

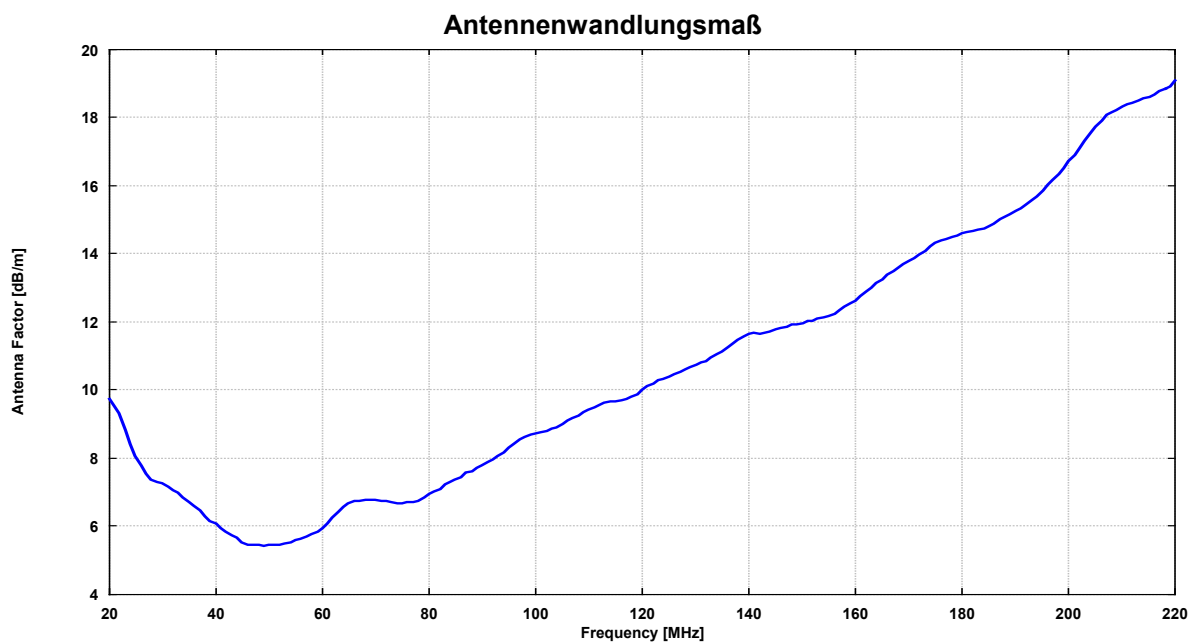
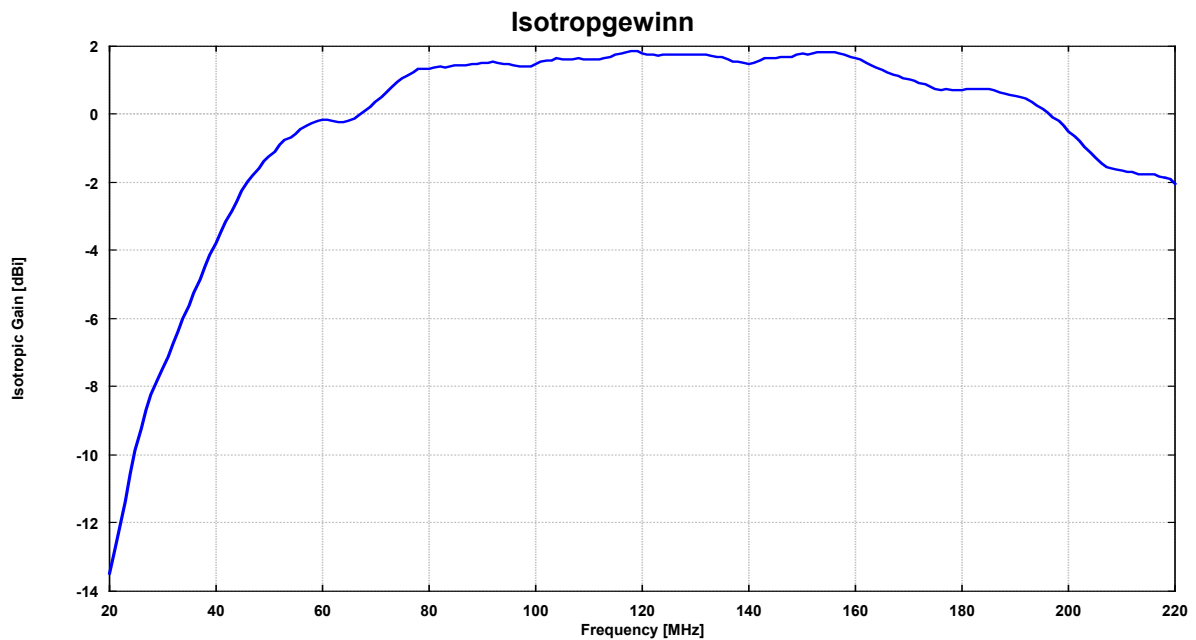
# SCHWARZBECK MESS - ELEKTRONIK

