



东莞久尹电子有限公司  
**DONGGUAN JOYIN ELECTRONICS CO., LTD.**



# SPECIFICATION FOR APPROVAL

201805074A

<b>CUSTOMER:</b>	万保刚		
<b>PART NO. :</b>	_____		
	JCR503K430KA54PU505Y		
<b>MODEL NO. :</b>	_____		
	JCR503K430KA	<b>ISSUE DATE :</b>	May-31-2018
<b>CUSTOMER P/N :</b>	_____	<b>REV. NO :</b>	A
	_____	<b>REV. DATE :</b>	_____

## JOYIN ENGINEERING SIGNATURE

DRAWN BY 庞春喜	CHECKED BY	APPROVED BY
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## CUSTOMER RESPONSE

- Approval
- Approval with the following change
- Reject with the following reasons

CUSTOMER SIGNATURE	TITLE	DATE
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东莞久尹电子有限公司  
DONGGUAN JOYIN  
ELECTRONICS CO., LTD

NTC Thermistor JCR Type

Edition:JCR503K430KA54PU505Y

## REVISED RECORD SHEET

REV. NO	REV. DATE	REVISED CONTENT



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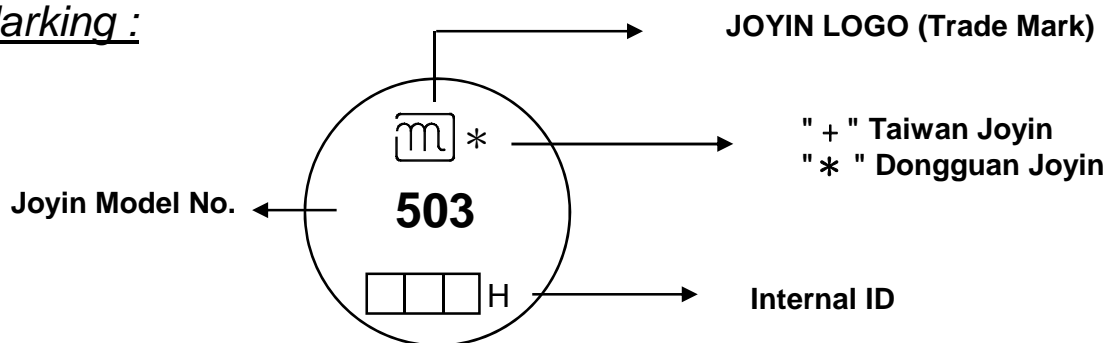


### Part Number Code

JCR 503 K 430 K A 5 4 P U5 05 Y  
(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

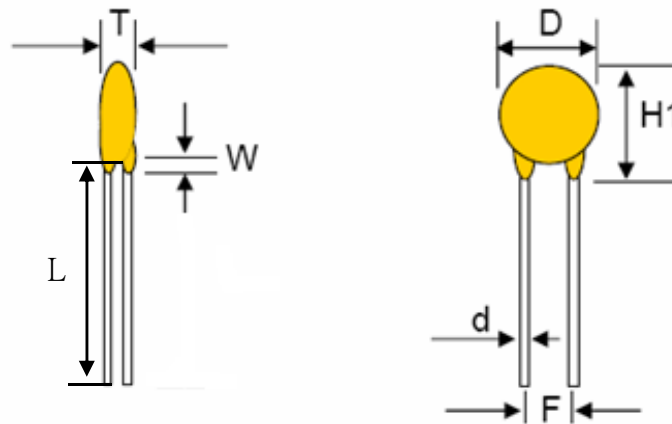
No.	Item	Digit	Specification
(1)	Product Type	JCR	JOYIN NTC Thermistor JCR Type
(2)	Resistance at 25°C	503	$50 \times 10^3 \Omega = 50K\Omega$
(3)	Tolerance of R25°C	K	±10%
(4)	B Value	430	4300K
(5)	Tolerance of B Value	K	±10%
(6)	Definition of B Value	A	$B_{25/50}$
(7)	Lead Diameter	5	0.5±0.05 mm
(8)	Lead spacing	4	3.5 mm
(9)	Lead Style	P	Straight Lead
(10)	Packaging	U5	Bulk & Lead Length 25 mm min
(11)	Body Size	05	Φ 5mm
(12)	Optional Suffix	Y	Yellow Powder & Halogen-free CP Wire

