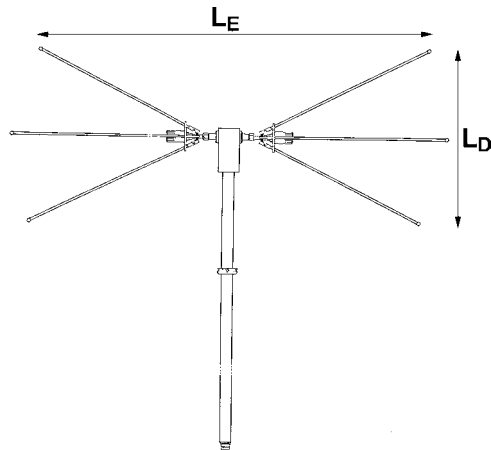


SCHWARZBECK MESS - ELEKTRONIK

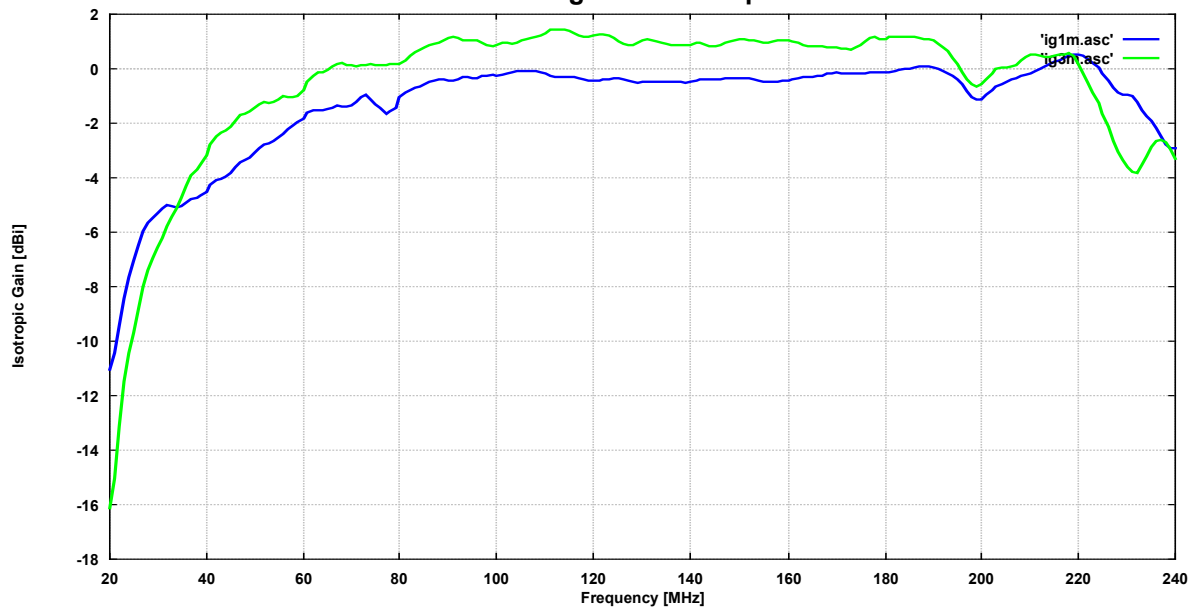
An der Klinge 29 D-69250 Schönau Tel.: 06228/1001 Fax.: (49)6228/1003

4:1 Balun VHBA 9123 mit Faltbikonus-Elementen FBAL 9178 4:1 Balun VHBA 9123 with Collapsible Conical Elements FBAL 9178

