

# Sea-Bird Electronics, Inc.

13431 NE 20th Street, Bellevue, WA 98005-2010 USA

Phone: (+1) 425-643-9866 Fax (+1) 425-643-9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 0267  
CALIBRATION DATE: 15-Feb-12

SBE 45 CONDUCTIVITY CALIBRATION DATA  
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

**COEFFICIENTS:**

g = -1.018808e+000	CPcor = -9.5700e-008
h = 1.375571e-001	CTcor = 3.2500e-006
i = -2.984846e-004	WBOTC = 1.1004e-006
j = 3.991681e-005	

BATH TEMP (ITS-90)	BATH SAL (PSU)	BATH COND (Siemens/m)	INST FREQ (Hz)	INST COND (Siemens/m)	RESIDUAL (Siemens/m)
22.0000	0.0000	0.00000	2726.57	0.00000	0.00000
1.0000	34.9700	2.98785	5405.75	2.98783	-0.00001
4.5000	34.9497	3.29607	5609.27	3.29608	0.00001
15.0000	34.9058	4.28143	6214.51	4.28143	0.00001
18.5000	34.8964	4.62785	6413.44	4.62785	0.00001
23.9940	34.8861	5.18724	6721.93	5.18722	-0.00001
29.0000	34.8799	5.71156	6998.41	5.71155	-0.00001
32.5000	34.8759	6.08521	7188.75	6.08521	0.00001

$$f = \text{INST FREQ} * \text{sqrt}(1.0 + \text{WBOTC} * t) / 1000.0$$

$$\text{Conductivity} = (g + hf^2 + if^3 + jf^4) / (1 + \delta t + \epsilon p) \text{ Siemens/meter}$$

t = temperature[°C]; p = pressure[decibars];  $\delta$  = CTcor;  $\epsilon$  = CPcor;

Residual = instrument conductivity - bath conductivity

