

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

Type GSA / GSAP

Slow Blow Fuse Series

HF **Pb** GSA/GSAP Series, 6x32mm Ceramic Tube Slow Blow Fuse

RoHS 2 Compliant

Description

6x32mm Slow Blow, ceramic 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 = **Pb**
HALOGEN FREE = **HF**



Physical Specifications

| | |
|-----------|--|
| Materials | Body : Ceramic |
| | Cap : Nickel Plated Brass Caps |
| | Leads : Matte Tin Plated Copper |
| Marking | On Fuse : |
| | "bel", "GSA", "Current Rating", "Voltage Rating", "Appropriate Safety Logos", "✓" (RoHS 2 compliant) |
| | On Label : |
| | "bel", "GSA" or "GSAP", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and " ^{RoHS} ✓ ", "  "(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 LR39772 | 63mA-15A/ 250V AC | 63mA-8A/125V AC @10,000A 63mA-1A/250V AC @35A >1A-3.5A/250V AC @100A >3.5A-8A/250V AC @200A |
|   | | | 10A-15A/125V AC @10,000A 10A-15A/250V AC @750A |
|  | JET1037-31003-1010 JET1037-31003-1011 JET1037-31003-1007 | | 1A-5A/125V AC @500A >5A-15A/125V AC @300A |

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

Type GSA / GSAP

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 | | | | | |
|----------------|---------------|--------------------------------|-------------------------------|---|--|--|-------------------------------|------------------|----|-------|----|----|---|
| | | | | | | | | UL US | SP | UL US | SP | CS | |
| GSA(P) 63-R | 63mA | 75.5 | 7.33 | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | 0.087 | 0.098 | 0.71 | Y | Y | | | | |
| GSA(P) 80-R | 80mA | 48.4 | 6.27 | | 0.135 | 0.152 | 0.74 | Y | Y | | | | |
| GSA(P) 100-R | 100mA | 29.4 | 4.41 | | 0.209 | 0.238 | 0.55 | Y | Y | | | | |
| GSA(P) 125-R | 125mA | 17.5 | 3.45 | | 0.323 | 0.372 | 0.58 | Y | Y | | | | |
| GSA(P) 160-R | 160mA | 12.3 | 3.13 | | 0.499 | 0.581 | 0.60 | Y | Y | | | | |
| GSA(P) 200-R | 200mA | 7.1 | 2.13 | | 0.773 | 0.908 | 0.63 | Y | Y | | | | |
| GSA(P) 250-R | 250mA | 5.0 | 1.97 | | 1.2 | 1.4 | 0.66 | Y | Y | | | | |
| GSA(P) 300-R | 300mA | 3.17 | 1.52 | | 1.9 | 2.2 | 0.70 | Y | Y | | | | |
| GSA(P) 375-R | 375mA | 2.14 | 1.26 | | 2.6 | 3.2 | 0.73 | Y | Y | | | | |
| GSA(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 | 0.78 | Y | Y | | | | |
| GSA(P) 600-R | 600mA | 1.05 | 0.98 | | 6.9 | 8.5 | 0.82 | Y | Y | | | | |
| GSA(P) 700-R | 700mA | 0.648 | 0.69 | | 8.5 | 11 | 0.84 | Y | Y | | | | |
| GSA(P) 750-R | 750mA | 0.642 | 0.68 | | 10 | 12 | 0.85 | Y | Y | | | | |
| GSA(P) 1-R | 1A | 0.374 | 0.59 | | 16 | 21 | 0.91 | Y | Y | | | | Y |
| GSA(P) 1.25-R | 1.25A | 0.248 | 0.43 | | 25 | 32 | 0.96 | Y | Y | | | | Y |
| GSA(P) 1.6-R | 1.6A | 0.155 | 0.38 | | 39 | 50 | 1.01 | Y | Y | | | | Y |
| GSA(P) 2-R | 2A | 0.115 | 0.36 | | 61 | 79 | 1.06 | Y | Y | | | | Y |
| GSA(P) 2.5-R | 2.5A | 0.079 | 0.29 | | 94 | 123 | 1.12 | Y | Y | | | | Y |
| GSA(P) 3-R | 3A | 0.058 | 0.27 | | 146 | 192 | 1.18 | Y | Y | | | | Y |
| GSA(P) 4-R | 4A | 0.039 | 0.23 | | 226 | 300 | 1.24 | Y | Y | | | | Y |
| GSA(P) 5-R | 5A | 0.029 | 0.22 | | 349 | 469 | 1.31 | Y | Y | | | | Y |
| GSA(P) 6-R | 6A | 0.018 | 0.19 | | 286 | 455 | 1.61 | Y | Y | | | | Y |
| GSA(P) 7-R | 7A | 0.016 | 0.18 | | 372 | 592 | 1.81 | Y | Y | | | | Y |
| GSA(P) 8-R | 8A | 0.013 | 0.17 | | 483 | 769 | 1.95 | Y | Y | | | | Y |
| GSA(P) 10-R | 10A | 0.010 | 0.17 | 817 | 1300 | 2.26 | | | Y | Y | Y | | |
| GSA(P) 12-R | 12A | 0.008 | 0.15 | 1277 | 2031 | 2.56 | | | Y | Y | Y | | |
| GSA(P) 15-R | 15A | 0.006 | 0.15 | 2123 | 3377 | 2.96 | | | Y | Y | Y | | |

