

MUR820 - MUR860

8.0 AMPS. Glass Passivated Super Fast Rectifiers

TO-220AC

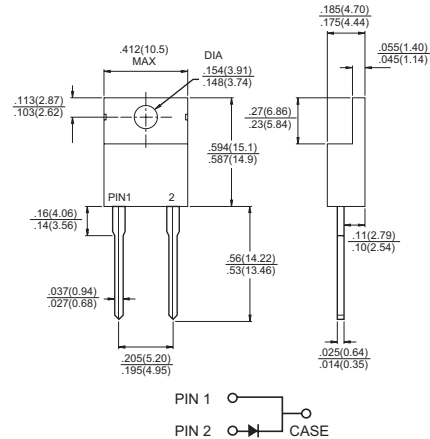


Features

- ✧ 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 molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ 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", (6.35mm) from case.
- ✧ Weight: 2.24 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	MUR820	MUR840	MUR860	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	200	400	600	V
Maximum RMS Voltage	V _{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V _{DC}	200	400	600	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length (See Fig. 1)	I _(AV)	8.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	100			A
Maximum Instantaneous Forward Voltage @ 8.0A	V _F	0.975	1.30	1.7	V
Maximum DC Reverse Current @ T _C =25 °C at Rated DC Blocking Voltage @ T _C =125 °C (Note 4)	I _R	5.0 250			uA uA
Maximum Reverse Recovery Time (Note 2)	T _{rr}	25	50		nS
Maximum Forward Recovery Time TFR (I _F =1.0A, di/dt = 50A/uS),	T _{fr}	35	50		nS
Typical Thermal Resistance (Note 3)	R _{θJC}	3.0	2.0		°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 Case, Mounted on Heatsink Size of 2" x 3" x 0.25" Al-Plate.
 4. Pulse test: $t_p = 300 \mu s$, Duty Cycle < 2%.

RATINGS AND CHARACTERISTIC CURVES (MUR820 THRU MUR860)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

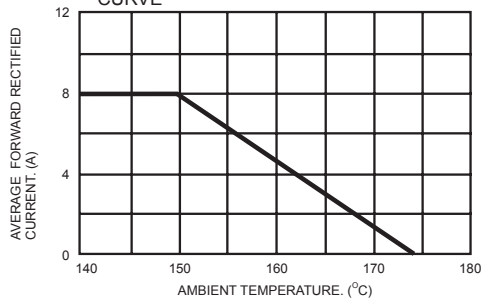


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

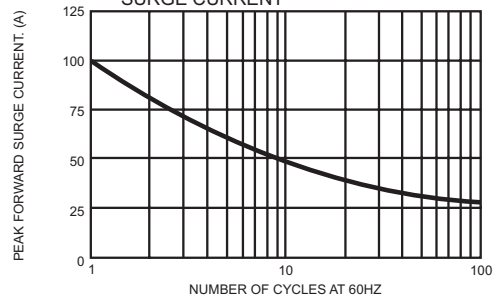


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

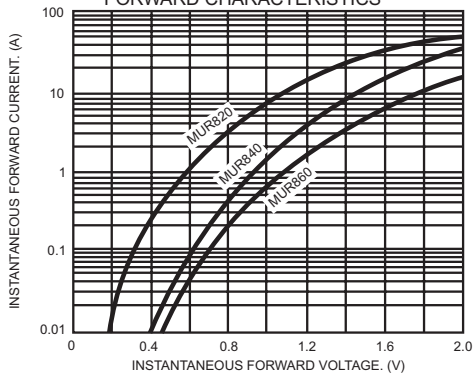


FIG.4- TYPICALS REVERSE CHARACTERISTICS

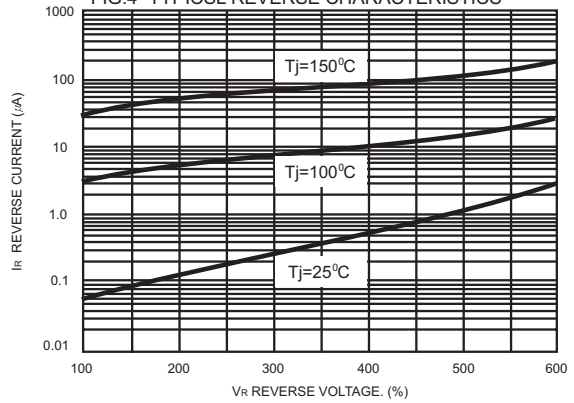


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

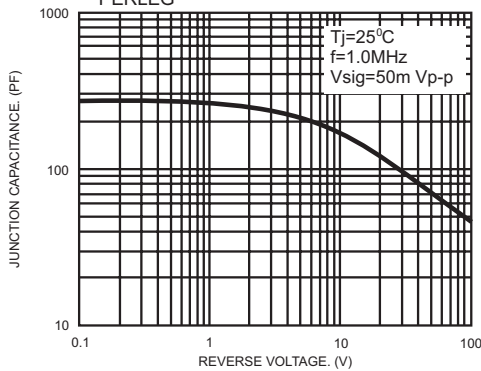


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

