

RoHS

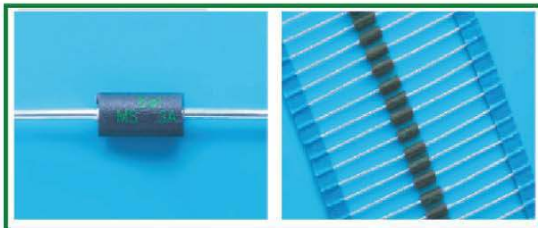
# bel

MS Apr2013D

## Type MS Slow Blow Micro Fuse

3 X 7 mm Size  
RoHS Compliant

**HF** MS Series Fuse



### Features

- Slow Blow Fuse
- Small size 3 x7 mm
- Wide range of current rating from 100mA to 15A
- Wide operating temperature range
- RoHS compliant
- Halogen Free

### Applications

- Notebook
- LCD monitor
- PC computer
- Office electronic equipment
- Industrial equipment
- Medical equipment
- POE, POE+
- LCD / LED monitor
- Power supply
- LCD / LED TV

HALOGEN FREE = **HF**

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

Testing current	Blow Time	
	Minimum	Maximum
100%	4 Hrs.	N/A
200%	N/A	30 Sec

### Safety Agency Approvals

SAFETY AGENCY	SAFETY AGENCY CERTIFICATE	AMPERE RANGE / VOLT @ I.R.ABILITY
	LR39772	250mA - 7A / 125V @50A AC;300A DC
	E20624	

Specifications Subject to change without notice.

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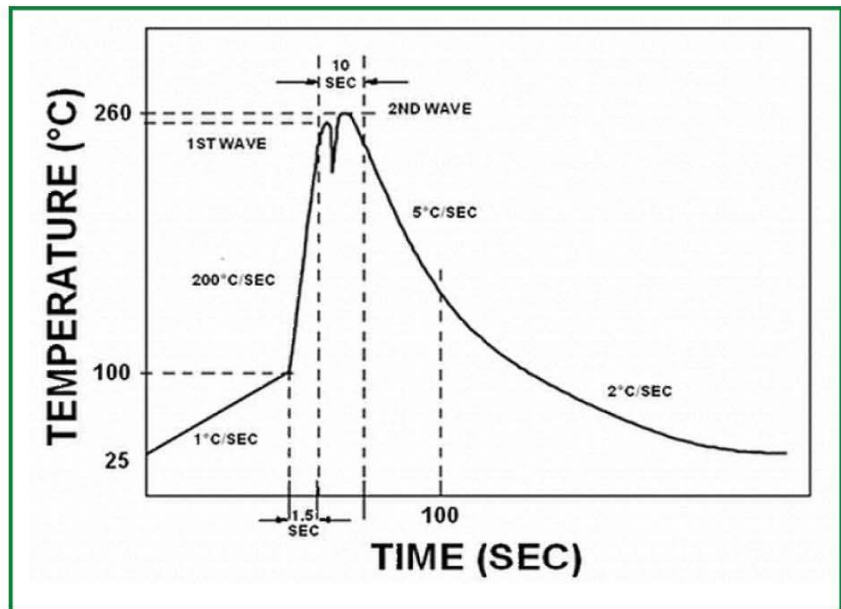
### Electrical Specifications