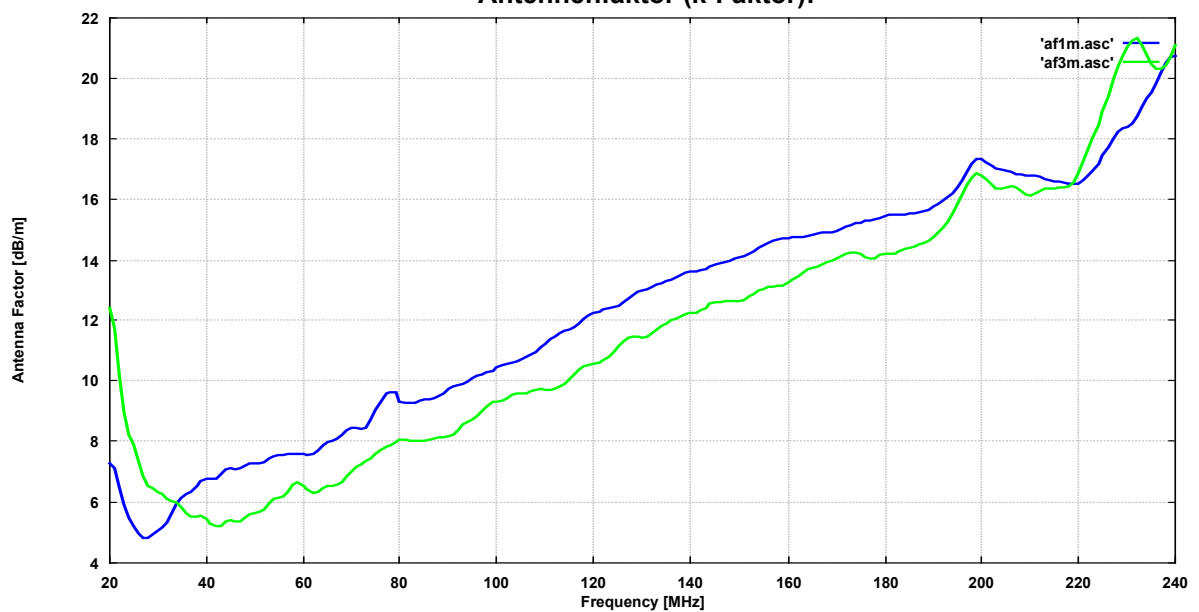


$L_E = 1.9 \text{ m}$
 $L_D = 0.9 \text{ m}$

Gewinn bezogen auf Isotropstrahler:



Antennenfaktor (k-Faktor):



SCHWARZBECK MESS - ELEKTRONIK

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

4:1 Balun VHBA 9123 mit Faltbikonus-Elementen FBAL 9178 4:1 Balun VHBA 9123 with Collapsible Conical Elements FBAL 9178

Frequency	Gain(Isotr.) 1 m	Ant.-Factor 1 m	Gain(Isotr.) 3 m	Ant.-Factor 3 m
MHz	dBi	dB/m	dBi	dB/m
20.00	-11.06	7.30	-16.15	12.39
21.00	-10.45	7.12	-15.07	11.74
22.00	-9.42	6.49	-13.14	10.21
23.00	-8.45	5.90	-11.50	8.95
24.00	-7.66	5.48	-10.42	8.24
25.00	-7.05	5.22	-9.71	7.89
26.00	-6.46	4.98	-8.82	7.34
27.00	-5.97	4.82	-8.00	6.85
28.00	-5.65	4.81	-7.38	6.54
29.00	-5.47	4.94	-6.98	6.45
30.00	-5.30	5.06	-6.59	6.35
31.00	-5.11	5.16	-6.21	6.25
32.00	-5.01	5.33	-5.78	6.10
33.00	-5.03	5.62	-5.44	6.03
34.00	-5.10	5.95	-5.12	5.97
35.00	-5.05	6.15	-4.74	5.84
36.00	-4.90	6.24	-4.29	5.63
37.00	-4.77	6.35	-3.92	5.50
38.00	-4.72	6.53	-3.71	5.52
39.00	-4.66	6.70	-3.50	5.54
40.00	-4.51	6.77	-3.18	5.45
41.00	-4.28	6.76	-2.78	5.26
42.00	-4.11	6.79	-2.49	5.18
43.00	-4.03	6.92	-2.33	5.22
44.00	-3.97	7.06	-2.26	5.35
45.00	-3.83	7.11	-2.11	5.39
46.00	-3.62	7.10	-1.89	5.37
47.00	-3.45	7.11	-1.71	5.37
48.00	-3.35	7.19	-1.64	5.48
49.00	-3.25	7.27	-1.58	5.60
50.00	-3.10	7.30	-1.45	5.65
51.00	-2.93	7.30	-1.30	5.67
52.00	-2.79	7.33	-1.22	5.76
53.00	-2.72	7.42	-1.24	5.94
54.00	-2.64	7.50	-1.22	6.09
55.00	-2.53	7.56	-1.11	6.14
56.00	-2.38	7.56	-1.01	6.19
57.00	-2.23	7.57	-1.02	6.36
58.00	-2.09	7.58	-1.06	6.55
59.00	-1.97	7.60	-0.99	6.63
60.00	-1.81	7.59	-0.76	6.54
61.00	-1.63	7.55	-0.47	6.40
62.00	-1.52	7.58	-0.25	6.31
63.00	-1.50	7.71	-0.13	6.34
64.00	-1.53	7.87	-0.11	6.45
65.00	-1.49	7.97	-0.04	6.52
66.00	-1.42	8.03	0.09	6.52
67.00	-1.35	8.09	0.19	6.55
68.00	-1.37	8.24	0.22	6.65
69.00	-1.38	8.37	0.15	6.85
70.00	-1.35	8.47	0.12	7.00
71.00	-1.20	8.45	0.09	7.15
72.00	-1.04	8.40	0.13	7.23

