

**42 to 65 kHz-A (Broadband)**  
 Transformed to 100 ohms minimum (B1)

Power Rating:

- 1 kW @ 1% duty cycle
- CW<sup>(4)</sup>: 25W in B265, PM265  
 15W in M265, TM265

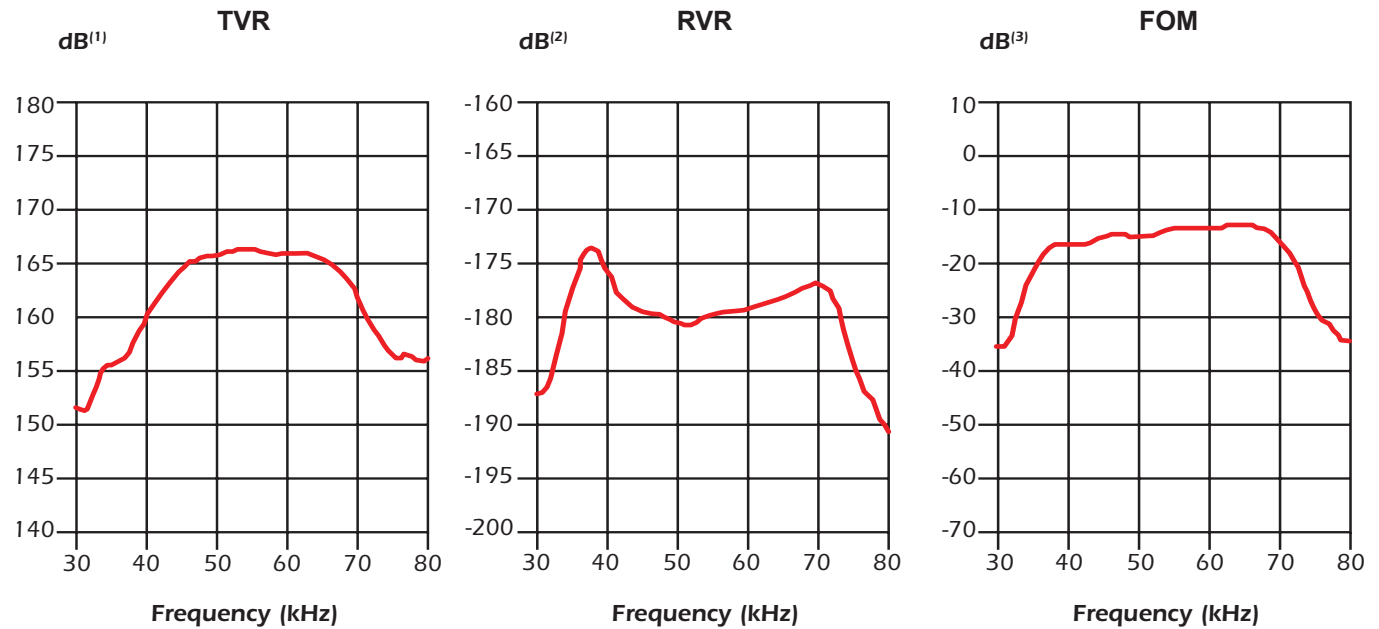
7 x 28.6 mm (1.13 in) PZT  
 Active Area: 45 cm<sup>2</sup> (6.9 in<sup>2</sup>)  
 Radiating Surface: Urethane

Q ≈ 2

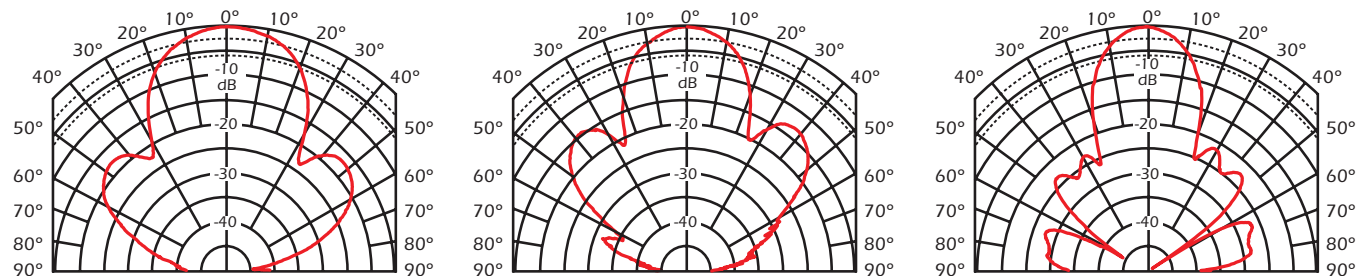
Cable Type: C335  
 Cable Length: 10 m (33 ft)

Notes:

- (1) dB re 1 μPa per volt at 1 meter
- (2) dB re 1 volt per μPa
- (3) Sum of transmitting voltage response and receiving voltage response
- (4) CW Power ratings is for 20°C seawater temperature. Consult Airmar for different housing CW ratings.



