



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 μ A
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 TA=25 °C at rated DC blocking voltage TA=100 °C	I _R	10.0 150.0								µA
Maximum reverse recovery time (NOTE 1)	T _{rr}	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

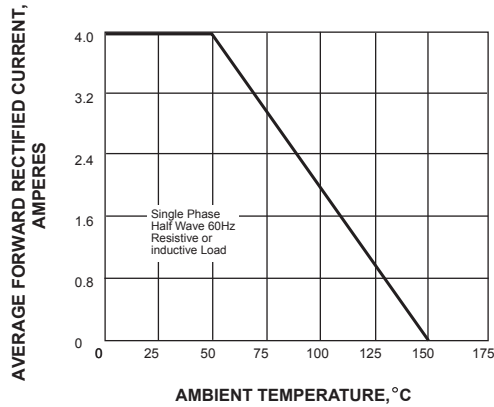


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

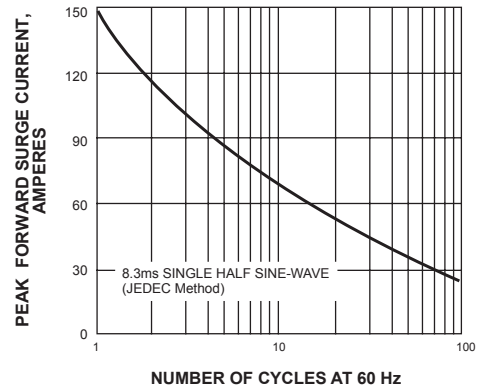


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

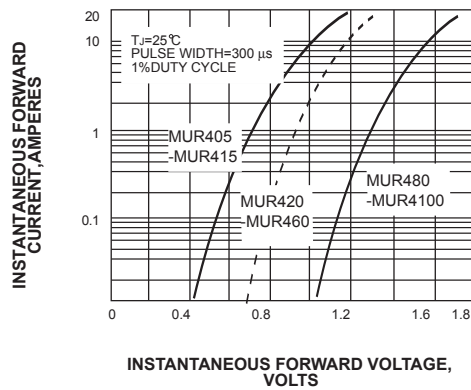
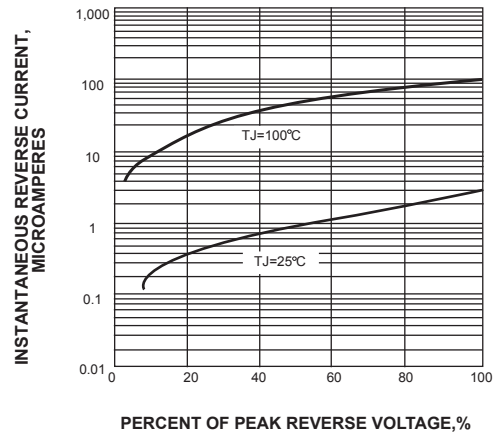
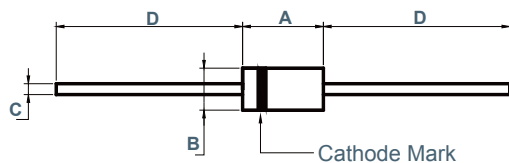


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



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	—	