

Type C1S



Surface Mount Slow Blow Chip Fuse

1206 Size
RoHS 6 Compliant

C1S Series Fuse



Features

- Slow Blow
- Small size, 1206 SMD
- Current rating from 750mA to 5A
- Wide operating temperature range from -55°C to 125°C
- Tape and Reel for automatic SMD placement
- Compatible with reflow and wave soldering
- RoHS6 compliant
- Halogen Free 
- Leadfree 

Applications

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

HALOGEN FREE = LEAD FREE = 

Electrical Characteristics (UL STD.248-14)

| Testing current | Blow Time | |
|-----------------|-----------|----------|
| | Minimum | Maximum |
| 100% | 4 hrs. | N/A |
| 200% | 1 sec | 120 sec |
| 300% | 0.1 sec | 3 sec |
| 800% | 0.002 sec | 0.05 sec |

Safety Agency Approvals

| SAFETY AGENCY | SAFETY AGENCY CERTIFICATE | AMPERE RANGE / VOLT @ I.R.ABILITY |
|---|---------------------------|-----------------------------------|
|  | E20624 | 750mA - 5A / 63V AC & DC @ 50A |
|  | | |

Environmental Specifications

| | |
|----------------------------------|---|
| Shock Resistance | MIL-STD-202G, Method 213B, Test Condition I (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) MIL-STD-202G Method 210F, Test Condition D. Bottom Side (260 °C, 10 sec) |
| Thermal Shock | MIL-STD-202G, Method 107G, Test Condition B (-65 °C to +125 °C). |
| Operating Temperature | -55 °C to +125 °C |

Specifications Subject to change without notice.

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HF (Pb)

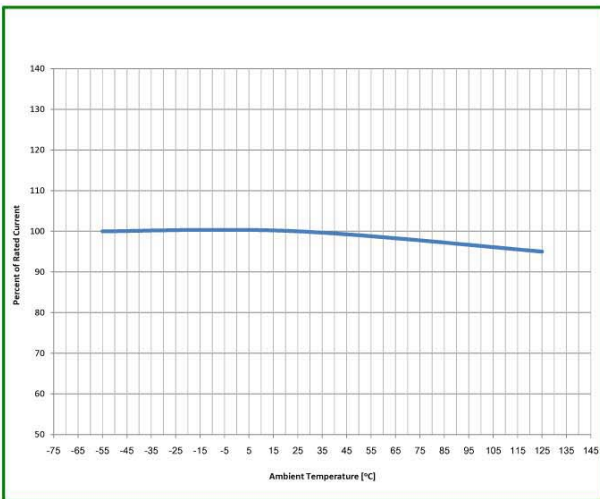
bel

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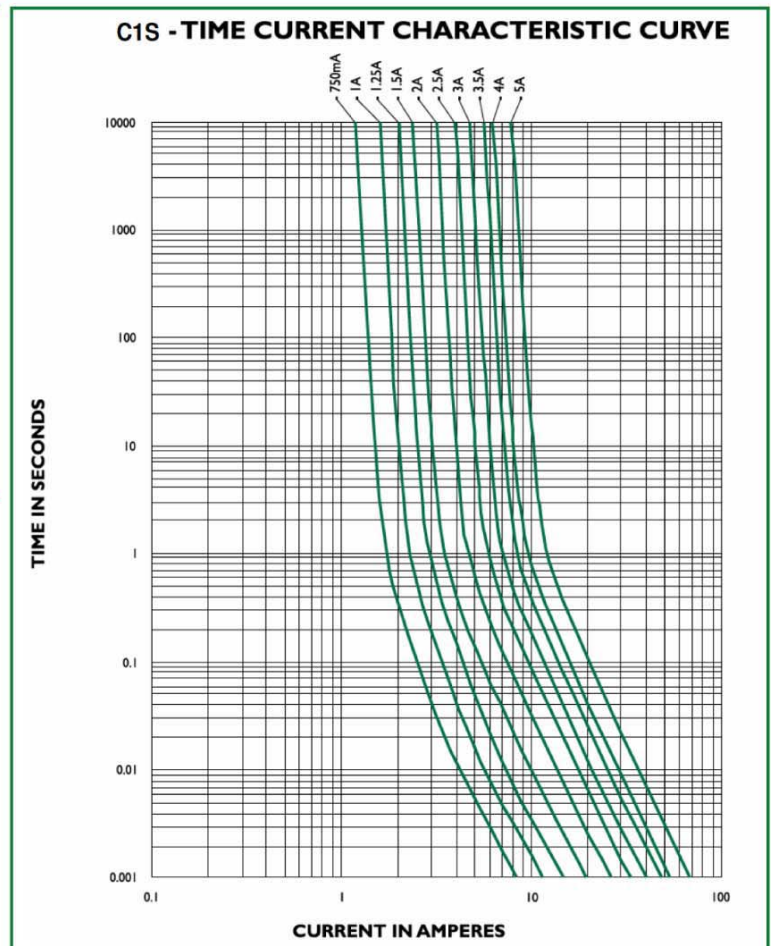
Electrical Specifications

