



## **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.

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### 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

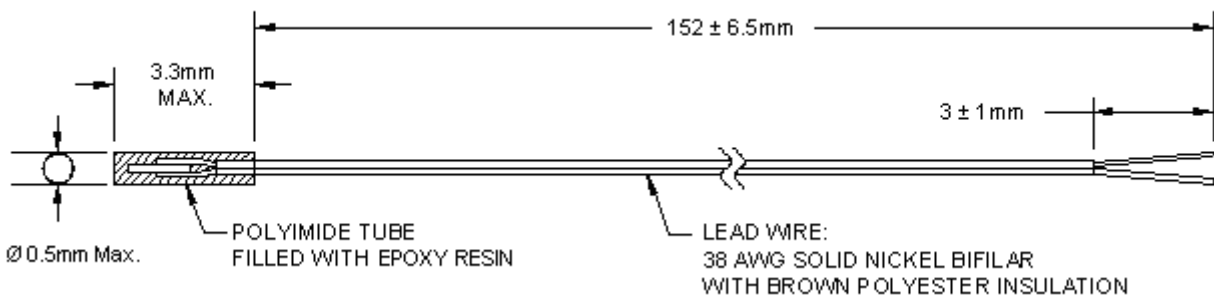


Figure 1: Micro-BetaCHIP Thermistor Probe (MCD)

**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	<b>10000.0</b>
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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### ORDERING INFORMATION

Part Number	Description	$\Omega$ @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

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