

# Type 0ACJ

## High Voltage DC, SMD Fuse

0ACJ 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
- MSL = 1
- RoHS compliant with exemption 7(a)  
Full compliance with EU Directive 2011/65/EU and amending directive 2015/863
- AEC-Q Compliant
- Meets Bel automotive qualification\*
- \* - Largely based on internal AEC-Q test plan



UK  
CA c CE  
**AEC-Q Compliant**

### Applications

- Battery Management Systems, (BMS)
- Li-ion Battery Packs
- DC-DC Converters
- Uninterruptible Power Supply (UPS) - Single phase and 3-Phase
- 380VDC server / lighting in data center

### Physical Specifications

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

### Electrical Characteristics

% of Ampere Rating (A)	Opening Time	
	Min	Max
100%	4 hour	-
200%	-	120 sec

### Safety Agency Approvals

Safety Agency	Ampere Rating / Voltage Rating	Ampere Range / Volt @ I.R. ability**
	1-3.15A/600V DC /400V DC /350V AC	1-3.15A/600V @ 100A DC /400V @ 200A DC /350V @ 100A AC
	4-5A/500V DC /400V DC /350V AC	4-5A/500V @ 100A DC /400V @ 200A DC /350V @ 100A AC
	6-7.5A/400V DC /350V AC	6-7.5A/400V @ 200A 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

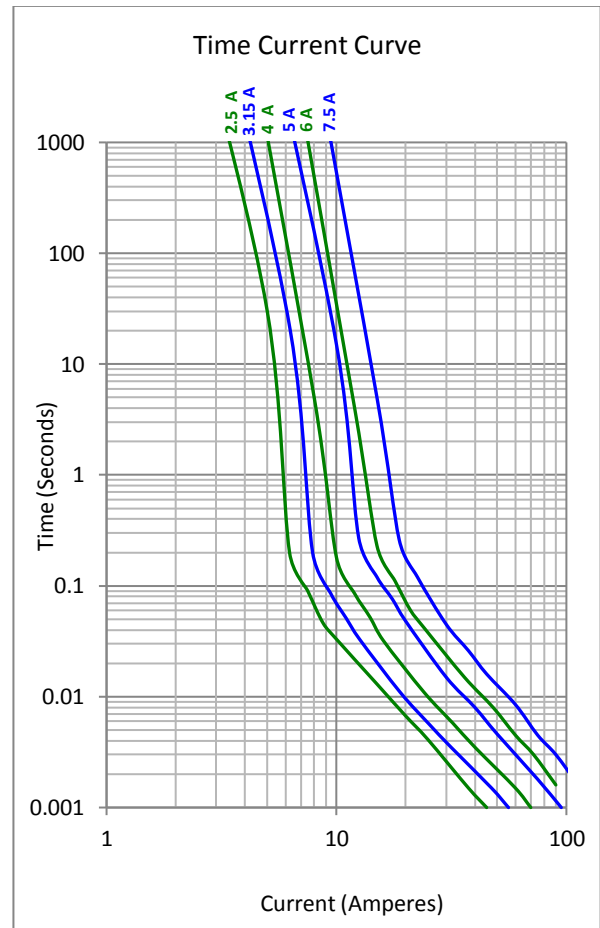
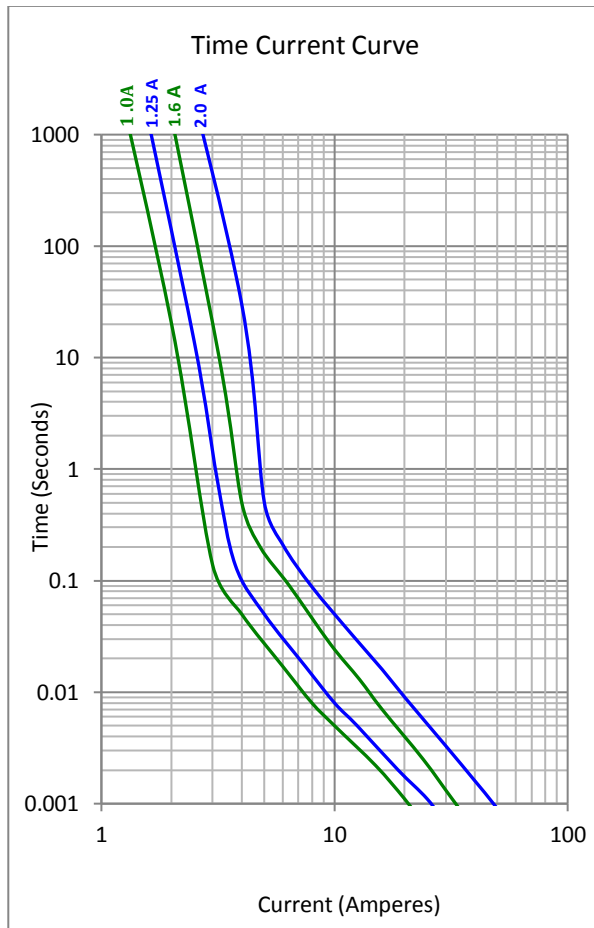
Part Number	Ampere Rating	Alpha Mark	Voltage and Interrupting Ratings	Typical Cold Resistance (mohms)**	Typical Voltage Drop (mV)	Typical Pre-Arcing I <sup>2</sup> t (A <sup>2</sup> Sec)***
0ACJ-1000-XX	1A	1	See Table of Ratings on Page 1 for Voltage and associated Interrupting Ratings	252	335	0.50
0ACJ-1250-XX	1.25A	1.25		192	325	0.95
0ACJ-1600-XX	1.6A	1.6		116	230	2.3
0ACJ-2000-XX	2A	2		93	255	4.1
0ACJ-2500-XX	2.5A	2.5		51	174	2.6
0ACJ-3150-XX	3.15A	3.15		39	165	3.0
0ACJ-4000-XX	4A	4		31	175	5.5
0ACJ-5000-XX	5A	5		20	155	11.5
0ACJ-6000-XX	6A	6		16.3	155	15
0ACJ-7500-XX	7.5A	7.5		13.5	165	25

