



**THE DATASHEET OF
0ABA-1000-TN**



Type 0ABA

Surface Mount Fast Acting Chip Fuse

HF  0ABA Series – 0402 Size

RoHS 2 Compliant

Features



- Fast Acting for excessive current, set the industry standard for performance, reliability and quality
- Small size, 0402 SMD
- Current rating from 200mA to 4A
- Wide operating temperature range from -55°C to 125°C
- Tape and Reel for automatic SMD placement
- Compatible with 260°C Pb-free IR and wave soldering process
- Excellent environmental integrity
- One time positive disconnect
- RoHS 2 compliant (MSL = 1)
- Halogen Free
- Lead Free





Applications


- Electronic device and Battery

LEAD FREE = 
 HALOGEN FREE = 



Electrical Characteristics (UL STD. 248-14)

| Rated Current | 1.0In | 2.5In | 3.0In |
|---------------|----------------|-------|-------|
| 1A~4A | 4 hour minimum | 5 sec | |
| 200mA~750mA | 4 hour minimum | | 5 sec |

Safety Agency Approvals

| Safety Agency | Safety Agency Certificate | Voltage Rating (V) | Ampere Range / Volt @ I.R. ability* |
|--|---------------------------|--------------------|-------------------------------------|
|  | E20624 | 200mA~4A/32V DC | 200mA~4A/35A@ 32V DC |
| * DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source) | | | |

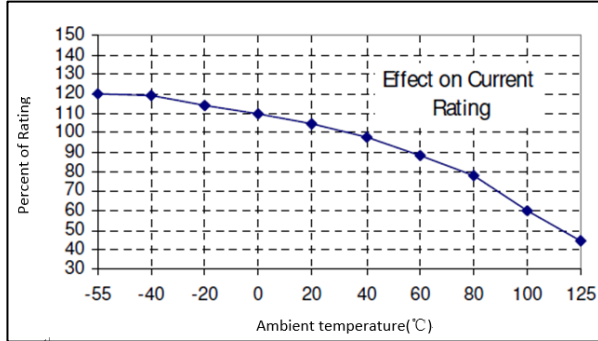
Physical Specifications

| | |
|-----------|---|
| Materials | Body : Ceramic Substrate |
| | Terminations : Ag / Ni / Sn (100% Lead-free) |
| | Element Cover Coating : Lead-free Glass |
| Marking | On Fuse : |
| | None |
| | On Label : |
| | "bel", "0ABA", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and "  ", "  " (China RoHS compliant). |

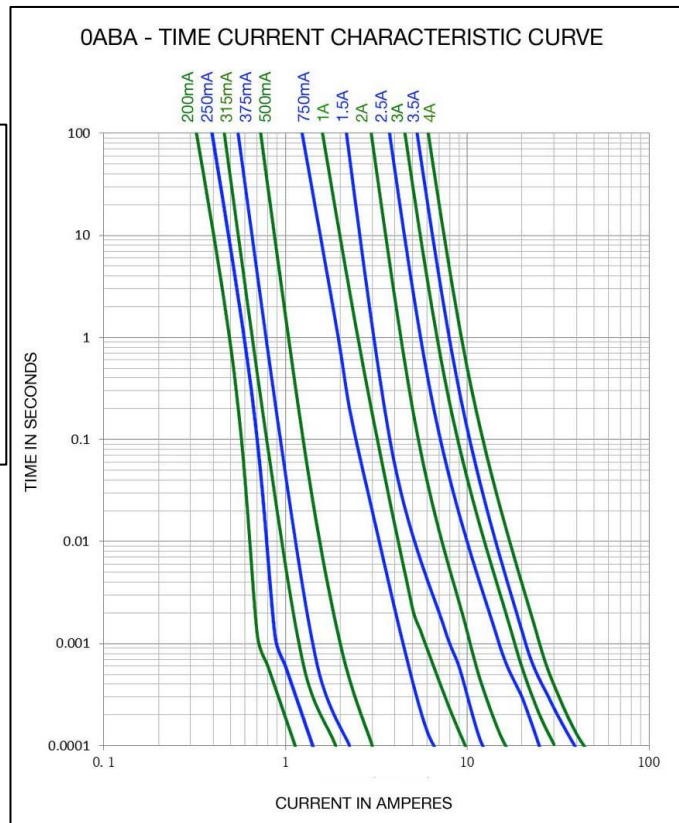
Temperature Derating Curve

Normal ambient temperature: $23 \pm 3^\circ\text{C}$


Operating temperature: $-55 \sim 125^\circ\text{C}$, with proper correction factor applied



