

# Bridge Rectifier

## **3N253**

50V / 2A

# DATASHEET

from

[www.web-bcs.com](http://www.web-bcs.com)

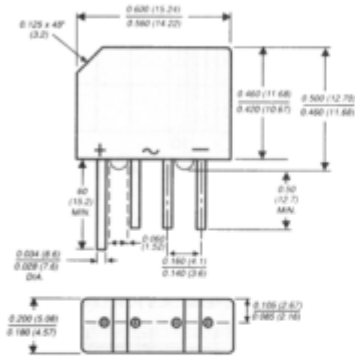
OEM – General Semiconductor

Source: General Semiconductor Databook 1998

# 2KBP005M THRU 2KBP10M SERIES 3N253 THRU 3N259

**GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER**  
Reverse Voltage - 50 to 1000 Volts    Forward Current - 2.0 Amperes

**Case Style KBPM**

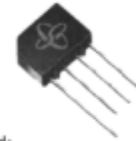


Polarity shown on front side of case: positive lead by beveled corner

Dimensions in inches and (millimeters)

**FEATURES**

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ This series is UL listed under the Recognized Component Index, file number E54214
- ◆ Glass passivated chip junctions
- ◆ Typical  $I_R$  less than 0.1  $\mu$ A
- ◆ High case dielectric strength
- ◆ Ideal for printed circuit boards
- ◆ High temperature soldering guaranteed:  
260°C/10 seconds at 5 lbs. (2.3kg) tension



**MECHANICAL DATA**

**Case:** Molded plastic body over passivated junctions  
**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026  
**Mounting Position:** Any  
**Weight:** 0.06 ounce, 1.7 grams

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

|  | SYMBOLS                              | 2KBP<br>005M<br>3N253 | 2KBP<br>01M<br>3N254 | 2KBP<br>02M<br>3N255 | 2KBP<br>04M<br>3N256 | 2KBP<br>06M<br>3N257 | 2KBP<br>08M<br>3N258 | 2KBP<br>10M<br>3N259 | UNITS              |
|--|--------------------------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------------|
| * Maximum repetitive peak reverse voltage  | V <sub>RRM</sub>                     | 50                    | 100                  | 200                  | 400                  | 600                  | 800                  | 1000                 | Volts              |
| * Maximum RMS voltage  | V <sub>RMS</sub>                     | 35                    | 70                   | 140                  | 280                  | 420                  | 560                  | 700                  | Volts              |
| * Maximum DC blocking voltage  | V <sub>DC</sub>                      | 50                    | 100                  | 200                  | 400                  | 600                  | 800                  | 1000                 | Volts              |
| * Maximum average forward output rectified current at T <sub>A</sub> =55°C   | I <sub(av)< sub=""></sub(av)<>       | 2.0                   |                      |                      |                      |                      |                      |                      | Amps               |
| * Peak forward surge current single half sine-wave superimposed on rated load (JEDEC Method) T <sub>J</sub> =150°C | I <sub>FSM</sub>                     | 60.0                  |                      |                      |                      |                      |                      |                      | Amps               |
| Rating for fusing (t < 8.3ms)  | I <sub>t</sub>                       | 15.0                  |                      |                      |                      |                      |                      |                      | A <sup>2</sup> sec |
| * Maximum instantaneous forward voltage drop per leg at 3.14A  | V <sub>F</sub>                       | 1.1                   |                      |                      |                      |                      |                      |                      | Volts              |
| * Maximum DC reverse current at rated DC blocking voltage per leg  | I <sub>R</sub>                       | 5.0<br>500.0          |                      |                      |                      |                      |                      |                      | $\mu$ A            |
| Typical junction capacitance per leg (NOTE 1)  | C <sub>J</sub>                       | 25.0                  |                      |                      |                      |                      |                      |                      | pF                 |
| Typical thermal resistance per leg (NOTE 2)  | R <sub>θJA</sub><br>R <sub>θJL</sub> | 30.0<br>11.0          |                      |                      |                      |                      |                      |                      | °C/W               |
| * Operating junction and storage temperature range   | T <sub>J</sub> , T <sub>STG</sub>    | -55 to +165           |                      |                      |                      |                      |                      |                      | °C                 |

**NOTES:**

- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts  
 (2) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.47 x 0.47" (12 x 12mm) copper pads  
 \* JEDEC registered values

**RATINGS AND CHARACTERISTICS CURVES 3N253 THRU 3N259 / 2KBP005M THRU 2KBP10M**