SCHWARZBECK MESS - ELEKTRONIK

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

4:1 Balun VHBA 9123 mit Faltbikonus-Elementen FBAL 9178 4:1 Balun VHBA 9123 with Collapsible Conical Elements FBAL 9178

Frequency	Gain(Isotr.) 1 m	Ant.-Factor 1 m	Gain(Isotr.) 3 m	Ant.-Factor 3 m
MHz	dBi	dB/m	dBi	dB/m
73.00	-0.96	8.45	0.12	7.37
74.00	-1.11	8.71	0.17	7.44
75.00	-1.31	9.03	0.12	7.60
76.00	-1.43	9.27	0.13	7.70
77.00	-1.65	9.60	0.13	7.82
78.00	-1.56	9.63	0.19	7.87
79.00	-1.44	9.62	0.18	7.99
80.00	-1.04	9.32	0.20	8.08
81.00	-0.88	9.27	0.31	8.08
82.00	-0.76	9.26	0.48	8.02
83.00	-0.69	9.29	0.60	8.00
84.00	-0.64	9.34	0.71	8.00
85.00	-0.58	9.39	0.77	8.04
86.00	-0.50	9.41	0.86	8.05
87.00	-0.43	9.44	0.92	8.09
88.00	-0.38	9.49	0.98	8.13
89.00	-0.38	9.59	1.05	8.16
90.00	-0.42	9.73	1.14	8.17
91.00	-0.42	9.82	1.17	8.23
92.00	-0.37	9.87	1.14	8.36
93.00	-0.31	9.90	1.04	8.55
94.00	-0.31	9.99	1.04	8.64
95.00	-0.32	10.09	1.03	8.74
96.00	-0.32	10.19	1.04	8.83
97.00	-0.27	10.23	0.96	9.00
98.00	-0.24	10.28	0.88	9.17
99.00	-0.20	10.34	0.83	9.30
100.00	-0.23	10.45	0.89	9.33
101.00	-0.22	10.53	0.95	9.36
102.00	-0.18	10.58	0.96	9.43
103.00	-0.11	10.59	0.93	9.55
104.00	-0.07	10.63	0.96	9.60
105.00	-0.07	10.72	1.03	9.61
106.00	-0.09	10.81	1.11	9.61
107.00	-0.09	10.90	1.15	9.65
108.00	-0.10	10.98	1.17	9.72
109.00	-0.14	11.11	1.23	9.74
110.00	-0.19	11.24	1.33	9.71
111.00	-0.26	11.39	1.42	9.71
112.00	-0.29	11.49	1.45	9.76
113.00	-0.31	11.59	1.45	9.83
114.00	-0.30	11.66	1.46	9.90
115.00	-0.28	11.72	1.39	10.05
116.00	-0.29	11.80	1.31	10.20
117.00	-0.33	11.91	1.21	10.37
118.00	-0.38	12.04	1.18	10.48
119.00	-0.43	12.16	1.19	10.54
120.00	-0.44	12.24	1.23	10.58
121.00	-0.42	12.30	1.28	10.59
122.00	-0.41	12.36	1.28	10.67
123.00	-0.38	12.39	1.23	10.79
124.00	-0.35	12.44	1.13	10.96
125.00	-0.34	12.50	1.00	11.16
126.00	-0.37	12.60	0.92	11.31
127.00	-0.43	12.73	0.86	11.43

SCHWARZBECK MESS - ELEKTRONIK

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

4:1 Balun VHBA 9123 mit Faltbikonus-Elementen FBAL 9178 4:1 Balun VHBA 9123 with Collapsible Conical Elements FBAL 9178

