

Doppelsteg Breitband-Hornantenne BBHA 9120 F
Double Ridge Broadband Horn Antenna BBHA 9120 F

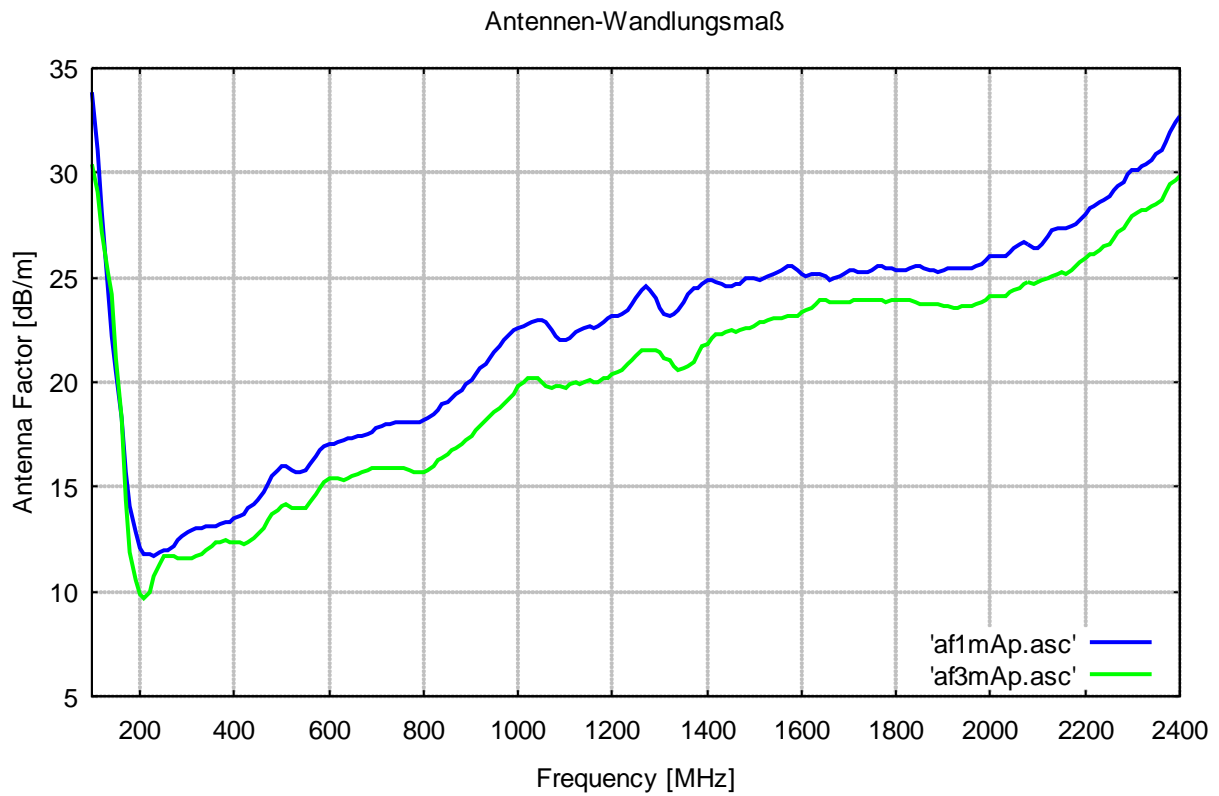
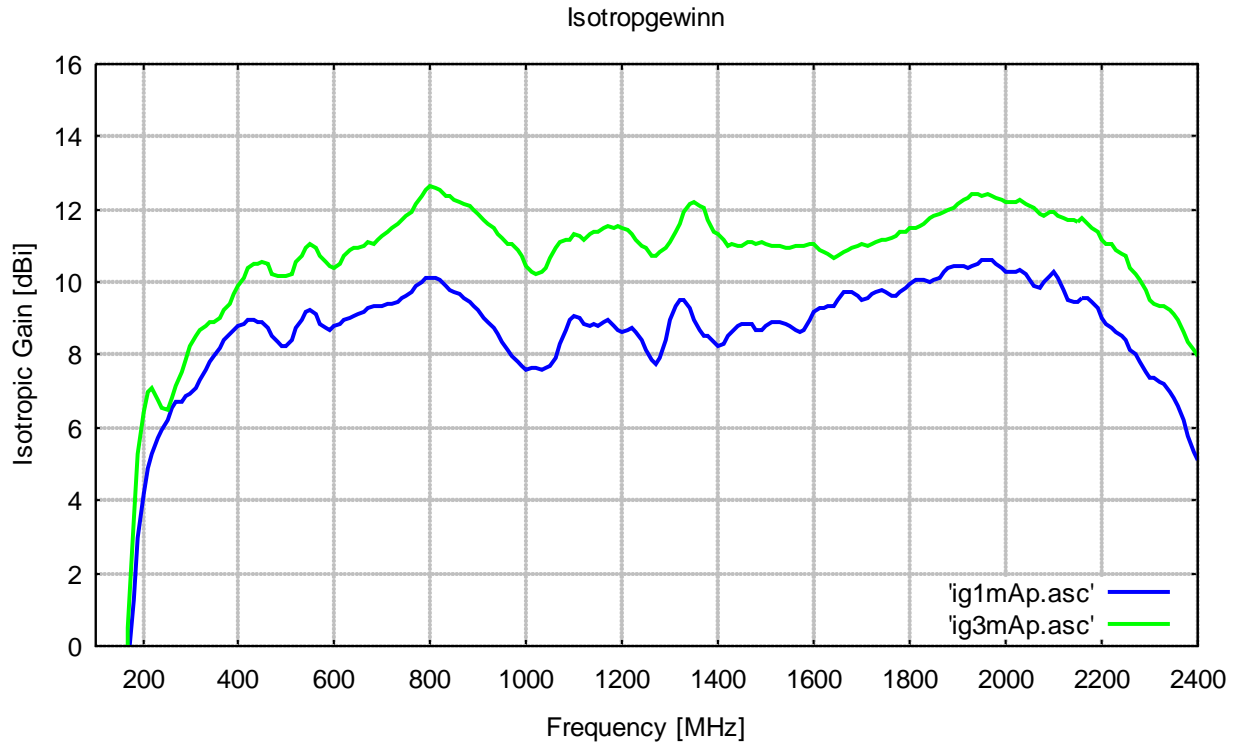

