

EDAL

## Series B427, BA223, B587, B588

## Sub-Miniature High Voltage Silicon Rectifiers

Compact tubular construction and flexible leads facilitate circuit mounting, provide excellent thermal conductivity and eliminate sharp edges to reduce corona common to larger, rectangular packages. Diodes are manufactured using double diffused junctions which are bonded and selected for uniform electrical characteristics.

Series B427, BA223, B587 and B588 units all meet moisture resistance requirements of MIL Standard 202A, Method 106. Series B427 and BA223 are available in voltage ratings of 1000 to 7000 volts PIV. The B427 is available in a current range from 50ma to 200ma and the BA223 in a current range from 150ma to 1000ma. Both are available

in standard and fast recovery series.

Series B587 and B588 offer voltage ratings from 1000 to 20,000 volts PIV. The B587 has a current rating from 50ma to 200ma and the B588, from 100ma to 1000ma. Both are available in standard and fast recovery series. All series are available with special ratings on request.

## Specifications

## B427, BA223

## Standard Series

| PIV<br>VOLTS | PART<br>NO.* | $I_o$<br>ma @<br>55°C | $V_f$<br>V @<br>25°C | PART<br>NO.* | $I_o$<br>ma @<br>55°C | $V_f$<br>V @<br>25°C |
|--------------|--------------|-----------------------|----------------------|--------------|-----------------------|----------------------|
| 1000         | B427-10      | 200                   | 5                    | BA223-10     | 1000                  | 5                    |
| 1500         | B427-15      | 200                   | 5                    | BA223-15     | 1000                  | 5                    |
| 2000         | B427-20      | 200                   | 5                    | BA223-20     | 700                   | 5                    |
| 2500         | B427-25      | 200                   | 5                    | BA223-25     | 700                   | 5                    |
| 3000         | B427-30      | 200                   | 5                    | BA223-30     | 500                   | 5                    |
| 3500         | B427-35      | 100                   | 7                    | BA223-35     | 500                   | 7                    |
| 4000         | B427-40      | 100                   | 7                    | BA223-40     | 400                   | 7                    |
| 4500         | B427-45      | 100                   | 7                    | BA223-45     | 400                   | 7                    |
| 5000         | B427-50      | 100                   | 7                    | BA223-50     | 300                   | 7                    |
| 5500         | B427-55      | 50                    | 10                   | BA223-55     | 300                   | 10                   |
| 6000         | B427-60      | 50                    | 10                   | BA223-60     | 200                   | 10                   |
| 6500         | B427-65      | 50                    | 10                   | BA223-65     | 200                   | 10                   |
| 7000         | B427-70      | 50                    | 10                   | BA223-70     | 150                   | 10                   |

## Fast Recovery Series

| PIV<br>VOLTS | PART<br>NO.* | $I_o$<br>ma @<br>10°C | $V_f$<br>V @<br>25°C | PART<br>NO.* | $I_o$<br>ma @<br>10°C | $V_f$<br>V @<br>25°C |
|--------------|--------------|-----------------------|----------------------|--------------|-----------------------|----------------------|
| 1000         | BR427-10     | 100                   | 7                    | BAR223-10    | 500                   | 7                    |
| 1500         | BR427-15     | 100                   | 7                    | BAR223-15    | 500                   | 7                    |
| 2000         | BR427-20     | 100                   | 7                    | BAR223-20    | 350                   | 7                    |
| 2500         | BR427-25     | 100                   | 7                    | BAR223-25    | 350                   | 7                    |
| 3000         | BR427-30     | 100                   | 7                    | BAR223-30    | 250                   | 7                    |
| 3500         | BR427-35     | 50                    | 10                   | BAR223-35    | 250                   | 10                   |
| 4000         | BR427-40     | 50                    | 10                   | BAR223-40    | 200                   | 10                   |
| 4500         | BR427-45     | 50                    | 10                   | BAR223-45    | 200                   | 10                   |
| 5000         | BR427-50     | 50                    | 10                   | BAR223-50    | 150                   | 10                   |
| 5500         | BR427-55     | 25                    | 15                   | BAR223-55    | 150                   | 15                   |
| 6000         | BR427-60     | 25                    | 15                   | BAR223-60    | 100                   | 15                   |
| 6500         | BR427-65     | 25                    | 15                   | BAR223-65    | 100                   | 15                   |
| 7000         | BR427-70     | 25                    | 15                   | BAR223-70    | 75                    | 15                   |

