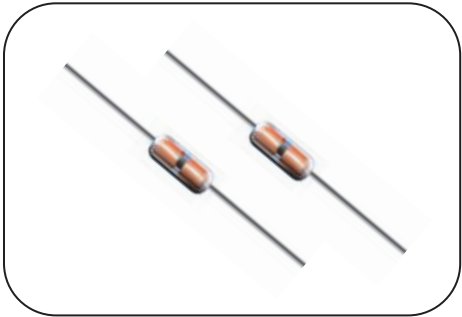


NTC Thermistor : DHT Type

Glass Axial Type for Temperature Sensing/Compensation

Features

- 1. RoHS compliant
- 2. Body size $\Phi 2\text{mm} \times 4\text{mm}$
- 3. Axial lead glass-sealed
- 4. Operating temperature range: $-40^{\circ}\text{C} \sim +200^{\circ}\text{C}$
- 5. Agency recognition: UL / cUL



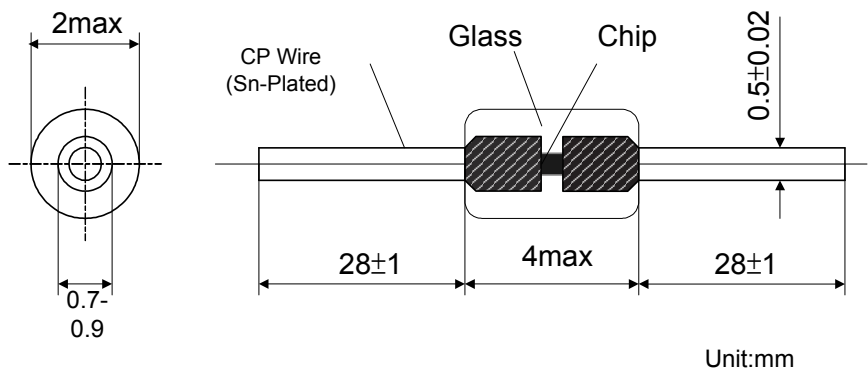
Recommended Applications

- 1. Home appliances (air conditioner, refrigerator, electric fan, electric cooker, washing machine, microwave oven, drinking machine, CTV, radio.)
- 2. Automotive electronics
- 3. Heaters

Part Number Code

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16					
Product Type				Size				Definition of B Value				Zero Power Resistance at 25°C (R ₂₅)				Tolerance of R ₂₅				B Value				Tolerance of B Value				Optional Suffix				Appearance			
DHT		THINKING NTC Thermistor DHT Series		0		Φ2 xL4max		A		B _{25/85}		102		1KΩ		F		±1%		34D		3435		2		±2%		Y		RoHS Compliant		S		Sn-plated CP wire	
								B		B _{25/50}		103		10KΩ		G		±2%		355		3550		3		±3%									
												473		47KΩ		H		±3%		39H		3975													
																J		±5%		435		4350													
																K		±10%																	

