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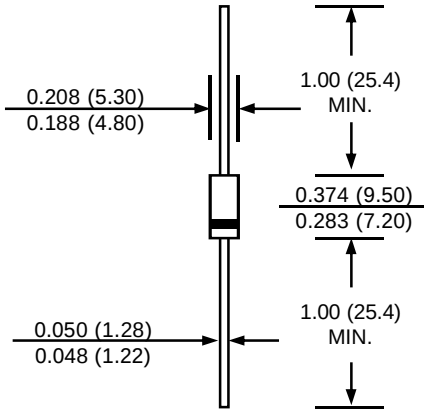
# MUR410 - MUR420

# ULTRAFAST RECOVERY RECTIFIERS DIODES

## PRV : 100 - 200 Volts
## Io : 4.0 Amperes

### DO - 201AD




**Dimensions in inches and ( millimeters )**

### FEATURES :

* High current capability
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* Fast switching for high efficiency
* Pb / RoHS Free

### MECHANICAL DATA :

* Case : DO-201AD Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 1.21 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

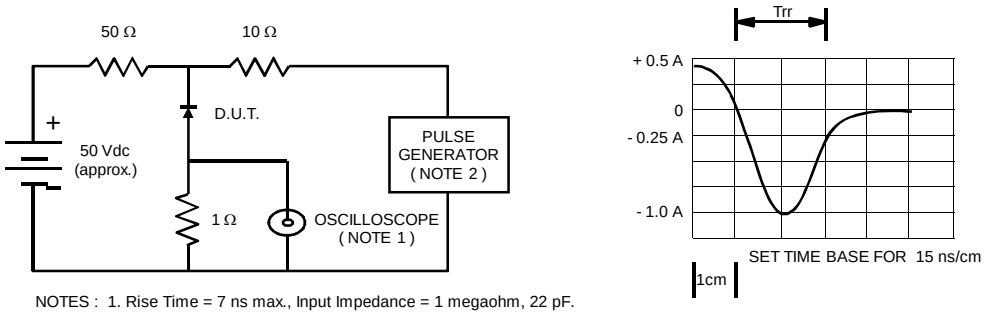
| RATING | SYMBOL | MUR410 | MUR415 | MUR420 | UNIT |
|---|---|---|---|---|---|
| Maximum Peak Reverse Voltage | $V_{RM}$ | 100 | 150 | 200 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 70 | 105 | 140 | V |
| Maximum Reverse Voltage | $V_R$ | 100 | 150 | 200 | V |
| Maximum Average Forward Current Ta = 80 °C | $I_{F(AV)}$ | 4.0 | | | A |
| Maximum Non-repetitive Peak Forward Surge Current | $I_{FSM}$ | 125 | | | A |
| Maximum Peak Forward Voltage at $I_F$ = 4 A | $V_F$ | 0.89 | | | V |
| Maximum Reverse Current at $V_R = V_{RM}$ Tj = 25 °C | $I_R$ | 5.0 | | | μA |
| Maximum Reverse Current at $V_R = V_{RM}$ Tj = 150 °C | $I_{R(H)}$ | 150 | | | μA |
| Maximum Reverse Recovery Time ( Note 1 ) | Trr | 25 | | | ns |
| Junction Temperature Range | $T_J$ | -65 to + 175 | | | °C |
| Storage Temperature Range | $T_{STG}$ | - 65 to + 175 | | | °C |

**Note:**

(1) Reverse Recovery Test Conditions : $I_F$ = 0.5A, $I_R$ = 1A ; $I_{RR}$ = 0.25 A

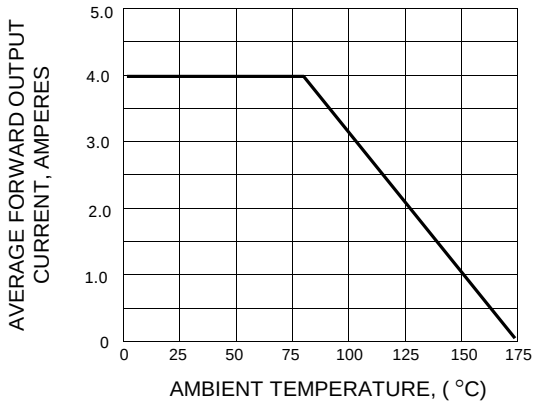
## RATING AND CHARACTERISTIC CURVES ( MUR410 - MUR420 )

### FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

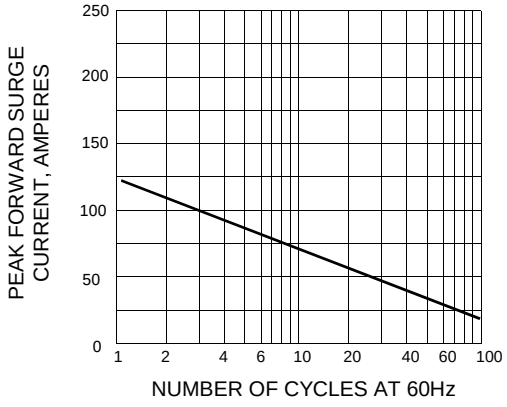



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise Time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

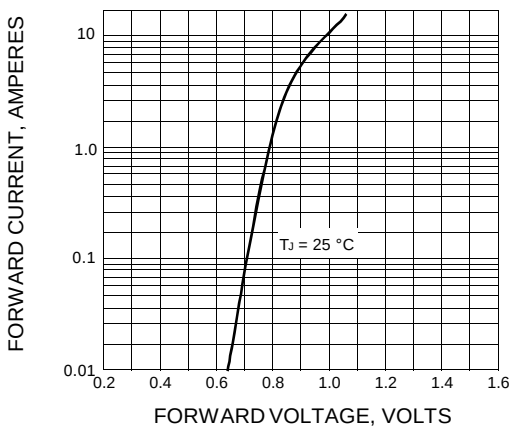
### FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT




### FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT




### FIG.4 - TYPICAL FORWARD CHARACTERISTICS




### FIG.5 - TYPICAL REVERSE CHARACTERISTICS

