

MPT-141-6T

High Field Hall Effect Probe

High Field Application (up to 6 Tesla)

High Accuracy: $\pm 0.05\%$ max. error at 25°C above 2.2T*

Calibration tables at 0, 25 and 50°C supplied

* Contribution of probe only

Specifications

The MPT-141-6T High Field Hall Effect Probe is most suitable to be use with a DTM-151 or DTM-152 Digital Teslameter.

Temperature-compensated from 0 to 50°C up to 2.2 Tesla. Probe is calibrated to measure field up to 6.1 Tesla. Transverse orientation reads (+) when field vector enters the top epoxy surface.

Accuracy at 25°C :

$\pm 0.01\%$ of reading + 0.006% of full scale up to 2.2T, temperature-compensated

$\pm 0.05\%$ of reading + 0.006% of full scale above 2.2T at 25°C

Operating Range:

4- Range Operation.

0.3, 0.6, 1.2, 6.0 Tesla Full Scale

3, 6, 12, 60 Kilo Gauss Full Scale

Temperature Stability:

Calibration: $\pm 10\text{ppm}$ of reading/ $^\circ\text{C}$ max.

- 3ppm/ $^\circ\text{C}$ of reading per meter of probe cable

Zero Drift: $\pm (1\mu\text{T} + 0.0003\%$ of full scale)/ $^\circ\text{C}$ max.

Temperature Range:

0 to 50°C operating to spec, -20 to $+60^\circ\text{C}$ max.

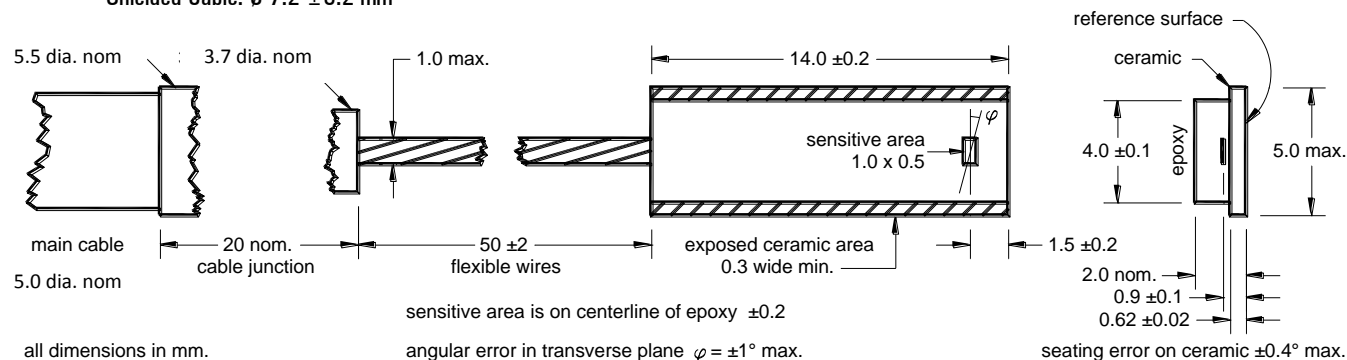
Dimensions:

Probe Head Size: 14 x 5 x 2 mm

Sensitive Area: 1 x 0.5 mm

Unshielded part of cable at probe head: $5.0 \pm 0.2\text{mm}$, 300 mm nominal length

Shielded Cable: $\varnothing 7.2 \pm 0.2\text{ mm}$



Resolution using DTM-151 Digital Teslameter:

TABLE 1 - DC Mode with Digital Filtering ON

1 in 600,000 of bipolar scan in front of panel display

Range	Display resolution		Serial / GPIB Output Resolution	
	Gauss	Tesla	Gauss	Tesla
0.3	0.01	0.000001	0.001	0.0000001
0.6	0.02	0.000002	0.01	0.000001
1.2	0.04	0.000004	0.01	0.000001
6.0	1	0.0001	0.1	0.00001

TABLE -2 DC Mode with Digital Filtering OFF, and AC Mode,

1 in 120,000 of bipolar scan in front of panel display

Range	Display resolution		Serial / GPIB Output Resolution	
	Gauss	Tesla	Gauss	Tesla
0.3	0.05	0.000005	0.001	0.0000001
0.6	0.1	0.00001	0.01	0.000001
1.2	0.2	0.00002	0.01	0.000001
6.0	1	0.0001	0.1	0.00001