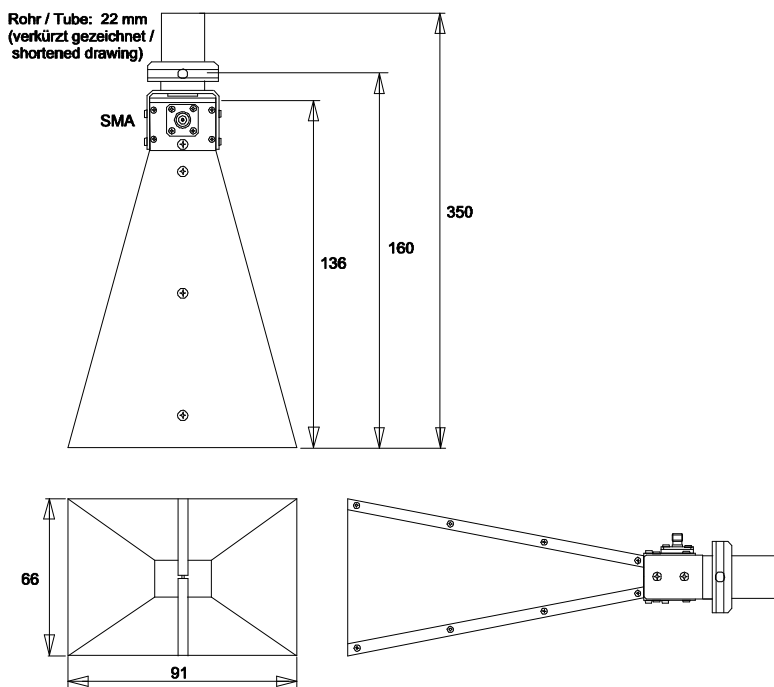


## Doppelsteg Breitband-Hornantenne BBHA 9120 C Double Ridge Broadband Horn Antenna BBHA 9120 C


**Beschreibung:**

Linear polarisierte Doppelsteg Breitband Hornantenne in Aluminiumausführung für Empfangs- und Sendeanwendungen.

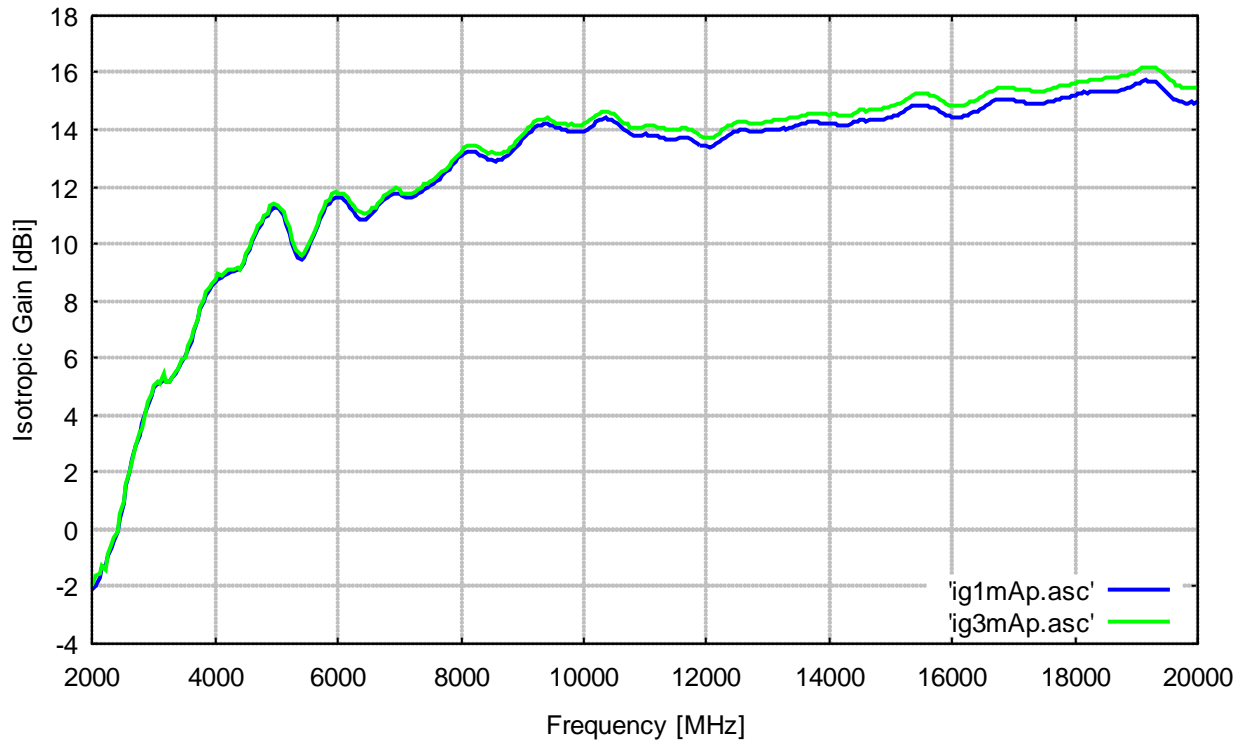
**Description:**

Linear polarized double ridged broadband horn antenna for receive and transmit applications made of aluminium.

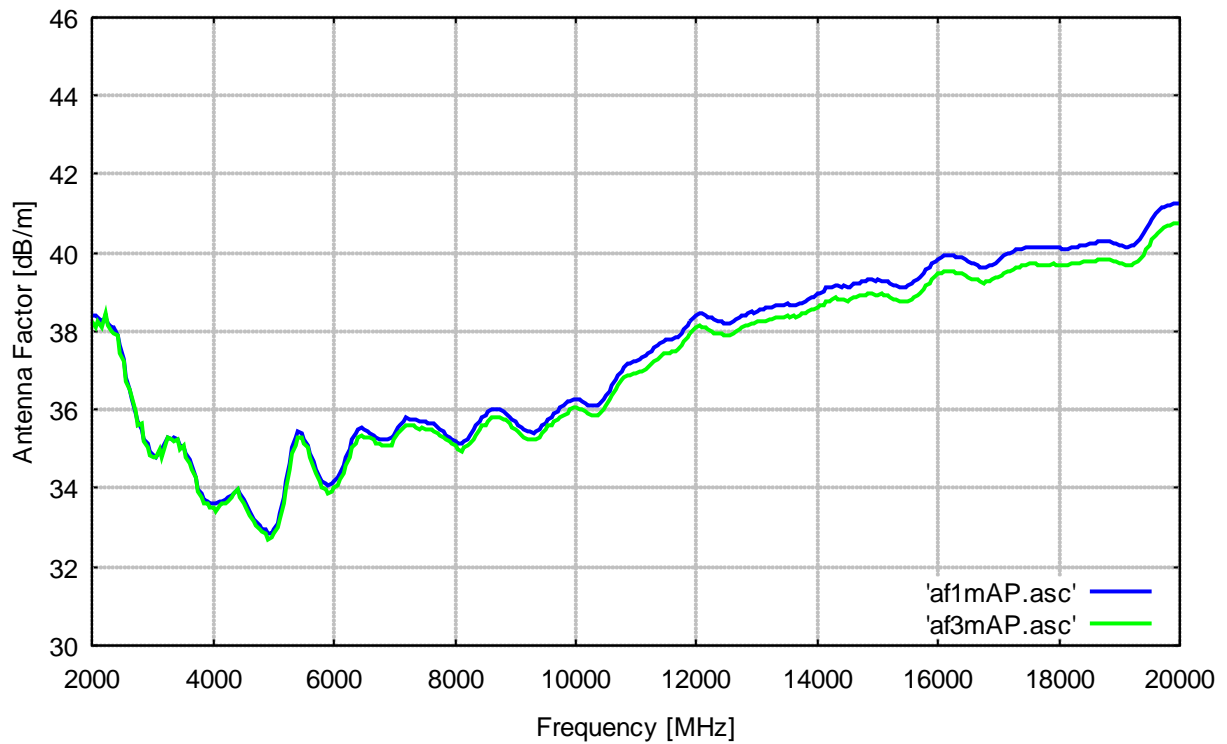
| <b>Technische Daten:</b>           |                                    | <b>Specifications:</b>           |
|------------------------------------|------------------------------------|----------------------------------|
| Frequenzbereich, nominell:         | 2...18 GHz                         | Nominal Frequency Range:         |
| Nutzbarer Frequenzbereich:         | 2 ... 20 GHz                       | Usable Frequency Range:          |
| Isotropgewinn:                     | 9 ... 16 dBi (f > 4 GHz)           | Isotropic Gain:                  |
| Antennenfaktor:                    | 33 ... 41 dB/m<br>(f > 4 GHz)      | Antenna Factor:                  |
| Impedanz, nominell:                | 50 Ω                               | Nominal Impedance:               |
| Stehwellenverhältnis SWR typisch:  | 1.8                                | Standing Wave Ratio SWR typical: |
| Stehwellenverhältnis SWR max.:     | < 4 (f > 4 GHz)                    | Standing Wave Ratio SWR max.:    |
| Vor- Rückverhältnis:               | typ. 25 dB                         | Front to Back Ratio:             |
| Polarisationsentkopplung:          | typ. > 25 dB                       | Cross Polarisation:              |
| 3 dB Öffnungswinkel typ.(E-Ebene): | 29°                                | 3 dB Beamwidth typ. (E-Plane):   |
| 3 dB Öffnungswinkel typ.(H-Ebene): | 26°                                | 3 dB Beamwidth typ. (H-Plane):   |
| 6 dB Öffnungswinkel typ.(E-Ebene): | 40°                                | 6 dB Beamwidth typ. (E-Plane):   |
| 6 dB Öffnungswinkel typ.(H-Ebene): | 40°                                | 6 dB Beamwidth typ. (H-Plane):   |
| Max. Eingangsleistung:             | 100 W (intermitt.)<br>50 W (cont.) | Max. Input Power:                |
| Anschlußart: SMA-Buchse            |                                    | SMA-Connector female             |
| Halterung: 22 mm Rohr, Rastring    |                                    | Mount: 22 mm Tube, Indexing Ring |
| Breite x Länge x Dicke:            | 98 x 140 (345) x 69 mm             | Width x Length x Thickness:      |
| Gewicht:                           | 0.5 kg                             | Weight:                          |



