

MUR420 - MUR460

4.0AMPS. Ultrafast Glass Passivated Rectifiers

DO-201AD

Features

- ✧ 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
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10s/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Mounting position: Any
- ✧ Weight:1.2 grams

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

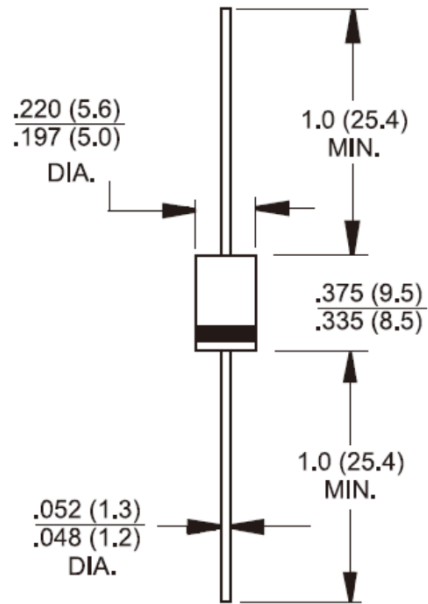
For capacitive load, derate current by 20%

Type Number	Symbol	MUR420	MUR440	MUR460	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS Voltage	V_{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	4			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	125			A
Maximum Instantaneous Forward Voltage (Note 1) @ 4 A	V_F	0.89	1.28		V
Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$	I_R	5 150	10 250		μA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	25	50		ns
Typical Junction Capacitance (Note 3)	C_j	65			pF
Maximum Forward Recovery Time TFR (IF=1.0A, di/dt=100A/us, Rev. to 1.0V)	T_{FR}	25	50		nS
Typical Thermal Resistance	$R_{\theta JA}$	28			$^\circ\text{C/W}$
Operating Temperature Range	T_J	-65 to + 150			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to + 150			$^\circ\text{C}$

Note 1: Pulse lest: $t_p = 300\mu\text{s}$, Duty Cycle<1%

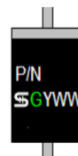
Note 2: Reverse Recovery Test Condition:IF=0.5A, IR=1.0A, IRR=0.25A

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.



Dimensions in inches and (millimeters)

Marking Diagram



- PN = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

RATINGS AND CHARACTERISTIC CURVES (MUR420 THRU MUR460)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

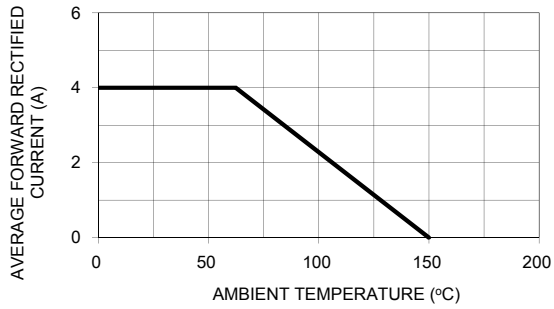


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

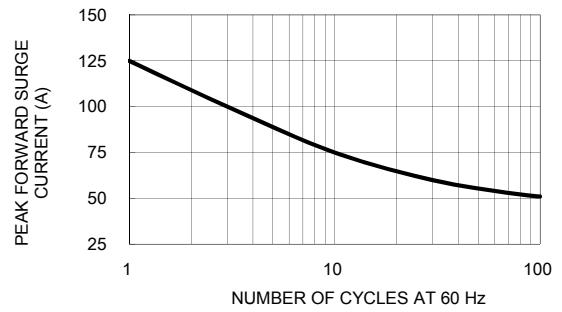


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

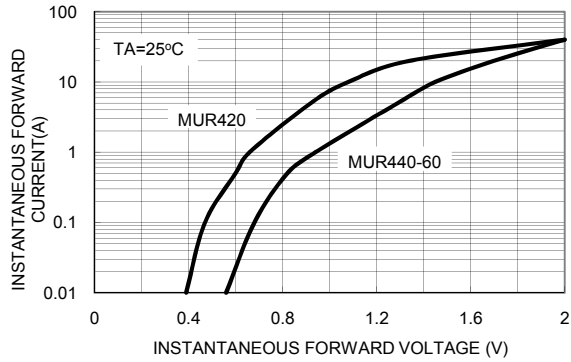


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

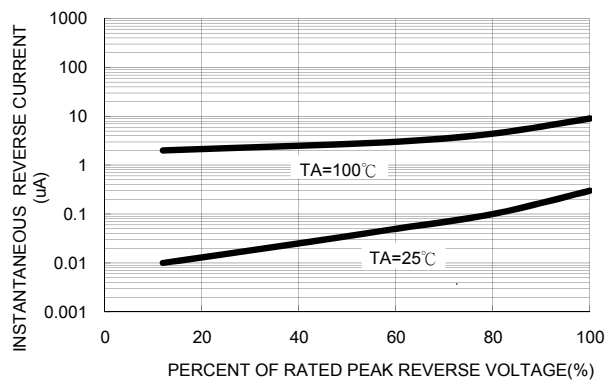


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

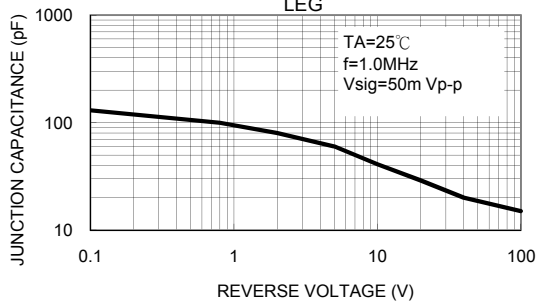


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

