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 -40ºC to +125ºC

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

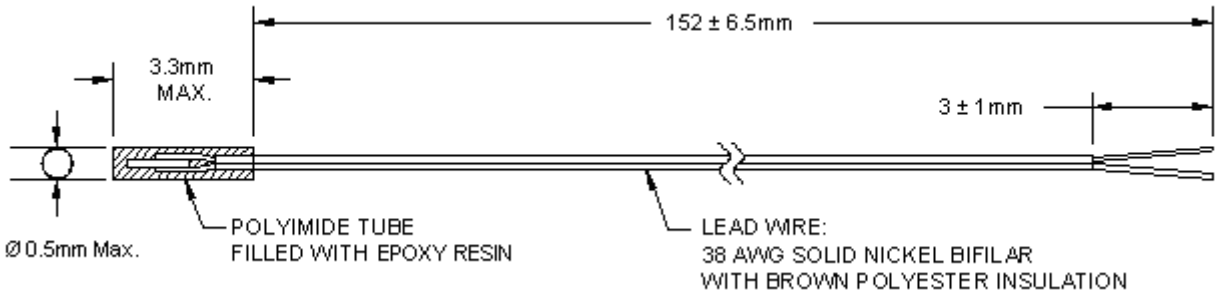

Figure 1: Micro-BetaCHIP Thermistor Probe (MCD)

RESISTANCE V TEMPERATURE TABLE

Temp. °C	Ohms
-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
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
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
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