Isotropgewinn



Antennen-Wandlungsmaß



| Frequency | Gain(Isotr.)<br>1 m Ap. | Ant.-Factor<br>1 m Ap. | Gain(Isotr.)<br>3 m Ap. | Ant.-Factor<br>3 m Ap. | Gain(Isotr.)<br>farfield | Ant.-Factor<br>farfield |
|-----------|-------------------------|------------------------|-------------------------|------------------------|--------------------------|-------------------------|
| MHz       | dBi                     | dB/m                   | dBi                     | dB/m                   | dBi                      | dB/m                    |
| 2000.00   | -2.14                   | 38.39                  | -1.99                   | 38.23                  | -2.61                    | 38.85                   |
| 2050.00   | -1.95                   | 38.40                  | -1.65                   | 38.10                  | -2.35                    | 38.81                   |
| 2100.00   | -1.68                   | 38.34                  | -1.58                   | 38.24                  | -1.88                    | 38.54                   |
| 2150.00   | -1.36                   | 38.23                  | -1.25                   | 38.12                  | -1.61                    | 38.48                   |
| 2200.00   | -1.27                   | 38.34                  | -1.39                   | 38.46                  | -1.38                    | 38.45                   |
| 2250.00   | -0.94                   | 38.20                  | -0.87                   | 38.14                  | -0.97                    | 38.24                   |
| 2300.00   | -0.65                   | 38.11                  | -0.52                   | 37.98                  | -0.54                    | 37.99                   |
| 2350.00   | -0.46                   | 38.10                  | -0.31                   | 37.95                  | -0.34                    | 37.99                   |
| 2400.00   | -0.06                   | 37.88                  | -0.08                   | 37.90                  | -0.14                    | 37.96                   |
| 2450.00   | 0.36                    | 37.64                  | 0.55                    | 37.45                  | 0.27                     | 37.73                   |
| 2500.00   | 0.88                    | 37.30                  | 0.95                    | 37.23                  | 0.88                     | 37.29                   |
| 2550.00   | 1.53                    | 36.82                  | 1.61                    | 36.74                  | 1.55                     | 36.81                   |
| 2600.00   | 2.00                    | 36.52                  | 1.99                    | 36.53                  | 1.80                     | 36.72                   |
| 2650.00   | 2.44                    | 36.24                  | 2.38                    | 36.30                  | 2.35                     | 36.33                   |
| 2700.00   | 2.92                    | 35.93                  | 2.90                    | 35.95                  | 2.92                     | 35.92                   |
| 2750.00   | 3.31                    | 35.70                  | 3.42                    | 35.59                  | 3.49                     | 35.52                   |
| 2800.00   | 3.68                    | 35.49                  | 3.50                    | 35.66                  | 3.71                     | 35.45                   |
| 2850.00   | 4.10                    | 35.22                  | 4.11                    | 35.21                  | 4.08                     | 35.24                   |
| 2900.00   | 4.35                    | 35.12                  | 4.44                    | 35.03                  | 4.37                     | 35.10                   |
| 2950.00   | 4.66                    | 34.96                  | 4.76                    | 34.86                  | 4.76                     | 34.86                   |
| 3000.00   | 4.93                    | 34.83                  | 5.01                    | 34.76                  | 5.05                     | 34.71                   |
| 3050.00   | 5.10                    | 34.80                  | 5.14                    | 34.77                  | 5.13                     | 34.78                   |
| 3100.00   | 5.11                    | 34.94                  | 5.07                    | 34.98                  | 5.14                     | 34.91                   |
| 3150.00   | 5.22                    | 34.97                  | 5.42                    | 34.77                  | 5.28                     | 34.91                   |
| 3200.00   | 5.14                    | 35.18                  | 5.20                    | 35.12                  | 5.24                     | 35.08                   |
| 3250.00   | 5.19                    | 35.27                  | 5.18                    | 35.28                  | 5.29                     | 35.17                   |
| 3300.00   | 5.33                    | 35.26                  | 5.34                    | 35.25                  | 5.57                     | 35.02                   |
| 3350.00   | 5.45                    | 35.27                  | 5.52                    | 35.20                  | 5.60                     | 35.12                   |
| 3400.00   | 5.59                    | 35.26                  | 5.62                    | 35.23                  | 5.74                     | 35.11                   |
| 3450.00   | 5.90                    | 35.07                  | 5.97                    | 35.01                  | 6.04                     | 34.94                   |
| 3500.00   | 6.07                    | 35.04                  | 6.00                    | 35.10                  | 6.28                     | 34.82                   |
| 3550.00   | 6.32                    | 34.91                  | 6.41                    | 34.81                  | 6.69                     | 34.54                   |
| 3600.00   | 6.60                    | 34.75                  | 6.69                    | 34.65                  | 6.92                     | 34.43                   |
| 3650.00   | 6.90                    | 34.57                  | 6.99                    | 34.48                  | 6.98                     | 34.49                   |
| 3700.00   | 7.31                    | 34.27                  | 7.32                    | 34.26                  | 7.42                     | 34.17                   |
| 3750.00   | 7.71                    | 33.99                  | 7.79                    | 33.91                  | 7.82                     | 33.88                   |
| 3800.00   | 7.95                    | 33.87                  | 8.06                    | 33.76                  | 8.13                     | 33.68                   |
| 3850.00   | 8.20                    | 33.73                  | 8.34                    | 33.59                  | 8.38                     | 33.55                   |
| 3900.00   | 8.39                    | 33.65                  | 8.45                    | 33.59                  | 8.44                     | 33.60                   |
| 3950.00   | 8.54                    | 33.61                  | 8.62                    | 33.53                  | 8.53                     | 33.62                   |
| 4000.00   | 8.67                    | 33.59                  | 8.77                    | 33.50                  | 8.82                     | 33.44                   |
| 4050.00   | 8.76                    | 33.61                  | 8.95                    | 33.42                  | 8.92                     | 33.44                   |
| 4100.00   | 8.79                    | 33.68                  | 8.91                    | 33.56                  | 9.01                     | 33.47                   |
| 4150.00   | 8.90                    | 33.68                  | 8.99                    | 33.59                  | 9.03                     | 33.55                   |
| 4200.00   | 8.98                    | 33.70                  | 9.09                    | 33.59                  | 9.05                     | 33.64                   |
| 4250.00   | 9.00                    | 33.79                  | 9.11                    | 33.67                  | 9.04                     | 33.75                   |
| 4300.00   | 9.05                    | 33.84                  | 9.10                    | 33.79                  | 9.13                     | 33.76                   |
| 4350.00   | 9.11                    | 33.88                  | 9.14                    | 33.85                  | 9.20                     | 33.79                   |
| 4400.00   | 9.12                    | 33.96                  | 9.13                    | 33.96                  | 9.18                     | 33.91                   |
| 4450.00   | 9.30                    | 33.88                  | 9.41                    | 33.78                  | 9.30                     | 33.89                   |
| 4500.00   | 9.59                    | 33.69                  | 9.68                    | 33.61                  | 9.61                     | 33.67                   |
| 4550.00   | 9.79                    | 33.59                  | 9.85                    | 33.53                  | 9.85                     | 33.53                   |
| 4600.00   | 10.08                   | 33.39                  | 10.14                   | 33.33                  | 10.21                    | 33.27                   |

