

50 kHz-AWIq

**Ceramics wired in parallel
Transformed to 250 ohms**

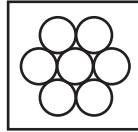
Power Rating: 1 kW rms @ 2% duty cycle

7 x 20.3 mm (0.80") PZT4

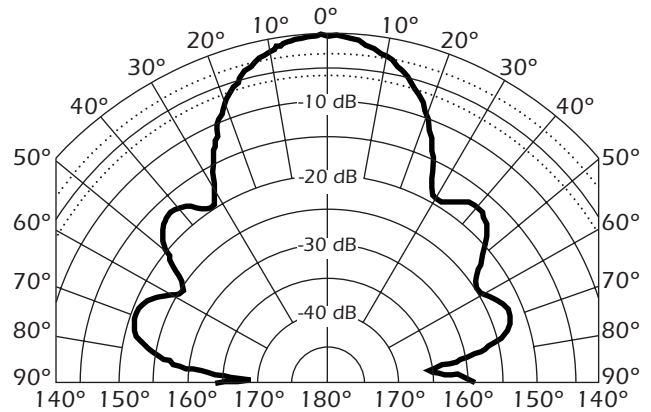
Active Area: 23 cm²

Epoxy/Urethane Window

Array



Transmit Radiation Pattern



Beamwidth:

-3 dB: 25°

-6 dB: 36°

-10 dB: 45°

Directivity Index: 17.2

Frequency Tolerance: ± 3 kHz

Peak TVR⁽¹⁾, nominal: 161 dB

Peak TVR⁽¹⁾, minimum: 159 dB

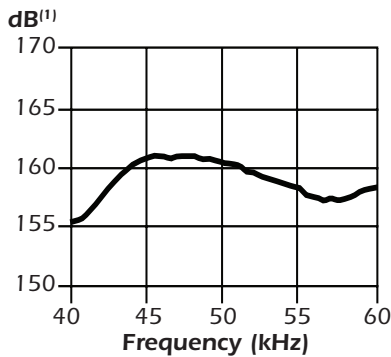
Q (transmit): 4

Peak Source Level⁽⁴⁾: 212 dB

Peak RVR⁽²⁾, nominal: -175 dB

Peak Figure of Merit⁽³⁾: -19.1 dB

TVR



RVR

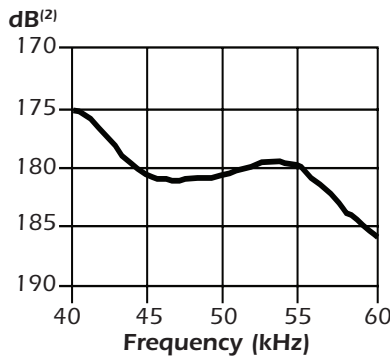
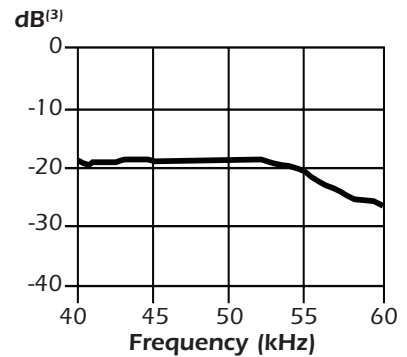


Figure of Merit



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) Nominal peak TVR, rated power, and no cavitation

Acoustic Data: td files:Stored Data:50AWIq;Urethane:07ks100802:Test#1:02Sens
Pattern Data: td files:Stored Data:50AWIq;Urethane:07ks100802:Test#1:04UnbalZ



Sensing Technology

Technical Data Catalog

50 kHz-AW1q

7 x 20.3 mm (0.80") PZT4

Cable Type: C332

Cable Length: 10.4 m (34')

Note:

Impedance data includes cable

Impedance Data		
	<i>Balanced</i>	<i>Unbalanced</i>
Parallel: Rp.	200 Ω: -20%, +40%	200 Ω: -20%, +40%
Parallel: Cp. (nominal)	0 pF	0 pF
Series [R - jX]: (nominal)	200 + j10 Ω	200 + j10 Ω
1 kHz capacitance: (nominal)	n/a	n/a

