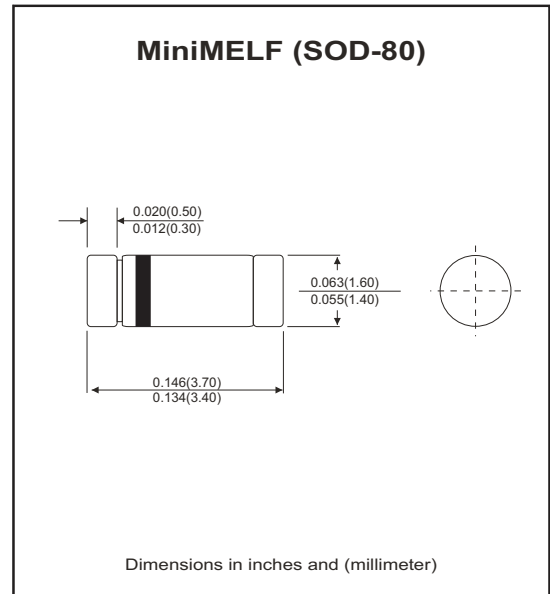


Features

- Silicon planar power Zener diodes.
- For use in stabilizing and clipping circuits with higher power rating.
- Standard Zener voltage tolerance is $\pm 5\%$ with a "B" suffix.

Mechanical Data:

- Case: MiniMELF glass case (SOD-80)
- Polarity: Color band denotes cathode end.
- Mounting position: Any.
- Weight: approx. 0.05g



Circuit diagram



Electrical Characteristics (TA=25°C, unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|------------------|--------------------|------|
| Zener current (See table "Characteristics") | | | |
| Power dissipation at TA=25°C | P _{tot} | 500 ⁽¹⁾ | mW |
| Thermal resistance, junction to ambient air | R _{θJA} | 300 ⁽¹⁾ | °C/W |
| Junction temperature | T _J | 175 | °C |
| Storage temperature range | T _{STG} | -65 to +150 | °C |

Note: Valid provided that electrodes are kept at ambient temperature.

ELECTRICAL CHARACTERISTIC (CZRL5225B-G Thru. CZRL5267B-G)
 Max VF=1.25V at IF=200mA, At TA=25°C unless otherwise specified.

