

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number:	0ABA-0250-TN
Manufacturer:	Bel Fuse Inc.
Package:	Tape & Reel (TR), Cut Tape (CT)
Availability:	Please confirm with sales

Product Page:

<https://antrexco.com/product/details/bel-fuse-inc/0aba-0250-tn.html>

Request a Quote:

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Scan for product page

Contact Information

Email: info@antrexco.com

WhatsApp: +86-186-8066-5326

Website: <https://antrexco.com>

Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

Type 0ABA

Surface Mount Fast Acting Chip Fuse

HF  0ABA Series – 0402 Size

RoHS 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
- Full compliance with EU Directive 2011/65/EU and amending directive 2015/863 (MSL = 1)
- Halogen Free
- Lead Free
- Meets Bel automotive qualification*

* - Largely based on internal AEC-Q test plan

Applications

- Electronic device and Battery

LEAD FREE = 

HALOGEN FREE = 



UK
CA
CE
c  US
AEC-Q Compliant

Electrical Characteristics (UL STD. 248-14)

Rated Current	1.0In	2.5In	3.0In
1A~4A	4 hours minimum	5 sec	
200mA~750mA	4 hours 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).

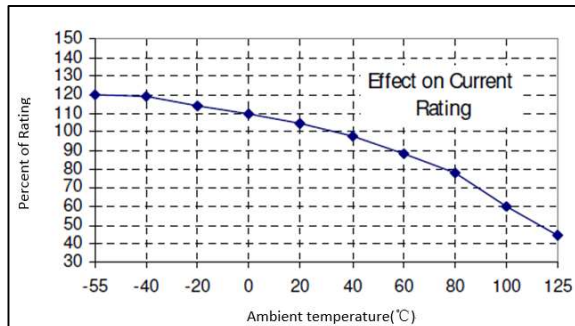
Type 0ABA

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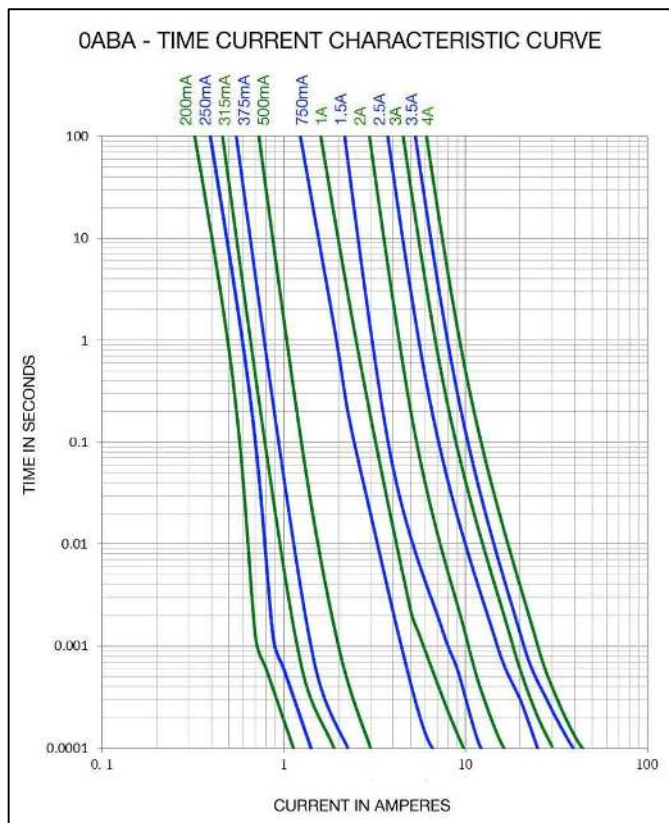
Temperature Derating Curve

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 Resistances are measured at <10% of rated current in ambient temperature of 25°C .

