

Ultra-fast Plastic Rectifiers Reverse Voltage 400V to 600V Forward Current 4A

MUR440 and MUR460

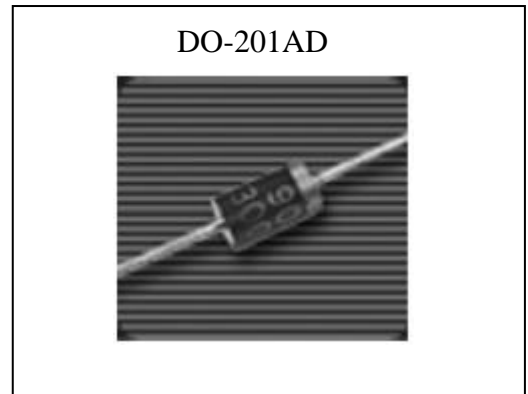
Features

- Glass passivated junction
- Plastic package has UL flammability classification 94V-0
- Ultra-fast recovery time for high efficiency
- Ideally suited for use in very high frequency switching power supplies, inverters, and as a free wheeling diode
- Excellent high temperature switching
- High temperature soldering guaranteed: 250°C/10seconds, 0.375"(9.5mm) lead length, 5lbs(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: 0.045 oz., 1.2 gram

Outline



Maximum Ratings and Electrical Characteristics

(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Type		Units
		MUR440	MUR460	
Maximum repetitive peak reverse voltage	VRRM	400	600	V
Peak reverse working voltage	VRWM	400	600	V
Maximum DC blocking voltage	VDC	400	600	V
Maximum instantaneous forward voltage (Note 1)	VF	at 3A, Tj=150°C		1.05
		at 3A, Tj=25°C		1.25
		at 4A, Tj=25°C		1.28
Maximum average forward rectified current (see Fig 1)	IF(AV)	4		A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	IFSM	125		A
Maximum instantaneous reverse current at rated DC blocking voltage (Note 1)	IR	Tj=25°C		10
		Tj=150°C		250
Maximum reverse recovery time at IF=0.5A, IR=1A, Irr=0.25A	trr	50		ns
Maximum reverse recovery time at IF=1A, dI/dt=50A/μs, VR=30V, Irr=10%IRM	trr	75		ns
Maximum forward recovery time at IF=1A, dI/dt=100A/μs, recovery to 1V	trr	50		ns
Typical thermal resistance, junction to ambient (Note 2)	RθJA	28		°C/W
Operating junction and storage temperature range	Tj;TSTG	-55 ~ +175		°C

Note: 1.Pulse test: pulse width≤300μs, duty cycle≤2%
 2.Length=1/2" on PCB with 1.5"×1.5" copper surface

