

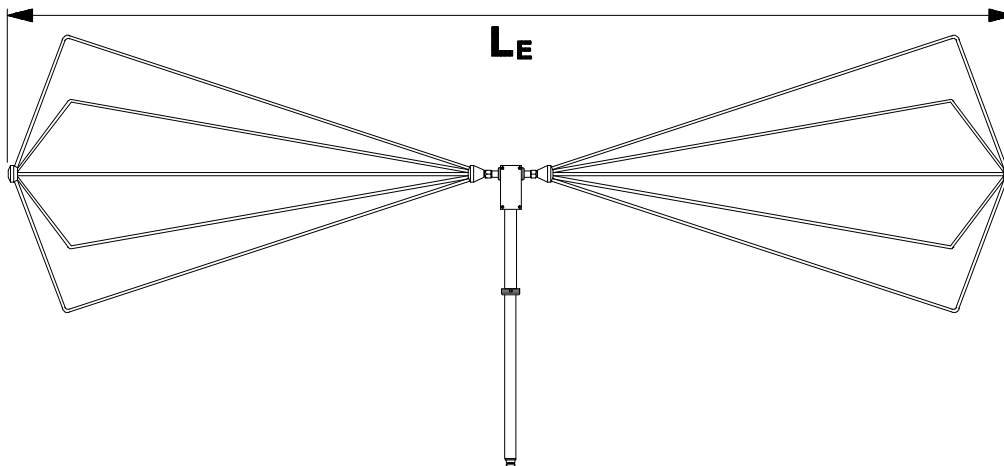
# SCHWARZBECK MESS - ELEKTRONIK

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

## VHBB 9124 4:1 Balun mit Bikonus-Elementen BBAL 9136

## VHBB 9124 4:1 Balun with Biconical Elements BBAL 9136

Frequenz	Abstand	Wellenlänge	Dämpfung	Isotrop-gewinn	Gewinn üb. Dipol	Antennen-Faktor
Frequency	Distance	lambda	Attenuat.	Gain (Isotr)	Gain, dipole	Ant.-Fctr.
MHz	m	m	dB	dBi	dBd	dB/m
20.00	4.00	15.00	43.40	-16.45	-18.60	12.69
25.00	4.00	12.00	35.50	-11.53	-13.68	9.71
30.00	4.00	10.00	30.35	-8.16	-10.31	7.92
35.00	4.00	8.57	26.40	-5.52	-7.67	6.62
40.00	4.00	7.50	24.00	-3.74	-5.89	6.00
50.00	4.00	6.00	20.34	-0.94	-3.09	5.14
60.00	4.00	5.00	20.58	-0.27	-2.42	6.05
70.00	4.00	4.29	20.10	0.64	-1.51	6.48
80.00	4.00	3.75	20.90	0.82	-1.33	7.46
90.00	4.00	3.33	21.40	1.08	-1.07	8.22
100.00	4.00	3.00	21.74	1.37	-0.78	8.85
110.00	4.00	2.73	21.97	1.67	-0.48	9.38
120.00	4.00	2.50	22.85	1.61	-0.54	10.19
125.00	4.00	2.40	22.87	1.78	-0.37	10.38
130.00	4.00	2.31	23.17	1.80	-0.35	10.70
140.00	4.00	2.14	23.23	2.09	-0.06	11.05
150.00	4.00	2.00	24.00	2.00	-0.15	11.74
160.00	4.00	1.88	24.80	1.88	-0.27	12.42
170.00	4.00	1.76	25.20	1.95	-0.20	12.88
175.00	4.00	1.71	25.80	1.77	-0.38	13.31
180.00	4.00	1.67	26.40	1.60	-0.56	13.73
190.00	4.00	1.58	30.20	-0.07	-2.22	15.87
200.00	4.00	1.50	29.30	0.60	-1.55	15.64
225.00	4.00	1.33	37.20	-2.84	-4.99	20.10
250.00	4.00	1.20	42.00	-4.78	-6.93	22.96