| Frequency | Gain(Isotr.)<br>1 m Ap. | Ant.-Factor<br>1 m Ap. | Gain(Isotr.)<br>3 m Ap. | Ant.-Factor<br>3 m Ap. | Gain(Isotr.)<br>farfield | Ant.-Factor<br>farfield |
|-----------|-------------------------|------------------------|-------------------------|------------------------|--------------------------|-------------------------|
| MHz       | dBi                     | dB/m                   | dBi                     | dB/m                   | dBi                      | dB/m                    |
| 4650.00   | 10.34                   | 33.23                  | 10.44                   | 33.13                  | 10.45                    | 33.12                   |
| 4700.00   | 10.50                   | 33.16                  | 10.62                   | 33.04                  | 10.55                    | 33.12                   |
| 4750.00   | 10.71                   | 33.04                  | 10.81                   | 32.94                  | 10.72                    | 33.03                   |
| 4800.00   | 10.89                   | 32.96                  | 10.96                   | 32.89                  | 10.92                    | 32.93                   |
| 4850.00   | 10.98                   | 32.95                  | 11.06                   | 32.87                  | 11.03                    | 32.91                   |
| 4900.00   | 11.16                   | 32.86                  | 11.31                   | 32.72                  | 11.23                    | 32.80                   |
| 4950.00   | 11.26                   | 32.86                  | 11.38                   | 32.73                  | 11.29                    | 32.83                   |
| 5000.00   | 11.24                   | 32.96                  | 11.35                   | 32.85                  | 11.28                    | 32.92                   |
| 5050.00   | 11.19                   | 33.10                  | 11.30                   | 32.98                  | 11.28                    | 33.00                   |
| 5100.00   | 11.00                   | 33.37                  | 11.14                   | 33.23                  | 11.11                    | 33.26                   |
| 5150.00   | 10.69                   | 33.76                  | 10.86                   | 33.59                  | 10.86                    | 33.60                   |
| 5200.00   | 10.38                   | 34.16                  | 10.56                   | 33.98                  | 10.52                    | 34.02                   |
| 5250.00   | 10.00                   | 34.63                  | 10.14                   | 34.49                  | 10.17                    | 34.46                   |
| 5300.00   | 9.68                    | 35.03                  | 9.83                    | 34.88                  | 9.85                     | 34.85                   |
| 5350.00   | 9.52                    | 35.27                  | 9.70                    | 35.08                  | 9.70                     | 35.09                   |
| 5400.00   | 9.42                    | 35.45                  | 9.59                    | 35.28                  | 9.64                     | 35.23                   |
| 5450.00   | 9.54                    | 35.40                  | 9.66                    | 35.29                  | 9.76                     | 35.18                   |
| 5500.00   | 9.80                    | 35.23                  | 9.91                    | 35.12                  | 9.97                     | 35.06                   |
| 5550.00   | 10.01                   | 35.10                  | 10.07                   | 35.03                  | 10.13                    | 34.98                   |
| 5600.00   | 10.30                   | 34.89                  | 10.39                   | 34.79                  | 10.42                    | 34.77                   |
| 5650.00   | 10.61                   | 34.66                  | 10.74                   | 34.52                  | 10.73                    | 34.53                   |
| 5700.00   | 10.87                   | 34.47                  | 10.98                   | 34.36                  | 11.06                    | 34.28                   |
| 5750.00   | 11.12                   | 34.29                  | 11.25                   | 34.16                  | 11.33                    | 34.09                   |
| 5800.00   | 11.32                   | 34.17                  | 11.48                   | 34.01                  | 11.53                    | 33.95                   |
| 5850.00   | 11.44                   | 34.12                  | 11.57                   | 33.99                  | 11.61                    | 33.96                   |
| 5900.00   | 11.55                   | 34.08                  | 11.74                   | 33.89                  | 11.77                    | 33.87                   |
| 5950.00   | 11.61                   | 34.10                  | 11.80                   | 33.91                  | 11.80                    | 33.91                   |
| 6000.00   | 11.62                   | 34.17                  | 11.77                   | 34.02                  | 11.77                    | 34.01                   |
| 6050.00   | 11.59                   | 34.26                  | 11.79                   | 34.07                  | 11.71                    | 34.15                   |
| 6100.00   | 11.53                   | 34.40                  | 11.73                   | 34.20                  | 11.54                    | 34.38                   |
| 6150.00   | 11.40                   | 34.59                  | 11.61                   | 34.39                  | 11.43                    | 34.57                   |
| 6200.00   | 11.27                   | 34.80                  | 11.47                   | 34.60                  | 11.31                    | 34.76                   |
| 6250.00   | 11.12                   | 35.01                  | 11.34                   | 34.80                  | 11.21                    | 34.93                   |
| 6300.00   | 10.98                   | 35.23                  | 11.18                   | 35.02                  | 11.09                    | 35.12                   |
| 6350.00   | 10.88                   | 35.39                  | 11.12                   | 35.16                  | 11.01                    | 35.27                   |
| 6400.00   | 10.82                   | 35.52                  | 11.06                   | 35.28                  | 10.94                    | 35.40                   |
| 6450.00   | 10.88                   | 35.53                  | 11.07                   | 35.34                  | 10.99                    | 35.42                   |
| 6500.00   | 10.97                   | 35.51                  | 11.16                   | 35.32                  | 11.07                    | 35.41                   |
| 6550.00   | 11.08                   | 35.47                  | 11.26                   | 35.28                  | 11.19                    | 35.35                   |
| 6600.00   | 11.20                   | 35.41                  | 11.30                   | 35.31                  | 11.24                    | 35.37                   |
| 6650.00   | 11.33                   | 35.35                  | 11.42                   | 35.25                  | 11.34                    | 35.34                   |
| 6700.00   | 11.45                   | 35.29                  | 11.58                   | 35.16                  | 11.47                    | 35.27                   |
| 6750.00   | 11.57                   | 35.24                  | 11.68                   | 35.13                  | 11.61                    | 35.19                   |
| 6800.00   | 11.63                   | 35.24                  | 11.77                   | 35.10                  | 11.77                    | 35.10                   |
| 6850.00   | 11.71                   | 35.22                  | 11.82                   | 35.11                  | 11.86                    | 35.07                   |
| 6900.00   | 11.75                   | 35.25                  | 11.90                   | 35.10                  | 11.91                    | 35.09                   |
| 6950.00   | 11.76                   | 35.30                  | 11.97                   | 35.09                  | 11.98                    | 35.08                   |
| 7000.00   | 11.76                   | 35.37                  | 11.90                   | 35.22                  | 11.96                    | 35.16                   |
| 7050.00   | 11.66                   | 35.53                  | 11.78                   | 35.40                  | 11.92                    | 35.26                   |
| 7100.00   | 11.62                   | 35.62                  | 11.78                   | 35.46                  | 11.91                    | 35.34                   |
| 7150.00   | 11.59                   | 35.71                  | 11.76                   | 35.54                  | 11.85                    | 35.45                   |
| 7200.00   | 11.59                   | 35.78                  | 11.79                   | 35.58                  | 11.81                    | 35.56                   |
| 7250.00   | 11.67                   | 35.76                  | 11.85                   | 35.58                  | 11.91                    | 35.52                   |
| 7300.00   | 11.76                   | 35.73                  | 11.90                   | 35.58                  | 11.99                    | 35.49                   |

