

# GSAP 100-R Datasheet



|                              |   |
|------------------------------|---|
| DiGi Electronics Part Number | GSAP 100-R-DG   |
| Manufacturer                 | <a href="#">Bel Fuse Inc.</a>   |
| Manufacturer Product Number  | GSAP 100-R  |
| Description                  | FUSE CERM 100MA 250VAC 3AB 3AG  |
| Detailed Description         | 100 mA 250 V AC DC Fuse Cartridge, Ceramic Through Hole 3AB, 3AG, 1/4" x 1-1/4" (Axial) |

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## Purchase and inquiry

Manufacturer Product Number:

GSAP 100-R

Series:

GSAP

Mounting Type:

Through Hole

Current Rating (Amps):

100 mA

Response Time:

Slow Blow

Breaking Capacity @ Rated Voltage:

35A

Approval Agency:

CE, CSA, cULus

Color:

-

DC Cold Resistance:

29.4 Ohms

Manufacturer:

Bel Fuse Inc.

Product Status:

Obsolete

Fuse Type:

Cartridge, Ceramic

Voltage Rating - AC:

250 V

Package / Case:

3AB, 3AG, 1/4" x 1-1/4" (Axial)

Melting I<sup>2</sup>t:

0.209

Operating Temperature:

-55°C ~ 125°C

Size / Dimension:

0.272" Dia x 1.280" L (6.90mm x 32.50mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8536.10.0040

Moisture Sensitivity Level (MSL):

Not Applicable

ECCN:

EAR99

# 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

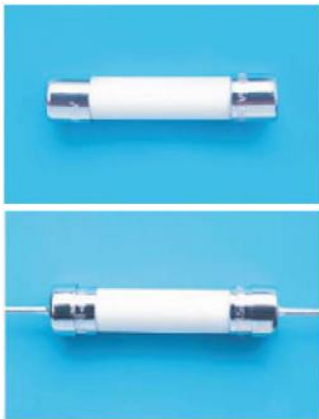
- Meet UL and CSA standard 248-14
- Wide operating temperature range
- Bulk packing available
- RoHS 2 compliant
- Halogen Free
- Lead Free

### 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",<br>"Appropriate Safety Logos", "✓" ( RoHS 2 compliant )   |
|           | On Label :  |
|           | "bel", "GSA" or "GSAP", "Current Rating", "Voltage Rating", "Interrupting Rating",<br>"Appropriate Safety Logos" and "✓", "Pb", "E" (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*  |
|----------------------------------|--|-----------------------|--|
| <b>UL</b> <b>US</b><br><b>SP</b> | E20624<br>LR39772  | 500mA-15A/<br>250V AC | 500mA-8A/125V AC@10,000A<br>500mA-1A/250V AC@35A<br>>1A-3.5A/250V AC@100A<br>>3.5A-8A/250V AC@200A |
| <b>RU</b> <b>US</b><br><b>SP</b> |  |                       | 10A-15A/125V AC@10,000A<br>10A-15A/250V AC@750A  |
| <b>PSE</b>                       | JET1037-31003-1010<br>JET1037-31003-1011<br>JET1037-31003-1007 |                       | 1A-5A/125V AC@500A<br>>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 <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  |   |   |   |   |   |
|----------------|---------------|--------------------------------|-------------------------------|---|--|--|-------------------------------|---|---|---|---|---|---|
|                |               |                                |                               |   |  |  |                               |  |  |  |  |  |   |
| 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

**GSAP EOL–**  
Last Buy Date is Aug 31, 2021



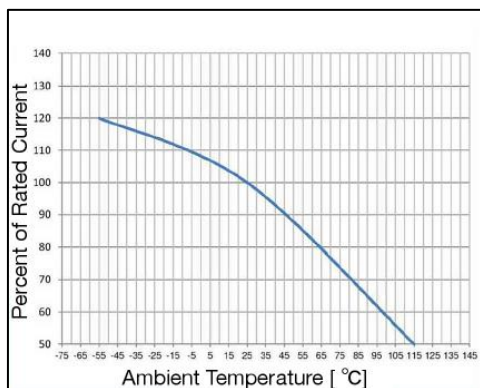
Specifications subject to change without notice

