

THERMO STRING TYPE NTC THERMISTOR

1. Part Numbering (Part Number)

NXF	T	15	XH	103	F	A	2	B	025
Product ID	Individual specifications	Chip dimensions	Temperature characteristics	Resistance	Resistance tolerance	Lead wire specifications	Terminal form	Packaging	Dimensions (Full length)

2. Part No. and ratings

Murata P/N (*1)	Resistance value at.25°C	B-constant 25/50°C	Operating current for sensor (mA) (*2, *3)	Operating temperature range (°C)
NXFT15XH103FA2B***	10kΩ ±1%	3380K±1%	0.12	-40~+125
NXFT15XV103FA2B***	10kΩ ±1%	3936K±1%	0.12	
NXFT15WB473FA2B***	47kΩ ±1%	4050K±1%	0.06	
NXFT15WF104FA2B***	100kΩ ±1%	4250K±1%	0.04	

Thermal dissipation constant	1.5mW/°C (*4)
Rated electric power	7.5mW (*2,*4)
Thermal time constant	4sec. (25°C to 50°C in air)

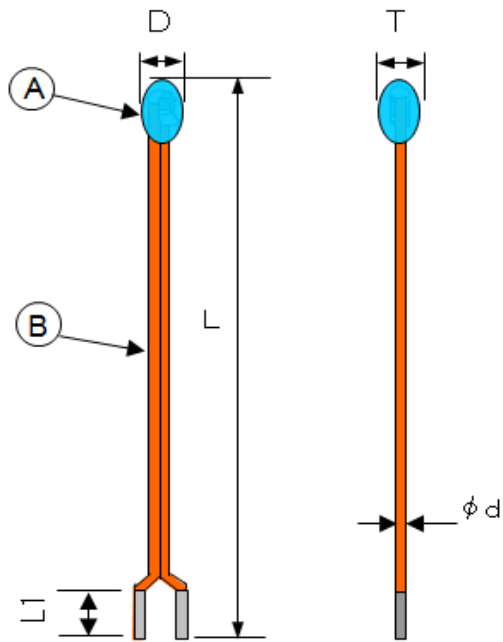
*1: *** means the full length (Example : 050=50mm) 25mm, 30~150mm interval 10mm.

*2 : Measured at 25°C in still air, as a single unit without mounting.

*3 : Operating current rises for sensor rises Thermo String's temperature by 0.1°C.
Please regard self heat of the Thermo String.

*4: Too rapid temperature rising, however, may cause any unexpected failures on your circuit.
Please do not apply high electric power in short time.

3. Construction and dimensions (in mm)



	Dimensions (mm)	notes
D	1.2±0.4	Resin width
T	1.2±0.4	Resin width
L	25 to100 ±2 110 to150 ±3	Full length
L1	3+2/-1	Soldering part
d	0.30±0.05	Lead wire diameter
(A)	-	Epoxy resin
(B)	-	Copper lead wire with polyurethane coat

*The NTC Thermistor in epoxy resin is soldered by Sn-3Ag-0.5Cu

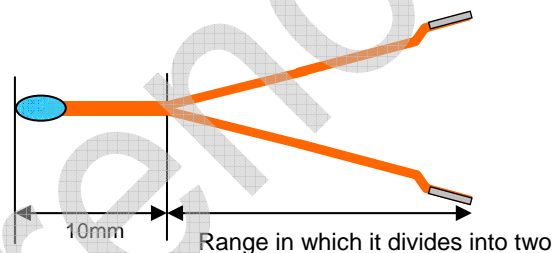
4. Quantity (Standard Quantity)
1000pcs./unit bag.

Notice for use

⚠ Special Caution

1. Resin of this product is not waterproofing.
Do not use NTC Thermistor under the following environments because all these factors can deteriorate the characteristics of product or can cause the failures and the burning-out.

