

# MUR160 - MUR190

## 1.0 AMP. Glass Passivated High Efficient Rectifiers

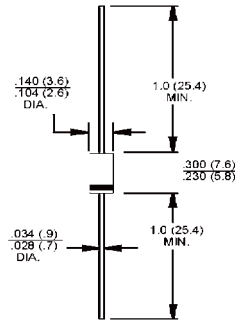
### DO-15/DO-214AC

### 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

- ✧ 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/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.40 grams



Dimensions in inches and (millimeters)

#### Marking Diagram



- MUR1XX = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

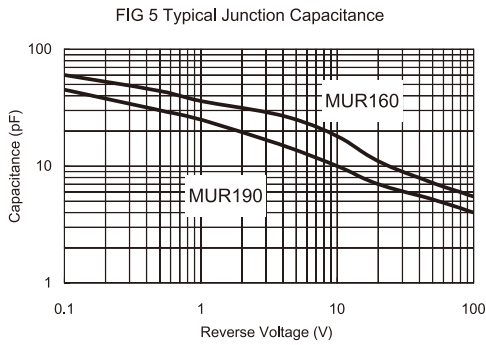
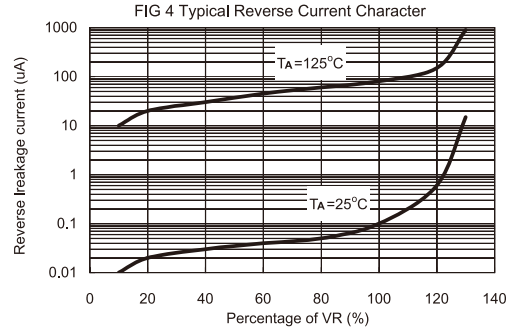
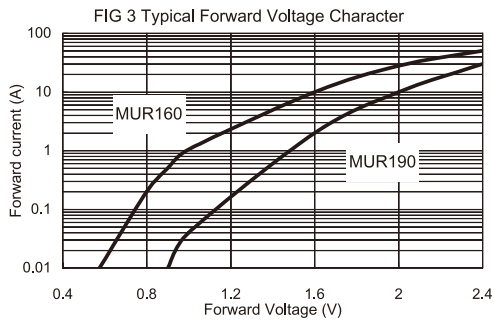
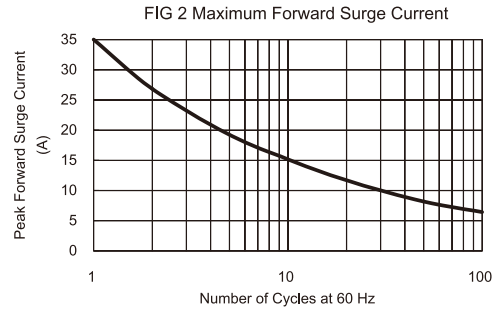
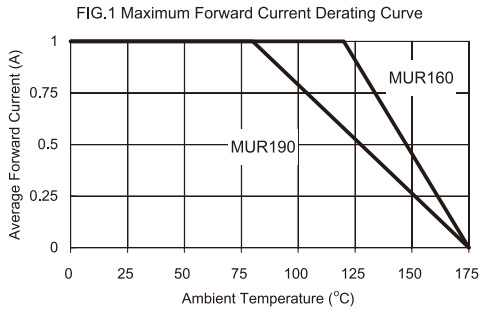
### Maximum Ratings and Electrical Characteristics

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	MUR160	MUR190	Units
Maximum Recurrent 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 Refer to Fig.1	$I_{F(AV)}$	1.0		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 @ 1.0A $T_j=150\text{ }^\circ\text{C}$ $T_j=25\text{ }^\circ\text{C}$	$V_F$	1.05 1.25	1.50 1.70	V
Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage ( Note 1 ) @ $T_A=125\text{ }^\circ\text{C}$	$I_R$	5.0 150		uA uA
Maximum Reverse Recovery Time ( Note 2 )	$T_{rr}$	50	75	nS
Typical Junction Capacitance ( Note 4 )	$C_j$	27	15	pF
Typical Thermal Resistance ( Note 3 )	$R_{\theta JA}$	50		$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-65 to +175		$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +175		$^\circ\text{C}$

- Notes: 1. Pulse Test: Pulse Width = 300uS, Duty Cycle  $\leq$  1.0%  
2. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $IRR=0.25A$   
3. Mounted on P.C. Board with 0.4" x 0.4" Copper Surface.  
4. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C

### RATINGS AND CHARACTERISTIC CURVES (MUR160 THRU MUR190)



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

