

Type 0679L

Square Ceramic Surface Mount Quick Acting Fuse

HF 0679L Series - 2410 Size

RoHS 2 Compliant

Features

- Quick Acting, 2410 SMD
- Compatible with 260C, IR Pb-free solder process
- Wide range of current rating from 250mA to 20A
- Wide operating temperature range, -55C to 125C
- Tape & Reel for auto-insert SMD process
- RoHS2 compliant, with exemption 7a
- Halogen Free, (MSL = 1)

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 | 5 Sec |

Safety Agency Approvals

| SAFETY AGENCY | SAFETY AGENCY CERTIFICATE | VOLTAGE RATING (V) | AMPERE RANGE / VOLT @ I.R. ABILITY* |
|---------------|---------------------------|----------------------------------|---|
| | E20624 | 250mA - 20A / 125V AC 125V DC | 250mA - 20A / 125V @ 50A AC 125V @ 300A DC |

* I.R. = INTERRUPTING RATING = SHORT CIRCUIT RATING (AMPS)

Physical Specifications

| | |
|-----------|--|
| Materials | Body : Ceramic |
| | Terminations : Silver Plated Caps |
| Marking | On Fuse : |
| | "Current Rating", "Q", "L" "bel" stamped in end caps. |
| | On Label : |
| | "bel", "0679L", "Current Rating", "Voltage Rating", "Interrupting Rating", " Appropriate Safety Logos" and " ", " " (China RoHS compliant). |

Specifications subject to change without notice



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

+1 201.432.0463
techhelp@belf.com
belfuse.com

Type 0679L

Square Ceramic Surface Mount Quick Acting Fuse


HF 0679L Series - 2410 Size

RoHS 2 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 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 |
| Moisture Sensitivity Level | 1 (According to IPC J-Std-020) |

Electrical Specifications

| Part Number | Ampere Rating (A) | Typical Cold Resistance (ohm) | Volt-drop @100% In (Volt) max. | Voltage and Interrupting Ratings | Melting I ² T <10 m Sec (A ² Sec) | Melting I ² T @10 In (A ² Sec) | Maximum Power Dissipation (W) | Agency Approvals |
|--------------|-------------------|-------------------------------|--------------------------------|---|---|--|-------------------------------|--|
| | | | | | | | |  |
| 0679L0250-XX | 250mA | 0.61 | 0.530 | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | 0.01 | 0.02 | 0.13 | Y |
| 0679L0375XX | 375mA | 0.33 | 0.480 | | 0.04 | 0.04 | 0.18 | Y |
| 0679L0500-XX | 500mA | 0.24 | 0.470 | | 0.08 | 0.08 | 0.24 | Y |
| 0679L0630-XX | 630mA | 0.17 | 0.410 | | 0.15 | 0.15 | 0.26 | Y |
| 0679L0750-XX | 750mA | 0.14 | 0.380 | | 0.24 | 0.26 | 0.29 | Y |
| 0679L1000-XX | 1A | 0.09 | 0.280 | | 0.51 | 0.54 | 0.28 | Y |
| 0679L1250-XX | 1.25A | 0.072 | 0.250 | | 0.21 | 0.22 | 0.31 | Y |
| 0679L1500-XX | 1.5A | 0.058 | 0.250 | | 0.32 | 0.29 | 0.38 | Y |
| 0679L2000-XX | 2A | 0.041 | 0.240 | | 0.62 | 0.68 | 0.48 | Y |
| 0679L2500-XX | 2.5A | 0.032 | 0.240 | | 0.96 | 1.13 | 0.60 | Y |
| 0679L3000-XX | 3A | 0.026 | 0.220 | | 1.6 | 1.8 | 0.66 | Y |
| 0679L3500-XX | 3.5A | 0.022 | 0.220 | | 2.0 | 2.2 | 0.77 | Y |
| 0679L4000-XX | 4A | 0.020 | 0.220 | | 3.1 | 3.5 | 0.88 | Y |
| 0679L5000-XX | 5A | 0.014 | 0.200 | | 5.3 | 5.5 | 1.00 | Y |
| 0679L6300-XX | 6.3A | 0.011 | 0.190 | | 8.7 | 8.3 | 1.20 | Y |
| 0679L7000-XX | 7A | 0.010 | 0.175 | | 11.1 | 10.8 | 1.23 | Y |
| 0679L8000-XX | 8A | 0.0089 | 0.170 | | 14.8 | 14.1 | 1.36 | Y |
| 0679L9100-XX | 10A | 0.0066 | 0.150 | | 25.7 | 25.7 | 1.50 | Y |
| 0679L9120-XX | 12A | 0.0056 | 0.140 | | 41.0 | 38.9 | 1.68 | Y |
| 0679L9150-XX | 15A | 0.0038 | 0.130 | | 76.7 | 103.5 | 1.95 | Y |
| 0679L9200-XX | 20A | 0.0030 | 0.130 | 130.5 | 128.0 | 2.60 | Y | |