### Marking :





## Structure and Dimensions



( Unit : mm )

Body Size	D max.	T max.	F±1.0	d±0.05	L min	H1 max	W max
Φ 5 mm	6.0	3.5	3.5	0.5	25.0	8.0	3.0

Material of coating : Epoxy powder

Color of coating : Yellowish brown

## Electrical Characteristics

Part No.	Zero Power Resistance at 25°C	Tolerance of R <sub>25</sub>	B <sub>25/50</sub> Value	Tolerance of B Value	Max. Power Rating at 25°C
	R <sub>25</sub> (KΩ)	(± %)	(K)	(± %)	P <sub>max</sub> (mW)
JCR503K430KA54PU505Y	50	10	4300	10	450

Part No.	Dissipation Factor	Thermal Time Constant	Operating Temperature Range
	δ (mW/°C)	τ (sec.)	T <sub>L</sub> ~T <sub>U</sub> ( °C )
JCR503K430KA54PU505Y	7.5	18	-40 ~ +125



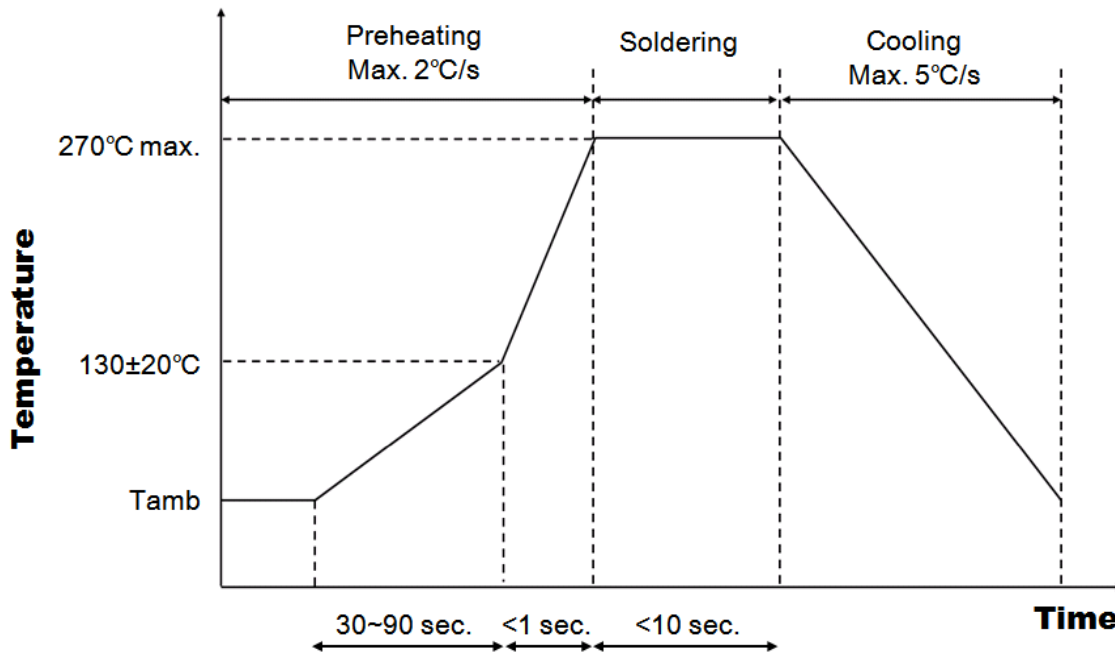
### NTC Thermistor JCR Type

Item	Standard	Test condition	Specifications															
Terminal pull strength	IEC 60068-2-21	Gradually applying the force specified and keeping the unit fixed for 10±1 sec.  <table border="1"> <tr> <td>Terminal diameter (mm)</td> <td>Force (Kg)</td> </tr> <tr> <td>0.3&lt;d≤0.5</td> <td>0.5</td> </tr> <tr> <td>0.5&lt;d≤0.8</td> <td>1.0</td> </tr> </table>	Terminal diameter (mm)	Force (Kg)	0.3<d≤0.5	0.5	0.5<d≤0.8	1.0	No visible damage									
Terminal diameter (mm)	Force (Kg)																	
0.3<d≤0.5	0.5																	
0.5<d≤0.8	1.0																	