Catalog Number	Ampere Rating	Typical Cold Resistance (ohm)	Volt-drop @100% In (volt) Max.	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		
MS 250	250mA	3.20	2.30	125	250mA - 7A / 125V @50A AC;300A DC	0.047	0.042	0.80	Y	Y	Y
MS 300	300mA	2.44	2.10	125		0.063	0.056	0.82	Y	Y	Y
MS 375	375mA	1.66	2.00	125		0.111	0.101	0.85	Y	Y	Y
MS 500	500mA	0.99	1.80	125		0.20	0.18	0.88	Y	Y	Y
MS 750	750mA	0.550	1.40	125		0.46	0.44	0.94	Y	Y	Y
MS 1	1 A	0.338	1.30	125		0.81	0.78	0.98	Y	Y	Y
MS 1.25	1.25 A	0.259	1.30	125		1.44	1.41	1.01	Y	Y	Y
MS 1.5	1.5 A	0.172	1.00	125		1.9	1.9	1.03	Y	Y	Y
MS 2	2 A	0.105	0.70	125		3.4	3.4	1.08	Y	Y	Y
MS 2.5	2.5 A	0.073	0.66	125		6.0	6.1	1.12	Y	Y	Y
MS 3	3 A	0.056	0.53	125		8.0	8.1	1.14	Y	Y	Y
MS 3.5	3.5 A	0.046	0.46	125		10.6	10.9	1.17	Y	Y	Y
MS 4	4 A	0.041	0.42	125		14	15	1.19	Y	Y	Y
MS 5	5 A	0.020	0.26	125		33	35	1.26	Y	Y	Y
MS 7	7 A	0.011	0.20	125		59	63	1.31	Y	Y	Y

Consult manufacturer for other ratings

### Soldering Parameters

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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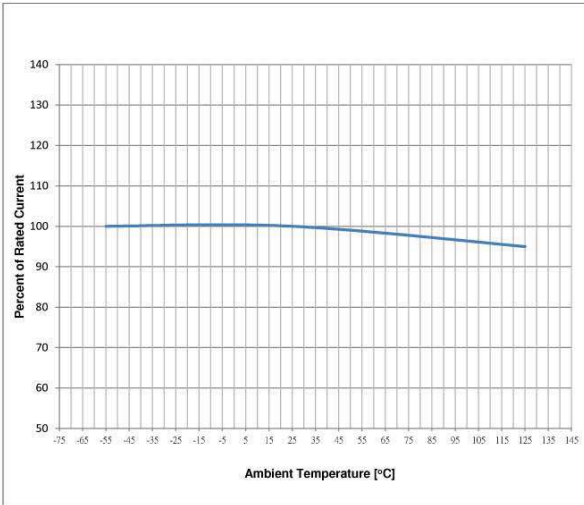
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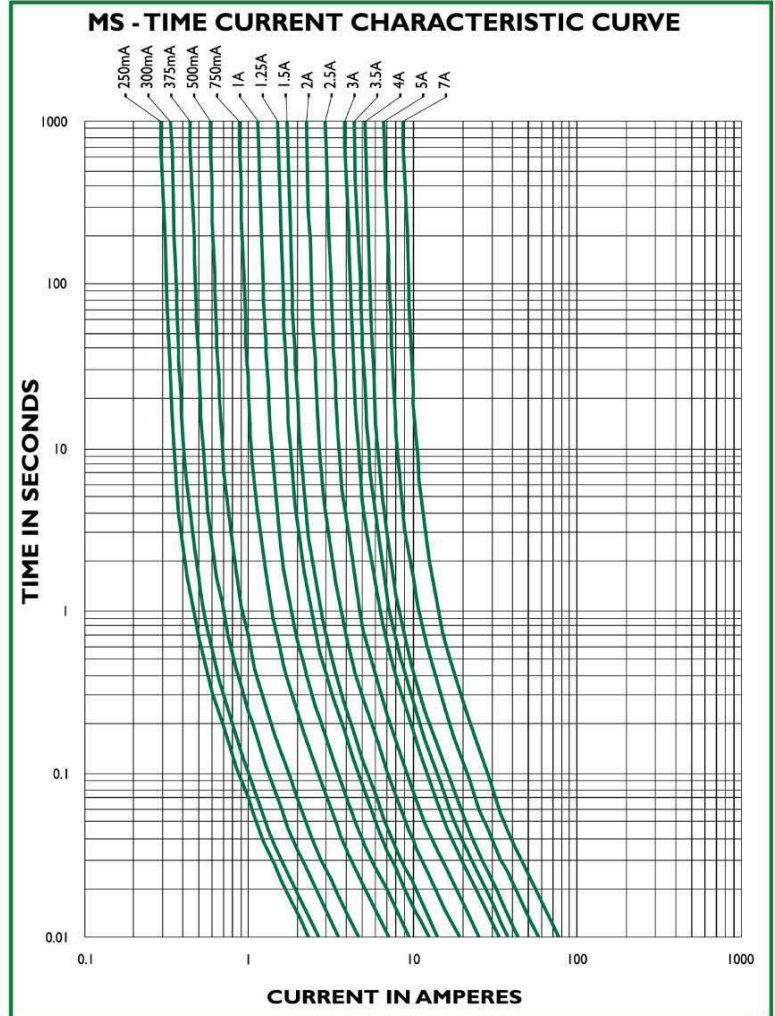
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### Temperature Derating Curve



