

Micro-BetaCHIP Thermistor Probe (MCD)



- NTC Temperature Sensor
- Fast time response
- Small tip diameter (Ø0.5mm Max.)
- Various lead lengths available

DESCRIPTION

NTC thermistor soldered to 38 AWG Solid Nickel Bifilar with Polyester Type Insulation. Unit potted in polyimide tube using Epoxy Resin.

FEATURES

- Rapid Time Constant (200 milliseconds in liquids).
- Custom tolerances available on request
- 0.3 mW/°C typ. Dissipation Constant in air at 25°C.
- Smaller than mini-BetaCURVE device.
- Temperature range -40°C to +125°C

APPLICATIONS

- Low volume flow sensors (liquids or gases)
- Laboratory animal research.
- Peltiere (thermal cooler) temperature tracking sensors.
- Temperature control for bath showers.
- DNA research sensors.
- Medical catheters.

PERFORMANCE SPECS

Parameters	Units	Value
Resistance @ +25°C	Ohms	10,000
Resistance tolerance @ 25°C	°C	± 0.2
Alpha Value @ 25°C	%/°C	- 4.39
Beta Value 25/85	K	3976
Tolerance on Beta Value 25/85	%	± 0.5
Time response in Liquids	milliseconds	200
Dissipation Constant in still air	mW/°C	0.3

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MECHANICAL DETAILS

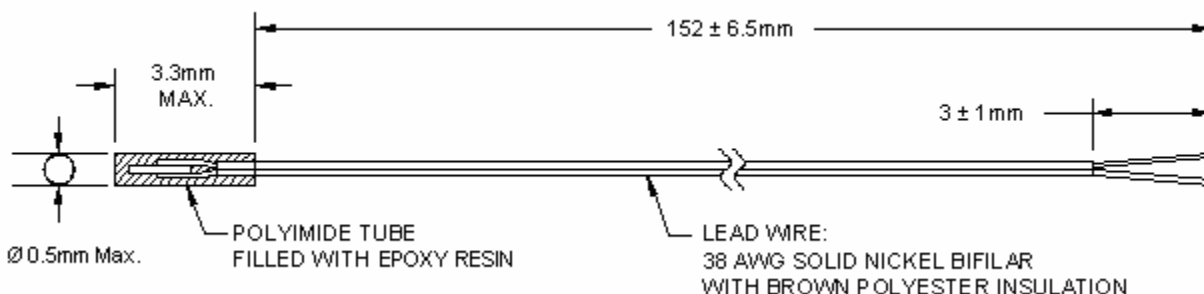


Figure 1: Micro-BetaCHIP Thermistor Probe (MCD)

RESISTANCE V TEMPERATURE TABLE

Temp. °C	Ohms
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-40	336103.2
-39	314558.0
-38	294529.1
-37	275900.8
-36	258567.0
-35	242430.2
-34	227400.9
-33	213396.6
-32	200341.4
-31	188165.5
-30	176804.8
-29	166199.8
-28	156296.1
-27	147043.2
-26	138394.7
-25	130307.6
-24	122742.3
-23	115662.2
-22	109033.4
-21	102824.6
-20	97006.9
-19	91553.3
-18	86439.2
-17	81641.4
-16	77138.6
-15	72911.1
-14	68940.4
-13	65209.7

Temp. °C	Ohms
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-12	61702.9
-11	58405.5
-10	55303.9
-9	52385.2
-8	49637.8
-7	47050.6
-6	44613.4
-5	42316.7
-4	40151.6
-3	38110.0
-2	36184.0
-1	34366.6
0	32650.9
1	31030.8
2	29500.5
3	28054.4
4	26687.5
5	25395.0
6	24172.5
7	23015.9
8	21921.2
9	20884.7
10	19903.2
11	18973.3
12	18092.2
13	17256.9
14	16464.9
15	15713.7

Temp. °C	Ohms
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16	15000.9
17	14324.5
18	13682.3
19	13072.6
20	12493.3
21	11943.0
22	11419.9
23	10922.7
24	10449.8
25	10000.0
26	9572.0
27	9164.7
28	8777.0
29	8407.7
30	8056.1
31	7721.0
32	7401.7
33	7097.3
34	6807.1
35	6530.3
36	6266.2
37	6014.3
38	5773.8
39	5544.2
40	5325.0
41	5115.6
42	4915.6
43	4724.4

Temp. °C	Ohms
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44	4541.7
45	4367.0
46	4200.0
47	4040.2
48	3887.4
49	3741.1
50	3601.1
51	3467.0
52	3338.7
53	3215.8
54	3098.0
55	2985.2
56	2877.0
57	2773.3
58	2673.9
59	2578.6
60	2487.1
61	2399.4
62	2315.2
63	2234.4
64	2156.8
65	2082.3
66	2010.8
67	1942.1
68	1876.0
69	1812.6
70	1751.6
71	1693.0

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72	1636.6	86	1037.3	100	678.4	114	456.5
73	1582.4	87	1005.3	101	658.9	115	444.2
74	1530.2	88	974.4	102	640.0	116	432.3
75	1480.1	89	944.7	103	621.8	117	420.8
76	1431.8	90	916.0	104	604.2	118	409.7
77	1385.3	91	888.3	105	587.1	119	398.8
78	1340.6	92	861.5	106	570.6	120	388.4
79	1297.5	93	835.8	107	554.6	121	378.2
80	1256.1	94	810.9	108	539.2	122	368.3
81	1216.1	95	786.8	109	524.3	123	358.8
82	1177.7	96	763.6	110	509.8	124	349.5
83	1140.6	97	741.2	111	495.9	125	340.6
84	1104.9	98	719.6	112	482.3		
85	1070.5	99	698.6	113	469.2		

ORDERING INFORMATION

Part Number	Description	Ω @25°C	MOQ
10K3MCD1	Micro-BetaCHIP Thermistor Probe (MCD)	10,000	1000 *

* For quantities less than Minimum Order Quantity – contact distribution

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