| Frequency | Gain(Isotr.)<br>1 m Ap. | Ant.-Factor<br>1 m Ap. | Gain(Isotr.)<br>3 m Ap. | Ant.-Factor<br>3 m Ap. | Gain(Isotr.)<br>farfield | Ant.-Factor<br>farfield |
|-----------|-------------------------|------------------------|-------------------------|------------------------|--------------------------|-------------------------|
| MHz       | dBi                     | dB/m                   | dBi                     | dB/m                   | dBi                      | dB/m                    |
| 7350.00   | 11.80                   | 35.75                  | 11.98                   | 35.56                  | 12.07                    | 35.47                   |
| 7400.00   | 11.91                   | 35.70                  | 12.11                   | 35.50                  | 12.14                    | 35.46                   |
| 7450.00   | 11.98                   | 35.69                  | 12.14                   | 35.53                  | 12.18                    | 35.49                   |
| 7500.00   | 12.03                   | 35.69                  | 12.21                   | 35.51                  | 12.22                    | 35.50                   |
| 7550.00   | 12.11                   | 35.67                  | 12.27                   | 35.50                  | 12.33                    | 35.45                   |
| 7600.00   | 12.17                   | 35.67                  | 12.33                   | 35.50                  | 12.41                    | 35.43                   |
| 7650.00   | 12.26                   | 35.63                  | 12.44                   | 35.46                  | 12.47                    | 35.42                   |
| 7700.00   | 12.38                   | 35.57                  | 12.53                   | 35.42                  | 12.58                    | 35.37                   |
| 7750.00   | 12.50                   | 35.51                  | 12.63                   | 35.37                  | 12.71                    | 35.30                   |
| 7800.00   | 12.62                   | 35.44                  | 12.77                   | 35.29                  | 12.85                    | 35.21                   |
| 7850.00   | 12.75                   | 35.36                  | 12.88                   | 35.24                  | 12.98                    | 35.14                   |
| 7900.00   | 12.87                   | 35.30                  | 13.00                   | 35.17                  | 13.10                    | 35.08                   |
| 7950.00   | 12.99                   | 35.24                  | 13.11                   | 35.12                  | 13.21                    | 35.02                   |
| 8000.00   | 13.08                   | 35.20                  | 13.21                   | 35.07                  | 13.28                    | 35.00                   |
| 8050.00   | 13.18                   | 35.16                  | 13.35                   | 34.99                  | 13.34                    | 34.99                   |
| 8100.00   | 13.25                   | 35.14                  | 13.43                   | 34.96                  | 13.43                    | 34.96                   |
| 8150.00   | 13.25                   | 35.20                  | 13.41                   | 35.03                  | 13.42                    | 35.02                   |
| 8200.00   | 13.24                   | 35.25                  | 13.41                   | 35.09                  | 13.41                    | 35.09                   |
| 8250.00   | 13.20                   | 35.35                  | 13.41                   | 35.13                  | 13.36                    | 35.19                   |
| 8300.00   | 13.12                   | 35.48                  | 13.37                   | 35.23                  | 13.28                    | 35.32                   |
| 8350.00   | 13.06                   | 35.60                  | 13.30                   | 35.35                  | 13.23                    | 35.42                   |
| 8400.00   | 13.00                   | 35.70                  | 13.23                   | 35.48                  | 13.25                    | 35.46                   |
| 8450.00   | 12.94                   | 35.81                  | 13.18                   | 35.58                  | 13.20                    | 35.56                   |
| 8500.00   | 12.94                   | 35.87                  | 13.20                   | 35.61                  | 13.15                    | 35.66                   |
| 8550.00   | 12.91                   | 35.95                  | 13.17                   | 35.69                  | 13.12                    | 35.74                   |
| 8600.00   | 12.92                   | 35.99                  | 13.13                   | 35.78                  | 13.10                    | 35.81                   |
| 8650.00   | 12.96                   | 36.00                  | 13.16                   | 35.80                  | 13.15                    | 35.81                   |
| 8700.00   | 13.00                   | 36.01                  | 13.20                   | 35.81                  | 13.23                    | 35.79                   |
| 8750.00   | 13.07                   | 35.99                  | 13.25                   | 35.81                  | 13.27                    | 35.79                   |
| 8800.00   | 13.17                   | 35.94                  | 13.34                   | 35.77                  | 13.33                    | 35.78                   |
| 8850.00   | 13.27                   | 35.89                  | 13.43                   | 35.73                  | 13.48                    | 35.68                   |
| 8900.00   | 13.40                   | 35.81                  | 13.57                   | 35.63                  | 13.62                    | 35.59                   |
| 8950.00   | 13.51                   | 35.75                  | 13.71                   | 35.55                  | 13.76                    | 35.50                   |
| 9000.00   | 13.63                   | 35.68                  | 13.80                   | 35.51                  | 13.85                    | 35.45                   |
| 9050.00   | 13.76                   | 35.60                  | 13.92                   | 35.43                  | 13.93                    | 35.43                   |
| 9100.00   | 13.87                   | 35.53                  | 14.06                   | 35.34                  | 14.05                    | 35.35                   |
| 9150.00   | 13.96                   | 35.49                  | 14.16                   | 35.29                  | 14.16                    | 35.29                   |
| 9200.00   | 14.05                   | 35.44                  | 14.26                   | 35.24                  | 14.27                    | 35.23                   |
| 9250.00   | 14.12                   | 35.43                  | 14.32                   | 35.23                  | 14.34                    | 35.20                   |
| 9300.00   | 14.17                   | 35.42                  | 14.35                   | 35.24                  | 14.38                    | 35.21                   |
| 9350.00   | 14.19                   | 35.45                  | 14.38                   | 35.25                  | 14.39                    | 35.24                   |
| 9400.00   | 14.19                   | 35.49                  | 14.41                   | 35.28                  | 14.41                    | 35.28                   |
| 9450.00   | 14.15                   | 35.58                  | 14.34                   | 35.39                  | 14.36                    | 35.37                   |
| 9500.00   | 14.12                   | 35.65                  | 14.28                   | 35.49                  | 14.34                    | 35.43                   |
| 9550.00   | 14.06                   | 35.76                  | 14.24                   | 35.58                  | 14.28                    | 35.54                   |
| 9600.00   | 14.04                   | 35.82                  | 14.24                   | 35.62                  | 14.25                    | 35.61                   |
| 9650.00   | 14.00                   | 35.91                  | 14.22                   | 35.69                  | 14.20                    | 35.71                   |
| 9700.00   | 13.98                   | 35.97                  | 14.20                   | 35.76                  | 14.21                    | 35.74                   |
| 9750.00   | 13.95                   | 36.05                  | 14.17                   | 35.83                  | 14.23                    | 35.77                   |
| 9800.00   | 13.94                   | 36.11                  | 14.18                   | 35.87                  | 14.20                    | 35.84                   |
| 9850.00   | 13.90                   | 36.19                  | 14.16                   | 35.93                  | 14.14                    | 35.95                   |
| 9900.00   | 13.92                   | 36.22                  | 14.14                   | 35.99                  | 14.11                    | 36.02                   |
| 9950.00   | 13.91                   | 36.27                  | 14.12                   | 36.05                  | 14.12                    | 36.06                   |
| 10000.00  | 13.95                   | 36.27                  | 14.18                   | 36.04                  | 14.21                    | 36.01                   |