An der Klinge 29 D-69250 Schönau Tel.: 06228/1001 Fax.: (49)6228/1003

## VHBB 9124 4:1 Balun mit Faltbikonus-Elementen BBFA 9146 VHBB 9124 4:1 Balun with Collapsible Cone Elements BBFA 9146



Elemente auf 0.8 m Kreisdurchmesser eingestellt, keine Verlängerungen  
*Elements adjusted to 0.8 m outer Diameter, no Extensions*



# SCHWARZBECK MESS - ELEKTRONIK

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## VHBB 9124 4:1 Balun mit Faltbikonus-Elementen BBFA 9146 VHBB 9124 4:1 Balun with Collapsible Cone Elements BBFA 9146

Diameter 0.8 m, no Extensions		
Frequency	Gain(Isotr.)	Ant.-Factor
Frequenz	Isotrop-gewinn	Ant.-Wand-lungsmaß
MHz	dBi	dB/m
20.00	-13.50	9.74
21.00	-12.85	9.51
22.00	-12.25	9.32
23.00	-11.37	8.83
24.00	-10.58	8.41
25.00	-9.87	8.05
26.00	-9.25	7.77
27.00	-8.69	7.53
28.00	-8.22	7.38
29.00	-7.83	7.30
30.00	-7.50	7.26
31.00	-7.11	7.16
32.00	-6.75	7.07
33.00	-6.38	6.97
34.00	-5.99	6.84
35.00	-5.61	6.71
36.00	-5.24	6.59
37.00	-4.86	6.45
38.00	-4.47	6.28
39.00	-4.12	6.16
40.00	-3.79	6.06
41.00	-3.46	5.94
42.00	-3.14	5.83
43.00	-2.85	5.74
44.00	-2.56	5.65
45.00	-2.23	5.51
46.00	-1.98	5.46
47.00	-1.80	5.46
48.00	-1.60	5.44
49.00	-1.38	5.41
50.00	-1.23	5.43
51.00	-1.08	5.45
52.00	-0.89	5.43
53.00	-0.76	5.47
54.00	-0.66	5.53
55.00	-0.56	5.59
56.00	-0.42	5.61
57.00	-0.34	5.68
58.00	-0.26	5.75
59.00	-0.18	5.82
60.00	-0.14	5.93
61.00	-0.16	6.09
62.00	-0.18	6.25
63.00	-0.21	6.42
64.00	-0.21	6.56
65.00	-0.18	6.66
66.00	-0.11	6.72
67.00	-0.01	6.75
68.00	0.11	6.76
69.00	0.22	6.78
70.00	0.37	6.76

