

RoHS

**bel**

3AG Apr2013D

**Type 3AG / 3AP**  
**Fast Blow Fuse Series**

6 x 32 mm Glass Tube  
RoHS 6 Compliant

HF **Pb** 3AG / 3AP Series, 6 x 32mm Fast Blow Fuse



**Description**

6x32mm Fast Blow, glass tube body cartridge fuse designed, approved and complied with UL and CSA standard 248-14.

**Features**

- Meet UL and CSA standard 248-14
- Wide operating temperature range
- Bulk and Tape & Reel packing available
- RoHS6 compliant
- Halogen Free
- Leadfree

**Applications**

Provide individual protection for components or internal circuits.

- Power Supplies
- Battery charger
- Monitor
- Adapter

LEAD FREE = **Pb**

HALOGEN FREE = **HF**

**Electrical Characteristics (UL / CSA STD.248-14)**

Testing current	Blow Time	
	Minimum	Maximum
100%	4 Hrs.	N/A
135%	N/A	1 Hr
200%	N/A	5 sec

**Safety Agency Approvals**

SAFETY AGENCY	SAFETY AGENCY CERTIFICATE NUMBER	AMPERE RANGE / VOLT @ I.R.ABILITY
	E20624	100mA - 10A / 250V AC @200A 100mA - 15A / 125V AC @10,000A
	LR39772	
	JET 1037-31003-1010 JET 1037-31003-1011	1A - 5A / 125V AC @500A
	JET 1037-31003-1007	>5A - 15A / 125V AC @300A
		100mA - 10A / 250V AC @200A 100mA - 15A / 125V AC @10,000A

Specifications subject to change without notice

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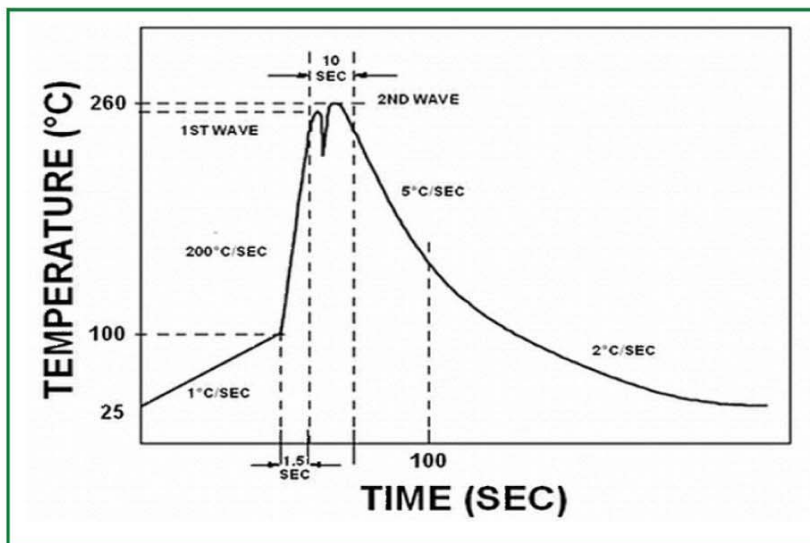
## Electrical Specifications

