



### Applications

- Input Rectification
- Low Frequency Freewheel
- Battery Isolation

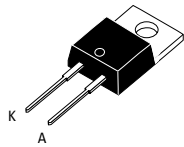
- > Suitable for General Purpose Applications
- > Isolated and Non-Isolated Tab
- >  $V_R/V_{RRM}$  400, 600, 800, 1200V

## CRNA/CRNB15

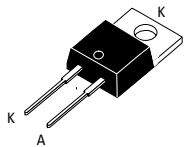
15Amp - 400/600/800/1200V - RECTIFIER

### Absolute Maximum Ratings

|                                                                                                 | CONDITIONS                                            | SYMBOL                                   | RATING              |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------|---------------------|
| RMS On-State Current (full sine wave)                                                           | $T_c = 100^\circ\text{C}$<br>$T_c = 90^\circ\text{C}$ | TO-220AB<br>TO-220AB Iso<br>$I_{F(RMS)}$ | 15A                 |
| Average On-State Current                                                                        | $T_c = 100^\circ\text{C}$<br>$T_c = 90^\circ\text{C}$ | TO-220AB<br>TO-220AB Iso<br>$I_{F(AV)}$  | 9.5A                |
| Non Repetitive Surge Peak On-State Current<br>(Full Cycle, $T_j$ Initial = $25^\circ\text{C}$ ) | F = 50 Hz<br>F = 60 Hz                                | $I_{FSM}$                                | 188A<br>225A        |
| $I^2t$ Value for fusing                                                                         | tp = 10 ms                                            | $I^2t$                                   | 210A <sup>2</sup> s |
| Storage Temperature Range                                                                       |                                                       | $T_{stg}$                                | -40 to +150°C       |
| Operating Junction Temperature Range                                                            |                                                       | $T_j$                                    | -40 to +125°C       |
| Isolation Voltage (CRNA Series only)                                                            |                                                       | $V_{ISO}$                                | 2500 $V_{RMS}$      |



TO-220AB Isolated  
(CRNA15)



TO-220AB Non-Isolated  
(CRNB15)



### Electrical Characteristics

|                            |                           |       |
|----------------------------|---------------------------|-------|
| $V_{FM}$ @ 15A             | $T_j = 25^\circ\text{C}$  | 1.1V  |
| $I_{RM}$ @ $V_R = V_{RRM}$ | $T_j = 25^\circ\text{C}$  | 0.1mA |
| $I_{RM}$ @ $V_R = V_{RRM}$ | $T_j = 125^\circ\text{C}$ | 1.0mA |

### Thermal Resistances

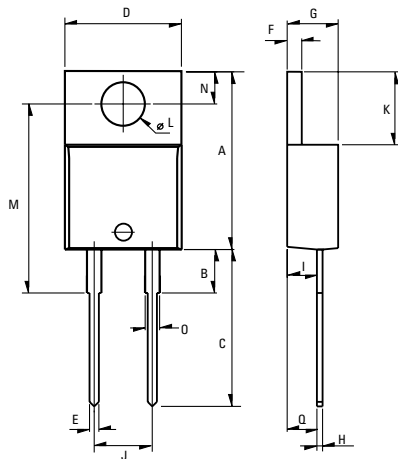
|                       | SYMBOL                             | RATING   |
|-----------------------|------------------------------------|----------|
| Junction to Case (AC) | TO-220AB<br>$R_{th(j-c)}$          | 1.95°C/W |
| Junction to Case (AC) | TO-220AB Isolated<br>$R_{th(j-c)}$ | 2.85°C/W |
| Junction to Ambient   | TO-220AB<br>$R_{th(j-a)}$          | 60°C/W   |
| Junction to Ambient   | TO-220AB Isolated<br>$R_{th(j-a)}$ | 60°C/W   |