Beschreibung:

Linear polarisierte Doppelsteg Breitband Hornantenne in Aluminiumausführung für Empfangs- und Sendeanwendungen. Für hohe Leistungen kann die Antenne optional mit 7-16 Buchse ausgestattet werden.

Description:

Linear polarized double ridge broadband horn antenna for receive and transmit applications made of aluminium. An optional 7-16 connector is available for high power applications.

Technische Daten:		Specifications:
Frequenzbereich, nominell:	200 MHz...2 GHz	<i>Nominal Frequency Range:</i>
Nutzbarer Frequenzbereich:	200 MHz ... 2.4 GHz	<i>Usable Frequency Range:</i>
Isotropgewinn (Fernfeld):	11.5 dBi +/-2.5 dB (0.3-2 GHz)	<i>Isotropic Gain (Farfield):</i>
Antennenfaktor (Fernfeld):	8...23 dB/m	<i>Antenna Factor (Farfield):</i>
Impedanz, nominell:	50 Ω	<i>Nominal Impedance:</i>
Stehwellenverhältnis SWR typisch:	<2	<i>Standing Wave Ratio SWR typical:</i>
Stehwellenverhältnis SWR max.:	3.5	<i>Standing Wave Ratio SWR max.:</i>
Vor- Rückverhältnis:	typ. 25 dB	<i>Front to Back Ratio:</i>
Polarisationsentkopplung:	typ. > 25 dB	<i>Cross Polarisation:</i>
Max. Eingangsleistung: Anschlußart: N-Buchse	1.5 kW @ 200 MHz 0.5 kW @ 2 GHz	<i>Max. Input Power: N-Connector female</i>
Max. Eingangsleistung: Option: 7-16 Buchse	3.5 kW @ 200 MHz 1.5 kW @ 2 GHz	<i>Max. Input Power: Option: 7-16 connector female</i>
Halterung (Zentralbefestigung):	3/8", M10, M12	<i>Center Mount:</i>
Breite x Länge x Dicke:	945 x 690 x 960 mm	<i>Width x Length x Thickness:</i>
Gewicht:	16 kg	<i>Weight:</i>
Empfohlenes Zubehör:	AM 9144 Mast	<i>Recommended Accessories:</i>



