



NTC Type SMD

Thermometrics Surface Mount Devices



Features

- Nickel barrier tin plated terminations for soldering
- High sensitivity to changes in temperature
- Wide operating temperature range -40°F to 257°F (-40°C to 125°C)
- Rugged construction
- Available in other material systems
- Intended for temperature measurement, control and compensation
- Suitable for standard soldering techniques
- Excellent solderability without “tombstoning”
- Ceramic between electrodes glass coated for improved stability
- Supplied in tape-and-reel packaging

Type NHQ Specification

Surface mount chip 1206 size

Description

A range of 1206 size surface mount NTC chip thermistors. The terminations are nickel barrier with tin plating.

General

Soldering Recommendations

- Maximum storage time in closed package: One year
- Maximum storage time exposed to ambient conditions of 59°F to 86°F (15°C to 30°C), 15% to 70% RH: 30 days
- Drying prior to soldering: Not to exceed 48h at 176°F (80°C) or 16h at 212°F (100°C) or 8h at 257°F (125°C)
- Flux type: R or RMA

Flow Soldering Conditions

- Preheat temperature: 176°F to 302°F (80°C to 150°C)
- Maximum rate of temperature change: 4.5°F/s or 2.5°C/s
- Maximum solder temperature: 509°F (265°C)
- Maximum dwell time: 10 seconds
- Cooling in ambient or air flow of 5m/s

Reflow Soldering Conditions

- Method infrared, hot gas, vapor
- Maximum rate of preheat temperature change: 4.5°F/s or 2.5°C/s
- Maximum temperature: 437°F (225°C)
- Maximum time above: 392°F (200°C) 30 seconds
- Maximum radiant flux: (0.1 to 100 W μ) 5 W/cm²
- Maximum hot air temperature: 527°F (275°C) at 4 m/s
- Maximum vapor temperature: 419°F (215°C)
- Maximum rate of cooling: 4.5°F/s or 2.5°C/s

Cleaning

Ultrasonic cleaning in methanol or isopropanol not exceeding 40 kHz for 5 minutes, or aqueous cleaning not exceeding 158°F (70°C) for 7 minutes (recommended).



NTC Type NHQ Outline Drawing

| Code | R25 Ω | B (25/85) |
|--------------|--------|-----------|
| NHQ202B410T5 | 2000 | 4100 |
| NHQ222B410T5 | 2200 | 4100 |
| NHQ252B410T5 | 2500 | 4100 |
| NHQ302B410T5 | 3000 | 4100 |
| NHQ472B355T5 | 4700 | 3550 |
| NHQ502B355T5 | 5000 | 3550 |
| NHQ103B375T5 | 10000 | 3750 |
| NHQ153B400T5 | 15000 | 4000 |
| NHQ203B400T5 | 20000 | 4000 |
| NHQ223B400T5 | 22000 | 4000 |
| NHQ303B400T5 | 30000 | 4000 |
| NHQ333B400T5 | 33000 | 4000 |
| NHQ473B400T5 | 47000 | 4000 |
| NHQ503B400T5 | 50000 | 4000 |
| NHQ104B425T5 | 100000 | 4250 |
| NHQ154B425T5 | 150000 | 4250 |
| NHQ304B435T5 | 300000 | 4350 |
| NHQ474B435T5 | 470000 | 4350 |
| NHQ504B435T5 | 500000 | 4350 |

Data

- Resistance tolerance at 77°F (25°C) ±5%; for ±10% replace T5 by T10 in code.
- Tolerance on B value ±200 K
- Minimum temperature: -40°F (-40°C)
- Maximum temperature: 257°F (125°C)
- Dissipation factor: 3 mW/K
- Time constant: 8 seconds maximum

Type NHQM Specification

Surface mount chip 0805 size

Description

A range of 0805 size surface mount NTC chip thermistors. The terminations are nickel barrier with tin plating.