Consult manufacturer for other ratings
XX - Packaging code (See "ordering information")

NOTES:

All tests were conducted with the fuses soldered to a printed circuit boards with a nominal thickness of 1.6 mm. The copper test circuit trace was a printed circuit with an overall length of 100 mm, copper thickness/width as described below. The printed circuit boards were mounted by screws to a test fixture having brass blocks for connection of the test leads. All samples were soldered to the test boards by the manufacturer.

| Fuse rating | Test Board Trace Dimensions |
|--------------|-----------------------------|
| 250 mA – 5 A | 1 oz. copper, 5.0 mm wide |
| 6 A – 20 A | 3 oz. copper, 10 mm wide. |

Specifications subject to change without notice



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

+1 201.432.0463
techhelp@belf.com
belfuse.com

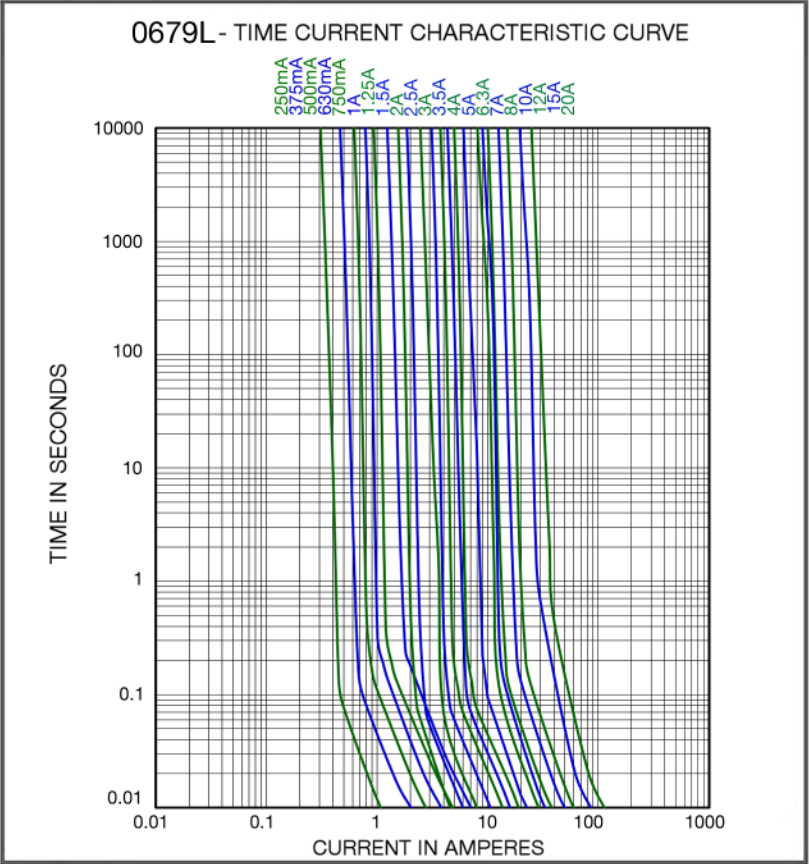
Type 0679L

Square Ceramic Surface Mount Quick Acting Fuse

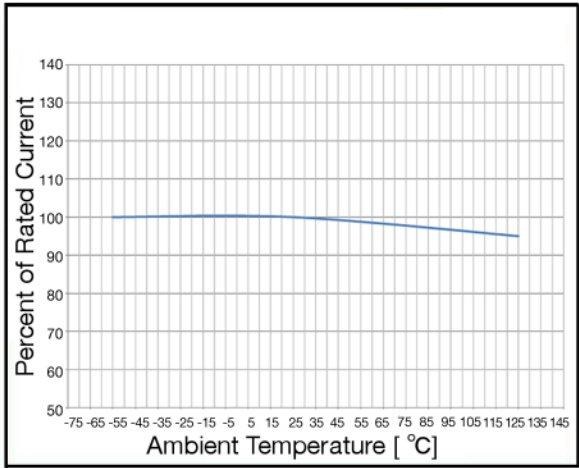
HF 0679L Series - 2410 Size

RoHS 2 Compliant

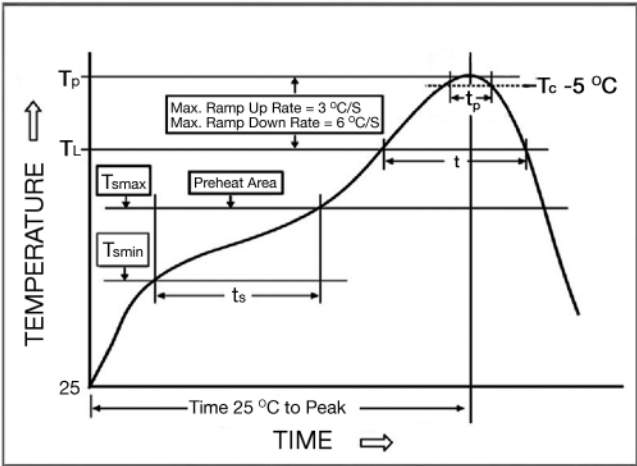
Average Time Current Curve



Temperature Derating Curve



| IR Reflow Profile (IPC/JEDEC J-STD-020D) | |
|--|------------------|
| 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) | 260 °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. |



Specifications subject to change without notice



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