Structure and Dimensions



NTC Thermistor : DHT Type

Glass Axial Type for Temperature Sensing/Compensation

Electrical Characteristics

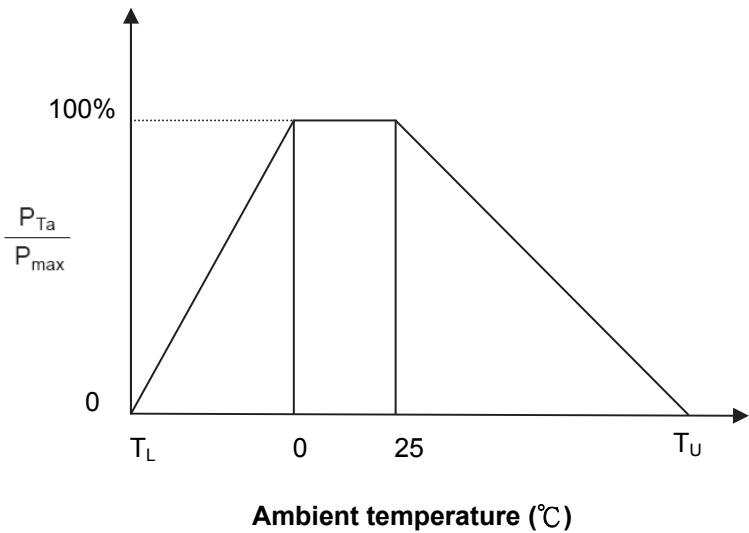
Part No.	Zero Power Resistance at 25°C	Tolerance of R ₂₅	B Value		Tolerance of B Value	Max. Power Dissipation at 25°C	Dissipation Factor	Thermal Time Constant	Operating Temperature Range	Safety Approvals	
	R ₂₅ (KΩ)	(± %)	(K)		(±%)	P _{max} (mW)	δ(mW/°C)	τ (Sec.)	T _L ~T _U (°C)	UL	cUL
DHT0A502□355*	5	1、2、3、5、10	25/85	3550	2、3	120	≥2	≤10	-40~+200	✓	✓
DHT0B103□355*	10		25/50	3550						✓	✓
DHT0A103□34D*	10		25/85	3435						✓	✓
DHT0A103□347*	10		25/85	3470						✓	✓
DHT0A103□39H*	10		25/85	3975						✓	✓
DHT0B203□395*	20		25/50	3950						✓	✓
DHT0B303□395*	30		25/50	3950						✓	✓
DHT0B473□395*	47		25/50	3950						✓	✓
DHT0B503□395*	50		25/50	3950						✓	✓
DHT0B104□400*	100		25/50	4000						✓	✓
DHT0A104□39H*	100		25/85	3975						✓	✓
DHT0A104□430*	100		25/85	4300						✓	✓
DHT0B204□395*	200		25/50	3950						✓	✓
DHT0A204□400*	200		25/85	4000						✓	✓
DHT0B204□435*	200		25/50	4350						✓	✓

Note 1: □ = Tolerance of R₂₅
 * = Tolerance of B value

Note 2: UL/cUL File No: E138827

Note 3: Special specifications are available upon request.

