

GLZ2.0 SERIES

SURFACE MOUNT ZENER DIODES

VOLTAGE 2.0 to 56 Volts

POWER 500 mWatts

MINI-MELF / LL34

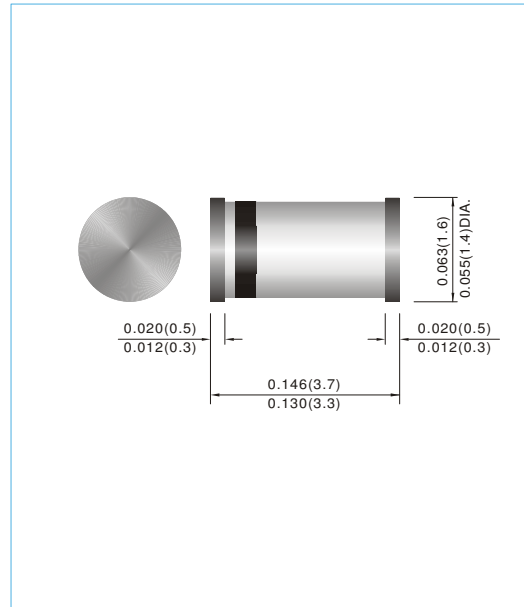
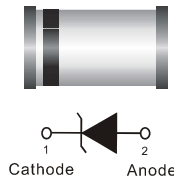
Unit : inch(mm)

FEATURES

- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in comply with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: Molded Glass MINI-MELF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.001 ounces, 0.03 grams.
- Mounting Position: Any
- Polarity : Color band denotes cathode end
- Packing information
T/R - 2.5K per 7" plastic Reel
T/R - 10K per 13" plastic Reel



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| Parameter | Symbol | Value | Units |
|---|-----------|--------------|------------------|
| Power Dissipation at $T_A = 25^\circ\text{C}$ | P_{TOT} | 500 | mW |
| Junction Temperature Range | T_J | -55 to + 175 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -65 to + 175 | $^\circ\text{C}$ |

Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

| Parameter | Symbol | Min. | Typ. | Max. | Units |
|--|-----------------|------|------|------|----------------------------|
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | -- | -- | 0.3 | $^\circ\text{C}/\text{mW}$ |
| Forward Voltage at $I_F = 100\text{mA}$ | V_F | -- | -- | 1 | V |

Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

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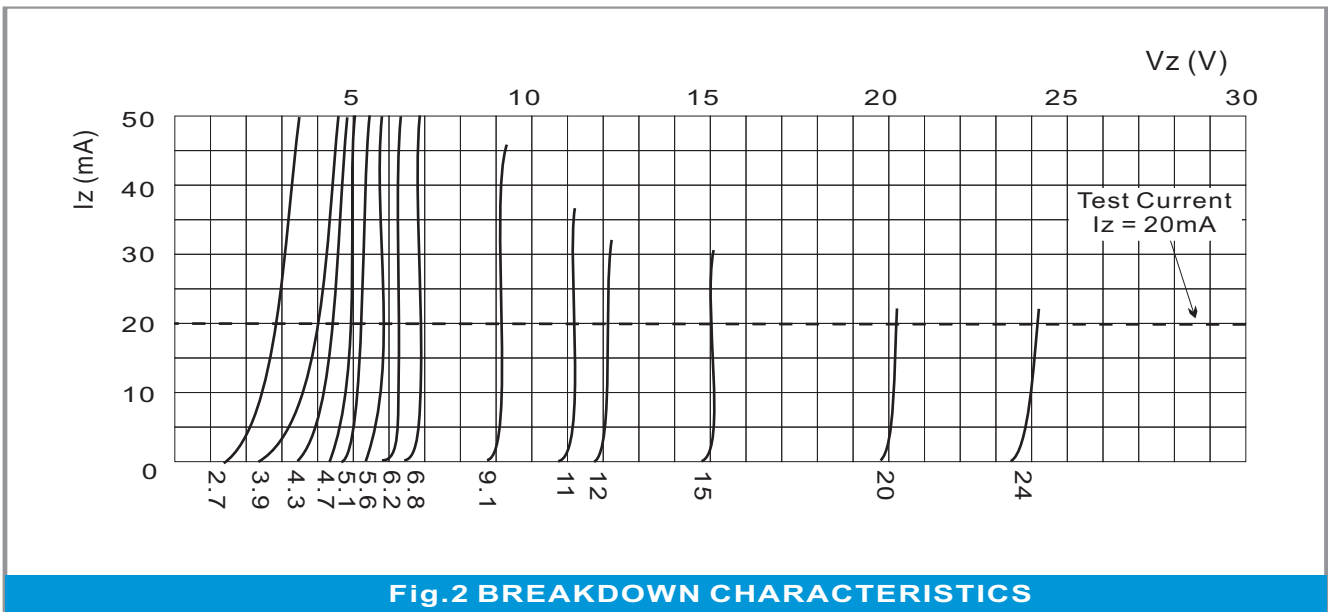
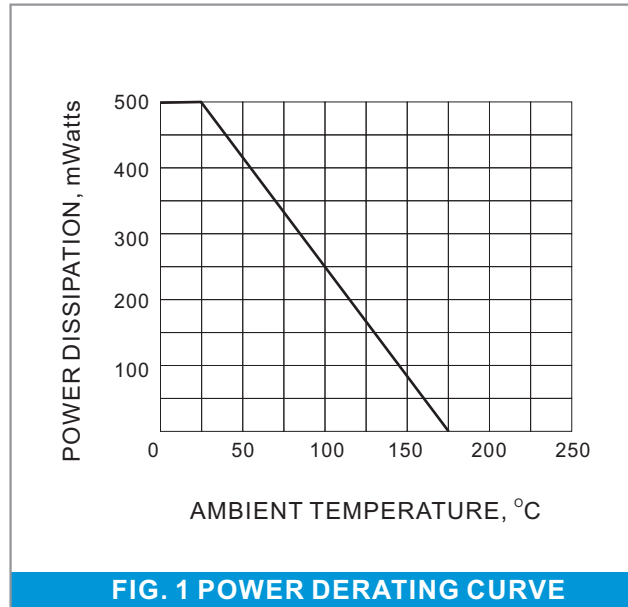
| Part Number | Nominal Zener Voltage | | | Max. Zener Impedance | | | | Max Reverse Leakage Current | | Marking Code |
|---------------------|----------------------------------|--------|--------|-----------------------------------|----|-----------------------------------|-----|---------------------------------|-----|--------------|
| | V _Z @ I _{ZT} | | | Z _{ZT} @ I _{ZT} | | Z _{ZK} @ I _{ZK} | | I _R @ V _R | | |
| | Nom. V | Min. V | Max. V | Ω | mA | Ω | mA | μA | V | |
| 500 mW Zener Diodes | | | | | | | | | | |
| GLZ 2.0A | 2 | 1.88 | 2.1 | 140 | 20 | 2000 | 1 | 120 | 0.5 | 2A0 |
| GLZ 2.0B | 2 | 2.02 | 2.2 | 140 | 20 | 2000 | 1 | 120 | 0.5 | 2B0 |
| GLZ 2.2A | 2.2 | 2.12 | 2.3 | 120 | 20 | 2000 | 1 | 120 | 0.7 | 2A2 |
| GLZ 2.2B | 2.2 | 2.22 | 2.41 | 120 | 20 | 2000 | 1 | 120 | 0.7 | 2B2 |
| GLZ 2.4A | 2.4 | 2.33 | 2.52 | 100 | 20 | 2000 | 1 | 120 | 1 | 2A4 |
| GLZ 2.4B | 2.4 | 2.43 | 2.63 | 100 | 20 | 2000 | 1 | 120 | 1 | 2B4 |
| GLZ 2.7A | 2.7 | 2.54 | 2.75 | 100 | 20 | 1000 | 1 | 120 | 1 | 2A7 |
| GLZ 2.7B | 2.7 | 2.69 | 2.91 | 100 | 20 | 1000 | 1 | 120 | 1 | 2B7 |
| GLZ 3.0A | 3 | 2.85 | 3.07 | 80 | 20 | 1000 | 1 | 50 | 1 | 3A0 |
| GLZ 3.0B | 3 | 3.01 | 3.22 | 80 | 20 | 1000 | 1 | 50 | 1 | 3B0 |
| GLZ 3.3A | 3.3 | 3.16 | 3.38 | 70 | 20 | 1000 | 1 | 20 | 1 | 3A3 |
| GLZ 3.3B | 3.3 | 3.32 | 3.53 | 70 | 20 | 1000 | 1 | 20 | 1 | 3B3 |
| GLZ 3.6A | 3.6 | 3.46 | 3.69 | 60 | 20 | 1000 | 1 | 10 | 1 | 3A6 |
| GLZ 3.6B | 3.6 | 3.6 | 3.84 | 60 | 20 | 1000 | 1 | 10 | 1 | 3B6 |
| GLZ 3.9A | 3.9 | 3.74 | 4.01 | 50 | 20 | 1000 | 1 | 5 | 1 | 3A9 |
| GLZ 3.9B | 3.9 | 3.89 | 4.16 | 50 | 20 | 1000 | 1 | 5 | 1 | 3B9 |
| GLZ 4.3A | 4.3 | 4.04 | 4.29 | 40 | 20 | 1000 | 1 | 5 | 1 | 4A3 |
| GLZ 4.3B | 4.3 | 4.17 | 4.43 | 40 | 20 | 1000 | 1 | 5 | 1 | 4B3 |
| GLZ 4.3C | 4.3 | 4.3 | 4.57 | 40 | 20 | 1000 | 1 | 5 | 1 | 4C3 |
| GLZ 4.7A | 4.7 | 4.44 | 4.68 | 25 | 20 | 900 | 1 | 5 | 1 | 4A7 |
