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## 1N5820 THRU 1N5822

### Features

- Low Switching Noise
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability

### Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 28°C/W Junction To Ambient

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|----------------------------------------|---------------------|-----------------------------|
| 1N5820             | ---            | 20V                                    | 14V                 | 20V                         |
| 1N5821             | ---            | 30V                                    | 21V                 | 30V                         |
| 1N5822             | ---            | 40V                                    | 28V                 | 40V                         |

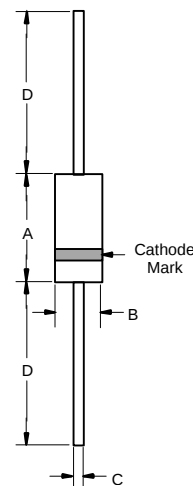
### Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                                     |             |                         |                                                       |
|---------------------------------------------------------------------|-------------|-------------------------|-------------------------------------------------------|
| Average Forward Current                                             | $I_{F(AV)}$ | 3.0A                    | $T_A = 85^\circ\text{C}$                              |
| Peak Forward Surge Current                                          | $I_{FSM}$   | 80A                     | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage<br>1N5820<br>1N5821<br>1N5822 | $V_F$       | .475V<br>.500V<br>.525V | $I_{FM} = 3.0\text{A};$<br>$T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage             | $I_R$       | 2.0mA<br>20mA           | $T_J = 25^\circ\text{C}$<br>$T_J = 100^\circ\text{C}$ |
| Typical Junction Capacitance                                        | $C_J$       | 200pF                   | Measured at 1.0MHz, $V_R=4.0\text{V}$                 |

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 1%

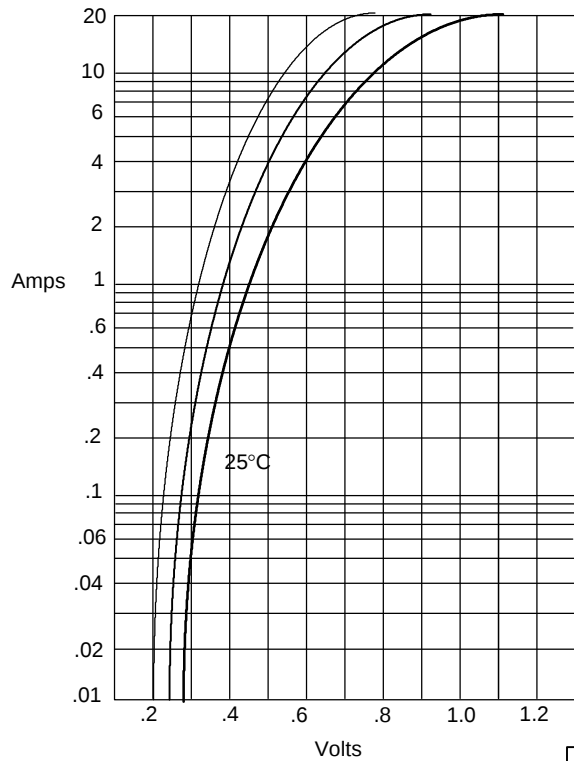
## 3 Amp Schottky Barrier Rectifier 20 - 40 Volts

### DO-201AD



| DIM | INCHES |      | MM    |      | NOTE |
|-----|--------|------|-------|------|------|
|     | MIN    | MAX  | MIN   | MAX  |      |
| A   | ---    | .370 | ---   | 9.50 |      |
| B   | ---    | .250 | ---   | 6.40 |      |
| C   | .048   | .052 | 1.20  | 1.30 |      |
| D   | 1.000  | ---  | 25.40 | ---  |      |