Max. Power Dissipation Derating Curve



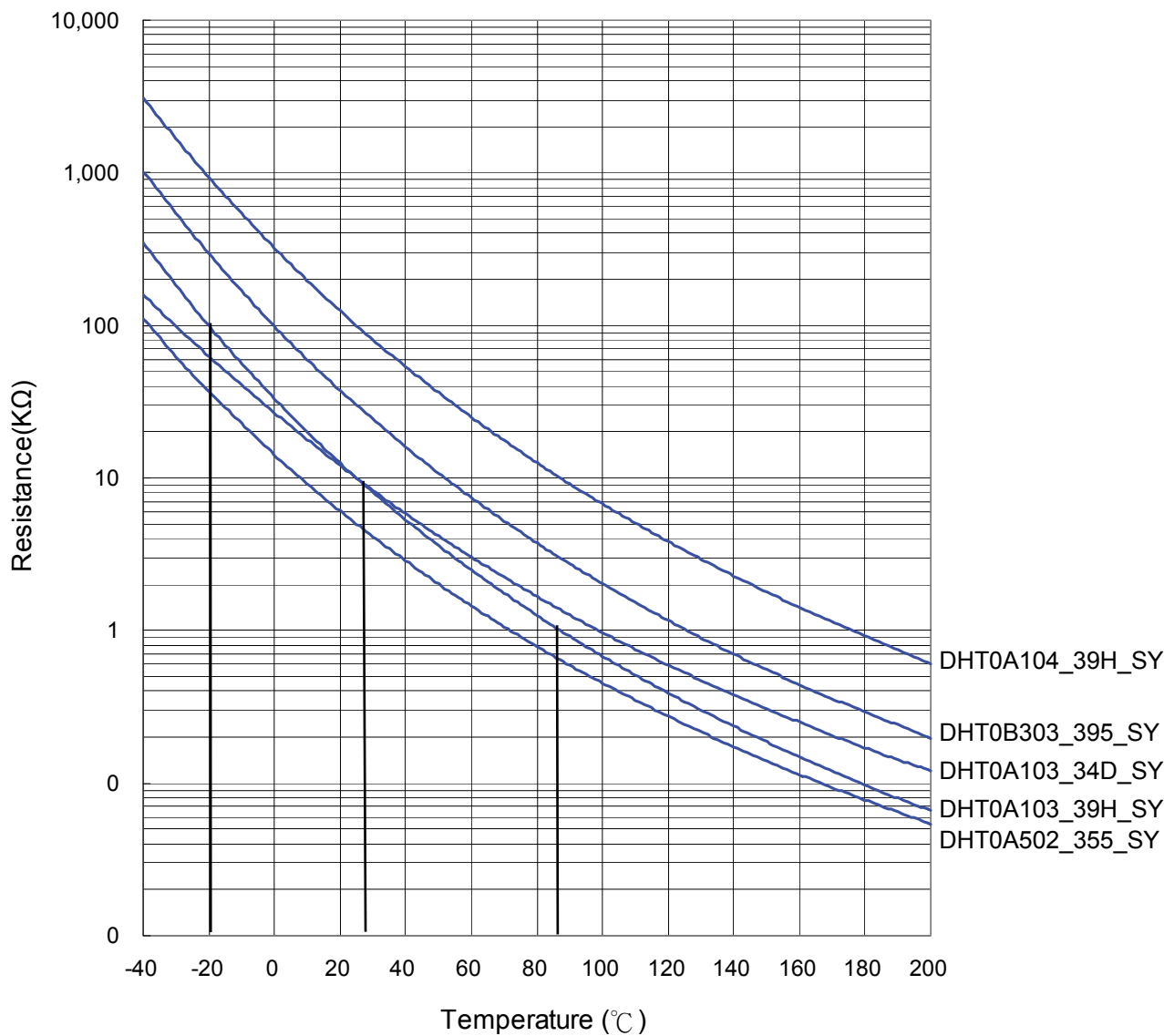
T_U : Maximum operating temperature (°C)
 T_L : Minimum operating temperature (°C)

For example:
 Ambient temperature (T_a) = 55°C
 Maximum operating temperature (T_U) = 200°C
 $P_{Ta} = (T_U - T_a) / (T_U - 25) \times P_{max} \cong 83\% P_{max}$

