

Features

- ◇ Designed for use in switching power supplies, inverters and as free wheeling diodes
- ◇ High efficiency, low VF
- ◇ High reliability
- ◇ Ultrafast recovery time for high efficiency
- ◇ 175°C operating junction temperature
- ◇ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ◇ Case: 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:
260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs.,(2.3kg) tension
- ◇ Weight: 0.34 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	MUR160A	MUR190A	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	900	V
Maximum RMS Voltage	V_{RMS}	420	630	V
Maximum DC Blocking Voltage	V_{DC}	600	900	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	35		A
Maximum Instantaneous Forward Voltage (Note 1) @ 1.0A $T_A=150^\circ\text{C}$ $T_A=25^\circ\text{C}$	V_F	1.05 1.25	1.50 1.70	V
Maximum Reverse Current @ Rated VR $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	5 150		uA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	50	75	nS
Typical Junction Capacitance (Note 3)	C_j	27	15	pF
Typical Thermal Resistance	$R_{\theta JA}$	50		$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	- 65 to + 175		$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 175		$^\circ\text{C}$

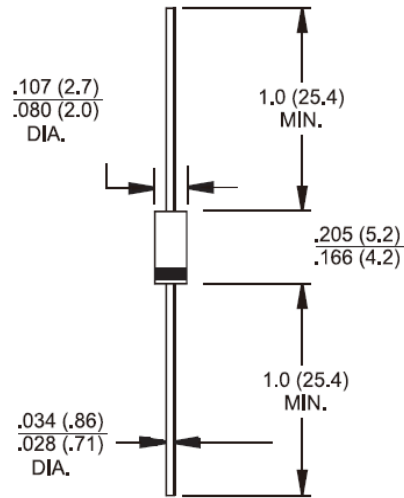
Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

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

MUR160A - MUR190A 1.0AMP Glass Passivated High Efficient Rectifiers

DO-41



Dimensions in inches and (millimeters)

Marking Diagram



MUR1XXA	= Specific Device Code
G	= Green Compound
Y	= Year
M	= Work Month

RATINGS AND CHARACTERISTIC CURVES (MUR160A THRU MUR190A)

FIG.1 FORWARD CURRENT DERATING CURVE

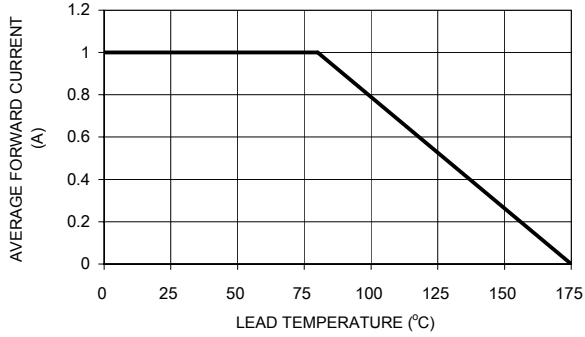


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

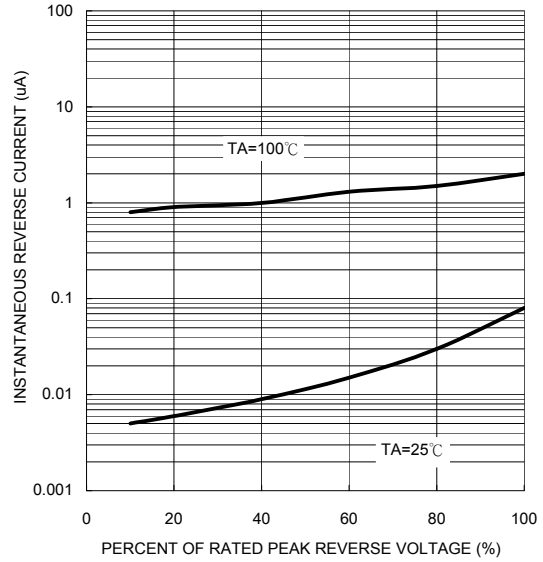


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

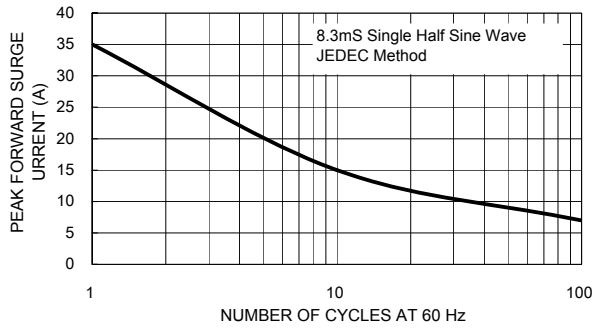


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

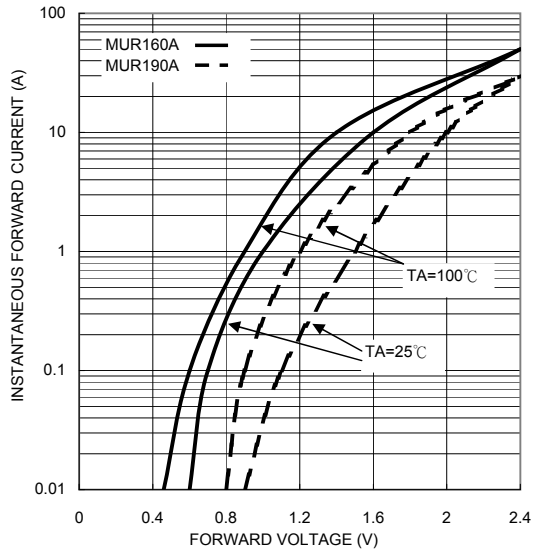


FIG. 4 TYPICAL JUNCTION CAPACITANCE

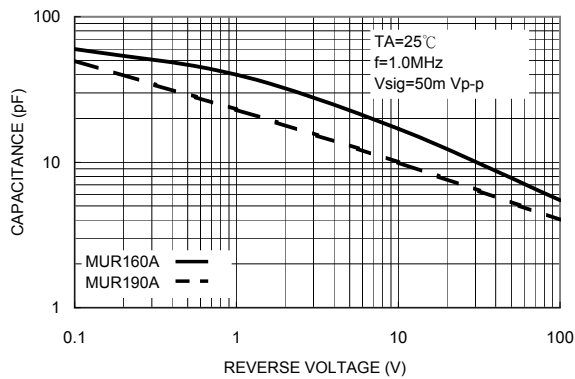


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