Catalog Number	Ampere Rating	Typical Cold Resistance (ohm)	Volt-drop @100% In (Volt) Max.	Voltage Rating (V)	Interrupting Rating	Melting I <sup>2</sup> T <10 m Sec (A <sup>2</sup> Sec)	Melting I <sup>2</sup> T @ 10 In (A <sup>2</sup> Sec)	Maximum Power Dissipation (W)	Agency Approvals			
									UL US	SF	PS E	CE
3AG(3AP) 100-R	100mA	11.3	4.62	250	100mA - 10A / 250V AC @200A  100mA - 15A / 125V AC @10,000A	0.002	0.002	0.59	Y	Y		Y
3AG(3AP) 125-R	125mA	10.5	5.18	250		0.004	0.003	0.80	Y	Y		Y
3AG(3AP) 160-R	160mA	7.3	4.85	250		0.008	0.006	0.94	Y	Y		Y
3AG(3AP) 200-R	200mA	5.0	4.38	250		0.014	0.010	1.10	Y	Y		Y
3AG(3AP) 250-R	250mA	3.4	4.05	250		0.025	0.019	1.29	Y	Y		Y
3AG(3AP) 300-R	300mA	2.5	3.54	250		0.044	0.034	1.51	Y	Y		Y
3AG(3AP) 375-R	375mA	1.86	3.35	250		0.071	0.055	1.64	Y	Y		Y
3AG(3AP) 400-R	400mA	1.32	3.22	250		0.08	0.08	1.71	Y	Y		Y
3AG(3AP) 500-R	500mA	1.19	3.17	250		0.14	0.11	1.88	Y	Y		Y
3AG(3AP) 750-R	750mA	0.66	2.54	250		0.19	0.17	2.15	Y	Y		Y
3AG(3AP) 1-R	1A	0.155	0.28	250		1.4	1.4	0.37	Y	Y	Y	Y
3AG(3AP) 1.25-R	1.25A	0.114	0.27	250		2.4	2.5	0.44	Y	Y	Y	Y
3AG(3AP) 1.6-R	1.6A	0.085	0.27	250		4.2	4.4	0.51	Y	Y	Y	Y
3AG(3AP) 2-R	2A	0.057	0.22	250		7.2	7.6	0.59	Y	Y	Y	Y
3AG(3AP) 2.5-R	2.5A	0.043	0.21	250		12	13	0.70	Y	Y	Y	Y
3AG(3AP) 3-R	3A	0.033	0.17	250		21	23	0.83	Y	Y	Y	Y
3AG(3AP) 3.5-R	3.5A	0.027	0.18	250		28	31	0.91	Y	Y	Y	Y
3AG(3AP) 4-R	4A	0.024	0.17	250		36	40	1.00	Y	Y	Y	Y
3AG(3AP) 5-R	5A	0.018	0.16	250		63	70	1.20	Y	Y	Y	Y
3AG(3AP) 6-R	6A	0.014	0.15	250		107	123	1.40	Y	Y	Y	Y
3AG(3AP) 7-R	7A	0.012	0.16	250	141	162	1.60	Y	Y	Y	Y	
3AG(3AP) 8-R	8A	0.010	0.15	250	184	214	1.70	Y	Y	Y	Y	
3AG(3AP) 10-R	10A	0.008	0.13	250	316	372	2.00	Y	Y	Y	Y	
3AG(3AP) 12-R	12A	0.006	0.13	250	501	597	2.40		Y	Y	Y	
3AG(3AP) 15-R	15A	0.006	0.15	250	845	1023	2.80		Y	Y	Y	

Consult manufacturer for other ratings

## 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.



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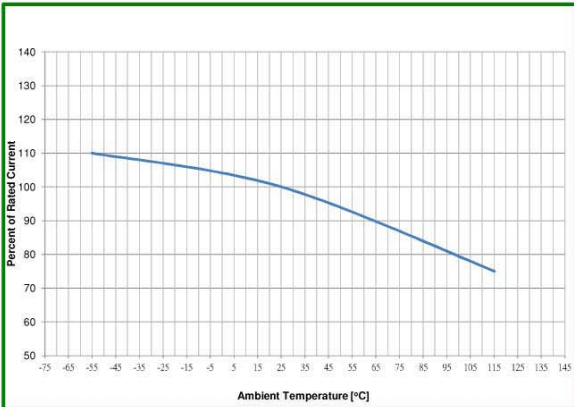
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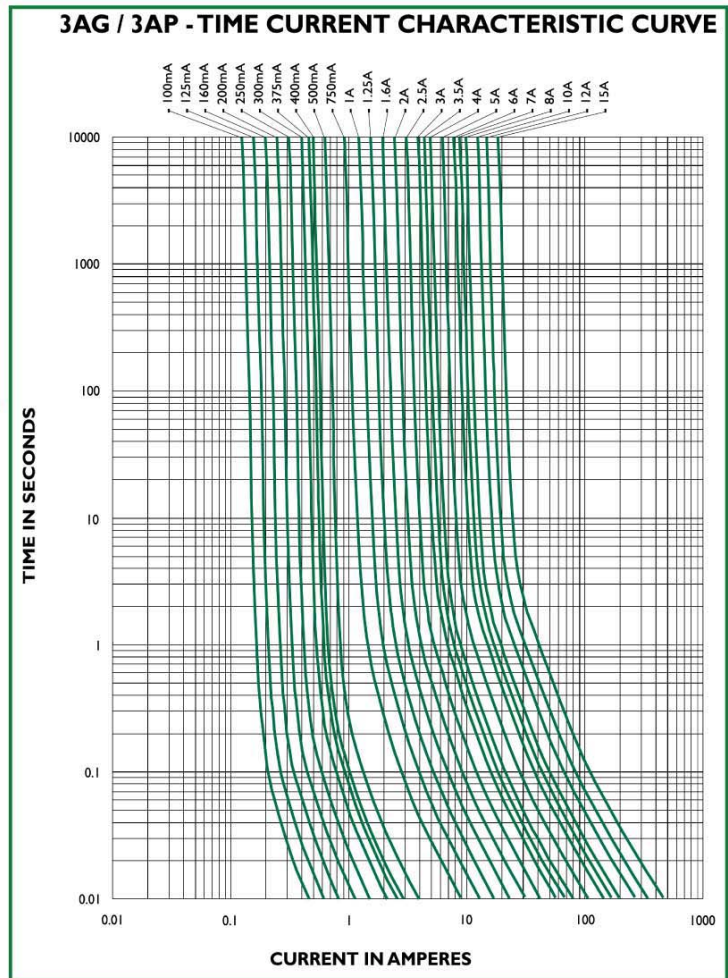
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Temperature Derating Curve



