

# SCHWARZBECK MESS - ELEKTRONIK

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

## BBA 9106 BIKONUS-Messantenne in Balun / Halterung VHA 9103 Bicone Antenna BBA 9106 in Balun VHA 9103, 30 MHz ... 300 MHz, 15W

Free-Space Calibration,  $\Delta AF < \pm 0,7\text{dB}$ , 50 ohm test system, far-field > 3m  
wlogdist 91031575.doc

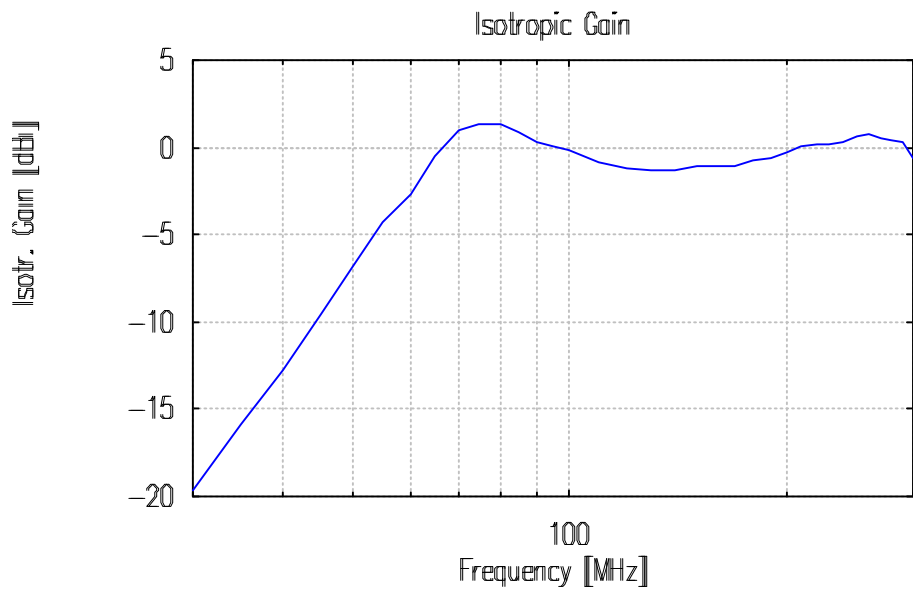
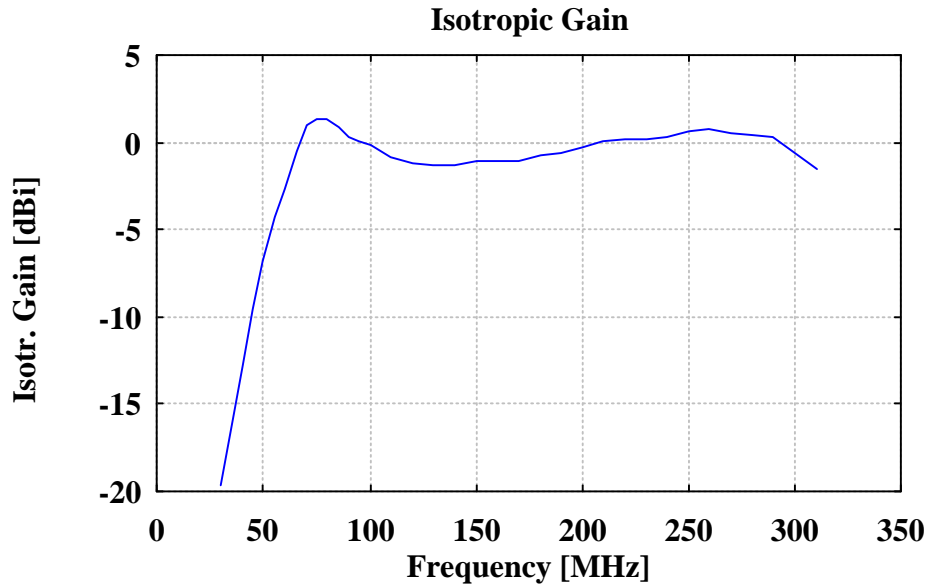
80311gs