| GLZ 4.7B | 4.7 | 4.55 | 4.80 | 25 | 20 | 900 | 1 | 5 | 1 | 4B7 |
| GLZ 4.7C | 4.7 | 4.68 | 4.93 | 25 | 20 | 900 | 1 | 5 | 1 | 4C7 |
| GLZ 5.1A | 5.1 | 4.81 | 5.07 | 20 | 20 | 800 | 1 | 5 | 1.5 | 5A1 |
| GLZ 5.1B | 5.1 | 4.94 | 5.2 | 20 | 20 | 800 | 1 | 5 | 1.5 | 5B1 |
| GLZ 5.1C | 5.1 | 5.09 | 5.37 | 20 | 20 | 800 | 1 | 5 | 1.5 | 5C1 |
| GLZ 5.6A | 5.6 | 5.28 | 5.55 | 13 | 20 | 500 | 1 | 5 | 2.5 | 5A6 |
| GLZ 5.6B | 5.6 | 5.45 | 5.73 | 13 | 20 | 500 | 1 | 5 | 2.5 | 5B6 |
| GLZ 5.6C | 5.6 | 5.61 | 5.91 | 13 | 20 | 500 | 1 | 5 | 2.5 | 5C6 |
| GLZ 6.2A | 6.2 | 5.78 | 6.09 | 10 | 20 | 300 | 1 | 5 | 3 | 6A2 |
| GLZ 6.2B | 6.2 | 5.96 | 6.27 | 10 | 20 | 300 | 1 | 5 | 3 | 6B2 |
| GLZ 6.2C | 6.2 | 6.12 | 6.44 | 10 | 20 | 300 | 1 | 5 | 3 | 6C2 |
| GLZ 6.8A | 6.8 | 6.29 | 6.63 | 8 | 20 | 150 | 0.5 | 2 | 3.5 | 6A8 |
| GLZ 6.8B | 6.8 | 6.49 | 6.83 | 8 | 20 | 150 | 0.5 | 2 | 3.5 | 6B8 |
| GLZ 6.8C | 6.8 | 6.66 | 7.01 | 8 | 20 | 150 | 0.5 | 2 | 3.5 | 6C8 |
| GLZ 7.5A | 7.5 | 6.85 | 7.22 | 8 | 20 | 120 | 0.5 | 0.5 | 4 | 7A5 |
| GLZ 7.5B | 7.5 | 7.07 | 7.45 | 8 | 20 | 120 | 0.5 | 0.5 | 4 | 7B5 |
| GLZ 7.5C | 7.5 | 7.29 | 7.67 | 8 | 20 | 120 | 0.5 | 0.5 | 4 | 7C5 |
| GLZ 8.2A | 8.2 | 7.53 | 7.92 | 8 | 20 | 120 | 0.5 | 0.5 | 5 | 8A2 |
| GLZ 8.2B | 8.2 | 7.78 | 8.19 | 8 | 20 | 120 | 0.5 | 0.5 | 5 | 8B2 |
| GLZ 8.2C | 8.2 | 8.03 | 8.45 | 8 | 20 | 120 | 0.5 | 0.5 | 5 | 8C2 |
| GLZ 9.1A | 9.1 | 8.29 | 8.73 | 8 | 20 | 120 | 0.5 | 0.5 | 6 | 9A1 |
| GLZ 9.1B | 9.1 | 8.57 | 9.01 | 8 | 20 | 120 | 0.5 | 0.5 | 6 | 9B1 |
| GLZ 9.1C | 9.1 | 8.83 | 9.3 | 8 | 20 | 120 | 0.5 | 0.5 | 6 | 9C1 |
| GLZ 10A | 10 | 9.12 | 9.59 | 8 | 20 | 120 | 0.5 | 0.2 | 7 | 10A |
| GLZ 10B | 10 | 9.41 | 9.9 | 8 | 20 | 120 | 0.5 | 0.2 | 7 | 10B |
| GLZ 10C | 10 | 9.7 | 10.2 | 8 | 20 | 120 | 0.5 | 0.2 | 7 | 10C |
| GLZ 10D | 10 | 9.94 | 10.44 | 8 | 20 | 120 | 0.5 | 0.2 | 7 | 10D |
| GLZ 11A | 11 | 10.18 | 10.71 | 10 | 10 | 120 | 0.5 | 0.2 | 8 | 11A |
| GLZ 11B | 11 | 10.5 | 11.05 | 10 | 10 | 120 | 0.5 | 0.2 | 8 | 11B |
| GLZ 11C | 11 | 10.82 | 11.38 | 10 | 10 | 120 | 0.5 | 0.2 | 8 | 11C |