Average Time Current Curve



Environmental Specifications

<b>Shock Resistance</b>	MIL-STD-202G, Method 213B, Test Condition I (100 G's peak for 6 milliseconds; Sawtooth Waveform)
<b>Vibration Resistance</b>	MIL-STD-202G, Method 201A (10-55 Hz, 0.06 inch, total excursion).
<b>Salt Spray Resistance</b>	MIL-STD-202G, Method 101E, Test condition B (48 hrs).
<b>Insulation Resistance</b>	MIL-STD-202G, Method 302, Test Condition A (After Opening) 10,000 ohms minimum.
<b>Solderability</b>	MIL-STD-202G, Method 208H
<b>Resistance to solder Heat</b>	MIL-STD-202G Method 210F, Test Condition B. (260+/-5 °C, 10+/-1 sec)
<b>Thermal Shock</b>	MIL-STD-202G, Method 107G, Test Condition B (-65 °C to +125 °C).
<b>Operating Temperature</b>	-55 °C to +125 °C
<b>Terminal Strength</b>	IEC-68-2-21



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## Physical Specifications

<b>Materials</b>	Body : Glass
	Cap : Nickel Plated Brass Caps
	Leads: Matte Tin Plated Copper
<b>Marking</b>	On Fuse:
	"bel", "3AG", "Current Rating", "Voltage Rating",
	"Appropriate Safety Logos", " (RoHS 6 compliant)
	On label:
	"bel", "3AG", or "3AP", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and " (China RoHS compliant).

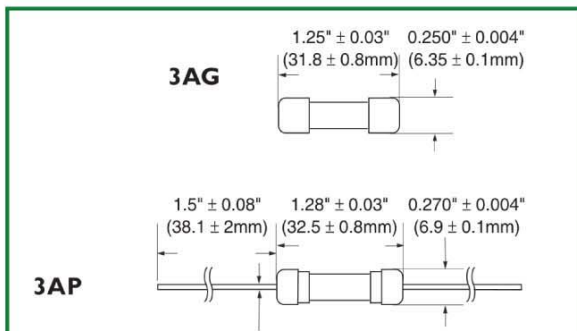
## Fuse FGNO Explanation

06XX-XXXXX-XX, [XXXX]=Ampere Rating

Fraction	Decimal	Milliamps	Bel FGNO[XXXX]
1/32	.032	32	0032
1/25	.040	40	0040
1/20	.050	50	0050
1/16	.063	63	0063
8/100	.080	80	0080
1/10	.100	100	0100
1/8	.125	125	0125
15/100	.150	150	0150
	.160	160	0160
2/10	.200	200	0200
1/4	.250	250	0250
3/10	.300	300	0300
	.315	315	0315
3/8	.375	375	0375
4/10	.400	400	0400
1/2	.500	500	0500
6/10	.600	600	0600
	.630	630	0630
7/10	.700	700	0700
3/4	.750	750	0750
8/10	.800	800	0800

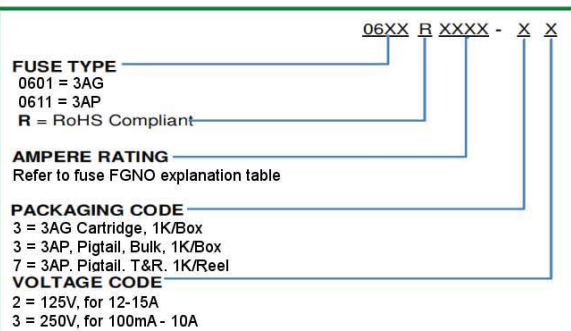
Fraction	Decimal	Amps	Bel FGNO[XXXX]
	1.0	1	1000
1-1/4	1.25	1.25	1250
1-1/2	1.50	1.5	1500
	1.60	1.6	1600
	2.0	2	2000
2-1/4	2.25	2.25	2250
2-1/2	2.5	2.5	2500
	3.0	3	3000
	3.15	3.15	3150
3-1/2	3.5	3.5	3500
	4.0	4	4000
	5.0	5	5000
	6.0	6	6000
	6.3	6.3	6300
	7.0	7	7000
7-1/2	7.5	7.5	7500
	8.0	8	8000
		10	9100
		12	9120
		15	9150
		20	9200
		25	9250
		30	9300

## Mechanical Dimensions



\* Ratings 7A and less have 0.032" diameter lead;  
Ratings 8A and above have 0.040" diameter lead.

## Ordering Information



Specifications subject to change without notice

## Packaging

Packaging Option	Packaging Specification	Quantity	Packaging Code	Inside Tape Spacing
Bulk	N/A	1000	33 / 32	N/A
Bulk (Pigtail Type)	N/A	1000	33 / 32	N/A
Tape & Reel, 10 mm Pitch	EIA-296-F	1000	73 / 72	73

## CORPORATE OFFICE

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