Bending Strength of Terminals	IEC 60068-2-21	Hold specimen and apply the force specified below to each lead. Bend the specimen to 90°, then return to the original position. Repeat the procedure in the opposite direction.  <table border="1"> <tr> <td>Terminal diameter (mm)</td> <td>Force (Kg)</td> </tr> <tr> <td>0.3&lt;d≤0.5</td> <td>0.25</td> </tr> <tr> <td>0.5&lt;d≤0.8</td> <td>0.5</td> </tr> </table>	Terminal diameter (mm)	Force (Kg)	0.3<d≤0.5	0.25	0.5<d≤0.8	0.5	No visible damage									
Terminal diameter (mm)	Force (Kg)																	
0.3<d≤0.5	0.25																	
0.5<d≤0.8	0.5																	
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±5°C, 10±1 sec	No visible damage ΔR25 ≤ ±3%															
High temperature storage	IEC 60068-2-2	125±5°C, 1000hrs	No visible damage ΔR25 ≤ ±5%															
Damp Heat Steady State	IEC 60068-2-3	40±2°C, 90~95% RH, 1000±24hrs	No visible damage ΔR25 ≤ ±3%															
Rapid Change of Temperature	IEC 60068-2-14	The conditions shown below shall be repeated 5 Cycles . <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Period (minutes)</th> </tr> </thead> <tbody> <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>125±5</td> <td>30±3</td> </tr> <tr> <td>4</td> <td>Room temperature</td> <td>5±3</td> </tr> </tbody> </table>	Step	Temperature (°C)	Period (minutes)	1	-40±5	30±3	2	Room temperature	5±3	3	125±5	30±3	4	Room temperature	5±3	No visible damage ΔR25 ≤ ±3%
Step	Temperature (°C)	Period (minutes)																
1	-40±5	30±3																
2	Room temperature	5±3																
3	125±5	30±3																
4	Room temperature	5±3																
Life Test	IEC 60539-1 4.26.3	25±5°C, Pmax, 1000hrs	No visible damage ΔR25 ≤ ±5%															