+1 201.432.0463
techhelp@belf.com
belfuse.com

Type 0679L

Square Ceramic Surface Mount Quick Acting Fuse

HF 0679L Series - 2410 Size

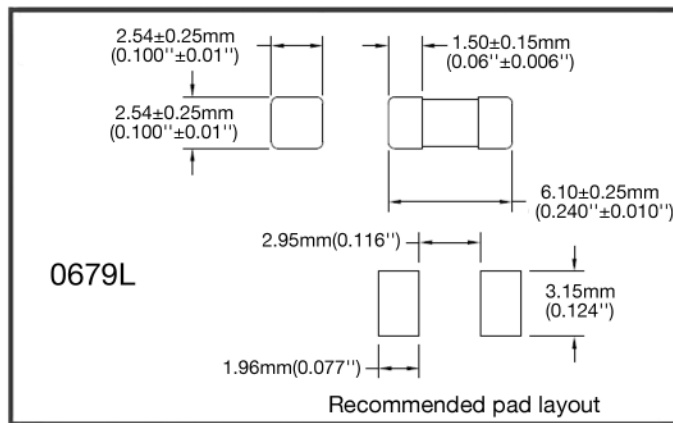
RoHS 2 Compliant

Fuse FGNO Explanation
06XX X [XXXX] X XX, [XXXX]=Ampere Rating

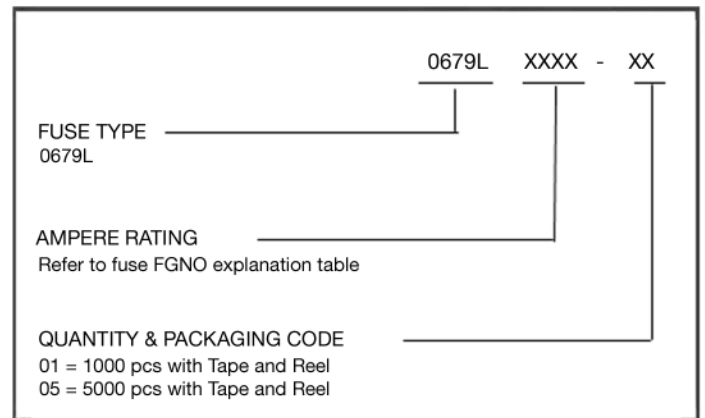
| Fraction | Decimal | Milliamps | Bel FGNO[XXXX] |
|----------|---------|-----------|----------------|
| 1/4 | 0.250 | 250 | 0250 |
| 3/8 | .375 | 375 | 0375 |
| 1/2 | .500 | 500 | 0500 |
| | .630 | 630 | 0630 |
| 3/4 | .750 | 750 | 0750 |

| 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 |
| | 2.0 | 2 | 2000 |
| 2-1/2 | 2.5 | 2.5 | 2500 |
| | 3.0 | 3 | 3000 |
| 3-1/2 | 3.5 | 3.5 | 3500 |
| | 4.0 | 4 | 4000 |
| | 5.0 | 5 | 5000 |
| | 6.3 | 6.3 | 6300 |
| | 7.0 | 7 | 7000 |
| | 8.0 | 8 | 8000 |
| | | 10 | 9100 |
| | | 12 | 9120 |
| | | 15 | 9150 |
| | | 20 | 9200 |

Mechanical Dimensions



Ordering Information



Packaging

| Packaging Tape & Reel | Packaging Specification | Quantity | Quantity & Packaging Code |
|--|-------------------------|----------|---------------------------|
| 12 mm wide tape with 13 inches Diameter reel | EIA Standard 481-E | 5000 | 05 |
| 12 mm wide tape with 7 inches Diameter reel | EIA Standard 481-E | 1000 | 01 |

Specifications subject to change without notice



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

+1 201.432.0463
techhelp@belf.com
belfuse.com