Frequency	Distance	lambda	Attenuat.	Gain (Isotr.)	Gain, dipole	Ant.-Factor
MHz	m	m	dB	dBi	dBd	dB/m
30.00	4.00	10.00	53.48	-19.73	-21.88	19.49
35.00	4.00	8.57	47.22	-15.93	-18.08	17.03
40.00	4.00	7.50	42.18	-12.83	-14.98	15.09
45.00	4.00	6.67	36.62	-9.54	-11.69	12.82
50.00	4.00	6.00	32.05	-6.79	-8.94	10.99
55.00	4.00	5.45	27.80	-4.25	-6.41	9.28
60.00	4.00	5.00	25.30	-2.63	-4.78	8.41
65.00	4.00	4.62	21.61	-0.43	-2.58	6.91
70.00	4.00	4.29	19.33	1.03	-1.12	6.09
75.00	4.00	4.00	19.21	1.39	-0.76	6.33
80.00	4.00	3.75	19.87	1.34	-0.81	6.94
85.00	4.00	3.53	21.29	0.89	-1.26	7.92
90.00	4.00	3.33	22.83	0.37	-1.78	8.94
95.00	4.00	3.16	23.73	0.15	-2.00	9.62
100.00	4.00	3.00	24.75	-0.13	-2.28	10.35
110.00	4.00	2.73	26.90	-0.79	-2.94	11.84
120.00	4.00	2.50	28.34	-1.14	-3.29	12.94
130.00	4.00	2.31	29.39	-1.31	-3.46	13.81
140.00	4.00	2.14	29.91	-1.25	-3.40	14.39
150.00	4.00	2.00	30.16	-1.08	-3.23	14.82
160.00	4.00	1.88	30.70	-1.07	-3.22	15.37
170.00	4.00	1.76	31.12	-1.01	-3.16	15.84
180.00	4.00	1.67	31.03	-0.72	-2.87	16.05
190.00	4.00	1.58	31.19	-0.56	-2.72	16.36
200.00	4.00	1.50	31.03	-0.26	-2.41	16.50
210.00	4.00	1.43	30.80	0.06	-2.09	16.60
220.00	4.00	1.36	30.99	0.17	-1.98	16.90
230.00	4.00	1.30	31.27	0.22	-1.93	17.23
240.00	4.00	1.25	31.44	0.32	-1.83	17.50
250.00	4.00	1.20	31.00	0.72	-1.43	17.46
260.00	4.00	1.15	31.30	0.74	-1.41	17.78
270.00	4.00	1.11	32.06	0.53	-1.62	18.32
280.00	4.00	1.07	32.41	0.51	-1.64	18.65
290.00	4.00	1.03	32.99	0.37	-1.78	19.10
300.00	4.00	1.00	35.06	-0.52	-2.67	20.28
310.00	4.00	0.97	37.44	-1.56	-3.71	21.61
MHz	m	m	dB	dBi	dBd	dB/m

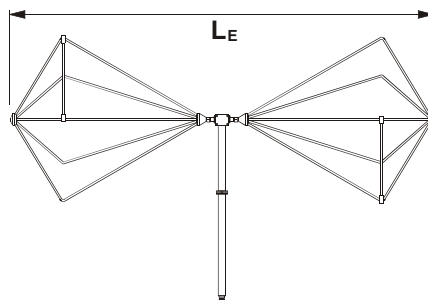
# SCHWARZBECK MESS - ELEKTRONIK

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

**BBA 9106 BIKONUS-Messantenne in Balun / Halterung VHA 9103**  
**Bicone Antenna BBA 9106 in Balun VHA 9103, 30 MHz ... 300 MHz, 15W**