**Transmit Radiation Pattern**



Beamwidth	@ 42 kHz
-3 dB	25°
-6 dB	35°
-10 dB	43°

Beamwidth	@ 50 kHz
-3 dB	20°
-6 dB	28°
-10 dB	34°

Beamwidth	@ 65 kHz
-3 dB	16°
-6 dB	22°
-10 dB	28°



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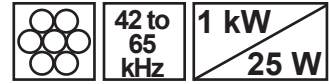
# Technical Data Catalog

## 42 to 65 kHz-A (Broadband)

Note: Impedance data includes cable

**Balanced Impedance Table (Nominal Value) in 20°C Water**

Test Frequency (kHz)	Impedance Magnitude (Ω)	Phase Angle (°)	Series Resistance (Ω)	Series Reactance (Ω)	Parallel Conductance (mS)	Parallel Susceptance (mS)	Parallel Resistance (Ω)	Parallel Capacitance (pF)
40.00	305.87	-15.48	294.78	-81.62	3.15	0.87	317.38	3470.98
41.00	247.24	-19.88	232.50	-84.08	3.80	1.38	262.91	5339.42
42.00	203.32	-20.42	190.54	-70.94	4.61	1.72	216.95	6502.90
43.00	173.62	-19.56	163.60	-58.14	5.43	1.93	184.26	7138.63
44.00	152.61	-16.64	146.22	-43.70	6.28	1.88	159.28	6786.59
45.00	140.30	-12.05	137.20	-29.29	6.97	1.49	143.46	5262.71
46.00	134.39	-8.36	132.96	-19.55	7.36	1.08	135.83	3745.19
47.00	129.98	-5.84	129.31	-13.23	7.65	0.78	130.66	2651.98
48.00	126.28	-3.80	126.00	-8.37	7.90	0.53	126.55	1740.80
49.00	123.64	-1.69	123.58	-3.64	8.08	0.24	123.69	773.95
50.00	119.60	0.02	119.60	0.03	8.36	0.00	119.60	-7.13
51.00	115.87	3.54	115.65	7.15	8.61	-0.53	116.09	-1661.96
52.00	116.85	7.67	115.81	15.59	8.48	-1.14	117.91	-3495.61
53.00	120.09	11.08	117.86	23.07	8.17	-1.60	122.37	-4803.73
54.00	125.09	13.76	121.50	29.74	7.77	-1.90	128.78	-5602.29
55.00	131.10	15.44	126.37	34.90	7.35	-2.03	136.01	-5875.61
56.00	138.17	16.25	132.65	38.67	6.95	-2.03	143.92	-5757.18
57.00	144.18	16.30	138.39	40.46	6.66	-1.95	150.22	-5434.31
58.00	147.81	16.55	141.69	42.11	6.48	-1.93	154.20	-5288.48
59.00	154.64	17.23	147.70	45.81	6.18	-1.92	161.91	-5167.01
60.00	159.67	16.88	152.79	46.36	5.99	-1.82	166.86	-4823.14
61.00	164.96	17.59	157.25	49.84	5.78	-1.83	173.05	-4778.87
62.00	171.78	18.35	163.05	54.08	5.53	-1.83	180.99	-4704.40
63.00	182.10	18.89	172.28	58.97	5.20	-1.78	192.47	-4492.47
64.00	190.26	19.35	179.52	63.03	4.96	-1.74	201.65	-4330.09
65.00	203.20	20.59	190.22	71.47	4.61	-1.73	217.07	-4238.17
66.00	220.23	21.49	204.92	80.67	4.23	-1.66	236.68	-4010.94
67.00	244.22	21.86	226.65	90.94	3.80	-1.52	263.14	-3622.18
68.00	275.19	21.56	255.95	101.11	3.38	-1.34	295.89	-3124.79
69.00	319.03	20.17	299.48	109.98	2.94	-1.08	339.87	-2492.40
70.00	381.73	15.34	368.12	101.01	2.53	-0.69	395.84	-1576.06



## 42 to 65 kHz-A (Broadband)

Transformed to 100 ohms minimum with internal diplexer (B1)

**Power Rating:**

- 1 kW @ 1% duty cycle
- CW<sup>(4)</sup>: 25W in B265, PM265  
15W in M265, TM265

7 x 28.6 mm (1.13 in) PZT  
Active Area: 45 cm<sup>2</sup> (6.9 in<sup>2</sup>)  
Radiating Surface: Urethane

