DATA SHEET

PRODUCT **NTC Thermistor Sensor**

SERIES JFR Series

PART NO.

QUICK REFERENCE DATA

PARAMETER	VALUE	UNIT
Resistance Value R25	10~ 33	KΩ
B25/50	3380~3950	K
B25/85	3435~4050	K

ISSUE DATE 2023/2/4

REVISION DATE 2023/2/4

REFERENCE NO.

RoHS COMPLIANCE ITEM

Halogen Free

NTC Sensor Specialty JFR series

Features

RoHS / Halogen-Free (HF) compliant
Accuracy
Operating temperature range: -40℃～+ 100℃
Agency recognition: UL / TUV

符合 RoHS / Halogen-Free (HF)規範
高精度
工作溫度範圍：-40℃～+ 100℃
安規認證: UL / TUV

Applications

IT equipment
Mobile devices
Battery packs

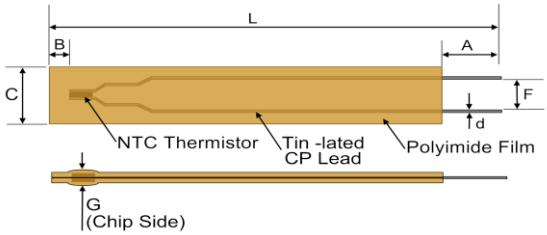
IT 設備
移動設備
電池組

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	**F**	**R**	**1**	**0**	**3**	**F**	**3**	**4**	**4**	**F**	**B**	**2**	**5**	**0**	**5**	**0**	**C**	**P**	**G**
①			②			③	④			⑤	⑥	⑦		⑧			⑨		⑩

①	Product Type	JFR series	⑤	Tolerance of B Value	F = ±1% G = ±2%	⑨	Soldered Length	CP = 5.0mm ± 1.0 mm
②	Zero Power Resistance @25℃（R25）	103 = 10KΩ	⑥	Definition of B Value	A = 25/50 B = 25/85	⑩	Optional Suffix	Internal Control Code
③	Tolerance of R25	F = ±1% G = ±2% H = ±3% J = ±5%	⑦	Lead Diameter	25 = Ø0.25mm			
④	B Value	344 = 3435 K	⑧	Lead Length	025 = 25 mm 050 = 50 mm			

Structure and Dimension



Unit in mm

ITEM	A±1.0	B±0.5	C±0.5	L±1.0	F±0.20	G max	d±0.02
JFR103F344FB25025CPG	5.0	2.0	4.0	25	1.55	0.6	0.25
JFR103F344FB25050CPG	5.0	2.0	4.0	50	1.55	0.6	0.25

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)		
JFR103X338YA	10,000	10,5,3,1	3380	5,3,1	Approx. 1.6	Approx. 3.4	3.5		
JFR103X395YA	10,000	10,5,3,1	3950	5,3,1	Approx. 1.6	Approx. 3.4	3.5		

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)		
JFR103X344YB	10,000	10,5,3,1	3435	5,3,1	Approx. 1.6	Approx. 3.4	3.5	■	■
JFR103X398YB	10,000	10,5,3,1	3980	5,3,1	Approx. 1.6	Approx. 3.4	3.5		
JFR103X405YB	10,000	10,5,3,1	3980	5,3,1	Approx. 1.6	Approx. 3.4	3.5		
JFR333X405YB	33,000	10,5,3,1	3980	5,3,1	Approx. 1.6	Approx. 3.4	3.5		

※ X : R Tolerance, Y : B Value Tolerance

Reliability-NTC Thermistor JFR

<table>
<tr><th>Test description</th><th>Standard</th><th>Test condition</th><th>Specifications</th></tr>
<tr><td>Tensile Strength of Terminal</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 Terminal</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 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±3℃,10±1 sec</td><td>△R25/R25≦±5%</td></tr>
<tr><td>Dry heat</td><td>IEC 60068-2-2</td><td>100±5℃, 1000±24hrs</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>100±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>Room temperature load</td><td>IEC 60539-1</td><td>25±5℃ , Pmax, 1000±24hrs</td><td>No visible damage
△R25/R25≦±5%</td></tr>
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