

# ANTREX Electronics

## Electronic Components Sourcing Information

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### Product Reference Information

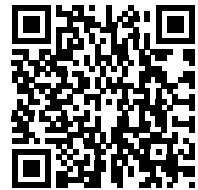
|                      |                           |
|----------------------|---------------------------|
| <b>Part Number:</b>  | 3SB 15-R                  |
| <b>Manufacturer:</b> | Bel Fuse Inc.             |
| <b>Package:</b>      | Bulk                      |
| <b>Availability:</b> | Please confirm with sales |

#### Product Page:

<https://antrexco.com/product/details/bel-fuse-inc/3sb-15-r.html>

#### Request a Quote:

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### Contact Information

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### Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

#### Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

# Type 3SB

## Slow Blow Fuse Series

**HF** **Pb** 3SB Series, 6x32mm Glass Tube Slow Blow Fuse

RoHS Compliant

### Description

6x32mm Slow Blow, glass tube body cartridge fuse designed, approved and complied with UL standard 248-14.

### Features

- Meet UL standard 248-14
- Wide operating temperature range
- Bulk packing available
- Full compliance with EU Directive 2011/65/EU and amending directive 2015/863
- Halogen Free
- Lead Free

### Applications

Provide individual protection for components or internal circuits.

- Power supplies
- Battery charger
- Monitor
- Adapter

LEAD FREE = **Pb**

HALOGEN FREE = **HF**



### Physical Specifications

|           |                                                                                                                                                |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Materials | Body : Glass                                                                                                                                   |
|           | Cap : Nickel Plated Brass Caps                                                                                                                 |
|           | Leads : Matte Tin Plated Copper                                                                                                                |
| Marking   | On Fuse :                                                                                                                                      |
|           | "bel", "3SB", "Current Rating", "Voltage Rating",                                                                                              |
|           | "Appropriate Safety Logos", "✓" ( RoHS compliant )                                                                                             |
|           | On Label :                                                                                                                                     |
|           | "bel", "3SB", "Current Rating", "Voltage Rating", "Interrupting Rating",<br>"Appropriate Safety Logos" and "✓", "RoHS" (China RoHS compliant). |

### Electrical Characteristics

| Testing Current | Blow Time |         |
|-----------------|-----------|---------|
|                 | Minimum   | Maximum |
| 100%            | 4 hrs.    | N/A     |
| 135%            | N/A       | 1 Hr    |
| 200%            | 5 sec     | 30 sec  |

### Safety Agency Approvals

| Safety Agency | Safety Agency Certificate | Ampere Rating/ Voltage Rating                | Ampere Range / Volt @ I.R. ability*                                           |
|---------------|---------------------------|----------------------------------------------|-------------------------------------------------------------------------------|
| <b>UL US</b>  | E506667                   | 500mA-8A/<br>250V AC<br>8.1A-15A/<br>125V AC | 500mA-8A/125V AC@10,000A<br>500mA-8A/250V AC@200A<br>8.1A-15A/125V AC@10,000A |

\*I.R.= Interrupting Rating = Short Circuit Rating(Amps)

## Environmental Specifications

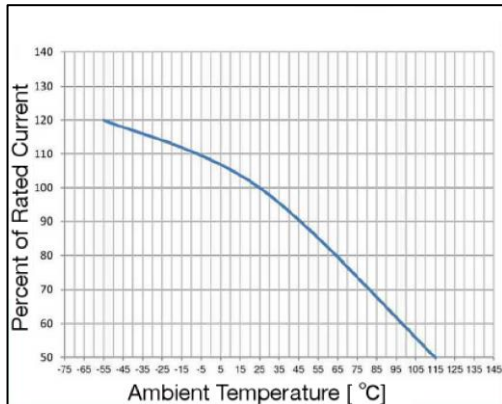
|                           |                                                                                                     |
|---------------------------|-----------------------------------------------------------------------------------------------------|
| Shock Resistance          | MIL-STD-202G, Method 213B, Test Condition 1<br>(100 G's peak for 6 milliseconds; Sawtooth waveform) |
| Vibration Resistance      | MIL-STD-202G, Method 201A (10-55 Hz, 0.06 inch, total excursion).                                   |
| Salt Spray Resistance     | MIL-STD-202G, Method 101E, Test Condition B (48 hrs).                                               |
| Insulation Resistance     | MIL-STD-202G, Method 302, Test Condition A<br>(After Opening) 10,000 ohms minimum.                  |
| Solderability             | MIL-STD-202G, Method 208H                                                                           |
| Resistance to solder Heat | MIL-STD-202G, Method 210F, Test Condition B (260+/-5°C, 10+/-1 sec)                                 |
| Thermal Shock             | MIL-STD-202G, Method 107G, Test Condition B (-65°C to +125°C).                                      |
| Operating Temperature     | -55°C to +125°C                                                                                     |
| Terminal Strength         | IEC-68-2-21                                                                                         |