GLZ2.0 SERIES

| Part Number | Nominal Zener Voltage | | | Max. Zener Impedance | | | | Max Reverse Leakage Current | | Marking Code |
|---------------------|----------------------------------|--------|--------|-----------------------------------|----|-----------------------------------|-----|---------------------------------|----|--------------|
| | V _Z @ I _{ZT} | | | Z _{ZT} @ I _{ZT} | | Z _{ZK} @ I _{ZK} | | I _R @ V _R | | |
| | Nom. V | Min. V | Max. V | Ω | mA | Ω | mA | μA | V | |
| 500 mW Zener Diodes | | | | | | | | | | |
| GLZ 12A | 12 | 11.13 | 11.71 | 12 | 10 | 110 | 0.5 | 0.2 | 9 | 12A |
| GLZ 12B | 12 | 11.44 | 12.03 | 12 | 10 | 110 | 0.5 | 0.2 | 9 | 12B |
| GLZ 12C | 12 | 11.74 | 12.35 | 12 | 10 | 110 | 0.5 | 0.2 | 9 | 12C |
| GLZ 13A | 13 | 12.11 | 12.75 | 14 | 10 | 110 | 0.5 | 0.2 | 10 | 13A |
| GLZ 13B | 13 | 12.55 | 13.21 | 14 | 10 | 110 | 0.5 | 0.2 | 10 | 13B |
| GLZ 13C | 13 | 12.99 | 13.66 | 14 | 10 | 110 | 0.5 | 0.2 | 10 | 13C |
| GLZ 15A | 15 | 13.44 | 14.13 | 16 | 10 | 110 | 0.5 | 0.2 | 11 | 15A |
| GLZ 15B | 15 | 13.89 | 14.62 | 16 | 10 | 110 | 0.5 | 0.2 | 11 | 15B |
| GLZ 15C | 15 | 14.35 | 15.09 | 16 | 10 | 110 | 0.5 | 0.2 | 11 | 15C |
| GLZ 16A | 16 | 14.8 | 15.57 | 18 | 10 | 150 | 0.5 | 0.2 | 12 | 16A |
| GLZ 16B | 16 | 15.25 | 16.04 | 18 | 10 | 150 | 0.5 | 0.2 | 12 | 16B |
| GLZ 16C | 16 | 15.69 | 16.51 | 18 | 10 | 150 | 0.5 | 0.2 | 12 | 16C |
| GLZ 18A | 18 | 16.22 | 17.06 | 23 | 10 | 150 | 0.5 | 0.2 | 13 | 18A |
| GLZ 18B | 18 | 16.82 | 17.7 | 23 | 10 | 150 | 0.5 | 0.2 | 13 | 18B |
| GLZ 18C | 18 | 17.42 | 18.33 | 23 | 10 | 150 | 0.5 | 0.2 | 13 | 18C |
| GLZ 20A | 20 | 18.02 | 18.96 | 28 | 10 | 200 | 0.5 | 0.2 | 15 | 20A |
| GLZ 20B | 20 | 18.63 | 19.59 | 28 | 10 | 200 | 0.5 | 0.2 | 15 | 20B |
| GLZ 20C | 20 | 19.23 | 20.22 | 28 | 10 | 200 | 0.5 | 0.2 | 15 | 20C |
| GLZ 20D | 20 | 19.72 | 20.72 | 28 | 10 | 200 | 0.5 | 0.2 | 15 | 20D |
| GLZ 22A | 22 | 20.15 | 21.2 | 30 | 5 | 200 | 0.5 | 0.2 | 17 | 22A |
| GLZ 22B | 22 | 20.64 | 21.71 | 30 | 5 | 200 | 0.5 | 0.2 | 17 | 22B |
| GLZ 22C | 22 | 21.08 | 22.17 | 30 | 5 | 200 | 0.5 | 0.2 | 17 | 22C |
