纳入仕样书
SPECIFICATIONS

形　　名 Part No.	:	244NT-4-S20S031
貴 部 番 Customer's Part No.	:	—
仕様書番号 Spec.No.	:	S20-S031

検印 Checked by	営業担当者 Submitted by
SEMITEC 2020.10.14 澤田	SEMITEC 2020.10.14 (小)幸旭

SEMITEC株式会社

纳入仕样书 SPECIFICATIONS	貴部番 Customer's Part No. ; –	承认 Approved	核对 Checked	作成 Prepared
用途 Application ; –	品 名 Part No. ; 244NT-4-S20S031	興順電子 '20.10.14 関口	興順電子 '20.10.14 山崎	興順電子 '20.10.14 陈勇

本仕样书以中英文表述，若中英文产生冲突时以中文为准。

Chinese shall be precedent, if discrepancy occurs between Chinese and English description in this Specifications.

1. 适用范围
本仕样书是关于温度检测用热敏电阻244NT-4-S20S031的相关规定，
仅适用于本仕样书指定内容。

Scope
This specification defines rating, dimensions, electrical properties, mechanical properties and climatic properties for the following part.

2. 品名
Part No.

244NT-4-S20S031

3. 额定值和特性
Ratings and Characteristics

3.1 零功率电阻 Zero-power resistance	: R_{200} 1.100 kΩ (200 ℃时的零功率电阻) : R_{200} 1.100 k ohm (at 200 deg. C)
3.2 零功率电阻公差 Tolerance on zero-power resistance	: R_{200} ± 5 % : R_{200} +/- 5 %
3.3 B常数 B-value	: $B_{100/200}$ 4 500 K (根据100 ℃、200 ℃时零功率电阻计算) : $B_{100/200}$ 4 500 K (The B-value is calculated from R_{100} and R_{200})
3.4 B常数公差 Tolerance on B-value	: $B_{100/200}$ ± 3 % : $B_{100/200}$ +/- 3 %
3.5 热耗散系数 Dissipation factor	: 约 0.8 mW/℃ (静止空气中) : Approx. 0.8 mW / deg. C (in still air)

3.6 热时间常数 : 约 6 秒 (静止空气中)
Thermal time constant : Approx. 6 s (in still air)

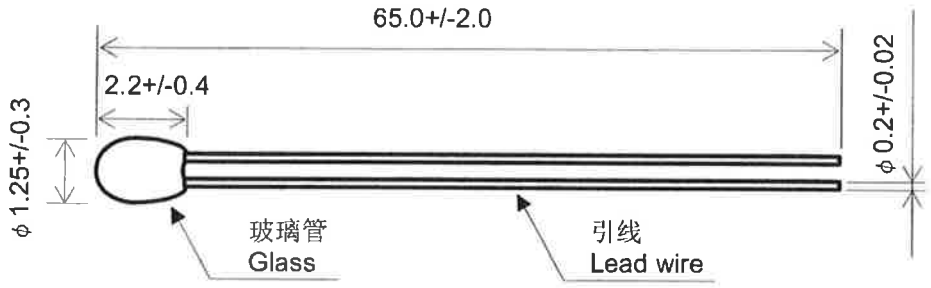
3.7 额定功耗 : 约 4.0 mW (at 25 ℃)
Rated power dissipation (自身发热温度上升约5 ℃)
: Approx. 4.0 mW (at 25 deg. C)
(Including self-heat of approx. 5 deg. C)

