

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix. Part numbers listed indicate a tolerance of  $\pm 20\%$  with guaranteed limits on only, VZ, IR and

### MAXIMUM RATINGS

| Rating                            | Value   |
|-----------------------------------|---|
| Thermal resistance                | 38°C/W junction to lead at 3/8" lead length from body                 |
| Thermal impedance                 | 4.5°C/W @ 10ms heating time   |
| Average rectified forward current | 1.0A @ $T_A = 55^\circ\text{C}$ and 0.75A @ $T_A = 100^\circ\text{C}$ |
| Forward surge current             | 30A @ 8.3ms half sine   |
| Solder temperatures               | 260°C for 10 s maximum  |
| Junction and storage temperature  | -65 to +200°C   |

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Part number | Working peak reverse voltage | Minimum breakdown voltage | Average rectified current <sup>(1)</sup> |       | Maximum forward voltage |      | Maximum reverse current |       | Maximum surge current <sup>(2)</sup> | Reverse recovery <sup>(3)</sup> |
|-------------|------------------------------|---------------------------|--|-------|-------------------------|------|-------------------------|-------|--------------------------------------|---------------------------------|
|             | $V_{RWM}$                    | $V_{BR} @ 50\mu\text{A}$  | $I_O @ T_A$                              |       | $V_F @ 3A$              |      | $I_R @ V_{RWM}$         |       | $I_{FSM}$                            | $t_{rr}$                        |
|             | Volts                        | Volts                     | Amps                                     |       | Volts                   |      | $\mu\text{A}$           |       | Amps                                 | $\mu\text{s}$                   |
|             |                              |                           | 55°C                                     | 100°C | Min                     | Max  | 25°C                    | 100°C |                                      |                                 |
| 1N5614      | 200                          | 220                       | 1.00                                     | 0.750 | 0.8                     | 1.30 | 0.5                     | 25    | 30                                   | 2.0                             |
| 1N5616      | 400                          | 440                       | 1.00                                     | 0.750 | 0.8                     | 1.30 | 0.5                     | 25    | 30                                   | 2.0                             |
| 1N5618      | 600                          | 660                       | 1.00                                     | 0.750 | 0.8                     | 1.30 | 0.5                     | 25    | 30                                   | 2.0                             |
| 1N5620      | 800                          | 880                       | 1.00                                     | 0.750 | 0.8                     | 1.30 | 0.5                     | 25    | 30                                   | 2.0                             |
| 1N5622      | 1000                         | 1100                      | 1.00                                     | 0.750 | 0.8                     | 1.30 | 0.5                     | 25    | 30                                   | 2.0                             |

Note 1: From 1 Amp at  $T_A = 55^\circ\text{C}$ , derate linearly at 5.56mA/°C to 0.75 Amp at  $T_A = 100^\circ\text{C}$ , from  $T_A = 100^\circ\text{C}$  derate linearly at 7.5mA/°C to 0 Amps at  $T_A = 200^\circ\text{C}$ . These ambient ratings are for PC boards where thermal resistance from mounting point to ambient is sufficiently controlled where  $T_{J(max)}$  does not exceed 175°C.

Note 2:  $T_A = 100^\circ\text{C}$ ,  $f = 60\text{Hz}$ ,  $I_O = 750\text{mA}$  for ten 8.3ms surges @ 1 minute intervals.

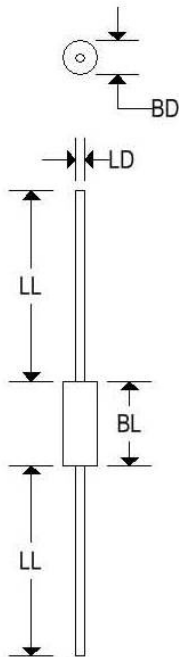
Note 3:  $I_F = 0.5A$ ,  $I_{RM} = 1A$ ,  $I_{R(REC)} = 0.250A$

# 1N5614-1N5622

## STANDARD RECOVERY RECTIFIERS

### MECHANICAL CHARACTERISTICS

|                  |                             |
|------------------|-----------------------------|
| <b>Case:</b>     | Digi B                      |
| <b>Marking:</b>  | Body painted, alpha-numeric |
| <b>Polarity:</b> | Cathode band                |