Frequency	Isotropic gain 1 m Aperture	Antenna factor 1 m Aperture	Isotropic gain 3 m Aperture	Antenna factor 3 m Aperture	Isotropic gain (Farfield)	Antenna factor (Farfield)
MHz	dBi	dB/m	dBi	dB/m	dBi	dB/m
190.00	2.95	12.84	5.27	10.53	2.56	13.23
200.00	4.19	12.06	6.41	9.83	5.30	10.94
210.00	4.87	11.79	7.00	9.66	6.85	9.81
220.00	5.30	11.76	7.07	10.00	8.15	8.92
230.00	5.74	11.71	6.78	10.68	9.10	8.36
240.00	5.96	11.86	6.55	11.28	9.54	8.29
250.00	6.23	11.95	6.48	11.70	9.56	8.62
260.00	6.56	11.96	6.81	11.71	9.48	9.04
270.00	6.70	12.15	7.17	11.68	9.33	9.52
280.00	6.72	12.45	7.54	11.62	9.01	10.15
290.00	6.85	12.62	7.86	11.61	8.84	10.63
300.00	6.93	12.83	8.22	11.55	8.63	11.13
310.00	7.09	12.95	8.51	11.54	8.62	11.42
320.00	7.33	12.99	8.66	11.66	8.65	11.68
330.00	7.60	13.00	8.77	11.82	9.20	11.39
340.00	7.78	13.07	8.89	11.96	9.83	11.02
350.00	7.98	13.12	8.90	12.20	10.29	10.81
360.00	8.20	13.15	9.03	12.32	10.71	10.64
370.00	8.40	13.19	9.21	12.37	11.02	10.56
380.00	8.56	13.26	9.40	12.41	11.22	10.59
390.00	8.71	13.33	9.66	12.39	11.16	10.88
400.00	8.77	13.49	9.90	12.36	11.08	11.18
410.00	8.87	13.60	10.11	12.36	11.13	11.35
420.00	8.97	13.72	10.39	12.29	11.17	11.51
430.00	8.95	13.94	10.51	12.38	11.16	11.73
440.00	8.92	14.17	10.52	12.57	11.15	11.94
450.00	8.90	14.38	10.55	12.74	11.13	12.15
460.00	8.75	14.72	10.50	12.98	11.12	12.35
470.00	8.54	15.12	10.23	13.44	11.03	12.63
480.00	8.38	15.47	10.16	13.68	10.99	12.86
490.00	8.23	15.80	10.16	13.86	11.13	12.90
500.00	8.22	15.98	10.15	14.05	11.32	12.88
510.00	8.39	15.98	10.22	14.15	11.42	12.95
520.00	8.72	15.82	10.54	14.00	11.59	12.95
530.00	8.98	15.73	10.74	13.96	11.69	13.01
540.00	9.20	15.67	10.91	13.96	11.83	13.04
550.00	9.21	15.82	11.02	14.01	11.90	13.13
560.00	9.10	16.09	10.96	14.22	11.86	13.32
570.00	8.87	16.47	10.72	14.62	11.69	13.65
580.00	8.76	16.72	10.53	14.96	11.49	14.00
590.00	8.70	16.94	10.42	15.21	11.38	14.26
600.00	8.79	16.99	10.39	15.39	11.36	14.43
610.00	8.86	17.06	10.49	15.43	11.46	14.47
620.00	8.93	17.14	10.69	15.38	11.82	14.25
630.00	8.99	17.22	10.86	15.35	12.23	13.98
640.00	9.05	17.29	10.92	15.42	12.43	13.92
650.00	9.13	17.35	10.94	15.54	12.61	13.86
660.00	9.20	17.41	11.00	15.61	12.69	13.92
670.00	9.28	17.46	11.08	15.66	12.57	14.18
680.00	9.34	17.53	11.06	15.81	12.41	14.46
690.00	9.34	17.65	11.13	15.86	12.31	14.68