## Electrical Specifications

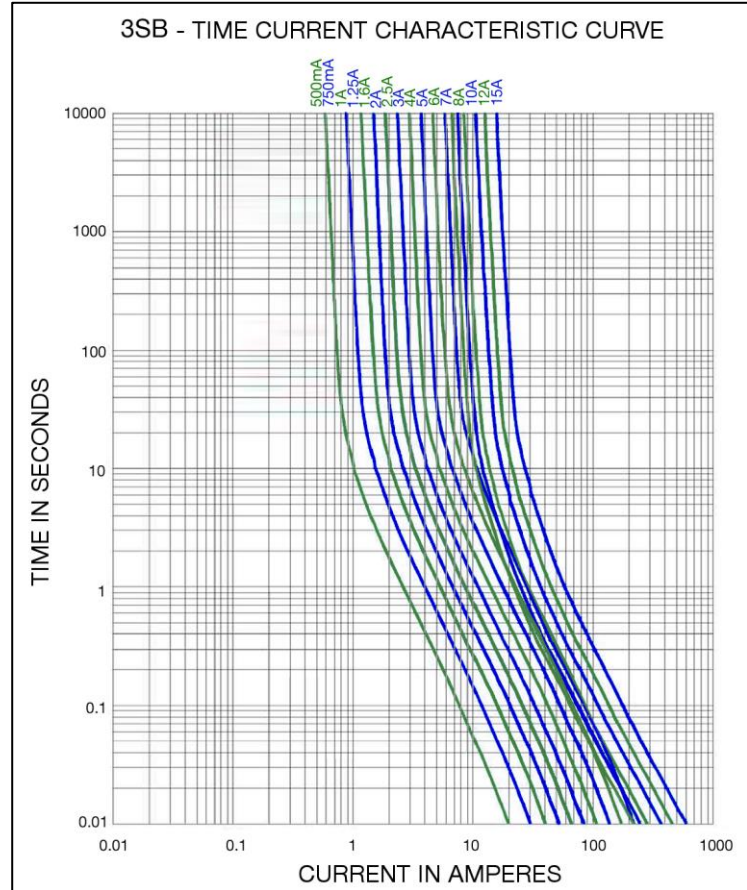
| Catalog Number | Ampere Rating | Typical Cold Resistance (ohms) | Volt-drop @100%In (Volt) max. | Voltage and Interrupting Ratings                                                        | Melting I <sup>2</sup> T <10 mSec (A <sup>2</sup> Sec) | Melting I <sup>2</sup> T @10 In (A <sup>2</sup> Sec) | Maximum Power Dissipation (W) | Agency Approvals |
|----------------|---------------|--------------------------------|-------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------|-------------------------------|------------------|
| 3SB 500-R      | 500mA         | 1.38                           | 1.07                          | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | 4.4                                                    | 5.4                                                  | 0.8                           | Y                |
| 3SB 750-R      | 750mA         | 0.642                          | 0.68                          |                                                                                         | 9                                                      | 10                                                   | 0.8                           | Y                |
| 3SB 1-R        | 1A            | 0.374                          | 0.59                          |                                                                                         | 16                                                     | 21                                                   | 0.9                           | Y                |
| 3SB 1.25-R     | 1.25A         | 0.248                          | 0.43                          |                                                                                         | 25                                                     | 32                                                   | 0.9                           | Y                |
| 3SB 1.6-R      | 1.6A          | 0.155                          | 0.38                          |                                                                                         | 39                                                     | 50                                                   | 1.0                           | Y                |
| 3SB 2-R        | 2A            | 0.115                          | 0.36                          |                                                                                         | 61                                                     | 79                                                   | 1.0                           | Y                |
| 3SB 2.5-R      | 2.5A          | 0.079                          | 0.29                          |                                                                                         | 94                                                     | 123                                                  | 1.1                           | Y                |
| 3SB 3-R        | 3A            | 0.058                          | 0.27                          |                                                                                         | 146                                                    | 192                                                  | 1.1                           | Y                |
| 3SB 4-R        | 4A            | 0.039                          | 0.23                          |                                                                                         | 226                                                    | 300                                                  | 1.2                           | Y                |
| 3SB 5-R        | 5A            | 0.029                          | 0.22                          |                                                                                         | 349                                                    | 469                                                  | 1.3                           | Y                |
| 3SB 6-R        | 6A            | 0.018                          | 0.19                          |                                                                                         | 286                                                    | 455                                                  | 1.6                           | Y                |
| 3SB 7-R        | 7A            | 0.016                          | 0.18                          |                                                                                         | 372                                                    | 592                                                  | 1.8                           | Y                |
| 3SB 8-R        | 8A            | 0.013                          | 0.17                          |                                                                                         | 483                                                    | 769                                                  | 1.9                           | Y                |
| 3SB 10-R       | 10A           | 0.010                          | 0.17                          |                                                                                         | 817                                                    | 1300                                                 | 2.3                           | Y                |
| 3SB 12-R       | 12A           | 0.008                          | 0.15                          |                                                                                         | 1277                                                   | 2031                                                 | 2.6                           | Y                |
| 3SB 15-R       | 15A           | 0.006                          | 0.15                          |                                                                                         | 2123                                                   | 3377                                                 | 3.0                           | Y                |