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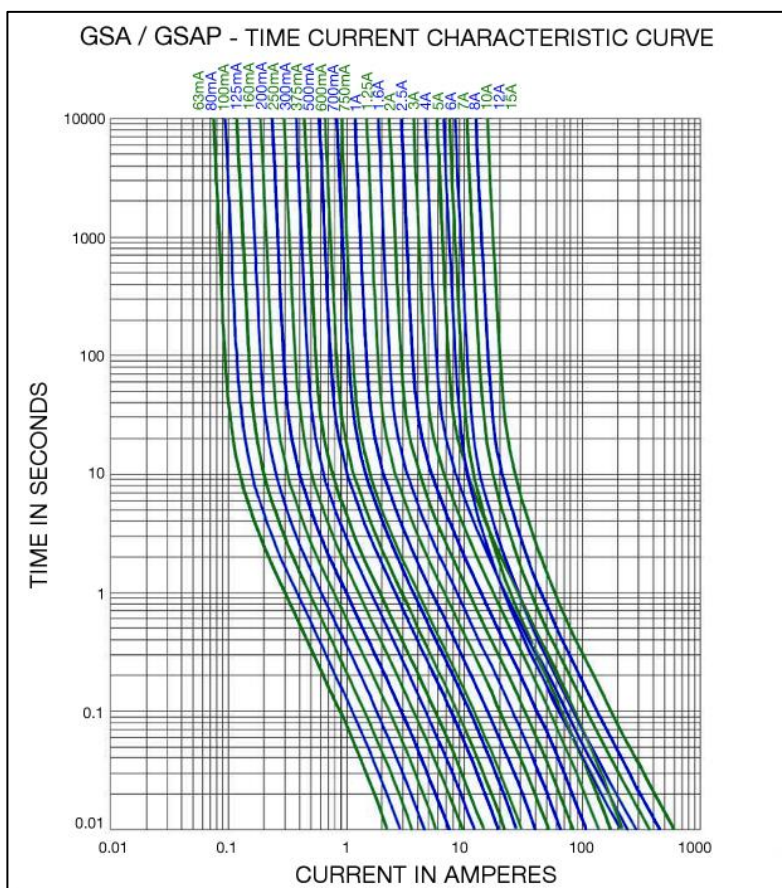
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# Type GSA / GSAP

## Temperature Derating Curve

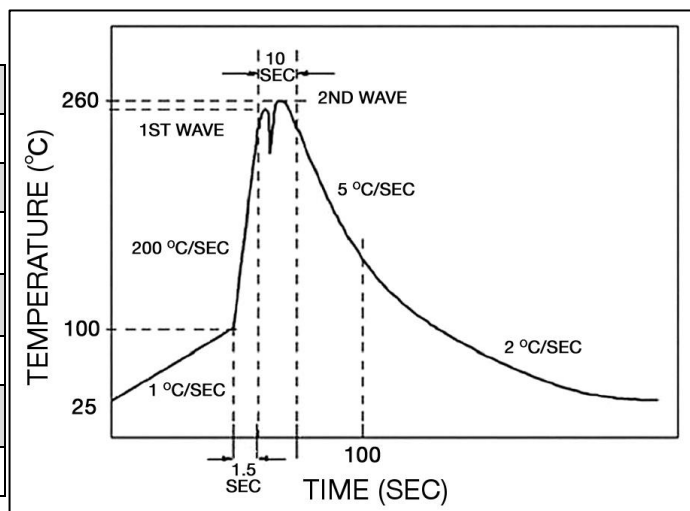


## Average Time Current Curve



## 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<br>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.                            |



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