(1) Place with splashed water or under high humidity with dewing.
2. This product is using the solder of about 220 °C of melting points. Please perform soldering on the following condition not to melt the solder in resin head.
(Less than [10 seconds at 260 degrees Celsius] or less than [3.5 seconds at 350 degrees Celsius], and it is 25 mm or more in full length of a product.)
In the worst case, heat reaches the element part from a lead terminal part, and a solder of our product element region melts it. And that causes fears of break of wire, or short circuit.
3. Please do a quality rating enough by a real machine when bonding, the resin molding, and the resin coating, etc. that are processed to this product. And, please use it after confirming it is unquestionable.
Especially, please do not process it under the high temperature and the high pressure.
The stress occurs because of the amount, the resin thickness, bias, and the temperature change of the fabricating materials (bonding material, molding resin, and coating material etc.)
And, there is a possibility to generate the crack and the characteristic degradation by the stress.
4. A crack goes into resin, an element, and solder, and there are characteristic degradation and fear of failure.
Do not separate the parallel lead wires 10mm or less from the resin head, when you separate parallel lead wires. Please do not split the lead wire exceeding the range that can be divided of showing in the following.



5. If aggressiveness pressure strong against a resin part is applied, an element will break or crack. Please do not put pressure more than 30N(Normal temperature). Please avoid use in the state where it was pressurized, in a category temperature range.

⚠ Caution

1. Applying the power exceeding rated Electric Power may result to deterioration of characteristics, destruction of product or in the worst case, to catching fire. Do not apply the power exceeding rated Electric Power.
2. Exposing the NTC Thermistor to the following environment may result to deterioration of characteristics,
①Corrosive gas or deoxidizing gas (Cl₂,H₂S,NH₃,SO_x,NO_x etc.)
②Volatile, flammable gas ③Dusty place ④Low or high air pressure
⑤salt water, oil, chemical liquid and solvent. ⑥Vibratile place
⑦other place equivalent to the above ① through ⑦

CT-006E'

Murata Manufacturing Co.,Ltd.

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This information may be changed without a previous notice.

3. Limitation of Applications

Please contact us before using our products for the applications listed below which require especially high reliability for the prevention of defects which might directly cause damage to the third party's life, body or property.

- ①Aircraft equipment ②Aerospace equipment ③Undersea equipment ④Power plant control equipment
- ⑤Medical equipment ⑥Transportation equipment(vehicles, trains, ships, etc.)
- ⑦Traffic signal equipment ⑧Disaster prevention/crime prevention equipment
- ⑨Data-processing equipment
- ⑩Application of similar complexity and/or reliability requirements to the applications listed in the above.

4. Addition of fail safe function

Please provide an appropriate fail-safe function on your product to prevent a second damage that may be caused by the abnormal function or the failure of our product.

Notice

1. Use this product within the specified temperature range. Higher temperature may cause deterioration of the characteristics or the material quality of this product.
2. To keep solderability and characteristic of product from declining, following storage condition is recommended.
 - ①Storage condition Temperature : -10°C ~ +40°C
 Humidity : less than 75% RH (not dewing condition)
 - ② Term Please use this product within 6 month after shipment
 by first-in first-out stocking system.
 - ③Handling after seal open After unpack aging of the minimum package, reseal it promptly or store it inside
 a sealed container with a drying agent.
 - ④Place Do not store this product in corrosive gas (SO_x, Cl etc.) or under sun-light.
3. Do not touch the resin head directly by solder iron. It may cause the melt of solder in resin head.
4. The ceramic element of this product is fragile, and care must be taken not to load a excessive press-force or not to give a shock at handling. Such forces may cause cracking or chipping.
5. Do not apply an excessive force to the lead. Otherwise, it may cause break off of junction between lead and element, or may crack element. Therefore, hold of element side lead wire is recommended when lead wire is bent or cut.

Bend repeatedly standard : Count the bent by 90° degree and again bent back to the initial position,
 Then other side count the bent by 90° degree and again bent back to the initial
 position. Max10times.

Bend angle : Do not bend the lead wire radius 1mm or less when you bend the lead wire.

⚠ Attention

1. Please make sure that the component is evaluated against the specification when it is mounted to your product. This evaluation will be needed to confirm any unforeseen hazardous situation which is not observed in the evaluation of component.
2. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
3. We consider it not appropriate to include any terms and conditions with regard to the business transaction in the product specifications, drawings or other technical documents. Therefore, if your technical documents as above include such terms and conditions such as warranty clause, product liability clause, or intellectual property infringement liability clause, they will be deemed to be invalid.

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