



# MUR405 THRU MUR4100

## Ultra Fast Rectifiers

### FEATURES

- Ultra fast switching for high efficiency
- Low leakage current
- High forward surge capability
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



DO-201AD

### 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:** 1.10 grams

### PRIMARY CHARACTERISTICS

IF(AV)	4.0 A
VRRM	50 V to 1000 V
IFSM	150 A
Trr	45 ns, 50ns, 75 ns
VF	1.0V, 1.30V, 1.65V
IR	10 μA
TJ max.	150 °C

### 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%.

PARAMETER	SYMBOL	MUR405	MUR410	MUR415	MUR420	MUR440	MUR460	MUR480	MUR4100	UNIT
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	560	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 at TA=55°C	$I_{(AV)}$	4.0								Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150.0								Amps
Maximum instantaneous forward voltage at 4.0A	$V_F$	1.0		1.30			1.65			Volts
Maximum DC reverse current at rated DC blocking voltage TA=25 °C TA=100 °C	$I_R$	10.0 150.0								μA
Maximum reverse recovery time (NOTE 1)	Trr	45		50			75			nS
Typical junction capacitance (NOTE 2)	$C_J$	45								pF
Typical thermal resistance (NOTE 3)	$R_{θJA}$	20.0								°C/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150								°C

- Note: 1.Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$   
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
3.Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length,P.C.B. mounted



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### Ratings and Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

FIG. 1- FORWARD CURRENT DERATING CURVE

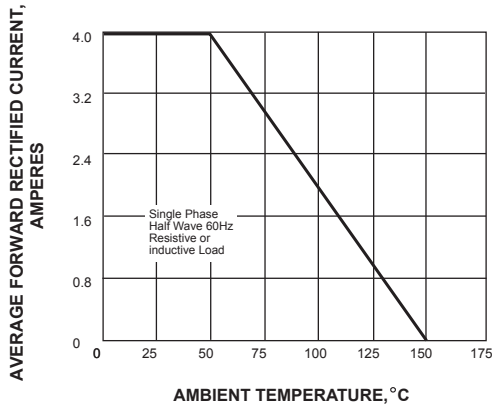


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

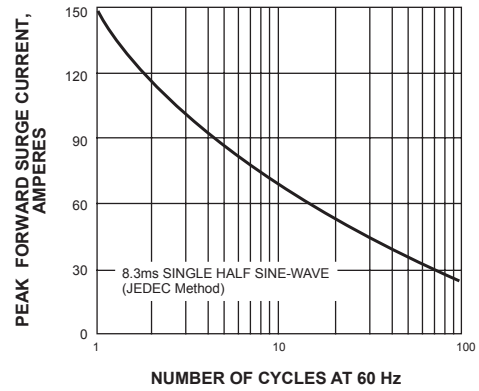


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

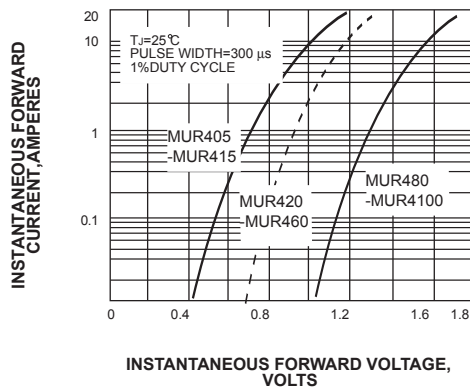
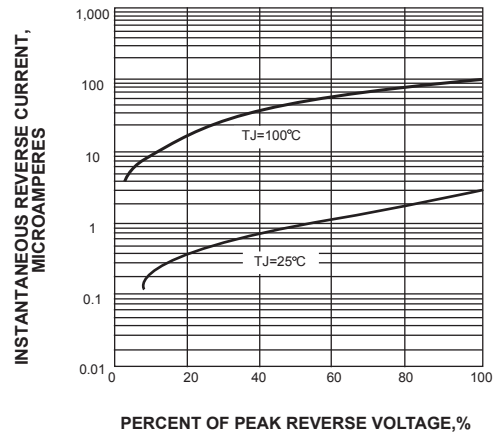
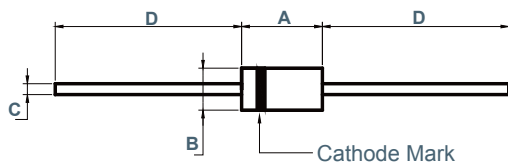


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



### Dimensions

#### DO-201AD



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.335	0.374	8.50	9.50	
B	0.197	0.220	5.00	5.60	Φ
C	0.048	0.052	1.10	1.30	Φ
D	1.000	—	25.4	—	

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