### Technische Daten:

Frequenzbereich: 20-200 MHz  
 Anschluss: 50 Ω N  
 Elementlänge LE mit BBAL 9136: 1.94 m  
 Länge / Durchmesser der Halterung: 0.58 m / 22 mm  
 Elementaufnahme: 10 mm  
 Gewicht des Halters / Balun: 0.9 kg  
 Gewicht eines Elements: 0.75 kg

### VHBB 9124 BBAL 9136

20-200 MHz  
 50 Ω N  
 1.94 m  
 0.58 m / 22 mm  
 10 mm  
 0.9 kg  
 0.75 kg

### Specifications:

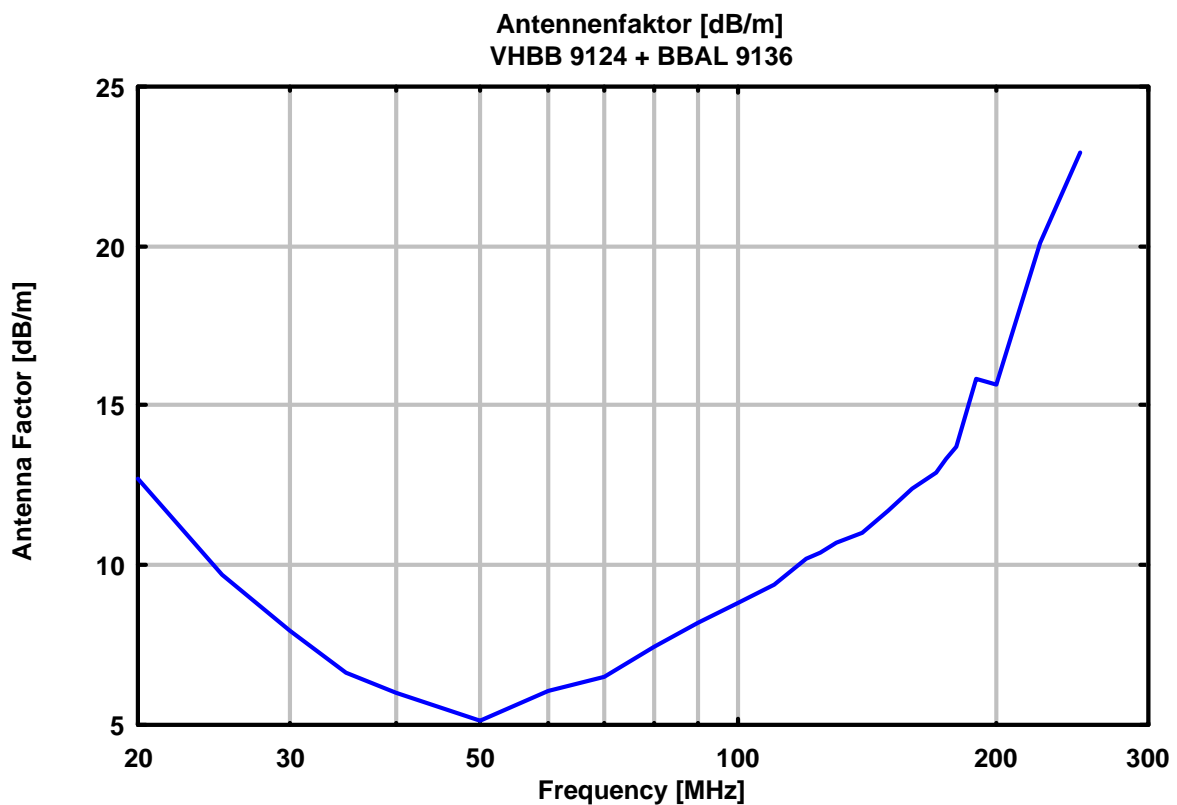
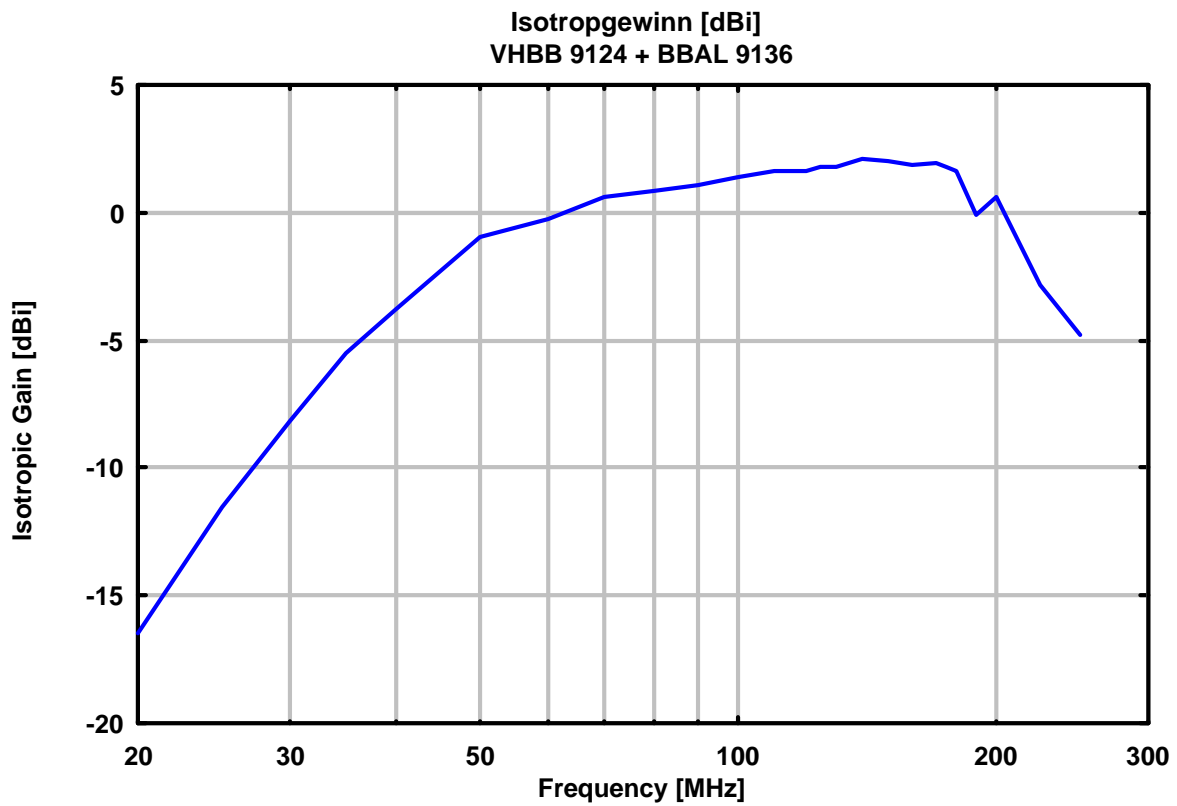
Frequency range: 20-200 MHz  
 Connector: N  
 Element length LE with BBAL 9136: 1.94 m  
 Holder length / diameter: 0.58 m / 22 mm  
 Element fixture: 10 mm  
 Holder / balun weight: 0.9 kg  
 Weight of one element: 0.75 kg