| Frequency | Gain(Isotr.)<br>1 m Ap. | Ant.-Factor<br>1 m Ap. | Gain(Isotr.)<br>3 m Ap. | Ant.-Factor<br>3 m Ap. | Gain(Isotr.)<br>farfield | Ant.-Factor<br>farfield |
|-----------|-------------------------|------------------------|-------------------------|------------------------|--------------------------|-------------------------|
| MHz       | dBi                     | dB/m                   | dBi                     | dB/m                   | dBi                      | dB/m                    |
| 10050.00  | 14.01                   | 36.25                  | 14.25                   | 36.02                  | 14.26                    | 36.01                   |
| 10100.00  | 14.10                   | 36.21                  | 14.32                   | 35.99                  | 14.31                    | 36.00                   |
| 10150.00  | 14.17                   | 36.18                  | 14.39                   | 35.96                  | 14.39                    | 35.96                   |
| 10200.00  | 14.28                   | 36.11                  | 14.51                   | 35.89                  | 14.48                    | 35.91                   |
| 10250.00  | 14.33                   | 36.10                  | 14.59                   | 35.85                  | 14.59                    | 35.85                   |
| 10300.00  | 14.38                   | 36.10                  | 14.64                   | 35.84                  | 14.65                    | 35.83                   |
| 10350.00  | 14.39                   | 36.13                  | 14.64                   | 35.88                  | 14.63                    | 35.89                   |
| 10400.00  | 14.38                   | 36.18                  | 14.64                   | 35.92                  | 14.65                    | 35.91                   |
| 10450.00  | 14.34                   | 36.27                  | 14.58                   | 36.02                  | 14.59                    | 36.01                   |
| 10500.00  | 14.30                   | 36.34                  | 14.55                   | 36.10                  | 14.55                    | 36.09                   |
| 10550.00  | 14.20                   | 36.48                  | 14.45                   | 36.24                  | 14.49                    | 36.19                   |
| 10600.00  | 14.12                   | 36.60                  | 14.36                   | 36.36                  | 14.42                    | 36.31                   |
| 10650.00  | 13.99                   | 36.78                  | 14.24                   | 36.53                  | 14.26                    | 36.50                   |
| 10700.00  | 13.94                   | 36.87                  | 14.18                   | 36.62                  | 14.19                    | 36.61                   |
| 10750.00  | 13.84                   | 37.00                  | 14.09                   | 36.75                  | 14.12                    | 36.73                   |
| 10800.00  | 13.79                   | 37.09                  | 14.06                   | 36.83                  | 14.11                    | 36.78                   |
| 10850.00  | 13.76                   | 37.17                  | 14.05                   | 36.88                  | 14.11                    | 36.82                   |
| 10900.00  | 13.78                   | 37.19                  | 14.08                   | 36.89                  | 14.11                    | 36.86                   |
| 10950.00  | 13.77                   | 37.24                  | 14.07                   | 36.94                  | 14.07                    | 36.94                   |
| 11000.00  | 13.83                   | 37.22                  | 14.12                   | 36.93                  | 14.14                    | 36.90                   |
| 11050.00  | 13.82                   | 37.27                  | 14.11                   | 36.98                  | 14.18                    | 36.90                   |
| 11100.00  | 13.81                   | 37.31                  | 14.15                   | 36.98                  | 14.20                    | 36.93                   |
| 11150.00  | 13.79                   | 37.37                  | 14.13                   | 37.04                  | 14.18                    | 36.99                   |
| 11200.00  | 13.78                   | 37.43                  | 14.10                   | 37.10                  | 14.16                    | 37.04                   |
| 11250.00  | 13.73                   | 37.51                  | 14.06                   | 37.18                  | 14.13                    | 37.11                   |
| 11300.00  | 13.71                   | 37.57                  | 14.05                   | 37.24                  | 14.15                    | 37.13                   |
| 11350.00  | 13.68                   | 37.64                  | 14.03                   | 37.29                  | 14.11                    | 37.21                   |
| 11400.00  | 13.66                   | 37.70                  | 14.02                   | 37.34                  | 14.08                    | 37.28                   |
| 11450.00  | 13.65                   | 37.74                  | 13.97                   | 37.43                  | 14.04                    | 37.36                   |
| 11500.00  | 13.67                   | 37.77                  | 14.00                   | 37.43                  | 14.04                    | 37.39                   |
| 11550.00  | 13.69                   | 37.79                  | 14.01                   | 37.46                  | 14.04                    | 37.43                   |
| 11600.00  | 13.70                   | 37.81                  | 14.04                   | 37.47                  | 14.06                    | 37.45                   |
| 11650.00  | 13.72                   | 37.83                  | 14.04                   | 37.50                  | 14.06                    | 37.49                   |
| 11700.00  | 13.72                   | 37.86                  | 14.03                   | 37.55                  | 14.05                    | 37.54                   |
| 11750.00  | 13.66                   | 37.96                  | 13.97                   | 37.65                  | 13.96                    | 37.66                   |
| 11800.00  | 13.61                   | 38.05                  | 13.92                   | 37.74                  | 13.90                    | 37.76                   |
| 11850.00  | 13.53                   | 38.17                  | 13.84                   | 37.85                  | 13.83                    | 37.86                   |
| 11900.00  | 13.47                   | 38.26                  | 13.77                   | 37.96                  | 13.80                    | 37.93                   |
| 11950.00  | 13.41                   | 38.35                  | 13.70                   | 38.07                  | 13.73                    | 38.03                   |
| 12000.00  | 13.41                   | 38.40                  | 13.70                   | 38.11                  | 13.74                    | 38.06                   |
| 12050.00  | 13.40                   | 38.44                  | 13.71                   | 38.13                  | 13.75                    | 38.09                   |
| 12100.00  | 13.44                   | 38.43                  | 13.75                   | 38.12                  | 13.83                    | 38.04                   |
| 12150.00  | 13.52                   | 38.40                  | 13.81                   | 38.10                  | 13.91                    | 38.00                   |
| 12200.00  | 13.58                   | 38.36                  | 13.88                   | 38.06                  | 13.97                    | 37.98                   |
| 12250.00  | 13.65                   | 38.33                  | 13.97                   | 38.02                  | 14.00                    | 37.98                   |
| 12300.00  | 13.74                   | 38.28                  | 14.04                   | 37.97                  | 14.10                    | 37.92                   |
| 12350.00  | 13.81                   | 38.24                  | 14.11                   | 37.94                  | 14.17                    | 37.89                   |
| 12400.00  | 13.85                   | 38.24                  | 14.16                   | 37.93                  | 14.21                    | 37.88                   |
| 12450.00  | 13.93                   | 38.20                  | 14.23                   | 37.89                  | 14.25                    | 37.87                   |
| 12500.00  | 13.96                   | 38.20                  | 14.27                   | 37.89                  | 14.30                    | 37.86                   |
| 12550.00  | 13.99                   | 38.21                  | 14.30                   | 37.89                  | 14.31                    | 37.88                   |
| 12600.00  | 13.97                   | 38.26                  | 14.28                   | 37.94                  | 14.30                    | 37.93                   |
| 12650.00  | 13.97                   | 38.29                  | 14.28                   | 37.98                  | 14.31                    | 37.95                   |
| 12700.00  | 13.92                   | 38.37                  | 14.23                   | 38.06                  | 14.25                    | 38.04                   |