| GLZ 22D | 22 | 21.52 | 22.63 | 30 | 5 | 200 | 0.5 | 0.2 | 17 | 22D |
| GLZ 24A | 24 | 22.05 | 23.18 | 35 | 5 | 200 | 0.5 | 0.2 | 19 | 24A |
| GLZ 24B | 24 | 22.61 | 23.77 | 35 | 5 | 200 | 0.5 | 0.2 | 19 | 24B |
| GLZ 24C | 24 | 23.12 | 24.31 | 35 | 5 | 200 | 0.5 | 0.2 | 19 | 24C |
| GLZ 24D | 24 | 23.63 | 24.85 | 35 | 5 | 200 | 0.5 | 0.2 | 19 | 24D |
| GLZ 27A | 27 | 24.26 | 25.52 | 45 | 5 | 250 | 0.5 | 0.2 | 21 | 27A |
| GLZ 27B | 27 | 24.97 | 26.26 | 45 | 5 | 250 | 0.5 | 0.2 | 21 | 27B |
| GLZ 27C | 27 | 25.63 | 26.95 | 45 | 5 | 250 | 0.5 | 0.2 | 21 | 27C |
| GLZ 27D | 27 | 26.29 | 27.64 | 45 | 5 | 250 | 0.5 | 0.2 | 21 | 27D |
| GLZ 30A | 30 | 26.99 | 28.39 | 55 | 5 | 250 | 0.5 | 0.2 | 23 | 30A |
| GLZ 30B | 30 | 27.7 | 29.13 | 55 | 5 | 250 | 0.5 | 0.2 | 23 | 30B |
| GLZ 30C | 30 | 28.36 | 29.82 | 55 | 5 | 250 | 0.5 | 0.2 | 23 | 30C |
| GLZ 30D | 30 | 29.02 | 30.51 | 55 | 5 | 250 | 0.5 | 0.2 | 23 | 30D |
| GLZ 33A | 33 | 29.68 | 31.22 | 65 | 5 | 250 | 0.5 | 0.2 | 25 | 33A |
| GLZ 33B | 33 | 30.32 | 31.88 | 65 | 5 | 250 | 0.5 | 0.2 | 25 | 33B |
| GLZ 33C | 33 | 30.9 | 32.5 | 65 | 5 | 250 | 0.5 | 0.2 | 25 | 33C |
| GLZ 33D | 33 | 31.49 | 33.11 | 65 | 5 | 250 | 0.5 | 0.2 | 25 | 33D |
| GLZ 36A | 36 | 32.14 | 33.79 | 75 | 5 | 250 | 0.5 | 0.2 | 27 | 36A |
| GLZ 36B | 36 | 32.79 | 34.49 | 75 | 5 | 250 | 0.5 | 0.2 | 27 | 36B |
| GLZ 36C | 36 | 33.4 | 35.13 | 75 | 5 | 250 | 0.5 | 0.2 | 27 | 36C |
| GLZ 36D | 36 | 34.01 | 35.77 | 75 | 5 | 250 | 0.5 | 0.2 | 27 | 36D |
| GLZ 39A | 39 | 34.68 | 36.47 | 85 | 5 | 250 | 0.5 | 0.2 | 30 | 39A |
| GLZ 39B | 39 | 35.36 | 37.19 | 85 | 5 | 250 | 0.5 | 0.2 | 30 | 39B |
| GLZ 39C | 39 | 36 | 37.85 | 85 | 5 | 250 | 0.5 | 0.2 | 30 | 39C |
| GLZ 39D | 39 | 36.63 | 38.52 | 85 | 5 | 250 | 0.5 | 0.2 | 30 | 39D |
| GLZ 41 | 41 | 37 | 41 | 90 | 5 | - | - | 0.2 | 30 | 41 |
| GLZ 43 | 43 | 40 | 45 | 90 | 5 | - | - | 0.2 | 33 | 43 |
| GLZ 47 | 47 | 44 | 49 | 90 | 5 | - | - | 0.2 | 36 | 47 |
| GLZ 51 | 51 | 48 | 54 | 110 | 5 | - | - | 0.2 | 39 | 51 |
| GLZ 56 | 56 | 53 | 60 | 110 | 5 | - | - | 0.2 | 43 | 56 |