Frequency	Isotropic gain 1 m Aperture	Antenna factor 1 m Aperture	Isotropic gain 3 m Aperture	Antenna factor 3 m Aperture	Isotropic gain (Farfield)	Antenna factor (Farfield)
MHz	dBi	dB/m	dBi	dB/m	dBi	dB/m
700.00	9.35	17.77	11.28	15.84	12.23	14.89
710.00	9.39	17.85	11.39	15.85	12.30	14.94
720.00	9.41	17.95	11.48	15.89	12.47	14.90
730.00	9.46	18.03	11.60	15.89	12.64	14.85
740.00	9.54	18.06	11.69	15.91	12.82	14.78
750.00	9.64	18.08	11.79	15.93	13.00	14.72
760.00	9.75	18.08	11.92	15.91	13.19	14.65
770.00	9.87	18.08	12.12	15.83	13.47	14.48
780.00	9.99	18.07	12.38	15.69	13.66	14.40
790.00	10.09	18.08	12.52	15.65	13.78	14.39
800.00	10.12	18.16	12.62	15.66	13.84	14.44
810.00	10.11	18.28	12.61	15.78	13.69	14.70
820.00	10.03	18.46	12.54	15.96	13.49	15.00
830.00	9.91	18.69	12.38	16.22	13.41	15.19
840.00	9.79	18.91	12.34	16.36	13.41	15.30
850.00	9.73	19.08	12.26	16.55	13.36	15.44
860.00	9.67	19.24	12.21	16.70	13.44	15.47
870.00	9.57	19.44	12.13	16.88	13.44	15.57
880.00	9.47	19.64	12.07	17.04	13.33	15.78
890.00	9.36	19.85	11.97	17.24	13.19	16.01
900.00	9.23	20.08	11.86	17.45	13.11	16.20
910.00	9.04	20.36	11.71	17.69	13.00	16.40
920.00	8.88	20.62	11.58	17.92	12.93	16.57
930.00	8.72	20.87	11.46	18.13	12.81	16.78
940.00	8.56	21.12	11.31	18.37	12.58	17.11
950.00	8.37	21.41	11.20	18.58	12.41	17.37
960.00	8.14	21.73	11.07	18.79	12.31	17.56
970.00	7.95	22.00	11.02	18.94	12.28	17.68
980.00	7.82	22.22	10.89	19.16	12.31	17.74
990.00	7.68	22.46	10.73	19.40	12.38	17.75
1000.00	7.61	22.61	10.44	19.78	12.34	17.88
1010.00	7.62	22.69	10.29	20.02	12.31	18.00
1020.00	7.63	22.76	10.21	20.18	12.15	18.24
1030.00	7.61	22.86	10.26	20.22	12.06	18.41
1040.00	7.64	22.92	10.40	20.16	12.08	18.48
1050.00	7.70	22.95	10.68	19.96	12.12	18.52
1060.00	7.91	22.82	10.94	19.79	12.13	18.60
1070.00	8.29	22.52	11.11	19.69	12.20	18.61
1080.00	8.68	22.21	11.13	19.76	12.12	18.77
1090.00	8.96	22.01	11.18	19.78	12.08	18.89
1100.00	9.09	21.96	11.32	19.73	12.17	18.88
1110.00	8.99	22.13	11.24	19.89	12.20	18.93
1120.00	8.83	22.38	11.17	20.03	12.28	18.93
1130.00	8.81	22.47	11.34	19.94	12.45	18.83
1140.00	8.83	22.53	11.40	19.96	12.69	18.67
1150.00	8.81	22.63	11.35	20.09	12.82	18.61
1160.00	8.90	22.61	11.48	20.03	13.03	18.48
1170.00	8.93	22.65	11.56	20.02	13.14	18.45
1180.00	8.81	22.85	11.51	20.15	13.21	18.45
1190.00	8.68	23.05	11.54	20.19	13.07	18.66
1200.00	8.65	23.15	11.46	20.34	12.97	18.83
1210.00	8.71	23.16	11.45	20.43	12.78	19.10

