

# Type 0ACG

## 500VDC, SMD Fuse

**HF** 0ACG Series

RoHS Compliant

### Features

- Surface mount design to save space
- Ceramic tube, silver plated cap construction
- Compatible with 260 °C, IR Pb-free solder process
- Wide operating temperature range, -40°C to 125°C
- Tape & Reel for auto-insert SMD process
- AEC-Q Compliant
- MSL = 1
- Complies with IEC 60127-7 standard
- Fully compliance with EU Directive 2011/65/EU and amending directive 2015/863
- Meets Bel automotive qualification\*
- \* - Largely based on internal AEC-Q test plan



### Applications

- Battery Management Systems, (BMS)
- Li-ion Battery Packs
- DC-DC Converters

HALOGEN FREE = **HF**




### Physical Specifications

Materials	Body : Ceramic
	Cap : Silver plated copper
Marking	On Fuse :
	"Current Rating"
	On Label :
	"bel", "0ACG", "Current Rating", "Voltage Rating", "Interrupting Rating", and "  ", "  "(China RoHS compliant).

### Electrical Characteristics

% of Ampere Rating (A)	Operating Time	
	Min	Max
125%	1 hour	-
200%	-	120 sec
1000%	-	1 sec

### Ratings

Safety Agency	Ampere Rating / Voltage Rating	Ampere Range / Volt @ I.R. ability*
	1-3.15A/500V DC /350V DC /350V AC	1-3.15A/500V @ 100A DC /350V @ 1500A DC /350V @ 100A AC
	4-5A/450V DC /125V DC /350V AC	4-5A/450V @ 100A DC /125V @ 1500A DC /350V @ 100A AC
* AC Interrupting Rating (measured at designated voltage, 100% power factor); DC Interrupting Rating (measured at designated voltage, time constant of less than 50 microseconds, battery source)		

## Electrical Specifications

Part Number	Ampere Rating	Alpha Mark	Voltage and Interrupting Ratings	Typical Cold. Resistance (mohms)**	Typical Voltage Drop (mV)	Typical Pre-Arcing I <sup>2</sup> t (A <sup>2</sup> Sec)***
0ACG-1000-XX	1A	1	See Table of Ratings on Page 1 for Voltage and associated Interrupting Ratings	180	220	0.50
0ACG-1250-XX	1.25A	1.25		140	210	0.95
0ACG-1600-XX	1.6A	1.6		90	190	2.3
0ACG-2000-XX	2A	2		70	185	4.1
0ACG-2500-XX	2.5A	2.5		40	120	2.6
0ACG-3150-XX	3.15A	3.15		31.5	140	3.3
0ACG-4000-XX	4A	4		24.5	140	5.5
0ACG-5000-XX	5A	5		17.5	130	11.5

Consult manufacturer for other ratings

\*\* DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25 °C

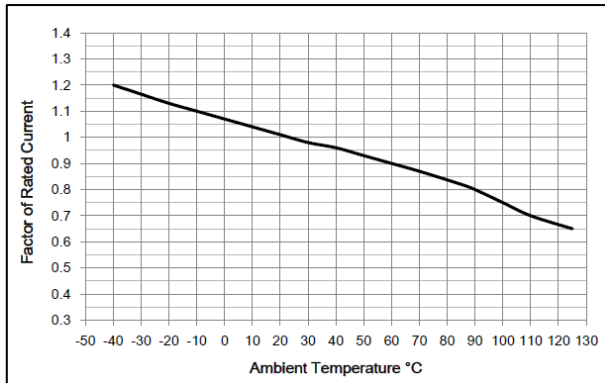
\*\*\* Typical Pre-arcing I<sup>2</sup>t are measured at 10In Current, DC battery bank.

## Temperature derating curve

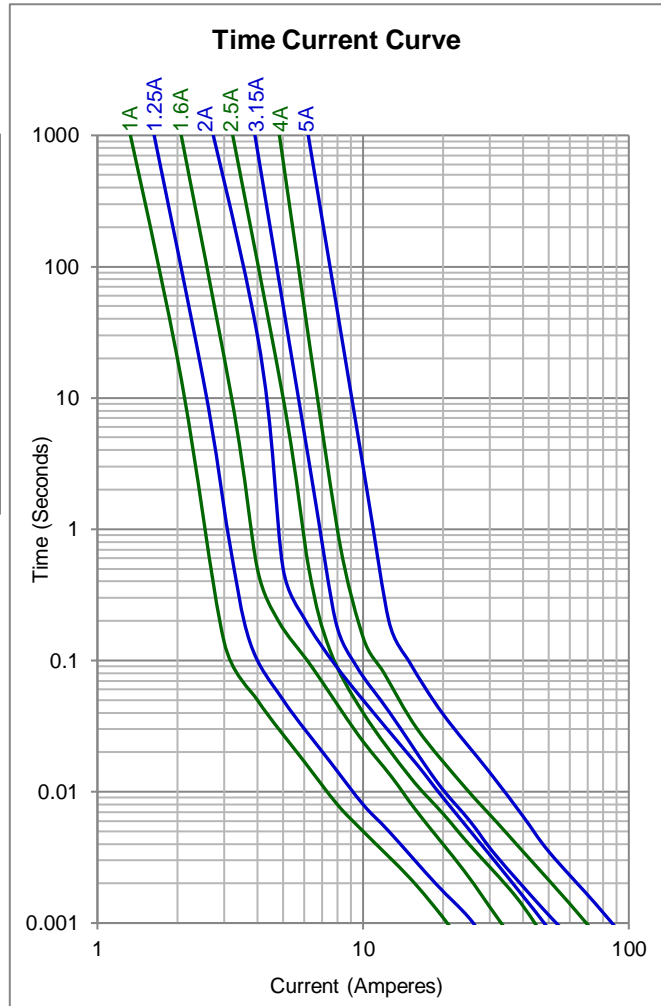
Normal Operating Temperature: 25°C ± 2°C