| Frequency | Gain(Isotr.)<br>1 m Ap. | Ant.-Factor<br>1 m Ap. | Gain(Isotr.)<br>3 m Ap. | Ant.-Factor<br>3 m Ap. | Gain(Isotr.)<br>farfield | Ant.-Factor<br>farfield |
|-----------|-------------------------|------------------------|-------------------------|------------------------|--------------------------|-------------------------|
| MHz       | dBi                     | dB/m                   | dBi                     | dB/m                   | dBi                      | dB/m                    |
| 12750.00  | 13.94                   | 38.39                  | 14.23                   | 38.10                  | 14.25                    | 38.08                   |
| 12800.00  | 13.95                   | 38.42                  | 14.23                   | 38.13                  | 14.28                    | 38.08                   |
| 12850.00  | 13.96                   | 38.44                  | 14.24                   | 38.16                  | 14.27                    | 38.12                   |
| 12900.00  | 13.95                   | 38.48                  | 14.22                   | 38.21                  | 14.29                    | 38.14                   |
| 12950.00  | 14.00                   | 38.47                  | 14.28                   | 38.19                  | 14.34                    | 38.12                   |
| 13000.00  | 13.98                   | 38.52                  | 14.27                   | 38.23                  | 14.34                    | 38.16                   |
| 13050.00  | 13.99                   | 38.54                  | 14.28                   | 38.25                  | 14.38                    | 38.16                   |
| 13100.00  | 14.01                   | 38.56                  | 14.32                   | 38.25                  | 14.40                    | 38.17                   |
| 13150.00  | 14.01                   | 38.59                  | 14.33                   | 38.26                  | 14.40                    | 38.20                   |
| 13200.00  | 14.01                   | 38.62                  | 14.33                   | 38.31                  | 14.41                    | 38.22                   |
| 13250.00  | 14.04                   | 38.62                  | 14.38                   | 38.28                  | 14.44                    | 38.23                   |
| 13300.00  | 14.03                   | 38.66                  | 14.35                   | 38.35                  | 14.44                    | 38.25                   |
| 13350.00  | 14.06                   | 38.67                  | 14.40                   | 38.33                  | 14.47                    | 38.26                   |
| 13400.00  | 14.08                   | 38.68                  | 14.41                   | 38.35                  | 14.46                    | 38.30                   |
| 13450.00  | 14.12                   | 38.67                  | 14.43                   | 38.36                  | 14.50                    | 38.30                   |
| 13500.00  | 14.14                   | 38.69                  | 14.44                   | 38.39                  | 14.50                    | 38.32                   |
| 13550.00  | 14.19                   | 38.67                  | 14.50                   | 38.36                  | 14.57                    | 38.29                   |
| 13600.00  | 14.21                   | 38.68                  | 14.48                   | 38.41                  | 14.58                    | 38.31                   |
| 13650.00  | 14.26                   | 38.67                  | 14.56                   | 38.36                  | 14.61                    | 38.31                   |
| 13700.00  | 14.25                   | 38.70                  | 14.53                   | 38.42                  | 14.60                    | 38.36                   |
| 13750.00  | 14.27                   | 38.71                  | 14.55                   | 38.44                  | 14.63                    | 38.35                   |
| 13800.00  | 14.25                   | 38.77                  | 14.55                   | 38.47                  | 14.63                    | 38.39                   |
| 13850.00  | 14.23                   | 38.82                  | 14.53                   | 38.51                  | 14.62                    | 38.43                   |
| 13900.00  | 14.21                   | 38.87                  | 14.53                   | 38.55                  | 14.56                    | 38.52                   |
| 13950.00  | 14.24                   | 38.87                  | 14.58                   | 38.54                  | 14.59                    | 38.52                   |
| 14000.00  | 14.19                   | 38.95                  | 14.52                   | 38.63                  | 14.55                    | 38.59                   |
| 14050.00  | 14.20                   | 38.98                  | 14.54                   | 38.64                  | 14.57                    | 38.60                   |
| 14100.00  | 14.18                   | 39.02                  | 14.53                   | 38.67                  | 14.55                    | 38.65                   |
| 14150.00  | 14.14                   | 39.10                  | 14.48                   | 38.76                  | 14.49                    | 38.74                   |
| 14200.00  | 14.14                   | 39.12                  | 14.49                   | 38.78                  | 14.49                    | 38.77                   |
| 14250.00  | 14.17                   | 39.13                  | 14.51                   | 38.79                  | 14.53                    | 38.77                   |
| 14300.00  | 14.14                   | 39.19                  | 14.48                   | 38.84                  | 14.50                    | 38.82                   |
| 14350.00  | 14.18                   | 39.17                  | 14.52                   | 38.83                  | 14.57                    | 38.78                   |
| 14400.00  | 14.25                   | 39.14                  | 14.58                   | 38.81                  | 14.61                    | 38.78                   |
| 14450.00  | 14.26                   | 39.16                  | 14.60                   | 38.82                  | 14.61                    | 38.81                   |
| 14500.00  | 14.33                   | 39.12                  | 14.67                   | 38.77                  | 14.66                    | 38.79                   |
| 14550.00  | 14.34                   | 39.14                  | 14.68                   | 38.79                  | 14.69                    | 38.78                   |
| 14600.00  | 14.31                   | 39.20                  | 14.65                   | 38.86                  | 14.69                    | 38.81                   |
| 14650.00  | 14.33                   | 39.20                  | 14.67                   | 38.87                  | 14.70                    | 38.84                   |
| 14700.00  | 14.33                   | 39.24                  | 14.67                   | 38.89                  | 14.70                    | 38.87                   |
| 14750.00  | 14.32                   | 39.28                  | 14.67                   | 38.93                  | 14.69                    | 38.91                   |
| 14800.00  | 14.34                   | 39.28                  | 14.70                   | 38.93                  | 14.74                    | 38.89                   |
| 14850.00  | 14.36                   | 39.30                  | 14.71                   | 38.94                  | 14.78                    | 38.87                   |
| 14900.00  | 14.37                   | 39.31                  | 14.74                   | 38.95                  | 14.81                    | 38.87                   |
| 14950.00  | 14.42                   | 39.29                  | 14.80                   | 38.92                  | 14.82                    | 38.89                   |
| 15000.00  | 14.43                   | 39.31                  | 14.81                   | 38.93                  | 14.84                    | 38.90                   |
| 15050.00  | 14.48                   | 39.29                  | 14.83                   | 38.94                  | 14.88                    | 38.89                   |
| 15100.00  | 14.52                   | 39.28                  | 14.89                   | 38.91                  | 14.94                    | 38.86                   |
| 15150.00  | 14.57                   | 39.25                  | 14.93                   | 38.90                  | 14.98                    | 38.85                   |
| 15200.00  | 14.65                   | 39.20                  | 14.99                   | 38.87                  | 15.03                    | 38.83                   |
| 15250.00  | 14.72                   | 39.17                  | 15.05                   | 38.83                  | 15.08                    | 38.81                   |
| 15300.00  | 14.76                   | 39.15                  | 15.10                   | 38.82                  | 15.15                    | 38.76                   |
| 15350.00  | 14.83                   | 39.11                  | 15.16                   | 38.78                  | 15.22                    | 38.72                   |
| 15400.00  | 14.85                   | 39.12                  | 15.23                   | 38.74                  | 15.27                    | 38.70                   |

| Frequency | Gain(Isotr.)<br>1 m Ap. | Ant.-Factor<br>1 m Ap. | Gain(Isotr.)<br>3 m Ap. | Ant.-Factor<br>3 m Ap. | Gain(Isotr.)<br>farfield | Ant.-Factor<br>farfield |
|-----------|-------------------------|------------------------|-------------------------|------------------------|--------------------------|-------------------------|
| MHz       | dBi                     | dB/m                   | dBi                     | dB/m                   | dBi                      | dB/m                    |
| 15450.00  | 14.87                   | 39.13                  | 15.24                   | 38.76                  | 15.29                    | 38.70                   |
| 15500.00  | 14.87                   | 39.16                  | 15.26                   | 38.76                  | 15.32                    | 38.71                   |
| 15550.00  | 14.85                   | 39.20                  | 15.26                   | 38.80                  | 15.31                    | 38.74                   |
| 15600.00  | 14.83                   | 39.25                  | 15.24                   | 38.84                  | 15.30                    | 38.78                   |
| 15650.00  | 14.80                   | 39.31                  | 15.20                   | 38.91                  | 15.27                    | 38.84                   |
| 15700.00  | 14.75                   | 39.38                  | 15.16                   | 38.98                  | 15.23                    | 38.91                   |
| 15750.00  | 14.71                   | 39.45                  | 15.10                   | 39.07                  | 15.17                    | 38.99                   |
| 15800.00  | 14.65                   | 39.55                  | 15.05                   | 39.15                  | 15.11                    | 39.08                   |
| 15850.00  | 14.59                   | 39.63                  | 14.98                   | 39.24                  | 15.03                    | 39.19                   |
| 15900.00  | 14.52                   | 39.73                  | 14.91                   | 39.34                  | 14.97                    | 39.28                   |
| 15950.00  | 14.48                   | 39.80                  | 14.86                   | 39.41                  | 14.93                    | 39.35                   |
| 16000.00  | 14.45                   | 39.85                  | 14.85                   | 39.45                  | 14.89                    | 39.42                   |
| 16050.00  | 14.43                   | 39.90                  | 14.84                   | 39.49                  | 14.87                    | 39.46                   |
| 16100.00  | 14.42                   | 39.93                  | 14.83                   | 39.52                  | 14.85                    | 39.50                   |
| 16150.00  | 14.45                   | 39.93                  | 14.84                   | 39.54                  | 14.88                    | 39.50                   |
| 16200.00  | 14.47                   | 39.94                  | 14.87                   | 39.54                  | 14.92                    | 39.49                   |
| 16250.00  | 14.52                   | 39.92                  | 14.92                   | 39.52                  | 14.94                    | 39.50                   |
| 16300.00  | 14.56                   | 39.90                  | 14.97                   | 39.49                  | 14.97                    | 39.50                   |
| 16350.00  | 14.60                   | 39.89                  | 15.01                   | 39.48                  | 15.01                    | 39.48                   |
| 16400.00  | 14.66                   | 39.86                  | 15.05                   | 39.47                  | 15.07                    | 39.45                   |
| 16450.00  | 14.72                   | 39.82                  | 15.13                   | 39.42                  | 15.15                    | 39.40                   |
| 16500.00  | 14.79                   | 39.78                  | 15.19                   | 39.38                  | 15.21                    | 39.36                   |
| 16550.00  | 14.85                   | 39.75                  | 15.26                   | 39.34                  | 15.28                    | 39.31                   |
| 16600.00  | 14.91                   | 39.71                  | 15.32                   | 39.30                  | 15.37                    | 39.25                   |
| 16650.00  | 14.96                   | 39.69                  | 15.35                   | 39.30                  | 15.41                    | 39.24                   |
| 16700.00  | 15.02                   | 39.65                  | 15.42                   | 39.25                  | 15.49                    | 39.19                   |
| 16750.00  | 15.05                   | 39.65                  | 15.46                   | 39.24                  | 15.52                    | 39.18                   |
| 16800.00  | 15.07                   | 39.65                  | 15.47                   | 39.25                  | 15.56                    | 39.17                   |
| 16850.00  | 15.07                   | 39.68                  | 15.48                   | 39.27                  | 15.56                    | 39.19                   |
| 16900.00  | 15.08                   | 39.70                  | 15.48                   | 39.30                  | 15.54                    | 39.23                   |
| 16950.00  | 15.05                   | 39.75                  | 15.45                   | 39.35                  | 15.53                    | 39.28                   |
| 17000.00  | 15.04                   | 39.79                  | 15.45                   | 39.38                  | 15.54                    | 39.29                   |
| 17050.00  | 15.00                   | 39.86                  | 15.41                   | 39.44                  | 15.51                    | 39.35                   |
| 17100.00  | 14.97                   | 39.91                  | 15.40                   | 39.48                  | 15.49                    | 39.39                   |
| 17150.00  | 14.95                   | 39.96                  | 15.39                   | 39.51                  | 15.45                    | 39.46                   |
| 17200.00  | 14.93                   | 40.00                  | 15.39                   | 39.54                  | 15.43                    | 39.50                   |
| 17250.00  | 14.92                   | 40.04                  | 15.37                   | 39.59                  | 15.43                    | 39.52                   |
| 17300.00  | 14.92                   | 40.06                  | 15.36                   | 39.62                  | 15.42                    | 39.56                   |
| 17350.00  | 14.91                   | 40.09                  | 15.36                   | 39.65                  | 15.40                    | 39.60                   |
| 17400.00  | 14.92                   | 40.11                  | 15.36                   | 39.67                  | 15.39                    | 39.64                   |
| 17450.00  | 14.93                   | 40.13                  | 15.36                   | 39.70                  | 15.37                    | 39.68                   |
| 17500.00  | 14.93                   | 40.15                  | 15.36                   | 39.72                  | 15.41                    | 39.67                   |
| 17550.00  | 14.96                   | 40.14                  | 15.38                   | 39.72                  | 15.44                    | 39.67                   |
| 17600.00  | 14.98                   | 40.15                  | 15.42                   | 39.71                  | 15.46                    | 39.67                   |
| 17650.00  | 15.01                   | 40.14                  | 15.45                   | 39.70                  | 15.49                    | 39.66                   |
| 17700.00  | 15.05                   | 40.13                  | 15.49                   | 39.69                  | 15.52                    | 39.66                   |
| 17750.00  | 15.07                   | 40.14                  | 15.52                   | 39.69                  | 15.56                    | 39.64                   |
| 17800.00  | 15.09                   | 40.13                  | 15.53                   | 39.70                  | 15.58                    | 39.65                   |
| 17850.00  | 15.13                   | 40.13                  | 15.55                   | 39.70                  | 15.61                    | 39.65                   |
| 17900.00  | 15.14                   | 40.13                  | 15.56                   | 39.71                  | 15.62                    | 39.65                   |
| 17950.00  | 15.18                   | 40.12                  | 15.60                   | 39.70                  | 15.67                    | 39.63                   |
| 18000.00  | 15.21                   | 40.12                  | 15.63                   | 39.69                  | 15.71                    | 39.61                   |
| 18050.00  | 15.24                   | 40.11                  | 15.66                   | 39.69                  | 15.75                    | 39.60                   |
| 18100.00  | 15.27                   | 40.10                  | 15.67                   | 39.70                  | 15.77                    | 39.60                   |



