

## Aktive Bikonus-Breitbandantenne Active Biconical Broadband Antenna



### Beschreibung:

Die EFS 9221 ist eine aktive, symmetrische Bikonusantenne, die einen extrem breiten Frequenzbereich von mehr als 5 Dekaden überstreicht mit einem glatten Frequenzgang. Im Gegensatz zu den bei Frequenzen unterhalb von 30 MHz häufig verwendeten unsymmetrischen Stabantennen bietet die EFS 9221 eine hohe Gleichtaktunterdrückung, die für präzise Messungen der Feldstärke unerlässlich ist. Aufgrund ihrer handlichen Abmessungen und einem eingebauten NiMH-Akku eignet sich die EFS 9221 hervorragend auch für den tragbaren Einsatz. Zur Erhöhung der Empfindlichkeit stehen die optionalen Bikonuselemente BBUK 9139 M4 zur Verfügung, die den Messbereich um etwa 11 dB verschieben.

### Description:

The EFS 9221 is an active, symmetrical biconical antenna with a wide frequency range of more than 5 decades and a remarkable flat frequency response. In contrast to the frequently used unsymmetrical vertical monopole or rod antennas the EFS 9221 allows precise fieldstrength measurements, thanks to a very high common mode rejection. Because of its small dimensions and a built in rechargeable NiMH battery the EFS 9221 is a perfect choice for portable applications. The sensitivity can be improved by approx. 11 dB using the optional BBUK 9139 M4 biconical elements.

Technische Daten:		Specifications:
Frequenzbereich:	9 kHz – 1 GHz	Frequency Range:
Nominelle Impedanz:	50 Ω	Nominal Impedance:
Antennenwandlungsmaß:	typ. 27-37 dB/m	Antenna Factor:
Abweichung von Rundstrahlcharakteristik:	typ. < 1.5 dB	Deviation from Omnidirectional Pattern:
Frequenzgang:	typ. < +/- 1.5 dB (50 kHz -1000 MHz)	Frequency Flatness:
Feldstärke-Messbereich:	~ ≤ 135 dBμV/m (~ ≤ 6 V/m)	Fieldstrength measuring range:
VSWR:	typ. < 1.2 (f < 300 MHz) typ. < 1.6 (f < 1 GHz)	VSWR:
Abmessungen:	610 x 144 x 50	Dimensions:
Befestigung:	22 mm	Mounting
Gewicht:	780 g	Weight:
Anschluss:	N female	Connector:
Option: Elemente für hohe Empfindlichkeit	BBUK 9139 M4	Option: Elements for High Sensitivity
Option: Ladegerät	ACS 110	Option: Automatic Charger

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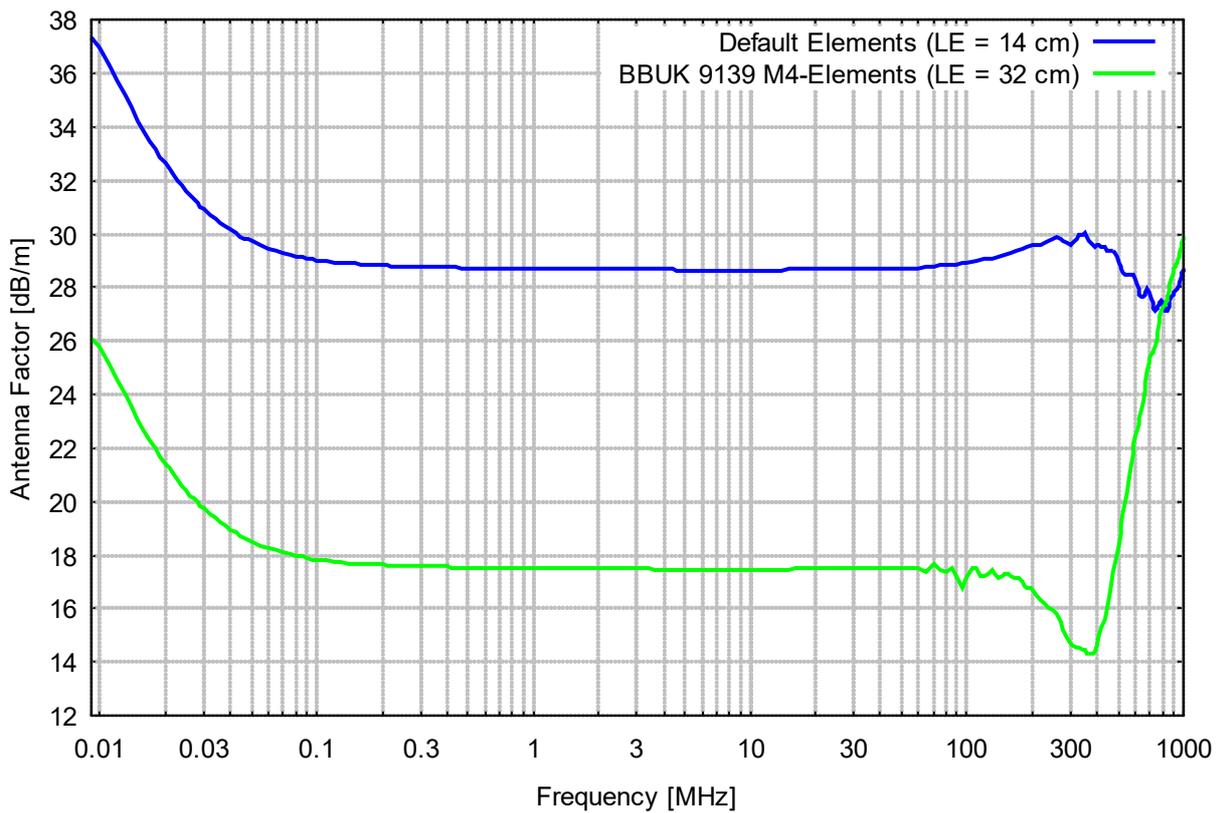
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Serienmäßige Bikonuselemente ( $L_E = 14$  cm)  
Default Biconical Elements