Diameter 0.8 m, no Extensions		
Frequency	Gain(Isotr.)	Ant.-Factor
Frequenz	Isotrop-gewinn	Ant.-Wand-lungsmaß
MHz	dBi	dB/m
71.00	0.52	6.72
72.00	0.64	6.73
73.00	0.77	6.71
74.00	0.95	6.65
75.00	1.07	6.65
76.00	1.14	6.69
77.00	1.25	6.70
78.00	1.34	6.72
79.00	1.34	6.83
80.00	1.35	6.94
81.00	1.37	7.02
82.00	1.41	7.08
83.00	1.39	7.21
84.00	1.42	7.29
85.00	1.44	7.37
86.00	1.46	7.45
87.00	1.44	7.57
88.00	1.48	7.63
89.00	1.50	7.71
90.00	1.52	7.79
91.00	1.51	7.89
92.00	1.55	7.95
93.00	1.52	8.07
94.00	1.50	8.18
95.00	1.48	8.30
96.00	1.46	8.40
97.00	1.42	8.54
98.00	1.42	8.62
99.00	1.43	8.70
100.00	1.49	8.73
101.00	1.56	8.75
102.00	1.58	8.81
103.00	1.60	8.87
104.00	1.65	8.91
105.00	1.64	9.00
106.00	1.63	9.09
107.00	1.64	9.17
108.00	1.65	9.24
109.00	1.61	9.36
110.00	1.61	9.43
111.00	1.63	9.49
112.00	1.64	9.56
113.00	1.65	9.63
114.00	1.69	9.67
115.00	1.76	9.67
116.00	1.80	9.71
117.00	1.84	9.75
118.00	1.85	9.81
119.00	1.85	9.88
120.00	1.81	10.00
121.00	1.77	10.10

# SCHWARZBECK MESS - ELEKTRONIK

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## VHBB 9124 4:1 Balun mit Faltbikonus-Elementen BBFA 9146 VHBB 9124 4:1 Balun with Collapsible Cone Elements BBFA 9146

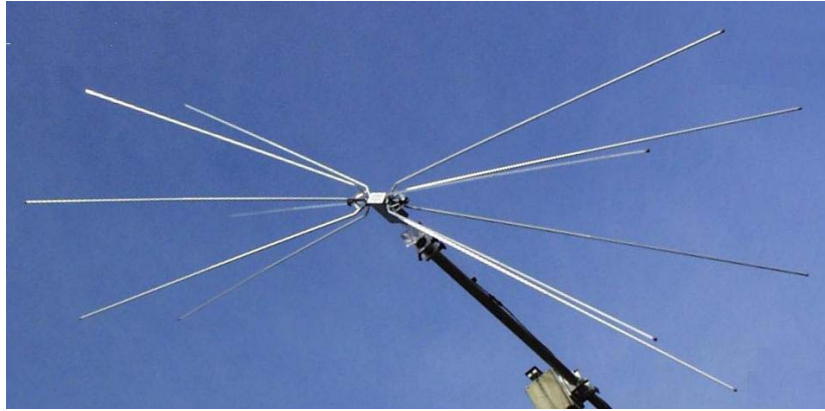
Diameter 0.8 m, no Extensions		
Frequency	Gain(Isotr.)	Ant.-Factor
Frequenz	Isotrop-gewinn	Ant.-Wand-lungsmaß
MHz	dBi	dB/m
122.00	1.75	10.19
123.00	1.74	10.28
124.00	1.76	10.33
125.00	1.76	10.39
126.00	1.77	10.46
127.00	1.76	10.54
128.00	1.77	10.60
129.00	1.76	10.67
130.00	1.76	10.74
131.00	1.76	10.80
132.00	1.77	10.86
133.00	1.73	10.97
134.00	1.71	11.05
135.00	1.68	11.14
136.00	1.63	11.26
137.00	1.57	11.38
138.00	1.54	11.47
139.00	1.51	11.57
140.00	1.49	11.65
141.00	1.53	11.68
142.00	1.60	11.67
143.00	1.65	11.68
144.00	1.67	11.72
145.00	1.67	11.78
146.00	1.70	11.81
147.00	1.69	11.87
148.00	1.71	11.91
149.00	1.76	11.92
150.00	1.78	11.96
151.00	1.77	12.03
152.00	1.80	12.05
153.00	1.83	12.09
154.00	1.84	12.13
155.00	1.83	12.19
156.00	1.84	12.24
157.00	1.80	12.34
158.00	1.75	12.44
159.00	1.70	12.54
160.00	1.67	12.63
161.00	1.61	12.75
162.00	1.51	12.90
163.00	1.44	13.02
164.00	1.37	13.15
165.00	1.30	13.27
166.00	1.22	13.41
167.00	1.18	13.49
168.00	1.13	13.60
169.00	1.07	13.71
170.00	1.03	13.80
171.00	1.01	13.87
172.00	0.94	13.99
173.00	0.88	14.10