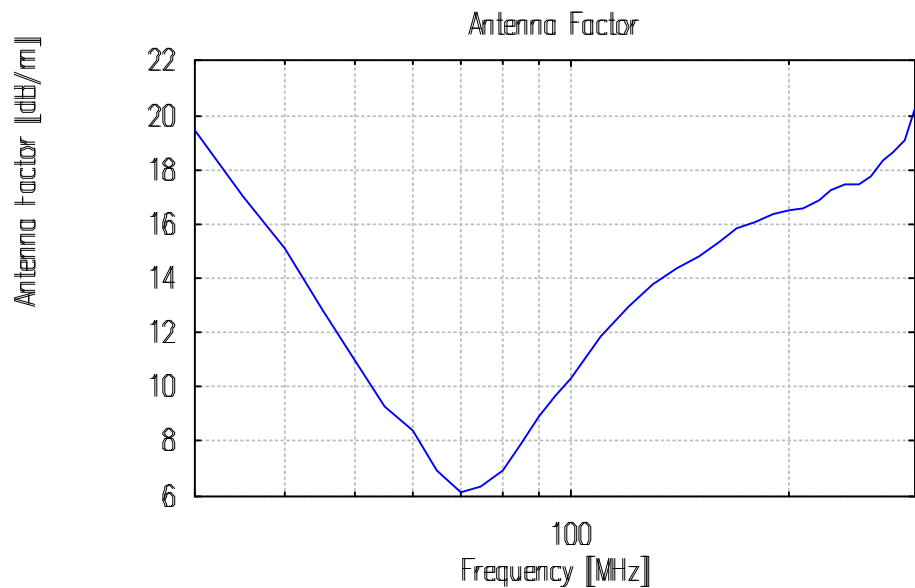
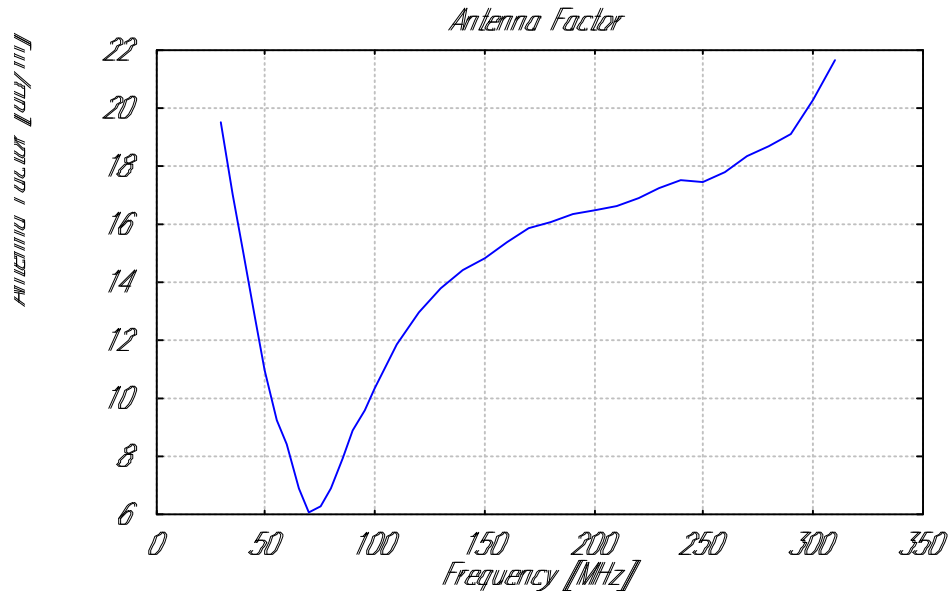
**Isotropic Gain BBA 9106 / VHA 9103 1575, LIN and LOG frequency scales, free-space far field**



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## BBA 9106 BIKONUS-Messantenne in Balun / Halterung VHA 9103 Bicone Antenna BBA 9106 in Balun VHA 9103, 30 MHz ... 300 MHz, 15W



Antenna Factor dB(1/m), free-space far field calibration BBA 9106 BICONE in VHA 9103

### Techn. Daten

Elementlänge LE (gesamt):  
Konusdurchmesser:  
Elementaufnahme:  
Gesamtlänge Halterung:  
Rohrdurchmesser Halter:

### BBA 9106 in VHA 9103

1.31 m  
0.53 m  
10 mm  
0.53 m  
22 mm

### Specification:

Element Length LE (total):  
Cone Diameter:  
Element Fixture:  
Holder Length (total):  
Holder Tube Diameter:

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## BBA 9106 BIKONUS-Messantenne in Balun / Halterung VHA 9103

