

# Type 0679H

## Square Ceramic Surface Mount Quick Acting Fuse

**HF** 0679H Series – 2410 Size

RoHS Compliant

### Features

- Quick Acting, 2410 SMD
- Compatible with 260°C, IR Pb-free solder process
- Wide range of current rating from 250mA to 15A
- Wide operating temperature range, -55°C to 125°C
- Tape & Reel for auto-insert SMD process
- AEC-Q Compliant
- Fully compliance with EU Directive 2011/65/EU and amending directive 2015/863, Compliant with exemption 7(a)
- Halogen Free, (MSL = 1)
- Meets Bel automotive qualification\*
- \* - Largely based on internal AEC-Q test plan

### Applications

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



**AEC-Q Compliant**

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   | Ampere Rating/ Voltage Rating                            | Ampere Range / Volt @ I.R. ability*   |
|---------------|---|--|---|
| <b>UL</b>     | E20624  | 250mA–3A/350V AC<br>72V DC<br>3.5A-15A/350V AC<br>60V DC | 250mA-3A/350V @ 50A AC<br>72V @100A DC<br>3.5A-5A/350V @50A AC<br>60V @150A DC<br>6.3A-15A/350V @50A-AC<br>60V @100A DC |
| <b>TÜV</b>    | R 50368185<br>Tested according to<br>IEC 60127-1:2006+A1+A2<br>IEC 60127-7:2015 | 250mA–3A/350V AC<br>72V DC<br>3.5A-15A/350V AC<br>60V DC | 250mA-3A/350V @ 50A AC<br>72V @100A DC<br>3.5A-5A/350V @50A AC<br>60V @150A DC<br>6.3A-15A/350V @50A-AC<br>60V @100A DC |

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

### Physical Specifications



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

Specifications subject to change without notice

## Environmental Specifications

|                            |   |                              |   |
|----------------------------|---|------------------------------|---|
| Shock Resistance           | MIL-STD-202G, Method 213B, Test Condition 1 (100 G's peak for 6 milliseconds; Sawtooth waveform)  | High temperature storage     | MIL-STD-202 Method 108  |
| Vibration Resistance       | MIL-STD-202G, Method 201A (10-55 Hz, 0.06 inch, total excursion).   | Temperature cycling          | JESD22 Method JA-104, Test Condition B                                    |
| Salt Spray Resistance      | MIL-STD-202G, Method 101E, Test Condition B (48 hrs.).  | Biased humidity              | MIL-STD-202 Method 103, 85C/85% RH with 10% operating power for 1000 hrs. |
| Insulation Resistance      | MIL-STD-202G, Method 302, Test Condition A (After Opening) 10,000 ohms minimum.   | Operational life             | MIL-STD-202 Method 108, Test Condition D                                  |
| Solderability              | MIL-STD-202G, Method 208H   | Resistance to solvents       | MIL-STD-202 Method 215  |
| Resistance to solder Heat  | MIL-STD-202G, Method 210F, Test Condition C. Top Side (260°C, 20 sec)<br>MIL-STD-202G, Method 210F, Test Condition D. Bottom Side (260°C, 10 sec) | Mechanical shock             | MIL-STD-202 Method 213, Test Condition C                                  |
| Thermal Shock              | MIL-STD-202G, Method 107G, Test Condition B (-65°C to +125°C).  | Vibration                    | MIL-STD-202 Method 204  |
| Operating Temperature      | -55°C to +125°C   | Resistance to soldering heat | MIL-STD-202 Method 210, Test condition B                                  |
| Moisture Sensitivity Level | 1 (According to IPC J-Std-020)  | Thermal shock                | MIL-STD-202 Method 107  |
|                            |   | Solderability                | J-STD-002   |
|                            |   | Board flex(SMD)              | AEC-Q200-005  |
|                            |   | Terminal strength            | AEC-Q200-006  |
|                            |   | Electrical characterization  | 3 temperature electrical  |