Optionale Bikonuselemente BBUK 9139 M4 für hohe Empfindlichkeit ( $L_E = 32$  cm)  
Optional Biconical Elements BBUK 9139 M4 for high sensitivity



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Frequency	Antenna Factor Default Elements	Antenna Factor BBUK 9139 M4
MHz	dB/m	dB/m
0.009	37.32	26.12
0.010	36.97	25.77
0.011	36.34	25.14
0.012	35.74	24.54
0.013	35.20	24.00
0.014	34.73	23.53
0.015	34.22	23.02
0.016	33.85	22.65
0.017	33.50	22.30
0.018	33.16	21.96
0.019	32.86	21.66
0.020	32.63	21.43
0.021	32.42	21.22
0.022	32.21	21.01
0.023	32.01	20.81
0.024	31.81	20.61
0.025	31.62	20.42
0.026	31.43	20.23
0.027	31.32	20.12
0.028	31.16	19.96
0.029	31.05	19.85
0.030	30.94	19.74
0.032	30.75	19.55
0.034	30.58	19.38
0.036	30.41	19.21
0.038	30.26	19.06
0.040	30.16	18.96
0.042	30.05	18.85
0.044	29.92	18.72
0.046	29.84	18.64
0.048	29.79	18.59
0.050	29.71	18.51
0.055	29.57	18.37
0.060	29.45	18.25
0.065	29.35	18.15
0.070	29.29	18.09
0.075	29.22	18.02
0.080	29.17	17.97
0.085	29.13	17.93
0.090	29.09	17.89
0.095	29.05	17.85
0.10	29.03	17.83
0.11	28.98	17.78
0.12	28.95	17.75
0.13	28.92	17.72
0.14	28.90	17.70
0.15	28.89	17.69
0.16	28.87	17.67
0.17	28.86	17.66
0.18	28.85	17.65

Frequency	Antenna Factor Default Elements	Antenna Factor BBUK 9139 M4
MHz	dB/m	dB/m
0.19	28.84	17.64
0.20	28.83	17.63
0.21	28.82	17.62
0.22	28.81	17.61
0.23	28.81	17.61
0.24	28.80	17.60
0.25	28.80	17.60
0.26	28.79	17.59
0.27	28.79	17.59
0.28	28.78	17.58
0.29	28.78	17.58
0.30	28.78	17.58
0.32	28.77	17.57
0.34	28.77	17.57
0.36	28.76	17.56
0.38	28.76	17.56
0.40	28.76	17.56
0.42	28.75	17.55
0.44	28.75	17.55
0.46	28.74	17.54
0.48	28.74	17.54
0.50	28.74	17.54
0.55	28.74	17.54
0.60	28.73	17.53
0.65	28.72	17.52
0.70	28.72	17.52
0.75	28.72	17.52
0.80	28.72	17.52
0.85	28.71	17.51
0.90	28.71	17.51
0.95	28.71	17.51
1.00	28.71	17.51
1.10	28.71	17.51
1.20	28.70	17.50
1.30	28.70	17.50
1.40	28.70	17.50
1.50	28.70	17.50
1.60	28.69	17.49
1.70	28.69	17.49
1.80	28.69	17.49
1.90	28.69	17.49
2.00	28.69	17.49
2.10	28.68	17.48
2.20	28.68	17.48
2.30	28.68	17.48
2.40	28.68	17.48
2.50	28.68	17.48
2.60	28.68	17.48
2.70	28.68	17.48
2.80	28.68	17.48