***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.
300 Executive Drive, Suite 300,
West Orange, NJ 07052 USA

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

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Environmental Specifications

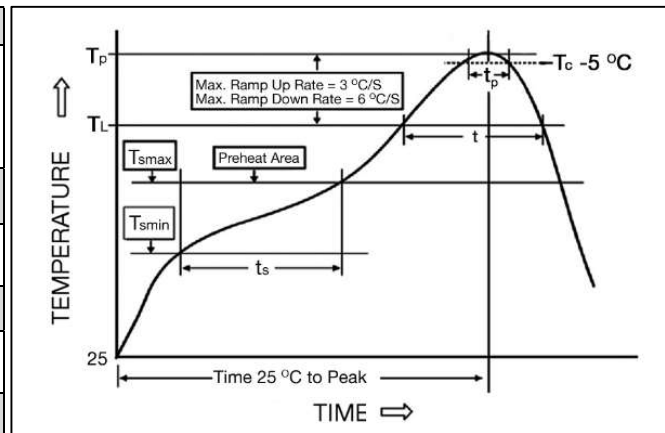
High temperature storage	MIL-STD-202 Method 108
Temperature cycling	JESD22 Method JA-104, Test Condition B
Biased humidity	MIL-STD-202 Method 103, 85°C/85% RH with 10% operating power for 1000 hrs.
Operational life	MIL-STD-202 Method 108, Test Condition D
Resistance to solvents	MIL-STD-202 Method 215
Mechanical shock	MIL-STD-202 Method 213, Test Condition C
Vibration	MIL-STD-202G Method 204 Test condition D (10-2k HZ ,20G's for 20minutes)
Resistance to soldering heat	MIL-STD-202 Method 210, Test condition B
Thermal shock	MIL-STD-202 Method 107
Solderability	J-STD-002 Test B
Board flex(SMD)	AEC-Q200-005
Terminal strength	AEC-Q200-006
Electrical characterization	3 Temperature Electrical

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 _{min})	150°C
Temperature max (T _{max})	200°C
Time (T _{min} to T _{max}) (t _s)	60-120 seconds
Average ramp-up rate (T _{max} 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 temperature (T _c)	30 seconds
Average ramp-down rate (T _p to T _{max})	6°C/second max.
Time 25°C to peak temperature	8 minutes max.



Type 0ABA

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Fuse FGNO Explanation

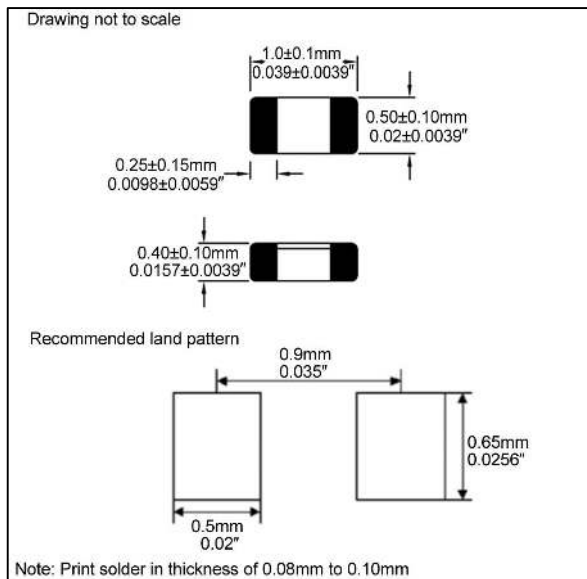
0ABA - [XXXX] X XX

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

0ABA - XXXX - X X

FUSE TYPE
0ABA

AMPERE RATING
Refer to fuse FGNO explanation table

PACKAGING CODE
T = Tape & Reel

QUANTITY CODE
N=10,000 pcs/Reel

Packaging

Packaging Tape & Reel	Packaging Specification	Quantity	Packaging Code& Quantity Code
8 mm wide tape with 7 inches Diameter reel	EIA Standard 481-E	10,000 pcs	TN



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