4. 使用温度范围 : -50 ℃ ～ +300 ℃
Category temperature range : -50 deg. C ~ +300 deg. C

5. 贮存温度范围 : -10 ℃ ～ +40 ℃
Storage temperature range : -10 deg. C ~ +40 deg. C

6. 外观和尺寸
Dimensions

单位：mm
Unit : mm



7. 气候性能
Climatic properties

项　　目 Item	试　　验　　条　　件 Test conditions	判定标准 Criteria
7.1 低温试验 Cold	-50℃±3℃的空气中放置1 000小时后 再放置在标准状态1小时后进行测试。 A test sample is exposed in air at -50 deg. C +/- 3 deg. C for 1 000 h and then stored at room temperature and humidity for 1 h.	R_{25}的相对初期变化率在±3%以内、$B_{25/85}$的相对初期变化率在±2%以内。 Variation of R_{25} after the test shall be within +/- 3% of the initial values. Variation of $B_{25/85}$ after the test shall be within +/-2% of the initial values.
7.2 高温试验 Dry heat	+300℃±3℃的空气中放置1 000小时后 再放置在标准状态1小时后进行测试。 A test sample is exposed in air at +300 deg. C +/- 3 deg. C for 1 000 h and then stored at room temperature and humidity for 1 h.	

[有关性能试验的补充]
・标准状态是指+15℃～+35℃、相对湿度25%～75%的环境。
・试验方法的依据是JIS C 2570-1标准。

Note
"Room temperature" is defined as the temperature between +15 deg. C to +35 deg. C.
"Room humidity" is defined as the humidity between 25 %RH to 75 %RH.
"A test method" is based on JIS C 2570-1.

NT热敏电阻使用注意事项
Precautions for use of NT thermistor

警告.
Warning.

使用时请严格遵守以下事项，否则NT热敏电阻的损坏可能导致使用设备的损伤或故障。
Comply with the following precautions for use, otherwise NT thermistor may be broken or cause failure and/or malfunction of equipment.

(1) 热敏电阻是按不同用途分别进行设计的。请勿用于规定以外的用途。
Thermistor is designed for particular use. Do not utilize it for other use applied.

(2) 热敏电阻在机器设计装机后，需进行可靠性测试确认设备的性能和功能。
Check performance and function of your equipment with thermistor by your actual evaluation and reliability tests.

(3) 热敏电阻自身发热导致阻值低下可能引发设备故障，
请注意对热敏电阻施加的电压。
Pay attention to voltage to be applied to thermistor because its lowered resistance by self-heating may cause failure and/or malfunction of equipment.

(4) 请勿超出规定温度范围外使用。
Do not use the thermistor out of category temperature range specified.

(5) 热敏电阻作为传感器使用时，需采取设计安全回路，或者
通过与同等性能传感器合并使用等措施避免发生意外。
Take all possible measures such as a safety circuit or concomitance use of another temperature sensor with same performance to prevent any accident.

(6) 在受干扰的环境下使用请采取以下对策。
Take measures as following in case of electrical noise is concerned.
- 设置保护回路
  A protect circuit.
- 热敏电阻（含引线）的屏蔽
  An electrical shield over thermistor including lead wire.

(7) 热敏电阻封装加工时，需注意封装材料的种类、量、硬化条件、附着性等
并确认其可靠性。
When thermistor is sealed, examine a kind of sealant, quantity, curing condition and adhesiveness and confirm its reliability.

(8) 不适用于超过规定额定功率的使用。
Do not apply rating power in excess of that specified.

(9) 请勿施加过度的振动、冲击（掉落等）及压力。
Do not apply excessive mechanical impact such as vibration or falling.

(10) 请勿反复弯曲引线。
Do not repeat the bending of the lead wires.

(11) 打开引线或应用于拉力试验时请注意玻璃体部易发生破损。
When lead wires are applied to tensile force of leg split, be careful of breaking glass bead.

(12) 请保持引线焊接部清洁以防污渍、锈迹等造成焊接不良。
Connect lead wires of thermistor without blot or stain, otherwise it may cause loose contact.

(13) 引线焊接时请在距玻璃体部末端5㎜以上的位置焊接。
When lead wires are soldered, process at the portion further than 5mm away from the glass bead.

(14) 玻璃体部请勿与融化后的焊料或烙铁接触。
Do not put molten solder or a heated soldering iron in touch with the glass bead.

(15) 需进行引线打弯或切割等再加工时，请在玻璃体部末端5㎜以上的位置固定引线后再进行。
When lead wires are cut or bent, process with holding the portion of 5 mm away from the glass part.

(16) 请勿在相对湿度超过85%的环境下长时间使用。
（有对策的情况除外。）
Do not use thermistor for long time at more than 85 %RH, except when it is taken measures.

