GOOD-ARK SEMICONDUCTOR

MUR420

Super Fast Plastic Rectifier
Reverse Voltage 200 V Forward Current 4.0 A

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as a free wheeling diode
- Ultrafast recovery time for high efficiency
- Glass passivated junction
- High temperature soldering guaranteed: 250°C/10seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3Kg) tension

Package: DO-201AD

Mechanical Data

- Cases: 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 ounce, 1.2 grams

Maximum Ratings and Electrical Characteristics

(T_A = 25°C unless otherwise noted)

Parameter	Symbols	MUR420	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	Volts
Working Peak Reverse Voltage	V_{RWM}	200	Volts
Maximum DC Blocking Voltage	V_{DC}	400	Volts
Maximum Average Forward Rectified Current at T_A=80°C (See figure 1)	$I_{F(AV)}$	4.0	Amps
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load) (JEDEC Method)	I_{FSM}	125.0	Amps
Maximum Instantaneous Forward Voltage (Note 1) at 3.0A, T_J=150°C at 3.0A, T_J=25°C at 4.0A, T_J=25°C	V_F	0.710 0.875 0.890	Volts
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage (Note 1) T_J=25°C T_J=150°C	I_R	5.0 150	uA
Maximum Reverse Recovery Time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	25	nS
Maximum Reverse Recovery Time at I_F=1.0A, di/dt=50A/us, V_R=30V, I_{rr}=10% I_{RM}	t_{rr}	35	nS
Maximum Forward Recovery Time at I_F=1.0A, di/dt=100A/us, recovery to 1.0V	t_{fr}	25	nS
Typical Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	28	°C/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +175	°C

Notes: 1. Pulse test: t_p=300us, duty cycle < 2%
2. Lead length = 1/2" on P.C. Board with 1.2" x 1.2" copper surface

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Ratings and Characteristics Curves (T_A = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

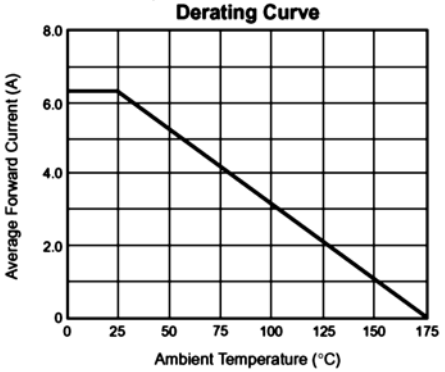


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

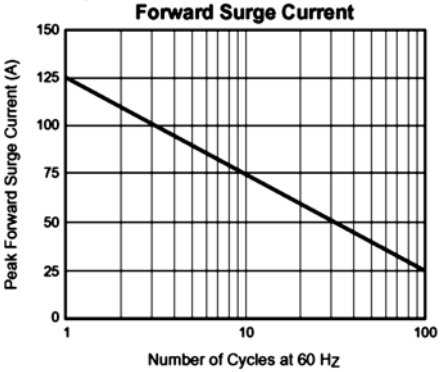


Fig. 3 – Typical Instantaneous Forward Characteristics

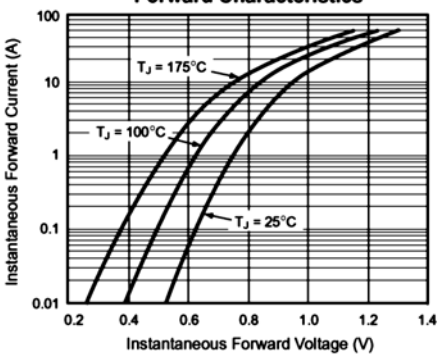


Fig. 4 – Typical Reverse Leakage Characteristics

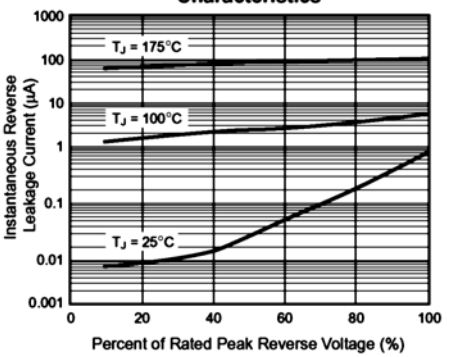
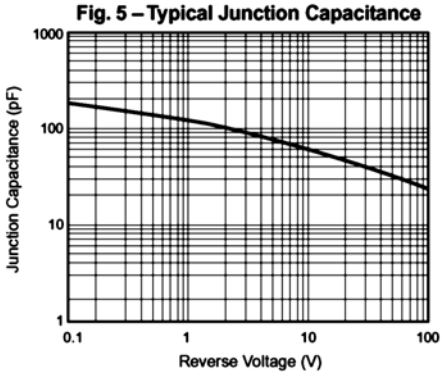


Fig. 5 – Typical Junction Capacitance



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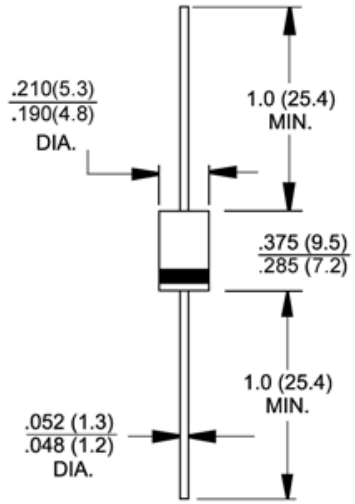
Package Outline Dimensions

DO-201AD



Dimensions in inches and (millimeters)