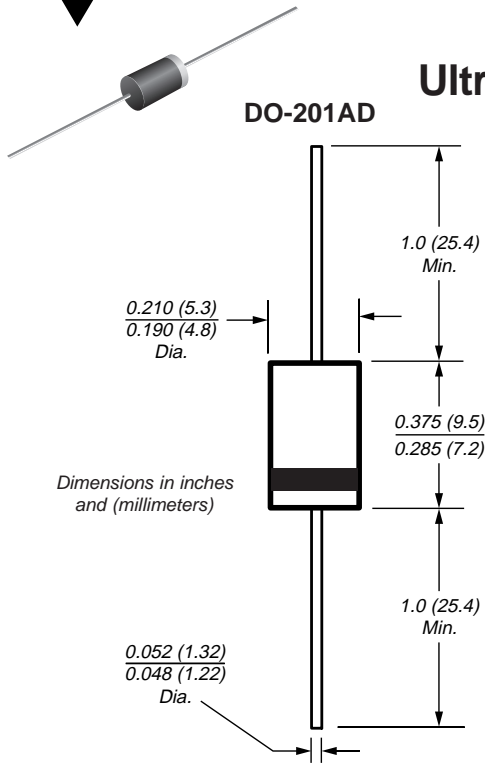




**Ultrafast Plastic Rectifiers**

**Reverse Voltage** 400 to 600V  
**Forward Current** 4.0A



**Features**

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- 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
- 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 over passivated chip  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.045 oz., 1.2 g

**Maximum Ratings & Thermal Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	MUR440	MUR460	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	400	600	V
Working peak reverse voltage	V <sub>RWM</sub>	400	600	V
Maximum DC blocking voltage	V <sub>DC</sub>	400	600	V
Maximum average forward rectified current (See figure 1)	I <sub>F(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>	150		A
Typical thermal resistance junction to ambient <sup>(2)</sup>	R <sub>θJA</sub>	28		°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175°C		°C

**Electrical Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

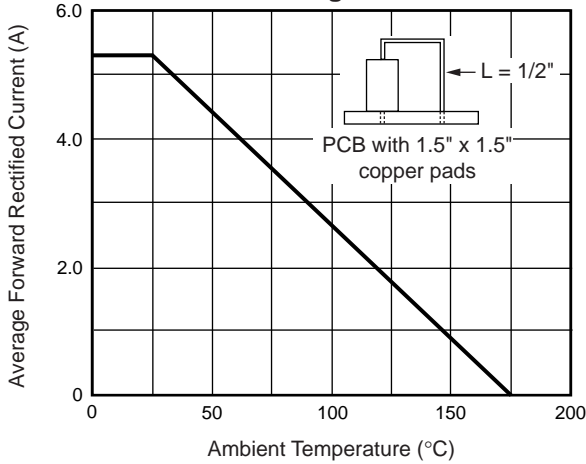
Parameter	Symbol	MUR440	MUR460	Unit
Maximum instantaneous forward voltage (NOTE 1) at 3.0A, T <sub>J</sub> = 150°C at 3.0A, T <sub>J</sub> = 25°C at 4.0A, T <sub>J</sub> = 25°C	V <sub>F</sub>	1.05 1.25 1.28		V
Maximum instantaneous reverse current at rated DC blocking voltage <sup>(1)</sup> T <sub>J</sub> = 25°C T <sub>J</sub> = 150°C	I <sub>R</sub>	10 250		μA
Max. reverse recovery time at I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>rr</sub> = 0.25A	t <sub>rr</sub>	50		ns
Maximum reverse recovery time at, I <sub>F</sub> = 1.0A, di/dt = 50A/μs, V <sub>R</sub> = 30V, I <sub>rr</sub> = 10% I <sub>RM</sub>	t <sub>rr</sub>	75		ns
Maximum forward recovery time (I <sub>F</sub> = 1.0A, di/dt = 100A/μs, Rec. to 1.0V)	t <sub>fr</sub>	50		ns

**Notes:**

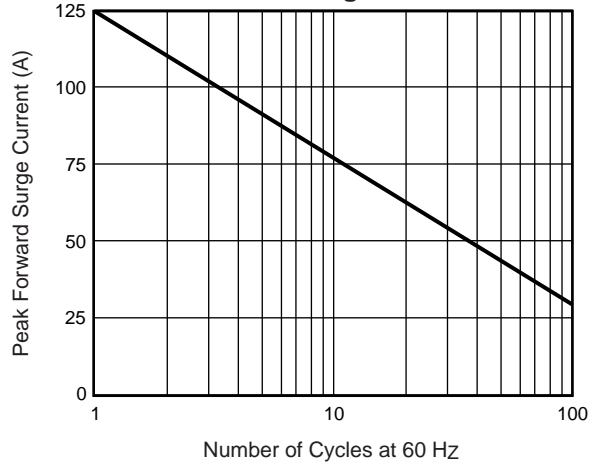
- (1) Pulse test: t<sub>p</sub> = 300μs, duty cycle ≤ 2%
- (2) Lead length = 1/2" on P.C. board with 1.5" x 1.5" copper surface

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

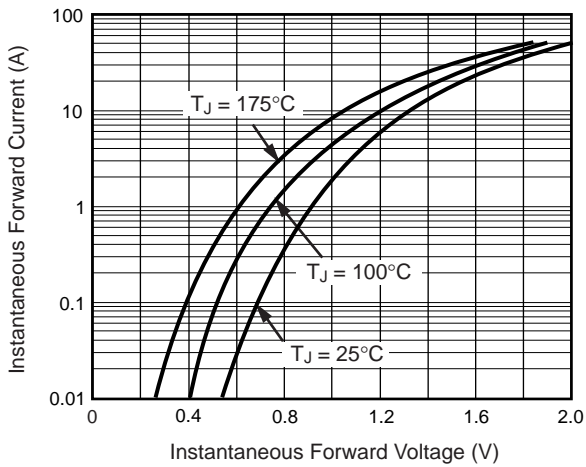
**Fig. 1 – Forward Current Derating Curve**



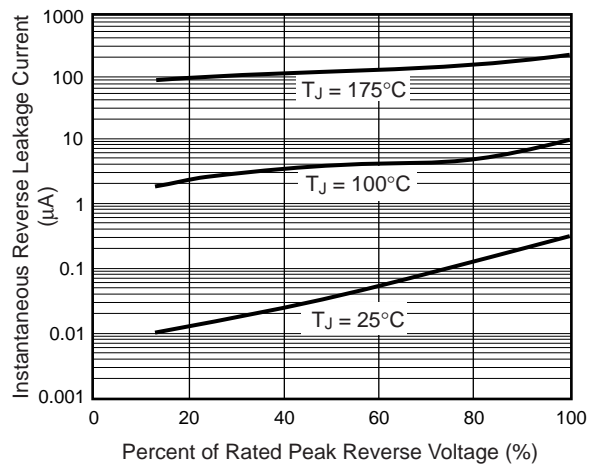
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 – Typical Junction Capacitance per Leg**