# SCHWARZBECK MESS - ELEKTRONIK

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

**VHBB 9124 4:1 Balun mit Bikonus-Elementen BBAL 9136**

***VHBB 9124 4:1 Balun with Biconical Elements BBAL 9136***



# SCHWARZBECK MESS - ELEKTRONIK

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

## VHBB 9124 4:1 Balun mit Bikonus-Elementen BBAL 9136

## VHBB 9124 4:1 Balun with Biconical Elements BBAL 9136

Frequency	Distance	Wavelength	Attenuation	Gain(Isotr.)	Gain(Dipole)	Ant.-Factor
Frequenz	Abstand	Wellenlänge	Dämpfung	Isotropgewinn	Gewinn über Dipol	Ant.-Wandlungsmaß
MHz	m	m	dB	dBi	dBd	dB/m
25.00	1.00	12.00	19.43	-9.51	-11.67	7.69
27.50	1.00	10.91	19.34	-9.06	-11.21	8.06
30.00	1.00	10.00	19.06	-8.54	-10.69	8.30
32.50	1.00	9.23	18.40	-7.86	-10.01	8.31
35.00	1.00	8.57	17.88	-7.28	-9.43	8.38
37.50	1.00	8.00	16.97	-6.52	-8.67	8.22
40.00	1.00	7.50	16.12	-5.82	-7.97	8.08
42.50	1.00	7.06	15.00	-4.99	-7.14	7.78
45.00	1.00	6.67	14.23	-4.36	-6.51	7.65
47.50	1.00	6.32	13.48	-3.75	-5.90	7.50
50.00	1.00	6.00	13.01	-3.29	-5.44	7.49
52.50	1.00	5.71	12.72	-2.93	-5.08	7.56
55.00	1.00	5.45	12.44	-2.59	-4.75	7.62
57.50	1.00	5.22	12.13	-2.24	-4.40	7.66
60.00	1.00	5.00	11.90	-1.95	-4.10	7.73
62.50	1.00	4.80	11.61	-1.62	-3.77	7.76
65.00	1.00	4.62	11.49	-1.39	-3.54	7.87
67.50	1.00	4.44	11.45	-1.21	-3.36	8.02
70.00	1.00	4.29	11.52	-1.09	-3.24	8.21
72.50	1.00	4.14	11.34	-0.84	-2.99	8.27
75.00	1.00	4.00	11.44	-0.75	-2.90	8.47
77.50	1.00	3.87	11.80	-0.78	-2.93	8.79
80.00	1.00	3.75	11.97	-0.73	-2.88	9.01
82.50	1.00	3.64	12.08	-0.65	-2.80	9.20
85.00	1.00	3.53	12.22	-0.59	-2.74	9.40
87.50	1.00	3.43	12.54	-0.63	-2.78	9.69
90.00	1.00	3.33	12.76	-0.62	-2.77	9.92
92.50	1.00	3.24	12.89	-0.56	-2.71	10.10
95.00	1.00	3.16	12.97	-0.48	-2.64	10.26
97.50	1.00	3.08	13.34	-0.55	-2.70	10.55
100.00	1.00	3.00	13.47	-0.51	-2.66	10.73
105.00	1.00	2.86	13.74	-0.43	-2.58	11.08
110.00	1.00	2.73	14.21	-0.47	-2.62	11.51
115.00	1.00	2.61	14.73	-0.53	-2.68	11.97
120.00	1.00	2.50	15.03	-0.50	-2.65	12.30
125.00	1.00	2.40	15.36	-0.49	-2.64	12.65
130.00	1.00	2.31	15.47	-0.37	-2.52	12.87
135.00	1.00	2.22	15.66	-0.30	-2.45	13.13
140.00	1.00	2.14	15.65	-0.14	-2.29	13.28
145.00	1.00	2.07	15.83	-0.08	-2.23	13.52
150.00	1.00	2.00	16.61	-0.32	-2.47	14.06
155.00	1.00	1.94	16.58	-0.16	-2.31	14.19
160.00	1.00	1.88	16.72	-0.09	-2.24	14.39
165.00	1.00	1.82	17.26	-0.23	-2.38	14.80
170.00	1.00	1.76	17.54	-0.24	-2.39	15.07
175.00	1.00	1.71	17.66	-0.17	-2.32	15.25
180.00	1.00	1.67	18.19	-0.32	-2.47	15.64
185.00	1.00	1.62	18.64	-0.42	-2.57	15.99
190.00	1.00	1.58	20.20	-1.09	-3.24	16.88
195.00	1.00	1.54	20.38	-1.06	-3.21	17.08
200.00	1.00	1.50	20.62	-1.08	-3.23	17.32

