

Type GFH

Fast-Acting Ceramic Tube Fuse Series



Description

GFH Fast-Acting Ceramic Tube Fuse Type, 250V/350V/500V rated designed in accordance to IEC 60127.2, GB9364.2, UL 248-14

Features

- Lead-free
- Internationally approved
- Reduced PCB space requirements
- Direct Solderability or plug-in versions
- Low internal resistance
- Shock safe casing
- Vibration resistant
- Halogen free

Applications

- Power supplies
- Battery Chargers
- Consumer Electronics
- Industrial Controllers
- Adapter



Agency Approvals.

| Safety Agency | Agency File Number | Ampere Range Volt@I.R.Ability |
|---------------|--------------------|--|
| TUV | J 50524994 | 1A~20A 1500A@250V AC |
| CQC | CQC21012317267 | 15A~16A 1500A@250V AC |
| CCC | 2022980207000009 | 2A~10A 1500A@250V AC |
| cURus | E485357 | 50mA~16A 1500A@250V AC 100mA~25A 300A@350Vac/dc 100mA~25A 300A@500Vac/dc 20A~25A 300A@250V AC |

Electrical Characteristics for Series

| % of Ampere Rating | Ampere Rating | Opening Time |
|--------------------|---------------|--------------------------------------|
| 150% | 50mA~4A | 1 Hours, Minimum |
| | 5A~6.3A | 1 Hours, Minimum |
| | 8A~25A | 30 min., Minimum |
| 210% | 50mA~4A | 30min, Maximum |
| | 5A~6.3A | 30min, Maximum |
| | 8A~25A | 30min, Maximum |
| 275% | 50mA~4A | 0.01sec., Minimum; 2sec. Maximum |
| | 5A~6.3A | 0.01sec., Minimum; 3sec. Maximum |
| | 8A~25A | 0.04sec., Minimum; 20sec. Maximum |
| 400% | 50mA~4A | 0.003sec., Minimum; 0.3sec., Maximim |
| | 5A~6.3A | 0.003sec., Minimum; 0.3sec., Maximim |
| | 8A~25A | 0.01sec., Minimum; 1sec., Maximim |
| 1000% | 50mA~4A | 20ms, Maximum |
| | 5A~6.3A | 20ms, Maximum |
| | 8A~25A | 30ms, Maximum |

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Electrical Characteristic Specifications by Item