General

Soldering Recommendations

- Maximum storage time in closed package: One year
- Maximum storage time exposed to ambient conditions of 59°F to 86°F (15°C to 30°C), 15% to 70% RH: 30 days
- Drying prior to soldering: Not to exceed 48h at 176°F (80°C) or 16h at 212°F (100°C) or 8h at 257°F (125°C)
- Flux type: R or RMA

Flow Soldering Conditions

- Preheat temperature: 176°F to 302°F (80°C to 150°C)
- Maximum rate of temperature change: 4.5°F/s or 2.5°C/s
- Maximum solder temperature: 509°F (265°C)
- Maximum dwell time: 10 seconds
- Cooling in ambient or air flow of 5m/s

Reflow Soldering Conditions

- Method infrared, hot gas, vapor
- Maximum rate of preheat temperature change: 4.5°F/s or 2.5°C/s
- Maximum temperature: 437°F (225°C)
- Maximum time above: 392°F (200°C) 30 seconds
- Maximum radiant flux: (0.1 to 100 W/μ) 5 W μ/cm²
- Maximum hot air temperature: 527°F (275°C) at 4 m/s
- Maximum vapor temperature: 419°F (215°C)
- Maximum rate of cooling: 4.5°F/s or 2.5°C/s

Cleaning

Ultrasonic cleaning in methanol or isopropanol not exceeding 40 kHz for 5 minutes, or aqueous cleaning not exceeding 158°F (70°C) for 7 minutes (recommended).



NTC Type NHQM Outline Drawing

| Code | R25 Ω | B (25/85°C) |
|---------------|--------|-------------|
| NHQM202B410T5 | 2000 | 4100 |
| NHQM252B410T5 | 2500 | 4100 |
| NHQM272B410T5 | 2700 | 4100 |
| NHQM302B410T5 | 3000 | 4100 |
| NHQM472B355T5 | 4700 | 3550 |
| NHQM502B355T5 | 5000 | 3550 |
| NHQM682B375T5 | 6800 | 3750 |
| NHQM103B375T5 | 10000 | 3750 |
| NHQM153B400T5 | 15000 | 4000 |
| NHQM203B400T5 | 20000 | 4000 |
| NHQM223B400T5 | 22000 | 4000 |
| NHQM273B400T5 | 27000 | 4000 |
| NHQM303B400T5 | 30000 | 4000 |
| NHQM333B400T5 | 33000 | 4000 |
| NHQM473B415T5 | 47000 | 4150 |
| NHQM503B415T5 | 50000 | 4150 |
| NHQM104B425T5 | 100000 | 4250 |
| NHQM154B425T5 | 150000 | 4250 |
| NHQM304B425T5 | 300000 | 4250 |
| NHQM474B435T5 | 470000 | 4350 |
| NHQM504B435T5 | 500000 | 4350 |

Data

- Resistance tolerance at 77°F (25°C) ±5%; for ±10% replace T5 by T10 in code.
- Tolerance on B value ±200 K
- Minimum temperature: -40°F (-40°C)
- Maximum temperature: 257°F (125°C)
- Dissipation factor: 1.5 mW/K
- Time constant: 5 seconds maximum

Type NHQMM Specification

Surface mount chip 0603 size

Description

A range of 0603 size surface mount NTC chip thermistors. The terminations are nickel barrier with tin plating.

General

Soldering Recommendations

- Maximum storage time in closed package: One year
- Maximum storage time exposed to ambient conditions of 59°F to 86°F (15°C to 30°C), 15% to 70% RH: 30 days
- Drying prior to soldering: Not to exceed 48h at 176°F (80°C) or 16h at 212°F (100°C) or 8h at 257°F (125°C)
- Flux type: R or RMA

Flow Soldering Conditions

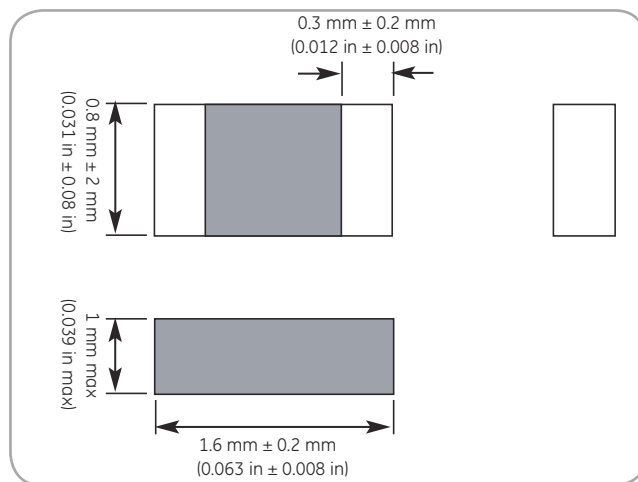
- Preheat temperature: 176°F to 302°F (80°C to 150°C)
- Maximum rate of temperature change: 4.5°F/s or 2.5°C/s
- Maximum solder temperature: 509°F (265°C)
- Maximum dwell time: 10 seconds
- Cooling in ambient or air flow of 5m/s

