

THERMO STRING TYPE NTC THERMISTOR

1. Part Numbering (Part Number)

NXF	S	15	XH	103	F	E	A	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	Maximum operating current (mA) (*2, *3)	Operating temperature range (°C)
NXFT15XH103FEAB***	10kΩ ± 1%	3380K±1%	0.077	-40~+125
NXFT15XV103FEAB***	10kΩ ± 1%	3936K±1%	0.077	
NXFT15WB473FEAB***	47kΩ ± 1%	4050K±1%	0.036	
NXFT15WF104FEAB***	100kΩ ± 1%	4250K±1%	0.024	

Thermal Dissipation Constant	.6mW/°C (*4)
Rated Electric power	3.0mW (*2,4)
Thermal Time constant	about 3s (25°C to 50°C in air)

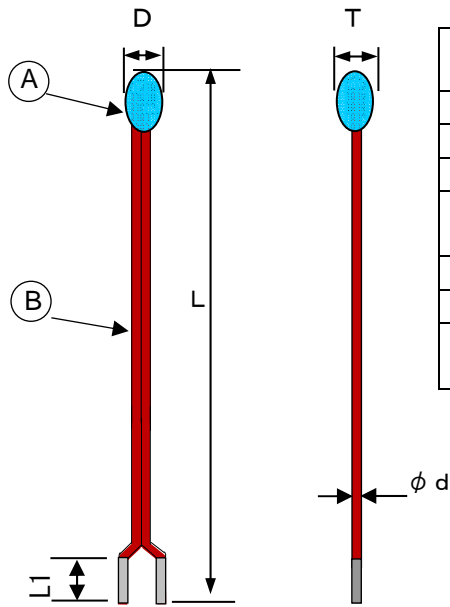
*1: *** means the full length (Example : 050=50mm) 21mm,25mm,30mm, 35mm,40mm, 45mm,50mm

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

*3 : Maximum operating current rises for sensor rises thermistor'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	21,25 to 50 ±2	Full length
L1	21 3±1.5 25 to 50 3+2/-1	Soldering part
d	0.30±0.05	Lead wire diameter
Ⓐ	-	Epoxy resin
Ⓑ	-	Copper & Ni Alloy Lead wire with Modified Polyester coat.

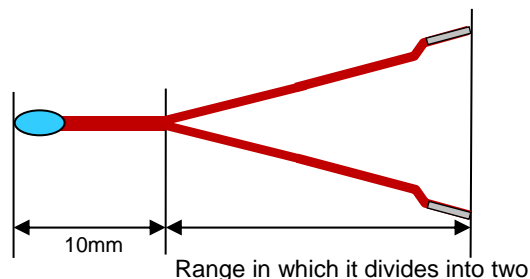
*The NTC Thermistor in epoxy resin is soldered by Sn-3Ag-0.5Cu

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

Notice for use

 Special Caution

1. Resin of this product is not waterproofing.
Do not use chip 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.
Place with splashed water or under high humidity with dewing.
2. This product is using the solder of about 217°C of melting points. Please perform soldering on a condition not melt the solder in resin head (260°C, less than 10s or 350°C, less than 3.5s and more than 19mm in full length of the product) .
When I am the worst, heat reaches the element part from a lead terminal part, and a solder of our product element region melts it, and there are fear of break of wire, or short circuit.
3. When this product is processed into the adhesion, a resin mold, a resin coat , thermal shrink sleeve wearing and so on, please use it after you evaluate enough in quality with actual procedure and process and ensure there is no problem about it.
Please do not do in particular the processing under a high temperature, the high pressure.
Solder used for between lead and ceramic body connection in the products has melting point approximately 217°C, so it will melt or move when high temperature and high pressure or only high temperature are applied.
That may bring electric short or electric open in the circuit.
In addition, for stress to occur because of deflection and a temperature change of quantity of application and the resin thickness of adhesive, mold resin, coating materials, crack occurs to an ceramic body, and a characteristic might deteriorate.
4. Because ceramic body, the resin and the solder might crack then there might be the possibility of characteristic deterioration, do not split the lead wire exceeding the range that you can divide into two.



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.
 - ① Corrosive gas or deoxidizing gas (Cl₂, H₂S, NH₃, SO_x, NO_x etc.)
 - ② Volatile, flammable gas
 - ③ Dusty place
 - ④ Low or high air pressure
 - ⑤ salt water, oil, chemical liquid and solvent.
 - ⑥ Vibratile place
 - ⑦ other place equivalent to the above ① through ⑥

3. Please consult with us and use it.
 Especially high reliability, in order to prevent defects which might directly cause damage to other party's life, body or property. (Listed below.)
 In case of usage for other applications , Murata replies in a document if it is acceptable.
 - ① Aircraft equipment ② Aerospace equipment ③ Undersea equipment ④ Power plant control equipment
 - ⑤ Medical equipment ⑥ Transportation equipment (trains, ships, etc.)
 - ⑦ Traffic signal equipment ⑧ Disaster prevention/crime prevention equipment
 - ⑨ Data-processing equipment
 - ⑩ Application of similar complexity and/or reliability requirements to the applications listed in the above.

4. Addition of failsafe 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.

① Storage condition	Temperature	:-10°C ~ +40°C
	Humidity	: Max. 75% RH (not dewing condition)
② Term	Please use this product within 6 month after shipment by first-in first-out stocking system.	
③ Handling after seal open	After unpack aging of the minimum package, reseal it promptly or store it inside a sealed container with a drying agent.	
④ Place	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° and again bent back to the initial position,
 Then other side count the bent by 90° 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. Please return one duplicate of this product specification to us with your receipt signature. If the duplicate is not returned by appointed day, this product specification will be deemed to have been received by you.
4. 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.