SAM YANG

# SAMYANG ELECTRONICS

*( SINGLE CHIP )*

*MBR1535 --- MBR15200*

## SCHOTTKY BARRIER RECTIFIER

**VOLTAGE RANGE: 35 --- 200 V**
**CURRENT:15.0A**

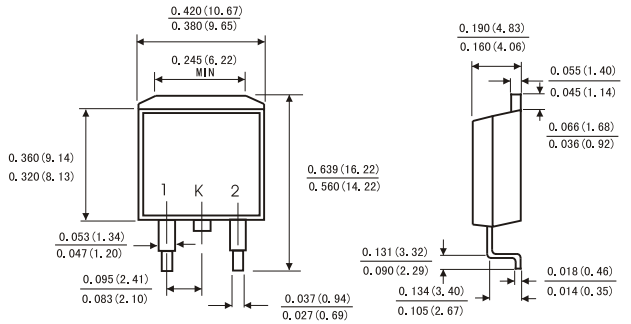
### FEATURES

- ◇Metal-semiconductor junction with guard ring
- ◇Epitaxial construction
- ◇Low forward voltage drop,low switching losses
- ◇High surge capability
- ◇For use in low voltage,high frequency inverters free wheeling,and polarity protection applications
- ◇The plastic material carries U/L recognition 94V-0

### MECHANICAL DATA

- ◇Case:JEDEC TO-263 ,molded plastic
- ◇Terminals: Axial lead ,solderable per MIL- STD-202,Method 208
- ◇Polarity: As marked
- ◇Weight: 0.08ounces,2.24 grams
- ◇Mounting position: Any

**TO - 263** D2PAK




Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

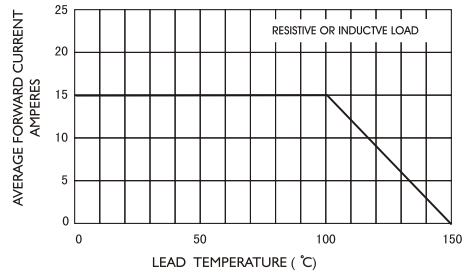
Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

| | Symbols | MBR 1535 | MBR 1545 | MBR 1550 | MBR 1560 | MBR **15100** | MBR 15150 | MBR 15200 | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 35 | 45 | 50 | 60 | 100 | 150 | 200 | Volts |
| Maximum RMS voltage | $V_{RMS}$ | 25 | 32 | 35 | 42 | 70 | 105 | 140 | Volts |
| Maximum DC blocking voltage | $V_{DC}$ | 35 | 45 | 50 | 60 | 100 | 150 | 200 | Volts |
| Maximum average forward rectified current See Fig. 1 | $I_{(AV)}$ | 15.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 150.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 15 A | $V_F$ | 0.60 | | 0.75 | | 0.85 | 0.90 | 0.95 | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) $T_c$ =25℃ | $I_R$ | 0.2 | | | | | | | mA |
| $T_c$ =125℃ | | 30 | | | 50 | | | | |
| Typical thermal resistance (Note 2) | $R_{\theta JC}$ | 3.0 | | | | | | | ℃/W |
| Operating junction temperature range | $T_J$ | -65 to+150 | | | | | | | ℃ |
| Storage temperature range | $T_{STG}$ | -65 to+150 | | | | | | | ℃ |

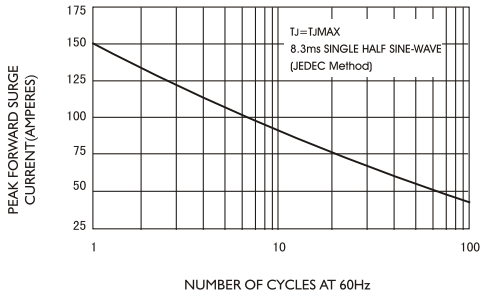
NOTE: 1. Pulse test:300us pulse width,1% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal resistance junction to ambient

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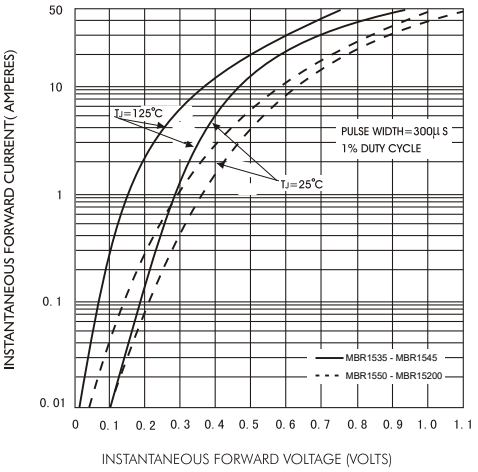
## FIG.1-FORWARD CURRENT DERATING CURVE



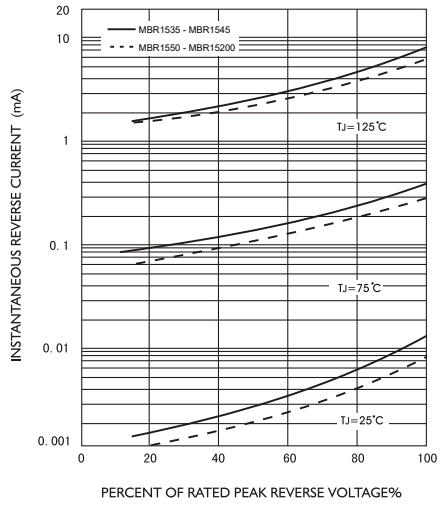

## FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



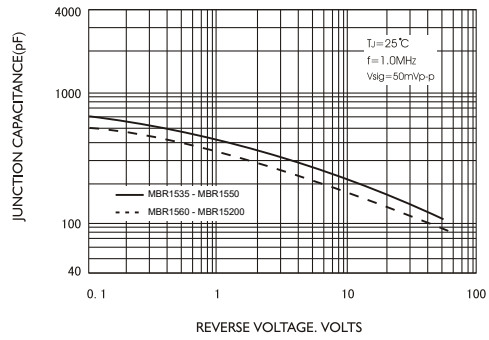

## FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS




## FIG.4-TYPICAL REVERSE CHARACTERISTICS




## FIG.5-TYPICAL JUNCTION CAPACITANCE




## FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