Reflow Soldering Conditions

- Method infrared, hot gas, vapor
- Maximum rate of preheat temperature change: 4.5°F/s or 2.5°C/s
- Maximum temperature: 437°F (225°C)
- Maximum time above: 392°F (200°C) 30 seconds
- Maximum radiant flux: (0.1 to 100 W μ) 5 W μ /cm²
- Maximum hot air temperature: 527°F (275°C) at 4 m/s
- Maximum vapor temperature: 419°F (215°C)
- Maximum rate of cooling: 4.5°F/s or 2.5°C/s

Cleaning

Ultrasonic cleaning in methanol or isopropanol not exceeding 40 kHz for 5 minutes, or aqueous cleaning not exceeding 158°F (70°C) for 7 minutes (recommended).



NTC Type NHQMM Outline Drawing

| Code | R25 Ω | B (25/85) |
|----------------|--------------|-----------|
| NHQMM202B410T5 | 2000 | 4100 |
| NHQMM222B410T5 | 2200 | 4100 |
| NHQMM302B410T5 | 3000 | 4100 |
| NHQMM332B410T5 | 3300 | 4100 |
| NHQMM472B355T5 | 4700 | 3550 |
| NHQMM502B355T5 | 5000 | 3550 |
| NHQMM682B355T5 | 6800 | 3550 |
| NHQMM103B375T5 | 10000 | 3750 |
| NHQMM153B380T5 | 15000 | 3800 |
| NHQMM203B380T5 | 20000 | 3800 |
| NHQMM223B380T5 | 22000 | 3800 |
| NHQMM303B400T5 | 30000 | 4000 |
| NHQMM333B400T5 | 33000 | 4000 |
| NHQMM473B400T5 | 47000 | 4000 |
| NHQMM503B400T5 | 50000 | 4000 |
| NHQMM683B400T5 | 68000 | 4000 |
| NHQMM104B415T5 | 100000 | 4150 |
| NHQMM154B425T5 | 150000 | 4250 |
| NHQMM204B425T5 | 200000 | 4250 |

Data

- Resistance tolerance at 77°F (25°C) \pm 5%; for \pm 10% replace T5 by T10 in code
- Tolerance on B value \pm 200 K
- Minimum temperature: -40°F (-40°C)
- Maximum temperature: 257°F (125°C)
- Dissipation factor: 1.2 mW/K
- Time constant: 4 seconds maximum

Type NHQT Specification

Surface mount chip 0402 size

Description

A range of 0402 size surface mount NTC chip thermistors. The terminations are nickel barrier with tin plating.

General

Soldering Recommendations

- Maximum storage time in closed package: One year
- Maximum storage time exposed to ambient conditions of 59°F to 86°F (15°C to 30°C), 15% to 70% RH: 30 days
- Drying prior to soldering: Not to exceed 48h at 176°F (80°C) or 16h at 212°F (100°C) or 8h at 257°F (125°C)
- Flux type: R or RMA

Flow Soldering Conditions

- Preheat temperature: 176°F to 302°F (80°C to 150°C)
- Maximum rate of temperature change: 4.5°F/s or 2.5°C/s
- Maximum solder temperature: 509°F (265°C)
- Maximum dwell time: 10 seconds
- Cooling in ambient or air flow of 5m/s

Reflow Soldering Conditions

- Method infrared, hot gas, vapor
- Maximum rate of preheat temperature change: 4.5°F/s or 2.5°C/s
- Maximum temperature: 437°F (225°C)
- Maximum time above: 392°F (200°C) 30 seconds
- Maximum radiant flux: (0.1 to 100 W μ) 5 W μ /cm²
- Maximum hot air temperature: 527°F (275°C) at 4 m/s
- Maximum vapor temperature: 419°F (215°C)
- Maximum rate of cooling: 4.5°F/s or 2.5°C/s

Cleaning

Ultrasonic cleaning in methanol or isopropanol not exceeding 40 kHz for 5 minutes, or aqueous cleaning not exceeding 158°F (70°C) for 7 minutes (recommended).