## Electrical Specifications

| Part Number  | Ampere Rating (A) | Typical Cold Resistance (ohms) | Volt-drop @100% In (Volt) max. | Voltage and Interrupting Ratings  | Melting PT <10m Sec (A² Sec) | Melting PT @10 In (A² Sec) | Maximum Power Dissipation (W) | Agency Approvals  |   |
|--------------|-------------------|--------------------------------|--------------------------------|---|------------------------------|----------------------------|-------------------------------|---|---|
|              |                   |                                |                                |   |                              |                            |                               |  |  |
| 0679H0250-XX | 250mA             | 0.55                           | 0.530                          | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | 0.01                         | 0.02                       | 0.13                          | Y   | Y   |
| 0679H0375-XX | 375mA             | 0.32                           | 0.480                          |   | 0.04                         | 0.04                       | 0.18                          | Y   | Y   |
| 0679H0500-XX | 500mA             | 0.22                           | 0.470                          |   | 0.08                         | 0.08                       | 0.24                          | Y   | Y   |
| 0679H0630-XX | 630mA             | 0.17                           | 0.410                          |   | 0.15                         | 0.15                       | 0.26                          | Y   | Y   |
| 0679H0750-XX | 750mA             | 0.14                           | 0.380                          |   | 0.24                         | 0.26                       | 0.29                          | Y   | Y   |
| 0679H1000-XX | 1A                | 0.09                           | 0.280                          |   | 0.51                         | 0.54                       | 0.28                          | Y   | Y   |
| 0679H1250-XX | 1.25A             | 0.068                          | 0.250                          |   | 0.21                         | 0.22                       | 0.31                          | Y   | Y   |
| 0679H1500-XX | 1.5A              | 0.053                          | 0.250                          |   | 0.32                         | 0.29                       | 0.38                          | Y   | Y   |
| 0679H2000-XX | 2A                | 0.035                          | 0.240                          |   | 0.62                         | 0.68                       | 0.48                          | Y   | Y   |
| 0679H2500-XX | 2.5A              | 0.028                          | 0.240                          |   | 0.96                         | 1.13                       | 0.60                          | Y   | Y   |
| 0679H3000-XX | 3A                | 0.022                          | 0.220                          |   | 1.6                          | 1.8                        | 0.66                          | Y   | Y   |
| 0679H3500-XX | 3.5A              | 0.019                          | 0.220                          |   | 2.0                          | 2.2                        | 0.77                          | Y   | Y   |
| 0679H4000-XX | 4A                | 0.018                          | 0.220                          |   | 3.1                          | 3.5                        | 0.88                          | Y   | Y   |
| 0679H5000-XX | 5A                | 0.014                          | 0.200                          |   | 5.3                          | 5.5                        | 1.00                          | Y   | Y   |
| 0679H6300-XX | 6.3A              | 0.011                          | 0.190                          |   | 8.7                          | 8.3                        | 1.20                          | Y   | Y   |
| 0679H7000-XX | 7A                | 0.010                          | 0.175                          |   | 11.1                         | 10.8                       | 1.23                          | Y   | Y   |
| 0679H8000-XX | 8A                | 0.0085                         | 0.170                          |   | 14.8                         | 14.1                       | 1.36                          | Y   | Y   |
| 0679H9100-XX | 10A               | 0.0064                         | 0.150                          |   | 25.7                         | 25.7                       | 1.50                          | Y   | Y   |
| 0679H9120-XX | 12A               | 0.0054                         | 0.140                          |   | 41.0                         | 38.9                       | 1.68                          | Y   | Y   |
| 0679H9150-XX | 15A               | 0.0038                         | 0.130                          |   | 76.7                         | 103.5                      | 1.95                          | Y   | 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 |
|-------------|-----------------------------|
| 250mA-5A    | 1 oz. copper, 5.0mm wide.   |
| 6.3A-15A    | 3 oz. copper, 10mm wide.    |

