

PRODUCT SPECIFICATION

PRODUCT : NTC SENSOR STD.

TYPE : JCR03 SERIES

CUSTOMER :

APPROVED BY CUSTOMER

VENDOR :

HITANO ENTERPRISE CORP.
7F-7, NO. 3, WU CHUAN 1ST ROAD, NEW
TAIPEI INDUSTRIAL PARK, NEW TAIPEI CITY,
TAIWAN, R.O.C.
TEL: +886 2 2299 1331 (REP.)
FAX: +886 2 2298 2466

HITANO
ENTERPRISE CORP.®

MAKER :

JOYIN CO., LTD.
No.160, Ln. 623, Shen shen Rd., Yang mei Dist.,
Taoyuan City 326007, Taiwan



JOYIN



Features

- RoHS / Halogen-Free (HF) compliant
- Body size : Ø3mm
- Operating temperature range : -40°C~+125°C
- Wide resistance range
- Agency recognition : UL / TUV

Applications

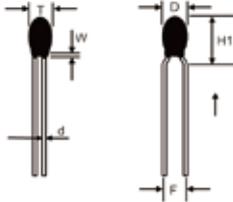
- Home appliances
- Office automation
- Switch mode power supplies
- Adapters
- Security

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°C(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



Unit : mm

Body Size	Dmax.	Tmax.	F±0.5	d±0.05	Wmax	H1max
∅ 3mm	4.0	3.5	2.5	0.5	3.0	10.0

Electrical Characteristics

Part No.	Zero Power Resistance at 25°C	Tolerance of R25	B 25/50 Value	Tolerance of B Value	Dissipation Factor	Thermal Time Constant	Max. Power Rating at 25°C	Safety Approvals
	R 25 (Ω)	(± %)	(K)	(± %)	δ(mW/°C)	τ(sec.)	(mW)	
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°C	Tolerance of R25	B 25/85 Value	Tolerance of B Value	Dissipation Factor	Thermal Time Constant	Max. Power Rating at 25°C	Safety Approvals
	R 25 (Ω)	(± %)	(K)	(± %)	δ(mW/°C)	τ(sec.)	(mW)	
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	

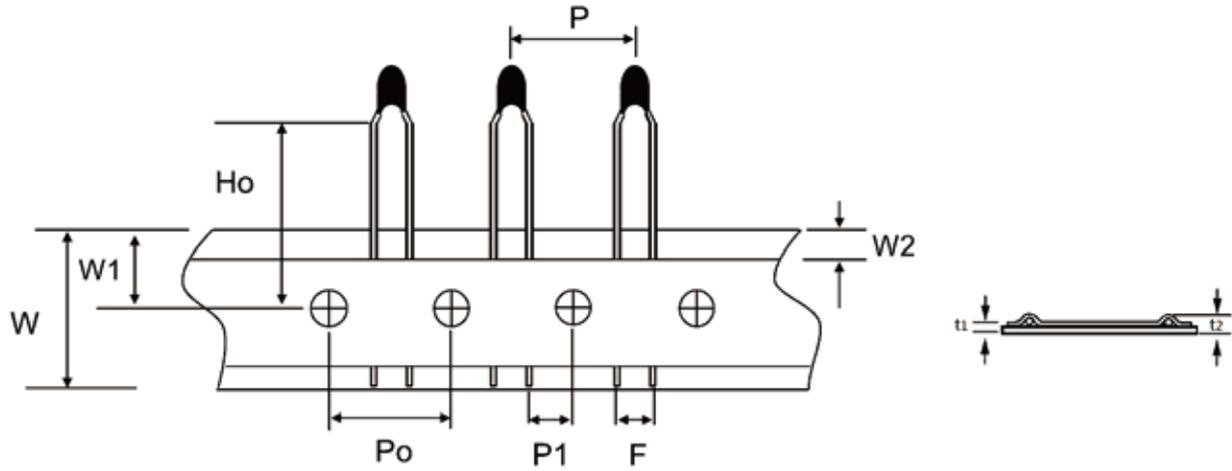
※ X : R Tolerance, Y : B Value Tolerance

Reliability-NTC Thermistor JCR

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"> <thead> <tr> <th>Terminal diameter (mm)</th> <th>Force (Kg)</th> </tr> </thead> <tbody> <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> </tbody> </table>	Terminal diameter (mm)	Force (Kg)	d ≤ 0.25mm	1N (0.102Kg)	0.25mm < d ≤ 0.35mm	2.5N (0.255Kg)	0.35mm < d ≤ 0.50mm	5N (0.510Kg)	0.50mm < d ≤ 0.80mm	10N (1.02Kg)	No visible damage					
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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"> <thead> <tr> <th>Terminal diameter (mm)</th> <th>Force (Kg)</th> </tr> </thead> <tbody> <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> </tbody> </table>	Terminal diameter (mm)	Force (Kg)	d ≤ 0.25mm	0.5N (0.051Kg)	0.25mm < d ≤ 0.35mm	1.25N (0.128Kg)	0.35mm < d ≤ 0.50mm	2.5N (0.255Kg)	0.50mm < d ≤ 0.80mm	5N (0.510Kg)	No visible damage					
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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 △R25/R25 ≤ ±5%															
High temperature storage	IEC 60068-2-2	125±2°C, 1000hrs	No visible damage △R25/R25 ≤ ±5%															
Damp Heat Steady State	IEC 60068-2-78	40±2°C, 90~95% RH, 1000±24hrs	No visible damage △R25/R25 ≤ ±5%															
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 △R25/R25 ≤ ±5%
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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 △R25/R25 ≤ ±5%															

Packaging

Tape and Reel Dimensions



Unit : 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