



# MUR410 - MUR420

# ULTRAFAST RECOVERY RECTIFIERS DIODES

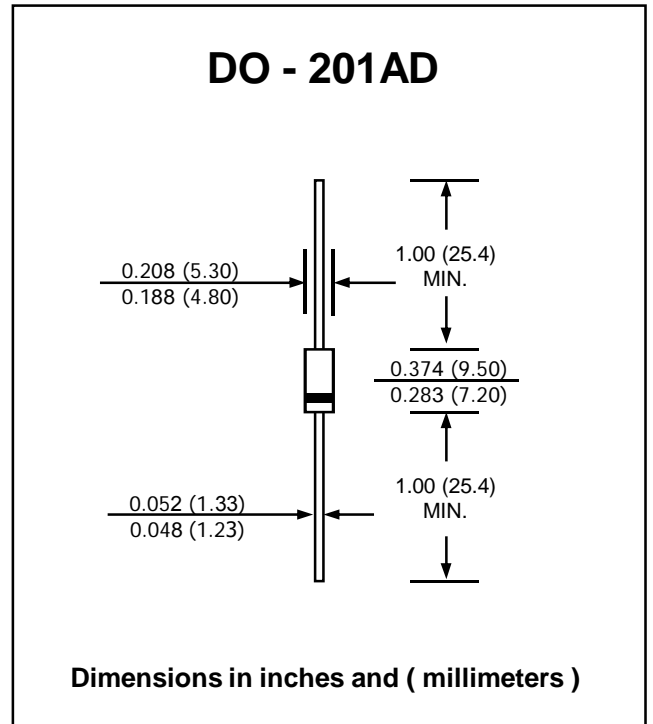
**PRV : 100 - 200 Volts**  
**Io : 4.0 Amperes**

**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%.

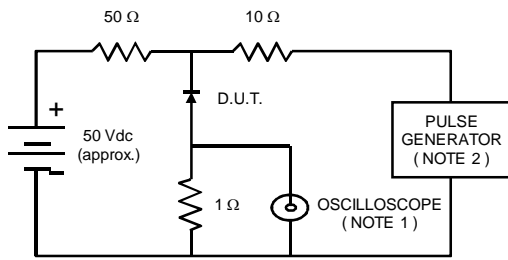
RATING	SYMBOL	MUR410	MUR415	MUR420	UNIT
Maximum Peak Reverse Voltage	V <sub>RM</sub>	100	150	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	70	105	140	V
Maximum Reverse Voltage	V <sub>R</sub>	100	150	200	V
Maximum Average Forward Current Ta = 80 °C	I <sub>F(AV)</sub>	4.0			A
Maximum Non-repetitive Peak Forward Surge Current	I <sub>FSM</sub>	125			A
Maximum Peak Forward Voltage at I <sub>F</sub> = 4 A	V <sub>F</sub>	0.89			V
Maximum Reverse Current at V <sub>R</sub> = V <sub>RM</sub> T <sub>j</sub> = 25 °C	I <sub>R</sub>	5.0			μA
Maximum Reverse Current at V <sub>R</sub> = V <sub>RM</sub> T <sub>j</sub> = 150 °C	I <sub>R(H)</sub>	150			μA
Maximum Reverse Recovery Time ( Note 1 )	T <sub>rr</sub>	25			ns
Junction Temperature Range	T <sub>J</sub>	-65 to + 175			°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 175			°C

**Note:**

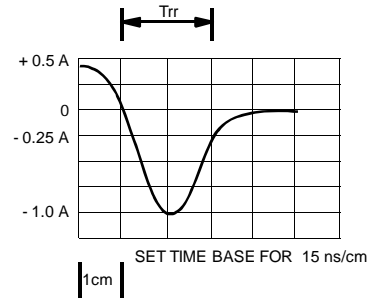
(1) Reverse Recovery Test Conditions : I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1A ; I<sub>RR</sub> = 0.25 A

**RATING AND CHARACTERISTIC CURVES ( MUR410 - MUR420 )**

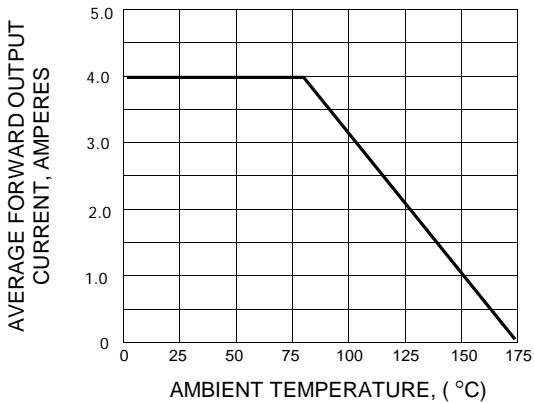
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



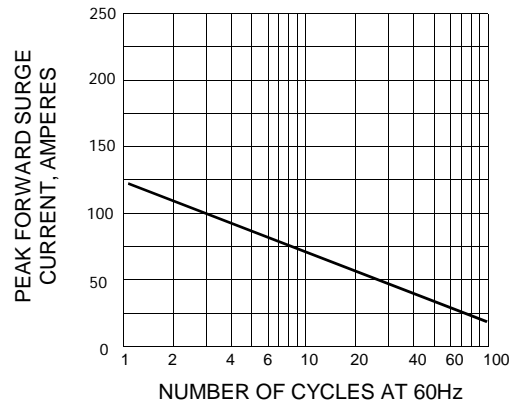
NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise Time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.



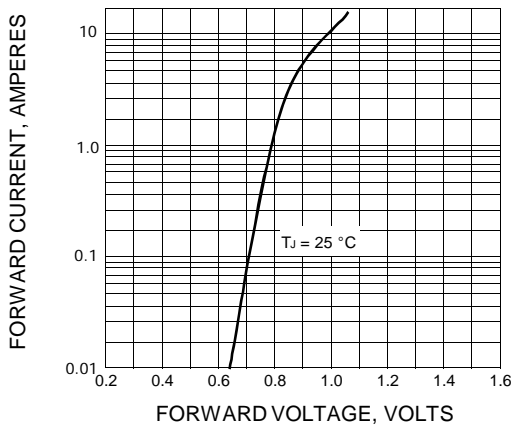
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



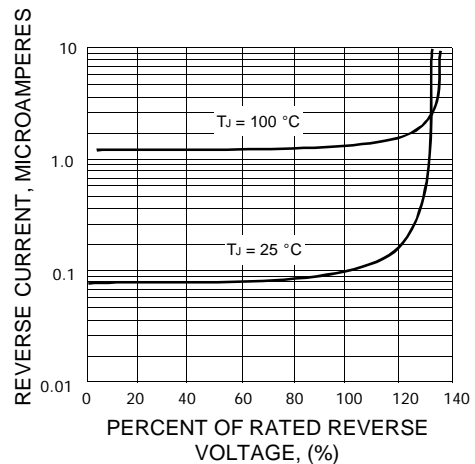
**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**



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