DATA SHEET

PRODUCT **NTC Thermistor**

SERIES JCR 03 Series

PART NO.

QUICK REFERENCE DATA

PARAMETER	VALUE	UNIT
Size	03	mm
Resistance Value R25	10~ 330	KΩ
B25/50	3380~4250	K
B25/85	3435~4250	K

ISSUE DATE 2023/2/4

REVISION DATE 2023/2/4

REFERENCE NO.

RoHS COMPLIANCE ITEM

Halogen Free

NTC Sensor STD. JCR03 series

Features

RoHS / Halogen-Free (HF) compliant	符合 RoHS / Halogen-Free (HF)規範
Body size : Ø3mm	尺寸：Ø3mm
Operating temperature range : -40℃~+125℃	工作溫度範圍：-40℃～+ 125℃
Wide resistance range	電阻範圍廣
Qualified based on AEC-Q200	符合 AEC-Q200
Agency recognition: UL / TUV	安規認證: UL / TUV

Applications

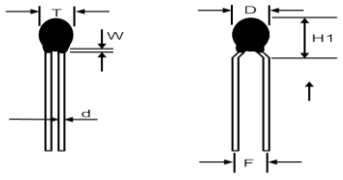
Home appliances	家電
Office automation	OA 設備
Automotive	汽車
Switch mode power supplies	開關模式電源
Adapters	適配器
Security	安防設備

How to Order

Part Number Code																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
J	**C**	**R**	**1**	**0**	**3**	**F**	**3**	**4**	**4**	**F**	**B**	**5**	**2**	**P**	**U**	**5**	**0**	**3**	**B**
①			②			③	④			⑤	⑥	⑦	⑧	⑨	⑩		Ⓐ		Ⓑ

①	Product Type	JCR03 series	⑤	Tolerance of B Value	F = ±1% G = ±2% H = ±3% J = ±5%	⑨	Lead Style	E = Outside Kink Lead G = Winder Kink Lead
②	Zero Power Resistance @25℃（R25）	502 = 5KΩ 103 =10KΩ 474 =470KΩ	⑥	Definition of B Value	A = 25/50 B = 25/85	⑩	Packaging	U5 = L:25mm for Bulk AW = H0:16mm for Ammo
③	Tolerance of R25	F = ±1% G = ±2% H = ±3% J = ±5% K = ±10%	⑦	Lead Diameter	5 = 0.5 mm	Ⓐ	Body Size	03 = 3 mm
④	B Value	344 = 3435 K 405 = 4050 K	⑧	Lead Spacing	2 = 2.5 mm 4 = 3.5 mm	Ⓑ	Optional Suffix	Internal Control Code

Structure and Dimension



Ø 3mm	4.0	3.5	2.5	0.5	3.0	10.0

Unit in mm

Body Size	Dmax.	Tmax.	F±0.5	d±0.05	Wmax	H1max

Electrical Characteristics

Part No	Zero Power Resistance at 25℃	Tolerance of R25	B25/50 Value	Tolerance of B Value	Dissipation Factor	Thermal Time Constant	Max. Power Rating at 25℃	Safety Approvals	
	R 25 (Ω)	(± %)	(K)	(± %)	δ(mW/℃)	τ (sec.)	(mW)	cULus	
JCR103X338YA	10,000	10,5,3,2,1	3380	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR103X410YA	10,000	10,5,3,2,1	4100	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR473X395YA	47,000	10,5,3,2,1	3950	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR503X395YA	50,000	10,5,3,2,1	3950	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR104X395YA	100,000	10,5,3,2,1	3950	5,3,2,1	Approx. 2.5	Approx. 18	150		
JCR104X425YA	100,000	10,5,3,2,1	4250	5,3,2,1	Approx. 2.5	Approx. 18	150		