NTC Thermistor : DHT Type

Glass Axial Type for Temperature Sensing/Compensation

■ R-T Characteristic Curves

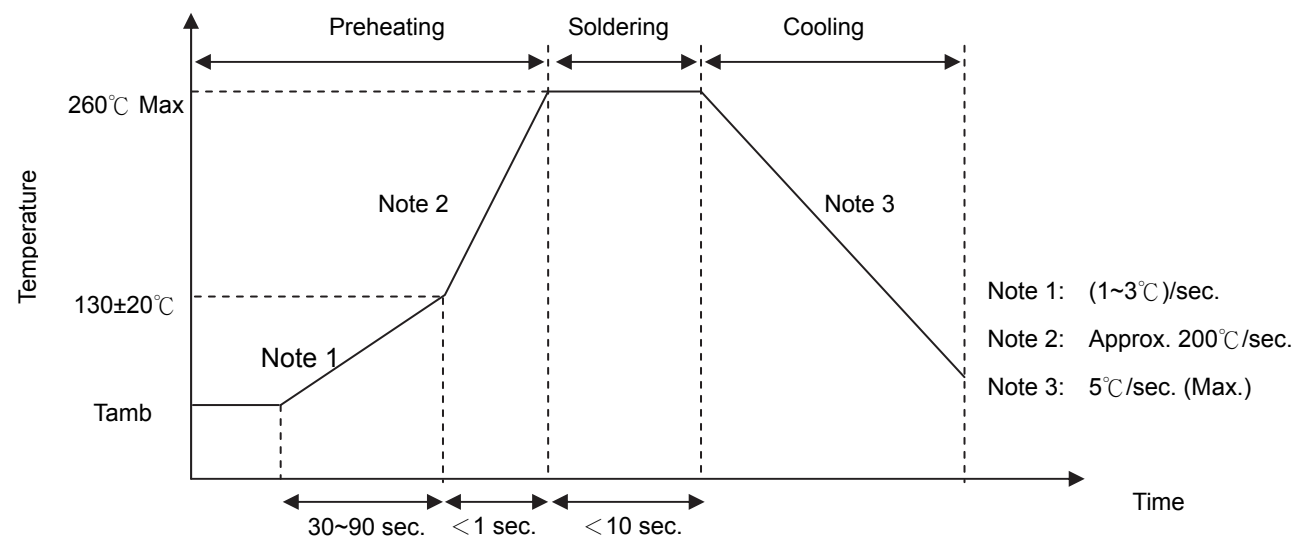


NTC Thermistor : DHT Type

Glass Axial Type for Temperature Sensing/Compensation

Soldering Recommendation

Wave Soldering Profile



Recommended Reworking Conditions With Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	360°C (max.)
Soldering Time	3 sec. (max.)
Distance from Thermistor	2 mm (min.)

NTC Thermistor : DHT Type

Glass Axial Type for Temperature Sensing/Compensation

■ Reliability

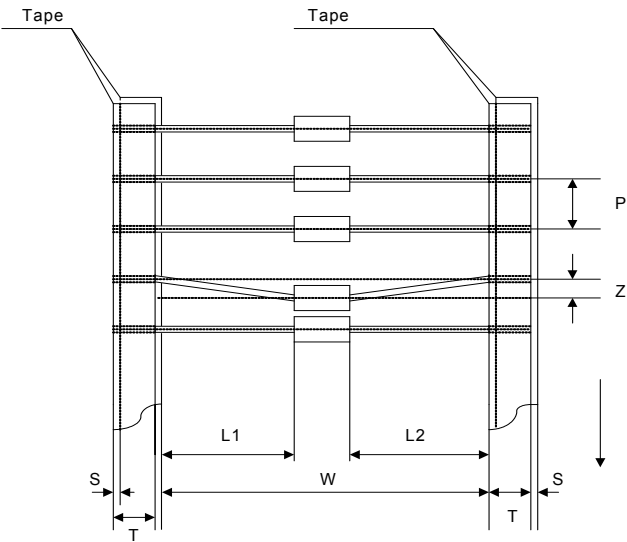
Item	Standard	Test conditions / Methods	Specifications															
Tensile Strength of Terminations	IEC 60068-2-21	<div>Gradually apply the force specified and keep the unit fixed for 10±1 sec.</div> <div><div>Terminal diameter</div><div>Force</div><div>(mm)</div><div>(Kg)</div><div>0.3<d≤0.5</div><div>0.5</div></div>	No visible damage															
Bending Strength of Terminations	IEC 60068-2-21	<div>Hold specimen and apply the force specified below to each lead. Bend the specimen to 90°, and then return to the original position. Repeat the procedure in the opposite direction.</div> <div><div>Terminal diameter</div><div>Force</div><div>(mm)</div><div>(Kg)</div><div>0.3<d≤0.5</div><div>0.25</div></div>	No visible damage															
Solderability	IEC 60068-2-20	245 ± 3 °C , 3 ± 0.3 sec	At least 95% of terminal electrode is covered by new solder															
Resistance to Soldering Heat	IEC 60068-2-20	260 ± 3 °C , 10 ± 1 sec	No visible damage ΔR ₂₅ /R ₂₅ ≤ 3 %															
High Temperature Storage	IEC 60068-2-2	200 ± 5 °C , 1000 ± 24 hrs	No visible damage ΔR ₂₅ /R ₂₅ ≤ 5 %															
Damp Heat, Steady State	IEC 60068-2-78	40 ± 2°C , 90~95% RH , 1000 ± 24 hrs	No visible damage ΔR ₂₅ /R ₂₅ ≤ 3 %															
Rapid Change of Temperature	IEC 60068-2-14	<div>The conditions shown below shall be repeated 5 cycles.</div> <table><tr><th>Step</th><th>Temperature (°C)</th><th>Period (minutes)</th></tr><tr><td>1</td><td>-40 ± 5</td><td>30 ± 3</td></tr><tr><td>2</td><td>Room temperature</td><td>5 ± 3</td></tr><tr><td>3</td><td>200 ± 5</td><td>30 ± 3</td></tr><tr><td>4</td><td>Room temperature</td><td>5 ± 3</td></tr></table>	Step	Temperature (°C)	Period (minutes)	1	-40 ± 5	30 ± 3	2	Room temperature	5 ± 3	3	200 ± 5	30 ± 3	4	Room temperature	5 ± 3	No visible damage ΔR ₂₅ /R ₂₅ ≤ 3 %
Step	Temperature (°C)	Period (minutes)																
1	-40 ± 5	30 ± 3																
2	Room temperature	5 ± 3																
3	200 ± 5	30 ± 3																
4	Room temperature	5 ± 3																
Max. Power Dissipation	IEC 60539-1	25 ± 5°C , Pmax., 1000 ± 24 hrs	No visible damage ΔR ₂₅ /R ₂₅ ≤ 5 %															

