

# SCHWARZBECK MESS - ELEKTRONIK

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

## TRILOG Hochleistungs Breitband-Antenne VULB 9161 SE (verkürzte Triangel) TRILOG High Power Broadband Antenna VULB 9161 SE (Short Traingel Elem.)

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
20.00	5.00	15.00	55.14	-21.35	-23.50	17.59
25.00	5.00	12.00	42.93	-14.27	-16.43	12.45
30.00	5.00	10.00	37.79	-10.91	-13.06	10.68
35.00	5.00	8.57	36.05	-9.37	-11.52	10.47
40.00	5.00	7.50	37.38	-9.46	-11.61	11.72
45.00	5.00	6.67	36.52	-8.52	-10.67	11.80
50.00	5.00	6.00	34.47	-7.03	-9.18	11.23
55.00	5.00	5.45	30.47	-4.62	-6.77	9.65
60.00	5.00	5.00	35.34	-6.68	-8.83	12.46
65.00	5.00	4.62	30.72	-4.02	-6.17	10.50
70.00	5.00	4.29	25.25	-0.96	-3.12	8.09
75.00	5.00	4.00	21.38	1.27	-0.88	6.45
80.00	5.00	3.75	21.25	1.62	-0.53	6.67
85.00	5.00	3.53	23.96	0.52	-1.63	8.28
90.00	5.00	3.33	26.34	-0.41	-2.57	9.72
95.00	5.00	3.16	27.27	-0.65	-2.80	10.42
100.00	5.00	3.00	27.58	-0.58	-2.73	10.80
105.00	5.00	2.86	27.14	-0.15	-2.30	10.79
110.00	5.00	2.73	26.66	0.29	-1.86	10.75
115.00	5.00	2.61	26.42	0.61	-1.54	10.82
120.00	5.00	2.50	26.18	0.91	-1.24	10.89
125.00	5.00	2.40	26.21	1.08	-1.08	11.08
130.00	5.00	2.31	27.79	0.46	-1.70	12.04
135.00	5.00	2.22	30.32	-0.64	-2.80	13.47
140.00	5.00	2.14	31.50	-1.08	-3.23	14.22
145.00	5.00	2.07	32.78	-1.57	-3.72	15.01
150.00	5.00	2.00	33.95	-2.00	-4.15	15.74
155.00	5.00	1.94	35.29	-2.53	-4.68	16.56
160.00	5.00	1.88	37.53	-3.51	-5.66	17.82
165.00	5.00	1.82	39.19	-4.21	-6.36	18.78
170.00	5.00	1.76	32.16	-0.56	-2.72	15.39
180.00	5.00	1.67	28.42	1.55	-0.60	13.77
190.00	5.00	1.58	24.35	3.82	1.67	11.97
200.00	5.00	1.50	21.24	5.60	3.45	10.64
210.00	4.92	1.43	20.94	5.89	3.74	10.77
220.00	4.84	1.36	20.65	6.17	4.02	10.90
230.00	4.78	1.30	19.07	7.09	4.94	10.36
240.00	4.71	1.25	19.10	7.20	5.05	10.62
250.00	4.66	1.20	18.51	7.63	5.47	10.55
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Frequency Frequenz	Distance Abstand	Wavelength Wellen- länge	Attenuation Dämpfung	Gain(Isotr.) Isotrop- gewinn	Gain(Dipole) Gewinn über Dipol	Ant.-Factor Ant.-Wand- lungsmaß
MHz	m	m	dB	dBi	dBd	dB/m
260.00	4.60	1.15	19.27	7.36	5.21	11.15
270.00	4.55	1.11	19.65	7.29	5.14	11.56
280.00	4.51	1.07	20.08	7.19	5.04	11.97
290.00	4.46	1.03	20.21	7.24	5.09	12.23
300.00	4.43	1.00	20.26	7.32	5.17	12.44
310.00	4.39	0.97	20.68	7.22	5.07	12.83
320.00	4.35	0.94	20.94	7.19	5.04	13.13
330.00	4.32	0.91	20.90	7.31	5.16	13.28
340.00	4.29	0.88	21.15	7.29	5.14	13.56
350.00	4.26	0.86	21.10	7.41	5.26	13.69
360.00	4.23	0.83	21.32	7.39	5.24	13.95
370.00	4.21	0.81	21.67	7.31	5.16	14.28
380.00	4.18	0.79	21.91	7.28	5.13	14.54
390.00	4.16	0.77	22.14	7.25	5.10	14.79
400.00	4.14	0.75	22.20	7.31	5.16	14.95
410.00	4.12	0.73	22.47	7.26	5.11	15.22
420.00	4.10	0.71	22.62	7.27	5.12	15.42
430.00	4.08	0.70	23.17	7.07	4.92	15.82
440.00	4.06	0.68	23.33	7.08	4.93	16.01
450.00	4.04	0.67	23.75	6.95	4.79	16.34