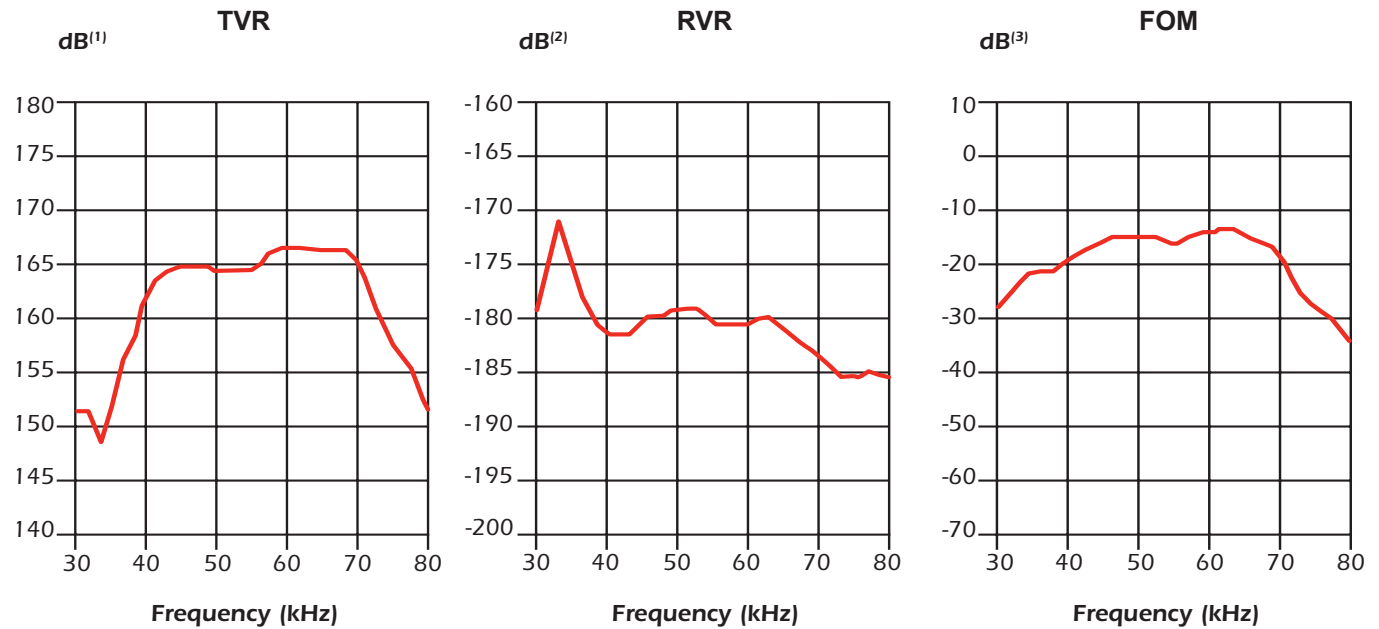
Q ≈ 2

Cable Type: C332

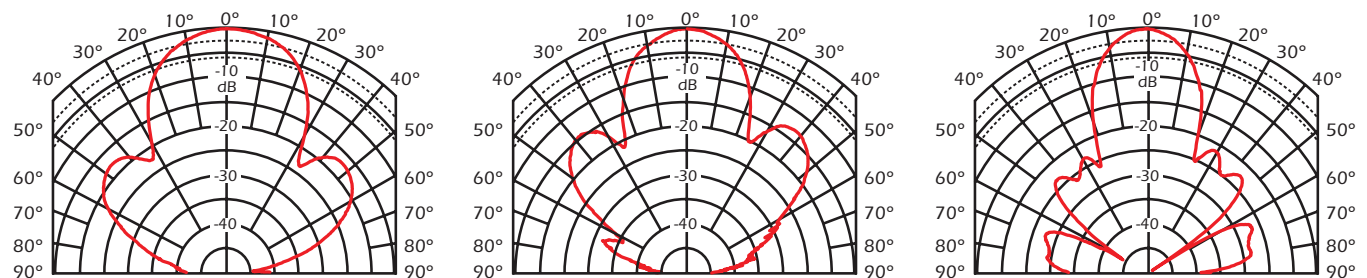
Cable Length: 10 m (33 ft)

**Notes:**

- (1) dB re 1 μPa per volt at 1 meter
- (2) dB re 1 volt per μPa
- (3) Sum of transmitting voltage response and receiving voltage response
- (4) CW Power ratings is for 20°C seawater temperature. Consult Airmar for different housing CW ratings.



### Transmit Radiation Pattern



Beamwidth	@ 42 kHz
-3 dB	25°
-6 dB	35°
-10 dB	43°

Beamwidth	@ 50 kHz
-3 dB	20°
-6 dB	28°
-10 dB	34°

Beamwidth	@ 65 kHz
-3 dB	16°
-6 dB	22°
-10 dB	28°



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## 42 to 65 kHz-A (Broadband)

Note: Impedance data includes cable

**Balanced Impedance Table (Nominal Value) in 20°C Water**

Test Frequency (kHz)	Impedance Magnitude (Ω)	Phase Angle (°)	Series Resistance (Ω)	Series Reactance (Ω)	Parallel Conductance (mS)	Parallel Susceptance (mS)	Parallel Resistance (Ω)	Parallel Capacitance (pF)
30.00	369.73	83.91	39.20	367.64	0.29	-2.69	3487.58	-14268.01
31.00	458.23	80.95	72.10	452.52	0.34	-2.16	2912.20	-11064.50
32.00	612.89	75.00	158.64	592.00	0.42	-1.58	2367.81	-7838.46
34.00	1307.23	21.62	1215.29	481.58	0.71	-0.28	1406.12	-1319.17
35.00	895.70	-24.50	815.05	-371.44	1.02	0.46	984.32	2105.29
36.00	521.51	-39.81	400.58	-333.93	1.47	1.23	678.95	5428.02
38.00	236.80	-41.41	177.59	-156.64	3.17	2.79	315.76	11699.57
39.00	179.20	-35.91	145.14	-105.10	4.52	3.27	221.25	13357.34
40.00	142.39	-27.65	126.13	-66.07	6.22	3.26	160.74	12967.03
42.00	113.37	-4.79	112.98	-9.46	8.79	0.74	113.77	2790.29
43.00	112.00	5.56	111.47	10.86	8.89	-0.87	112.53	-3204.41
44.00	118.72	12.92	115.71	26.54	8.21	-1.88	121.80	-6812.68
46.00	132.25	19.33	124.79	43.78	7.14	-2.50	140.15	-8660.73
47.00	135.14	22.06	125.24	50.76	6.86	-2.78	145.81	-9412.51
48.00	140.50	24.34	128.01	57.91	6.48	-2.93	154.21	-9726.54
50.00	156.97	25.32	141.89	67.14	5.76	-2.73	173.66	-8673.82
51.00	162.23	23.71	148.53	65.24	5.64	-2.48	177.19	-7736.13
52.00	164.41	22.36	152.06	62.54	5.63	-2.31	177.77	-7080.60
54.00	162.16	17.95	154.26	49.98	5.87	-1.90	170.45	-5602.39
55.00	154.93	16.29	148.71	43.45	6.20	-1.81	161.40	-5239.04
56.00	145.43	16.49	139.45	41.28	6.59	-1.95	151.67	-5547.28
58.00	129.54	21.14	120.83	46.72	7.20	-2.78	138.89	-7639.77
59.00	126.81	25.10	114.84	53.79	7.14	-3.34	140.04	-9023.02
60.00	128.44	29.21	112.10	62.68	6.80	-3.80	147.15	-10079.31
62.00	136.41	33.56	113.67	75.41	6.11	-4.05	163.70	-10403.53
63.00	139.81	34.06	115.82	78.31	5.93	-4.01	168.77	-10120.97
64.00	140.07	33.41	116.92	77.13	5.96	-3.93	167.80	-9776.78
66.00	128.22	34.77	105.32	73.13	6.41	-4.45	156.10	-10726.58
67.00	120.52	38.43	94.41	74.91	6.50	-5.16	153.84	-12251.04
68.00	114.92	44.40	82.11	80.40	6.22	-6.09	160.84	-14249.97
70.00	120.19	60.97	58.32	105.09	4.04	-7.28	247.70	-16541.12
71.00	131.74	67.88	49.62	122.04	2.86	-7.03	349.82	-15762.33
72.00	147.83	72.91	43.45	141.30	1.99	-6.47	502.95	-14291.97
74.00	187.22	77.96	39.06	183.10	1.11	-5.22	897.37	-11234.73
75.00	208.62	79.19	39.12	204.92	0.90	-4.71	1112.62	-9991.31
76.00	231.26	79.96	40.31	227.72	0.75	-4.26	1326.69	-8916.77
78.00	283.38	80.75	45.57	279.69	0.57	-3.48	1762.21	-7106.74
79.00	314.90	80.70	50.89	310.76	0.51	-3.13	1948.60	-6313.52
80.00	351.93	79.83	62.14	346.40	0.50	-2.80	1993.06	-5564.04



