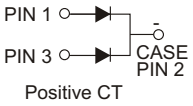


VOLTAGE RANGE
20 to 200 Volts
CURRENT
60.0 Ampere

## FEATURES

* Low forward voltage drop
* High current capability
* High reliability
* High surge current capability
* Good for switching mode application

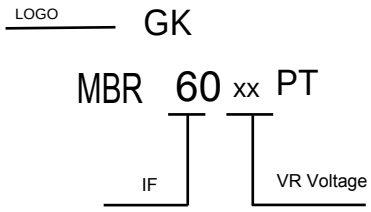






## MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any




## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25℃ ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| TYPE NUMBER | MBR6020PT | MBR6040PT | MBR6060PT | MBR6080PT | MBR60100PT | MBR60150PT | MBR60200PT | UNITS |
|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | 20 | 40 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum RMS Voltage | 14 | 28 | 42 | 56 | 70 | 105 | 140 | V |
| Maximum DC Blocking Voltage | 20 | 40 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum Average Forward Rectified Current | 60 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 400 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 60A | 0.6 | | 0.75 | 0.88 | | 0.95 | | V |
| Maximum DC Reverse Current Ta=25℃ | 0.1 | | | 0.02 | | | | mA |
| at Rated DC Blocking Voltage Ta=100℃ | 5 | | | 2 | | | | mA |
| Typical Junction Capacitance (Note1) | 650 | | | | | | | pF |
| Typical Thermal Resistance RθJC (Note 2) | 1.4 | | | | | | | ℃/W |
| Operating Temperature Range TJ | -65 —+150 | | | | | | | ℃ |
| Storage Temperature Range TSTG | -65 — +150 | | | | | | | ℃ |

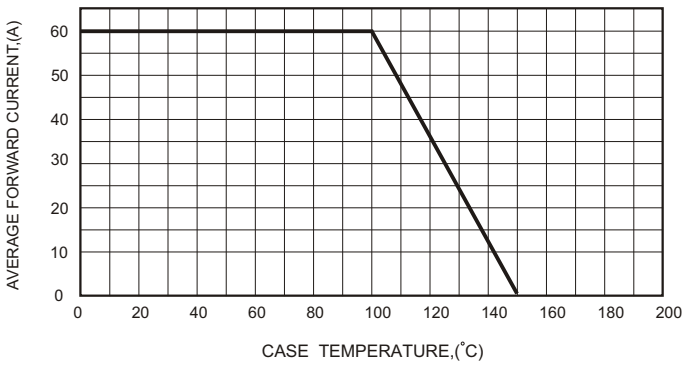
**NOTES:**

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

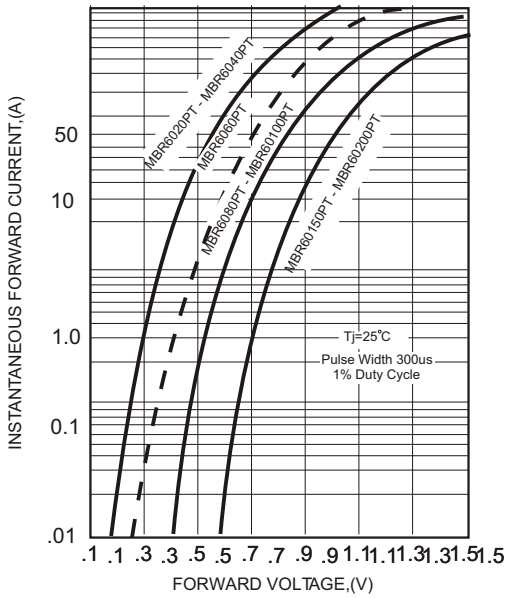
2. Thermal Resistance Junction to Case.

## RATING AND CHARACTERISTIC CURVES

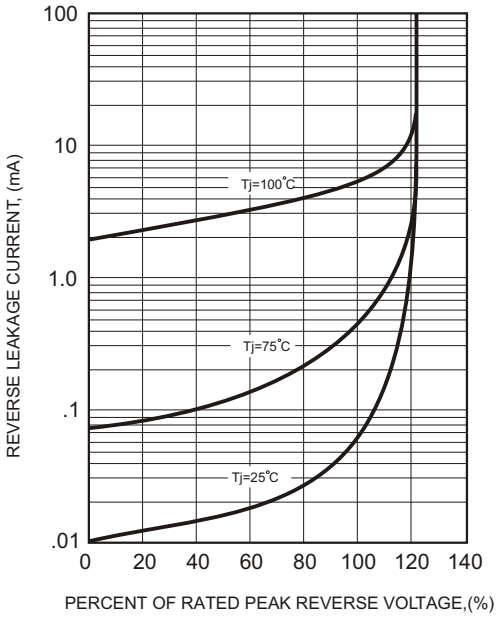
### FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE



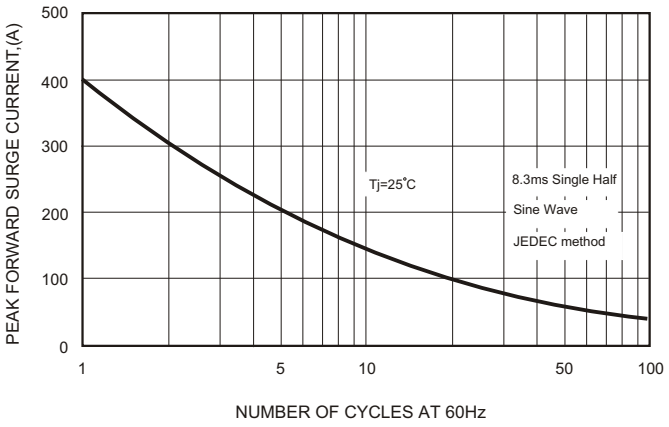

### FIG.2-TYPICAL FORWARD CHARACTERISTICS



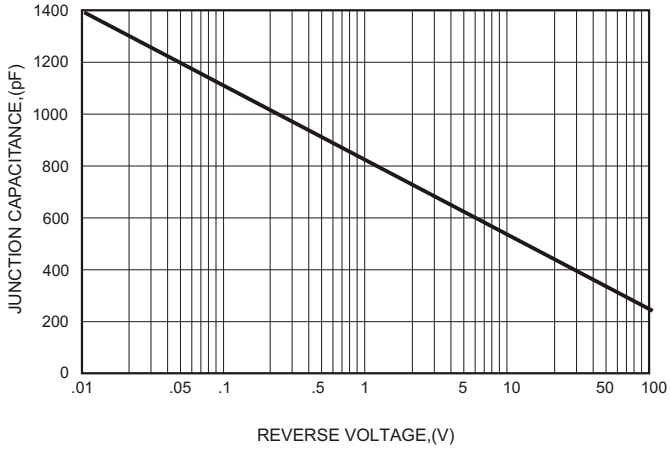

### FIG.3 - TYPICAL REVERSE CHARACTERISTICS




### FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



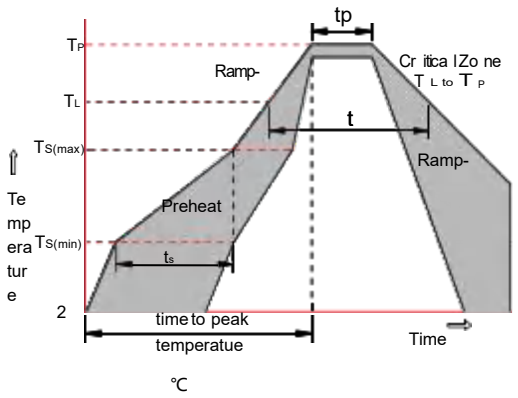

### FIG.5-TYPICAL JUNCTION CAPACITANCE



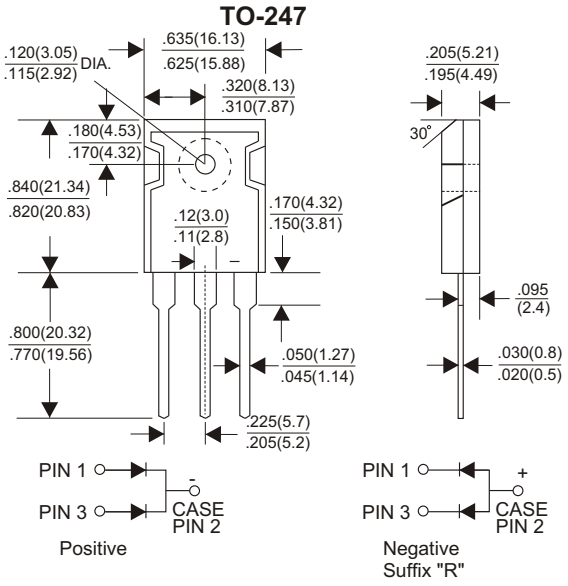
## Soldering parameters

| Reflow Condition | | Pb-Free assembly (see as bellow) |
|---|---|---|
| Pre Heat | -Temperature Min ($T_{s(min)}$) | +150℃ |
| | -Temperature Max($T_{s(max)}$) | +200℃ |
| | -Time (Min to Max) (ts) | 60-180 secs. |
| Average ramp up rate (Liquid us Temp ($T_L$) to peak) | | 3℃/sec. Max |
| $T_{s(max)}$ to $T_L$ - Ramp-up Rate | | 3℃/sec. Max |
| Reflow | -Temperature($T_L$)(Liquid us) | +217℃ |
| | -Temperature($t_L$) | 60-150 secs. |
| Peak Temp ($T_p$) | | +260(+0/-5)℃ |
| Time within 5℃ of actual Peak Temp ($t_p$) | | 30 secs. Max |
| Ramp-down Rate | | 6℃/sec. Max |
| Time 25℃ to Peak Temp ($T_P$) | | 8 min. Max |
| Do not exceed | | +260℃ |

**FIG5:** Reflow condition




## Package Dimensions & Suggested Pad Layout




Dimensions in inches and (millimeters)