

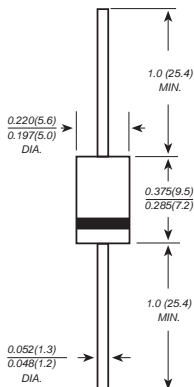


# MUR405 THRU MUR4100

## ULTRA FAST RECTIFIERS

Reverse Voltage - 200 to 600 Volts Forward Current - 4.0 Amperes

### DO-201AD



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ultra fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-201AD molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.04 ounce, 1.10 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

MDD Catalog Number	SYMBOLS	MUR405	MUR410	MUR415	MUR420	MUR440	MUR460	MUR480	MUR4100	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	400	600	800	1000	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	280	420	550	700	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	400	600	800	1000	VOLTS
Maximum average forward rectified current 0.375" (9.5mm) lead length	$I_{(AV)}$	4.0								Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150								Amps
Maximum instantaneous forward voltage at 4.0A	$V_F$	0.875			1.25		1.85			Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=150^\circ\text{C}$	$I_R$	2.0 50.0			5.0 150.0					$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	25			50					ns
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	27.0			50.0					$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175								$^\circ\text{C}$

**Note:** 1. Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$

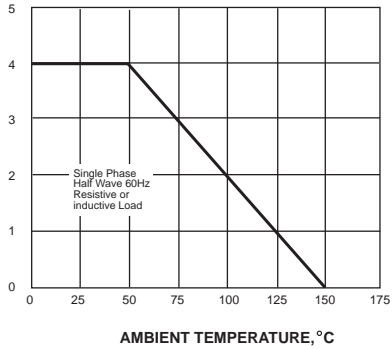
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

MDD ELECTRONIC

# RATINGS AND CHARACTERISTIC CURVES MUR405 THRU MUR4100

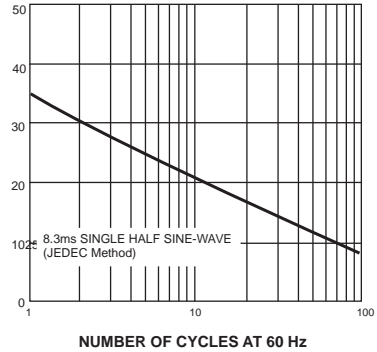
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



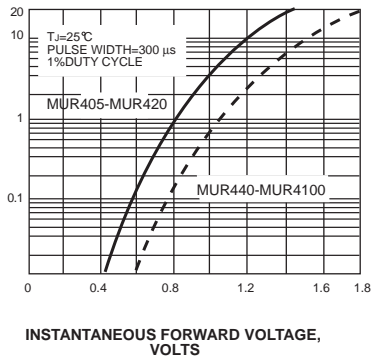
PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



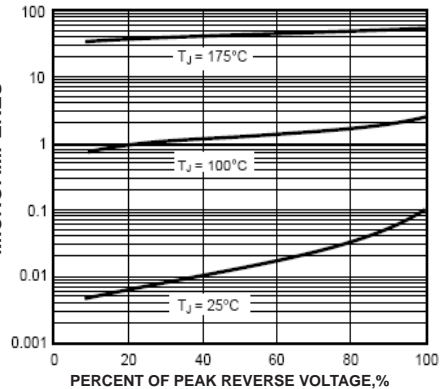
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

