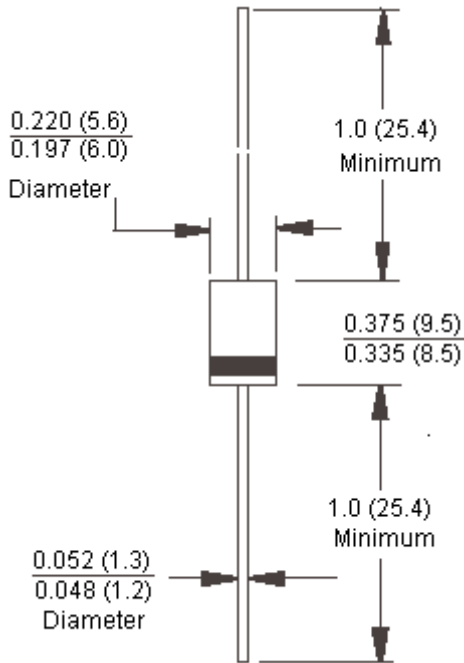




Features:

- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes.
- Ultrafast recovery time for high efficiency.
- Excellent high temperature switching.
- Glass passivated junction.

DO-201AD



Dimensions : Inches (Millimetres)

Mechanical Data:

| | |
|---------------------------------------|--|
| Cases | : Moulded plastic. |
| Lead | : Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed. |
| Polarity | : Colour band denotes cathode end. |
| High temperature soldering guaranteed | : 260°C/10 seconds/0.375 inch, (9.5mm) lead lengths at 5lbs., (2.3kg) tension. |
| Mounting position | : Any. |
| Weight | : 1.2 grams. |

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Type Number | Symbol | MUR420 | MUR440 | MUR460 | Units |
|--|-----------------|-------------|-----------|--------|--------------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 200 | 400 | 600 | V |
| Maximum RMS Voltage | V_{RMS} | 140 | 280 | 420 | |
| Maximum DC Blocking Voltage | V_{DC} | 200 | 400 | 600 | |
| Maximum Average Forward Rectified Current 0.375 inch (9.5mm) Lead Length | $I_{(AV)}$ | 4.0 | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 125 | 70 | | |
| Maximum Instantaneous Forward Voltage at 4.0A | V_F | 0.89 | 1.28 | | V |
| Maximum DC Reverse Current at $T_C = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_C = 125^\circ\text{C}$ | I_R | 5.0 150 | 10 250 | | μA μA |
| Maximum Reverse Recovery Time (Note 2) | T_{rr} | 25 | 50 | | nS |
| Typical Junction Capacitance (Note 1) $T_J = 25^\circ\text{C}$ | C_j | 65 | | | pF |
| Maximum Forward Recovery Time T_{FR} ($I_F = 1.0\text{A}$, $di/dt = 100\text{A}/\mu\text{s}$, Rev. to 1.0V) | T_{FR} | 25 | 50 | | nS |
| Typical Thermal Resistance (Note 3) | $R_{\theta JA}$ | 28 | | | $^\circ\text{C}/\text{W}$ |
| Operating Temperature Range | T_J | -65 to +150 | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | | | | |

Note: 1. Measured at 1MHz and Applied Reverse Voltage of 4.0 Volts DC.

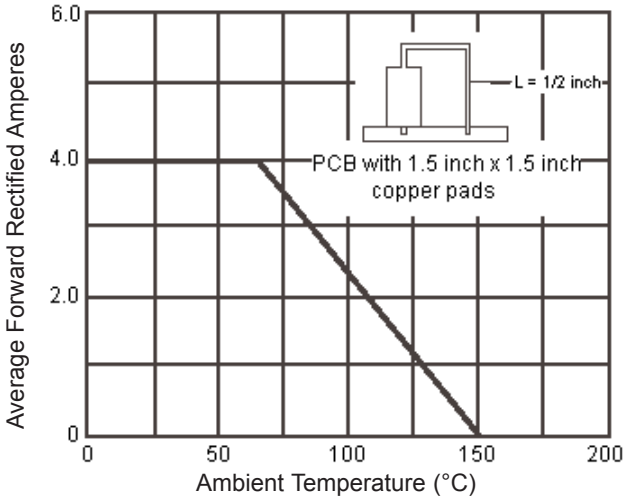
2. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.