460.00	4.03	0.65	23.90	6.95	4.80	16.53
470.00	4.01	0.64	23.33	7.31	5.16	16.36
480.00	3.99	0.63	23.46	7.32	5.16	16.53
490.00	3.98	0.61	23.56	7.34	5.19	16.68
500.00	3.96	0.60	23.49	7.45	5.30	16.75
520.00	3.94	0.58	23.68	7.49	5.34	17.05
540.00	3.91	0.56	24.37	7.28	5.13	17.58
560.00	3.89	0.54	24.80	7.20	5.05	17.98
580.00	3.87	0.52	25.31	7.08	4.93	18.41
600.00	3.85	0.50	25.71	7.00	4.85	18.78
620.00	3.83	0.48	26.35	6.80	4.65	19.27
640.00	3.81	0.47	26.95	6.62	4.47	19.72
660.00	3.80	0.45	26.60	6.91	4.76	19.70
680.00	3.78	0.44	26.81	6.92	4.77	19.95
700.00	3.77	0.43	27.15	6.86	4.71	20.26
720.00	3.75	0.42	26.95	7.07	4.91	20.30
740.00	3.74	0.41	27.67	6.81	4.66	20.80
760.00	3.73	0.39	27.92	6.79	4.64	21.05
780.00	3.72	0.38	28.07	6.81	4.66	21.26
800.00	3.71	0.38	28.34	6.77	4.62	21.51
820.00	3.70	0.37	28.53	6.77	4.62	21.72
840.00	3.69	0.36	28.53	6.86	4.71	21.84
860.00	3.68	0.35	28.58	6.93	4.78	21.98
880.00	3.67	0.34	28.77	6.93	4.77	22.18
900.00	3.66	0.33	29.29	6.75	4.60	22.55
920.00	3.65	0.33	29.80	6.58	4.43	22.91
940.00	3.64	0.32	29.94	6.59	4.44	23.09
960.00	3.63	0.31	30.26	6.52	4.37	23.35
980.00	3.63	0.31	30.38	6.54	4.39	23.50
1000.00	3.62	0.30	29.97	6.82	4.67	23.40
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Frequenz	Abstand	Wellenlänge	Dämpfung	Isotrop-gewinn	Gewinn über Dipol	Ant.-Wandlungsmaß
MHz	m	m	dB	dBi	dBd	dB/m
1050.00	3.60	0.29	30.22	6.89	4.74	23.75
1100.00	3.59	0.27	31.36	6.50	4.35	24.54
1150.00	3.57	0.26	32.74	5.99	3.84	25.44
1200.00	3.56	0.25	32.47	6.30	4.14	25.51
1250.00	3.55	0.24	32.33	6.53	4.38	25.63
1300.00	3.54	0.23	33.09	6.30	4.15	26.20
1350.00	3.53	0.22	34.63	5.69	3.54	27.14
1400.00	3.52	0.21	34.66	5.82	3.67	27.32
1450.00	3.51	0.21	35.66	5.46	3.31	27.98
1500.00	3.50	0.20	35.09	5.88	3.73	27.86
1550.00	3.50	0.19	36.39	5.37	3.22	28.66
1600.00	3.49	0.19	38.29	4.55	2.40	29.76
1650.00	3.48	0.18	40.44	3.60	1.44	30.97
1700.00	3.48	0.18	40.22	3.83	1.68	31.00
1750.00	3.47	0.17	41.82	3.15	1.00	31.93
1800.00	3.47	0.17	41.29	3.53	1.38	31.80
1850.00	3.46	0.16	39.03	4.77	2.62	30.79
1900.00	3.46	0.16	39.49	4.65	2.50	31.15
1950.00	3.45	0.15	41.64	3.68	1.53	32.34
2000.00	3.45	0.15	45.52	1.85	-0.31	34.40
MHz	m	m	dB	dBi	dBd	dB/m

Die Triangel-Elemente der VULB 9161 SE haben eine Gesamtbreite von < 1.5 m, um der formalen Bedingung aus CISPR 22 (Elementabstand zum Boden bei Vertikalpolarisation und 1 m Antennenhöhe > 0.25 m) zu genügen.

*The Triangel Elements of the VULB 9161 SE have been shortened to 1.5 m maximum width to fulfill the formal requirements of CISPR 22 (Element spacing > 0.25 m at antenna heights of 1 m and Vertical Polarisation).*

Messunsicherheit der Kalibrierdaten (Gewinn und Antennenfaktor):

<0.7 dB  
(k=2)

*Measurement Uncertainty of Gain and Antenna Factor:*

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**TRILOG High Power Broadband Antenna VULB 9161 SE (Short Triangel Elem.)**