NTC Type NHQT Outline Drawing

| Code | R25 Ω | B (25/85) |
|---------------|--------------|-----------|
| NHQT500B285T5 | 50 | 2850 |
| NHQT202B410T5 | 2000 | 4100 |
| NHQT252B410T5 | 2500 | 4100 |
| NHQT332B410T5 | 3300 | 4100 |
| NHQT352B410T5 | 3500 | 4100 |
| NHQT402B410T5 | 4000 | 4100 |
| NHQT652B410T5 | 6500 | 4100 |
| NHQT153B380T5 | 15000 | 3800 |
| NHQT203B380T5 | 20000 | 3800 |
| NHQT223B380T5 | 22000 | 3800 |
| NHQT303B400T5 | 30000 | 4000 |
| NHQT473B400T5 | 47000 | 4000 |
| NHQT683B400T5 | 68000 | 4000 |
| NHQT154B425T5 | 150000 | 4250 |

Data

- Resistance tolerance at 77°F (25°C) $\pm 5\%$; for $\pm 10\%$ replace T5 by T10 in code
- Tolerance on B value ± 200 K
- Minimum temperature: -40°F (-40°C)
- Maximum temperature: 257°F (125°C)
- Dissipation factor: 1.5 mW/K
- Time constant: 4 seconds maximum

Amphenol
Advanced Sensors

www.amphenol-sensors.com

© 2017 Amphenol Corporation. All Rights Reserved. Specifications are subject to change without notice. Other company names and product names used in this document are the registered trademarks or trademarks of their respective owners.

AAS-920-324F - 03/2017

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Amphenol:

[NHQM154B425T5](#) [NHQM304B425T5](#) [NHQMM471B320T10](#) [NHQMM501B320T10](#) [NHQMM683B400T10](#)
[NHQMM154B425T10](#) [NHQM400B280T10](#) [NHQMM302B410T5](#) [NHQMM332B410T5](#) [NHQMM222B410T5](#)
[NHQMM252B410T5](#) [NHQMM152B345T10](#) [NHQMM202B410T5](#) [NHQMM680B280T10](#) [NHQM474B435T5](#)
[NHQMM204B425T10](#) [NHQM272B410T10](#) [NHQM473B415T10](#) [NHQMM302B410T10](#) [NHQMM332B410T10](#)
[NHQM202B410T10](#) [NHQM504B435T5](#) [NHQMM400B280T10](#) [NHQM472B355T10](#) [NHQM502B355T5](#)
[NHQMM473B400T10](#) [NHQMM153B380T10](#) [NHQMM103B375T5](#) [NHQMM472B355T5](#) [NHQMM102B325T10](#)
[NHQM152B345T10](#) [NHQMM333B400T5](#) [NHQMM303B400T5](#) [NHQMM680B280T5](#) [NHQMM471B320T5](#)
[NHQMM300B275T10](#) [NHQMM502B355T10](#) [NHQM103B375T5](#) [NHQMM503B400T10](#) [NHQT683B400T10](#)
[NHQM472B355T5](#) [NHQMM223B380T5](#) [NHQMM102B325T5](#) [NHQMM203B380T5](#) [NHQM800B280T10](#)
[NHQMM152B345T5](#) [NHQM203B400T10](#) [NHQMM400B280T5](#) [NHQMM800B280T5](#) [NHQMM502B355T5](#)
[NHQMM682B355T5](#) [NHQMM800B280T10](#) [NHQM223B400T10](#) [NHQMM682B355T10](#) [NHQMM204B425T5](#)
[NHQM682B375T5](#) [NHQM473B415T5](#) [NHQM304B425T10](#) [NHQMM101B280T10](#) [NHQM801B325T10](#)
[NHQM252B410T10](#) [NHQT204B425T10](#) [NHQM503B415T10](#) [NHQM153B400T10](#) [NHQMM333B400T10](#)
[NHQMM202B410T10](#) [NHQM153B400T5](#) [NHQM154B425T10](#) [NHQMM501B320T5](#) [NHQMM101B280T5](#)
[NHQMM222B410T10](#) [NHQM502B355T10](#) [NHQM102B325T5](#) [NHQM501B325T5](#) [NHQM333B400T10](#)
[NHQM103B375T10](#) [NHQM801B325T5](#) [NHQM504B435T10](#) [NHQM501B325T10](#) [NHQM152B345T5](#)
[NHQMM503B400T5](#) [NHQM303B400T10](#) [NHQM202B410T5](#) [NHQM252B410T5](#) [NHQM272B410T5](#)
[NHQMM473B400T5](#) [NHQM302B410T10](#) [NHQM474B435T10](#) [NHQMM153B380T5](#) [NHQM101B280T10](#)
[NHQM102B325T10](#) [NHQMM683B400T5](#) [NHQMM154B425T5](#) [NHQM221B310T10](#) [NHQM101B280T5](#)
[NHQM303B400T5](#) [NHQM333B400T5](#) [NHQMM103B375T10](#) [NHQM682B375T10](#) [NHQMM104B415T10](#)



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.