



## Certificate of Calibration

Ocean Sonics, Ltd.

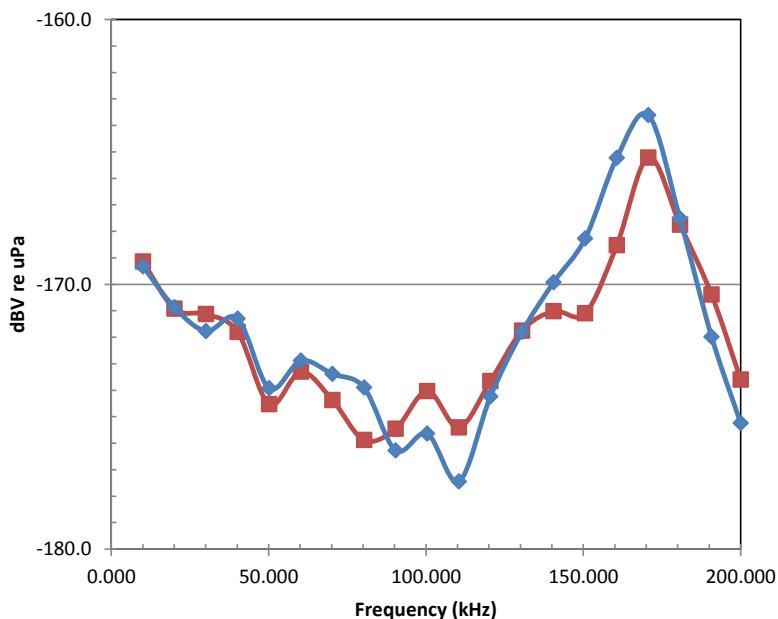
Calibration Certificate Number: **C3245**

Test Result: 10 kHz to 100 kHz:  $-173 \pm 3.4$   
10 kHz to 200 kHz:  $-171 \pm 5.3$

Model Number SB35-ETH  
Serial Number 1411  
Manufacture Date 21-May-2015  
Measurement Date 25-May-2015  
Certificate Date 25-May-2015  
Sensitivity @ 26 Hz -168.6 dBV re  $\mu$ Pa  
Case Type Titanium  
Element Manufacturer GeoSpectrum  
Element Model M24HF  
Element Serial 1516  
Software Release 30.1  
Calibrated By S.MacLean  
Work Order Number W1203  
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 142.5 dB re  $\mu$ 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 $\mu$ Pa]	
kHz	0 deg	90 deg
10.0	-169.1	-169.3
20.1	-170.9	-170.9
30.1	-171.1	-171.8
40.2	-171.8	-171.3
50.2	-174.5	-173.9
60.2	-173.3	-172.9
70.3	-174.4	-173.4
80.3	-175.9	-173.9
90.4	-175.5	-176.3
100.4	-174.0	-175.6
110.4	-175.4	-177.4
120.5	-173.7	-174.2
130.5	-171.8	-171.8
140.5	-171.0	-169.9
150.6	-171.1	-168.3
160.6	-168.5	-165.2
170.7	-165.2	-163.6
180.7	-167.7	-167.5
190.7	-170.4	-172.0
200.0	-173.6	-175.2