



# MUR420 THRU MUR460

4.0 AMPS. Ultrafast Glass Passivated Rectifiers



Voltage Range  
200 to 600 Volts  
Current  
4.0 Amperes

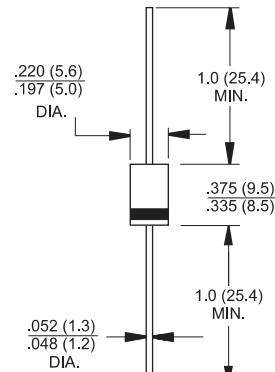
## Features

- ✧ 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

## Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Mounting position: Any
- ✧ Weight: 1.2 grams, 0.045oz.

## DO-201AD



Dimensions in inches and (millimeters)

## 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%

Type Number	Symbol	MUR420	MUR440	MUR460	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	140	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	400	600	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length (See Fig. 1)	I <sub>(AV)</sub>	4.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>	125	150		A
Maximum Instantaneous Forward Voltage @ 4.0A	V <sub>F</sub>	0.89	1.28		V
Maximum DC Reverse Current @ T <sub>C</sub> =25°C at Rated DC Blocking Voltage @ T <sub>C</sub> =150°C (Note 4)	I <sub>R</sub>	5.0 150	10 250		uA uA
Maximum Reverse Recovery Time ( Note 2 )	T <sub>rr</sub>	25	50		nS
Typical Junction Capacitance ( Note 1 ) T <sub>J</sub> = 25°C (Fig. 5)	C <sub>j</sub>	65			pF
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	28			°C/W
Maximum Forward Recovery Time TFR (I <sub>F</sub> =1.0A, di/dt = 100A/us, Rev. to 1.0V)	T <sub>FR</sub>	25	50		nS
Operating Temperature Range	T <sub>J</sub>	-65 to +175			°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +175			°C

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4..0 Volts D.C.

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

3. Thermal Resistance from Junction to Ambient, Lead Length = 1/2" on P.C. Board with 1.5" x 1.5" Copper Surface.

4. Pulse lest:  $t_p = 300 \mu s$ , Duty Cycle < 2%.

## RATINGS AND CHARACTERISTIC CURVES (MUR420 THRU MUR460)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

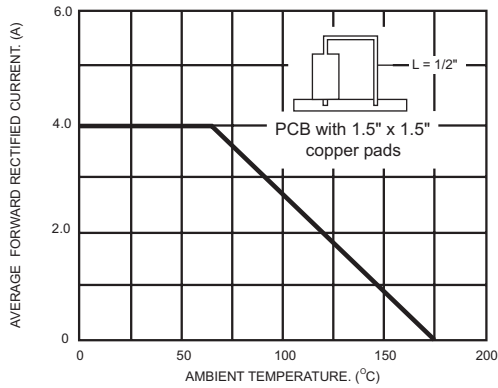


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

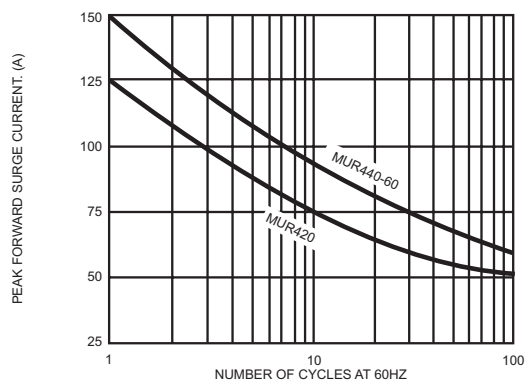


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

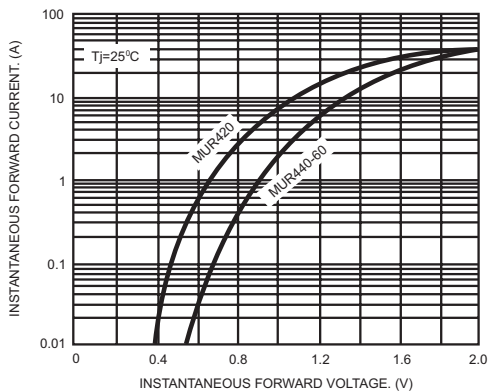


FIG.4- TYPICAL REVERSE CHARACTERISTICS

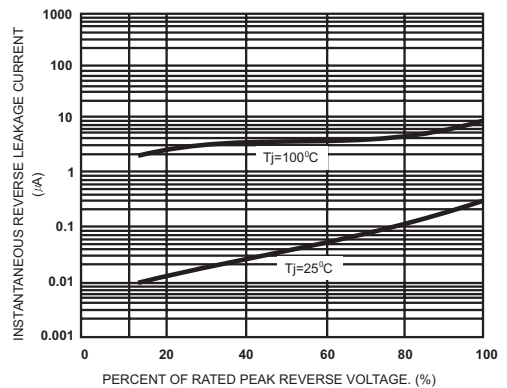


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

