

Type UMTS 250V UMF

Square Ceramic Surface Mount Time Lag Fuse

HF  UMTS Series – 4818 Size

RoHS 2 Compliant



Features

- Time lag
- 250VAC, Voltage Rating
- Wide range of current rating from 250mA to 6.3A
- Wide operating temperature range
- Tape & Reel for auto-insert SMD process
- RoHS 2 compliant
- Halogen Free
- Lead Free



Applications



- Lighting system
- LCD monitor
- Office electronic equipment
- Industrial equipment
- Medical equipment
- Power supply

LEAD FREE = 
HALOGEN FREE = 

Electrical Characteristics (Per IEC60127-4)



| Testing Current | Blow Time | |
|-----------------|-----------|---------|
| | Minimum | Maximum |
| 125% | 1 Hr. | N/A |
| 200% | N/A | 2 Min. |
| 1000% | 0.01 Sec | 0.1 Sec |

Safety Agency Approvals

| Safety Agency | Safety Agency Certificate | Voltage Rating (V) | Ampere Range / Volt @ I.R. ability* |
|---|--|--------------------------------|--|
|  | E315341 | 250mA–6.3A/250V AC /350V AC | 250mA-6.3A/250V @ 150A AC /350V @ 100A AC |
|  | R 50399509 Tested according to IEC60127- 1:2006+A1+A2 IEC 60127-7:2016 | 1.6A/250V AC /350V AC | 1.6A/250V @ 150A AC /350V @ 100A AC |

*I.R.= Interrupting Rating = Short Circuit Rating(Amps)



Physical Specifications

| | |
|-----------|--|
| Materials | Body : Ceramic |
| | Terminations : Brass Caps, gold plated with nickel undercoating |
| Marking | On Fuse : |
| | "bel", "T", "Current Rating", "L", "250V", in black color. |
| | On Label : |
| | "bel", "UMTS", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and "  ", "  " (China RoHS compliant). |

Environmental Specifications

| | |
|----------------------------|--|
| Shock Resistance | MIL-STD-202G, Method 213B, Test Condition 1 (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 B (After Opening) 0.1Mohms minimum. |
| Solderability | MIL-STD-202G, Method 208H |
| Resistance to solder Heat | MIL-STD-202G, Method 210F, Test Condition J. (235°C,30 sec) |
| Thermal Shock | MIL-STD-202G, Method 107G, Test Condition B (-65°C to +125°C). |
| Operating Temperature | -55°C to +125°C |
| Moisture Sensitivity Level | 1 (Peak Temperature at 240°C for 30 seconds max) |

Electrical Specifications

| Catalog Number | Ampere Rating | Typical Cold Resistance (ohms) | Volt-drop @100% In (Volt) max. | Voltage and Interrupting Ratings | Melting I ² T @ 10 In (A ² Sec) | Maximum Power Dissipation (W) | Agency Approvals | |
|----------------|---------------|--------------------------------|--------------------------------|---|---|-------------------------------|--|--|
| | | | | | | |  |  |
| UMTS 250 | 250mA | 0.78 | 0.314 | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | 0.26 | 0.12 | Y | |
| UMTS 315 | 315mA | 0.56 | 0.279 | | 0.42 | 0.14 | Y | |
| UMTS 400 | 400mA | 0.35 | 0.248 | | 0.67 | 0.16 | Y | |
| UMTS 500 | 500mA | 0.245 | 0.221 | | 1.1 | 0.19 | Y | |
| UMTS 630 | 630mA | 0.180 | 0.197 | | 1.7 | 0.21 | Y | |
| UMTS 800 | 800mA | 0.132 | 0.175 | | 2.8 | 0.25 | Y | |
| UMTS 1 | 1A | 0.085 | 0.156 | | 4.4 | 0.28 | Y | |
| UMTS 1.25 | 1.25A | 0.065 | 0.155 | | 7.0 | 0.33 | Y | |
| UMTS 1.6 | 1.6A | 0.061 | 0.150 | | 5.6 | 0.37 | Y | Y |
| UMTS 2 | 2A | 0.043 | 0.145 | | 9.2 | 0.43 | Y | |
| UMTS 2.5 | 2.5A | 0.035 | 0.140 | | 15 | 0.50 | Y | |
| UMTS 3.15 | 3.15A | 0.025 | 0.135 | | 25 | 0.57 | Y | |
| UMTS 4 | 4A | 0.020 | 0.130 | | 42 | 0.66 | Y | |
| UMTS 5 | 5A | 0.014 | 0.120 | | 69 | 0.75 | Y | |
| UMTS 6.3 | 6.3A | 0.011 | 0.115 | | 113 | 0.87 | Y | |