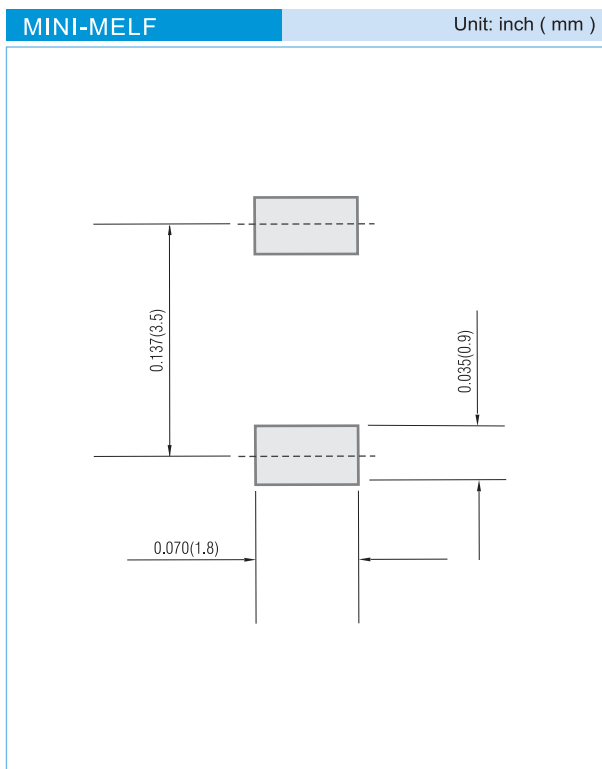
GLZ2.0 SERIES

RATING AND CHARACTERISTIC CURVES



GLZ2.0 SERIES

MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 10K per 13" plastic Reel
 - T/R - 2.5K per 7" plastic Reel

LEGAL STATEMENT

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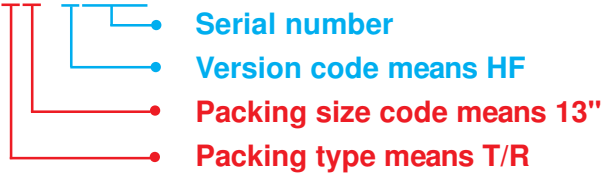
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GLZ2.0 SERIES

For example :

RB500V-40_R2_00001

Part No.



| Packing Code XX | | | | Version Code XXXXX | | |
|------------------------|----------------------|-------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| T/B | A | N/A | 0 | HF | 0 | serial number |
| T/R | R | 7" | 1 | RoHS | 1 | serial number |
| B/P | B | 13" | 2 | | | |
| T/P | T | 26mm | X | | | |
| TRR | S | 52mm | Y | | | |
| TRL | L | PBCU | U | | | |
| FORMING | F | PBCD | D | | | |

Part No_packing code_Version

GLZ2.0A_R1_10001

GLZ2.0A_R2_10001