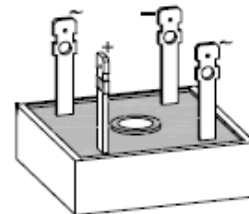


35A Single-Phase Bridge Rectifier

Features

- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Metal Case for Max. Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- This series is UL recognized under component index, File number E194718
- RoHS Compliant



MB35
(Metal Case)



Mechanical Data

| | |
|-------------------------|---|
| Case: | KBPC (MB35) Metal case with faston lugs |
| Terminals: | Plated faston lugs |
| Polarity: | As marked on case |
| Mounting: | Through hole with #10 screw |
| Mounting Torque: | 23 cm-kg (20 in-lbs) Max. |
| Weight: | 30 grams |

Maximum Ratings And Electrical Characteristics ($T_{amb}=25^{\circ}C$)

| Symbol | Description | MB3505 | MB351 | MB352 | MB354 | MB356 | MB358 | MB3510 | Unit | Conditions |
|------------------------|---|--------|-------|-------|-------|-------|-------|--------|------|---|
| V_{RRM} | Max. Repetitive Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| V_{RMS} | Max. RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| V_{DC} | Max. DC blocking voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| I_o | Average Rectified Output Current | 35 | | | | | | | A | $T_A=60^{\circ}C$ |
| I_{FSM} | Non-Repetitive Peak Forward Surge Current | 400 | | | | | | | A | 8.3ms single half sine-wave superimposed on rated load (JEDEC method) |

35A Single-Phase Bridge Rectifier

MB3505 – MB3510

| Symbol | Description | MB3505 | MB351 | MB352 | MB354 | MB356 | MB358 | MB3510 | Unit | Conditions |
|--------------------------------------|--|-------------|-------|-------|-------|-------|-------|--------|------------------|-------------------------------|
| V_{FM} | Forward Voltage per leg | 1.1 | | | | | | | V | I _o =17.5A |
| I_{RM} | Max. Reverse DC Current At Rated DC Blocking Voltage per leg | 10 | | | | | | | μA | T _C = 25°C |
| | | 1000 | | | | | | | μA | T _C = 125°C |
| I²t | Rating for Fusing (t<8.3ms) | 664 | | | | | | | A ² s | |
| C_J | Typical junction capacitance per leg | 300 | | | | | | | pF | f=1MHz V _R = 4V |
| R_{thjC} | Typical Thermal Resistance per leg | 2.1 | | | | | | | °C / W | Note |
| V_{ISO} | RMS Isolation Voltage from Case to Leads | 2500 | | | | | | | V | |
| T_J,T_{STG} | Operating Junction and Storage Temperature Range | -65 to +150 | | | | | | | °C | |

Note: Thermal Resistance junction to case, mounted on heatsink.

Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

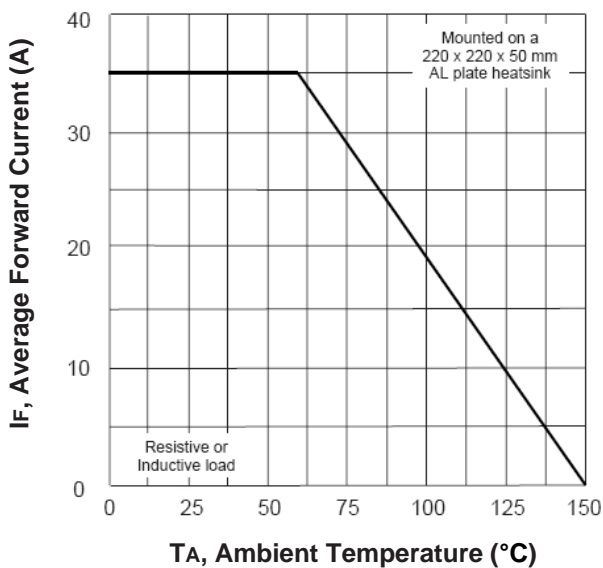
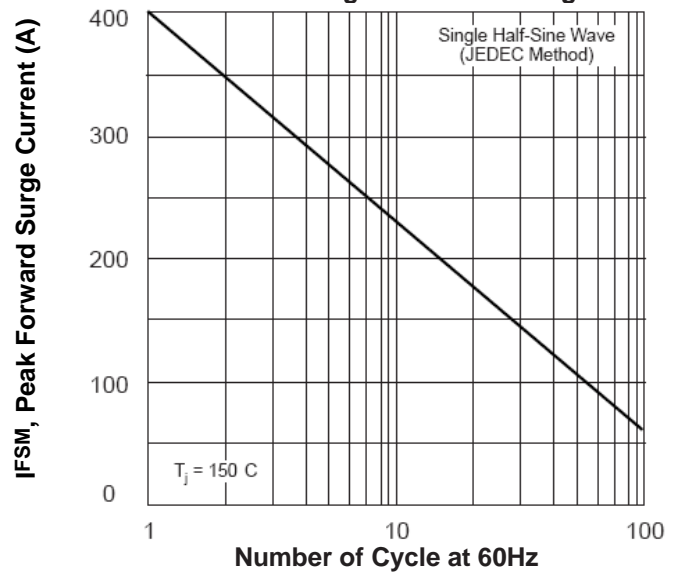