### GENERAL NOTES

1. All parameters at 25 degrees C unless otherwise specified.

### Dimensions

| REF. | Millimeters |      |       | Inches |       |       |
|------|-------------|------|-------|--------|-------|-------|
|      | Min.        | Typ. | Max.  | Min.   | Typ.  | Max.  |
| A    | 15.24       |      | 15.75 | 0.6    |       | 0.62  |
| B    |             | 3.23 |       |        | 0.127 |       |
| C    | 12.78       |      | 13.79 | 0.503  |       | 0.543 |
| D    | 9.96        |      | 10.36 | 0.392  |       | 0.408 |
| E    | 0.69        |      | 0.94  | 0.027  |       | 0.037 |
| F    | 1.22        |      | 1.32  | 0.048  |       | 0.052 |
| G    | 4.62        |      | 4.83  | 0.182  |       | 0.19  |
| H    | 0.46        |      | 0.61  | 0.018  |       | 0.024 |
| I    | 2.49        |      | 2.84  | 0.098  |       | 0.112 |
| J    | 2.39        |      | 2.69  | 0.094  |       | 0.106 |
| K    | 6.48        |      | 6.88  | 0.255  |       | 0.271 |
| L    | 3.78        |      | 3.89  | 0.149  |       | 0.153 |
| M    | 15.49       | 16   | 16.51 | 0.61   | 0.63  | 0.65  |
| N    | 2.59        |      | 2.9   | 0.102  |       | 0.114 |
| O    | 0.99        |      | 1.55  | 0.039  |       | 0.061 |
| Q    |             | 2.67 |       |        | 0.105 |       |



Weight: 2.3g (0.08 oz)

### Part Number Designation

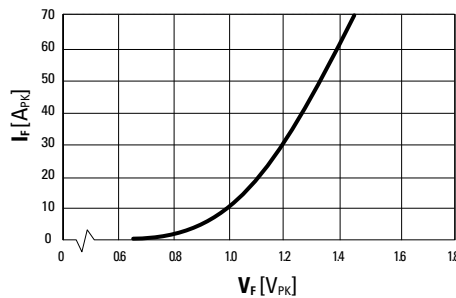
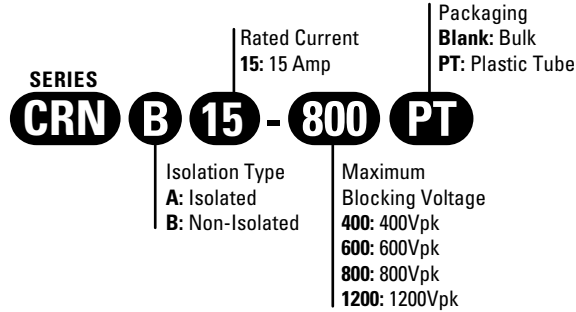


Fig. 1: On-state current versus on-state voltage (instantaneous values)

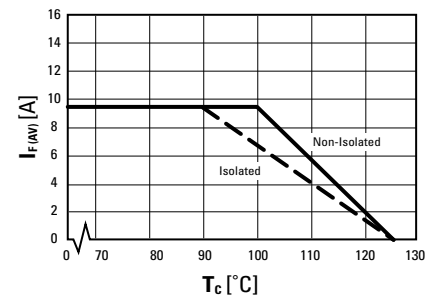


Fig. 2: Average on-state current versus case temperature

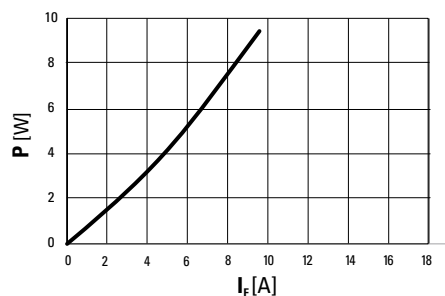


Fig. 3: Power dissipation versus average on-state current

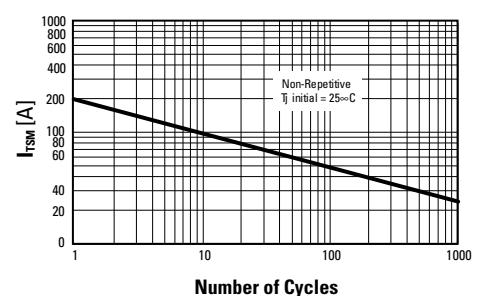


Fig. 4: Non-repetitive surge peak on-state current versus number of cycles.

### ISO9001 Certified

### Approvals

UL - Pending

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