

## **SEMICONDUCTOR PROTECTION FUSES**

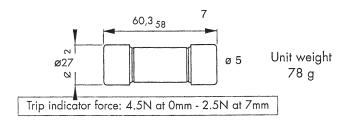


800V AC gRB from 8 to 110A SIZES: 27 X 60

#### Features/Benefits

- **Extremely high Interrupting rating Fuses:**Protection of power Semiconductors complying with IEC standards 269-1 and 4
- **800V Voltage Rating** according to IEC 33
- ➤ gR Class as per IEC 269-4
  -Full range protection
  -Improved safety and protection
  -Allows selective coordination
- With built in Trip Indicator

#### **Dimensions**



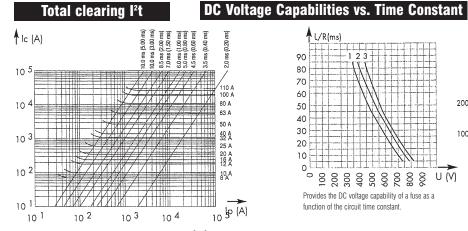
### **APPLICATIONS DATA**

| Voltage<br>rating<br>U <sub>N</sub> ( V ) | Class | Current<br>rating<br>I <sub>N</sub> ( A ) | pre-arcing<br>I <sup>2</sup> t @ 1 ms<br>I <sup>2</sup> t <sub>p</sub> (A <sup>2</sup> s) | Total clearing<br>I <sup>2</sup> t @ UN<br>I <sup>2</sup> t <sub>t</sub> (A <sup>2</sup> s) | Watt I |      | Tested interrupting rating            | CATALOG NO. |    |          | REF | PACK    |    |
|---|-------|---|---|---|--------|------|---------------------------------------|-------------|----|----------|-----|---------|----|
|   | gRB   | 8   | 4.25  | 70  | 1.2    | 2.0  | 175 kA<br>@ 700 V<br>90 kA<br>@ 800 V | 821         | CP | GRB27.60 | 8   | R221436 | 10 |
|   |       | 10  | 8.0   | 100   | 1.3    | 2.3  |                                       | 821         | CP | GRB27.60 | 10  | S221437 | 10 |
|   |       | 12  | 17.0  | 180   | 1.4    | 2.5  |                                       | 821         | CP | GRB27.60 | 12  | T221438 | 10 |
|   |       | 16  | 26.5  | 250   | 1.9    | 3.5  |                                       | 821         | CP | GRB27.60 | 16  | V221439 | 10 |
|   |       | 20  | 38.5  | 350   | 2.4    | 4.0  |                                       | 821         | CP | GRB27.60 | 20  | W221440 | 10 |
|   |       | 25  | 73.0  | 600   | 2.8    | 5.0  |                                       | 821         | CP | GRB27.60 | 25  | X221441 | 10 |
| 800                                       |       | 32  | 130   | 1000  | 3.5    | 6.0  |                                       | 821         | CP | GRB27.60 | 32  | Y221442 | 10 |
|   |       | 40  | 195   | 1400  | 4.7    | 8.0  |                                       | 821         | CP | GRB27.60 | 40  | Z221443 | 10 |
|   |       | 50  | 430   | 2700  | 4.8    | 8.5  |                                       | 821         | CP | GRB27.60 | 50  | A221444 | 10 |
|   |       | 63  | 965   | 5500  | 5.6    | 10   |                                       | 821         | CP | GRB27.60 | 63  | B221445 | 10 |
|   |       | 80  | 1890  | 11000   | 6.4    | 11.5 |                                       | 821         | CP | GRB27.60 | 80  | C221446 | 10 |
|   |       | 100                                       | 3480  | 19000   | 7.4    | 13   |                                       | 821         | CP | GRB27.60 | 100 | D221447 | 10 |
|   |       | 110                                       | 4670  | 27000   | 7.7    | 14   |                                       | 821         | CP | GRB27.60 | 110 | E221448 | 10 |

Minimum operating voltage for trip-indicator: 20 V See Fuse Blocks and Fuse Holders section

# 821cp gRB

## **SEMICONDUCTOR PROTECTION FUSES**



Above: Horizontal curves show maximum values of total clearing I2t (I2tt) as function of prospective current lp. @  $U_{\mbox{\scriptsize N}}$  with  $\cos j = 0.15$  Oblique lines indicatye total clearing duration Tt and associated pre-arching duration in brackets.

#### ↓ Um (V) 90 80 70 60 2000 50 40 30 1000 20 10 U (V) 100 200 300 400 500 600 700

Provides the DC voltage capability of a fuse as a function of the circuit time constant.

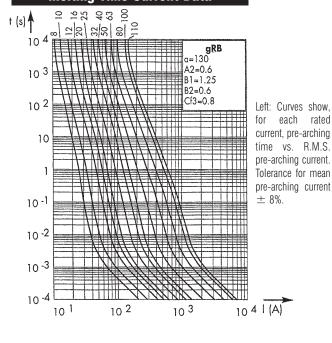
1 - L/R = 60 ms / 2 - L/R = 30 msAbove: Curves indicate peak arc voltage Um which may appear across fuse terminals of working voltage U, for different values of time constant L/R of the fault circuit.

**DC Peak Arc Voltage** 

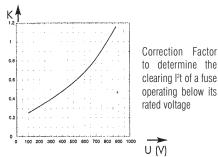
#### **Peak let-thru Data**

Below: Curves show, for each rating, value of peak let-through Ic(A) current lc as a function of available fault current ip 104 103 102 10 1 103 102 10 1 10<sup>5</sup> lp (A)

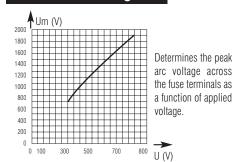
#### **Melting Time Current Data**



## Clearing i2t vs. Operating Voltage



### Peak arc voltage



#### **Watts loss Correction**

