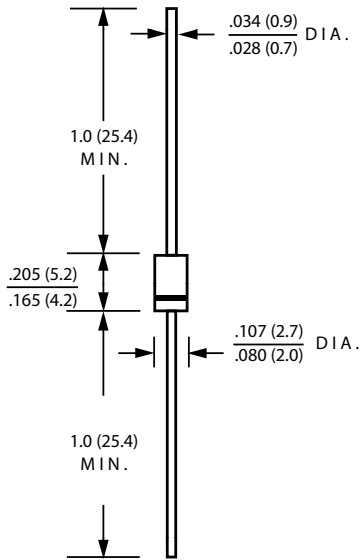




# 1N5817 thru 1N5819



## Schottky Barrier Rectifiers



DO-41

Dimensions in inches and (millimeters)



| Ordering Information |              |
|----------------------|--------------|
| Part Number          | Remark       |
| 1N581x               | General      |
| 1N581x-H             | Halogen Free |
| 1N581x-Q             | Automotive   |

| PRIMARY CHARACTERISTICS |                   |
|-------------------------|-------------------|
| $I_F$                   | 1A                |
| $V_{RRM}$               | 20~40V            |
| $I_{FSM}$               | 25A               |
| $V_F$                   | 0.50, 0.55V, 0.60 |
| $T_J$ max               | 125°C             |

### Features

- Guardring for overvoltage protection
- Very small conduction losses
- Low forward voltage drop
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 qualified

### Mechanical Data

- Cases: DO-41
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish)  
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.318 grams (approximate)

| MAXIMUM RATINGS (TA=25°C unless otherwise noted)                                      |                 |             |        |        |      |
|---|-----------------|-------------|--------|--------|------|
| PARAMETER   | SYMBOL          | 1N5817      | 1N5818 | 1N5819 | UNIT |
| Maximum repetitive peak reverse voltage   | $V_{RRM}$       | 20          | 30     | 40     | V    |
| Maximum RMS voltage   | $V_{RMS}$       | 14          | 21     | 28     | V    |
| Maximum DC blocking voltage   | $V_{DC}$        | 20          | 30     | 40     | V    |
| Maximum average forward rectified current   | $I_F$           | 1.0         |        |        | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load    | $I_{FSM}$       | 25.0        |        |        | A    |
| Maximum Instantaneous Forward Voltage<br>$I_F=1A @ 25°C$                              | $V_F$           | 0.50        | 0.55   | 0.60   | V    |
| Maximum DC Reverse Current @ $T_c=25°C$<br>at Rated DC Blocking Voltage @ $T_c=100°C$ | $I_R$           | 0.5<br>20   |        |        | mA   |
| Typical Junction Capacitance(NOTE1)   | $C_j$           | 150         | 200    |        | pF   |
| Typical Thermal Resistance  | $R_{\theta JA}$ | 90          |        |        | °C/W |
| Operating Temperature Range   | $T_J$           | -55 to +125 |        |        | °C   |
| Storage Temperature Range   | $T_{STG}$       | -55 to +150 |        |        | °C   |

NOTES:1.Measured at 1.0MHZ and applied reverse voltage of 4.0V DC



FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

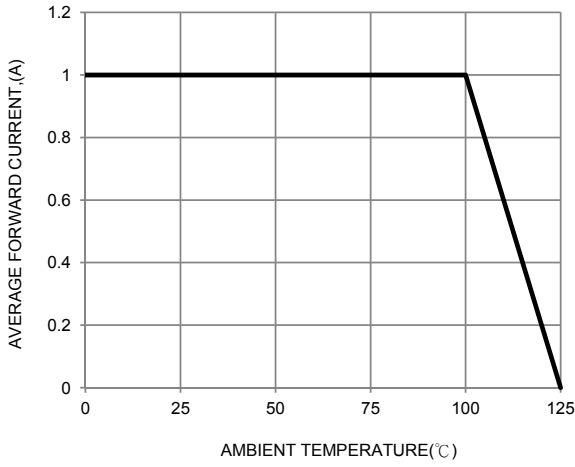


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

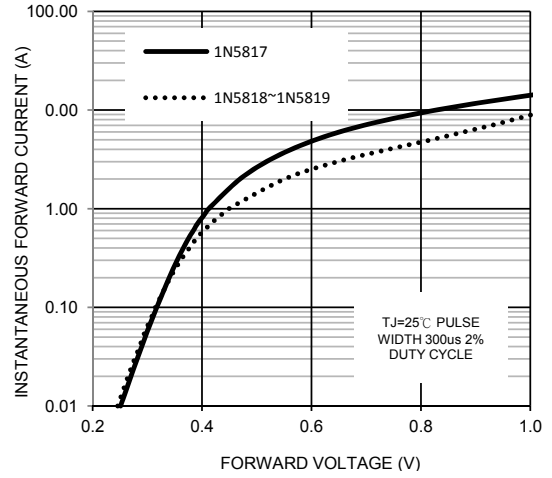


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

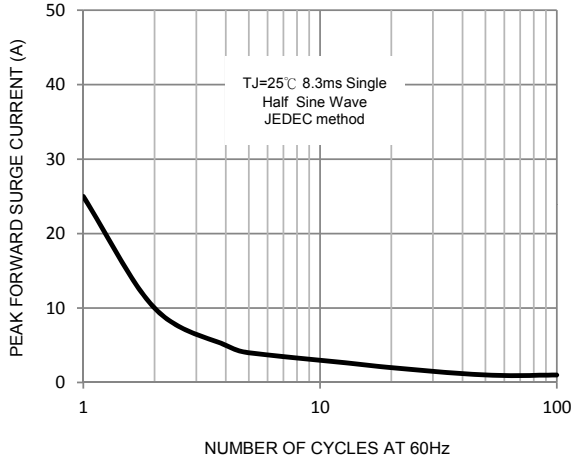


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

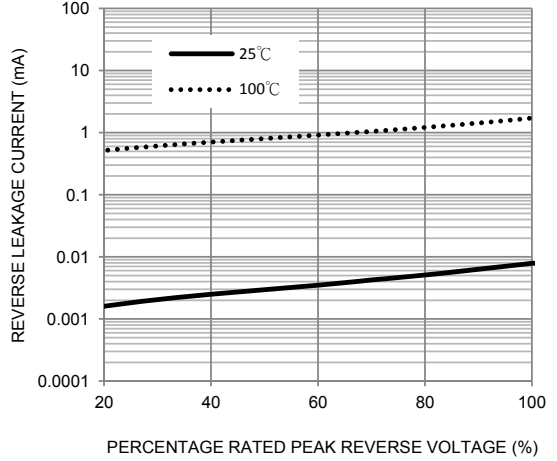


FIG. 5-TYPICAL JUNCTION CAPACITANCE