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.

## Time Current Curve



Specifications subject to change without notice

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

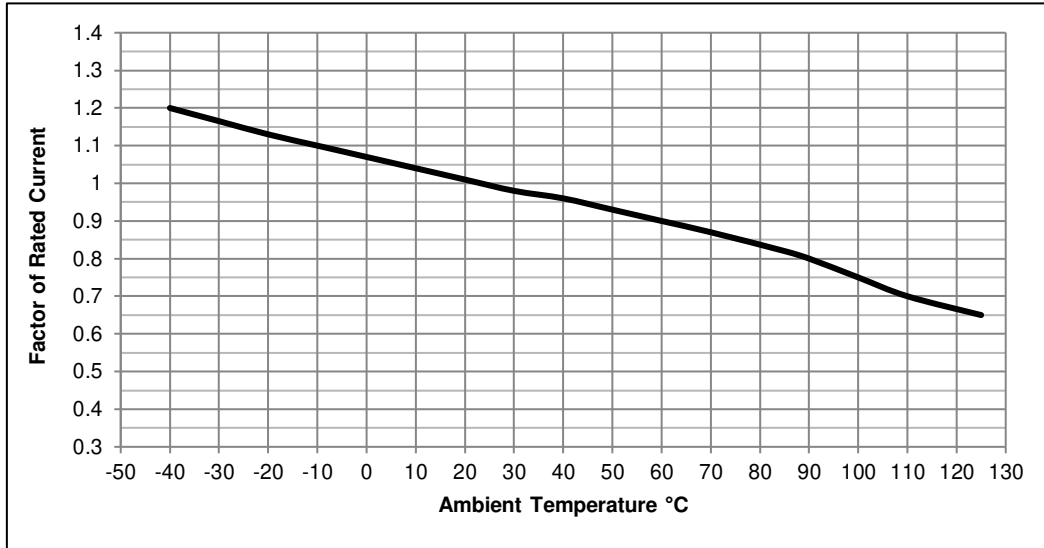
+1 201.432.0463  
Bel.US.CS@belf.com  
[belfuse.com/circuit-protection](http://belfuse.com/circuit-protection)

## Temperature derating curve

Normal Operating Temperature:  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

Operating Temperature:  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$  with proper correction factor applied.

