

# Type 0HAAL

## Time Lag Radial Lead Micro Fuse Series

HF  0HAAL Series

RoHS Compliant

### Description

Sub-miniature, Time-lag Type, 250 VAC rated fuses designed, approved and complied with IEC 60127-3, standard sheet 4.

### Features

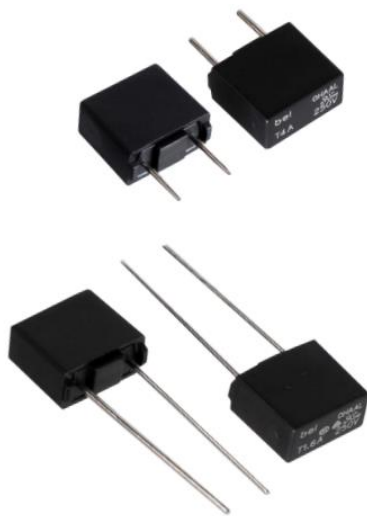
- Time-lag, 250 VAC
- Meet IEC standard 60127-3, sheet 4
- Wide operating temperature range
- Bulk and Tape & Reel packing available
- Full compliance with EU Directive 2011/65/EU and amending directive 2015/863
- Halogen Free and Lead Free

### Applications



Provide individual protection for components or internal circuits.

- Power supplies
- Battery chargers
- Consumer electronics
- Adapter
- Industrial controllers

LEAD FREE =   
 HALOGEN FREE = 






### Physical Specifications

Materials	Base and Cover : Black thermoplastic, UL 94-V0
	Pins : 100% Matte Tin Plated Copper
Marking	On Fuse: "bel", "0HAAL", "T", "Current Rating", "250V" & "Appropriate Safety Logos"
	On Label :
	"bel", "0HAAL", "T", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and "  ", "  " (China RoHS compliant).

### Electrical Characteristics (IEC-127-3 STANDARD SHEET 4) Safety Agency Approvals




Rated Current	1.5In		2.1In		2.75In		4In		10In	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
1A to 6.3A inclusive	1	2	400	10	150	3	20	150		
	hour	min.	ms	sec	ms	sec	ms	ms		

Safety Agency	Safety Agency Certificate	Ampere Rating/ Voltage Rating	Ampere Range / Volt @ I.R. ability*
	E506667	1A-6.3A/250Vac	1A-6.3A/250V ac @ 35A or 10In whichever is greater.
	40057591	1A/250Vac 1.6A-3.15A/250Vac 5A-6.3A/250Vac	
	2023960207000004	1A/250Vac 1.6A-3.15A/250Vac 5A-6.3A/250Vac	
*I.R.= Interrupting Rating = Short Circuit Rating (Amps)			

## 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 C. Top Side. (260°C, 20 sec)
Thermal Shock	MIL-STD-202G, Method 107G, Test Condition B (-65°C to +125°C).
Moisture Resistance	MIL-STD-202G, Method 202G, Method 106G
Operating Temperature	-55°C to +125°C

## Electrical Specifications

Part Number	Ampere Rating	Typical Cold Resistance (ohms)	Volt-drop @100% In (Volt) max.	Voltage and Interrupting Ratings	Nominal Melting I <sup>2</sup> T <10 mSec (A <sup>2</sup> Sec)	Nominal Melting I <sup>2</sup> T @10 In (A <sup>2</sup> Sec)	Maximum Power Dissipation (W)	Agency Approvals		
										
0HAAL1000-XX	1A	0.080	0.14	See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings	4.6	6.2	0.50	Y	Y	Y
0HAAL1250-XX	1.25A	0.060	0.13		8.7	10.9	0.60	Y		
0HAAL1600-XX	1.6A	0.044	0.12		11	14	0.73	Y	Y	Y
0HAAL2000-XX	2A	0.033	0.10		23	28.8	0.87	Y	Y	Y
0HAAL2500-XX	2.5A	0.024	0.10		30	35	1.00	Y	Y	Y
0HAAL3150-XX	3.15A	0.018	0.10		57	68	1.20	Y	Y	Y
0HAAL4000-XX	4A	0.014	0.10		96	98	1.40	Y		
0HAAL5000-XX	5A	0.010	0.10		98	100	1.50	Y	Y	Y
0HAAL6300-XX	6.3A	0.008	0.10		133	162	1.65	Y	Y	Y

Consult manufacturer for other ratings.

XX - Packaging code (see "ordering information")