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## 130 to 210 kHz-C (Broadband)

**Power Rating:**

- 1 kW @ 1% duty cycle
- CW<sup>(4)</sup>: 18W in B175, B265, PM265  
12W in M265, TM265

65 mm (2.5") P1A

Active Area: 33 cm<sup>2</sup>

Radiating Surface: Epoxy/Urethane

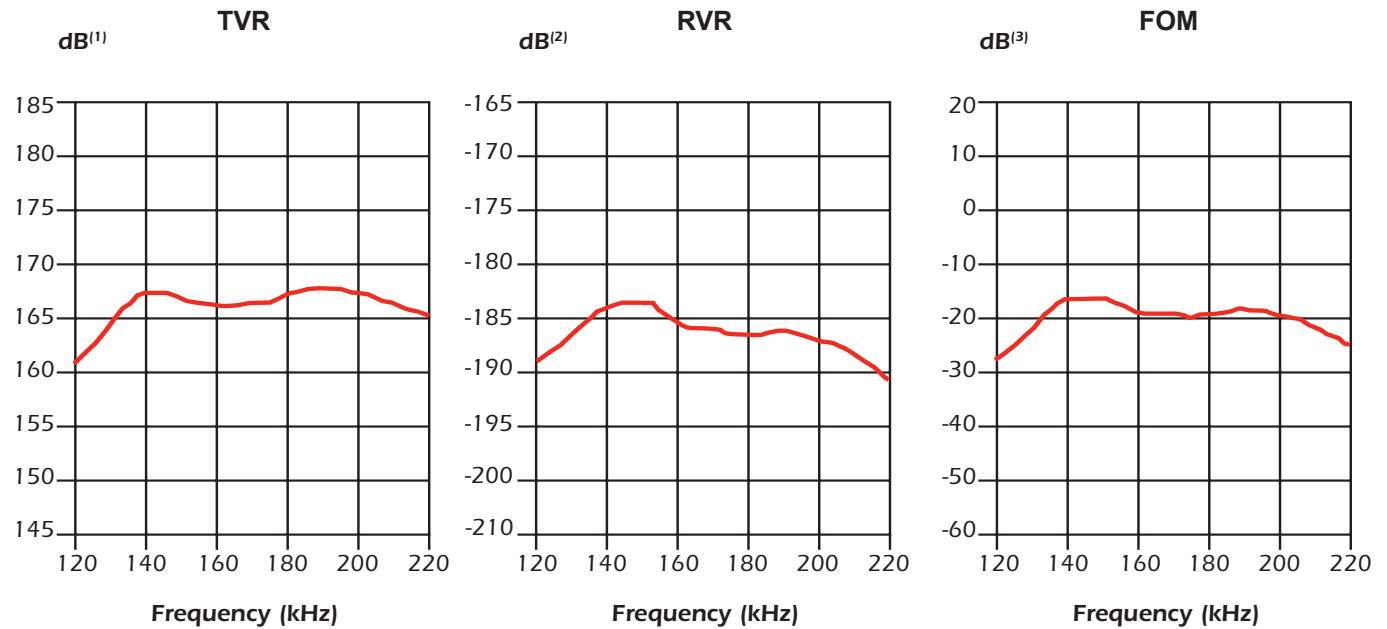
Q ≈ 2.5

Cable Type: C44

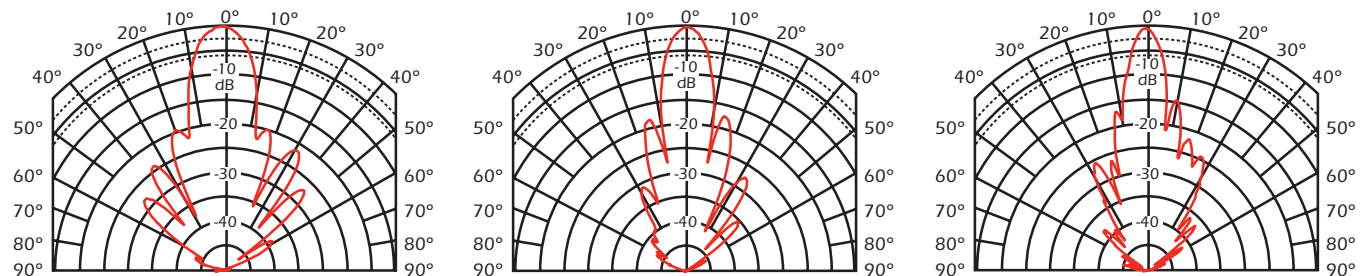
Cable Length: 10 m (50 ft)

**Notes:**

- (1) dB re 1 μPa per volt at 1 meter
- (2) dB re 1 volt per μPa
- (3) Sum of transmitting voltage response and receiving voltage response
- (4) CW Power ratings is for 20°C seawater temperature. Consult Airmar for different housing CW ratings.