Diameter 0.8 m, no Extensions		
Frequency	Gain(Isotr.)	Ant.-Factor
Frequenz	Isotrop-gewinn	Ant.-Wand-lungsmaß
MHz	dBi	dB/m
174.00	0.81	14.22
175.00	0.75	14.33
176.00	0.72	14.41
177.00	0.74	14.44
178.00	0.73	14.50
179.00	0.72	14.55
180.00	0.73	14.60
181.00	0.74	14.63
182.00	0.74	14.68
183.00	0.75	14.72
184.00	0.76	14.76
185.00	0.76	14.81
186.00	0.71	14.90
187.00	0.64	15.02
188.00	0.61	15.10
189.00	0.58	15.17
190.00	0.54	15.26
191.00	0.51	15.33
192.00	0.46	15.43
193.00	0.36	15.57
194.00	0.27	15.71
195.00	0.16	15.86
196.00	0.04	16.02
197.00	-0.07	16.18
198.00	-0.19	16.34
199.00	-0.33	16.53
200.00	-0.49	16.73
201.00	-0.63	16.91
202.00	-0.77	17.10
203.00	-0.97	17.34
204.00	-1.14	17.56
205.00	-1.28	17.74
206.00	-1.44	17.93
207.00	-1.54	18.08
208.00	-1.57	18.16
209.00	-1.62	18.24
210.00	-1.66	18.32
211.00	-1.69	18.39
212.00	-1.70	18.44
213.00	-1.74	18.52
214.00	-1.74	18.57
215.00	-1.74	18.61
216.00	-1.76	18.67
217.00	-1.83	18.78
218.00	-1.85	18.84
219.00	-1.90	18.93
220.00	-2.02	19.09

