

### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Epitaxial construction

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any
- \* Weight: 1.5 grams

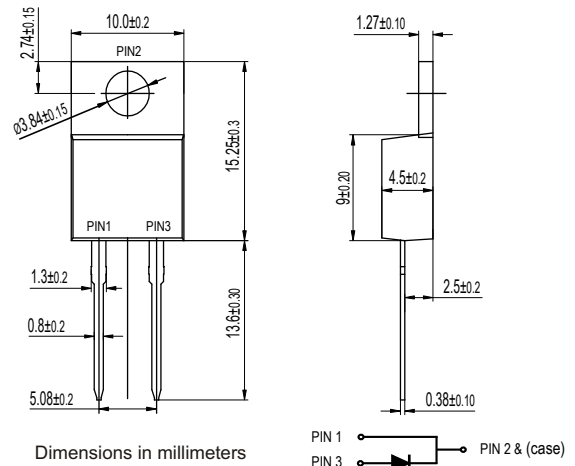
### VOLTAGE RANGE

1200 Volts

### CURRENT

15.0 Amperes

#### TO-220AC



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

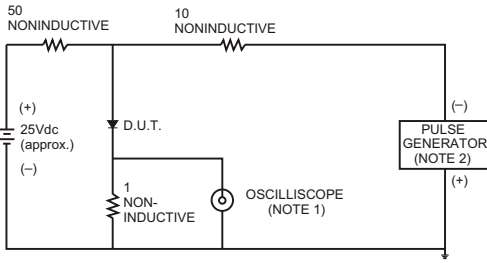
TYPE NUMBER	MUR15120	UNITS
Maximum Recurrent Peak Reverse Voltage	1200	V
Maximum RMS Voltage	1200	V
Maximum DC Blocking Voltage	1200	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=50°C	15.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	180	A
Maximum Instantaneous Forward Voltage at 15.0A Type at 15.0A Type at 10.0A Type at 5.0 A	2.5 2.1 1.98 1.75	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	5 100	μA
Maximum Reverse Recovery Time (Note 1)	60	nS
Typical Junction Capacitance (Note 2)	80	pF
Typical Thermal Resistance RθJ-C (Note 3)	1.8	°C/W
Typical Thermal Resistance RθJ-A (Note 4)	50	°C/W
Reverse recovery charge Q <sub>rr</sub>	150	nC
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>stg</sub>	-65 — +175	°C

#### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Between junction and case
4. Between junction and Air

## RATING AND CHARACTERISTIC CURVES (MUR15120)

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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



FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

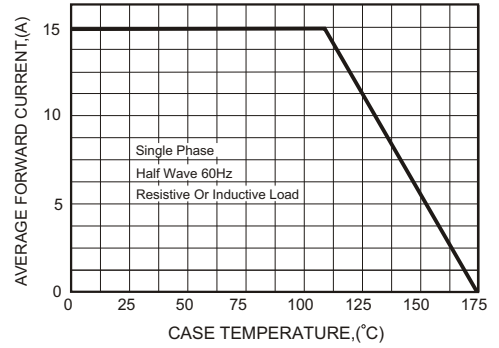


FIG.3-TYPICAL FORWARD CHARACTERISTICS

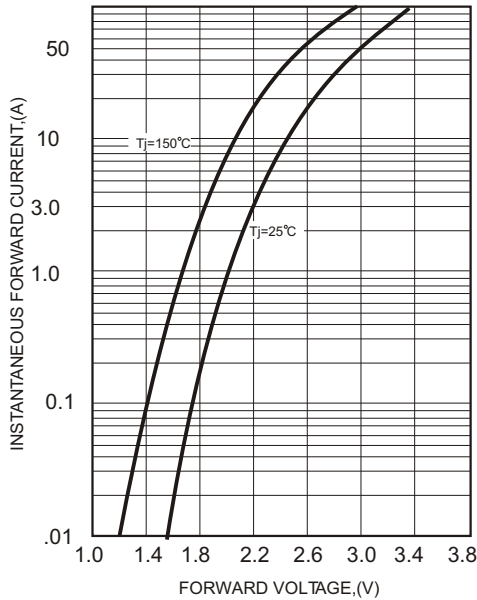


FIG.4-TYPICAL REVERSE CHARACTERISTICS

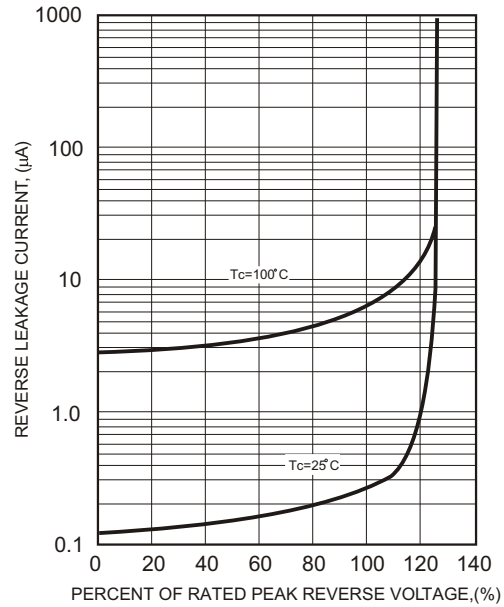


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

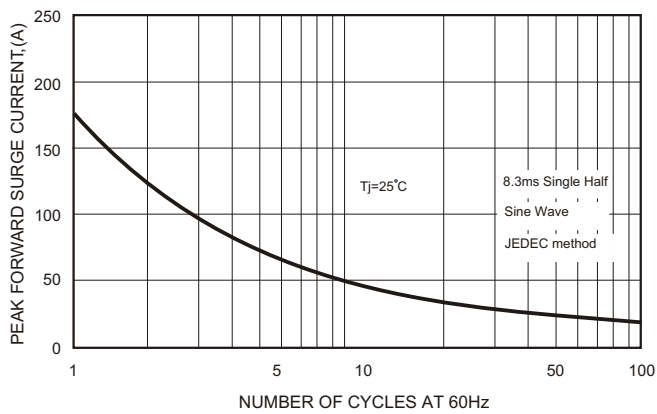
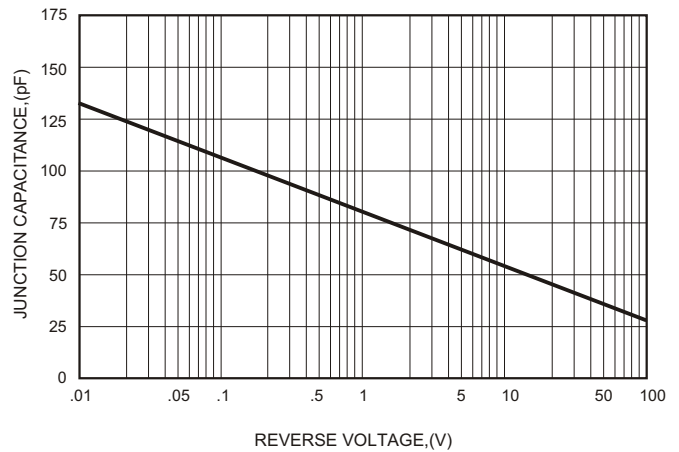


FIG.6-TYPICAL JUNCTION CAPACITANCE



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