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Frequency	Antenna Factor Default Elements	Antenna Factor BBUK 9139 M4
MHz	dB/m	dB/m
2.90	28.68	17.48
3.00	28.68	17.48
3.20	28.68	17.48
3.40	28.68	17.48
3.60	28.67	17.47
3.80	28.67	17.47
4.00	28.67	17.47
4.20	28.67	17.47
4.40	28.67	17.47
4.60	28.66	17.46
4.80	28.66	17.46
5.00	28.66	17.46
5.50	28.66	17.46
6.00	28.66	17.46
6.50	28.66	17.46
7.00	28.66	17.46
7.50	28.65	17.45
8.00	28.65	17.45
8.50	28.65	17.45
9.00	28.64	17.44
9.50	28.64	17.44
10.0	28.64	17.44
11.0	28.63	17.43
12.0	28.62	17.42
13.0	28.62	17.42
14.0	28.64	17.44
15.0	28.67	17.47
16.0	28.68	17.48
17.0	28.69	17.49
18.0	28.69	17.49
19.0	28.68	17.48
20.0	28.68	17.48
21.0	28.68	17.48
22.0	28.68	17.48
23.0	28.68	17.48
24.0	28.68	17.48
25.0	28.68	17.48
26.0	28.68	17.48
27.0	28.68	17.48
28.0	28.68	17.48
29.0	28.68	17.48
30.0	28.68	17.48
32.0	28.68	17.48
34.0	28.68	17.48
36.0	28.68	17.48
38.0	28.68	17.48
40.0	28.69	17.49
42.0	28.69	17.49
44.0	28.70	17.50
46.0	28.70	17.50
48.0	28.71	17.51
50.0	28.71	17.51

Frequency	Antenna Factor Default Elements	Antenna Factor BBUK 9139 M4
MHz	dB/m	dB/m
55.0	28.72	17.52
60.0	28.73	17.53
65.0	28.75	17.34
70.0	28.79	17.63
75.0	28.82	17.46
80.0	28.84	17.39
85.0	28.86	17.55
90.0	28.88	17.19
95.0	28.90	16.80
100.0	28.93	17.17
110.0	28.98	17.54
120.0	29.05	17.51
130.0	29.11	17.23
140.0	29.18	17.20
150.0	29.25	17.32
160.0	29.31	17.43
170.0	29.38	17.31
180.0	29.46	17.18
190.0	29.54	17.23
200.0	29.60	17.30
210.0	29.57	17.27
220.0	29.57	17.19
230.0	29.68	17.14
240.0	29.73	17.16
250.0	29.83	17.14
260.0	29.89	17.03
270.0	29.85	16.88
280.0	29.71	16.77
290.0	29.64	16.75
300.0	29.62	16.68
310.0	29.69	16.44
320.0	29.80	16.30
330.0	29.96	16.20
340.0	29.98	16.04
350.0	30.03	15.95
360.0	29.87	15.77
370.0	29.78	15.53
380.0	29.63	15.17
390.0	29.54	14.91
400.0	29.58	14.68
410.0	29.56	14.57
420.0	29.55	14.56
430.0	29.54	14.55
440.0	29.41	14.49
450.0	29.41	14.47
460.0	29.41	14.32
470.0	29.38	14.29
480.0	29.31	14.28
490.0	29.14	14.40
500.0	28.92	14.64
510.0	28.78	14.95
520.0	28.68	15.25