3. Thermal Resistance from Junction to Ambient, Lead Length = 1/2 inch on PC Board with 1.5 x 1.5 inches Copper Surface.

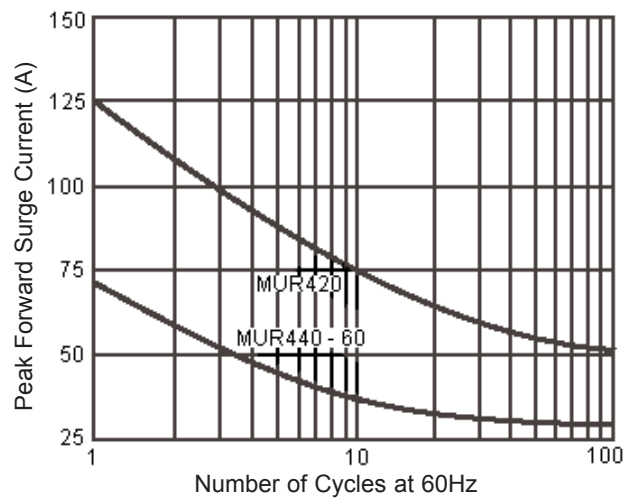
4. Pulse test: $t_p = 300 \mu\text{s}$, Duty Cycle < 2%.

Ratings and Characteristic Curves (MR850, MR851, MR852, MR854, MR856, MR858)

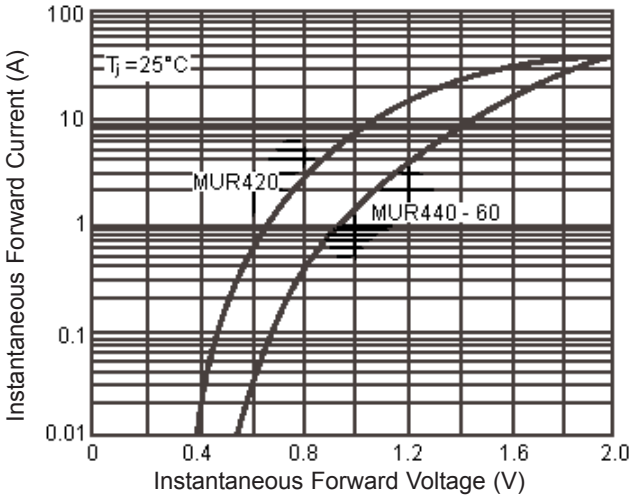
Maximum Forward Current Derating Curve



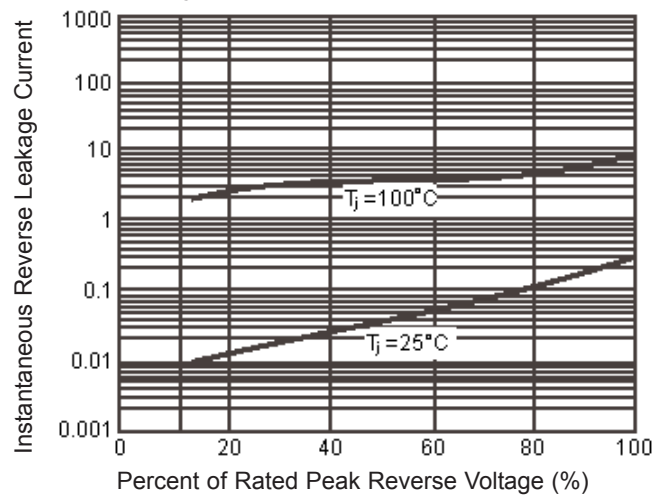
Maximum Non-Repetitive Forward Surge Current