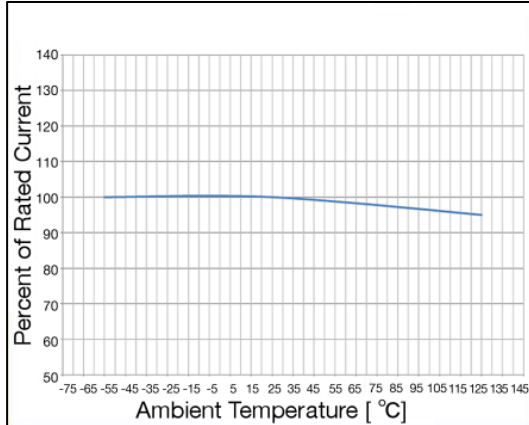


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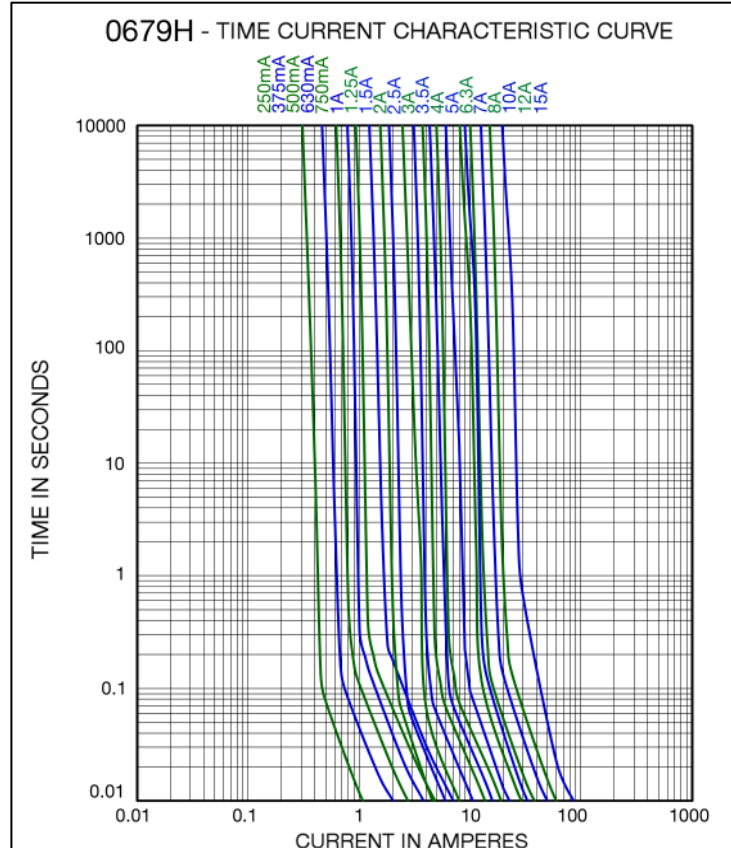
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## Temperature Derating Curve

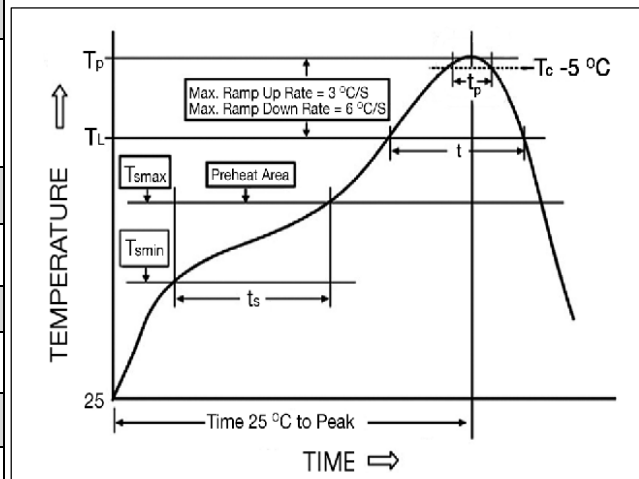


## Average Time Current Curve



## Soldering Parameters

| IR Reflow Profile (IPC/JEDEC J-STD-020D)  |                 |
|---|-----------------|
| <b>Preheat &amp; Soak</b>   |                 |
| 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.  |







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- Подбор аналогов;
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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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