Average Time Current Curve



Electrical Specifications

| Part Number | Ampere Rating | Resistance (ohms)** Typ. | Typical Melt I ² t *** DC (A ² s) | Voltage and Interrupting Ratings | Agency Approvals |
|--------------|---------------|--------------------------|---|---|---|
| | | | | |  |
| 0ABA-0200-XX | 200mA | 1.75 | 0.0006 | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | Y |
| 0ABA-0250-XX | 250mA | 1.50 | 0.0010 | | Y |
| 0ABA-0315-XX | 315mA | 1.00 | 0.0014 | | Y |
| 0ABA-0375-XX | 375mA | 0.78 | 0.0018 | | Y |
| 0ABA-0500-XX | 500mA | 0.50 | 0.0043 | | Y |
| 0ABA-0750-XX | 750mA | 0.22 | 0.011 | | Y |
| 0ABA-1000-XX | 1A | 0.13 | 0.04 | | Y |
| 0ABA-1500-XX | 1.5A | 0.078 | 0.06 | | Y |
| 0ABA-2000-XX | 2A | 0.040 | 0.13 | | Y |
| 0ABA-2500-XX | 2.5A | 0.024 | 0.20 | | Y |
| 0ABA-3000-XX | 3A | 0.018 | 0.33 | | Y |
| 0ABA-3500-XX | 3.5A | 0.014 | 0.45 | | Y |
| 0ABA-4000-XX | 4A | 0.011 | 0.60 | | Y |

Consult manufacturer for other ratings

**DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25 degrees;

***Typical Melting I²t (Measured with a battery bank at rated DC voltage, Measured at 1ms open time, time constant of calibrated circuit less than 50 microseconds).



Specifications subject to change without notice

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

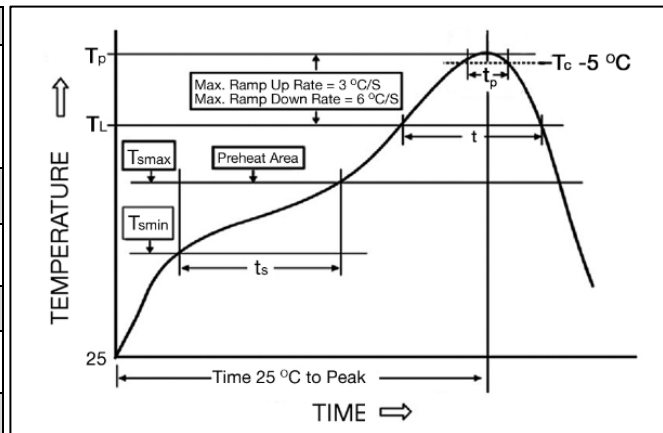
+1 201.432.0463
Bel.US.CS@belf.com
belfuse.com/circuit-protection

Soldering Method

| | |
|-----------------|---------------------------------------|
| Wave solder | Reservoir temperature: 260°C |
| | Time in reservoir: 10 seconds maximum |
| Infrared reflow | Temperature: 260°C |
| | Time: 30 seconds maximum |

Solder Reflow Profile

| Profile Feature | |
|--|-----------------|
| Preheat & Soak | |
| Temperature min (T _{smin}) | 150°C |
| Temperature max (T _{smax}) | 200°C |
| Time (T _{smin} to T _{smax}) (t _s) | 60-120 seconds |
| Average ramp-up rate (T _{smax} to T _p) | 3°C/second max. |
| Liquidous temperature (T _L) | 217°C |
| Time at liquidous (t _L) | 60-150 seconds |
| Peak package body temperature (T _p) | 260°C |
| Time (t _p) within 5°C of the specified classification temperture (T _c) | 30 seconds |
| Average ramp-down rate (T _p to T _{smax}) | 6°C/second max. |
| Time 25°C to peak temperature | 8 minutes max. |



