

## Features:

- High efficiency, low VF.
- High current capability
- High reliability
- High surge current capability
- For use in low voltage, high frequency inverter, free wheeling, and polarity protection application.

**RoHS  
Compliant**

## Mechanical Data:

Cases	: TO-220AC moulded plastic.
Terminals	: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed.
Polarity	: As marked.
High temperature soldering guaranteed	: 260°C/10 seconds/.25 inch, (6.35mm) from case.
Weight	: 2.24 grams.

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

Type Number	Symbol	MUR820	MUR840	MUR860	Units
Max. Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	400	600	V
Max. RMS Voltage	V <sub>RMS</sub>	140	280	420	
Max. DC Blocking Voltage	V <sub>DC</sub>	200	400	600	
Max. Average Forward Rectified Current 0.375 inch (9.5mm) Lead Length	I <sub>(AV)</sub>	8			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I <sub>FSM</sub>	100			
Max. Instantaneous Forward Voltage at 8A	V <sub>F</sub>	0.975	1.3	1.7	V
Max. DC Reverse Current at T <sub>c</sub> = 25°C at Rated DC Blocking Voltage at T <sub>c</sub> = 125°C (Note 4)	I <sub>R</sub>	5 250			μA μA
Max. Reverse Recovery Time (Note 2)	T <sub>rr</sub>	25	50		nS
Maximum Forward Recovery Time T <sub>FR</sub> (I <sub>F</sub> = 1.0A, di/dt = 50A/μS)	T <sub>fr</sub>	35			
Typical Thermal Resistance (Note 3)	R <sub>θJC</sub>	3	2		°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-65 to +175			°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +175			

- Notes:**
1. Measured at 1MHz and Applied Reverse Voltage of 4.0 Volts DC.
  2. Reverse Recovery Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A.
  3. Thermal Resistance from Junction to Case, Mounted on Heat sink Size of 2 × 3 × 0.25 inches Al-Plate.
  4. Pulse test: t<sub>p</sub> = 300μS, Duty Cycle < 2%.