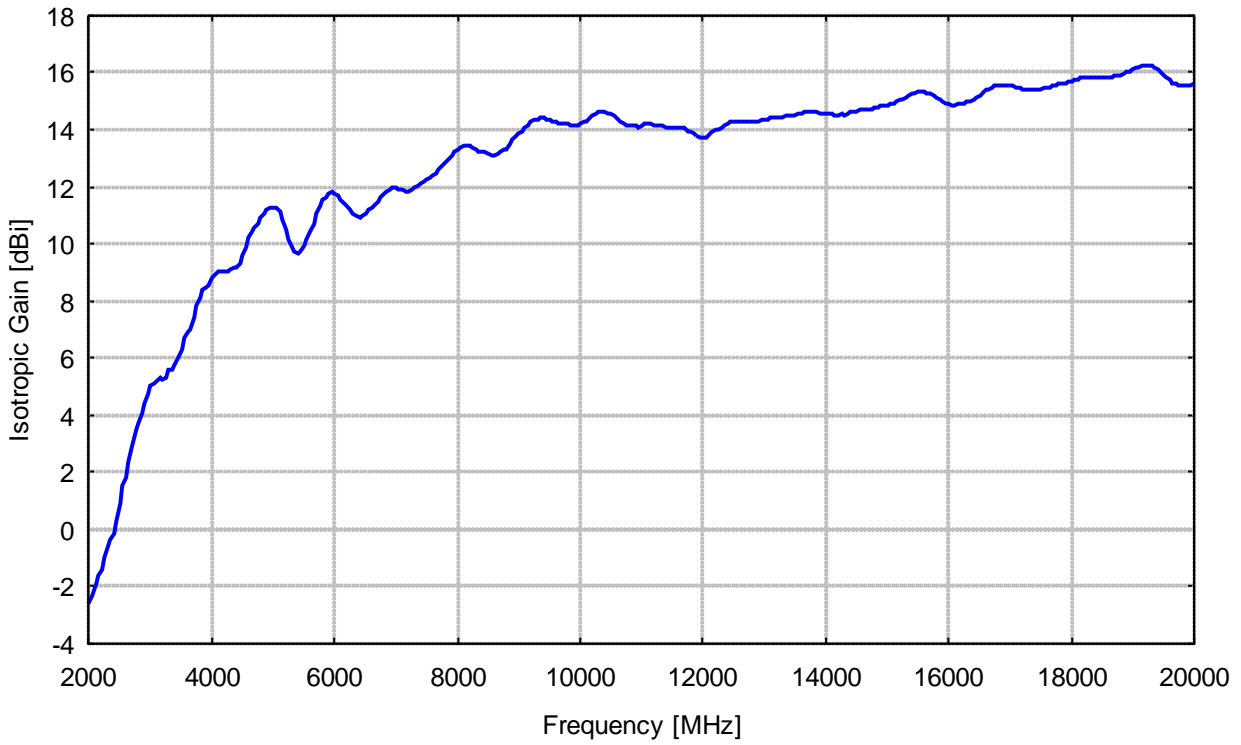
| Frequency | Gain(Isotr.)<br>1 m Ap. | Ant.-Factor<br>1 m Ap. | Gain(Isotr.)<br>3 m Ap. | Ant.-Factor<br>3 m Ap. | Gain(Isotr.)<br>farfield | Ant.-Factor<br>farfield |
|-----------|-------------------------|------------------------|-------------------------|------------------------|--------------------------|-------------------------|
| MHz       | dBi                     | dB/m                   | dBi                     | dB/m                   | dBi                      | dB/m                    |
| 18150.00  | 15.30                   | 40.10                  | 15.71                   | 39.68                  | 15.82                    | 39.57                   |
| 18200.00  | 15.29                   | 40.13                  | 15.71                   | 39.71                  | 15.82                    | 39.60                   |
| 18250.00  | 15.31                   | 40.14                  | 15.73                   | 39.72                  | 15.83                    | 39.61                   |
| 18300.00  | 15.31                   | 40.16                  | 15.73                   | 39.74                  | 15.83                    | 39.64                   |
| 18350.00  | 15.32                   | 40.17                  | 15.75                   | 39.74                  | 15.83                    | 39.67                   |
| 18400.00  | 15.30                   | 40.21                  | 15.74                   | 39.78                  | 15.82                    | 39.69                   |
| 18450.00  | 15.33                   | 40.21                  | 15.78                   | 39.76                  | 15.83                    | 39.71                   |
| 18500.00  | 15.33                   | 40.23                  | 15.79                   | 39.77                  | 15.82                    | 39.74                   |
| 18550.00  | 15.35                   | 40.24                  | 15.80                   | 39.78                  | 15.82                    | 39.76                   |
| 18600.00  | 15.35                   | 40.26                  | 15.82                   | 39.79                  | 15.85                    | 39.76                   |
| 18650.00  | 15.36                   | 40.28                  | 15.82                   | 39.81                  | 15.85                    | 39.78                   |
| 18700.00  | 15.36                   | 40.30                  | 15.83                   | 39.83                  | 15.86                    | 39.79                   |
| 18750.00  | 15.39                   | 40.29                  | 15.86                   | 39.82                  | 15.90                    | 39.78                   |
| 18800.00  | 15.40                   | 40.30                  | 15.87                   | 39.84                  | 15.91                    | 39.79                   |
| 18850.00  | 15.45                   | 40.28                  | 15.90                   | 39.83                  | 15.96                    | 39.77                   |
| 18900.00  | 15.49                   | 40.26                  | 15.95                   | 39.80                  | 16.01                    | 39.74                   |
| 18950.00  | 15.52                   | 40.25                  | 15.98                   | 39.79                  | 16.04                    | 39.73                   |
| 19000.00  | 15.60                   | 40.19                  | 16.05                   | 39.75                  | 16.11                    | 39.69                   |
| 19050.00  | 15.63                   | 40.19                  | 16.09                   | 39.73                  | 16.15                    | 39.66                   |
| 19100.00  | 15.69                   | 40.16                  | 16.14                   | 39.70                  | 16.19                    | 39.65                   |
| 19150.00  | 15.72                   | 40.15                  | 16.19                   | 39.67                  | 16.25                    | 39.61                   |
| 19200.00  | 15.70                   | 40.18                  | 16.20                   | 39.69                  | 16.26                    | 39.62                   |
| 19250.00  | 15.71                   | 40.20                  | 16.20                   | 39.71                  | 16.26                    | 39.64                   |
| 19300.00  | 15.66                   | 40.27                  | 16.17                   | 39.76                  | 16.24                    | 39.70                   |
| 19350.00  | 15.60                   | 40.36                  | 16.10                   | 39.85                  | 16.17                    | 39.79                   |
| 19400.00  | 15.49                   | 40.49                  | 16.03                   | 39.94                  | 16.09                    | 39.88                   |
| 19450.00  | 15.40                   | 40.60                  | 15.93                   | 40.07                  | 16.01                    | 39.99                   |
| 19500.00  | 15.26                   | 40.76                  | 15.82                   | 40.20                  | 15.89                    | 40.13                   |
| 19550.00  | 15.18                   | 40.86                  | 15.73                   | 40.32                  | 15.80                    | 40.24                   |
| 19600.00  | 15.08                   | 40.98                  | 15.65                   | 40.42                  | 15.72                    | 40.35                   |
| 19650.00  | 15.02                   | 41.06                  | 15.57                   | 40.51                  | 15.64                    | 40.45                   |
| 19700.00  | 14.96                   | 41.15                  | 15.53                   | 40.58                  | 15.61                    | 40.50                   |
| 19750.00  | 14.95                   | 41.18                  | 15.49                   | 40.64                  | 15.56                    | 40.57                   |
| 19800.00  | 14.93                   | 41.22                  | 15.47                   | 40.68                  | 15.53                    | 40.62                   |
| 19850.00  | 14.94                   | 41.23                  | 15.47                   | 40.71                  | 15.54                    | 40.63                   |
| 19900.00  | 14.95                   | 41.25                  | 15.47                   | 40.73                  | 15.55                    | 40.65                   |
| 19950.00  | 14.94                   | 41.27                  | 15.47                   | 40.75                  | 15.55                    | 40.67                   |
| 20000.00  | 14.98                   | 41.26                  | 15.49                   | 40.76                  | 15.58                    | 40.66                   |

