

62mA-400mA EOL – Last Buy Date is Jun 30, 2020  
 No replacements for these ratings

# Type 3SB / 3SBP

## Slow Blow Fuse Series

HF  3SB/3SBP Series, 6x32mm Glass Tube Slow Blow Fuse

RoHS 2 Compliant

### Description

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

### Features

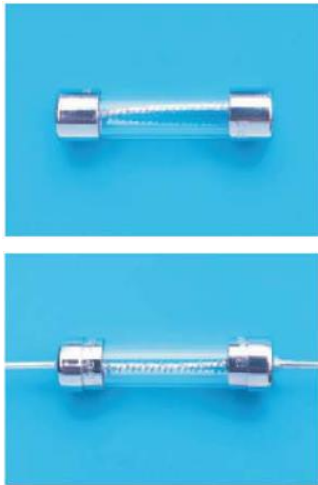
- Meet UL and CSA standard 248-14
- Wide operating temperature range
- Bulk packing available
- RoHS 2 compliant
- Halogen Free
- Lead Free

### Applications


Provide individual protection for components or internal circuits.

- Power supplies
- Battery charger
- Monitor
- Adapter

LEAD FREE =   
 HALOGEN FREE = 



### Physical Specifications

|           |   |
|-----------|---|
| Materials | Body : Glass  |
|           | Cap : Nickel Plated Brass Caps  |
|           | Leads : Matte Tin Plated Copper   |
| Marking   | On Fuse :   |
|           | "bel", "3SB", "Current Rating", "Voltage Rating",<br>"Appropriate Safety Logos", "✓" ( RoHS 2 compliant)  |
|           | On Label :  |
|           | "bel", "3SB" or "3SBP", "Current Rating", "Voltage Rating", "Interrupting Rating",<br>"Appropriate Safety Logos" and "✓", "  " (China RoHS compliant). |

### Electrical Characteristics (UL/CSA STD,248-14)

| 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                | Voltage Rating (V)   | Ampere Range / Volt @ I.R. ability*   |
|---|--|----------------------|---|
|  | E20624                                   | 63mA-8A/<br>250V AC  | 63mA-8A/125V AC@10,000A<br>63mA-8A/250V AC@200A<br>8.1A-15A/125V AC@10,000A                       |
|  | LR39772                                  |                      | 63mA-1A/250V AC@35A<br>>1A-3.5A/250V AC@100A<br>>3.5A-8A/250V AC@200A<br>8.1A-15A/125V AC@10,000A |
|  | JET1037-31003-1010<br>JET1037-31003-1011 | 8.1A-15A/<br>125V AC | 1A-5A/125V AC@500A  |
|   | JET1037-31003-1007                       |                      | >5A-15A/125V AC@300A  |
|   |  |                      |   |




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

# Type 3SB / 3SBP

## Environmental Specifications

|                           |  |
|---------------------------|--|
| Shock Resistance          | MIL-STD-202G, Method 213B, Test Condition 1 (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 (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(P) 63-R    | 63mA          | 75.5                           | 7.33                          | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | 0.09  | 0.10   | 0.7                           | Y   | Y   |   |
| 3SB(P) 80-R    | 80mA          | 48.4                           | 6.27                          |   | 0.13  | 0.15   | 0.7                           | Y   | Y   |   |
| 3SB(P) 100-R   | 100mA         | 29.4                           | 4.41                          |   | 0.21  | 0.24   | 0.5                           | Y   | Y   |   |
| 3SB(P) 125-R   | 125mA         | 17.5                           | 3.45                          |   | 0.32  | 0.37   | 0.6                           | Y   | Y   |   |
| 3SB(P) 160-R   | 160mA         | 12.3                           | 3.13                          |   | 0.50  | 0.58   | 0.6                           | Y   | Y   |   |
| 3SB(P) 200-R   | 200mA         | 7.1                            | 2.13                          |   | 0.77  | 0.91   | 0.6                           | Y   | Y   |   |
| 3SB(P) 250-R   | 250mA         | 5.0                            | 1.97                          |   | 1.2   | 1.4  | 0.6                           | Y   | Y   |   |
| 3SB(P) 300-R   | 300mA         | 3.2                            | 1.52                          |   | 1.9   | 2.2  | 0.7                           | Y   | Y   |   |
| 3SB(P) 375-R   | 375mA         | 2.14                           | 1.26                          |   | 2.6   | 3.2  | 0.7                           | Y   | Y   |   |
| 3SB(P) 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   | Y   |
| 3SB(P) 750-R   | 750mA         | 0.642                          | 0.68                          | 9   |   | 10   | 0.8                           | Y   | Y   |   |
| 3SB(P) 1-R     | 1A            | 0.374                          | 0.59                          | 16  |   | 21   | 0.9                           | Y   | Y   | Y   |
| 3SB(P) 1.25-R  | 1.25A         | 0.248                          | 0.43                          | 25  |   | 32   | 0.9                           | Y   | Y   | Y   |
| 3SB(P) 1.6-R   | 1.6A          | 0.155                          | 0.38                          | 39  |   | 50   | 1.0                           | Y   | Y   | Y   |
| 3SB(P) 2-R     | 2A            | 0.115                          | 0.36                          | 61  |   | 79   | 1.0                           | Y   | Y   | Y   |
| 3SB(P) 2.5-R   | 2.5A          | 0.079                          | 0.29                          | 94  |   | 123  | 1.1                           | Y   | Y   | Y   |
| 3SB(P) 3-R     | 3A            | 0.058                          | 0.27                          | 146   |   | 192  | 1.1                           | Y   | Y   | Y   |
| 3SB(P) 4-R     | 4A            | 0.039                          | 0.23                          | 226   |   | 300  | 1.2                           | Y   | Y   | Y   |
| 3SB(P) 5-R     | 5A            | 0.029                          | 0.22                          | 349   |   | 469  | 1.3                           | Y   | Y   | Y   |
| 3SB(P) 6-R     | 6A            | 0.018                          | 0.19                          | 286   |   | 455  | 1.6                           | Y   | Y   | Y   |
| 3SB(P) 7-R     | 7A            | 0.016                          | 0.18                          | 372   |   | 592  | 1.8                           | Y   | Y   | Y   |
| 3SB(P) 8-R     | 8A            | 0.013                          | 0.17                          | 483   |   | 769  | 1.9                           | Y   | Y   | Y   |
| 3SB(P) 10-R    | 10A           | 0.010                          | 0.17                          | 817   |   | 1300   | 2.3                           | Y   | Y   | Y   |
| 3SB(P) 12-R    | 12A           | 0.008                          | 0.15                          | 1277  |   | 2031   | 2.6                           | Y   | Y   | Y   |
| 3SB(P) 15-R    | 15A           | 0.006                          | 0.15                          | 2123  | 3377  | 3.0  | Y                             | Y   | Y   |   |