Consult manufacturer for other ratings

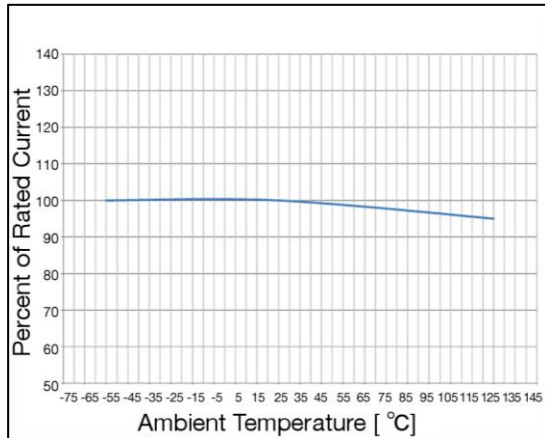


Specifications subject to change without notice

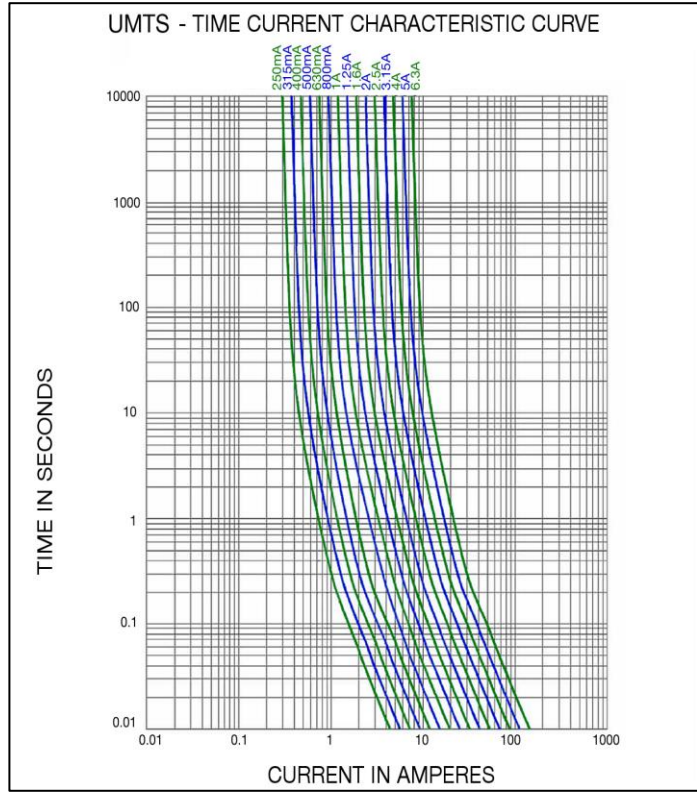
Bel Fuse Inc.
206 Van Vorst Street
Jersey City, NJ 07302 USA

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belfuse.com/circuit-protection