Fuse FGNO Explanation

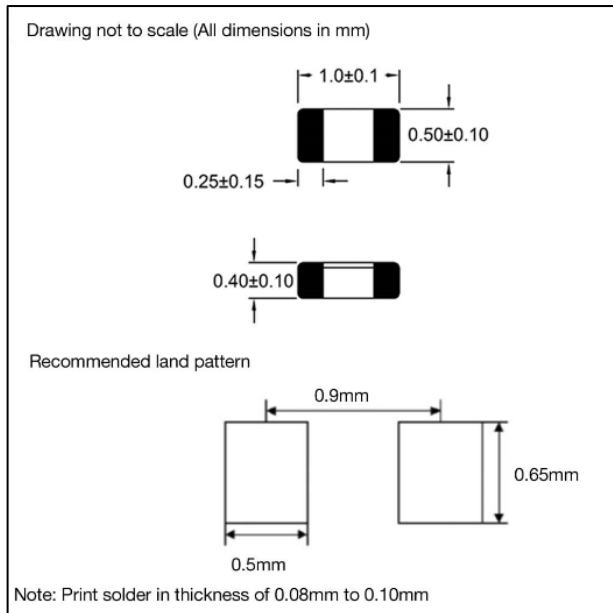
0ABA - [XXXX] X XX

0ABA=0ABA; [XXXX]=Ampere Rating; XX=See Ordering Information as below

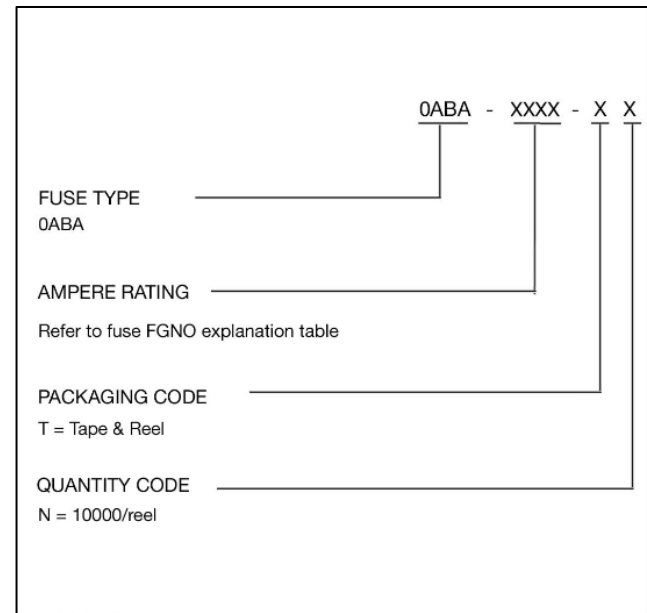
| Fraction | Decimal | Milliamps | Bel FGNO[XXXX] |
|----------|---------|-----------|----------------|
| 1/5 | 0.200 | 200 | 0200 |
| 1/4 | .250 | 250 | 0250 |
| | .315 | 315 | 0315 |
| 3/8 | .375 | 375 | 0375 |
| 1/2 | .500 | 500 | 0500 |
| 3/4 | .750 | 750 | 0750 |

| Fraction | Decimal | Amps | Bel FGNO[XXXX] |
|----------|---------|------|----------------|
| | 1.0 | 1 | 1000 |
| 1-1/2 | 1.50 | 1.5 | 1500 |
| | 2.0 | 2 | 2000 |
| 2-1/2 | 2.5 | 2.5 | 2500 |
| | 3.0 | 3 | 3000 |
| 3-1/2 | 3.5 | 3.5 | 3500 |
| | 4.0 | 4 | 4000 |

Mechanical Dimensions



Ordering Information



Packaging

| Packaging Tape & Reel | Packaging Specification | Quantity | Quantity & Packaging Code |
|--|-------------------------|----------|---------------------------|
| 8 mm wide tape with 7 inches Diameter reel | EIA Standard 481-E | 10000 | 0ABA-XXXX-TN |

Looking for pricing, stock, or lifecycle information?

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 [Bel Fuse Inc. Information](#)

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