Frequency	Isotropic gain 1 m Aperture	Antenna factor 1 m Aperture	Isotropic gain 3 m Aperture	Antenna factor 3 m Aperture	Isotropic gain (Farfield)	Antenna factor (Farfield)
MHz	dBi	dB/m	dBi	dB/m	dBi	dB/m
1220.00	8.74	23.21	11.33	20.61	12.66	19.29
1230.00	8.63	23.39	11.17	20.84	12.60	19.42
1240.00	8.41	23.68	11.00	21.09	12.52	19.57
1250.00	8.14	24.01	10.92	21.23	12.38	19.78
1260.00	7.88	24.35	10.74	21.48	12.29	19.94
1270.00	7.75	24.54	10.73	21.56	12.16	20.14
1280.00	7.93	24.43	10.81	21.55	12.09	20.27
1290.00	8.40	24.03	10.92	21.51	12.31	20.12
1300.00	8.96	23.54	11.08	21.42	12.52	19.98
1310.00	9.32	23.25	11.40	21.17	12.76	19.80
1320.00	9.49	23.14	11.61	21.02	13.07	19.56
1330.00	9.50	23.20	11.92	20.78	13.29	19.40
1340.00	9.30	23.46	12.16	20.60	13.44	19.32
1350.00	8.97	23.86	12.21	20.62	13.58	19.25
1360.00	8.67	24.22	12.09	20.80	13.55	19.34
1370.00	8.51	24.45	12.05	20.91	13.43	19.52
1380.00	8.50	24.52	11.72	21.30	13.25	19.77
1390.00	8.36	24.72	11.39	21.69	12.98	20.10
1400.00	8.25	24.89	11.31	21.83	12.79	20.35
1410.00	8.31	24.90	11.14	22.07	12.67	20.54
1420.00	8.50	24.76	10.99	22.28	12.69	20.57
1430.00	8.65	24.68	11.06	22.26	12.73	20.60
1440.00	8.78	24.60	11.01	22.38	12.79	20.59
1450.00	8.83	24.62	10.97	22.48	12.72	20.73
1460.00	8.85	24.65	11.09	22.42	12.73	20.77
1470.00	8.85	24.71	11.08	22.49	12.57	21.00
1480.00	8.70	24.93	11.03	22.59	12.47	21.16
1490.00	8.69	24.99	11.11	22.57	12.41	21.28
1500.00	8.80	24.95	11.04	22.70	12.34	21.40
1510.00	8.90	24.90	10.98	22.82	12.30	21.50
1520.00	8.88	24.98	11.00	22.86	12.25	21.61
1530.00	8.88	25.03	10.98	22.94	12.24	21.67
1540.00	8.84	25.13	10.91	23.06	12.21	21.76
1550.00	8.77	25.26	10.94	23.08	12.26	21.77
1560.00	8.70	25.38	11.00	23.08	12.28	21.80
1570.00	8.64	25.50	10.98	23.16	12.34	21.80
1580.00	8.69	25.50	11.00	23.19	12.35	21.84
1590.00	8.94	25.31	11.05	23.19	12.31	21.94
1600.00	9.20	25.11	11.02	23.29	12.24	22.07
1610.00	9.26	25.10	10.89	23.46	12.04	22.31
1620.00	9.30	25.11	10.84	23.57	11.93	22.48
1630.00	9.32	25.15	10.75	23.72	11.76	22.70
1640.00	9.35	25.16	10.64	23.87	11.75	22.77
1650.00	9.51	25.06	10.69	23.88	11.74	22.83
1660.00	9.71	24.91	10.84	23.78	11.93	22.69
1670.00	9.74	24.94	10.89	23.78	12.13	22.54
1680.00	9.70	25.03	10.95	23.78	12.31	22.42
1690.00	9.59	25.19	11.01	23.77	12.37	22.40
1700.00	9.52	25.31	11.03	23.80	12.47	22.36
1710.00	9.57	25.31	10.99	23.89	12.47	22.41
1720.00	9.67	25.26	11.04	23.89	12.41	22.52
1730.00	9.71	25.27	11.09	23.89	12.40	22.59