Part No	Zero Power Resistance at 25℃	Tolerance of R25	B25/85 Value	Tolerance of B Value	Dissipation Factor	Thermal Time Constant	Max. Power Rating at 25℃	Safety Approvals	
	R 25 (Ω)	(± %)	(K)	(± %)	δ(mW/℃)	τ (sec.)	(mW)	cULus	
JCR102X360YB	1,000	10,5,3,2,1	3600	5,3,2,1	Approx. 2.5	Approx. 18	150		
JCR472X390YB	4,700	10,5,3,2,1	3900	5,3,2,1	Approx. 2.5	Approx. 18	150		
JCR502X345YB	5,000	10,5,3,2,1	3450	5,3,2,1	Approx. 2.5	Approx. 18	150		
JCR682X390YB	6,800	10,5,3,2,1	3900	5,3,2,1	Approx. 2.5	Approx. 18	150		
JCR103X344YB	10,000	10,5,3,2,1	3435	5,3,2,1	Approx. 2.5	Approx. 18	150	■	■
JCR103X398YB	10,000	10,5,3,2,1	3980	5,3,2,1	Approx. 2.5	Approx. 18	150	■	■
JCR333X398YB	33,000	10,5,3,2,1	3980	5,3,2,1	Approx. 2.5	Approx. 18	150		
JCR473X409YB	47,000	10,5,3,2,1	4090	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR503X409YB	50,000	10,5,3,2,1	4090	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR104X395YB	100,000	10,5,3,2,1	3950	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR104X408YB	100,000	10,5,3,2,1	4080	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR104X419YB	100,000	10,5,3,2,1	4190	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR104X425YB	100,000	10,5,3,2,1	4250	5,3,2,1	Approx. 2.5	Approx. 18	150		
JCR104X436YB	100,000	10,5,3,2,1	4360	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR204X406YB	200,000	10,5,3,2,1	4055	5,3,2,1	Approx. 2.5	Approx. 18	150	■	
JCR334X398YB	330,000	10,5,3,2,1	3980	5,3,2,1	Approx. 2.5	Approx. 18	150		

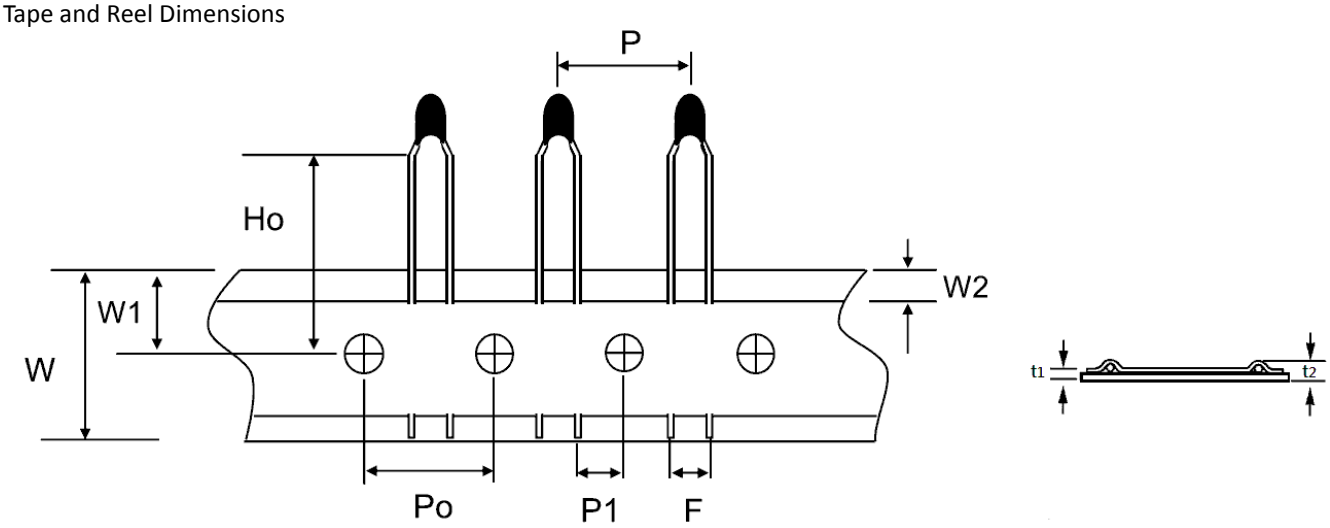
※ X : R Tolerance, Y : B Value Tolerance