### Transmit Radiation Pattern



Beamwidth	@ 130 kHz
-3 dB	11°
-6 dB	15°
-10 dB	20°

Beamwidth	@ 160 kHz
-3 dB	8°
-6 dB	12°
-10 dB	15°

Beamwidth	@ 210 kHz
-3 dB	6°
-6 dB	9°
-10 dB	12°



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# Technical Data Catalog

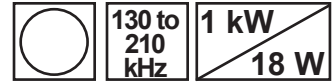
## 130 to 210 kHz-C (Broadband)

Note: Impedance data includes cable

1 kHz Capacitance: 5,310 pF: ± 20%

**Balanced Impedance Table (Nominal Value) in 20°C Water**

Test Frequency (kHz)	Impedance Magnitude (Ω)	Phase Angle (°)	Series Resistance (Ω)	Series Reactance (Ω)	Parallel Conductance (mS)	Parallel Susceptance (mS)	Parallel Resistance (Ω)	Parallel Capacitance (pF)
130.00	196.88	-65.77	80.79	-179.54	2.08	4.63	479.80	5670.82
133.00	195.76	-61.72	92.74	-172.39	2.42	4.50	413.19	5383.41
136.00	200.56	-57.84	106.75	-169.79	2.65	4.22	376.80	4939.84
139.00	207.35	-54.27	121.09	-168.31	2.82	3.92	355.04	4482.63
142.00	221.76	-52.05	136.37	-174.88	2.77	3.56	360.64	3985.61
145.00	239.78	-51.61	148.89	-187.95	2.59	3.27	386.14	3588.16
148.00	247.57	-54.71	143.02	-202.09	2.33	3.30	428.57	3545.53
151.00	271.21	-56.98	147.81	-227.39	2.01	3.09	497.63	3258.44
154.00	265.60	-61.32	127.45	-233.02	1.81	3.30	553.50	3413.90
157.00	258.21	-62.92	117.54	-229.91	1.76	3.45	567.27	3495.61
160.00	253.64	-63.37	113.68	-226.74	1.77	3.52	565.92	3505.84
163.00	251.25	-63.83	110.79	-225.50	1.76	3.57	569.76	3488.02
166.00	249.38	-64.41	107.71	-224.92	1.73	3.62	577.38	3467.41
169.00	248.51	-65.25	104.02	-225.69	1.68	3.65	593.69	3441.57
172.00	245.28	-67.40	94.25	-226.44	1.57	3.76	638.29	3482.91
175.00	233.69	-67.78	88.37	-216.34	1.62	3.96	618.01	3602.69
178.00	228.21	-66.22	92.02	-208.84	1.77	4.01	565.97	3585.41
181.00	228.89	-64.67	97.93	-206.89	1.87	3.95	535.02	3472.26
184.00	232.15	-64.28	100.74	-209.15	1.87	3.88	534.98	3356.89
187.00	235.99	-64.38	102.03	-212.80	1.83	3.82	545.87	3251.98
190.00	240.10	-65.84	98.26	-219.07	1.70	3.80	586.66	3183.28
193.00	235.70	-67.51	90.18	-217.76	1.62	3.92	616.04	3232.53
196.00	231.73	-66.55	92.21	-212.60	1.72	3.96	582.38	3214.73
199.00	236.46	-65.56	97.83	-215.27	1.75	3.85	571.54	3079.22
202.00	246.62	-66.44	98.56	-226.07	1.62	3.72	617.11	2928.50
205.00	251.39	-68.64	91.58	-234.11	1.45	3.70	690.08	2876.09
208.00	252.69	-71.85	78.71	-240.12	1.23	3.76	811.28	2877.46
210.00	247.95	-73.95	68.56	-238.28	1.12	3.88	896.75	2937.42



## 130 to 210 kHz-C (Broadband)

Transformed to 100 ohms minimum with internal diplexer (B2)

**Power Rating:**

- 1 kW @ 1% duty cycle
- CW<sup>(4)</sup>: 18W in B175, B265, PM265  
12W in M265, TM265

Q ≈ 2

Cable Type: C332

Cable Length: 10 m (33 ft)