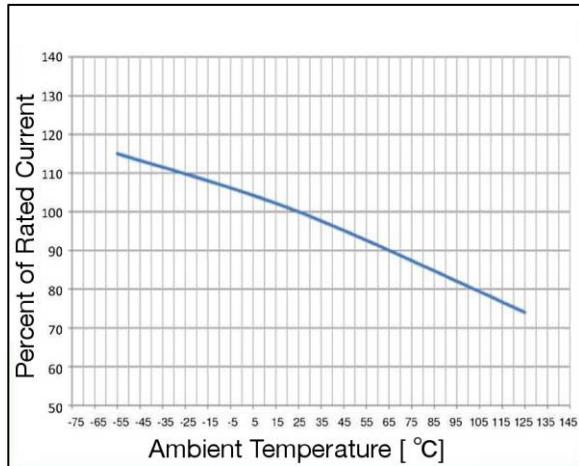


Specifications subject to change without notice

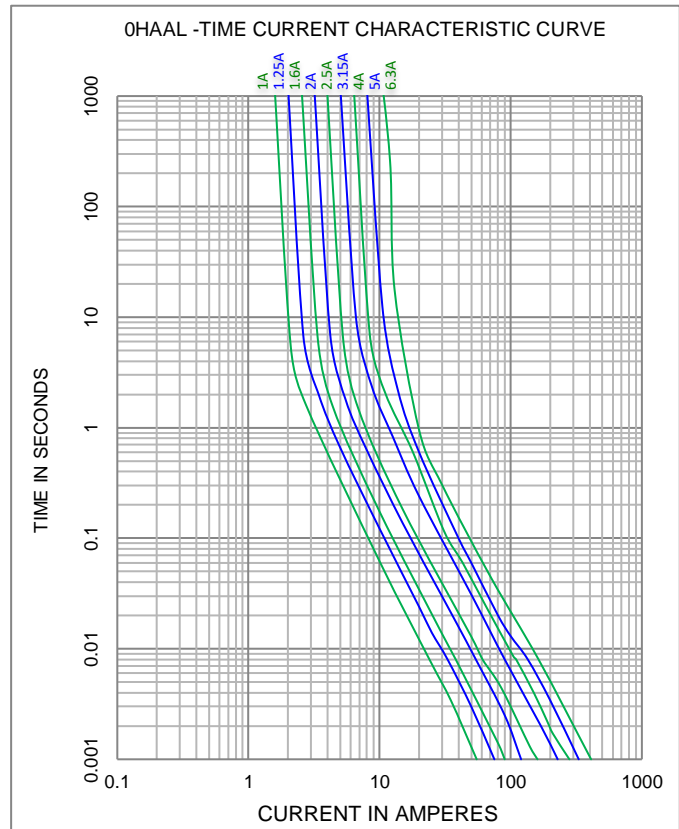
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## Temperature Derating Curve

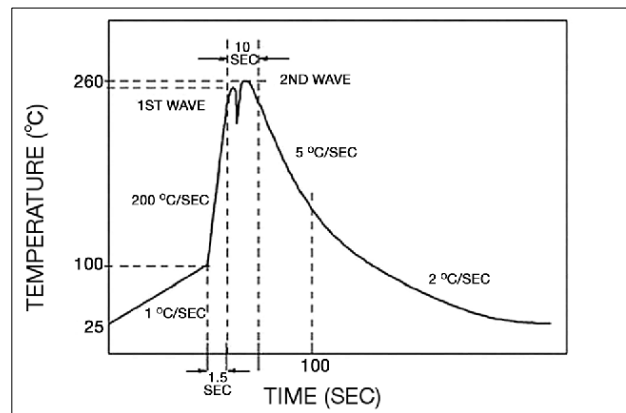


## Average Time Current Curve



## 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 <sub>p</sub>	260°C
Time within +0°C / -5°C of actual peak temperature	10 seconds
Ramp-down rate	5°C / second max.



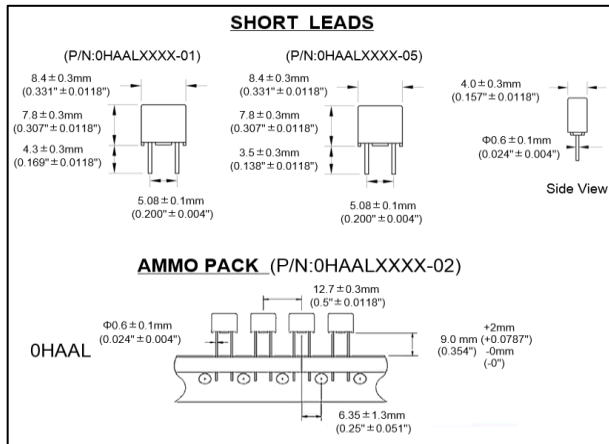
## Fuse FGNO Explanation

0HAA L [XXXX] X XX

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

Decimal	Amps	Bel FGNO[XXXX]
1.0	1	1000
1.25	1.25	1250
1.60	1.6	1600
2.0	2	2000
2.5	2.5	2500
3.15	3.15	3150
4.0	4	4000
5.0	5	5000
6.3	6.3	6300

## Mechanical Dimensions



## Ordering Information

OHAAL    XXXX - XX

FUSE TYPE \_\_\_\_\_  
 OHAAL=0HAAL Series

AMPERE RATING \_\_\_\_\_  
 Refer to fuse FGNO explanation table

PACKAGING/QUANTITY CODE \_\_\_\_\_

01=4.3+/-0.3mm lead length,2000pcs/box, Bulk  
 02=1000pcs/Box,Ammo Pack  
 05=3.5+/-0.3mm lead length,2000pcs/box, Bulk

## Packaging

Packaging Option	Packaging Specification	Quantity	Packaging Code
Bulk / bag, 2000 / box	N/A	2000	01, 05
12.7 mm pitch, On Tape / box	IEC-286-2	1000	02

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