

DIGITRON SEMICONDUCTORS

MBR3520-MBR35100

35 AMP SCHOTTKY BARRIER RECTIFIER

Operating and storage temperature range: -55 to +175°C

MAXIMUM RATINGS

| Part Number | Maximum recurrent peak reverse voltage | Maximum RMS voltage | Maximum DC blocking voltage |
|-------------|--|---------------------|-----------------------------|
| MBR3520 | 20V | 14V | 20V |
| MBR3530 | 30V | 21V | 30V |
| MBR3535 | 35V | 24.5V | 35V |
| MBR3540 | 40V | 28V | 40V |
| MBR3545 | 45V | 31.5V | 45V |
| MBR3560 | 60V | 42V | 60V |
| MBR3580 | 80V | 56V | 80V |
| MBR35100 | 100V | 70V | 100V |

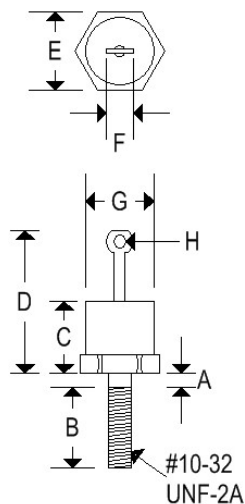
ELECTRICAL CHARACTERISTICS @ 25°C unless otherwise specified

| Parameter | Symbol | Value | Test Conditions |
|--|-------------|----------------------|---|
| Average forward current | $I_{F(AV)}$ | 35A | $T_A = 110^\circ\text{C}$ |
| Peak forward surge current | I_{FSM} | 600A | 8.3ms, half-sine |
| Maximum forward voltage drop MBR3520-3545 MBR3560 MBR3580-35100 | V_F | .68V .75V .84V | $I_{FM} = 35\text{A}$ $T_A = 25^\circ\text{C}^*$ |
| Maximum DC reverse current at rated DC blocking voltage | I_R | 1.5mA | $T_A = 25^\circ\text{C}$ |

* Pulse test: pulse width 300µsec, duty cycle 1%

MECHANICAL CHARACTERISTICS

| | |
|------------------|--------------------------------|
| Case | DO-4(R) |
| Marking | Alpha-numeric |
| Normal polarity | Cathode is stud |
| Reverse polarity | Anode is stud (add "R" suffix) |



| | DO-4(R) | | | |
|---|---------|-------|-------------|--------|
| | Inches | | Millimeters | |
| | Min | Max | Min | Max |
| A | - | 0.078 | - | 1.981 |
| B | 0.422 | 0.453 | 10.719 | 11.506 |
| C | - | 0.405 | - | 10.287 |
| D | - | 0.800 | - | 20.320 |
| E | 0.420 | 0.440 | 10.668 | 11.176 |
| F | - | 0.250 | - | 6.350 |
| G | - | 0.424 | - | 10.770 |
| H | 0.066 | - | 1.676 | - |

Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

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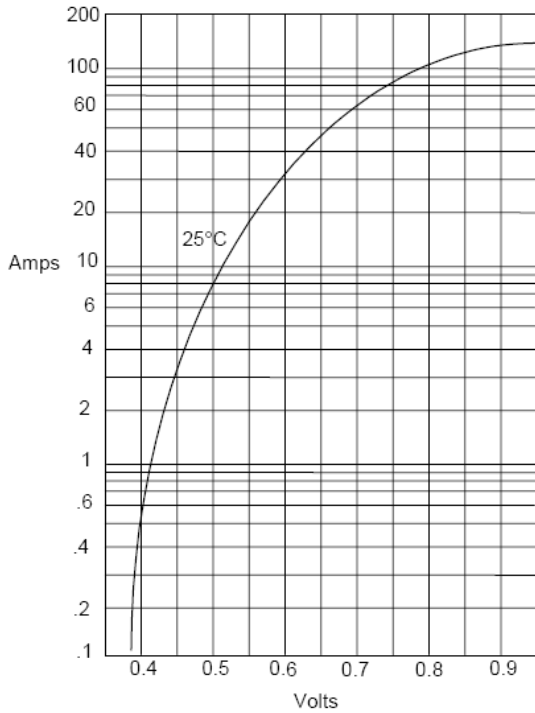
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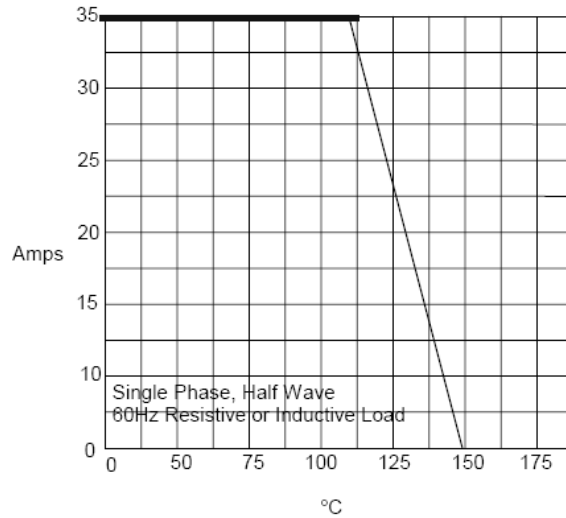
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Figure 1
Typical Forward Characteristics



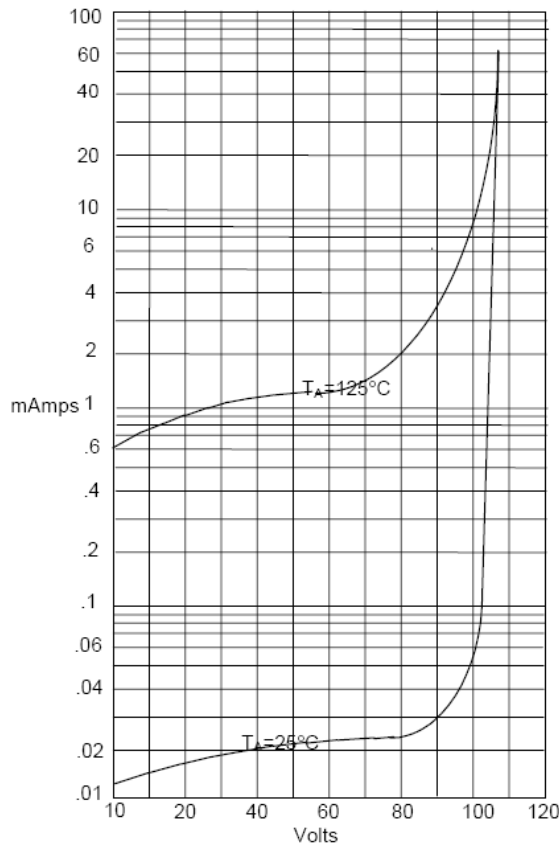
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



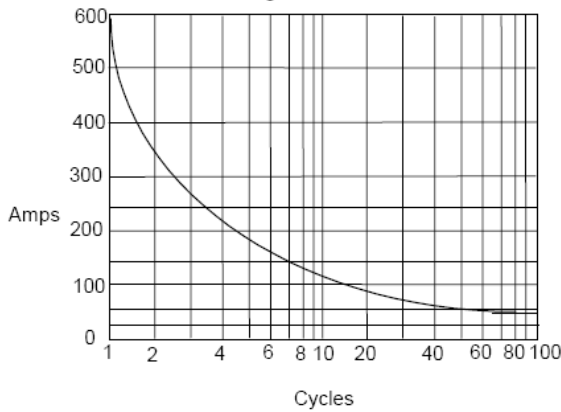
Average Forward Rectified Current - Amperes versus
Ambient Temperature - °C

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes versus
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus
Number Of Cycles At 60Hz - Cycles