Unbalance Impedance Table

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	418.98	-34.21	346.49	-235.56	1.9738	1.3419	506.63	5339.18
41.00	339.61	-34.34	280.41	-191.59	2.4312	1.6611	411.31	6448.24
42.00	287.92	-31.89	244.46	-152.12	2.9488	1.8350	339.12	6953.62
43.00	242.44	-27.10	215.82	-110.45	3.6718	1.8791	272.35	6954.97
44.00	217.38	-21.04	202.89	-78.03	4.2937	1.6512	232.90	5972.68
45.00	205.36	-14.98	198.39	-53.07	4.7041	1.2583	212.58	4450.40
46.00	199.17	-8.79	196.83	-30.43	4.9619	0.7670	201.53	2653.90
47.00	201.44	-4.78	200.74	-16.79	4.9469	0.4138	202.15	1401.15
48.00	200.73	-1.22	200.69	-4.28	4.9806	0.1062	200.78	352.12
49.00	198.34	2.41	198.17	8.33	5.0373	-0.2118	198.52	-687.80
50.00	201.95	8.64	199.66	30.35	4.8954	-0.7442	204.27	-2368.94
51.00	207.39	12.71	202.31	45.63	4.7037	-1.0609	212.60	-3310.78
52.00	221.17	17.41	211.04	66.18	4.3142	-1.3530	231.79	-4141.13
53.00	240.15	21.20	223.90	86.83	3.8824	-1.5056	257.57	-4521.31
54.00	271.57	22.83	250.29	105.38	3.3937	-1.4289	294.67	-4211.38
55.00	306.70	25.43	276.99	131.69	2.9446	-1.4000	339.60	-4051.16
56.00	351.87	24.75	319.56	147.29	2.5810	-1.1897	387.45	-3381.07
57.00	406.37	21.82	377.26	151.04	2.2845	-0.9147	437.73	-2553.90
58.00	456.66	19.17	431.34	149.96	2.0684	-0.7191	483.47	-1973.26
59.00	515.06	10.82	505.90	96.68	1.9070	-0.3644	524.38	-983.09
60.00	559.21	4.13	557.76	40.28	1.7836	-0.1288	560.67	-341.62

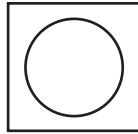


Sensing Technology

200 kHz-BM

Power Rating: 1 kW rms @ 2% duty cycle
 65 mm (2.5") P1A
 Active Area: 33 cm²
 Urethane Window

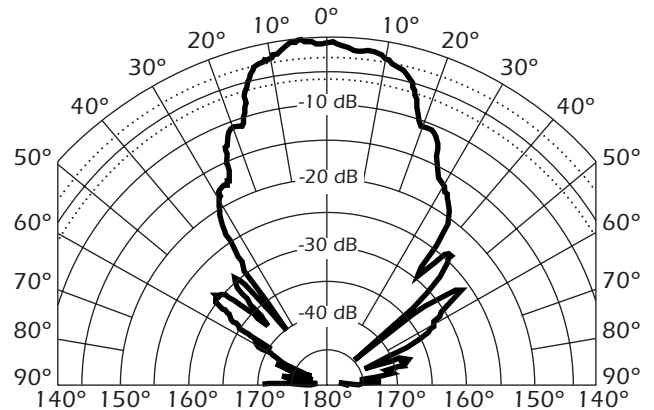
Array



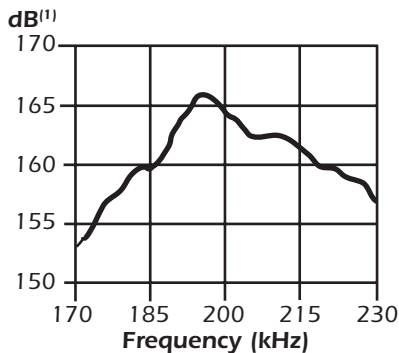
Beamwidth:
 -3 dB: 25°
 -6 dB: 32°
 -10 dB: 36°

Directivity Index: 17.2
 Frequency Tolerance: ± 10 kHz
 Peak TVR⁽¹⁾, nominal: 163 dB
 Peak TVR⁽¹⁾, minimum: 165 dB
 Q (transmit): 7
 Peak Source Level⁽⁴⁾: 214 dB
 Peak RVR⁽²⁾, nominal: -194 dB
 Peak Figure of Merit⁽³⁾: -30 dB