## Soldering Recommendation

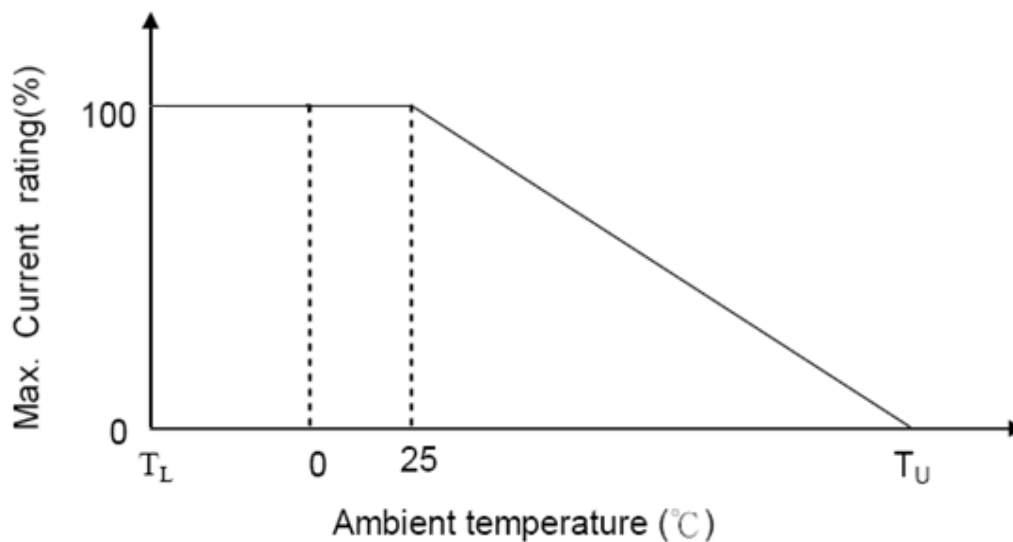
### ■ Wave Flow Soldering Profile



### ■ Recommended Reworking Conditions With Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	380°C (max.)
Soldering Time	3 sec (max.)
Distance NTC Thermistor	2 mm (min.)

## **Power Derating Curve**



Note : T<sub>L</sub> = Minimum operating temperature (°C)  
T<sub>U</sub> = Maximum operating temperature (°C)

For example :

Ambient temperature(T<sub>a</sub>)=55°C

Maximum operating temperature(T<sub>u</sub>)=120°C

$P_{T_a} = (T_u - T_a) / (T_u - 25) \times P_{max} = 70\% P_{max}$

## **RoHS Compliant Declaration**

We hereby declare that the components delivered to your company are compliant with RoHS directive 2011/65/EU

## **Storage condition of products**

(I) Storage Conditions :

1.Storage Temperature : -10 ~ +40°C

2.Relative Humidity : ≤75%RH

3.Keep away from corrosive atmosphere and sunlight.



## **Safety Approvals**

( Model No.: JCR503K430KA )



\* UL 1434 recognized ( File # E171531 )



\* TÜV / EN60539-1:2008 recognized  
( File # R 50267265 )

## **Certificate**

(1) ISO 9001 certificate

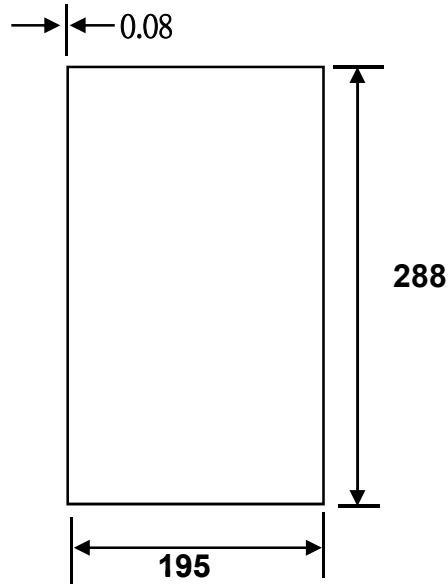
## **Tset Report**

- (1) RoHS SGS test report
- (2) RoHS2.0 SGS test report
- (2) Halogen-free test report



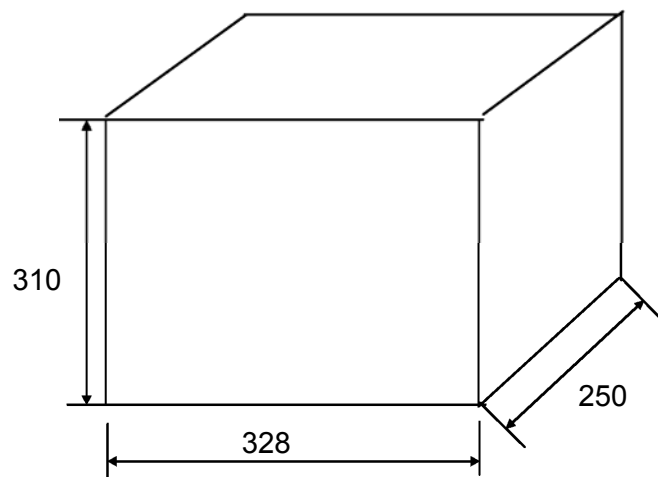
Standard Packing

(1) : Quantity (1000pcs / Poly bag)



(Unit: mm)

(2) : Quantity ( 20 Poly bags / Carton)



(Unit: mm)