



Certificate of Calibration

Ocean Sonics, Ltd.

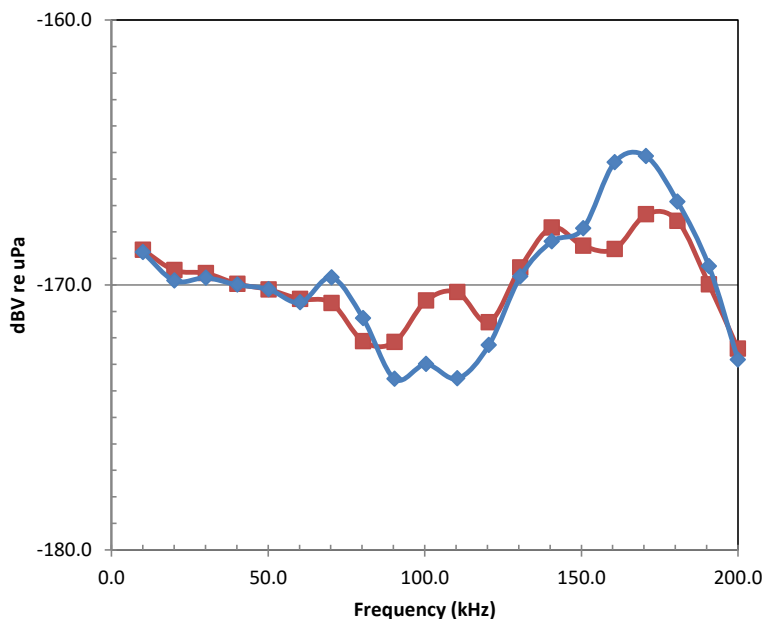
Calibration Certificate Number: **C4543**

Test Result: 10 kHz to 100 kHz: -171.1 ± 2.4
10 kHz to 200 kHz: -169.3 ± 4.2

Model Number SB35-ETH
Serial Number 1411
Manufacture Date 6-Sep-2018
Measurement Date 27-Sep-2018
Certificate Date 27-Sep-2018
Sensitivity @ 26 Hz -168.6 dB re V / uPa
Case Type Titanium
Element Manufacturer GeoSpectrum
Element Model M24HF
Element Serial 1516
Preamp Model 04-300419-01
Calibrated By S.MacLean
Work Order Number W1728
Test Type RX Sensitivity
Test Procedure Complex RMS
Test Location Tank #2, 1 m
Water Temperature 18 °C

Projector Manufacturer Ocean Sonics
Projector Model TH2-SER-4F
Projector Serial 2210
Measurement Distance 1 m
Output Level 131.9 dB re uPa @ 1 m
Tone Burst 100.0 us / 300 ms
Reference Manufacturer Ocean Sonics
Reference Model RB9-ETH
Reference Serial 1773
Primary Calibration 8-Nov-2017
Preamp Manufacturer Ocean Sonics
Preamp Model 04-300434-01
Preamp Serial 912
Preamp Gain 36 dB
ADC Manufacturer Ocean Sonics
ADC Model Number 04-300423-01
ADC Serial Number 586

Receive Sensitivity



Frequency	Sensitivity [dBV re uPa]	
kHz	0 deg	90 deg
10.0	-168.7	-168.8
20.1	-169.4	-169.8
30.1	-169.6	-169.7
40.2	-170.0	-170.0
50.2	-170.2	-170.2
60.2	-170.5	-170.7
70.3	-170.7	-169.7
80.3	-172.1	-171.3
90.4	-172.2	-173.5
100.4	-170.6	-173.0
110.4	-170.3	-173.5
120.5	-171.4	-172.3
130.5	-169.3	-169.7
140.5	-167.8	-168.4
150.6	-168.5	-167.9
160.6	-168.6	-165.4
170.7	-167.3	-165.1
180.7	-167.6	-166.9
190.7	-170.0	-169.3
200.0	-172.4	-172.8