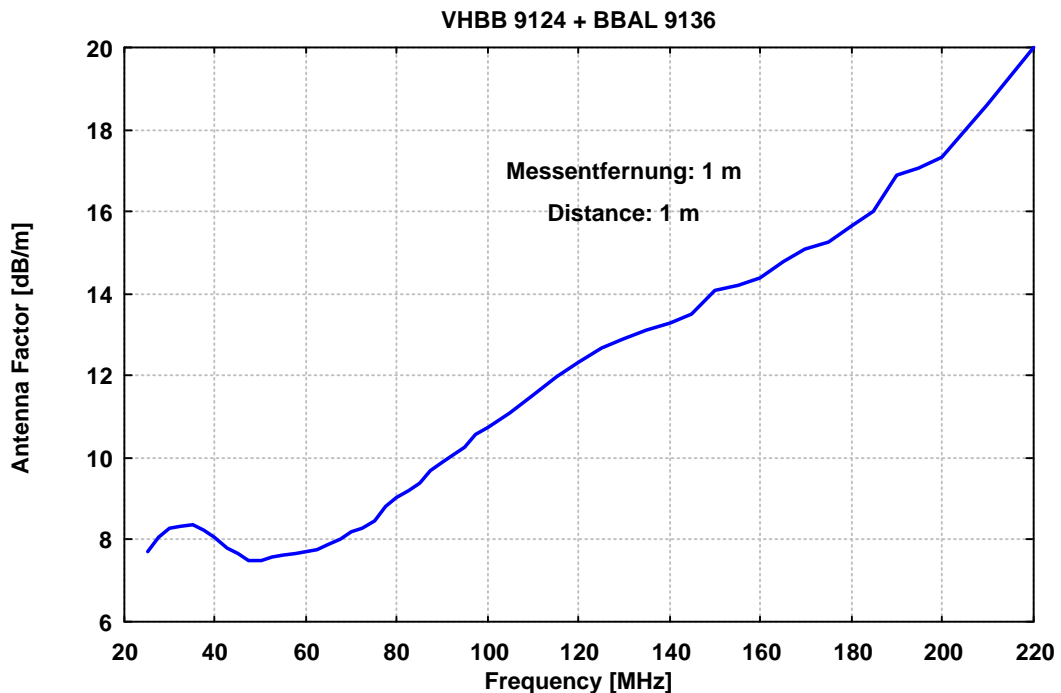
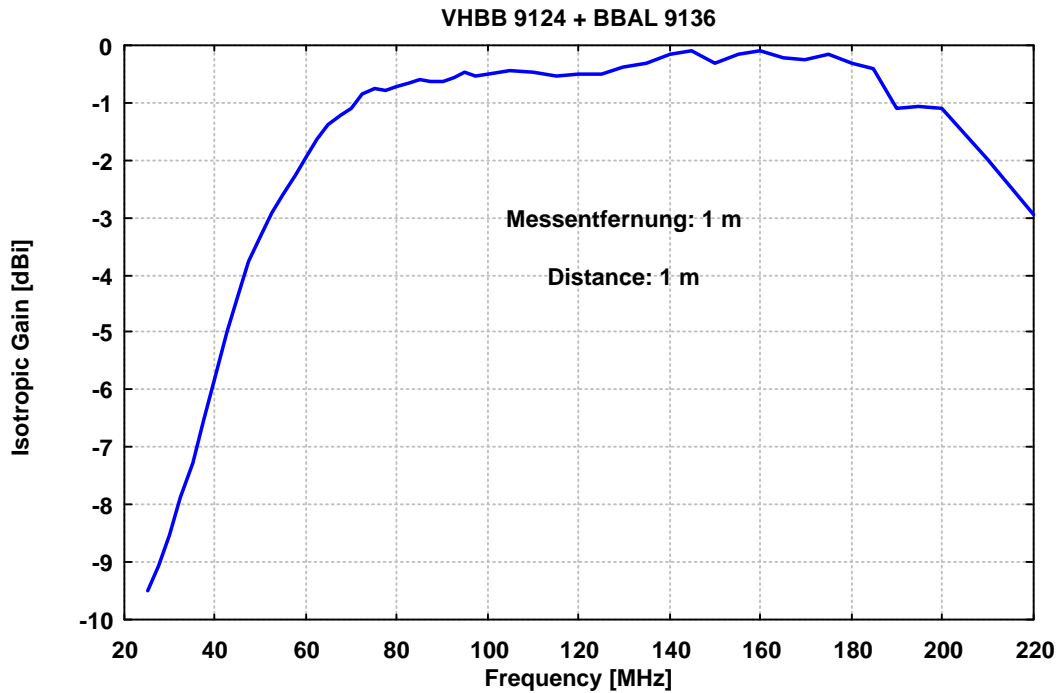
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## VHBB 9124 4:1 Balun mit Bikonus-Elementen BBAL 9136