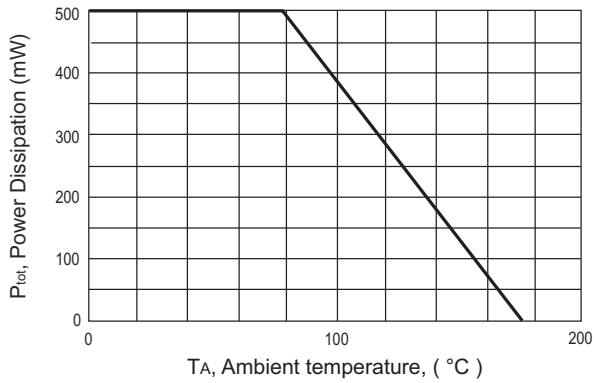
| Type NO. | Nominal Zener Voltage at IZT VZ(V) (Note 3) | Test Current IZT (mA) | Maximum Zener Impedance (Note 2) | | Typical Temperature Coefficient VZ (%/°C) | Max reverse Leakage Current | | Maximum Regulator Current IZM (mA) (Note 2.) |
|-------------|---|--------------------------|-------------------------------------|---------------------------|--|-----------------------------|-----------|--|
| | | | at IZT ZZT(ohm) | at IZK=0.25mA ZZK(ohm) | | IR (uA) | VR (V) | |
| CZRL5225B-G | 3 | 20 | 29 | 1600 | -0.075 | 50 | 1 | 152 |
| CZRL5226B-G | 3.3 | 20 | 28 | 1600 | -0.07 | 25 | 1 | 138 |
| CZRL5227B-G | 3.6 | 20 | 24 | 1700 | -0.065 | 15 | 1 | 126 |
| CZRL5228B-G | 3.9 | 20 | 23 | 1900 | -0.06 | 10 | 1 | 115 |
| CZRL5229B-G | 4.3 | 20 | 22 | 2000 | -0.055 | 5 | 1 | 106 |
| CZRL5230B-G | 4.7 | 20 | 19 | 1900 | ±0.030 | 5 | 2 | 97 |
| CZRL5231B-G | 5.1 | 20 | 17 | 1600 | ±0.030 | 5 | 2 | 89 |
| CZRL5232B-G | 5.6 | 20 | 11 | 1600 | 0.038 | 5 | 3 | 81 |
| CZRL5233B-G | 6 | 20 | 7 | 1600 | 0.038 | 5 | 3.5 | 76 |
| CZRL5234B-G | 6.2 | 20 | 7 | 1000 | 0.045 | 5 | 4 | 73 |
| CZRL5235B-G | 6.8 | 20 | 5 | 750 | 0.05 | 3 | 5 | 67 |
| CZRL5236B-G | 7.5 | 20 | 6 | 500 | 0.058 | 3 | 6 | 61 |
| CZRL5237B-G | 8.2 | 20 | 8 | 500 | 0.062 | 3 | 6.5 | 55 |
| CZRL5238B-G | 8.7 | 20 | 8 | 600 | 0.065 | 3 | 6.5 | 52 |
| CZRL5239B-G | 9.1 | 20 | 10 | 600 | 0.068 | 3 | 7 | 50 |
| CZRL5240B-G | 10 | 20 | 17 | 600 | 0.075 | 3 | 8 | 45 |
| CZRL5241B-G | 11 | 20 | 22 | 600 | 0.076 | 2 | 8.4 | 41 |
| CZRL5242B-G | 12 | 20 | 30 | 600 | 0.077 | 1 | 9.1 | 38 |