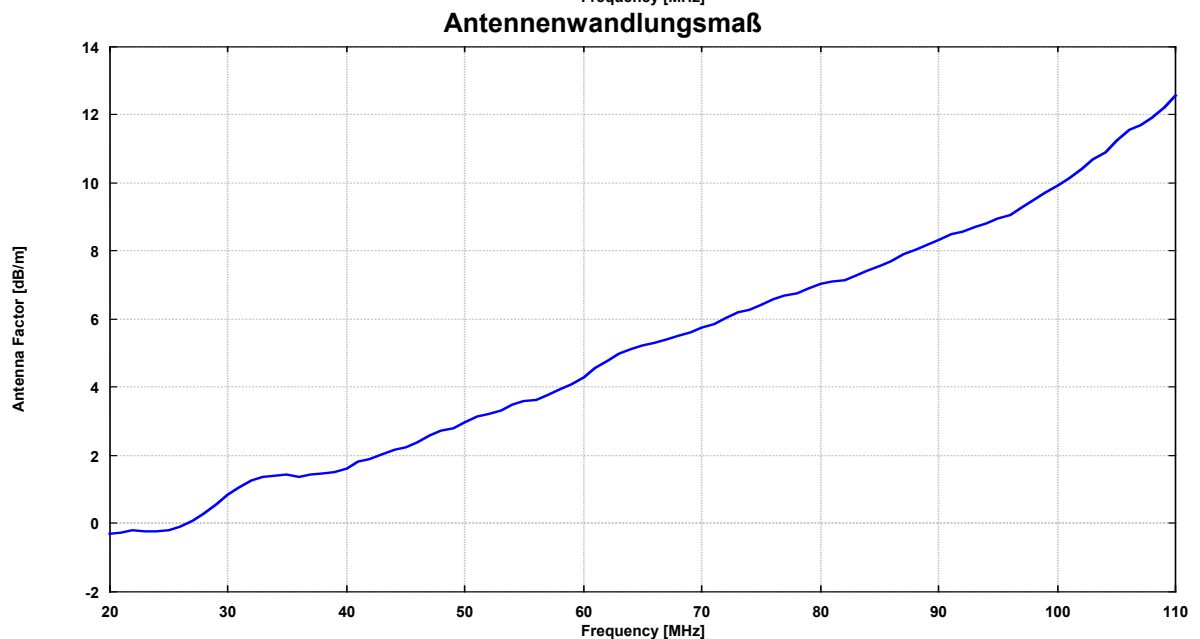
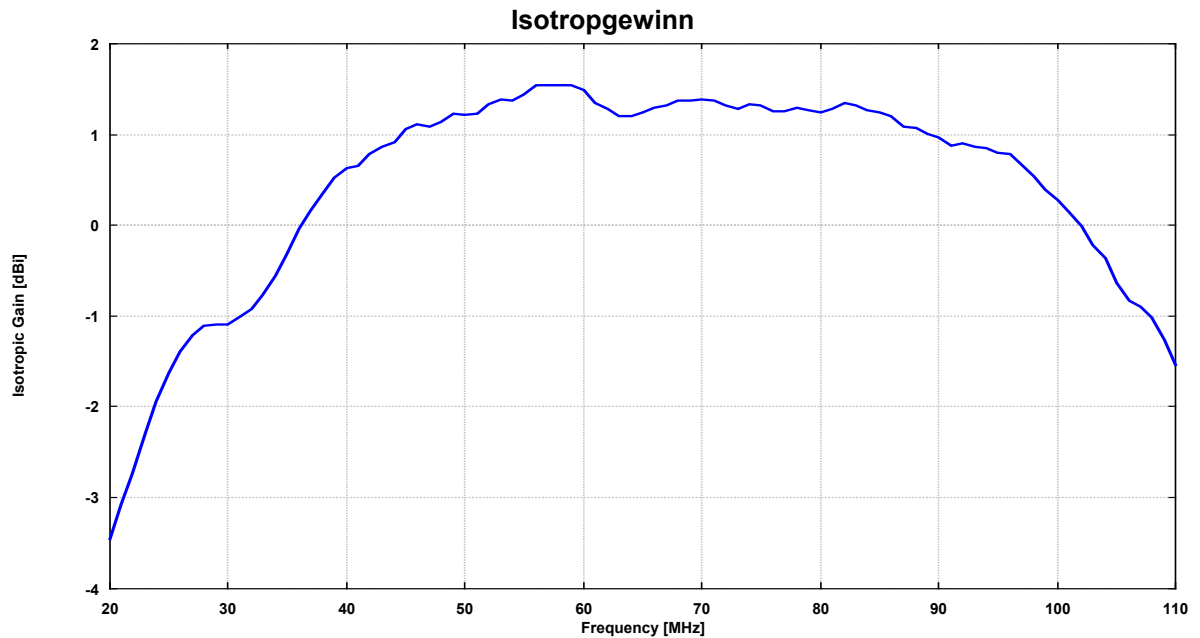
# SCHWARZBECK MESS - ELEKTRONIK

An der Klinge 29 D-69250 Schönau Tel.: 06228/1001 Fax.: (49)6228/1003

**VHBB 9124 4:1 Balun mit Faltbikonus-Elementen BBFA 9146**  
**VHBB 9124 4:1 Balun with Collapsible Cone Elements BBFA 9146**



