

High-reliability discrete products and engineering services since 1977

1N5400-1N5408

GENERAL PURPOSE RECTIFIERS

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.

MAXIMUM RATINGS

| Parameter | Symbol | 1N | | | | | | | | | I I mid |
|---|-----------------------------------|-------------|------|------|------|------|------|------|------|------|---------|
| | | 5400 | 5401 | 5402 | 5403 | 5404 | 5405 | 5406 | 5407 | 5408 | Unit |
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 140 | 210 | 280 | 350 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current, $.0.5$ " lead length @ T_L = 105 °C | I _{F(AV)} | 3.0 | | | | | | | А | | |
| Peak forward surge current 8.3ms single half-sine wave superimposed on rated load | I _{FSM} | 200 | | | | | | | А | | |
| Maximum full load reverse current, full cycle average 0.5" lead length @ T _L = 105°C | I _{R(AV)} | 500 | | | | | | | μΑ | | |
| Operating junction and storage temperature range | T _J , T _{stg} | -50 to +150 | | | | | | | °C | | |
| Power dissipation | P _D | 6.25 | | | | | | | W | | |
| Thermal resistance, junction to ambient | $R_{\theta JA}$ | 20 | | | | | | °C/W | | | |

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

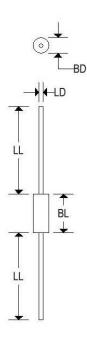
| Parameter | Symbol | 1N | | | | | | | | 11 | |
|---|----------------|------------|------|------|------|------|------|------|------|------|------|
| | | 5400 | 5401 | 5402 | 5403 | 5404 | 5405 | 5406 | 5407 | 5408 | Unit |
| Maximum instantaneous forward voltage @ 3.0A | V _F | | | | | 1.2 | | , | | | V |
| Maximum full load reverse current, full cycle T _A = 105°C | Irr | 0.5 | | | | | mA | | | | |
| Maximum DC reverse current @ rated DC blocking voltage $T_A = 25^{\circ}C$ $T_A = 150^{\circ}C$ | I _R | 5.0 500 | | | | | μΑ | | | | |
| Typical junction capacitance $V_R = 4.0V$, $f = 1.0 \text{ MHz}$ | Ст | 30 | | | | pF | | | | | |



High-reliability discrete products and engineering services since 1977

MECHANICAL CHARACTERISTICS

| Case | DO-201A | | | |
|----------|---------------|--|--|--|
| Marking | Alpha numeric | | | |
| Polarity | Cathode band | | | |



1N5400-1N5408

GENERAL PURPOSE RECTIFIERS

| | DO-201A | | | | | | | | |
|----|--------------------|-------|--------|-------|--|--|--|--|--|
| | Inches Millimeters | | | | | | | | |
| | Min | Max | Min | Max | | | | | |
| BD | 0.190 | 0.260 | 4.826 | 6.604 | | | | | |
| BL | 0.285 | 0.375 | 7.240 | 9.530 | | | | | |
| LD | 0.048 | 0.052 | 1.219 | 1.321 | | | | | |
| LL | 1.000 | - | 25.400 | 1 | | | | | |



High-reliability discrete products and engineering services since 1977

1N5400-1N5408

GENERAL PURPOSE RECTIFIERS

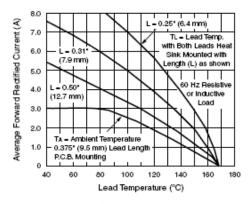


Figure 1. Forward Current Derating Curve

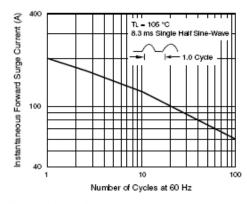


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

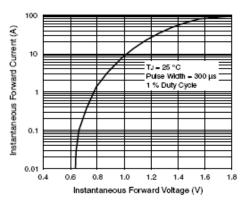


Figure 3. Typical Instantaneous Forward Characteristics

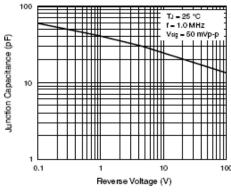


Figure 5. Typical Junction Capacitance

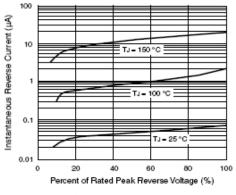


Figure 4. Typical Reverse Characteristics

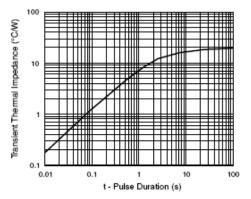


Figure 6. Typical Transient Thermal Impedance