Consult manufacturer for other ratings

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Specifications subject to change without notice

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# Type 3SB / 3SBP

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 / 3SBP

## 3SB(P) Fuse FGNO Explanation

06X2 R [XXXX] -XX

0602R=3SB/0612R=3SBP; [XXX1]=Ampere Rating; XX=See Ordering Information as below

| Catalog number | FGNO / Order Number |              |
|----------------|---------------------|--------------|
|                | 3SB                 | 3SBP         |
| 3SB(P) 63-R    | 0602R0061-33        | 0612R0061-33 |
| 3SB(P) 80-R    | 0602R0081-33        | 0612R0081-33 |
| 3SB(P) 100-R   | 0602R0101-33        | 0612R0101-33 |
| 3SB(P) 125-R   | 0602R0121-33        | 0612R0121-33 |
| 3SB(P) 160-R   | 0602R0161-33        | 0612R0161-33 |
| 3SB(P) 200-R   | 0602R0201-33        | 0612R0201-33 |
| 3SB(P) 250-R   | 0602R0251-33        | 0612R0251-33 |
| 3SB(P) 300-R   | 0602R0301-33        | 0612R0301-33 |
| 3SB(P) 375-R   | 0602R0371-33        | 0612R0371-33 |
| 3SB(P) 500-R   | 0602R0501-33        | 0612R0501-33 |
| 3SB(P) 750-R   | 0602R0751-33        | 0612R0751-33 |
|                |                     |              |
|                |                     |              |
|                |                     |              |

| Catalog number | FGNO / Order Number |              |
|----------------|---------------------|--------------|
|                | 3SB                 | 3SBP         |
| 3SB(P) 1-R     | 0602R1001-33        | 0612R1001-33 |
| 3SB(P) 1.25-R  | 0602R1251-33        | 0612R1251-33 |
| 3SB(P) 1.6-R   | 0602R1601-33        | 0612R1601-33 |
| 3SB(P) 2-R     | 0602R2001-33        | 0612R2001-33 |
| 3SB(P) 2.5-R   | 0602R2501-33        | 0612R2501-33 |
| 3SB(P) 3-R     | 0602R3001-33        | 0612R3001-33 |
| 3SB(P) 4-R     | 0602R4001-33        | 0612R4001-33 |
| 3SB(P) 5-R     | 0602R5001-33        | 0612R5001-33 |
| 3SB(P) 6-R     | 0602R6001-33        | 0612R6001-33 |
| 3SB(P) 7-R     | 0602R7001-33        | 0612R7001-33 |
| 3SB(P) 8-R     | 0602R8001-33        | 0612R8001-33 |
| 3SB(P) 10-R    | 0602R9101-33        | 0612R9101-33 |
| 3SB(P) 12-R    | 0602R9121-33        | 0612R9121-33 |
| 3SB(P) 15-R    | 0602R9151-33        | 0612R9151-33 |

## Mechanical Dimensions



\*Ratings 5A and less have 0.032"±0.002" diameter lead;  
Ratings 6A and above have 0.039"±0.002" diameter lead.

## Ordering Information



## Packaging

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



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- Техническая поддержка проекта;
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#### Как с нами связаться

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