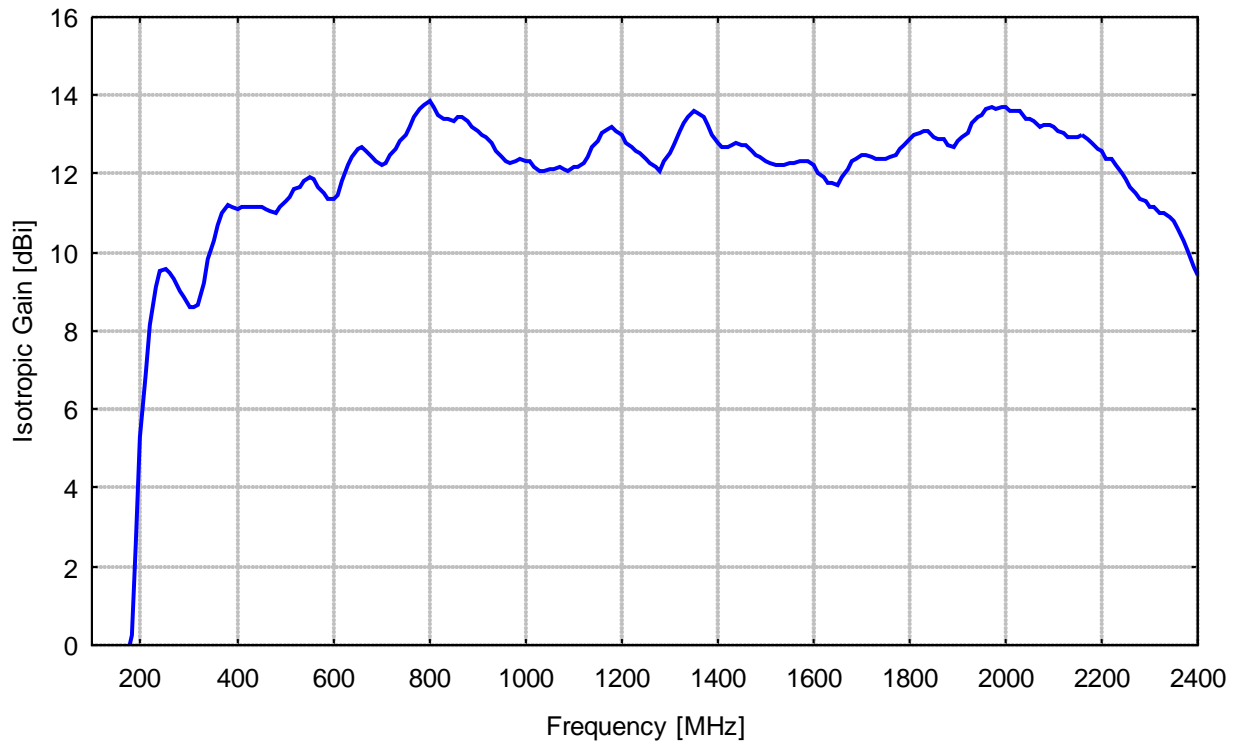


Frequency	Isotropic gain 1 m Aperture	Antenna factor 1 m Aperture	Isotropic gain 3 m Aperture	Antenna factor 3 m Aperture	Isotropic gain (Farfield)	Antenna factor (Farfield)
MHz	dBi	dB/m	dBi	dB/m	dBi	dB/m
1740.00	9.77	25.26	11.14	23.89	12.38	22.65
1750.00	9.75	25.34	11.17	23.91	12.37	22.71
1760.00	9.64	25.49	11.21	23.92	12.41	22.72
1770.00	9.63	25.55	11.29	23.89	12.49	22.69
1780.00	9.75	25.48	11.39	23.84	12.61	22.62
1790.00	9.86	25.42	11.40	23.88	12.73	22.54
1800.00	9.95	25.37	11.46	23.87	12.89	22.44
1810.00	10.05	25.32	11.48	23.89	12.99	22.39
1820.00	10.07	25.35	11.53	23.89	13.02	22.40
1830.00	10.03	25.44	11.59	23.88	13.08	22.39
1840.00	10.02	25.50	11.75	23.77	13.08	22.43
1850.00	10.07	25.50	11.83	23.73	12.96	22.60
1860.00	10.14	25.47	11.89	23.72	12.88	22.73
1870.00	10.28	25.38	11.91	23.74	12.87	22.79
1880.00	10.39	25.32	11.96	23.75	12.72	22.98
1890.00	10.46	25.29	12.06	23.69	12.66	23.08
1900.00	10.44	25.36	12.15	23.65	12.83	22.96
1910.00	10.44	25.40	12.24	23.60	12.94	22.90
1920.00	10.41	25.48	12.33	23.56	13.06	22.83
1930.00	10.45	25.48	12.40	23.53	13.28	22.65
1940.00	10.52	25.46	12.40	23.58	13.43	22.54
1950.00	10.60	25.42	12.39	23.63	13.50	22.52
1960.00	10.63	25.43	12.41	23.65	13.63	22.44
1970.00	10.62	25.49	12.39	23.72	13.69	22.42
1980.00	10.50	25.66	12.30	23.85	13.65	22.50
1990.00	10.36	25.83	12.25	23.95	13.71	22.48
2000.00	10.27	25.97	12.18	24.06	13.68	22.56
2010.00	10.26	26.03	12.18	24.11	13.59	22.69
2020.00	10.28	26.04	12.22	24.10	13.59	22.73
2030.00	10.33	26.04	12.24	24.13	13.59	22.78
2040.00	10.24	26.17	12.12	24.29	13.42	22.99
2050.00	10.06	26.39	12.10	24.36	13.38	23.08
2060.00	9.90	26.60	12.03	24.47	13.34	23.15
2070.00	9.86	26.68	11.88	24.66	13.21	23.33
2080.00	9.98	26.60	11.84	24.74	13.22	23.36
2090.00	10.19	26.43	11.92	24.70	13.23	23.39
2100.00	10.26	26.40	11.92	24.74	13.18	23.48
2110.00	10.09	26.62	11.79	24.91	13.10	23.60
2120.00	9.80	26.95	11.76	24.99	13.04	23.71
2130.00	9.53	27.26	11.72	25.06	12.94	23.85
2140.00	9.46	27.37	11.69	25.14	12.96	23.86
2150.00	9.48	27.38	11.66	25.21	12.95	23.92
2160.00	9.55	27.36	11.74	25.17	12.97	23.94
2170.00	9.54	27.41	11.61	25.34	12.91	24.04
2180.00	9.45	27.54	11.50	25.49	12.81	24.18
2190.00	9.26	27.77	11.35	25.68	12.65	24.38
2200.00	9.01	28.06	11.15	25.91	12.57	24.50
2210.00	8.84	28.26	11.04	26.07	12.39	24.72
2220.00	8.75	28.40	11.03	26.11	12.36	24.79
2230.00	8.64	28.55	10.87	26.31	12.22	24.97
2240.00	8.52	28.71	10.75	26.48	12.02	25.20
2250.00	8.41	28.86	10.71	26.55	11.85	25.42

