

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

| Characteristics | Symbol | Value |
|---|----------------------------|---------------------------------|
| Storage temperature range | T_{STG} | -55 to +150°C |
| Operating junction temperature range | T_J | -55 to +150°C |
| Maximum thermal resistance | $R_{\theta JL}, L = 3/8''$ | 52°C/W Junction to lead |
| Maximum thermal resistance | $R_{\theta JL}, L = 0$ | 28°C/W Junction to case |
| Working peak reverse voltage 1N5820 1N5821 1N5822 | V_{RWM} | 20V 30V 40V |
| Repetitive peak reverse voltage 1N5820 1N5821 1N5822 | V_{RRM} | 20V 30V 40V |
| Weight | | 0.032 ounces (1.0 gram) typical |

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

| Parameters | Symbol | Test Conditions | 1N5820 | 1N5821 | 1N5822 |
|------------------------------|-------------|--|--------|--------|--------|
| Average forward current | $I_{F(AV)}$ | | 3A | 3A | 3A |
| Case temperature | T_C | $R_{\theta JL} = 28^\circ\text{C/W}, L = 0''$ | 115°C | 116°C | 117°C |
| Lead temperature | T_L | $R_{\theta JL} = 52^\circ\text{C/W}, L = 3/8''$ | 85°C | 86°C | 88°C |
| Maximum surge current | I_{FSM} | 8.3 ms, half sine, $T_J = 150^\circ\text{C}$ | 150A | 150A | 150A |
| Maximum peak forward voltage | V_{FM} | $I_{FM} = 1\text{A}, T_J = 25^\circ\text{C}^*$ | .36V | .37V | .38V |
| Maximum peak forward voltage | V_{FM} | $I_{FM} = 3\text{A}, T_J = 25^\circ\text{C}^*$ | .46V | .48V | .50V |
| Maximum peak forward voltage | V_{FM} | $I_{FM} = 9.4\text{A}, T_J = 25^\circ\text{C}^*$ | .65V | .67V | .70V |
| Maximum peak reverse voltage | I_{RM} | $V_{RRM}, T_J = 25^\circ\text{C}$ | 1.5mA | 1.5mA | 1.5mA |
| Typical junction capacitance | C_J | $V_R = 5.0\text{V}, T_J = 25^\circ\text{C}$ | 265pF | 265pF | 265pF |

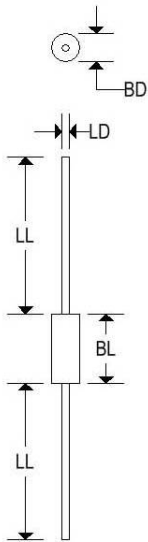
*Pulse test: Pulse width 300µsec, duty cycle 2%.

1N5820-1N5822

SCHOTTKY RECTIFIERS

MECHANICAL CHARACTERISTICS

| | |
|------------------|-----------------------------|
| Case: | DO-201A |
| Marking: | Body painted, alpha-numeric |
| Polarity: | Cathode band |



| | 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 | - |

1N5820-1N5822

SCHOTTKY RECTIFIERS

Figure 1
Typical Forward Characteristics

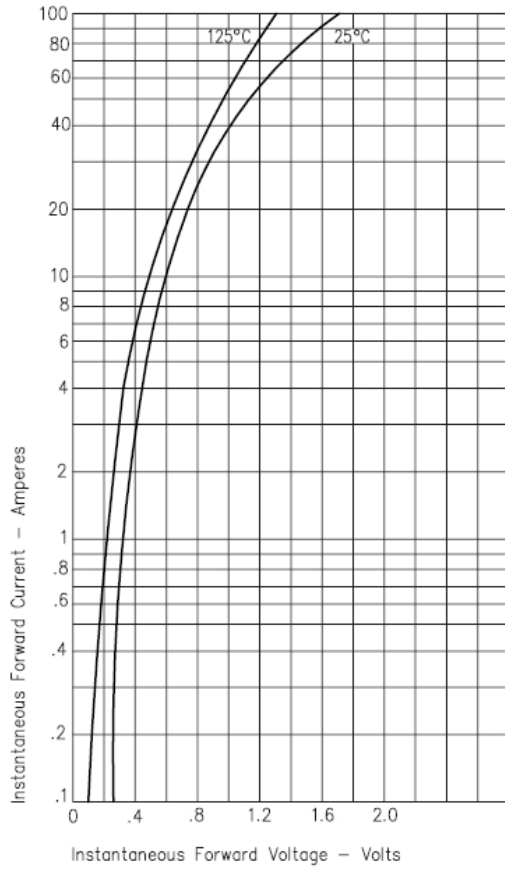


Figure 3
Typical Junction Capacitance

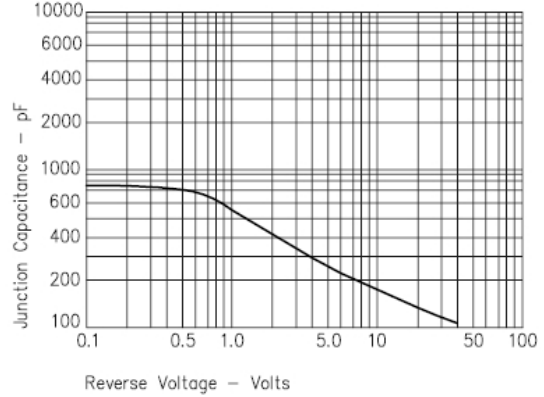


Figure 2
Typical Reverse Characteristics