## VHBB 9124 4:1 Balun with Biconical Elements BBAL 9136

Frequency	Distance	Wavelength	Attenuation	Gain(Isotr.)	Gain(Dipole)	Ant.-Factor
Frequenz	Abstand	Wellenlänge	Dämpfung	Isotrop-gewinn	Gewinn über Dipol	Ant.-Wandlungsmaß
MHz	m	m	dB	dBi	dBd	dB/m
210.00	1.00	1.43	22.81	-1.96	-4.11	18.62
220.00	1.00	1.36	25.17	-2.94	-5.09	20.00



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## VHBB 9124 4:1 Balun mit Bikonus-Elementen BBAL 9136

## *VHBB 9124 4:1 Balun with Biconical Elements BBAL 9136*

Frequency	Distance	Wavelength	Attenuation	Gain(Isotr.)	Gain(Dipole)	Ant.-Factor
Frequenz	Abstand	Wellenlänge	Dämpfung	Isotropgewinn	Gewinn über Dipol	Ant.-Wandlungsmaß
MHz	m	m	dB	dBi	dBd	dB/m
25.00	3.00	12.00	32.00	-11.03	-13.18	9.21
27.50	3.00	10.91	30.61	-9.92	-12.07	8.93
30.00	3.00	10.00	28.91	-8.69	-10.84	8.46
32.50	3.00	9.23	26.10	-6.94	-9.09	7.40
35.00	3.00	8.57	24.82	-5.98	-8.13	7.08
37.50	3.00	8.00	23.49	-5.01	-7.16	6.71
40.00	3.00	7.50	22.38	-4.18	-6.33	6.44
42.50	3.00	7.06	21.21	-3.33	-5.48	6.12
45.00	3.00	6.67	20.41	-2.68	-4.83	5.96
47.50	3.00	6.32	19.53	-2.00	-4.16	5.76
50.00	3.00	6.00	18.95	-1.49	-3.65	5.69
52.50	3.00	5.71	18.56	-1.09	-3.24	5.71
55.00	3.00	5.45	18.39	-0.80	-2.95	5.82
57.50	3.00	5.22	17.97	-0.39	-2.54	5.81
60.00	3.00	5.00	17.95	-0.20	-2.35	5.98
62.50	3.00	4.80	17.88	0.01	-2.14	6.13
65.00	3.00	4.62	18.00	0.12	-2.03	6.35
67.50	3.00	4.44	18.16	0.21	-1.94	6.60
70.00	3.00	4.29	18.32	0.29	-1.86	6.84
72.50	3.00	4.14	18.54	0.33	-1.82	7.10
75.00	3.00	4.00	18.12	0.68	-1.47	7.04
77.50	3.00	3.87	18.00	0.88	-1.27	7.12
80.00	3.00	3.75	18.51	0.77	-1.38	7.51
82.50	3.00	3.64	18.94	0.69	-1.46	7.86
85.00	3.00	3.53	18.88	0.85	-1.31	7.96
87.50	3.00	3.43	18.95	0.94	-1.21	8.12
90.00	3.00	3.33	19.02	1.03	-1.12	8.28
92.50	3.00	3.24	19.18	1.07	-1.08	8.48
95.00	3.00	3.16	19.61	0.97	-1.18	8.81
97.50	3.00	3.08	19.72	1.03	-1.13	8.97
100.00	3.00	3.00	19.87	1.06	-1.09	9.16
105.00	3.00	2.86	20.12	1.15	-1.00	9.50
110.00	3.00	2.73	20.32	1.25	-0.90	9.80
115.00	3.00	2.61	20.62	1.29	-0.86	10.14
120.00	3.00	2.50	20.86	1.35	-0.80	10.45
125.00	3.00	2.40	21.39	1.27	-0.88	10.89
130.00	3.00	2.31	21.79	1.24	-0.91	11.26
135.00	3.00	2.22	21.87	1.36	-0.79	11.47
140.00	3.00	2.14	22.31	1.30	-0.85	11.84
145.00	3.00	2.07	22.10	1.56	-0.59	11.89
150.00	3.00	2.00	22.71	1.40	-0.75	12.34
155.00	3.00	1.94	22.73	1.53	-0.62	12.50
160.00	3.00	1.88	23.15	1.46	-0.69	12.84
165.00	3.00	1.82	23.51	1.41	-0.74	13.16
170.00	3.00	1.76	23.96	1.32	-0.83	13.51
175.00	3.00	1.71	24.25	1.30	-0.85	13.78
180.00	3.00	1.67	24.66	1.22	-0.93	14.11
185.00	3.00	1.62	25.17	1.08	-1.07	14.49
190.00	3.00	1.58	26.45	0.56	-1.60	15.24
195.00	3.00	1.54	26.83	0.48	-1.67	15.54
200.00	3.00	1.50	28.26	-0.12	-2.28	16.36