Frequency	Gain(Isotr.) 1 m	Ant.-Factor 1 m	Gain(Isotr.) 3 m	Ant.-Factor 3 m
MHz	dBi	dB/m	dBi	dB/m
128.00	-0.49	12.85	0.88	11.49
129.00	-0.51	12.94	0.97	11.46
130.00	-0.49	12.99	1.07	11.43
131.00	-0.48	13.04	1.10	11.47
132.00	-0.48	13.11	1.04	11.59
133.00	-0.48	13.18	1.00	11.69
134.00	-0.48	13.24	0.96	11.81
135.00	-0.47	13.30	0.91	11.91
136.00	-0.48	13.37	0.88	12.01
137.00	-0.48	13.44	0.88	12.07
138.00	-0.50	13.52	0.88	12.14
139.00	-0.51	13.59	0.86	12.22
140.00	-0.48	13.62	0.90	12.24
141.00	-0.42	13.63	0.96	12.25
142.00	-0.39	13.65	0.96	12.31
143.00	-0.39	13.72	0.90	12.43
144.00	-0.40	13.79	0.82	12.57
145.00	-0.39	13.84	0.83	12.61
146.00	-0.37	13.88	0.88	12.62
147.00	-0.35	13.92	0.94	12.63
148.00	-0.35	13.97	0.99	12.64
149.00	-0.35	14.04	1.05	12.63
150.00	-0.36	14.10	1.09	12.65
151.00	-0.34	14.14	1.10	12.70
152.00	-0.35	14.21	1.06	12.80
153.00	-0.38	14.29	1.04	12.88
154.00	-0.43	14.40	0.99	12.98
155.00	-0.46	14.49	0.98	13.05
156.00	-0.49	14.57	0.96	13.12
157.00	-0.49	14.63	1.01	13.13
158.00	-0.48	14.67	1.04	13.16
159.00	-0.45	14.70	1.07	13.17
160.00	-0.43	14.73	1.05	13.26
161.00	-0.39	14.75	1.02	13.34
162.00	-0.35	14.76	0.96	13.45
163.00	-0.31	14.77	0.88	13.58
164.00	-0.29	14.80	0.83	13.69
165.00	-0.28	14.85	0.84	13.73
166.00	-0.26	14.89	0.84	13.78
167.00	-0.23	14.90	0.82	13.86
168.00	-0.19	14.91	0.80	13.93
169.00	-0.16	14.93	0.79	13.99
170.00	-0.14	14.97	0.77	14.06
171.00	-0.16	15.04	0.74	14.14
172.00	-0.18	15.11	0.73	14.21
173.00	-0.19	15.17	0.72	14.26
174.00	-0.18	15.21	0.77	14.26
175.00	-0.17	15.25	0.86	14.22
176.00	-0.16	15.29	1.02	14.11
177.00	-0.14	15.32	1.13	14.05
178.00	-0.12	15.35	1.16	14.07
179.00	-0.11	15.39	1.11	14.16
180.00	-0.12	15.45	1.11	14.22
181.00	-0.12	15.50	1.16	14.21
182.00	-0.09	15.52	1.20	14.22

SCHWARZBECK MESS - ELEKTRONIK

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

4:1 Balun VHBA 9123 mit Faltbikonus-Elementen FBAL 9178 4:1 Balun VHBA 9123 with Collapsible Conical Elements FBAL 9178

Frequency	Gain(Isotr.) 1 m	Ant.-Factor 1 m	Gain(Isotr.) 3 m	Ant.-Factor 3 m
MHz	dBi	dB/m	dBi	dB/m
183.00	-0.04	15.51	1.17	14.30
184.00	-0.00	15.52	1.17	14.35
185.00	0.02	15.54	1.17	14.40
186.00	0.06	15.55	1.17	14.44
187.00	0.10	15.56	1.14	14.51
188.00	0.09	15.61	1.12	14.58
189.00	0.07	15.68	1.10	14.65
190.00	0.03	15.77	1.03	14.77
191.00	-0.02	15.86	0.93	14.91
192.00	-0.08	15.97	0.80	15.08
193.00	-0.16	16.09	0.65	15.28
194.00	-0.24	16.22	0.42	15.55
195.00	-0.38	16.40	0.17	15.85
196.00	-0.58	16.64	-0.11	16.17
197.00	-0.81	16.92	-0.38	16.49
198.00	-1.03	17.18	-0.58	16.73
199.00	-1.14	17.34	-0.67	16.87
200.00	-1.11	17.35	-0.58	16.82
201.00	-0.97	17.25	-0.38	16.66
202.00	-0.79	17.12	-0.16	16.48
203.00	-0.67	17.04	0.00	16.37
204.00	-0.58	16.99	0.05	16.36
205.00	-0.50	16.96	0.04	16.41
206.00	-0.41	16.91	0.07	16.43
207.00	-0.32	16.85	0.14	16.40
208.00	-0.25	16.83	0.31	16.27
209.00	-0.20	16.82	0.44	16.18
210.00	-0.16	16.82	0.54	16.13
211.00	-0.08	16.78	0.51	16.19
212.00	-0.00	16.75	0.46	16.29
213.00	0.09	16.69	0.43	16.36
214.00	0.18	16.64	0.45	16.38
215.00	0.27	16.60	0.49	16.38
216.00	0.33	16.58	0.51	16.40
217.00	0.40	16.55	0.54	16.41
218.00	0.47	16.52	0.56	16.43
219.00	0.53	16.50	0.46	16.57
220.00	0.53	16.54	0.20	16.87
221.00	0.47	16.64	-0.16	17.27
222.00	0.36	16.78	-0.52	17.67
223.00	0.22	16.97	-0.87	18.06
224.00	0.04	17.19	-1.25	18.47
225.00	-0.19	17.45	-1.66	18.92
226.00	-0.44	17.74	-2.13	19.43
227.00	-0.69	18.03	-2.63	19.97
228.00	-0.86	18.24	-3.03	20.41
229.00	-0.95	18.36	-3.35	20.76
230.00	-0.95	18.41	-3.61	21.07