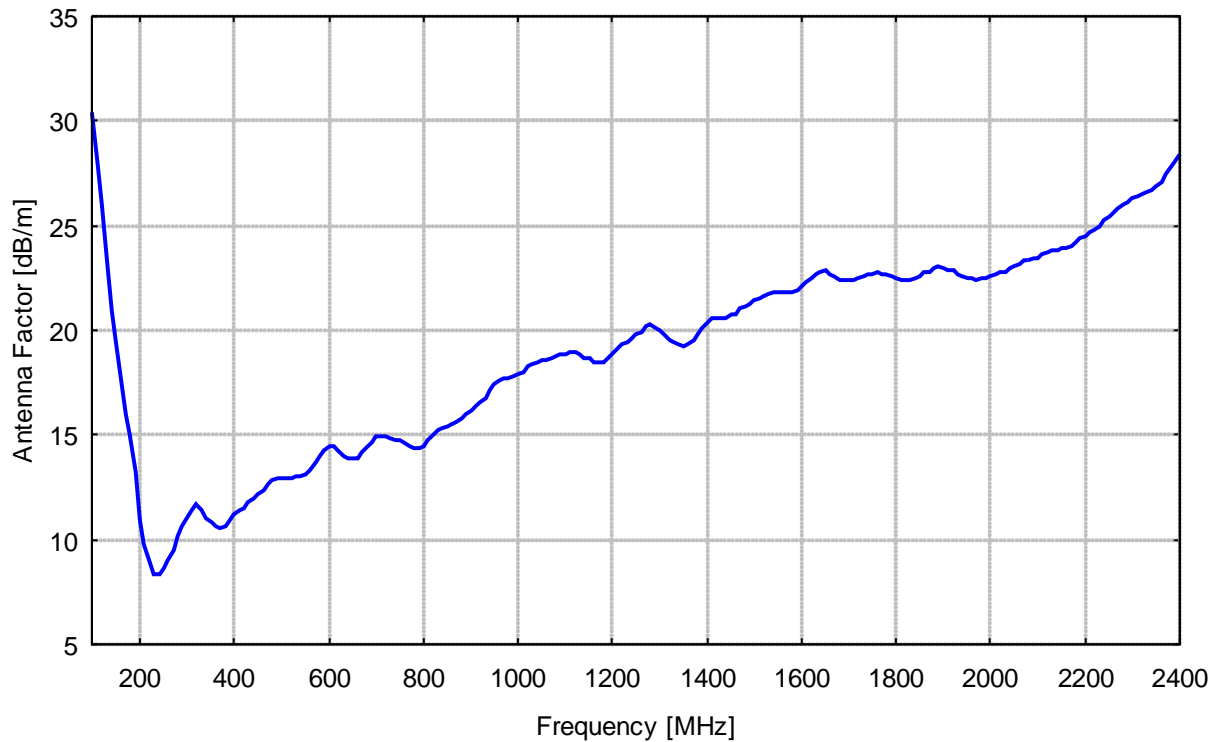
Frequency	Isotropic gain 1 m Aperture	Antenna factor 1 m Aperture	Isotropic gain 3 m Aperture	Antenna factor 3 m Aperture	Isotropic gain (Farfield)	Antenna factor (Farfield)
MHz	dBi	dB/m	dBi	dB/m	dBi	dB/m
2260.00	8.15	29.15	10.39	26.91	11.69	25.61
2270.00	8.01	29.33	10.20	27.14	11.53	25.81
2280.00	7.79	29.59	10.06	27.32	11.36	26.02
2290.00	7.53	29.89	9.81	27.60	11.33	26.08
2300.00	7.34	30.11	9.49	27.96	11.15	26.31
2310.00	7.35	30.14	9.42	28.08	11.14	26.36
2320.00	7.26	30.27	9.32	28.21	11.01	26.52
2330.00	7.18	30.38	9.32	28.25	10.99	26.58
2340.00	6.99	30.61	9.24	28.36	10.92	26.68
2350.00	6.79	30.85	9.13	28.51	10.81	26.84
2360.00	6.57	31.11	8.95	28.73	10.58	27.10
2370.00	6.23	31.49	8.64	29.07	10.30	27.42
2380.00	5.78	31.97	8.33	29.42	10.03	27.73
2390.00	5.35	32.44	8.13	29.66	9.65	28.13
2400.00	5.11	32.72	7.95	29.88	9.41	28.41



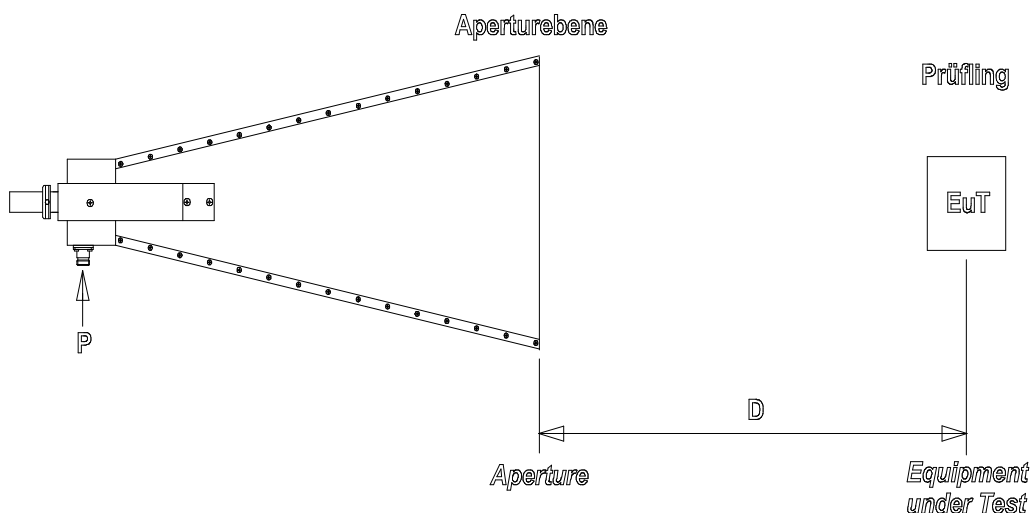
Isotropgewinn



Antennen-Wandlungsmaß



Erzeugung definierter Feldstärken BBHA 9120 F
Generating defined Field Strength BBHA 9120 F