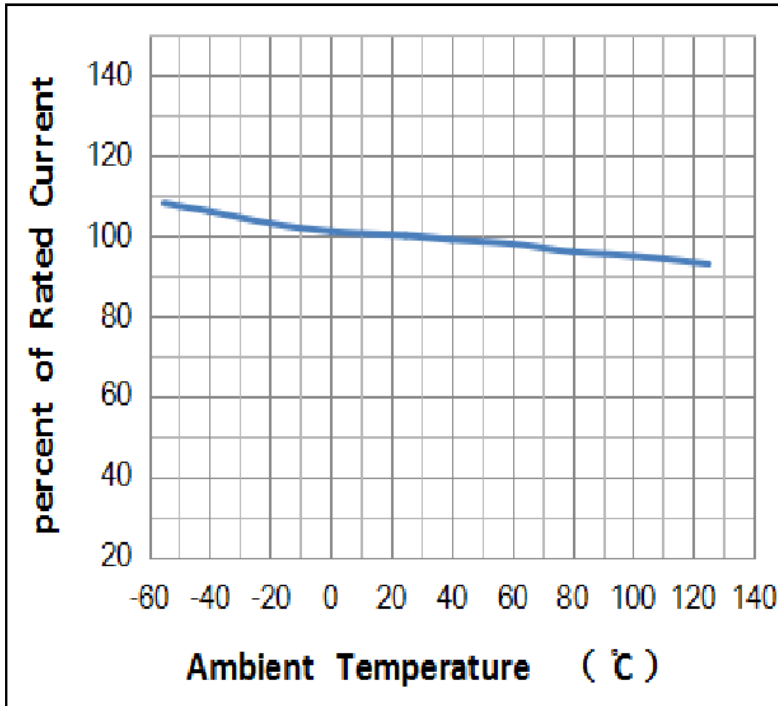
| Catalog Number | Rated Current | Voltage Rating | Breaking Capacity | Melting Integral 10In min(A ² S) | Agency Approvals | | | |
|----------------|---------------|--|---------------------------|--|------------------|-----|-----|-------|
| | | | | | TUV | CQC | CCC | cURus |
| GFH0050 | 50mA | 250V AC 250V DC 350V AC 350V DC 500V AC 500V DC | 50mA~16A 1500A@250V AC | 0.0002 | | | | • |
| GFH0063 | 63mA | | | 0.0008 | | | | • |
| GFH0080 | 80mA | | | 0.0009 | | | | • |
| GFH0100 | 100mA | | | 0.0046 | | | | • |
| GFH0125 | 125mA | | | 0.0055 | | | | • |
| GFH0160 | 160mA | | | 0.0033 | | | | • |
| GFH0200 | 200mA | | | 0.0046 | | | | • |
| GFH0250 | 250mA | | | 0.0141 | | | | • |
| GFH0315 | 315mA | | | 0.0239 | | | | • |
| GFH0500 | 500mA | | | 0.1617 | | | | • |
| GFH0630 | 630mA | | | 0.0612 | | | | • |
| GFH0800 | 800mA | | | 0.1489 | | | | • |
| GFH1100 | 1A | | | 0.1854 | 100mA~25A | • | | • |
| GFH1125 | 1.25A | | 0.4700 | 300A@350Vac/dc | • | | • | • |
| GFH1160 | 1.6A | | 1.0350 | 100mA~25A | • | | • | • |
| GFH1200 | 2A | | 1.9200 | 300A@500Vac/dc | • | | • | • |
| GFH1250 | 2.5A | | 3.7820 | | • | | • | • |
| GFH1315 | 3.15A | | 6.9010 | 20A~25A 300A@250V AC | • | | • | • |
| GFH1400 | 4A | | 15.294 | | • | | • | • |
| GFH1500 | 5A | | 26.922 | | • | | • | • |
| GFH1630 | 6.3A | | 56.234 | | • | | • | • |
| GFH1800 | 8A | | 66.245 | | • | | • | • |
| GFH2100 | 10A | | 151.32 | | • | | • | • |
| GFH2125 | 12.5A | | 176.75 | | • | | | • |
| GFH2150 | 15A | | 389.28 | | • | • | | • |
| GFH2160 | 16A | 467.13 | | • | • | | • | |
| GFH2200 | 20A | 635.00 | | • | | | • | |
| GFH2250 | 25A | 854.00 | | | | | • | |

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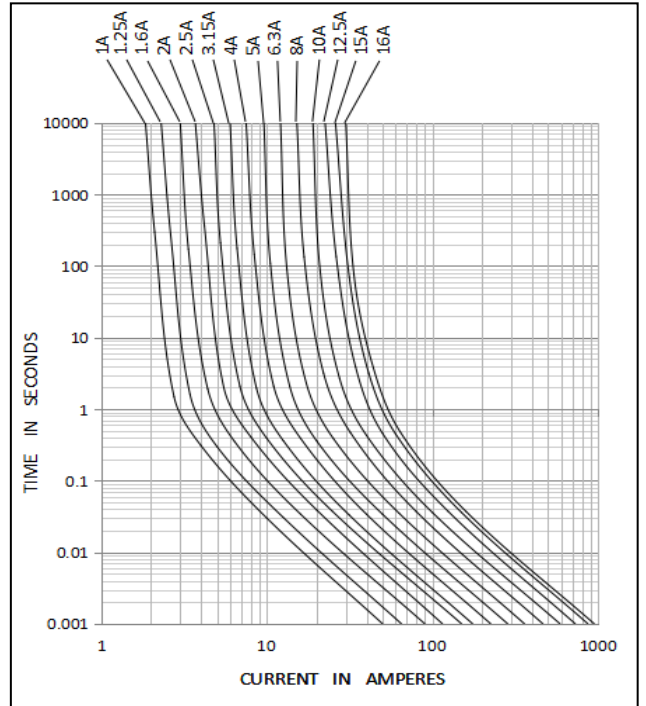
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Temperature Re-rating Curve

