

# MUR820(F,B) thru MUR860(F,B)

## 8A High Efficiency Rectifier

### FEATURE

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High ESD capability
- High temperature soldering guaranteed:  
260°C/10s/0.25"(6.35mm) from case

### MECHANICAL DATA

- Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- Mounting position: any

### TYPICAL APPLICATIONS

For use in low voltage, high frequency rectifier of switching mode power supplies, freewheeling diodes, DC/DC converters and polarity protection application.



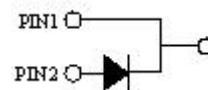
TO-220AC  
MUR8XX



ITO-220AC  
MUR8XXF



TO-263  
MUR8XXB



Ratings at 25°C ambient temperature unless otherwise specified, Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

### MAXIMUM RATINGS

Parameter	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 at $T_C=90^\circ\text{C}$	total device	8.0			A
	per diode	8.0			
Peak Forward Surge Current 8.3ms Single Half sine-wave superimposed on rate load per diode (JEDEC method)	$I_{FSM}$	100			A
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	50			ns
Junction Capacitance (Note2)	$C_J$	80	60		pF
Storage Temperature Range	$T_{STG}$	-55 to +150			°C
Operation Temperature Range	$T_J$	-55 to +150			°C

### ELECTRONICAL CHARACTERISTICS

Parameter	Symbol	MUR820	MUR840	MUR860	units
Maximum Forward Voltage Drop per diode at 8A (Note 3)	$V_F$	1.0	1.3	1.7	V
Maximum DC Reverse Current at rated DC blocking voltage (Note 3)	@ $T_C=25^\circ\text{C}$	10.0			μA
	@ $T_C=100^\circ\text{C}$	400.0			

### THERMAL CHARACTERISTICS

Parameter	Symbol	ITO-220	TO-220	TO-263	units
Typical Thermal Resistance (Note 4)	$R_{th(JC)}$	3.2	2.2	2.2	°C/W

#### Note:

1. Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc.
3. Pulse test: 300 μs pulse width, 1% duty cycle.
4. Thermal Resistance from Junction to Case Mounted on heatsink.