**Innere Elemente auf 0.8 m Kreisdurchmesser eingestellt, mit Verlängerungen**  
**Inner Elements adjusted to 0.8 m Diameter, with Extensions**



# SCHWARZBECK MESS - ELEKTRONIK

An der Klinge 29 D-69250 Schönau Tel.: 06228/1001 Fax.: (49)6228/1003

## VHBB 9124 4:1 Balun mit Faltbikonus-Elementen BBFA 9146 *VHBB 9124 4:1 Balun with Collapsible Cone Elements BBFA 9146*

Diameter 0.8 m as above, but with Extensions		
Frequency	Gain(Isotr.)	Ant.-Factor
Frequenz	Isotrop- gewinn	Ant.-Wand- lungsmaß
MHz	dBi	dB/m
20.00	-3.46	-0.30
21.00	-3.07	-0.27
22.00	-2.74	-0.19
23.00	-2.30	-0.24
24.00	-1.94	-0.24
25.00	-1.63	-0.19
26.00	-1.39	-0.09
27.00	-1.21	0.06
28.00	-1.11	0.27
29.00	-1.09	0.56
30.00	-1.09	0.85
31.00	-1.02	1.07
32.00	-0.92	1.25
33.00	-0.76	1.35
34.00	-0.56	1.41
35.00	-0.32	1.42
36.00	-0.03	1.38
37.00	0.16	1.43
38.00	0.36	1.46
39.00	0.53	1.51
40.00	0.63	1.63
41.00	0.65	1.83
42.00	0.79	1.90
43.00	0.86	2.03
44.00	0.92	2.17
45.00	1.06	2.23
46.00	1.11	2.37
47.00	1.09	2.57
48.00	1.14	2.71
49.00	1.23	2.79
50.00	1.22	2.98
51.00	1.23	3.14
52.00	1.34	3.20
53.00	1.39	3.31
54.00	1.38	3.49
55.00	1.44	3.59
56.00	1.55	3.63
57.00	1.55	3.78
58.00	1.55	3.94
59.00	1.54	4.09
60.00	1.49	4.30
61.00	1.35	4.57
62.00	1.28	4.79
63.00	1.21	5.00
64.00	1.21	5.14
65.00	1.24	5.24
66.00	1.30	5.31
67.00	1.33	5.41
68.00	1.37	5.50
69.00	1.37	5.62

Diameter 0.8 m as above, but with Extensions		
Frequency	Gain(Isotr.)	Ant.-Factor
Frequenz	Isotrop- gewinn	Ant.-Wand- lungsmaß
MHz	dBi	dB/m
70.00	1.39	5.74
71.00	1.37	5.87
72.00	1.32	6.05
73.00	1.29	6.20
74.00	1.34	6.27
75.00	1.32	6.40
76.00	1.26	6.58
77.00	1.26	6.69
78.00	1.30	6.76
79.00	1.27	6.90
80.00	1.24	7.04
81.00	1.28	7.11
82.00	1.35	7.15
83.00	1.32	7.28
84.00	1.27	7.43
85.00	1.25	7.56
86.00	1.20	7.71
87.00	1.09	7.92
88.00	1.07	8.04
89.00	1.01	8.20
90.00	0.97	8.34
91.00	0.88	8.52
92.00	0.91	8.58
93.00	0.87	8.72
94.00	0.85	8.83
95.00	0.80	8.97
96.00	0.79	9.07
97.00	0.65	9.31
98.00	0.54	9.50
99.00	0.40	9.73
100.00	0.28	9.94
101.00	0.15	10.15
102.00	-0.01	10.40
103.00	-0.22	10.70
104.00	-0.36	10.92
105.00	-0.63	11.27
106.00	-0.83	11.55
107.00	-0.90	11.71
108.00	-1.02	11.91
109.00	-1.26	12.22
110.00	-1.54	12.59