### *Bicone Antenna BBA 9106 in Balun VHA 9103*

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	55.10	-22.58	-24.73	20.76
27.50	3.00	10.91	53.14	-21.18	-23.34	20.19
30.00	3.00	10.00	50.68	-19.58	-21.73	19.34
32.50	3.00	9.23	46.79	-17.28	-19.43	17.74
35.00	3.00	8.57	44.50	-15.82	-17.97	16.92
37.50	3.00	8.00	41.94	-14.24	-16.39	15.94
40.00	3.00	7.50	39.79	-12.88	-15.03	15.14
42.50	3.00	7.06	36.71	-11.08	-13.23	13.87
45.00	3.00	6.67	34.65	-9.80	-11.95	13.09
47.50	3.00	6.32	31.90	-8.19	-10.34	11.94
50.00	3.00	6.00	30.04	-7.04	-9.19	11.24
55.00	3.00	5.45	26.00	-4.60	-6.75	9.63
60.00	3.00	5.00	22.45	-2.45	-4.60	8.23
65.00	3.00	4.62	19.48	-0.62	-2.77	7.10
70.00	3.00	4.29	17.73	0.58	-1.57	6.54
75.00	3.00	4.00	16.78	1.35	-0.80	6.37
80.00	3.00	3.75	17.14	1.45	-0.70	6.83
85.00	3.00	3.53	18.78	0.90	-1.25	7.91
90.00	3.00	3.33	20.31	0.38	-1.77	8.92
95.00	3.00	3.16	21.42	0.06	-2.09	9.71
100.00	3.00	3.00	22.56	-0.29	-2.44	10.51
110.00	3.00	2.73	23.97	-0.58	-2.73	11.63
120.00	3.00	2.50	25.70	-1.07	-3.22	12.87
130.00	3.00	2.31	27.10	-1.42	-3.57	13.91
140.00	3.00	2.14	27.74	-1.42	-3.57	14.56
150.00	3.00	2.00	28.32	-1.41	-3.56	15.15
160.00	3.00	1.88	29.12	-1.53	-3.68	15.83
170.00	3.00	1.76	28.96	-1.18	-3.33	16.01
180.00	3.00	1.67	29.37	-1.14	-3.29	16.46
190.00	3.00	1.58	29.59	-1.01	-3.16	16.81
200.00	3.00	1.50	29.48	-0.74	-2.89	16.98
210.00	3.00	1.43	29.49	-0.53	-2.68	17.19
220.00	3.00	1.36	29.41	-0.29	-2.44	17.36
230.00	3.00	1.30	29.28	-0.03	-2.18	17.49
240.00	3.00	1.25	29.54	0.03	-2.12	17.80
250.00	3.00	1.20	29.96	-0.00	-2.16	18.18
260.00	3.00	1.15	30.13	0.08	-2.07	18.44
270.00	3.00	1.11	29.82	0.40	-1.76	18.45
280.00	3.00	1.07	31.33	-0.20	-2.35	19.37
290.00	3.00	1.03	31.78	-0.27	-2.42	19.74
300.00	3.00	1.00	33.42	-0.94	-3.09	20.71
310.00	3.00	0.97	36.93	-2.56	-4.71	22.61

Kalibrierentfernung:

3 m

Calibration Distance:

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## BBA 9106 BIKONUS-Messantenne in Balun / Halterung VHA 9103

### *Bicone Antenna BBA 9106 in Balun VHA 9103*

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	2.00	12.00	51.42	-22.50	-24.65	20.68
27.50	2.00	10.91	49.88	-21.31	-23.46	20.32
30.00	2.00	10.00	47.65	-19.82	-21.97	19.58
32.50	2.00	9.23	44.12	-17.71	-19.86	18.17
35.00	2.00	8.57	41.95	-16.30	-18.45	17.40
37.50	2.00	8.00	39.12	-14.59	-16.74	16.29
40.00	2.00	7.50	36.85	-13.17	-15.32	15.43
42.50	2.00	7.06	33.72	-11.34	-13.50	14.13
45.00	2.00	6.67	31.77	-10.12	-12.27	13.40
47.50	2.00	6.32	29.05	-8.53	-10.68	12.28
50.00	2.00	6.00	27.20	-7.38	-9.53	11.58
55.00	2.00	5.45	23.17	-4.95	-7.10	9.97
60.00	2.00	5.00	19.19	-2.58	-4.73	8.36
65.00	2.00	4.62	16.16	-0.72	-2.87	7.20
70.00	2.00	4.29	14.59	0.39	-1.76	6.73
75.00	2.00	4.00	13.69	1.14	-1.01	6.58
80.00	2.00	3.75	14.63	0.95	-1.20	7.34
85.00	2.00	3.53	15.35	0.85	-1.30	7.96
90.00	2.00	3.33	16.58	0.49	-1.66	8.82
95.00	2.00	3.16	17.74	0.14	-2.01	9.64
100.00	2.00	3.00	18.75	-0.14	-2.29	10.36
110.00	2.00	2.73	20.90	-0.80	-2.95	11.85
120.00	2.00	2.50	22.63	-1.29	-3.44	13.10
130.00	2.00	2.31	23.70	-1.48	-3.63	13.98
140.00	2.00	2.14	24.57	-1.59	-3.74	14.73
150.00	2.00	2.00	25.40	-1.71	-3.86	15.45
160.00	2.00	1.88	25.52	-1.49	-3.64	15.79
170.00	2.00	1.76	26.10	-1.51	-3.66	16.34
180.00	2.00	1.67	26.12	-1.28	-3.43	16.60
190.00	2.00	1.58	25.91	-0.93	-3.09	16.73
200.00	2.00	1.50	26.35	-0.93	-3.08	17.17
210.00	2.00	1.43	26.81	-0.95	-3.10	17.61
220.00	2.00	1.36	26.34	-0.51	-2.66	17.58
230.00	2.00	1.30	26.62	-0.46	-2.61	17.92
240.00	2.00	1.25	26.48	-0.20	-2.35	18.03
250.00	2.00	1.20	26.57	-0.07	-2.22	18.25
260.00	2.00	1.15	27.27	-0.25	-2.40	18.77
270.00	2.00	1.11	27.60	-0.26	-2.41	19.10
280.00	2.00	1.07	28.08	-0.34	-2.49	19.50
290.00	2.00	1.03	29.57	-0.93	-3.08	20.40
300.00	2.00	1.00	30.96	-1.48	-3.63	21.24
310.00	2.00	0.97	34.13	-2.92	-5.07	22.97