| Catalog Number | Ampere Rating (A) | Nominal Cold Resistance (ohm) | Nominal Volt-drop @100% In (volt) | Interrupting Rating | Max. Voltage Rating (V) | Melting I ² T @ 10 In (A ² Sec) | Nominal Power Dissipation @100% In (W) | Agency Approvals | |
|----------------|-------------------|-------------------------------|-----------------------------------|--------------------------------|-------------------------|---|--|------------------|----|
| | | | | | | | | UL | CE |
| C1S 750 | 750mA | 0.350 | 0.333 | 750mA - 5A / 63V AC & DC @ 50A | 63 | 0.07 | 0.25 | Y | Y |
| C1S 1 | 1A | 0.285 | 0.349 | | 63 | 0.12 | 0.35 | Y | Y |
| C1S 1.25 | 1.25A | 0.225 | 0.346 | | 63 | 0.18 | 0.43 | Y | Y |
| C1S 1.5 | 1.5A | 0.182 | 0.348 | | 63 | 0.27 | 0.52 | Y | Y |
| C1S 2 | 2A | 0.105 | 0.254 | | 63 | 0.50 | 0.51 | Y | Y |
| C1S 2.5 | 2.5A | 0.072 | 0.221 | | 63 | 0.75 | 0.55 | Y | Y |
| C1S 3 | 3A | 0.050 | 0.182 | | 63 | 1.12 | 0.55 | Y | Y |
| C1S 3.5 | 3.5A | 0.040 | 0.171 | | 63 | 1.69 | 0.60 | Y | Y |
| C1S 4 | 4A | 0.032 | 0.160 | | 63 | 2.07 | 0.64 | Y | Y |
| C1S 5 | 5A | 0.022 | 0.140 | | 63 | 3.10 | 0.70 | Y | Y |

