KERSEMI®

# MBRF40020(R) THRU MBRF400100(R)

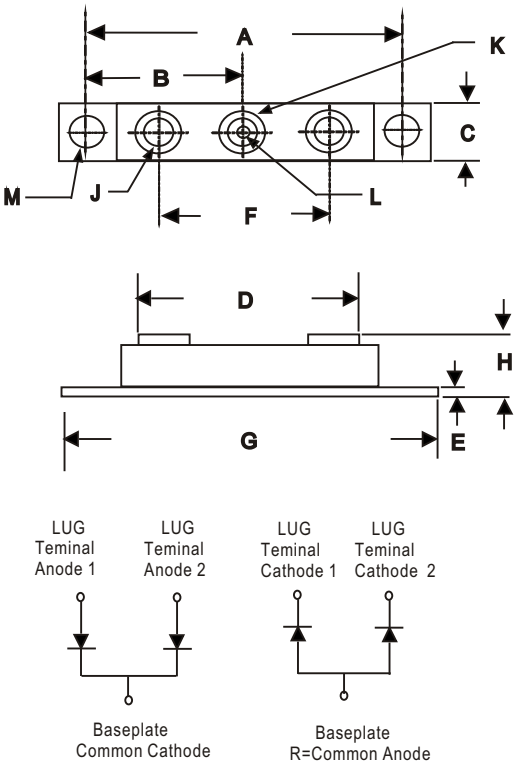
## SCHOTTKY DIODES MODULE TYPE 400A

## Features

High Surge Capability
Types Up to 100V $V_{RRM}$

400Amp Rectifier
20-100 Volts

FULL PACKAGE







## Maximum Ratings

Operating Temperature: -40 ℃ to +175 ℃
Storage Temperature: -40 ℃ to +175 ℃

| Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|---|---|---|---|
| MBRF40020(R) | 20V | 14V | 20V |
| MBRF40030(R) | 30V | 21V | 30V |
| MBRF40035(R) | 35V | 25V | 35V |
| MBRF40040(R) | 40V | 28V | 40V |
| MBRF40045(R) | 45V | 32V | 45V |
| MBRF40060(R) | 60V | 42V | 60V |
| MBRF40080(R) | 80V | 56V | 80V |
| MBRF400100(R) | 100V | 70V | 100V |
| | | | |
| | | | |

## Electrical Characteristics @ 25 ℃ Unless Otherwise Specified

| | | | |
|---|---|---|---|
| Average Forward Current (Per pkg) | $I_{F(AV)}$ | 400A | $T_C$ =125℃ |
| Peak Forward Surge Current (Per leg) | $I_{FSM}$ | 3000A | 8.3ms , half sine |
| Maximum Instantaneous Forward Voltage (Per leg) NOTE (1) | $V_F$ | 0.65V<br>0.75V<br>0.84V | (MBRF40020~MBRF40045)<br>(MBRF40060)<br>(MBRF40080~MBRF400100)<br>$I_{FM}$ =200A; $T_j$ = 25 ℃ |
| Maximum Instantaneous Reverse Current At Rated DC Blocking Voltage (Per leg) NOTE (1) | $I_R$ | 5.0 mA<br>200 mA | $T_J$ = 25 ℃<br>$T_J$ =125 ℃ |
| Maximum Thermal Resistance Junction To Case (Per leg) | $R_{\theta jc}$ | 0.8℃/W | |

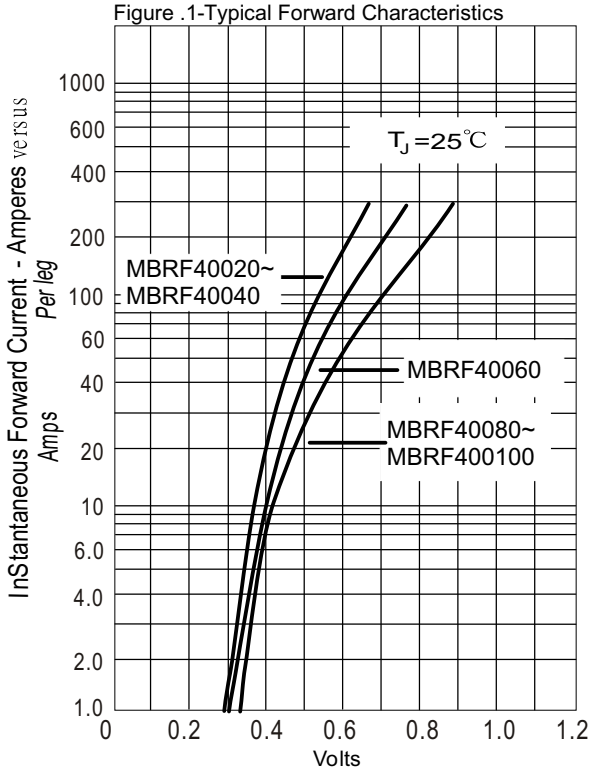
NOTE :
(1) Pulse Test: Pulse Width 300 usec, Duty Cycle < 2%

| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| | INCHES | | MM | | |
| DIM | MIN | MAX | MIN | MAX | NOTE |
| A | 3.150 | NOM | 80.01 | NOM | |
| B | 1.565 | 1.585 | 39.75 | 40.26 | |
| C | .700 | .800 | 17.78 | 20.32 | |
| E | .119 | .132 | 3.02 | 3.35 | |
| F | 1.375 | REF | 34.92 | REF | |
| G | 3.55 | 3.65 | 90.17 | 92.71 | |
| H | .604 | .635 | 15.35 | 16.35 | |
| J | 1/4 | - 20 | UNC | FULL | |
| K | .380 | .410 | 9.65 | 10.41 | Ø |
| L | .185 | .195 | 4.70 | 4.95 | Ø |
| M | .275 | .295 | 6.99 | 7.49 | Ø |
| | | | | | |
| | | | | | |

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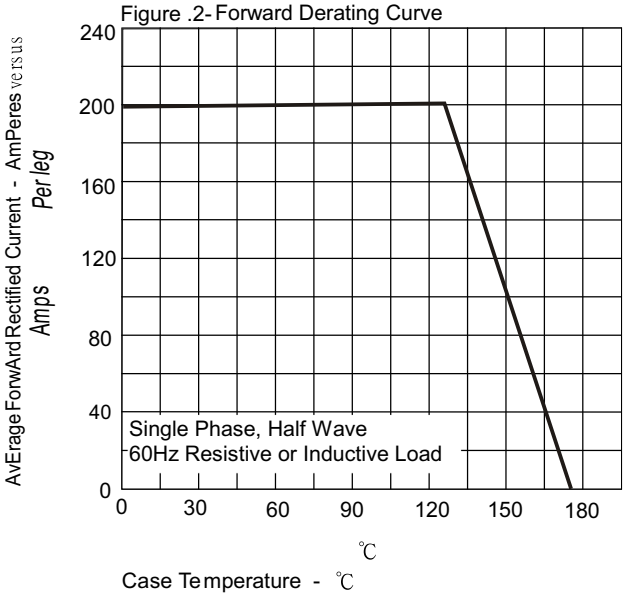
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Figure .1-Typical Forward Characteristics



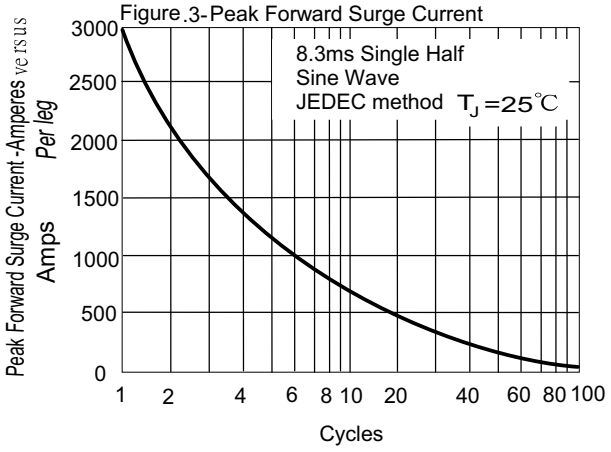

Instantaneous Forward Voltage - Volts

Figure .2- Forward Derating Curve



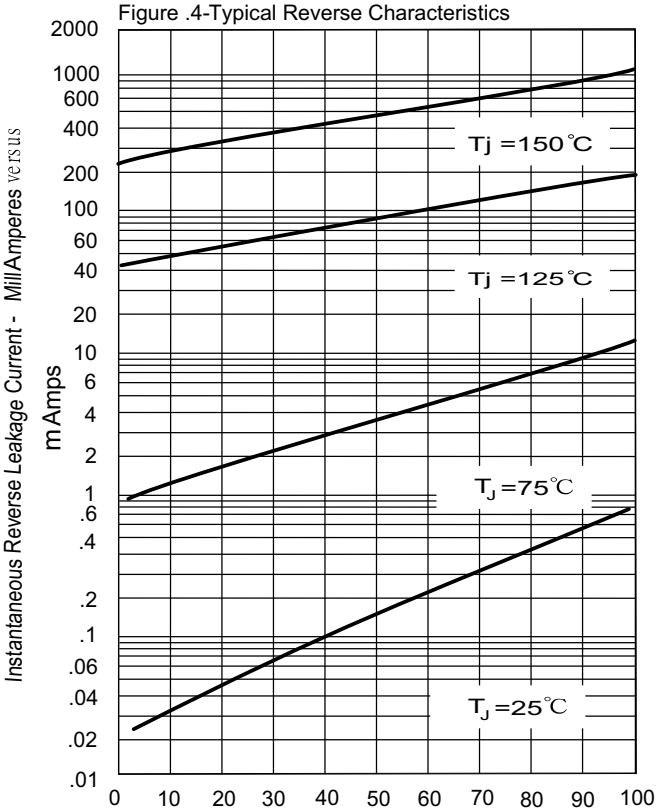

Case Temperature - ℃

Figure .3- Peak Forward Surge Current




Number Of Cycles At 60Hz - Cycles

Figure .4-Typical Reverse Characteristics




Reverse Voltage - Volts