Consult manufacturer for other ratings

## Temperature Derating Curve

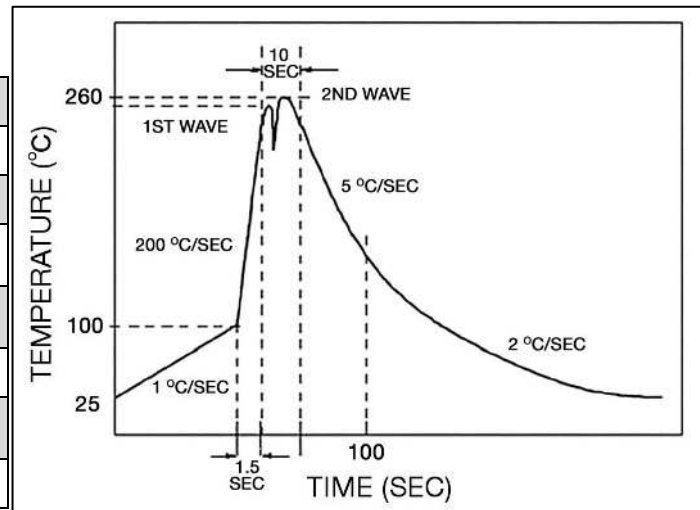


## Average Time Current Curve



## Soldering Parameters

| Lead-free Wave Soldering Profile                   |                                              |
|----------------------------------------------------|----------------------------------------------|
| Wave Soldering Parameter                           |                                              |
| Average ramp-up rate                               | 200°C / second                               |
| Heating rate during preheat                        | typical 1 - 2°C / second<br>Max 4°C / second |
| Final preheat temperature                          | within 125°C of soldering temperature        |
| Peak temperature T <sub>p</sub>                    | 260°C                                        |
| Time within +0°C / -5°C of actual peak temperature | 10 seconds                                   |
| Ramp-down rate                                     | 5°C / second max.                            |

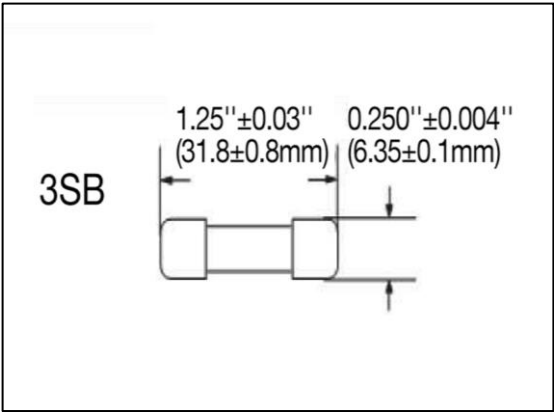


# Type 3SB

**3SB(P) Fuse FGNO Explanation**  
**06X2 R [XXXX] -XX**  
**0602R=3SB; [XXX1]=Ampere Rating; XX=See Ordering Information as below**

| Catalog number | FGNO / Order Number | Catalog number | FGNO / Order Number |
|----------------|---------------------|----------------|---------------------|
| 3SB 500-R      | 0602R0501-33        | 3SB 1-R        | 0602R1001-33        |
| 3SB 750-R      | 0602R0751-33        | 3SB 1.25-R     | 0602R1251-33        |
|                |                     | 3SB 1.6-R      | 0602R1601-33        |
|                |                     | 3SB 2-R        | 0602R2001-33        |
|                |                     | 3SB 2.5-R      | 0602R2501-33        |
|                |                     | 3SB 3-R        | 0602R3001-33        |
|                |                     | 3SB 4-R        | 0602R4001-33        |
|                |                     | 3SB 5-R        | 0602R5001-33        |
|                |                     | 3SB 6-R        | 0602R6001-33        |
|                |                     | 3SB 7-R        | 0602R7001-33        |
|                |                     | 3SB 8-R        | 0602R8001-33        |
|                |                     | 3SB 10-R       | 0602R9101-32        |
|                |                     | 3SB 12-R       | 0602R9121-32        |
|                |                     | 3SB 15-R       | 0602R9151-32        |

## Mechanical Dimensions



## Ordering Information

06X2 R XXX1 - X X

FUSE TYPE \_\_\_\_\_  
0602R = 3SB Series

R = RoHS Compliant \_\_\_\_\_

AMPERE RATING \_\_\_\_\_  
Refer to fuse FGNO explanation table

PACKAGING CODE \_\_\_\_\_  
3 = 3SB, Cartridge, 1K / Box

VOLTAGE CODE \_\_\_\_\_  
2 = 125V, for 8.1A-15A  
3 = 250V, for 500mA-8A

## Packaging

| Packaging Option | Packaging Specification | Quantity | Packaging Code | Inside Tape Spacing |
|------------------|-------------------------|----------|----------------|---------------------|
| Bulk             | N/A                     | 1000     | 32 / 33        | N/A                 |