Figure 1  
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

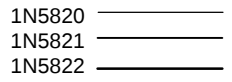
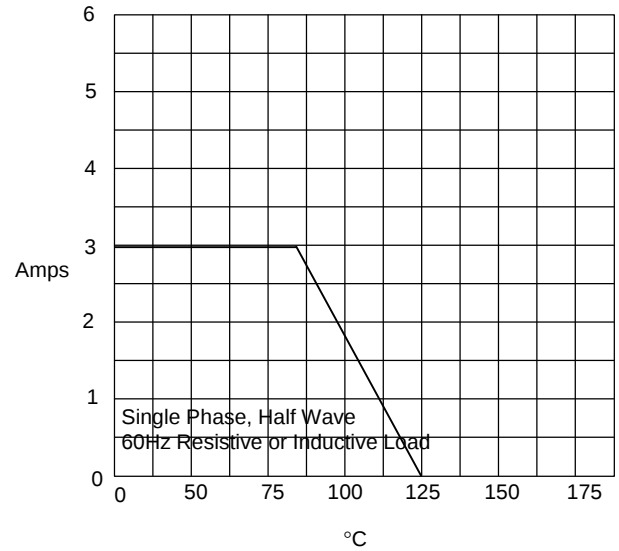
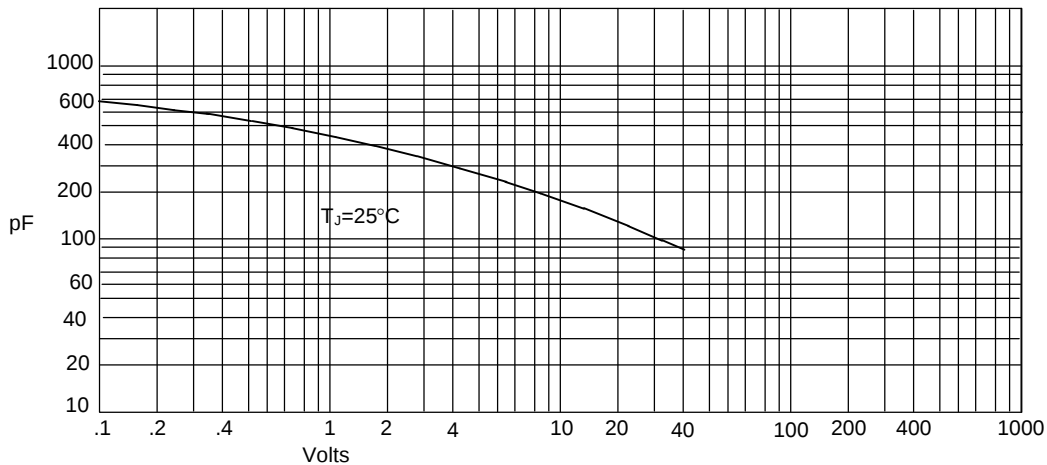


Figure 2  
Forward Derating Curve



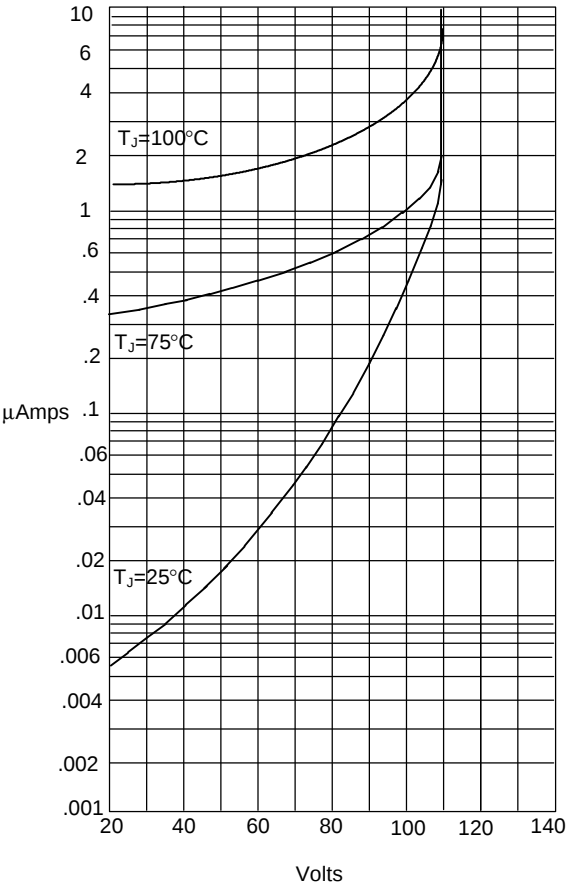
Average Forward Rectified Current - Amperes versus  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



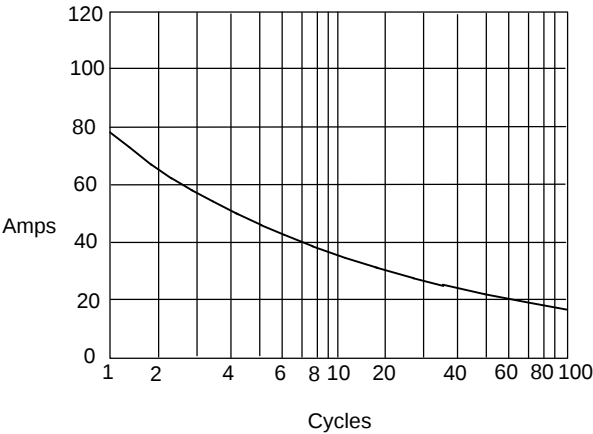
Junction Capacitance - pF versus  
Reverse Voltage - Volts

Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmpere *versus*  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5  
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Number Of Cycles At 60Hz - Cycles