Consult manufacturer for other ratings

EOL—
 Last Buy Date is
 Jun 30, 2020



Specifications subject to change without notice

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

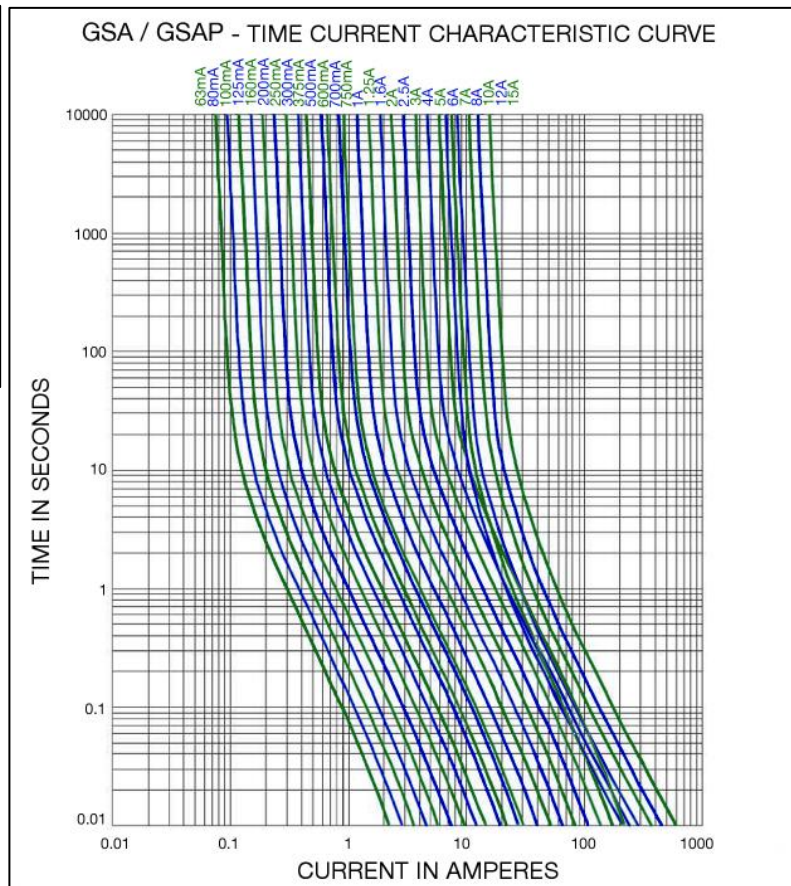
+1 201.432.0463
 Bel.US.CS@belf.com
belfuse.com/circuit-protection

Type GSA / GSAP

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 Tp | 260°C |
| Time within +0°C / -5°C of actual peak temperature | 10 seconds |
| Ramp-down rate | 5°C / second max. |



Specifications subject to change without notice

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

+1 201.432.0463
 Bel.US.CS@belf.com
belfuse.com/circuit-protection

Type GSA / GSAP

Fuse FGNO Explanation

06X6 R [XXXX] -XX

0606R=GSA/0616R=GSAP; [XXXX]=Ampere Rating; XX=See Ordering Information as below

| Fraction | Decimal | Milliamps | Bel FGNO[XXXX] |
|----------|---------|-----------|----------------|
| 1/16 | 0.063 | 63 | 0063 |
| 8/100 | .080 | 80 | 0080 |
| 1/10 | .100 | 100 | 0100 |
| 1/8 | .125 | 125 | 0125 |
| | .160 | 160 | 0160 |
| 2/10 | .200 | 200 | 0200 |
| 1/4 | .250 | 250 | 0250 |
| 3/10 | .300 | 300 | 0300 |
| 3/8 | .375 | 375 | 0375 |
| 1/2 | .500 | 500 | 0500 |
| 6/10 | .600 | 600 | 0600 |
| 7/10 | .700 | 700 | 0700 |
| 3/4 | .750 | 750 | 0750 |

| Fraction | Decimal | Amps | Bel FGNO[XXXX] |
|----------|---------|------|----------------|
| | 1.0 | 1 | 1000 |
| 1-1/4 | 1.25 | 1.25 | 1250 |
| | 1.60 | 1.6 | 1600 |
| | 2.0 | 2 | 2000 |
| 2-1/2 | 2.5 | 2.5 | 2500 |
| | 3.0 | 3 | 3000 |
| | 4.0 | 4 | 4000 |
| | 5.0 | 5 | 5000 |
| | 6.0 | 6 | 6000 |
| | 7.0 | 7 | 7000 |
| | 8.0 | 8 | 8000 |
| | | 10 | 9100 |
| | | 12 | 9120 |
| | | 15 | 9150 |

Mechanical Dimensions



*Diameter lead 0.032"±0.002" for 5A and less
 *Diameter lead 0.039"±0.002" for 6A and above

Ordering Information

06X6 R XXXX - X X

FUSE TYPE _____

0606R = GSA Series

0616R = GSAP Series

R = RoHS Compliant _____

AMPERE RATING _____

Refer to fuse FGNO explanation table

PACKAGING CODE _____

3 = GSA Cartridge, 1K/box

3 = GSAP Pigtail, Bulk, 1K/box

VOLTAGE CODE _____

3 = 250V for 100mA -20A

Packaging

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



Specifications subject to change without notice

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

+1 201.432.0463
 Bel.US.CS@belf.com
belfuse.com/circuit-protection

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9