Transmit Radiation Pattern



TVR



RVR

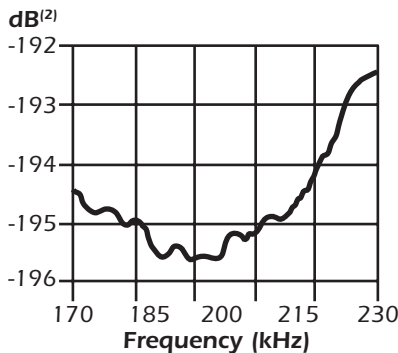
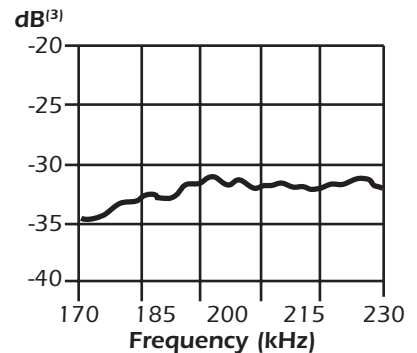


Figure of Merit



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) Nominal peak TVR, rated power, and no cavitation

Acoustic Data: td files:Stored Data:200BM:Urethane:07AT101704:Test#1:02Sens
 Pattern Data:td files:Stored Data:200BM:Urethane:080236-1:Test#1:02Sens



Sensing Technology

Technical Data Catalog

200 kHz-BM

65 mm (2.5") P1A

Cable Type: C332

Cable Length: 10.4 m (34')

Note:

Impedance data includes cable

Impedance Data		
	<i>Balanced</i>	<i>Unbalanced</i>
Parallel: Rp.	90 Ω: -20%, +40%	90 Ω: -20%, +40%
Parallel: Cp. (nominal)	200 pF	200 pF
Series [R - jX]: (nominal)	96 - j7 Ω	96 - j7 Ω
1 kHz capacitance: (nominal)	n/a	n/a

Balance Impedance Table

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)
170.00	302.52	-57.76	161.39	-255.87	1.76	2.80	567.07	2617.52
173.00	257.79	-58.82	133.47	-220.54	2.01	3.32	497.88	3053.14
176.00	219.90	-58.39	115.26	-187.27	2.38	3.87	419.53	3502.22
179.00	187.05	-56.07	104.41	-155.20	2.98	4.44	335.10	3944.10
182.00	161.78	-51.48	100.76	-126.58	3.85	4.84	259.78	4229.03
185.00	146.93	-45.99	102.08	-105.67	4.73	4.90	211.46	4211.14
188.00	134.57	-41.92	100.13	-89.90	5.53	4.96	180.85	4202.98
191.00	118.76	-37.28	94.50	-71.93	6.70	5.10	149.25	4249.38
194.00	102.02	-28.23	89.89	-48.25	8.64	4.64	115.79	3803.23
197.00	94.13	-12.46	91.92	-20.32	10.37	2.29	96.41	1852.33
200.00	103.69	3.04	103.54	5.50	9.63	-0.51	103.83	-407.04
203.00	121.96	9.86	120.16	20.87	8.08	-1.40	123.79	-1100.29
206.00	130.96	12.94	127.63	29.32	7.44	-1.71	134.37	-1320.94
208.00	135.92	16.67	130.21	39.00	7.05	-2.11	141.89	-1615.25
210.00	140.64	19.94	132.21	47.96	6.68	-2.42	149.61	-1837.72
212.00	144.53	25.35	130.61	61.89	6.25	-2.96	159.94	-2224.20
214.00	157.67	31.76	134.06	82.99	5.39	-3.34	185.44	-2482.77
216.00	177.47	35.56	144.36	103.22	4.58	-3.28	218.17	-2414.79
218.00	194.48	37.37	154.56	118.05	4.09	-3.12	244.72	-2278.61
219.00	202.45	38.60	158.21	126.31	3.86	-3.08	259.06	-2239.69
221.00	222.95	42.02	165.63	149.24	3.33	-3.00	300.10	-2162.18
222.00	236.42	43.39	171.80	162.42	3.07	-2.91	325.34	-2083.14
224.00	266.94	45.53	187.01	190.49	2.62	-2.67	381.04	-1899.38
226.00	303.76	46.72	208.27	221.12	2.26	-2.40	443.04	-1687.66
227.00	325.24	46.95	222.02	237.67	2.10	-2.25	476.45	-1575.34
230.00	404.83	45.72	282.62	289.85	1.72	-1.77	579.89	-1223.85



Sensing Technology