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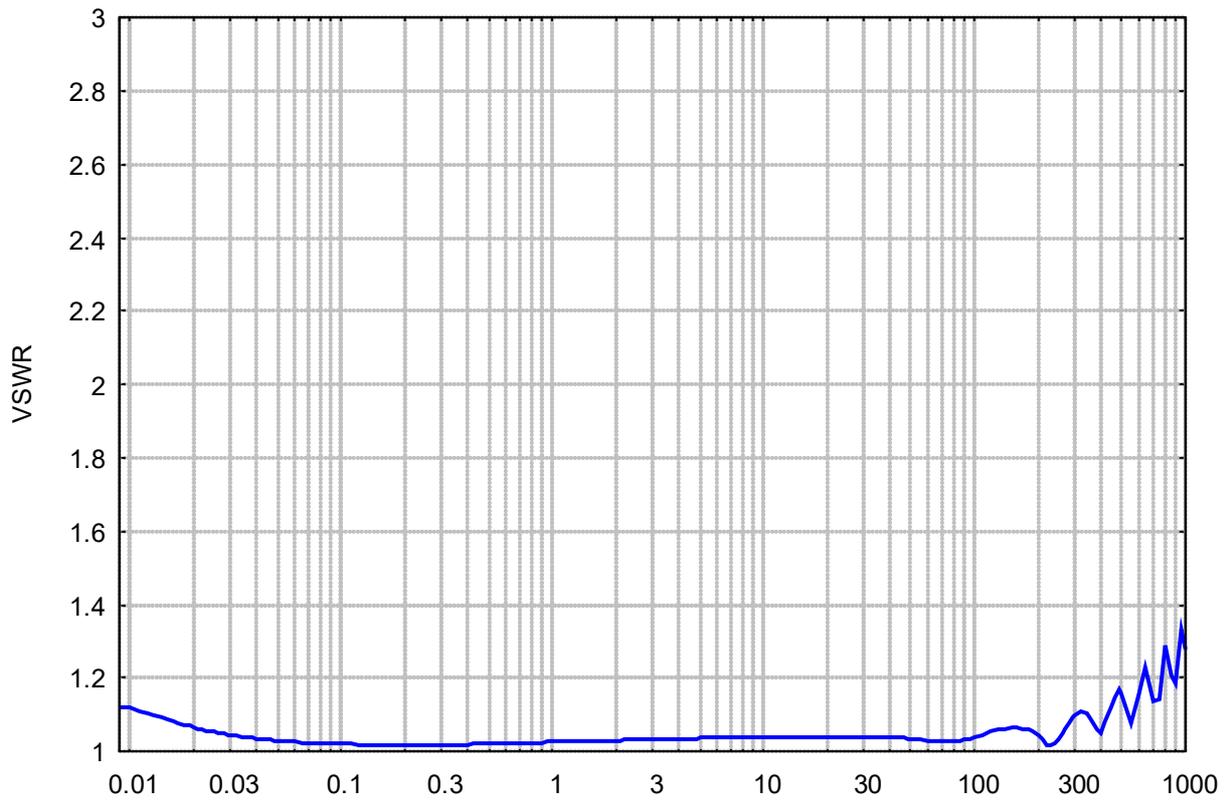
Frequency	Antenna Factor Default Elements	Antenna Factor BBUK 9139 M4
MHz	dB/m	dB/m
530.0	28.58	15.60
540.0	28.49	15.98
550.0	28.49	16.42
560.0	28.45	16.88
570.0	28.49	17.36
580.0	28.50	17.69
590.0	28.46	18.07
600.0	28.34	18.40
610.0	28.13	18.80
620.0	27.93	19.15
630.0	27.77	19.59
640.0	27.67	19.96
650.0	27.67	20.37
660.0	27.73	20.89
670.0	27.84	21.33
680.0	27.92	21.77
690.0	27.84	22.16
700.0	27.80	22.46
710.0	27.57	22.68
720.0	27.44	22.87
730.0	27.23	23.09
740.0	27.16	23.38
750.0	27.19	23.71
760.0	27.25	24.15
770.0	27.39	24.47
780.0	27.47	24.89

Frequency	Antenna Factor Default Elements	Antenna Factor BBUK 9139 M4
MHz	dB/m	dB/m
790.0	27.50	25.17
800.0	27.42	25.34
810.0	27.31	25.47
820.0	27.22	25.55
830.0	27.16	25.65
840.0	27.12	25.80
850.0	27.17	26.08
860.0	27.30	26.32
870.0	27.48	26.70
880.0	27.63	26.94
890.0	27.76	27.12
900.0	27.83	27.26
910.0	27.87	27.30
920.0	27.91	27.35
930.0	27.94	27.40
940.0	27.98	27.53
950.0	28.09	27.68
960.0	28.21	27.88
970.0	28.38	28.13
980.0	28.53	28.36
990.0	28.65	28.56
1000.0	28.70	28.69

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