| CZRL5243B-G | 13 | 9.5 | 13 | 600 | 0.079 | 0.5 | 9.9 | 35 |
| CZRL5244B-G | 14 | 9 | 15 | 600 | 0.082 | 0.1 | 10 | 32 |
| CZRL5245B-G | 15 | 8.5 | 16 | 600 | 0.082 | 0.1 | 11 | 30 |
| CZRL5246B-G | 16 | 7.8 | 17 | 600 | 0.083 | 0.1 | 12 | 28 |
| CZRL5247B-G | 17 | 7.4 | 19 | 600 | 0.084 | 0.1 | 13 | 27 |
| CZRL5248B-G | 18 | 7 | 21 | 600 | 0.085 | 0.1 | 14 | 25 |
| CZRL5249B-G | 19 | 6.6 | 23 | 600 | 0.086 | 0.1 | 14 | 24 |
| CZRL5250B-G | 20 | 6.2 | 25 | 600 | 0.086 | 0.1 | 15 | 23 |
| CZRL5251B-G | 22 | 5.6 | 29 | 600 | 0.087 | 0.1 | 17 | 21 |
| CZRL5252B-G | 24 | 5.2 | 33 | 600 | 0.087 | 0.1 | 18 | 19.1 |
| CZRL5253B-G | 25 | 5 | 35 | 600 | 0.089 | 0.1 | 19 | 18.2 |
| CZRL5254B-G | 27 | 4.6 | 41 | 600 | 0.09 | 0.1 | 21 | 16.8 |
| CZRL5255B-G | 28 | 4.5 | 44 | 600 | 0.091 | 0.1 | 21 | 16.2 |
| CZRL5256B-G | 30 | 4.2 | 49 | 600 | 0.091 | 0.1 | 23 | 15.1 |
| CZRL5257B-G | 33 | 3.8 | 58 | 700 | 0.092 | 0.1 | 25 | 13.8 |
| CZRL5258B-G | 36 | 3.4 | 70 | 700 | 0.093 | 0.1 | 27 | 12.6 |
| CZRL5259B-G | 39 | 3.2 | 80 | 800 | 0.094 | 0.1 | 30 | 11.6 |
| CZRL5260B-G | 43 | 3 | 93 | 900 | 0.095 | 0.1 | 33 | 10.6 |
| CZRL5261B-G | 47 | 2.7 | 105 | 1000 | 0.095 | 0.1 | 36 | 9.7 |
| CZRL5262B-G | 51 | 2.5 | 125 | 1100 | 0.096 | 0.1 | 39 | 8.9 |
| CZRL5263B-G | 56 | 2.2 | 150 | 1300 | 0.096 | 0.1 | 43 | -- |
| CZRL5264B-G | 60 | 2.1 | 170 | 1400 | 0.097 | 0.1 | 46 | -- |
| CZRL5265B-G | 62 | 2 | 185 | 1400 | 0.097 | 0.1 | 47 | -- |
| CZRL5266B-G | 68 | 1.8 | 230 | 1600 | 0.097 | 0.1 | 52 | -- |
| CZRL5267B-G | 75 | 1.7 | 270 | 1700 | 0.098 | 0.1 | 56 | -- |

Notes:

- (1) The Zener impedance is derived from the 1KHZ AC volt age which results when an AC current having an RMS value equal to 10% of the Zener current (IZT or IZK) is superim posed on IZT or IZK. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.
- (2) Valid provided that electrodes at a distance of 10mm from case are kept at ambient temperature.
- (3) Tested under thermal equilibrium and DC test conditions.

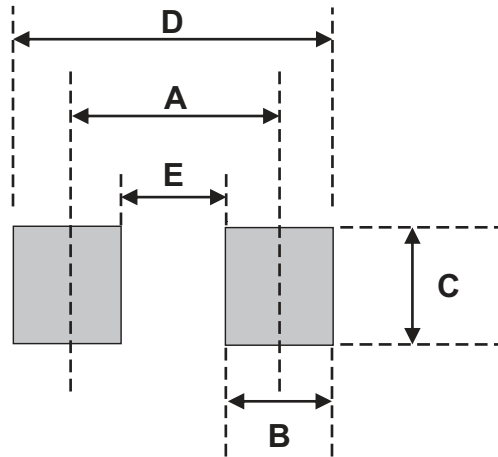
RATING AND CHARACTERISTIC CURVES (CZRL5225B-G Thru. CZRL5267B-G)

Fig.1- Admissible power dissipation vs. ambient temperature



Suggested PAD Layout

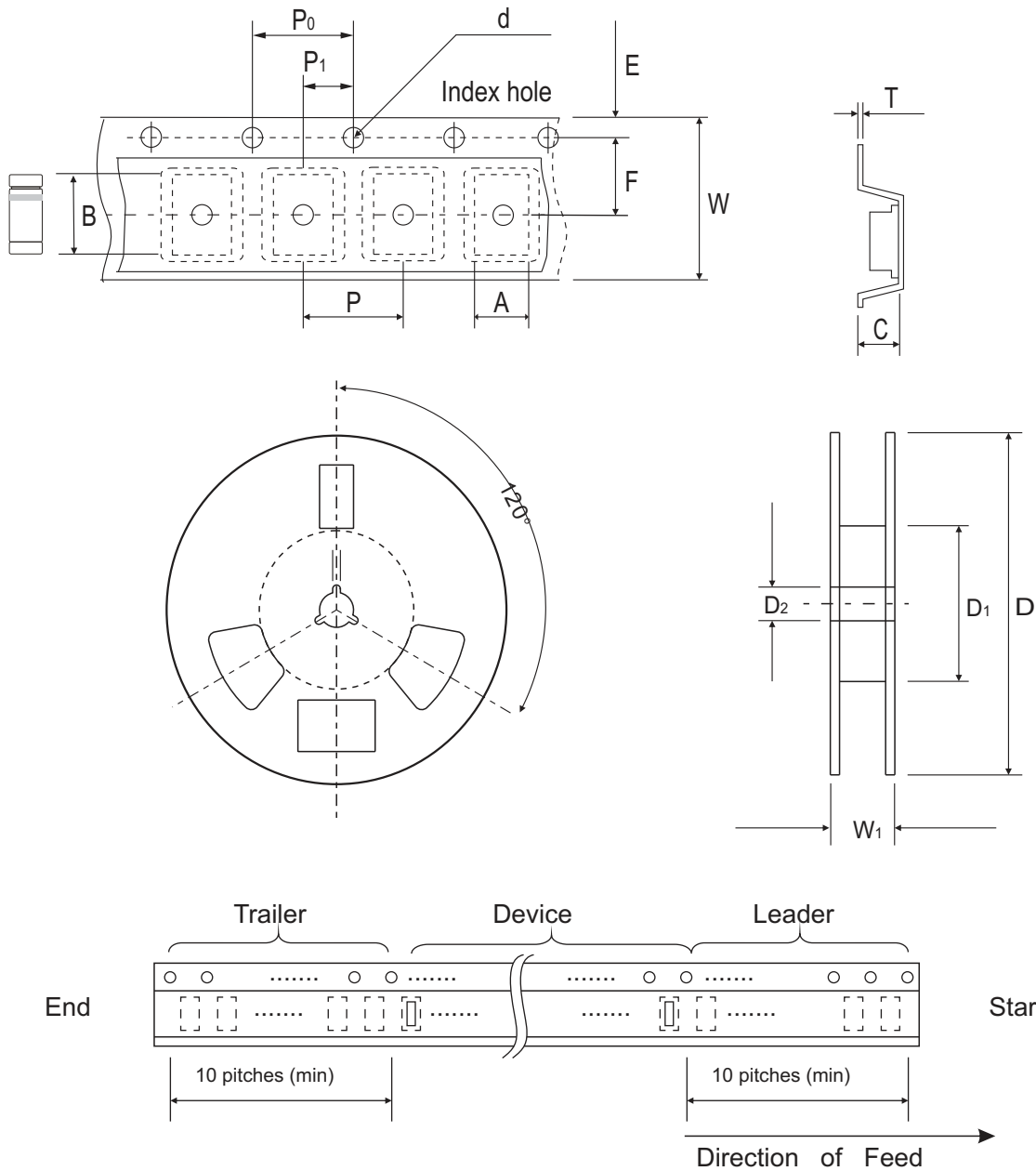
| SIZE | Mini-MELF (SOD-80) | |
|------|--------------------|--------|
| | (mm) | (inch) |
| A | 3.40 | 0.134 |
| B | 1.30 | 0.051 |
| C | 1.70 | 0.067 |
| D | 5.10 | 0.201 |
| E | 1.70 | 0.067 |



Standard Packaging

| Case Type | REEL PACK | |
|--------------------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| Mini MELF (SOD-80) | 2,500 | 7 |

Reel Taping Specification



| | | | | | | | | |
|-----------------------|--------|------------|-------------|-------------|---------------|--------------|------------|---------------|
| Mini-MELF (SOD-80) | SYMBOL | A | B | C | d | D | D1 | D2 |
| | (mm) | 2.0 (max) | 3.9 (max) | 2.0 (max) | 1.55 ± 0.10 | 178 ± 1.00 | 50.0 MIN. | 13.0 ± 0.20 |
| | (inch) | 0.078(max) | 0.153 (max) | 0.078 (max) | 0.061 ± 0.004 | 7.00 ± 0.039 | 1.969 MIN. | 0.512 ± 0.008 |

| | | | | | | | | |
|-----------------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|-----------|
| Mini-MELF (SOD-80) | SYMBOL | E | F | P | P0 | P1 | W | W1 |
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 8.00 ± 0.30 | 14.4 MAX. |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.314 ± 0.012 | 0.567 MAX |