

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.

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

- Notes:**
1. Measured at 1MHz and Applied Reverse Voltage of 4.0 Volts DC.
 2. Reverse Recovery Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 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_p = 300μS, Duty Cycle < 2%.

Ratings and Characteristic Curves (MUR820, MUR840 and MUR860)

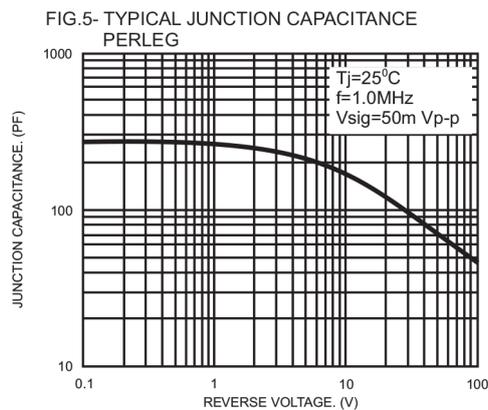
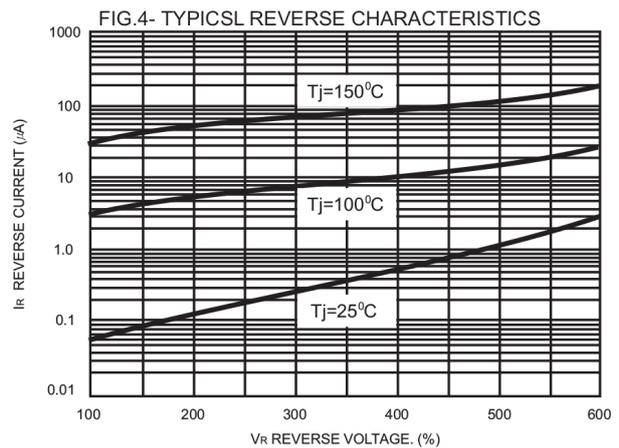
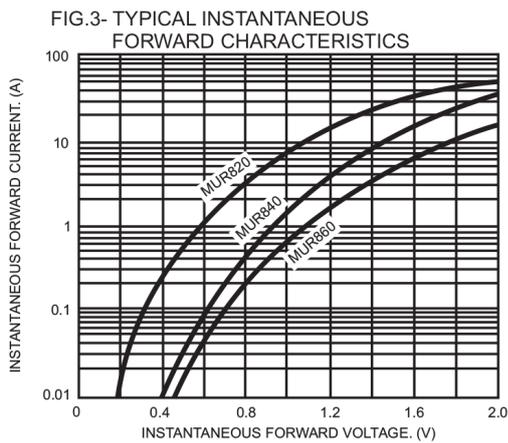
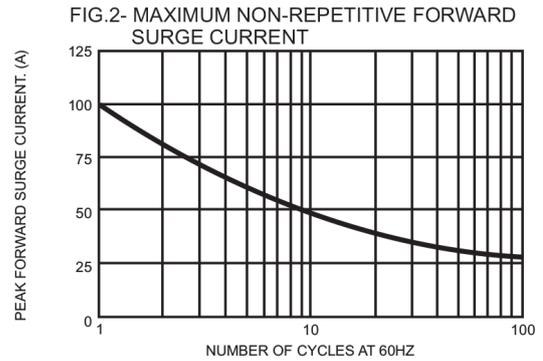
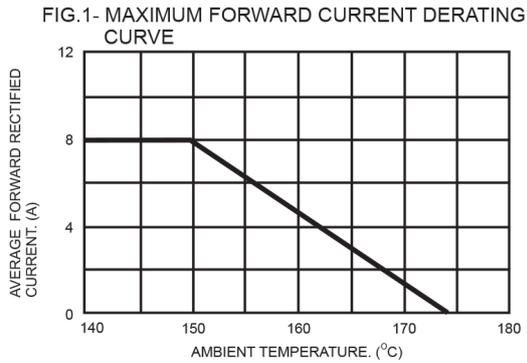
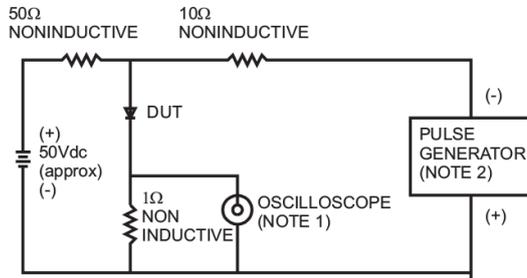
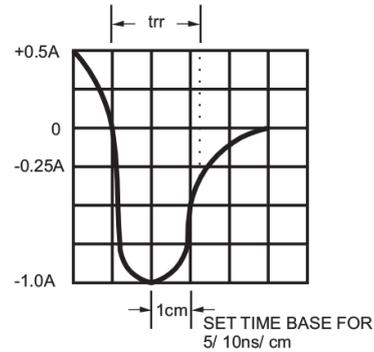


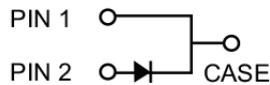
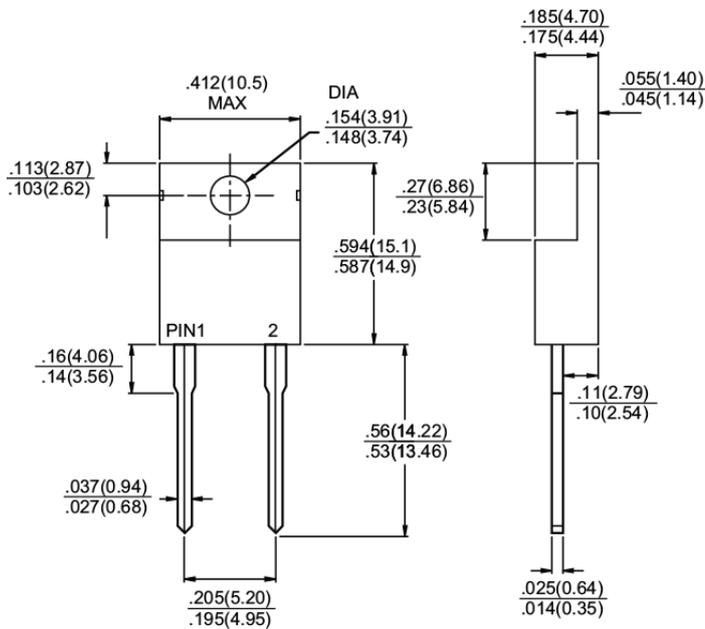
FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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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