Characteristic Curves

Fig. 1 – Forward Current Derating Curve

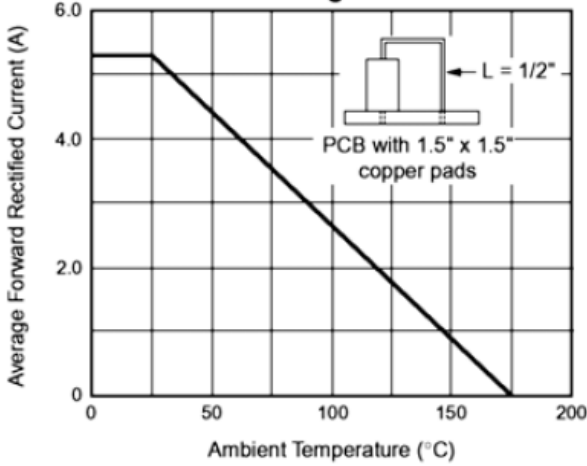


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

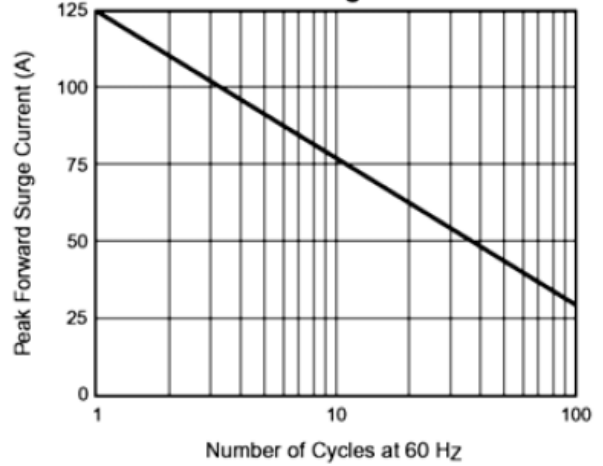


Fig. 3 – MUR460 Typical Instantaneous Forward Characteristics

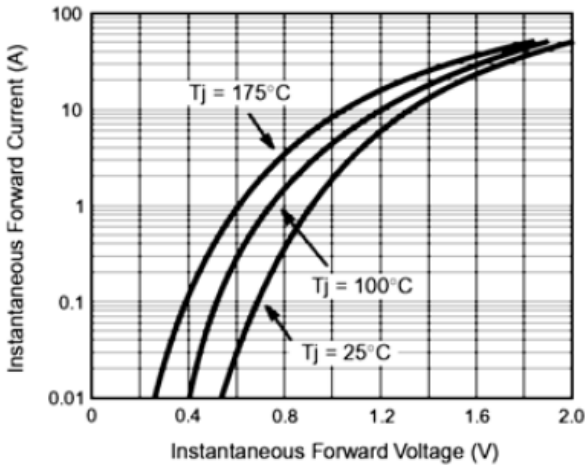


Fig. 4 – MUR460 Typical Reverse Characteristics

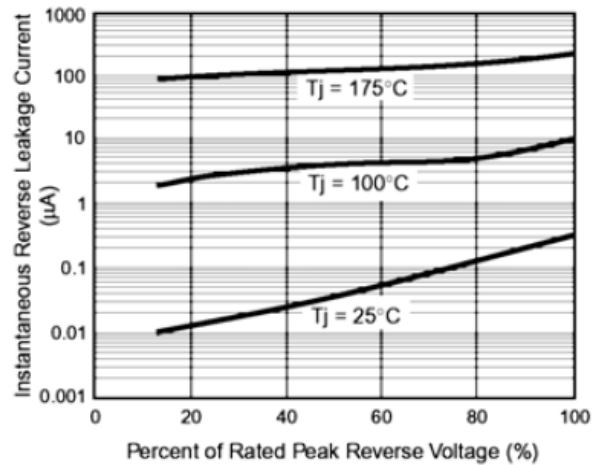
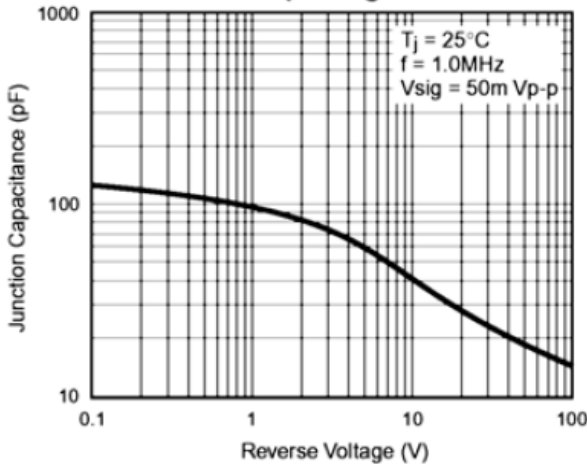
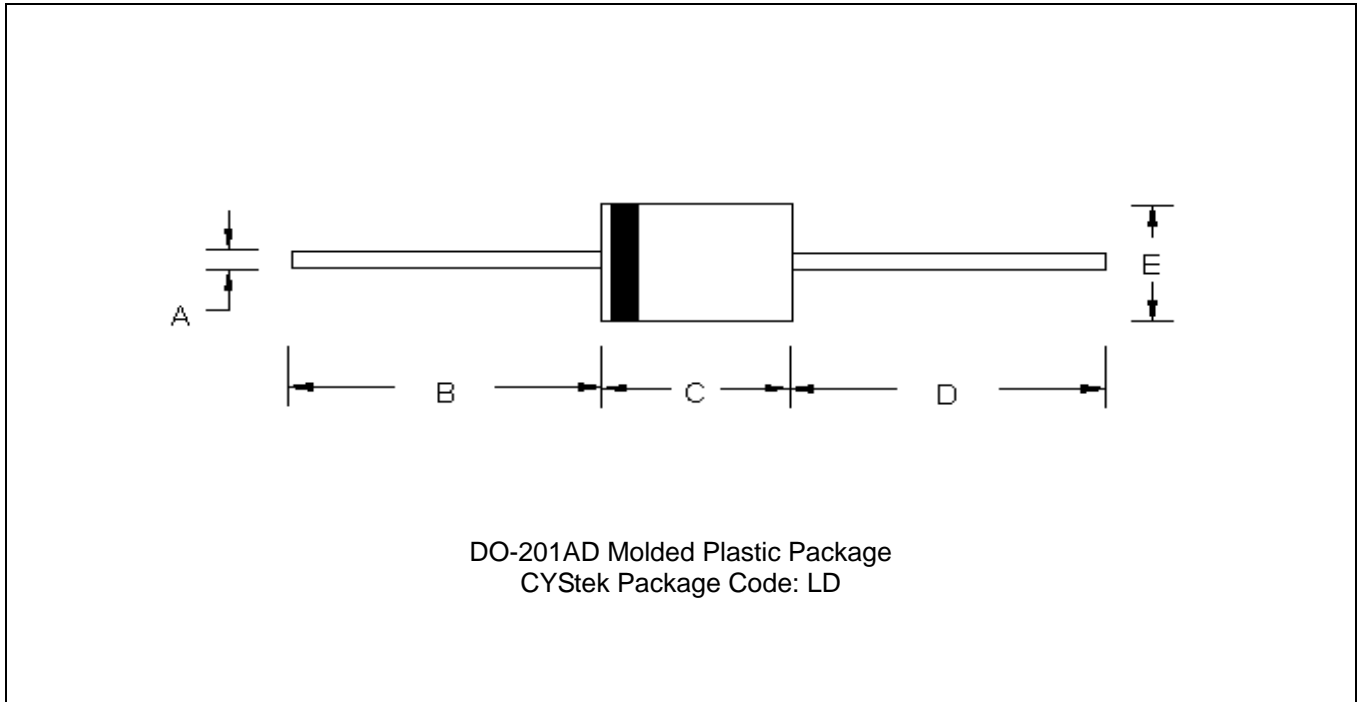


Fig. 5 – Typical Junction Capacitance per Leg



DO-201AD Dimension



DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	φ0.048	φ0.052	φ1.20	φ1.30	D	1.000	-	25.40	-
B	1.000	-	25.40	-	E	φ0.190	φ0.220	φ4.80	φ5.60
C	0.285	0.375	7.20	9.50					

Notes : 1.Controlling dimension : millimeters.
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material :

- Lead : Axial leads, solderable per MIL-STD-750, Method 2026 guaranteed.
- Mold Compound : Epoxy resin family, flammability solid burning class: UL94V-0

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