Chart of correction factor



## Soldering Characteristics

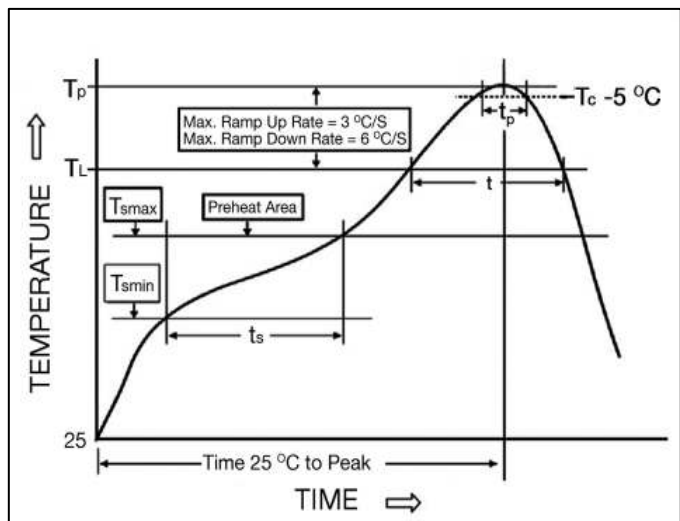
Reflow Soldering

- Temperature:  $260^{\circ}\text{C}$
- Time: 30 Seconds Maximum

Manual Soldering (not recommended)

- Temperature:  $350^{\circ}\text{C}$
- Time: 5 Seconds Maximum

Profile Feature	
<p><b>Preheat &amp; Soak</b></p> <p>Temperature min (<math>T_{smin}</math>)</p> <p>Temperature max (<math>T_{smax}</math>)</p> <p>Time (<math>T_{smin}</math> to <math>T_{smax}</math>) (<math>t_s</math>)</p>	<p><b>Lead(Pb) free solder</b></p> <p><math>150^{\circ}\text{C}</math></p> <p><math>200^{\circ}\text{C}</math></p> <p>60-120 seconds</p>
Average ramp-up rate( $T_{smax}$ to $T_p$ )	$3^{\circ}\text{C} / \text{second max.}$
Liquidous temperature( $T_L$ )	$217^{\circ}\text{C}$
Time at liquidous ( $t_L$ )	60 – 150 seconds
Peak package body temperature ( $T_p$ )	$260^{\circ}\text{C}$
Time ( $t_p$ ) within $5^{\circ}\text{C}$ of the specified classification temperature ( $T_c$ )	30 seconds
Average ramp-down rate( $T_p$ to $T_{smax}$ )	$6^{\circ}\text{C} / \text{second max.}$
Time $25^{\circ}\text{C}$ to peak temperature	8 minutes max.



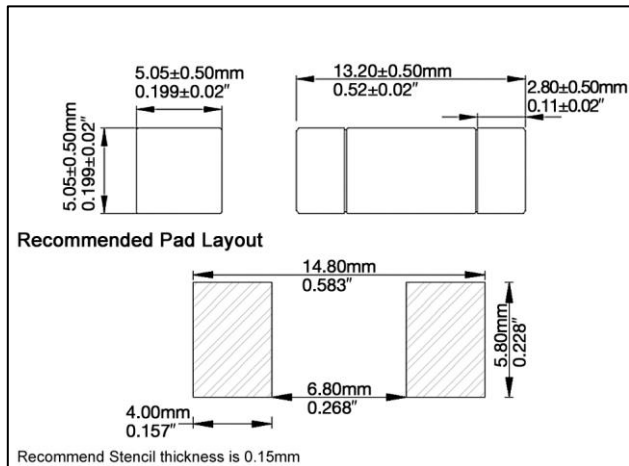
## Fuse FGNO Explanation

0ACJ - [XXXX] -XX

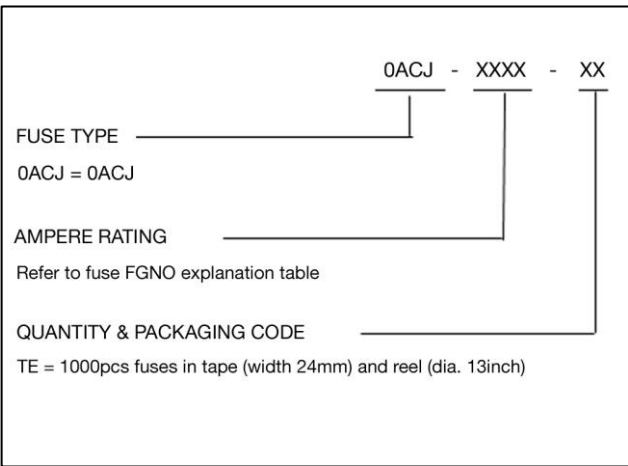
0ACJ=0ACJ; [XXXX]=Ampere Rating; XX=See Ordering Information as below

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
	6.0	6	6000
	7.5	7.5	7500

## Mechanical Dimensions



## Ordering Information



## Packaging

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