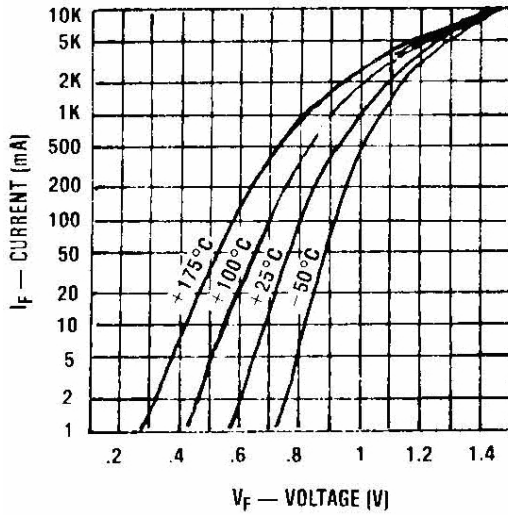


|    | Digi B |       |             |       |
|----|--------|-------|-------------|-------|
|    | Inches |       | Millimeters |       |
|    | Min    | Max   | Min         | Max   |
| BD | -      | 0.142 | -           | 3.607 |
| BL | -      | 0.250 | -           | 6.350 |
| LD | 0.038  | 0.042 | 0.965       | 1.067 |
| LL | 0.975  | -     | 24.765      | -     |

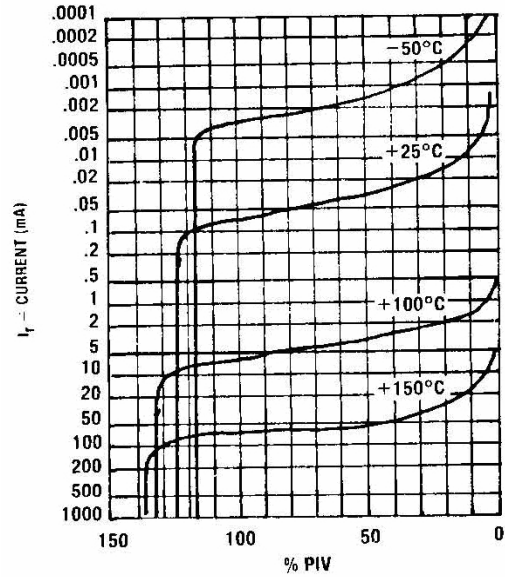
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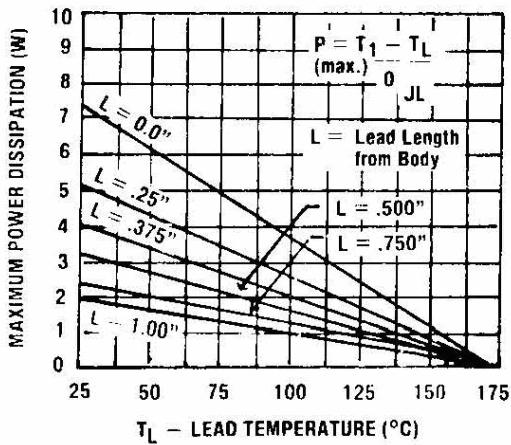
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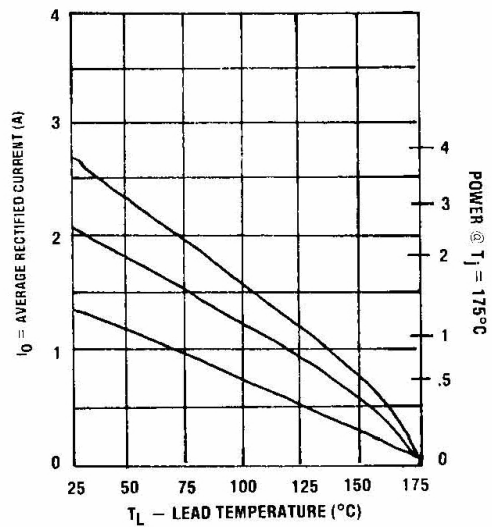
TYPICAL FORWARD VOLTAGE VS FORWARD CURRENT



TYPICAL REVERSE CURRENT VS PIV



MAXIMUM POWER DISSIPATION VS LEAD TEMPERATURE



MAXIMUM CURRENT VS LEAD TEMPERATURE