



MICRO-BETACHIP (MCD)

Thermistor Probe

SPECIFICATIONS

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

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

MECHANICAL DETAILS

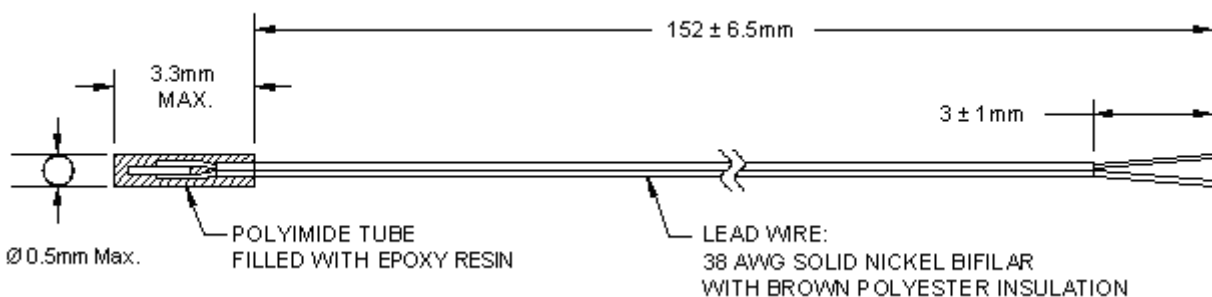


Figure 1: Micro-BetaCHIP Thermistor Probe (MCD)

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
-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

Temp. °C	Ohms
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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
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

Temp. °C	Ohms
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42	4915.6
43	4724.4
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
72	1636.6
73	1582.4
74	1530.2
75	1480.1
76	1431.8
77	1385.3
78	1340.6
79	1297.5
80	1256.1
81	1216.1
82	1177.7
83	1140.6

Temp. °C	Ohms
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84	1104.9
85	1070.5
86	1037.3
87	1005.3
88	974.4
89	944.7
90	916.0
91	888.3
92	861.5
93	835.8
94	810.9
95	786.8
96	763.6
97	741.2
98	719.6
99	698.6
100	678.4
101	658.9
102	640.0
103	621.8
104	604.2
105	587.1
106	570.6
107	554.6
108	539.2
109	524.3
110	509.8
111	495.9
112	482.3
113	469.2
114	456.5
115	444.2
116	432.3
117	420.8
118	409.7
119	398.8
120	388.4
121	378.2
122	368.3
123	358.8
124	349.5
125	340.6

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Thermistor Probe

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

NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
910 Turnpike Road
Shrewsbury, MA 01545
Tel: 1-508-842-0516
Fax: 1-508-842-0342
Sales email:
temperature.sales.amer@meas-spec.com

EUROPE

Measurement Specialties (Europe), Ltd.,
a TE Connectivity Company
Ballybrit Business Park
Galway Ireland
Tel: +353-91-753238
Fax: +353-91-770789
Sales email:
temperature.sales.emea@meas-spec.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 518057
China
Tel: +86 755 3330 5088
Fax: +86 755 3330 5099
Sales email:
temperature.sales.asia@meas-spec.com

TE.com/sensorsolutions

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