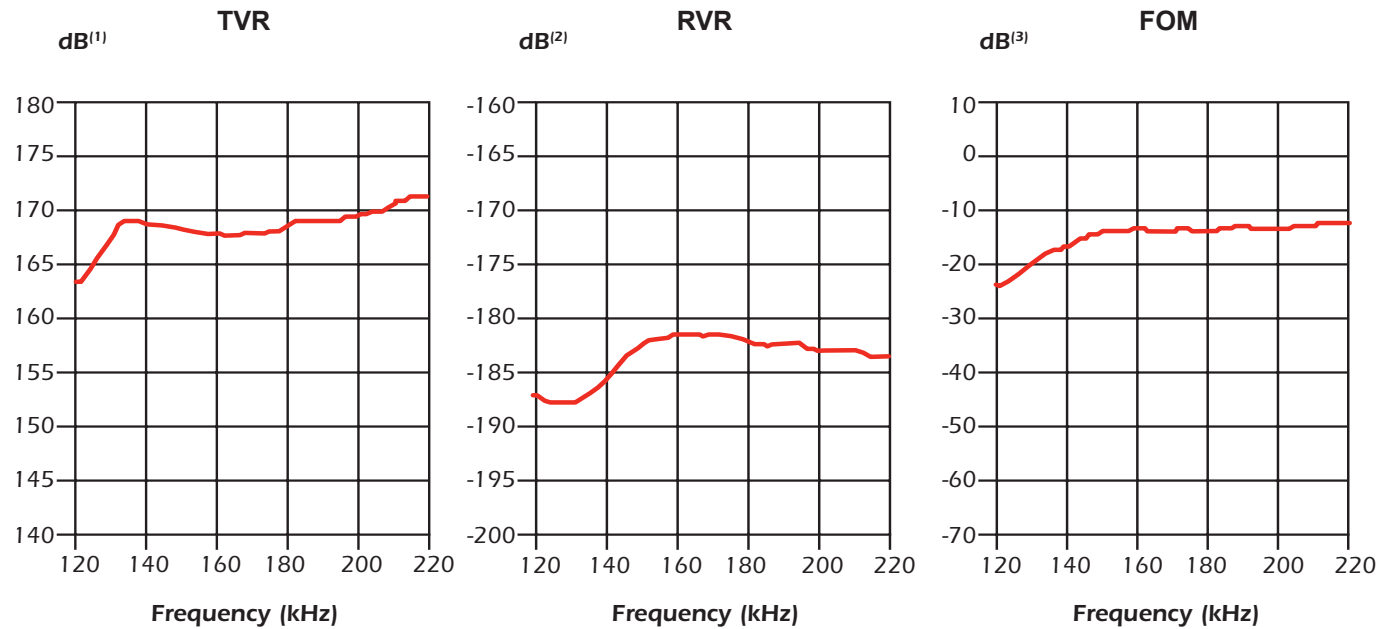
**Notes:**

- (1) dB re 1 μPa per volt at 1 meter
- (2) dB re 1 volt per μPa
- (3) Sum of transmitting voltage response and receiving voltage response
- (4) CW Power ratings is for 20°C seawater temperature. Consult Airmar for different housing CW ratings.

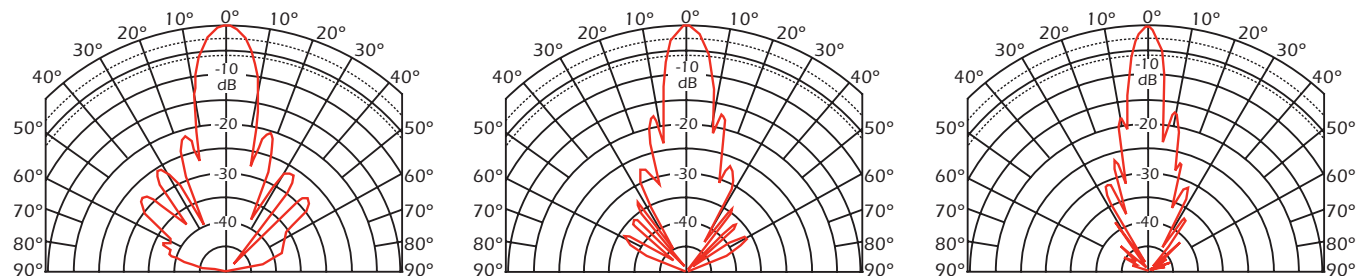
65 mm (2.56 in) PZT

Active Area: 33 cm<sup>2</sup> (5.1 in<sup>2</sup>)

Radiating Surface: Urethane



### Transmit Radiation Pattern



Beamwidth	@ 130 kHz
-3 dB	10°
-6 dB	14°
-10 dB	18°

Beamwidth	@ 160 kHz
-3 dB	8°
-6 dB	12°
-10 dB	15°

Beamwidth	@ 210 kHz
-3 dB	6°
-6 dB	8°
-10 dB	11°



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## 130 to 210 kHz-C (Broadband)

