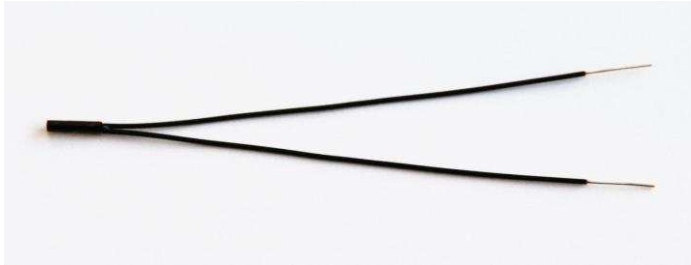


# Mini BetaCURVE Thermistor Probe (MBD)



- NTC Temperature Sensor
- Fast time response
- Small tip diameter
- Various lead lengths available

## DESCRIPTION

NTC Thermistor soldered to 30 AWG Solid Silver Plated Copper Wire with PVDF Insulation. Unit is potted in a polyimide tube with thermally conductive black epoxy.

## FEATURES

Rapid Time Constant  
(400 milliseconds in liquids).  
Standards supplied with  $\pm 0.2^\circ\text{C}$  tolerance  
( $0^\circ\text{C}$  to  $+70^\circ\text{C}$ ).  
Custom tolerances available on request  
Temperature range  $-40^\circ\text{C}$  to  $+125^\circ\text{C}$

## APPLICATIONS

Reduced size allows localized  
temperature sensing  
Small Medical probes  
Micro-flow sensing

## PERFORMANCE SPECS

Parameters	Units	Value
Nominal Resistance at $+25^\circ\text{C}$	Ohms	10000
Resistance tolerance from $0^\circ\text{C}$ to $+70^\circ\text{C}$	$^\circ\text{C}$	$\pm 0.2$
Alpha Value at $+25^\circ\text{C}$	$\%/^\circ\text{C}$	4.39
Beta Value 25/85	K	3976
Tolerance on Beta Value 25/85	%	$\pm 0.5$
Time response in Liquids	milliseconds	400
Dissipation Constant in still air	$\text{mW}/^\circ\text{C}$	0.5

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## MECHANICAL DETAILS

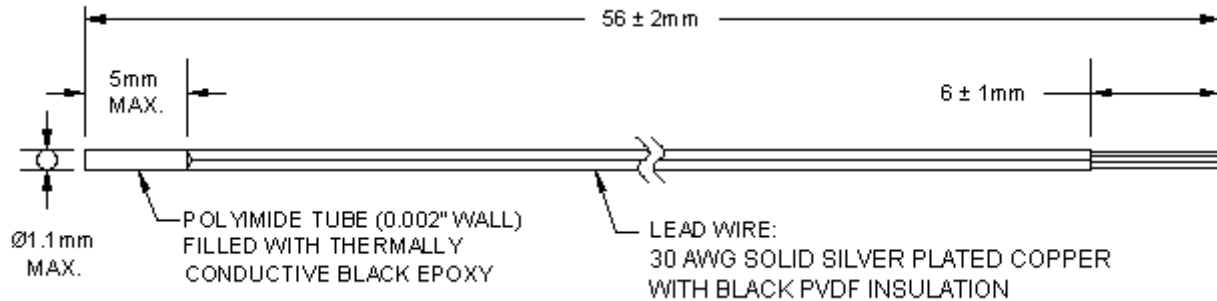


Figure 1: Mini BetaCURVE Thermistor Probe (MBD)

## RESISTANCE V TEMPERATURE TABLE

Temp. °C	Ohms	Temp. °C	Ohms	Temp. °C	Ohms	Temp. °C	Ohms
-40	336103.2	-12	61702.9	16	15000.9	44	4541.7
-39	314558.0	-11	58405.5	17	14324.5	45	4367.0
-38	294529.1	-10	55303.9	18	13682.3	46	4200.0
-37	275900.8	-9	52385.2	19	13072.6	47	4040.2
-36	258567.0	-8	49637.8	20	12493.3	48	3887.4
-35	242430.2	-7	47050.6	21	11943.0	49	3741.1
-34	227400.9	-6	44613.4	22	11419.9	50	3601.1
-33	213396.6	-5	42316.7	23	10922.7	51	3467.0
-32	200341.4	-4	40151.6	24	10449.8	52	3338.7
-31	188165.5	-3	38110.0	<b>25</b>	<b>10000.0</b>	53	3215.8
-30	176804.8	-2	36184.0	26	9572.0	54	3098.0
-29	166199.8	-1	34366.6	27	9164.7	55	2985.2
-28	156296.1	0	32650.9	28	8777.0	56	2877.0
-27	147043.2	1	31030.8	29	8407.7	57	2773.3
-26	138394.7	2	29500.5	30	8056.1	58	2673.9
-25	130307.6	3	28054.4	31	7721.0	59	2578.6
-24	122742.3	4	26687.5	32	7401.7	60	2487.1
-23	115662.2	5	25395.0	33	7097.3	61	2399.4
-22	109033.4	6	24172.5	34	6807.1	62	2315.2
-21	102824.6	7	23015.9	35	6530.3	63	2234.4
-20	97006.9	8	21921.2	36	6266.2	64	2156.8
-19	91553.3	9	20884.7	37	6014.3	65	2082.3
-18	86439.2	10	19903.2	38	5773.8	66	2010.8
-17	81641.4	11	18973.3	39	5544.2	67	1942.1
-16	77138.6	12	18092.2	40	5325.0	68	1876.0
-15	72911.1	13	17256.9	41	5115.6	69	1812.6
-14	68940.4	14	16464.9	42	4915.6	70	1751.6
-13	65209.7	15	15713.7	43	4724.4	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	$\Omega$ @25°C	MOQ
10K3MBD1	Mini BetaCurve Thermistor Probe (MBD)	10000	1000 *

\* For quantities less than Minimum Order Quantity – contact distribution

### NORTH AMERICA

Measurement Specialties, Inc.  
910 Turnpike Road  
Shrewsbury, MA 01545  
Tel: 1-508-842-0516  
Fax: 1-508-842-0342  
Sales:  
[temperature.cs.amer@meas-spec.com](mailto:temperature.cs.amer@meas-spec.com)

### EUROPE

Measurement Specialties, Inc  
Ballybrit Business Park  
Galway Ireland  
Tel: +353-91-753238  
Fax: +353-91-770789  
Sales:  
[temperature.cs.emea@meas-spec.com](mailto:temperature.cs.emea@meas-spec.com)

### ASIA

Measurement Specialties  
(China) Ltd.  
No. 26, Langshan Road,  
Shenzhen High-tech Park  
(North)  
Nanshan District, Shenzhen,  
China 518057  
Sales:  
[temperature.cs.asia@meas-spec.com](mailto:temperature.cs.asia@meas-spec.com)

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