## B587 and B588

## Standard Series

| PIV<br>VOLTS | PART<br>NO.* | $I_o$<br>ma @<br>55°C | $V_f$<br>V @<br>25°C | PART<br>NO. | $I_o$<br>ma @<br>55°C | $V_f$<br>V @<br>25°C |
|--------------|--------------|-----------------------|----------------------|-------------|-----------------------|----------------------|
| 1000         | B587-10      | 200                   | 5                    | B588-10     | 1000                  | 5                    |
| 1500         | B587-15      | 200                   | 5                    | B588-15     | 1000                  | 5                    |
| 2000         | B587-20      | 200                   | 5                    | B588-20     | 700                   | 5                    |
| 2500         | B587-25      | 200                   | 5                    | B588-25     | 700                   | 5                    |
| 3000         | B587-30      | 200                   | 5                    | B588-30     | 500                   | 5                    |
| 3500         | B587-35      | 100                   | 7                    | B588-35     | 500                   | 7                    |
| 4000         | B587-40      | 100                   | 7                    | B588-40     | 400                   | 7                    |
| 4500         | B587-45      | 100                   | 7                    | B588-45     | 400                   | 7                    |
| 5000         | B587-50      | 100                   | 7                    | B588-50     | 300                   | 7                    |
| 5500         | B587-55      | 50                    | 10                   | B588-55     | 300                   | 10                   |
| 6000         | B587-60      | 50                    | 10                   | B588-60     | 200                   | 10                   |
| 6500         | B587-65      | 50                    | 10                   | B588-65     | 200                   | 10                   |
| 7000         | B587-70      | 50                    | 10                   | B588-70     | 150                   | 10                   |
| 8000         | B587-80      | 50                    | 12                   | B588-80     | 125                   | 12                   |
| 8500         | B587-85      | 50                    | 12                   | B588-85     | 125                   | 12                   |
| 9000         | B587-90      | 50                    | 12                   | B588-90     | 125                   | 12                   |
| 9500         | B587-95      | 50                    | 12                   | B588-95     | 125                   | 12                   |
| 10000        | B587-100     | 50                    | 15                   | B588-100    | 100                   | 15                   |
| 11000        | B587-110     | 50                    | 15                   | B588-110    | 100                   | 15                   |
| 12000        | B587-120     | 50                    | 15                   | B588-120    | 100                   | 15                   |
| 13000        | B587-130     | 50                    | 15                   | B588-130    | 100                   | 15                   |
| 14000        | B587-140     | 50                    | 15                   | B588-140    | 100                   | 15                   |
| 15000        | B587-150     | 50                    | 25                   | B588-150    | 100                   | 25                   |
| 16000        | B587-160     | 50                    | 25                   | B588-160    | 100                   | 25                   |
| 17000        | B587-170     | 50                    | 25                   | B588-170    | 100                   | 25                   |
| 18000        | B587-180     | 50                    | 25                   | B588-180    | 100                   | 25                   |
| 19000        | B587-190     | 50                    | 25                   | B588-190    | 100                   | 25                   |
| 20000        | B587-200     | 50                    | 30                   | B588-200    | 100                   | 30                   |