Note: Impedance data includes cable

**Balanced Impedance Table (Nominal Value) in 20°C Water**

Test Frequency (kHz)	Impedance Magnitude (Ω)	Phase Angle (°)	Series Resistance (Ω)	Series Reactance (Ω)	Parallel Conductance (mS)	Parallel Susceptance (mS)	Parallel Resistance (Ω)	Parallel Capacitance (pF)
117.00	190.30	-31.19	162.79	-98.55	4.50	2.72	222.45	3701.83
120.00	174.84	-30.44	150.74	-88.59	4.93	2.90	202.80	3843.36
123.00	149.11	-29.58	129.67	-73.61	5.83	3.31	171.46	4283.90
126.00	125.94	-24.42	114.67	-52.07	7.23	3.28	138.32	4146.95
129.00	109.04	-15.17	105.24	-28.54	8.85	2.40	112.98	2961.73
132.00	100.47	-1.63	100.43	-2.86	9.95	0.28	100.51	341.44
135.00	103.22	13.01	100.57	23.24	9.44	-2.18	105.94	-2571.09
138.00	116.39	24.67	105.76	48.58	7.81	-3.59	128.08	-4136.54
141.00	137.80	32.11	116.72	73.25	6.15	-3.86	162.69	-4354.48
144.00	163.58	35.65	132.93	95.34	4.97	-3.56	201.31	-3937.89
147.00	190.50	35.69	154.71	111.14	4.26	-3.06	234.56	-3316.05
150.00	213.60	33.42	178.29	117.64	3.91	-2.58	255.91	-2735.71
153.00	230.31	30.05	199.37	115.31	3.76	-2.17	266.06	-2261.39
156.00	245.48	27.11	218.52	111.85	3.63	-1.86	275.77	-1893.62
159.00	264.12	25.25	238.89	112.67	3.42	-1.62	292.02	-1616.63
162.00	278.88	22.66	257.35	107.44	3.31	-1.38	302.20	-1357.15
165.00	281.76	17.75	268.34	85.91	3.38	-1.08	295.85	-1043.79
168.00	274.63	15.83	264.22	74.90	3.50	-0.99	285.45	-940.79
171.00	278.01	12.91	270.98	62.14	3.51	-0.80	285.23	-748.23
174.00	281.95	10.34	277.37	50.62	3.49	-0.64	286.60	-582.48
177.00	279.81	8.71	276.58	42.37	3.53	-0.54	283.07	-486.59
180.00	262.62	6.80	260.77	31.09	3.78	-0.45	264.48	-398.63
183.00	240.25	7.17	238.37	29.99	4.13	-0.52	242.15	-451.93
186.00	230.51	10.43	226.70	41.75	4.27	-0.79	234.39	-672.31
189.00	239.40	11.78	234.35	48.87	4.09	-0.85	244.55	-718.13
192.00	250.69	12.45	244.80	54.03	3.90	-0.86	256.72	-712.65
195.00	249.22	12.29	243.51	53.05	3.92	-0.85	255.07	-697.14
198.00	237.16	12.40	231.63	50.91	4.12	-0.91	242.82	-727.63
201.00	226.56	13.62	220.19	53.36	4.29	-1.04	233.12	-823.17
204.00	229.61	14.70	222.09	58.25	4.21	-1.10	237.37	-862.00
207.00	231.44	14.83	223.73	59.24	4.18	-1.11	239.41	-850.33
210.00	222.21	16.17	213.42	61.88	4.32	-1.25	231.37	-949.76
213.00	204.87	19.50	193.12	68.40	4.60	-1.63	217.34	-1217.62
216.00	189.92	25.16	171.91	80.73	4.77	-2.24	209.82	-1649.12
219.00	189.19	32.17	160.14	100.74	4.47	-2.81	223.51	-2045.44
222.00	198.09	39.18	153.56	125.14	3.91	-3.19	255.54	-2286.33
225.00	208.35	45.51	146.01	148.63	3.36	-3.42	297.32	-2421.93
228.00	218.55	51.80	135.15	171.75	2.83	-3.60	353.41	-2510.12



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## 130 to 210 kHz-C (Broadband) Transformed to 100 ohms minimum (B1)

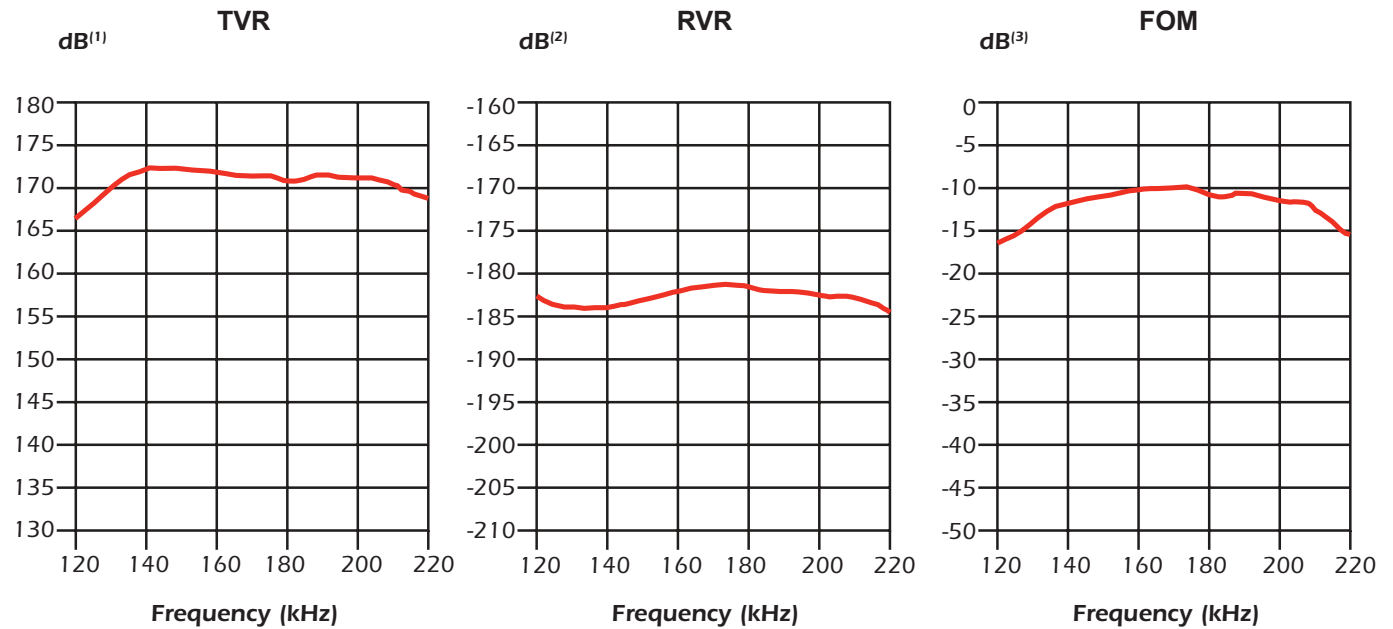
**Power Rating:**

- 1 kW @ 1% duty cycle
- CW<sup>(4)</sup>: 18W in B175, B265, PM265  
12W in M265, TM265

