

Chip radial type NTC thermistor

1. Part Numbering (Part Number)

NXR	T	15	XM	202	E	A	3	A	016
Product ID	Individual specifications	Chip dimensions	Temperature characteristics	Resistance	Resistance tolerance	Lead wire specifications	Lead wire forming	Packaging	*1

*1 : Lead distance between reference and bottom planes

2. Part No. and ratings

Murata P/N	Resistance value at.25°C	B-constant 25/50°C	Operating current for sensor (mA) (*1,*2)	Operating temperature range (°C)
NXRT15XM202EA3A016	2k Ω +/-3%	3500K +/-1%	0.27	-40~+125
NXRT15XV502FA3A016	5k Ω +/-1%	3936K +/-1%	0.17	
NXRT15XH103FA3A016	10k Ω +/-1%	3380K +/-1%	0.12	
NXRT15XV103FA3A016	10k Ω +/-1%	3936K +/-1%	0.12	
NXRT15WB333JA3A016	33k Ω +/-5%	4050K +/-3%	0.07	
NXRT15WB473FA3A016	47k Ω +/-1%	4050K +/-1%	0.06	
NXRT15WF104FA3A016	100k Ω +/-1%	4250K +/-1%	0.04	

Thermal dissipation constant	1.5mW/°C (*3)
Rated electric power	7.5mW (*1,3)
Thermal time constant	4sec. (25°C to 50°C in air)

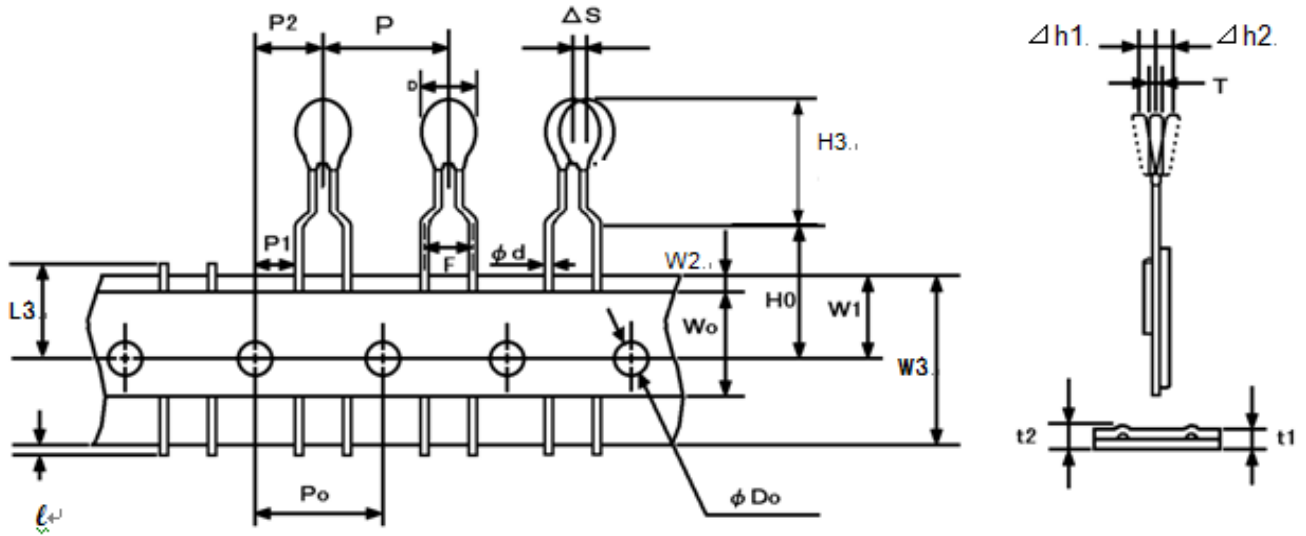
*1 : Measured at 25°C in still air, as a single unit without mounting.

*2 : Operating current rises for sensor rises thermistor's temperature by 0.1°C.
Please regard self heat of the Chip Radial.

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

3. Quantity (Standard Quantity) 2500pcs./unit bag.

4. Dimension of taping



Item	Code	Dimension (mm)
Pitch of component	P	12.7±1.0
Pitch of sproket hole	P0	12.7±0.3
Lead spacing	F	5.0±1.0
Length from hole center to component center	P2	6.35±1.3
Length from hole center to lead	P1	3.85±0.7
Body diameter	D	4.0 max.
Deviation along tape, left or right	ΔS	0±2.0
Carrier tape width	W3	18.0±0.5
Position of sproket hole	W1	9.0±0.5
Lead distance between reference and bottom planes	H0	16.0±1.0
Height of component	H3	7.5±1.0
Protrusion length	ℓ	+0.5~-1.0
Diameter of sproket hole	φ D0	4.0±0.1
Lead diameter	φ d	0.40±0.05
Total tape thickness	t1	0.6±0.3
Total thickness, tape and lead wire	t2	1.6 max.
Deviation across tape	Δh1, Δh2	1.0 max.
Portion to cut in case of defect	L3	11.0+0/-2.0
Hold down tape width	W0	9.5 min.
Hold down tape position	W2	1.5±1.5
Thickness	T	2.0 max.

Notice for use

Special Caution

1. This product is using the solder of about 240 °C of melting points. Please perform soldering on a condition not melt the solder in resin head. (260 degrees Celsius, less than 10 seconds and more than 8mm 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.
2. Please do a quality rating enough by a real machine when bonding, the resin molding, and the resin coating, etc. 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.
3. If strong tension against a lead or aggressiveness pressure strong against a resin part is applied, a resin part and an internal element will break or crack. In addition, the risk of the break or crack increases more because resin might soften in a high temperature, the pressurized state. Please avoid use in the state where it was pressurized.

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. 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.
place with splashed water or under high humidity with dewing.
3. 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
4. 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.
① Aircraft equipment ② Aerospace equipment ③ Undersea equipment ④ Power plant control equipment
⑤ Medical equipment ⑥ Transportation equipment (vehicles, 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.
5. 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.

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Murata Manufacturing Co., Ltd.

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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 : 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.
 - 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.
6. Please do not do the processing bending and straightening the quinquparts of the lead.
When such a processing is necessary, please talk to us.

Note

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.