



Certificate of Calibration

Ocean Sonics, Ltd.

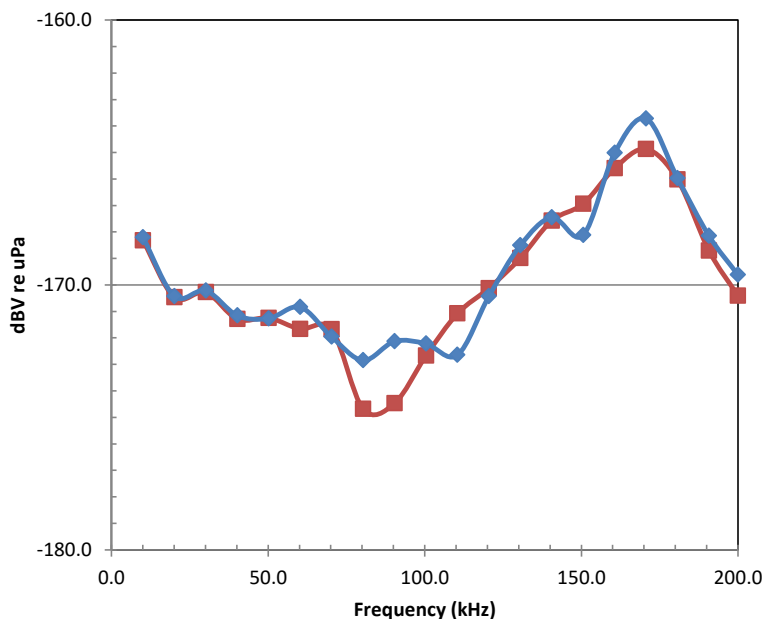
Calibration Certificate Number: **C4281**

Test Result: 10 kHz to 100 kHz: -171.4 ± 3.2
10 kHz to 200 kHz: -169.2 ± 5.5

Model Number SB35-ETH
Serial Number 1273
Manufacture Date 6-Nov-2017
Measurement Date 14-Nov-2017
Certificate Date 14-Nov-2017
Sensitivity @ 26 Hz -168.7 dB re V / uPa
Case Type Titanium
Element Manufacturer GeoSpectrum
Element Model M24HF
Element Serial B001847
Preamp Model 04-300435-01
Calibrated By S.MacLean
Work Order Number W1591
Test Type RX Sensitivity
Test Procedure Complex RMS
Test Location Tank #2, 1 m
Water Temperature 17 °C

Projector Manufacturer Ocean Sonics
Projector Model TH2-SER-4F
Projector Serial 2210
Measurement Distance 1 m
Output Level 125.5 dB re uPa @ 1 m
Tone Burst 100.0 us / 300 ms
Reference Manufacturer Ocean Sonics
Reference Model RB9-ETH
Reference Serial 1492
Primary Calibration 22-Dec-2015
Preamp Manufacturer Ocean Sonics
Preamp Model 04-300434-01
Preamp Serial 473
Preamp Gain 36 dB
ADC Manufacturer Ocean Sonics
ADC Model Number 04-300423-01
ADC Serial Number 473

Receive Sensitivity



Frequency kHz	Sensitivity [dBV re uPa]	
	0 deg	90 deg
10.0	-168.3	-168.2
20.1	-170.5	-170.4
30.1	-170.3	-170.2
40.2	-171.3	-171.2
50.2	-171.2	-171.3
60.2	-171.7	-170.8
70.3	-171.7	-172.0
80.3	-174.7	-172.8
90.4	-174.5	-172.1
100.4	-172.7	-172.2
110.4	-171.1	-172.6
120.5	-170.1	-170.4
130.5	-169.0	-168.5
140.5	-167.6	-167.4
150.6	-166.9	-168.1
160.6	-165.6	-165.0
170.7	-164.9	-163.7
180.7	-166.0	-166.0
190.7	-168.7	-168.1
200.0	-170.4	-169.6