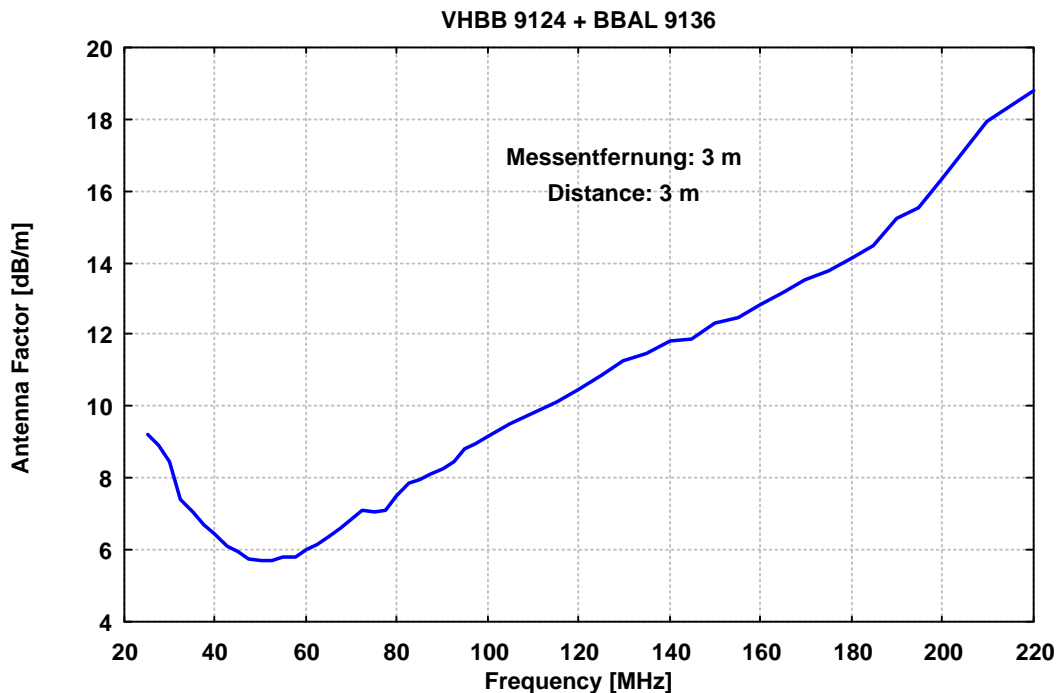
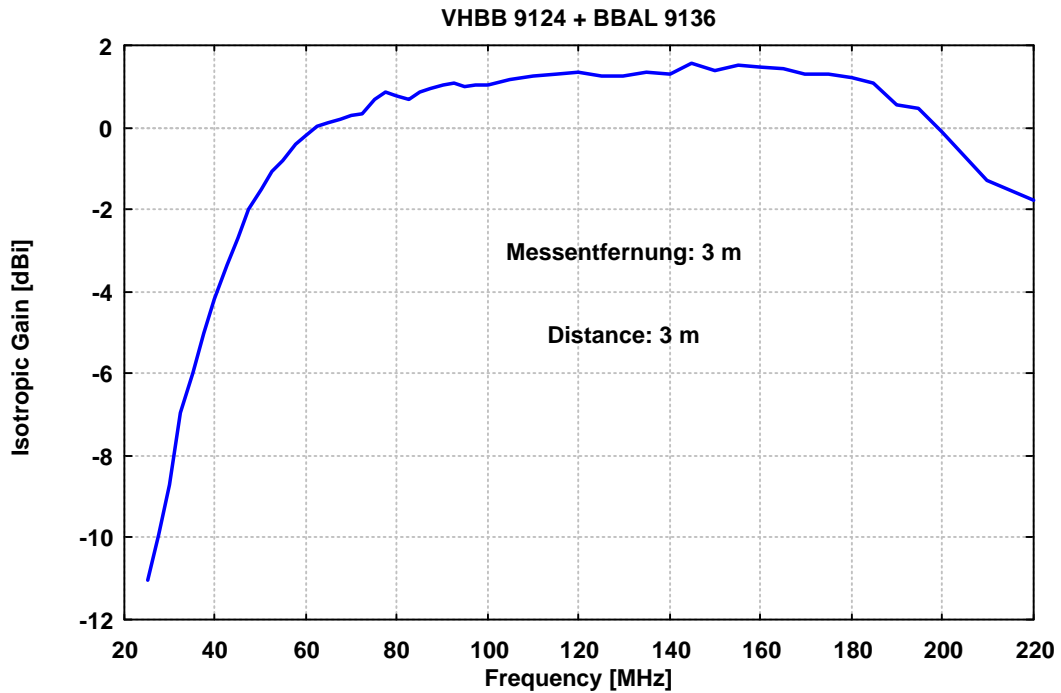
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## VHBB 9124 4:1 Balun with Biconical Elements BBAL 9136

Frequency	Distance	Wavelength	Attenuation	Gain(Isotr.)	Gain(Dipole)	Ant.-Factor
Frequenz	Abstand	Wellenlänge	Dämpfung	Isotrop-gewinn	Gewinn über Dipol	Ant.-Wandlungsmaß
MHz	m	m	dB	dBi	dBd	dB/m
210.00	3.00	1.43	31.01	-1.29	-3.44	17.95
220.00	3.00	1.36	32.33	-1.75	-3.90	18.82



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