



## **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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Thermistor Probe

### 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	100,000
Resistance tolerance @ 25°C	°C	± 0.2
Alpha Value @ 25°C	%/°C	- 4.68
Beta Value 25/85	K	4261
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

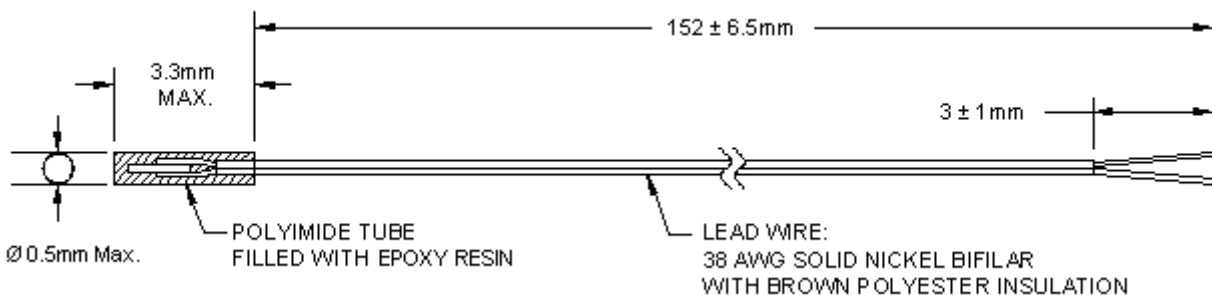


Figure 1: Micro-Beta CHIP Thermistor Probe (MCD)

**RESISTANCE V TEMPERATURE TABLE**

Temp. °C	Ohms	Temp. °C	Ohms	Temp. °C	Ohms	Temp. °C	Ohms
-40	4,071,370.1	1	332,622.5	42	46,875.1	84	9,437.3
-39	3,799,004.1	2	315,290.2	43	44,928.7	85	9,120.6
-38	3,546,480.7	3	298,956.0	44	43,072.9	86	8,815.9
-37	3,312,243.5	4	283,557.2	45	41,303.2	87	8,522.9
-36	3,094,866.1	5	269,035.5	46	39,615.1	88	8,240.9
-35	2,893,041.2	6	255,336.6	47	38,004.5	89	7,969.6
-34	2,705,569.5	7	242,409.5	48	36,467.4	90	7,708.5
-33	2,531,350.9	8	230,207.0	49	35,000.2	91	7,457.1
-32	2,369,375.1	9	218,684.8	50	33,599.3	92	7,215.1
-31	2,218,714.2	10	207,801.5	51	32,261.5	93	6,982.0
-30	2,078,515.5	11	197,518.4	52	30,983.7	94	6,757.6
-29	1,947,995.0	12	187,799.5	53	29,762.8	95	6,541.4
-28	1,826,431.7	13	178,611.0	54	28,596.0	96	6,333.1
-27	1,713,161.8	14	169,921.3	55	27,480.8	97	6,132.4
-26	1,607,574.3	15	161,700.8	56	26,414.6	98	5,939.0
-25	1,509,106.3	16	153,921.8	57	25,395.0	99	5,752.6
-24	1,417,239.1	17	146,558.5	58	24,419.7	100	5,572.8
-23	1,331,494.6	18	139,586.6	59	23,486.7	101	5,399.5
-22	1,251,431.4	19	132,983.3	60	22,594.0	102	5,232.4
-21	1,176,642.6	20	126,727.3	61	21,739.5	103	5,071.2
-20	1,106,752.3	21	120,798.7	62	20,921.5	104	4,915.7
-19	1,041,413.3	22	115,178.7	63	20,138.3	105	4,765.7
-18	980,305.0	23	109,849.8	64	19,388.2	106	4,620.9
-17	923,130.6	24	104,795.4	65	18,669.7	107	4,481.2
-16	869,616.1	<b>25</b>	<b>100,000.0</b>	66	17,981.4	108	4,346.3
-15	819,507.6	26	95,449.2	67	17,321.7	109	4,216.1
-14	772,570.3	27	91,129.2	68	16,689.4	110	4,090.4
-13	728,586.8	28	87,027.3	69	16,083.2	111	3,968.9
-12	687,355.4	29	83,131.3	70	15,502.0	112	3,851.7
-11	648,689.5	30	79,430.0	71	14,944.6	113	3,738.4
-10	612,415.9	31	75,912.6	72	14,409.9	114	3,628.9
-9	578,374.1	32	72,569.2	73	13,896.8	115	3,523.2
-8	546,415.1	33	69,390.3	74	13,404.5	116	3,420.9
-7	516,400.5	34	66,367.1	75	12,932.0	117	3,322.1
-6	488,202.0	35	63,491.1	76	12,478.4	118	3,226.6
-5	461,700.0	36	60,754.5	77	12,042.8	119	3,134.3
-4	436,783.9	37	58,149.8	78	11,624.5	120	3,045.0
-3	413,350.5	38	55,670.2	79	11,222.8	121	2,958.6
-2	391,303.8	39	53,308.9	80	10,836.8	122	2,875.1
-1	370,554.6	40	51,059.8	81	10,465.9	123	2,794.3
0	351,020.0	41	48,917.1	82	10,109.4	124	2,716.1
				83	9,766.8	125	2,640.5