(17) 对用户充分说明请勿用手直接接触。
Give warning to a user not to touch thermistor,if the user may touch thermistor in your application.

(18) 请勿在下列环境中使用。(有对策的情况除外。)
Do not use thermistor under the following environment, except when it is taken measures.

- Cl_2、NH_3、SO_X、NO_X等腐蚀性气体
- Corrosive gas. (Cl_2, NH_3, SO_X, NO_X etc.)
- 高导电性的条件（电解质、水、盐溶液等）
- High conductive conditions. (electrolyte, water, saline solution and etc.)
- 酸、碱、有机溶剂
- Acids, alkalis, organic solvent.
- 粉尘过多
- Dusty place.
- 易结露
- Condensing place.

注意.
Caution.

NT热敏电阻使用时请注意如下事项。
Pay attention to the following cautions for use NT thermistor.

(1) 需对热敏电阻进行再加工时请事先咨询弊公司。
Please consult us when the thermistor is reprocessed.

(2) 有可能无法检测正确温度而导致机器故障，所以在安装热敏电阻时请注意如下事项。
Pay attention to the following description when thermistor is installed to your equipment, otherwise it may cause malfunction of your equipment when the thermistor can not detect real temperature.

- 测定气体、液体或固体内部温度时，需避免加热体或冷却器对热敏电阻检测部的影响，使其处于待测定的环境温度中。
When thermistor detects temperature of air, liquid or the solid inside, put the thermistor in order to detect the certain ambient temperature and not to be affected by a heater or a chiller.

- 测定固体表面温度时，需用导热性能较好的润滑剂或粘合剂等充填固定且避免户外气流或空气对热敏电阻检测部的影响。
When thermistor detects temperature of a solid substance, then fill thermal conductive grease or adhesive up between the substance and the thermistor, and pay attention that the thermistor is not affected by air-flow or wind from outside.

(3) 使用热敏电阻时，根据推压、夹紧、插入等情况所需的机械性强度等安装条件请咨询弊公司。
When thermistor is installed with pushing, pressing, clamping or inserting, then please consult us about installing condition such as mechanical properties of the thermistor.

(4) 请勿安装在靠自身发热使用的热敏电阻附近，以防造成其他部件发生故障。
Do not allocate other parts nearby thermistor where it is used with self-heated condition.

(5) 为避免产品老化、损伤等请在-10℃～+40℃、相对湿度75%以下的环境下贮存。
放于阴凉干燥处，避免阳光直射并与腐蚀性气体隔绝，勿压。
贮存期限：交付后6个月内。
Pay attention to the following storage condition, otherwise it may cause deterioration and/or damage of thermistor.
- Store thermistor at -10 deg. C to +40 deg. C, less than 75 %RH in a carton not to be loaded at a depository without rapid temperature change, direct sunlight, corrosive gas and dust.
- Storage life : Within 6 months from delivery date.

(6) 凡涉及到性命或财产安全等下列使用领域时请务必与弊公司营业部联络咨询。
另外，请务必咨询故障安全机构。
・医疗器械　・汽车、铁道、船舶等运输设备　・航空・宇宙相关设备
・交通设备　・防盗・防灾害设备　・核动力相关设备　・军事设备
・海洋设备　・安全装置　・其他同等要求的设备
If you consider an end-usage of our products that requires a high reliability due to a potential risk for property or even human life, such as the usage listed below, it is necessary to contact our sales department. It is also necessary to consider a fail-safe mechanism.
・medical equipment ・transportation devices such as automobiles, railway, ships and boats ・aircraft ・spacecraft ・traffic equipment ・security/disaster prevention hardware ・nuclear power related hardware ・military hardware ・submarine hardware ・fail-safe devices ・other devices that require similarly high reliability

改定記録　Revision records

改定版数 Revision No.	発効日 Date	承認者 Approved	項番 Revision item	改定前 Former specification	改定後 New specification
初版 First issue	2020/10/14	関口	S20-S031	————	————
A					
B					
C					
D					
E					
F					
G					
H					
I					
J					