## Ratings and Characteristic Curves (MUR820, MUR840 and MUR860)

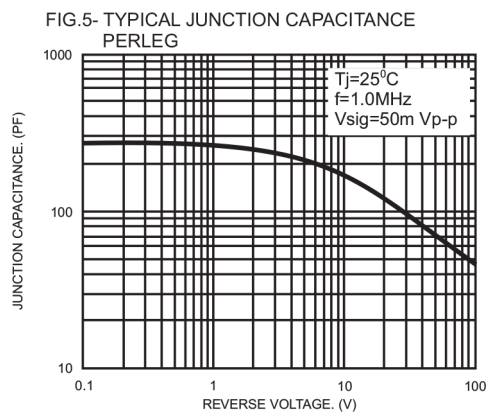
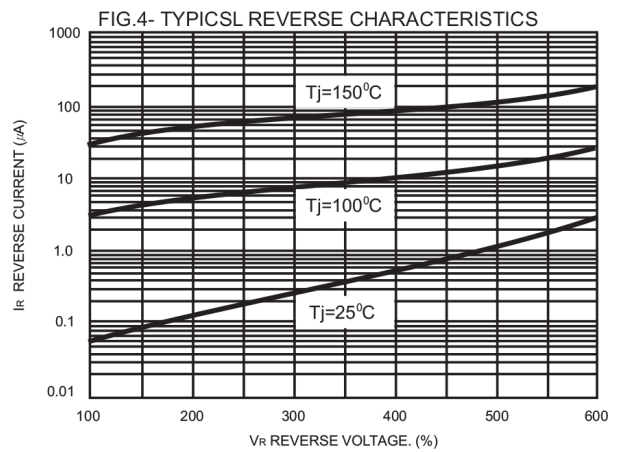
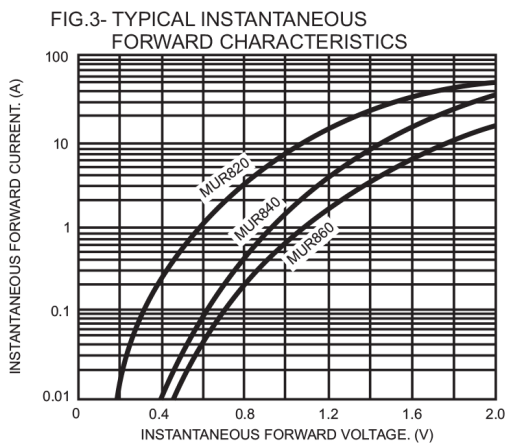
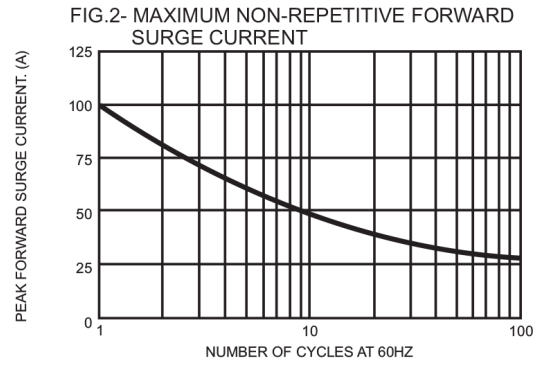
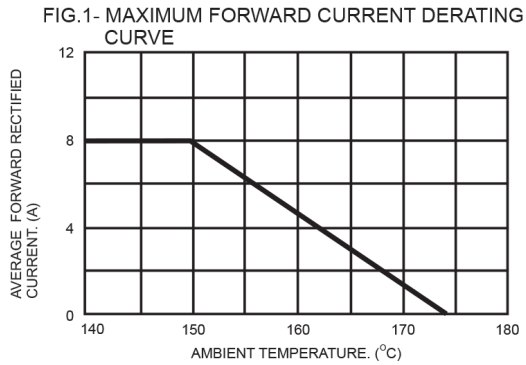
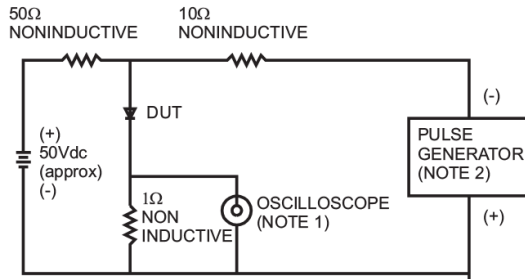
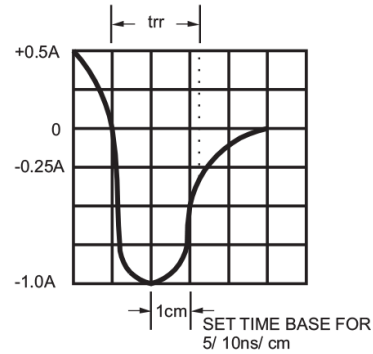


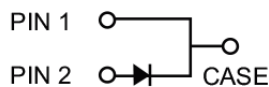
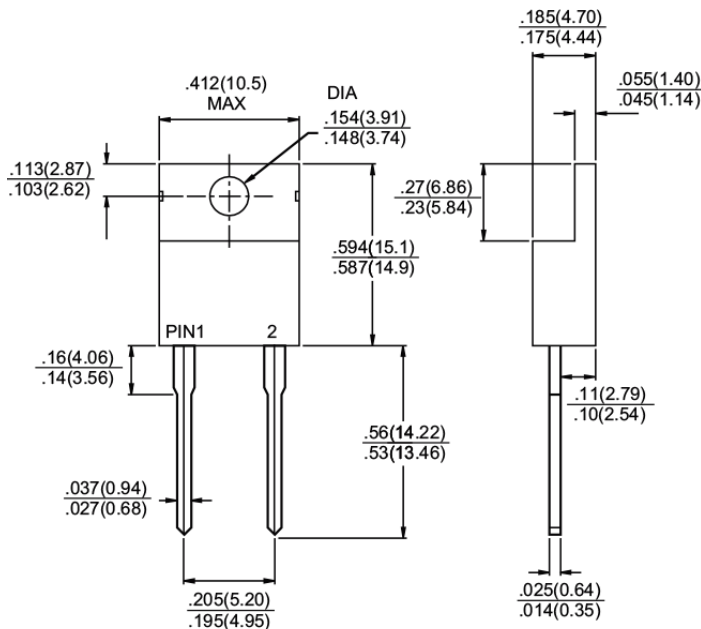
FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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



## TO-220AC



Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
Diode, Ultra-Fast, 8A, 200V	MUR820
Diode, Ultra-Fast, 8A, 400V	MUR840
Diode, Ultra-Fast, 8A, 600V	MUR860

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