# MUR405 THRU MUR460

## *4.0 AMP. ULTRA FAST RECTIFIERS*

**VOLTAGE RANGE**
50 to 600 Volts
CURRENT
4.0 Amperes

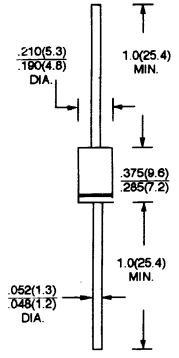
### FEATURES

* Low forward voltage drop
* High current capability
* High reliability
* High surge current capability
* Ultra fast 25,50 Nanosecond Recovery Times

### MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V – 0 rate flame retardant
* Lead and Mounting Surface Temperature for soldering Purposes 220℃ Max for 10 Seconds 1/16″ from case
* Polarity: Color band denotes cathode end
* Mounting Position: Any
* Weight: 1.18 grams

**DO-201AD**




Dimensions in inches and(milimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| TYPE NUMBER | SYMBOLS | MUR 405 | MUR 410 | MUR 415 | MUR 420 | MUR 440 | MUR 460 | UNITS |
|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 150 | 200 | 400 | 600 | |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 105 | 140 | 280 | 420 | V |
| Maximum D.C Blocking Voltage | $V_{DC}$ | 50 | 100 | 150 | 200 | 400 | 600 | V |
| Maximum Average Forward Rectified Current See fig. 1 | $I_{F(AV)}$ | 4.0 @$T_A$ = 80℃ | | | 4.0 @$T_A$ = 40℃ | | | A |
| Peak Forward Surge Current, 8.3 ms single half sine – wave superimposed on rated load(JEDEC method) | $I_{FSM}$ | 125 | | | 70 | | | A |
| Maximum Instantaneous Forward Voltage 4.0A@ $T_J$ = 25℃ (Note 1) | $V_F$ | 1.0 | | | 1.28 | | | V |
| Maximum D.C Reverse Current @$T_A$ = 25℃<br>At Rated D.C Blocking Voltage @$T_A$ = 150℃ | $I_R$ | 5.0<br>150 | | | 10<br>250 | | | μA<br>μA |
| Maximum Reverse Recovery Time(Note 2) | $T_{RR}$ | 25 | | | 50 | | | nS |
| Typical Junction Capacitance (Note 3) | $C_J$ | 65 | | | | | | pF |
| Typical Thermal Resistance Junction to Ambient(Note 4) | $R_{\theta JA}$ | 28 | | | | | | ℃/W |
| Operation Temperate Range | $T_J$, $T_{STG}$ | – 65 to + 150 | | | | | | ℃ |

NOTES: 1. Pulse test: $t_p$ = 300μs, duty cycle≤2%
2. Reverse Recovery Test Conditions: $I_F$ = 0.5A, $I_R$ = 1.0A, $I_{RR}$ = 0.25A.
3. Measured at 1 MHz and applied reverse voltage of 4.0V D.C.
4. Lead length = 1/2″ on P.C. Board with 1.5″ × 1.5″ copper surface

JGD

# RATINGS AND CHARACTERISTIC CURVES

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FIG.1 – FORWARD CURRENT DERATING CURVE

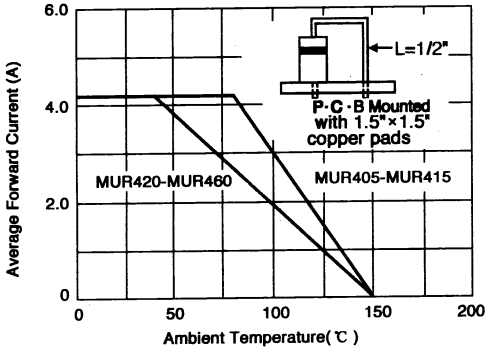



FIG.2 – TYPICAL REVERSE LEAKAGE CHARCTERISTICS

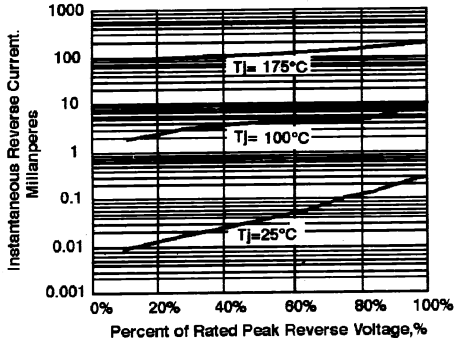



FIG.3 – TYPICAL JUNCTION CAPACITANCE – PER LEG

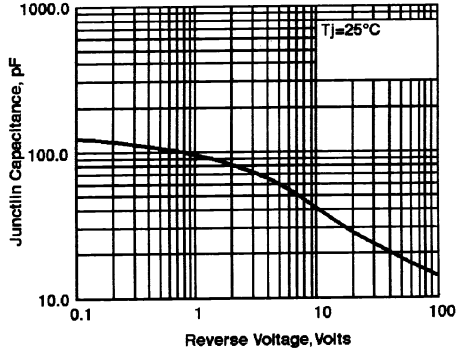



FIG.4 – TYPICAL FORWARD VOLTAGE

