

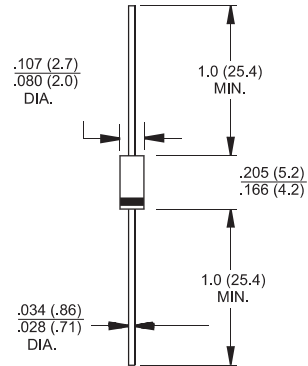


Features

- ◇ 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 & marking
- ◇ 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: 0.34 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	MUR160A	MUR190A	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	600	900	V
Maximum RMS Voltage	VRMS	420	630	V
Maximum DC Blocking Voltage	VDC	600	900	V
Maximum Average Forward Rectified Current (Square Wave Note 4) @ T _A =80 °C	I(AV)	1.0		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	IFSM	35		A
Maximum Instantaneous Forward Voltage @ 1.0A T _j =150 °C T _j =25 °C	VF	1.05 1.25	1.5 1.7	V
Maximum DC Reverse Current @ T _A =25 °C at Rated DC Blocking Voltage @ T _A =125 °C	I _R	5.0 150		uA uA
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 _{θJA}	50		°C/W
Operating Temperature Range	T _J	-65 to +175		°C
Storage Temperature Range	T _{STG}	-65 to +175		°C

- Notes:
1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
 2. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
 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 = 300uS, Duty Cycle ≤2.0%.

RATINGS AND CHARACTERISTIC CURVES (MUR160A THRU MUR190A)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

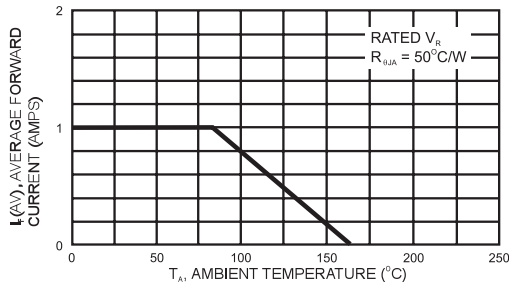


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

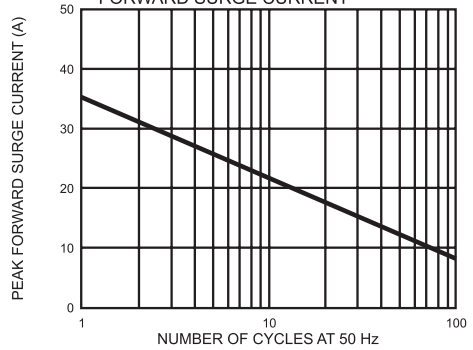


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

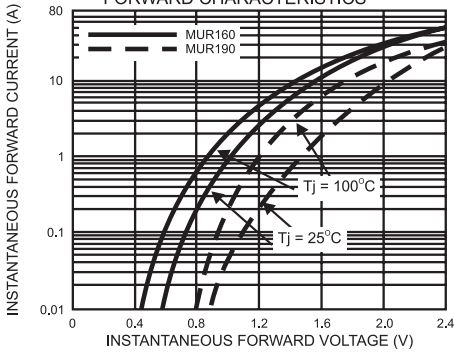


FIG.4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS

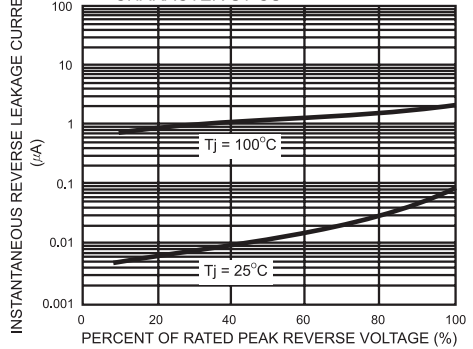


FIG.5- TYPICAL JUNCTION CAPACITANCE

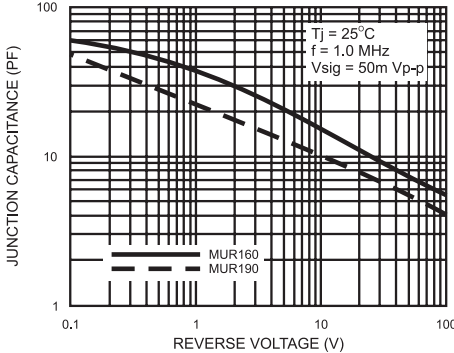
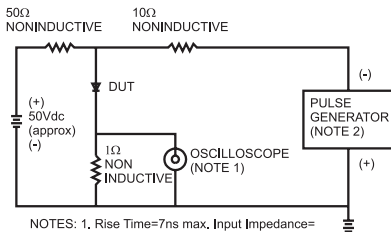


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
2. Rise Time=10ns max. Source Impedance= 50 ohms