Kalibrierentfernung:

2 m

Calibration Distance:

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## BBA 9106 BIKONUS-Messantenne in Balun / Halterung VHA 9103

### *Bicone Antenna BBA 9106 in Balun VHA 9103*

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	38.30	-18.95	-21.10	17.13
27.50	1.00	10.91	37.57	-18.17	-20.32	17.18
30.00	1.00	10.00	36.64	-17.33	-19.48	17.09
32.50	1.00	9.23	35.24	-16.28	-18.43	16.73
35.00	1.00	8.57	34.06	-15.37	-17.52	16.47
37.50	1.00	8.00	32.45	-14.26	-16.42	15.97
40.00	1.00	7.50	30.96	-13.24	-15.39	15.50
42.50	1.00	7.06	28.73	-11.86	-14.01	14.65
45.00	1.00	6.67	27.13	-10.81	-12.96	14.09
47.50	1.00	6.32	24.63	-9.33	-11.48	13.08
50.00	1.00	6.00	22.91	-8.24	-10.39	12.44
55.00	1.00	5.45	18.77	-5.76	-7.91	10.78
60.00	1.00	5.00	14.76	-3.37	-5.52	9.16
65.00	1.00	4.62	11.47	-1.38	-3.53	7.86
70.00	1.00	4.29	9.49	-0.07	-2.22	7.19
75.00	1.00	4.00	9.19	0.38	-1.77	7.34
80.00	1.00	3.75	10.29	0.11	-2.04	8.17
85.00	1.00	3.53	11.51	-0.24	-2.39	9.05
90.00	1.00	3.33	12.93	-0.70	-2.85	10.00
95.00	1.00	3.16	13.92	-0.96	-3.11	10.73
100.00	1.00	3.00	14.89	-1.22	-3.37	11.44
110.00	1.00	2.73	16.78	-1.75	-3.90	12.80
120.00	1.00	2.50	18.21	-2.09	-4.24	13.89
130.00	1.00	2.31	19.06	-2.16	-4.32	14.66
140.00	1.00	2.14	20.03	-2.33	-4.48	15.47
150.00	1.00	2.00	20.64	-2.33	-4.48	16.07
160.00	1.00	1.88	20.87	-2.17	-4.32	16.47
170.00	1.00	1.76	21.26	-2.10	-4.25	16.93
180.00	1.00	1.67	21.40	-1.92	-4.07	17.25
190.00	1.00	1.58	21.56	-1.77	-3.92	17.56
200.00	1.00	1.50	21.96	-1.75	-3.90	17.99
210.00	1.00	1.43	21.82	-1.46	-3.61	18.13
220.00	1.00	1.36	21.71	-1.21	-3.36	18.28
230.00	1.00	1.30	22.23	-1.27	-3.42	18.73
240.00	1.00	1.25	22.27	-1.11	-3.26	18.93
250.00	1.00	1.20	22.64	-1.11	-3.27	19.29
260.00	1.00	1.15	23.03	-1.14	-3.29	19.66
270.00	1.00	1.11	23.68	-1.30	-3.45	20.15
280.00	1.00	1.07	24.27	-1.44	-3.59	20.60
290.00	1.00	1.03	25.84	-2.07	-4.22	21.54
300.00	1.00	1.00	27.19	-2.60	-4.75	22.36
310.00	1.00	0.97	30.88	-4.30	-6.45	24.35

Kalibrierentfernung:

1 m

Calibration Distance: