



Ultrafast Plastic Rectifiers

Reverse Voltage 400 to 1000V
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

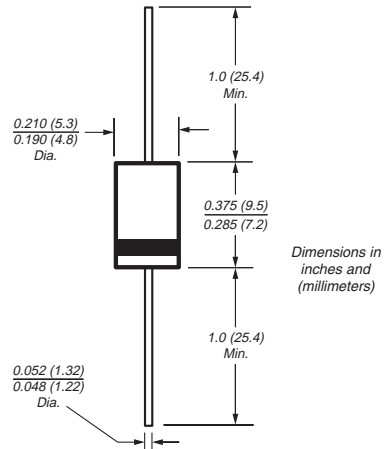
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.045 oz., 1.2 g

DO-201AD



Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	MUR440	MUR460	MUR4100	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	400	600	1000	V
Working peak reverse voltage	V _{RWM}	400	600	1000	V
Maximum DC blocking voltage	V _{DC}	400	600	1000	V
Maximum average forward rectified current (See figure 1)	I _{F(AV)}	4.0			A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	125		70	A
Typical thermal resistance junction to ambient ⁽²⁾	R _{θJA}	28		50	°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175°C			°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	MUR440	MUR460	MUR4100	Unit
Maximum instantaneous forward voltage (NOTE 1) at 3.0A, T _J = 150°C at 4.0A, T _J = 25°C	V _F	1.05	1.28	1.85	V
Maximum instantaneous reverse current at rated DC blocking voltage ⁽¹⁾ T _J = 25°C T _J = 100°C	I _R	10 100			μA
Max. reverse recovery time at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	t _{rr}	50		75	ns
Maximum reverse recovery time at, I _F = 1.0A, di/dt = 50A/μs, V _R = 30V, I _{rr} = 10% I _{RM}	t _{rr}	75			ns
Maximum forward recovery time (I _F = 1.0A, di/dt = 100A/μs, Rec. to 1.0V)	t _{fr}	50			ns

Notes:

(1) Pulse test: t_p = 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°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

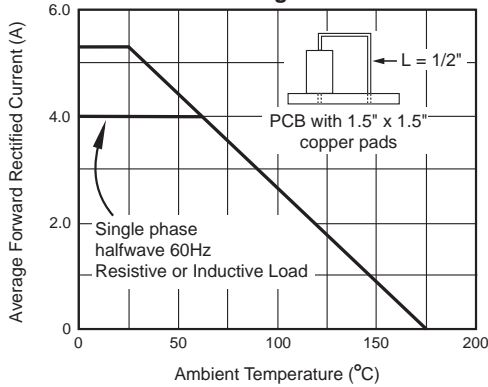


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

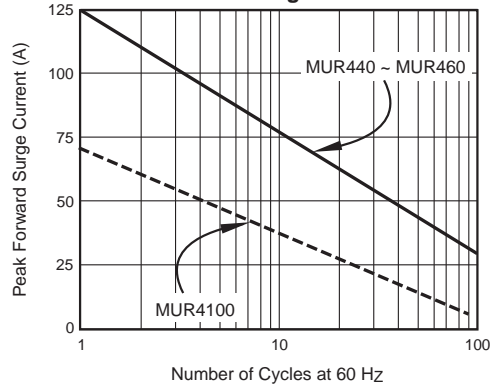


Fig. 3 - Typical Instantaneous Forward Characteristics

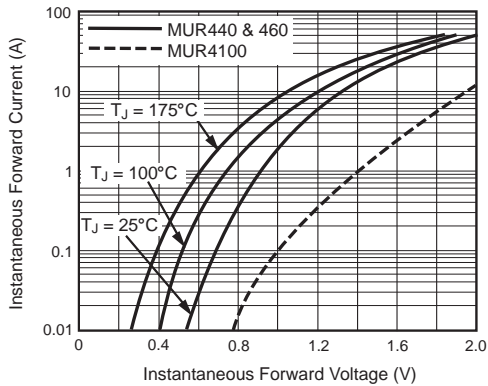


Fig. 4 - Typical Reverse Characteristics

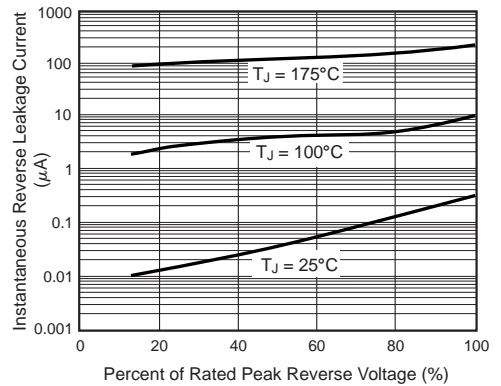


Fig. 5 - Typical Junction Capacitance per Leg

