

HNA Hydrophones

The HNA series needle hydrophones are the result of an extensive development to combine good spatial resolution with the ability to withstand high acoustic intensities such as encountered in mapping HIFU acoustic fields. Its ruggedness also opens possibilities for use inside tissue or phantoms.

Features

- Rugged
- Small size
- Broadband
- Very stable

Technical Specifications

	HNA-0400
Frequency range ($\pm 6\text{dB}$)	1-10 MHz
* EOC Nominal Sensitivity [nV/Pa]	70
* EOC Nom. Sens. [dB re 1V/uPa]	-263
Effective Diameter	400 μm
Capacitance	80 pF
Max. Operating Temperature	50 °C

* EOC ("end of cable") is the open-circuit output sensitivity of the hydrophone. Calibration with an amplifier can be determined from the gain and input impedance of the amplifier.

Provided with traceable calibration 1-20 MHz at 50 KHz intervals. For other calibrations available visit our web site.

The HNA hydrophone can withstand very high pressures (see reverse) but damage is caused by inertial cavitation and not incident field pressure per se. The same incident pressure may be safe or result in cavitation depending on water purity, gas content, temperature, agitation, and many other factors. The user is advised to watch for and avoid exposing this device to inertial cavitation.

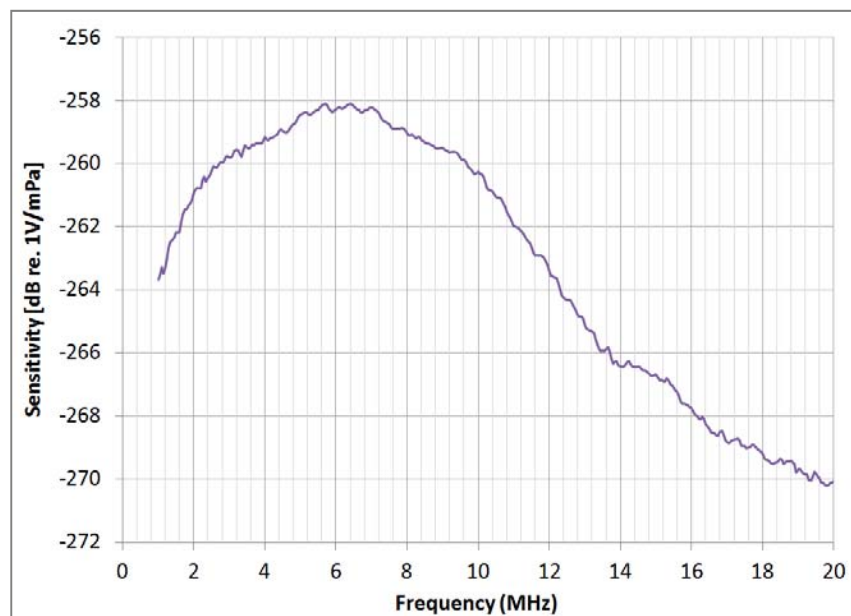
Specifications are subject to change without notice.



HNA Hydrophone

Typical Sensitivity Plot

Note that HIFU fields may contain significant harmonics beyond the frequency range in which the hydrophone's response is specified.



Durability

The HNA hydrophone has been successfully "stressed" under high-intensity ultrasound fields. Details of the characterization can be found in "HIFU Transducer Characterization Using a Robust Needle Hydrophone", Proceedings of the International Society for Therapeutic Ultrasound, Oxford, UK, Aug. 29- Sept 2, 2006 found [HERE](#).

Mechanical Specifications