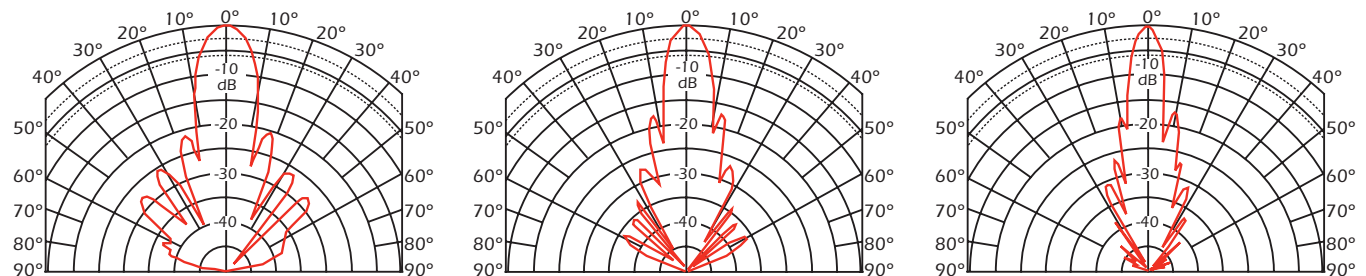
65 mm (2.56 in) PZT  
Active Area: 33 cm<sup>2</sup> (5.1 in<sup>2</sup>)  
Radiating Surface: Urethane

Q ≈ 2  
Cable Type: C335  
Cable Length: 10 m (33 ft)

- Notes:**
- (1) dB re 1 μPa per volt at 1 meter
  - (2) dB re 1 volt per μPa
  - (3) Sum of transmitting voltage response and receiving voltage response
  - (4) CW Power ratings is for 20°C seawater temperature. Consult Airmar for different housing CW ratings.



### Transmit Radiation Pattern



Beamwidth	@ 130 kHz
-3 dB	10°
-6 dB	14°
-10 dB	18°

Beamwidth	@ 160 kHz
-3 dB	8°
-6 dB	12°
-10 dB	15°

Beamwidth	@ 210 kHz
-3 dB	6°
-6 dB	8°
-10 dB	11°



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# Technical Data Catalog

## 130 to 210 kHz-C (Broadband)

Note: Impedance data includes cable

**Balanced Impedance Table (Nominal Value) in 20°C Water**

Test Frequency (kHz)	Impedance Magnitude (Ω)	Phase Angle (°)	Series Resistance (Ω)	Series Reactance (Ω)	Parallel Conductance (mS)	Parallel Susceptance (mS)	Parallel Resistance (Ω)	Parallel Capacitance (pF)
120.00	208.31	-17.43	198.75	-62.39	4.58	1.44	218.33	1906.87
123.00	177.31	-19.75	166.89	-59.91	5.31	1.91	188.39	2465.59
126.00	152.23	-18.99	143.95	-49.52	6.21	2.14	160.99	2699.47
129.00	133.22	-16.34	127.84	-37.48	7.20	2.11	138.83	2605.27
132.00	120.55	-12.05	117.89	-25.17	8.11	1.73	123.27	2088.34
135.00	112.76	-6.38	112.06	-12.54	8.81	0.99	113.46	1162.56
138.00	109.48	-0.54	109.48	-1.04	9.13	0.09	109.49	99.87
141.00	109.94	4.87	109.55	9.33	9.06	-0.77	110.34	-871.61
144.00	114.62	9.71	112.98	19.33	8.60	-1.47	116.29	-1626.25
147.00	121.20	13.15	118.02	27.58	8.03	-1.88	124.47	-2032.96
150.00	129.57	15.12	125.09	33.80	7.45	-2.01	134.22	-2135.96
153.00	138.30	15.64	133.18	37.28	6.96	-1.95	143.61	-2027.51
156.00	146.78	16.08	141.05	40.65	6.55	-1.89	152.76	-1924.61
159.00	157.83	16.02	151.70	43.56	6.09	-1.75	164.21	-1750.40
162.00	170.16	14.70	164.60	43.17	5.68	-1.49	175.92	-1464.75
165.00	181.46	12.13	177.41	38.14	5.39	-1.16	185.61	-1117.37
168.00	189.54	9.04	187.18	29.80	5.21	-0.83	191.93	-785.73
171.00	196.75	5.79	195.75	19.86	5.06	-0.51	197.76	-477.60
174.00	203.68	3.22	203.35	11.45	4.90	-0.28	204.00	-252.53
177.00	210.86	-0.59	210.84	-2.18	4.74	0.05	210.87	44.16
180.00	215.04	-4.94	214.24	-18.53	4.63	0.40	215.85	354.23
183.00	211.15	-9.70	208.13	-35.56	4.67	0.80	214.21	693.78
186.00	203.43	-11.87	199.07	-41.86	4.81	1.01	207.87	865.47
189.00	200.71	-12.44	195.99	-43.24	4.87	1.07	205.53	903.98
192.00	203.60	-13.26	198.17	-46.70	4.78	1.13	209.18	933.89
195.00	208.49	-15.13	201.27	-54.40	4.63	1.25	215.97	1021.47
198.00	211.19	-18.13	200.70	-65.71	4.50	1.47	222.22	1184.30
201.00	209.20	-20.47	195.99	-73.17	4.48	1.67	223.31	1323.75
204.00	210.75	-21.44	196.17	-77.03	4.42	1.73	226.42	1353.04
207.00	217.91	-22.49	201.34	-83.35	4.24	1.76	235.85	1349.54
210.00	229.47	-25.57	207.00	-99.03	3.93	1.88	254.38	1425.29
213.00	240.32	-30.09	207.94	-120.48	3.60	2.09	277.74	1558.76
216.00	244.20	-35.87	197.88	-143.09	3.32	2.40	301.36	1768.05
219.00	244.10	-41.77	182.06	-162.59	3.06	2.73	327.26	1983.11
220.00	242.56	-43.83	174.98	-167.99	2.97	2.86	336.26	2065.48