Reliability-NTC Thermistor JCR

<table>
<tr><th>Item</th><th>Standard</th><th>Test condition</th><th>Specifications</th></tr>
<tr><td>Terminal pull strength</td><td>IEC 60068-2-21</td><td>Gradually applying the force specified and keeping the unit fixed for 10±1 sec.
<table><tr><th>Terminal diameter (mm)</th><th>Force (Kg)</th></tr><tr><td>d ≦ 0.25mm</td><td>1N (0.102Kg)</td></tr><tr><td>0.25mm ＜ d ≦ 0.35mm</td><td>2.5N (0.255Kg)</td></tr><tr><td>0.35mm ＜ d ≦ 0.50mm</td><td>5N (0.510Kg)</td></tr><tr><td>0.50mm ＜ d ≦ 0.80mm</td><td>10N (1.02Kg)</td></tr></table></td><td>No visible damage</td></tr>
<tr><td>Bending Strength of Terminals</td><td>IEC 60068-2-21</td><td>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><tr><th>Terminal diameter (mm)</th><th>Force (Kg)</th></tr><tr><td>d ≦ 0.25mm</td><td>0.5N (0.051Kg)</td></tr><tr><td>0.25mm ＜ d ≦ 0.35mm</td><td>1.25N (0.128Kg)</td></tr><tr><td>0.35mm ＜ d ≦ 0.50mm</td><td>2.5N (0.255Kg)</td></tr><tr><td>0.50mm ＜ d ≦ 0.80mm</td><td>5N (0.510Kg)</td></tr></table></td><td>No visible damage</td></tr>
<tr><td>Solderability</td><td>IEC 60068-2-20</td><td>245±3℃, 3±0.3 sec</td><td>At least 95% of terminal electrode is covered by new solder</td></tr>
<tr><td>Resistance to soldering heat</td><td>IEC 60068-2-20</td><td>260±5℃,10±1 sec</td><td>No visible damage
△R25/R25≦±5%</td></tr>
<tr><td>High temperature storage</td><td>IEC 60068-2-2</td><td>125±2℃, 1000hrs</td><td>No visible damage
△R25/R25≦±5%</td></tr>
<tr><td>Damp Heat Steady State</td><td>IEC 60068-2-78</td><td>40±2℃ , 90~95% RH, 1000±24hrs</td><td>No visible damage
△R25/R25≦±5%</td></tr>
<tr><td>Rapid Change of Temperature</td><td>IEC 60068-2-14</td><td>The conditions shown below shall be repeated 5 cycles.
<table><tr><th>Step</th><th>Temperature (℃)</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>125±5</td><td>30±3</td></tr><tr><td>4</td><td>Room temperature</td><td>5±3</td></tr></table></td><td>No visible damage
△R25/R25≦±5%</td></tr>
<tr><td>Life Test</td><td>IEC 60539-1 4.26.3</td><td>25±5℃ , Pmax, 1000hrs</td><td>No visible damage
△R25/R25≦±5%</td></tr>
</table>

Packaging

Tape and Reel Dimensions



Unit in mm

Symbols	P	Po	P1	F	Ho	W	Wo	W1	W2	t1	t2
Nor.	12.7	12.7	5.1	2.5	18	18	12	9.0	2.0	0.6	1.2
Tol.	±1.0	±0.3	±1.0	±0.5	±1.0	$^{+1.0}_{-0.5}$	min	±0.5	max	±0.05	max