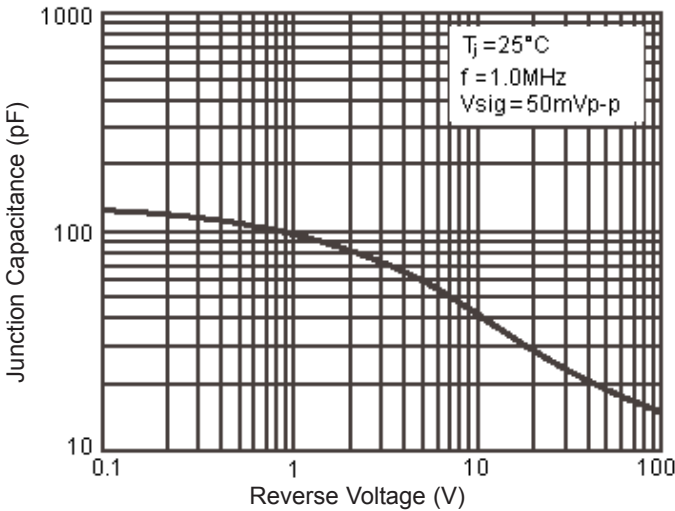
Typical Instantaneous Forward Characteristics



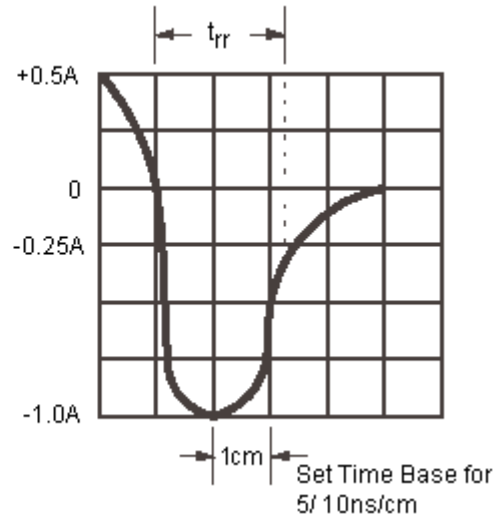
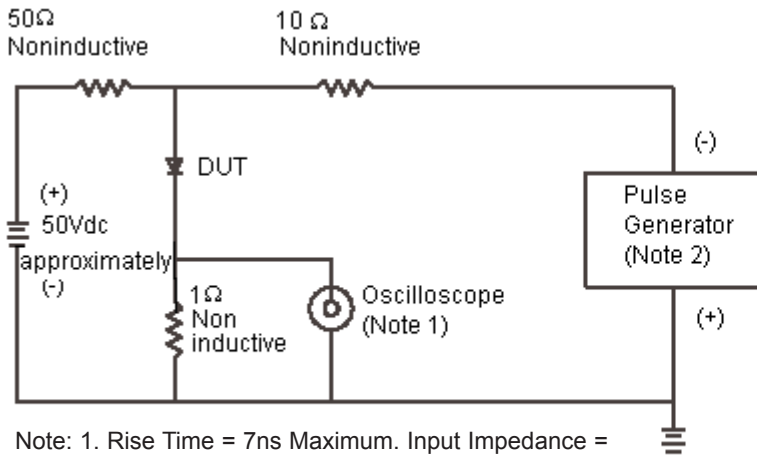
Typical Reverse Characteristics



Typical Junction Capacitance Per leg



Reverse Recovery Time Characteristic and Test Circuit Diagram



Note: 1. Rise Time = 7ns Maximum. Input Impedance = 1 Megohm 22pf
 2. Rise Time = 10ns Maximum Source Impedance = 50 ohms

Part Number Table

| Description | Part Number |
|-----------------------|-------------|
| Diode, Fast, 4A, 200V | MUR420 |
| Diode, Fast, 4A, 400V | MUR440 |
| Diode, Fast, 4A, 600V | MUR460 |

Notes:

International Sales Offices:

| | | | | | | | |
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