Temperature Derating Curve



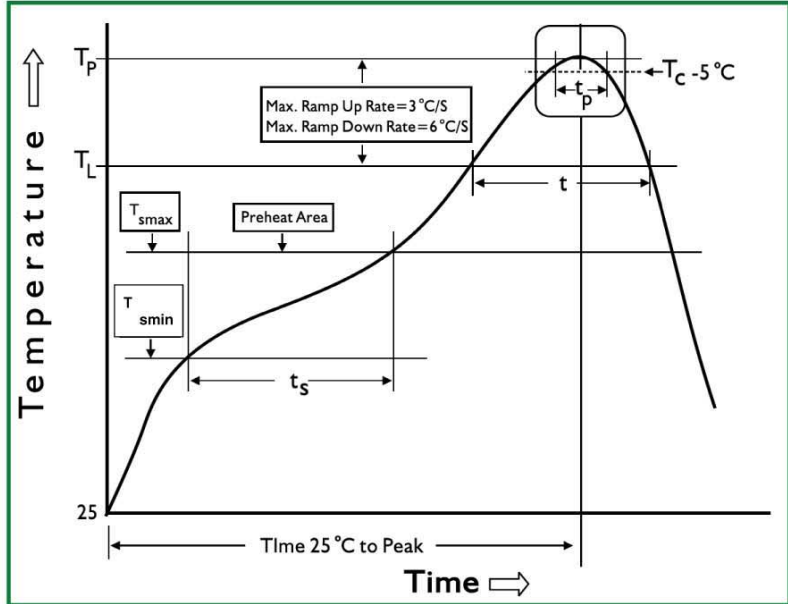
Average Time Current Curve



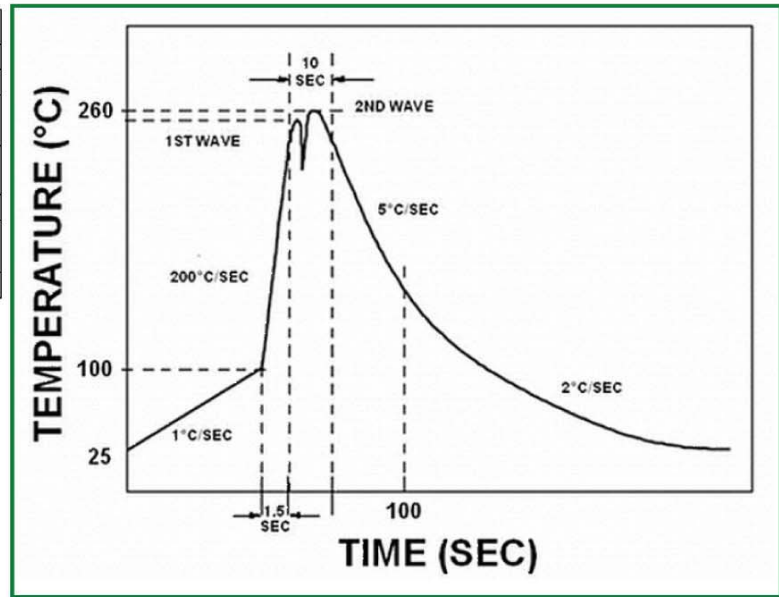
Specifications Subject to change without notice.

Soldering Parameters

| Lead-Free IR Reflow Profile (IPC/JEDEC J-STD-020D) | |
|--|----------------------|
| Reflow Parameter | |
| Minimum preheat temperature (TsMIN) | 150 °C |
| Maximum preheat temperature (TsMAX) | 200 °C |
| Preheat Time | 60-180 seconds |
| TsMAX to TL ramp-up rate | 3 °C/second max. |
| Time above temperature TL (tL) | 217°C 60-120 seconds |
| Peak Temperature (TP) | 260 °C max. |
| Time within 5° of Peak TP | 20-40 seconds |
| Ramp-down rate | 6 °C/second max. |



| 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 (TP) | 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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Physical Specifications

| | |
|------------------|--|
| Materials | Body : Ceramic Substrate |
| | Terminations: Ag / Ni / Sn (100% Lead -free) |
| | Element Cover Coating : Lead-free Glass |
| Marking | On Fuse: |
| | None |
| | On label: |

"bel", "C1S", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and " ", " " (China RoHS compliant).

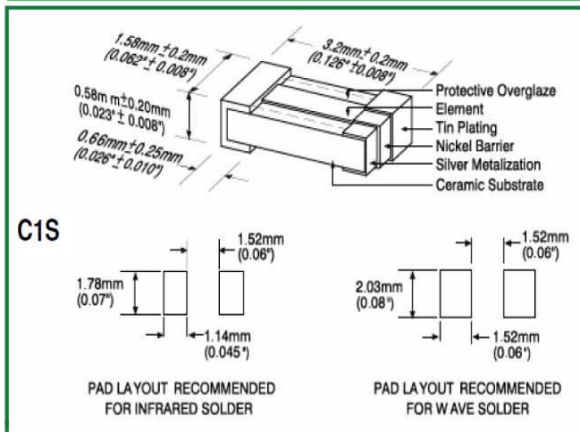
Fuse FGNO Explanation

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

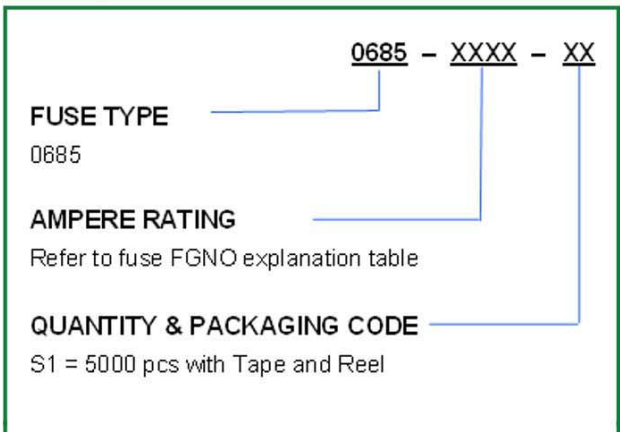
| Fraction | Decimal | Milliamps | Bel FGNO[XXXX] |
|----------|---------|-----------|----------------|
| 1/32 | 0.032 | 32 | 0032 |
| 1/25 | .040 | 40 | 0040 |
| 1/20 | .050 | 50 | 0050 |
| 1/16 | .063 | 63 | 0063 |
| 8/100 | .080 | 80 | 0080 |
| 1/10 | .100 | 100 | 0100 |
| 1/8 | .125 | 125 | 0125 |
| 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 Tape & Reel | Packaging Specification | Quantity | Quantity & Packaging Code |
|--|-------------------------|----------|---------------------------|
| 8 mm wide tape with 7 inches Diameter reel | EIA Standard 481-D | 5000 | 0685-XXXX-S1 |

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