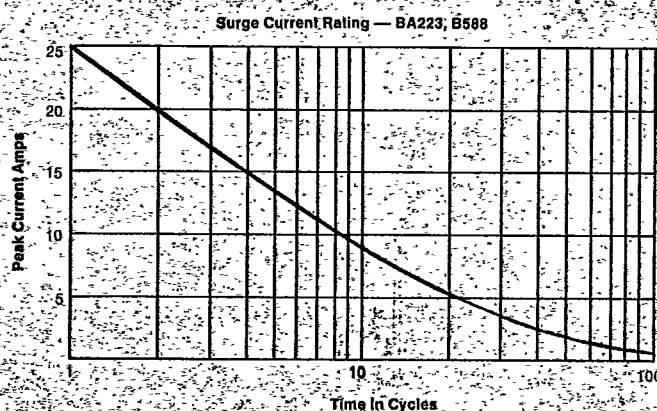
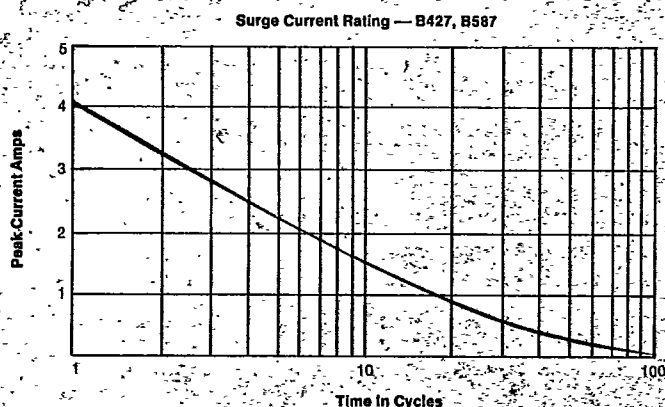
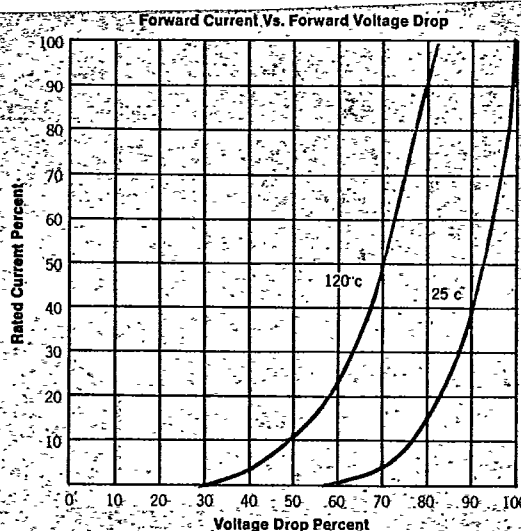
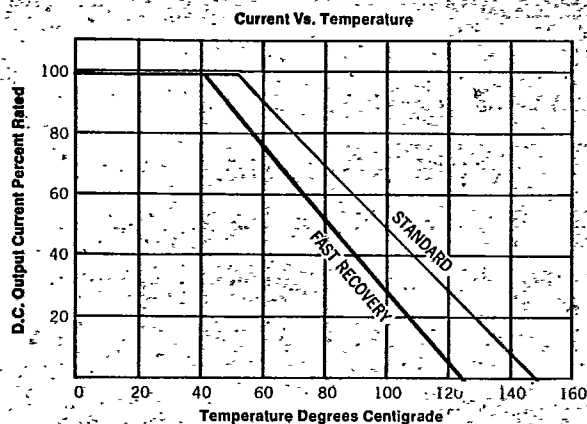
## Fast Recovery Series