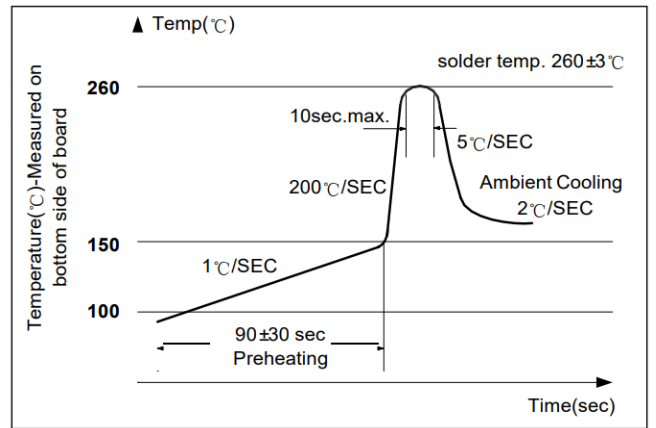


Average Time Current Curves



Soldering Parameters-Wave Soldering

| 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 | 260°C |
| Time within +0/-5°C of actual peak temperature | 10 seconds |
| Ramp-down Rate | 5°C/second max |



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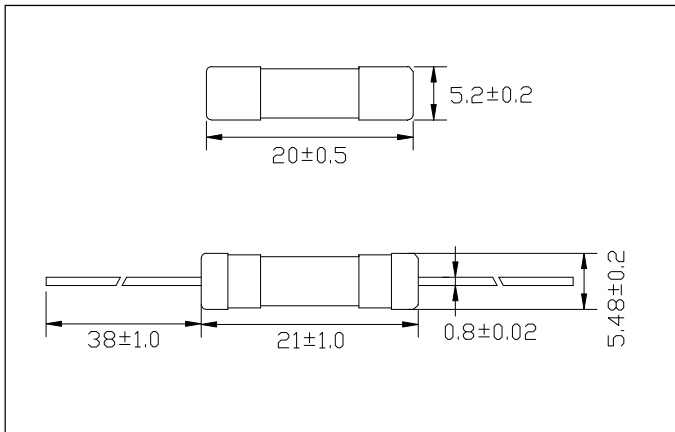


Product Characteristics

| | |
|---------------------------|---|
| Materials | Ceramic Body Nickel Plated Brass Caps Lead Wire :Diameter 0.8/1.0mm/1.2mm |
| Lead Pull Strength | 10 N(IEC 60068-2-21) |
| Soldering Parameters | 260°C, ≤10 sec.(wave) 350°C, ≤3 sec.(soldering iron) |
| Soldering Heat Resistance | 260°C, 10 sec.(IEC 60068-2-20) 350°C, ≤3 sec.(soldering iron) |

| | |
|-----------------------|---|
| Operating Temperature | -55°C to +125°C (consider de-rating) |
| Climatic Category | -40°C to +85°C/21 days (EN 60068-1, -2-1, -2-2, -2-78) |
| Stock Condition | +10°C to +60°C Relative humidity ≤75% yearly Average, without dew, maximum Value for 30 days-95% |
| Vibration Resistance | 24 cycles at 15 min. each (EN 60068-2-6) 10-60 Hz at 0.75 mm amplitude 60-2000 Hz at 10 g acceleration |

Mechanical Dimensions(Unit:mm)



Ordering Information

| | | | | |
|--|-----|------|---|----|
| FUZE TYPE GFH | GFH | 2100 | 2 | 01 |
| AMPERE RATING 10A(100mA*10 ²) | | | | |
| VOLTAGE RATING 2:250V 3:350V 5:500V | | | | |
| COMPLEMENT 00:Standard 01:Axial Lead | | | | |

*Note:20A Lead Φ1.0mm/25A Lead Φ1.2mm

Packaging

| Packaging Option | Packaging Specification | Quantity |
|------------------|-------------------------|----------|
| Standard | N / A | 500pcs |
| Axial Lead | N / A | 100pcs |