Fig.2-Max. Non-repetitive Peak Forward Surge Current Per Leg



35A Single-Phase Bridge Rectifier

MB3505 – MB3510

Fig.3-Typical Instantaneous Forward Characteristic Per Leg

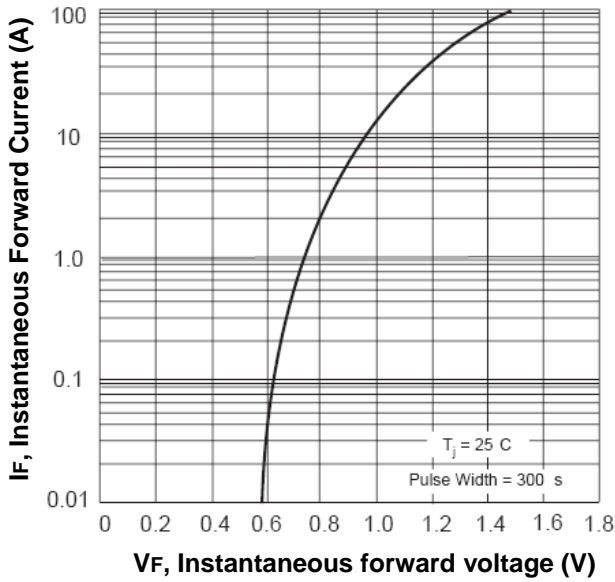


Fig.4-Typical Reverse Characteristics Per Leg

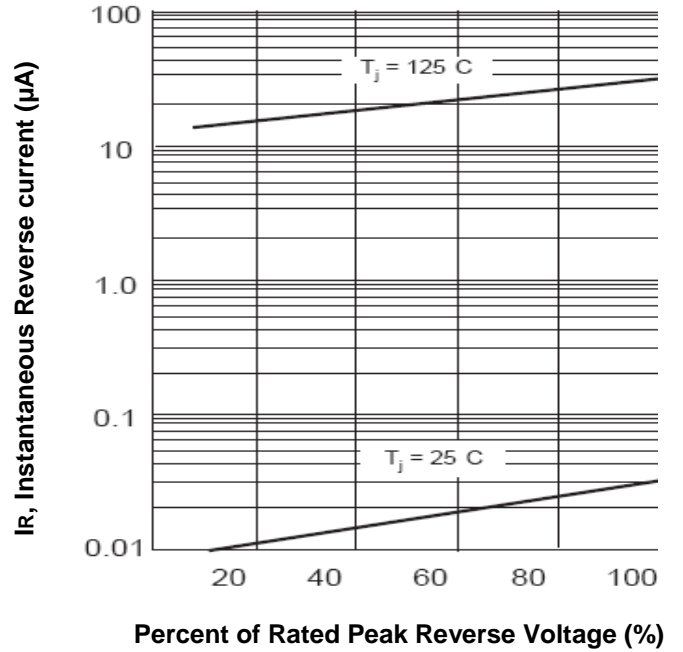
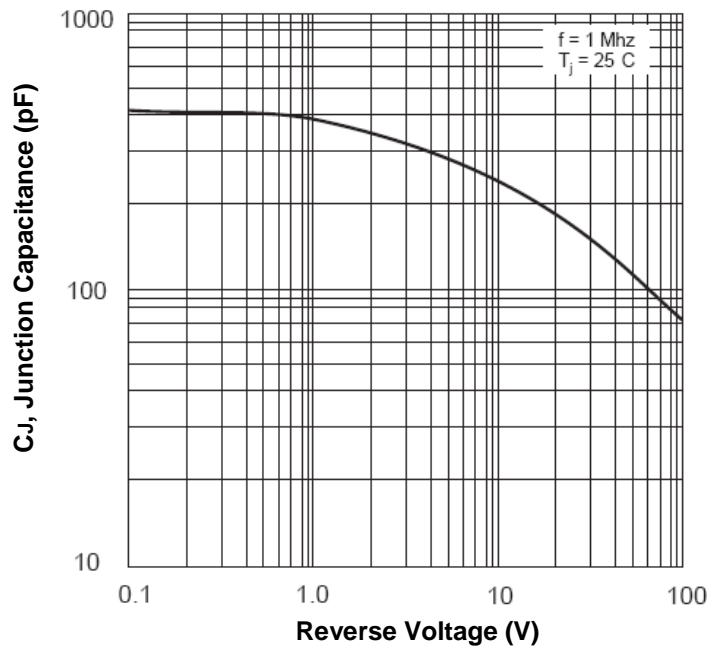


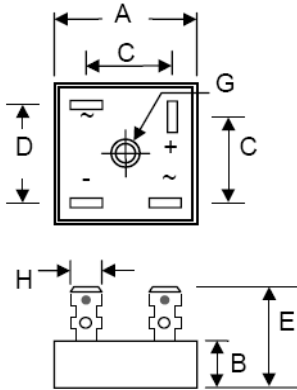
Fig.5-Typical Junction Capacitance Per Leg



35A Single-Phase Bridge Rectifier

MB3505 – MB3510

Dimensions in inch (mm)



| Dim | KBPC | | KBPC-W | |
|---------------------|-----------------------------------|-------|--------|-------|
| | Min | Max | Min | Max |
| A | 27.94 | 28.96 | 27.94 | 28.96 |
| B | 10.97 | 11.23 | 10.97 | 11.23 |
| C | 15.50 | 17.60 | 17.10 | 19.10 |
| D | 17.50 | 18.50 | 10.90 | 11.90 |
| E | 22.86 | 25.40 | 30.50 | — |
| G | Hole for #10 screw, 5.08Ø Nominal | | | |
| H | 6.35 Typical | | 0.97Ø | 1.07Ø |
| All Dimension in mm | | | | |

KBPC (MB35)

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