| PIV<br>VOLTS | PART<br>NO.* | $I_o$<br>ma @<br>40°C | $V_f$<br>V @<br>25°C | PART<br>NO. | $I_o$<br>ma @<br>55°C | $V_f$<br>V @<br>25°C |
|--------------|--------------|-----------------------|----------------------|-------------|-----------------------|----------------------|
| 1000         | BR587-10     | 100                   | 7                    | BR588-10    | 500                   | 7                    |
| 1500         | BR587-15     | 100                   | 7                    | BR588-15    | 500                   | 7                    |
| 2000         | BR587-20     | 100                   | 7                    | BR588-20    | 350                   | 7                    |
| 2500         | BR587-25     | 100                   | 7                    | BR588-25    | 350                   | 7                    |
| 3000         | BR587-30     | 100                   | 7                    | BR588-30    | 250                   | 7                    |
| 3500         | BR587-35     | 50                    | 10                   | BR588-35    | 250                   | 10                   |
| 4000         | BR587-40     | 50                    | 10                   | BR588-40    | 200                   | 10                   |
| 4500         | BR587-45     | 50                    | 10                   | BR588-45    | 200                   | 10                   |
| 5000         | BR587-50     | 50                    | 10                   | BR588-50    | 150                   | 10                   |
| 5500         | BR587-55     | 25                    | 15                   | BR588-55    | 150                   | 15                   |
| 6000         | BR587-60     | 25                    | 15                   | BR588-60    | 100                   | 15                   |
| 6500         | BR587-65     | 25                    | 15                   | BR588-65    | 100                   | 15                   |
| 7000         | BR587-70     | 25                    | 15                   | BR588-70    | 75                    | 15                   |
| 8000         | BR587-80     | 25                    | 18                   | BR588-80    | 65                    | 18                   |
| 8500         | BR587-85     | 25                    | 18                   | BR588-85    | 65                    | 18                   |
| 9000         | BR587-90     | 25                    | 18                   | BR588-90    | 60                    | 18                   |
| 9500         | BR587-95     | 25                    | 18                   | BR588-95    | 55                    | 18                   |
| 10000        | BR587-100    | 25                    | 23                   | BR588-100   | 50                    | 23                   |
| 11000        | BR587-110    | 25                    | 23                   | BR588-110   | 50                    | 23                   |
| 12000        | BR587-120    | 25                    | 23                   | BR588-120   | 50                    | 23                   |
| 13000        | BR587-130    | 25                    | 23                   | BR588-130   | 50                    | 23                   |
| 14000        | BR587-140    | 25                    | 23                   | BR588-140   | 50                    | 23                   |
| 15000        | BR587-150    | 25                    | 38                   | BR588-150   | 50                    | 38                   |
| 16000        | BR587-160    | 25                    | 38                   | BR588-160   | 50                    | 38                   |
| 17000        | BR587-170    | 25                    | 38                   | BR588-170   | 50                    | 38                   |
| 18000        | BR587-180    | 25                    | 38                   | BR588-180   | 50                    | 38                   |
| 19000        | BR587-190    | 25                    | 38                   | BR588-190   | 50                    | 38                   |
| 20000        | BR587-200    | 25                    | 45                   | BR588-200   | 50                    | 45                   |

\* Standard product lines are also available in higher current ratings. Other values available upon request.

# Electrical Ratings

|                                                                                                         | B427   | BR427  | BA223   | BAR223  | B587   | BR587  | B588    | BR588   |
|---------------------------------------------------------------------------------------------------------|--------|--------|---------|---------|--------|--------|---------|---------|
| Maximum Allowable One Cycle Surge Current: (60 Hz single phase non-recurrent, at rated PIV and no load) | 4 amps | 4 amps | 25 amps | 25 amps | 4 amps | 4 amps | 25 amps | 25 amps |
| Maximum Reverse Current 25°C @ PIV                                                                      | 1μa    | 2μa    | 5μa     | 10μa    | 1μa    | 2μa    | 5μa     | 10μa    |
|                                                                                                         | 40μa   | 100μa  | 200μa   | 500μa   | 40μa   | 100μa  | 200μa   | 500μa   |
| Recovery Time I, 2ma and I, 4ma recovery to 1ma                                                         | —      | 250 ns | —       | —       | —      | 250 ns | —       | —       |
| Recovery Time I, 20ma and I, 40ma recovery to 10ma                                                      | —      | —      | —       | 200 ns  | —      | —      | —       | 200 ns  |



## Edal Industries, Inc.