



Certificate of Calibration

Ocean Sonics, Ltd.

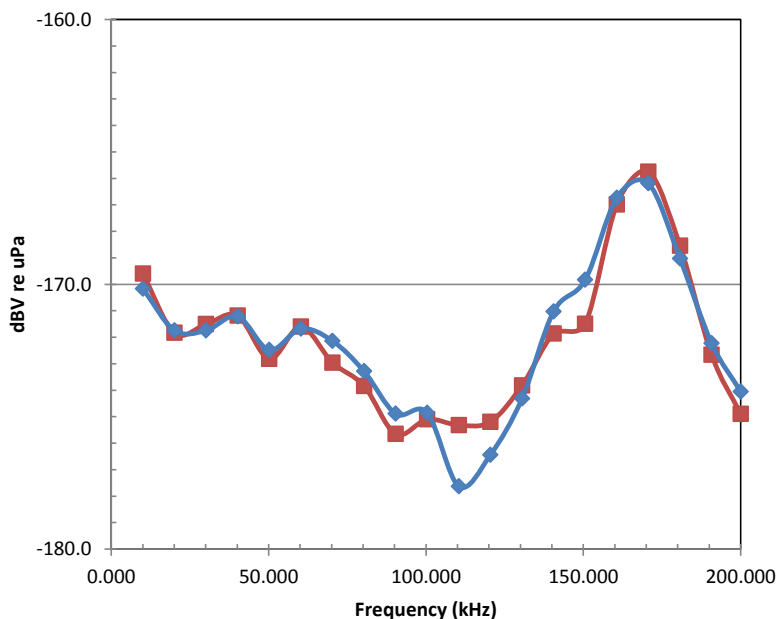
Calibration Certificate Number: **C3231**

Test Result: 10 kHz to 100 kHz: -173 ± 3.0
10 kHz to 200 kHz: -171 ± 5.0

Model Number SB2-ETH
Serial Number 1363
Manufacture Date 11-May-2015
Measurement Date 13-May-2015
Certificate Date 13-May-2015
Sensitivity @ 26 Hz -168.8 dBV re μ Pa
Case Type Plastic
Element Manufacturer GeoSpectrum
Element Model M24HF
Element Serial 1772
Software Release 29
Calibrated By S.MacLean
Work Order Number W1192
Test Type RX Sensitivity
Test Procedure Complex RMS
Test Location Tank #2, 1 m

Projector Manufacturer Ocean Sonics
Projector Model TH2-SER-4F
Projector Serial 2210
Measurement Distance 1 m
Projector Mode Wideband
Output Level 130.8 dB re μ Pa @ 1.0 m
Reference Manufacturer Ocean Sonics
Reference Model SB35-ETH
Reference Serial 1230
Preamp Manufacturer Ocean Sonics
Preamp Model 300415-01
Preamp Serial 119
Preamp Gain 30 dB
ADC Manufacturer Ocean Sonics
ADC Model Number 04-300423-01
ADC Serial Number 119

Receive Sensitivity



Frequency	Sensitivity [dBV re μ Pa]	
kHz	0 deg	90 deg
10.0	-169.6	-170.2
20.1	-171.8	-171.7
30.1	-171.5	-171.7
40.2	-171.2	-171.2
50.2	-172.8	-172.5
60.2	-171.6	-171.7
70.3	-173.0	-172.1
80.3	-173.8	-173.3
90.4	-175.7	-174.9
100.4	-175.1	-174.9
110.4	-175.3	-177.6
120.5	-175.2	-176.4
130.5	-173.8	-174.3
140.5	-171.9	-171.0
150.6	-171.5	-169.8
160.6	-167.0	-166.7
170.7	-165.7	-166.2
180.7	-168.5	-169.0
190.7	-172.7	-172.2
200.0	-174.9	-174.1