Temperature Derating Curve

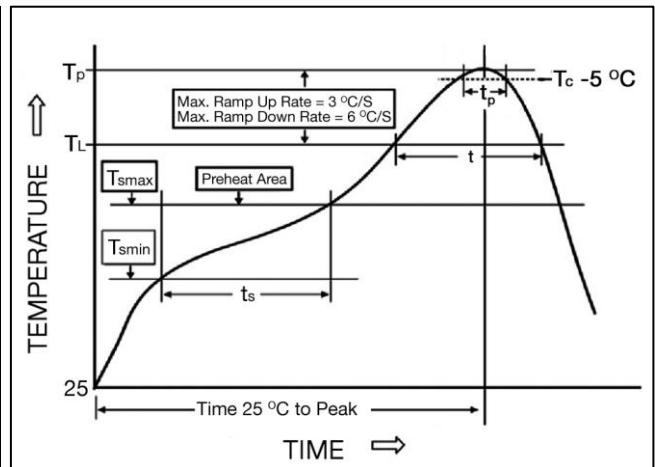


Average Time Current Curve



Soldering Parameters

| IR Reflow Profile | |
|---|------------------|
| Preheat & Soak | |
| Temperature min (T _{smin}) | 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 temperature (T _p) | 240°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. |



Soldering Guidelines

Reflow Conditions Recommended **240°C**, 30 sec. max.

NOT Recommended for Wave solder / Direct immersion / Hand Solder



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Fuse FGNO Explanation

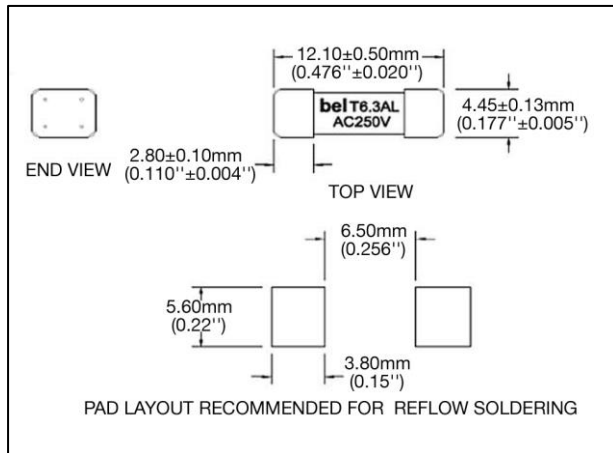
0683 - [XXXX] - XX

0683=UMTS; [XXXX]=Ampere Rating; XX=See Ordering Information as below

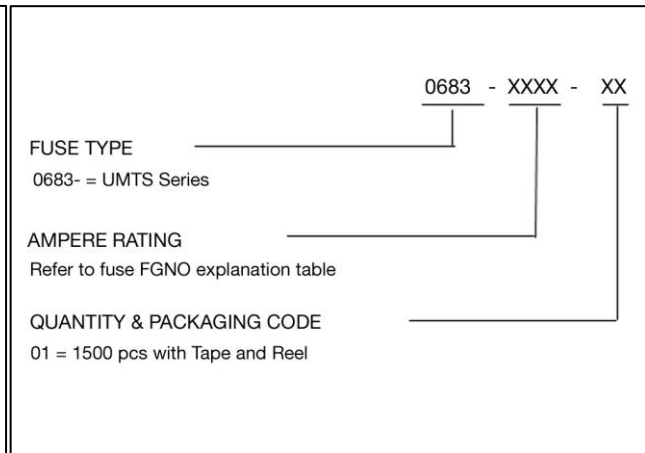
| Fraction | Decimal | Milliamps | Bel FGNO[XXXX] |
|----------|---------|-----------|----------------|
| 1/4 | 0.250 | 250 | 0250 |
| | .315 | 315 | 0315 |
| 4/10 | .400 | 400 | 0400 |
| 1/2 | .500 | 500 | 0500 |
| | .630 | 630 | 0630 |
| 8/10 | .800 | 800 | 0800 |
| | | | |
| | | | |
| | | | |

| Fraction | Decimal | Amps | Bel FGNO[XXXX] |
|----------|---------|------|----------------|
| | 1.0 | 1 | 1000 |
| 1-1/4 | 1.25 | 1.25 | 1250 |
| | 1.60 | 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 |
| | 6.3 | 6.3 | 6300 |

Mechanical Dimensions



Ordering Information



Packaging

| Packaging Tape & Reel | Packaging Specification | Quantity | Quantity & Packaging Code |
|--|-------------------------|----------|---------------------------|
| 24 mm wide tape with 13 inches Diameter reel | EIA Standard 481-E | 1500 | 01 |