

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", "Appropriate Safety Logos", "✓" (RoHS 2 compliant) |
| | On Label : |
| | "bel", "3SB" or "3SBP", "Current Rating", "Voltage Rating", "Interrupting Rating", "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/ 250V AC | 63mA-8A/125V AC@10,000A 63mA-8A/250V AC@200A 8.1A-15A/125V AC@10,000A |
|  | LR39772 | | 63mA-1A/250V AC@35A >1A-3.5A/250V AC@100A >3.5A-8A/250V AC@200A 8.1A-15A/125V AC@10,000A |
|  | JET1037-31003-1010 JET1037-31003-1011 | 8.1A-15A/ 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 ² T <10 mSec (A ² Sec) | Melting I ² T @10 In (A ² 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

Bel Fuse Inc.
206 Van Vorst Street
Jersey City, NJ 07302 USA

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Type 3SB / 3SBP

Temperature Derating Curve

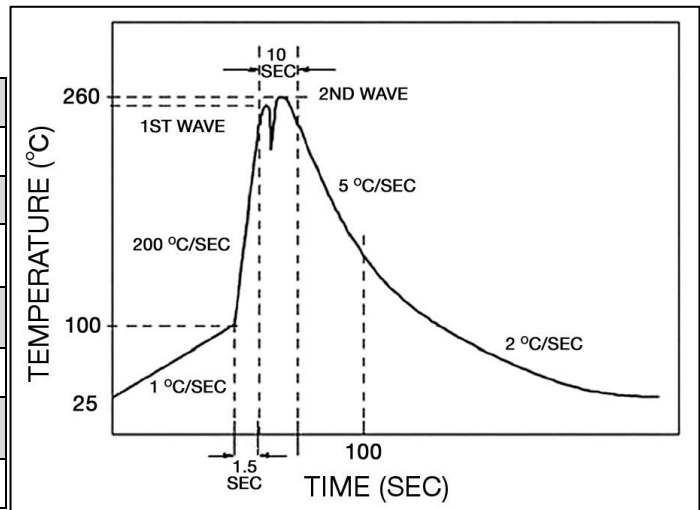


Average Time Current Curve



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 Max 4°C / second |
| Final preheat temperature | within 125°C of soldering temperature |
| Peak temperature T _p | 260°C |
| Time within +0°C / -5°C of actual peak temperature | 10 seconds |
| Ramp-down rate | 5°C / second max. |



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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 |
| | | |
| | | |
| | | |

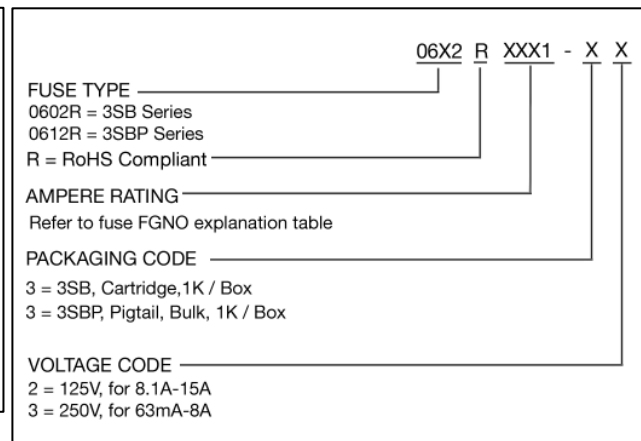
| Catalog number | FGNO / Order Number | |
|----------------|---------------------|--------------|
| | 3SB | 3SBP |
| 3SB(P) 1-R | 0602R1001-33 | 0612R1001-33 |
| 3SB(P) 1.25-R | 0602R1251-33 | 0612R1251-33 |
| 3SB(P) 1.6-R | 0602R1601-33 | 0612R1601-33 |
| 3SB(P) 2-R | 0602R2001-33 | 0612R2001-33 |
| 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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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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