NTC Thermistor : DHT Type

Glass Axial Type for Temperature Sensing/Compensation

■ Packaging

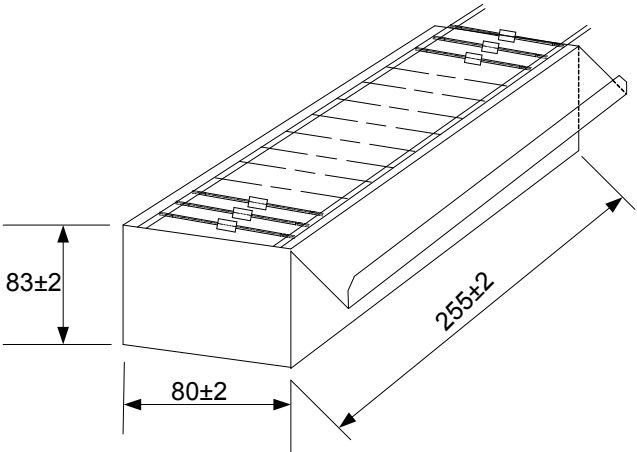
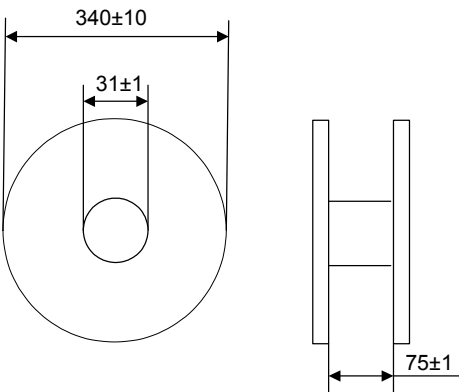
- Taping Specification



Item	W	P	L1-L2	T	Z	S
Max.	53	5.5	1	7	1.2	0.8
Min.	51	4.5	0	5	0	0

■ Quantity

- Bulk Packing: 500 pcs/bag
- Reel Packing: 5,000 pcs/reel
- Ammo Packing: 5,000 pcs/box



■ Warehouse Storage Conditions of Products

- Storage Conditions :
 1. Storage Temperature: -10℃ ~+40℃
 2. Relative Humidity: ≤75%RH
 3. Keep away from corrosive atmosphere and sunlight.
- Period of Storage : 1 year