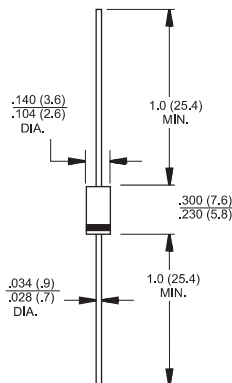


## Features

- ◇ 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

## 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: 0.34 grams



Dimensions in inches and (millimeters)

## 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 (Square Wave Note 4) @ $T_A=80^\circ\text{C}$	$I_{(AV)}$	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 $T_j=150^\circ\text{C}$ $T_j=25^\circ\text{C}$	$V_F$	1.05 1.25	1.5 1.7	V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	$I_R$	5.0 150		$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time ( Note 2 )	$T_{rr}$	50	75	nS
Typical Junction Capacitance ( Note 1 )	$C_j$	27	15	pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	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		$^\circ\text{C}$

- Notes:
1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
  2. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
  3. Thermal Resistance from Junction to Ambient, with units Mounted on P.C. Board with 0.2" x 0.2" Copper Surface.
  4. Pulse Test: Pulse Width = 300 $\mu\text{s}$ , Duty Cycle ?2.0%.

## RATINGS AND CHARACTERISTIC CURVES (MUR160 THRU MUR190)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

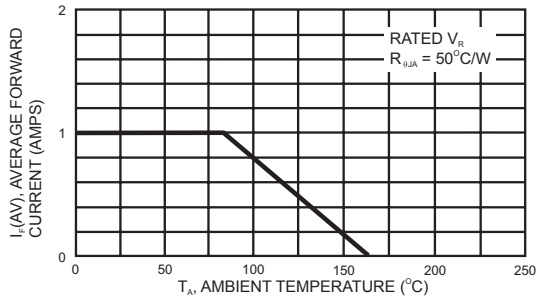


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

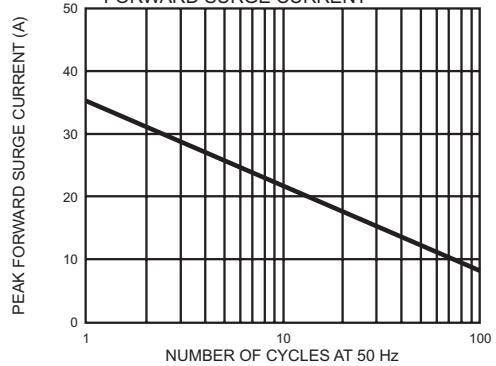


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

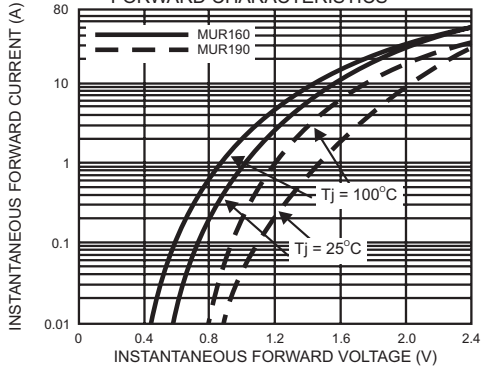


FIG.4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS

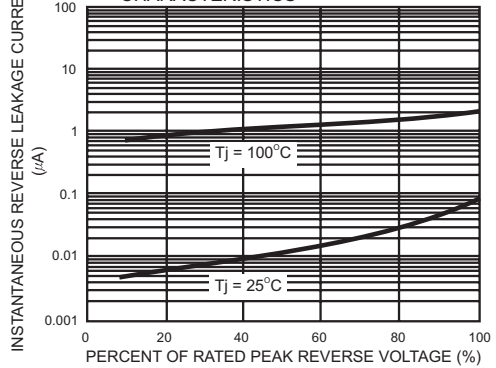


FIG.5- TYPICAL JUNCTION CAPACITANCE

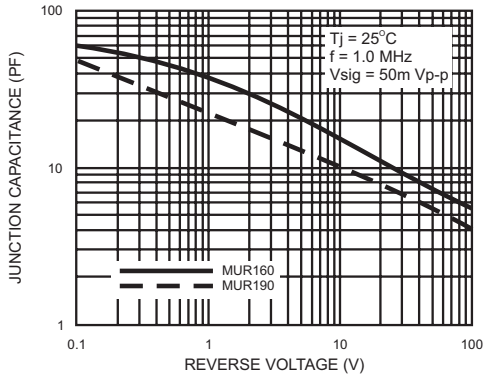


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