### 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°C, 10 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>Moisture Resistance</b>	MIL-STD-202F, Method 106G



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### Physical Specifications

<b>Materials</b>	Body : Molded with UL Recognized epoxy component plastic,UL 94-V0
	Lead Wire: Matte tin plated copper
<b>Marking</b>	On Fuse:
	"bel", "MS", "Current Rating", "125V" printed in green color
	On label:
	"bel", "MS", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and "  "  " (China RoHS compliant).

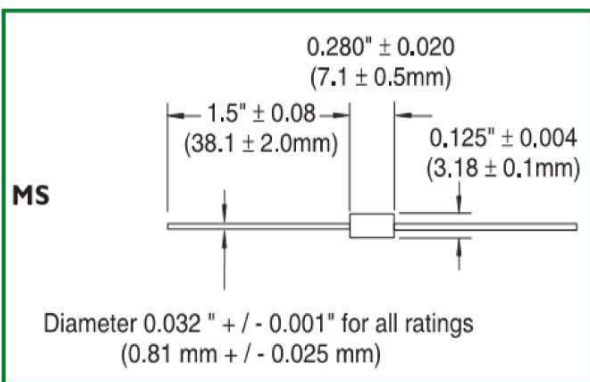
### Fuse FGNO Explanation

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

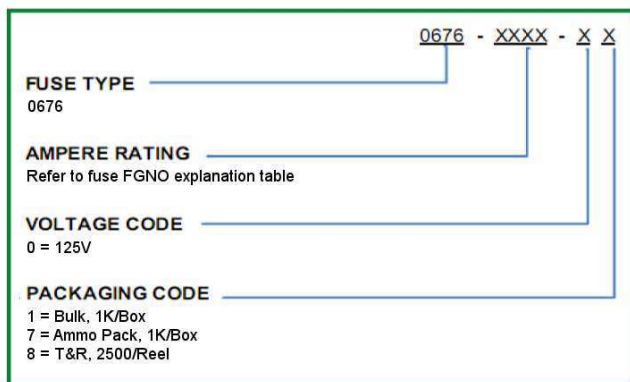
Fraction	Decimal	Milliamps	Bel FGNO[XXXX]
1/32	0.032	32	0032
1/25	.040	40	0040
1/20	.050	50	0050
1/16	.063	63	0063
8/100	.080	80	0080
1/10	.100	100	0100
1/8	.125	125	0125
15/100	.150	150	0150
	.160	160	0160
2/10	.200	200	0200
1/4	.250	250	0250
3/10	.300	300	0300
	.315	315	0315
3/8	.375	375	0375
4/10	.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



### Ordering Information



### Packaging

Packaging Option	Packaging Specification	Quantity	Packaging Code	Inside Tape Spacing
Bulk	N/A	1000	01	N/A
Bulk (Amon Package)	N/A	1000	07	N/A
Tape & Reel, 5 mm Pitch	EIA-296-F	2500	08	53

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### CORPORATE OFFICE

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