Operating Temperature: -40°C to 125°C with proper correction factor applied.

Chart of correction factor



## Average Time Current Curve



Specifications subject to change without notice

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Bel.US.CS@belf.com  
[belfuse.com/circuit-protection](http://belfuse.com/circuit-protection)

## Soldering Characteristics

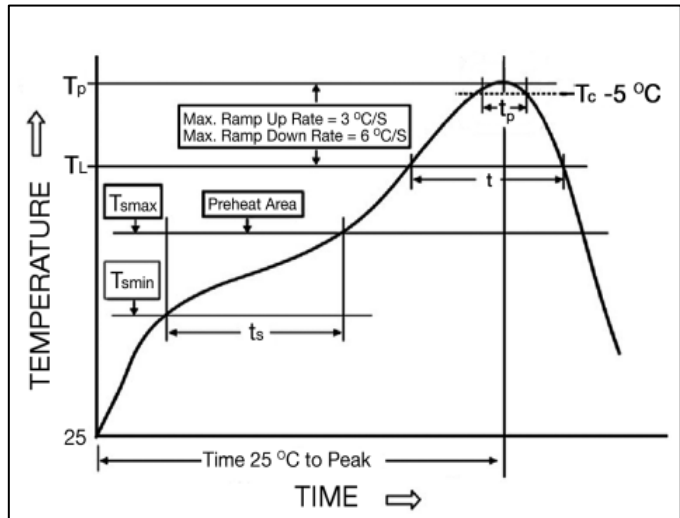
### Reflow Soldering

- Temperature: 260° C
- Time: 30 Seconds Maximum

### Manual Soldering (not recommended)

- Temperature: 350° C
- Time: 5 Seconds Maximum

Profile Feature	
<b>Preheat &amp; Soak</b>	
Temperature min ( $T_{smin}$ )	<b>Lead(Pb) free solder</b> 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 max
Time ( $t_p$ ) within 5°C of the specified classification temperature ( $T_c$ )	30 seconds
Average ramp-down rate( $T_p$ to $T_{smax}$ )	6°C / second max.
Time 25°C to peak temperature	8 minutes max.



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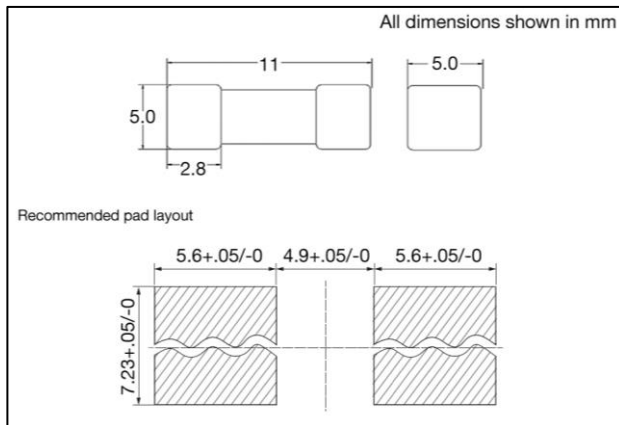
## Fuse FGNO Explanation

0ACG - [XXXX] -XX

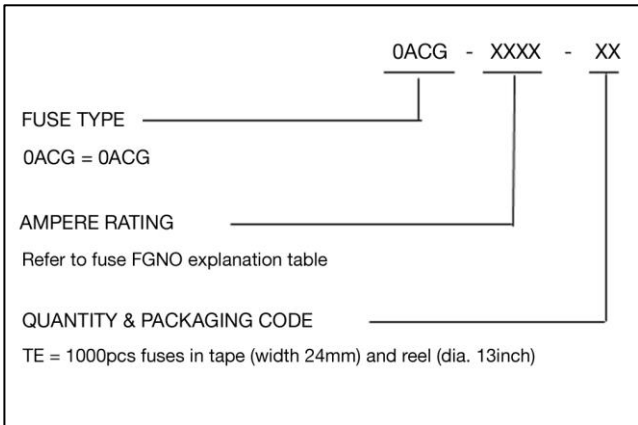
0ACG=0ACG; [XXXX]=Ampere Rating; XX=See Ordering Information as below

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

## Mechanical Dimensions



## Ordering Information



## Packaging

Packaging Option	Quantity	Packaging Code
Tape (width 24mm) and reel (dia. 13inch)	1000	TE