Entfernungsskizze Antenne-Prüfling (Immunitätsprüfung)
Distance Setup Antenna-EuT (Immunity Test)

Erzeugung von Feldstärken unter Freiraumbedingungen vor der Vorderkante (sog. Aperturöffnung) der Hornantenne (siehe Skizze und Angaben bei den Kurvenscharen). Wenn Anteile von Umgebungsreflexionen vorhanden sind, kann dies zu einer frequenz- und höhenabhängigen Änderung der Feldstärke führen. Die Leistungsangaben beziehen sich auf eine 50 Ω Quellimpedanz und unmodulierte Hochfrequenz (CW). Bei 80% Amplitudenmodulation ist die 1.8-fache Spannungsaussteuerung erforderlich, was in einem ca. 3.24-fachen Leistungsbedarf resultiert.

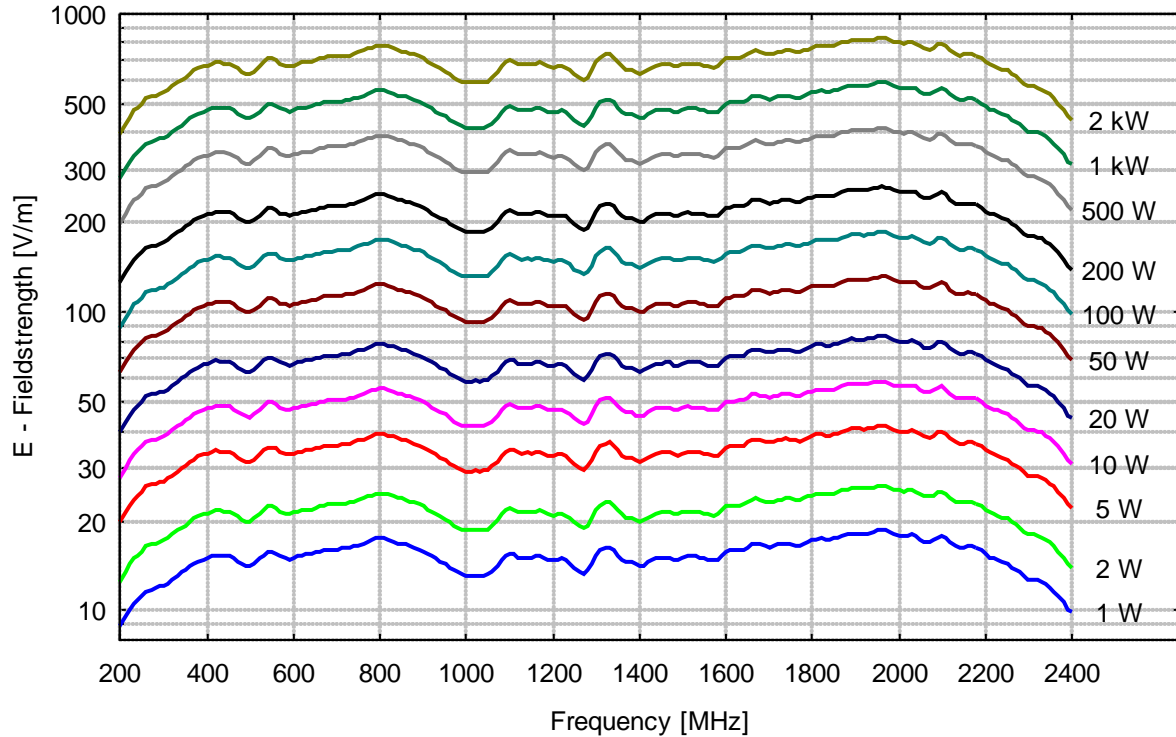
Field Strength generated under free-space conditions at a separation from the antenna aperture plane (see diagrams for several combinations of power and distance). If environmental reflections are present, this may lead to frequency and height dependent fieldstrengths. The Power figures refer to a 50 Ω Source and an unmodulated (cw) signal. An 80% Amplitude Modulation requires a 1.8 times higher voltage, resulting in 3.24 times higher power compared to cw.

Modulation (AM)	50 %	60 %	70 %	80 %	90 %	95%	Modulation (AM)
Leistungsfaktor	2.25	2.56	2.89	3.24	3.61	3.8	Power Factor
Zusätzlicher Leistungsbedarf [dB]	+3.5	+4.1	+4.6	+5.1	+5.6	+5.8	Additional Power Requirement [dB]



Erzeugte Elektrische Feldstärke vor der Antennenöffnung
unmoduliert, Eingangsleistung an N-Buchse, Reflexionsfreie Umgebung
Generated Electrical Fieldstrength in front of Antenna Aperture
no modulation, Input Power at N-Connector, Anechoic Environmental Conditions

BBHA 9120 F Input Power, Dist. Aperture-EuT: 1 m



BBHA 9120 F Input Power, Dist. Aperture-EuT: 3 m