Kalibrierbezugspunkt:  
Apertur

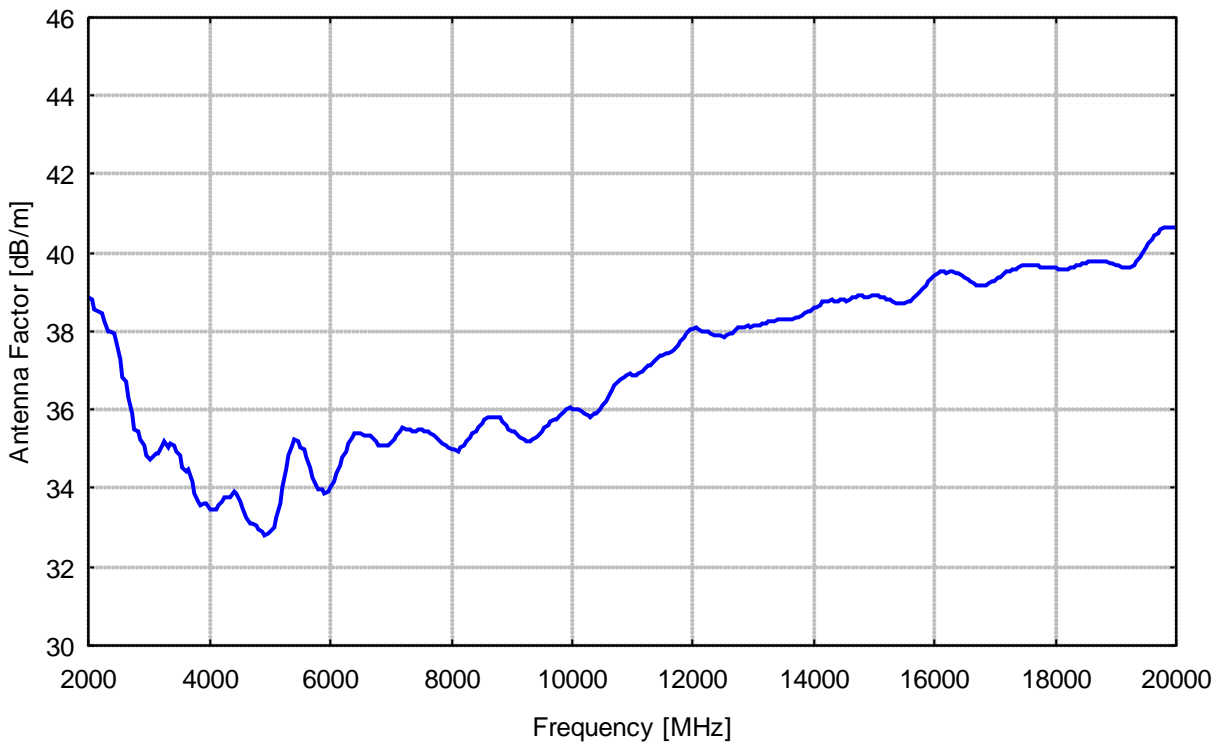
*Calibration Reference Point:*  
*Aperture*



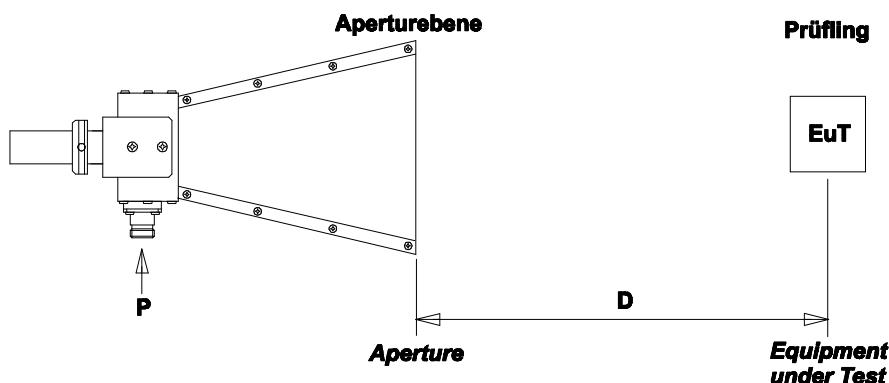
Isotropgewinn



Antennen-Wandlungsmaß



**Erzeugung definierter Feldstärken BBHA 9120 C**  
**Generating defined Field Strength BBHA 9120 C**



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

Erzeugung von Feldstärken unter Freiraumbedingungen vor der 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 Spannungssteuerung erforderlich, was in einem ca. 3.24-fachen Leistungsbedarf resultiert. Zur Steigerung der Feldstärke um den Faktor 10 ist die 100-fache Verstärkerleistung erforderlich.

*Field strength generated under free-space conditions at a separation from the antenna aperture (see diagrams for several combinations of power and distance). If environmental reflections are present, this may lead to frequency and height dependent field strengths. 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. A fieldstrength increase of factor 10 requires 100 times amplifier-power.*

**Bei der Erzeugung von hohen Feldstärken müssen die relevanten Sicherheitsvorschriften und Normen beachtet werden! Missachtung dieser Vorschriften kann zu Schädigungen der Gesundheit führen!**

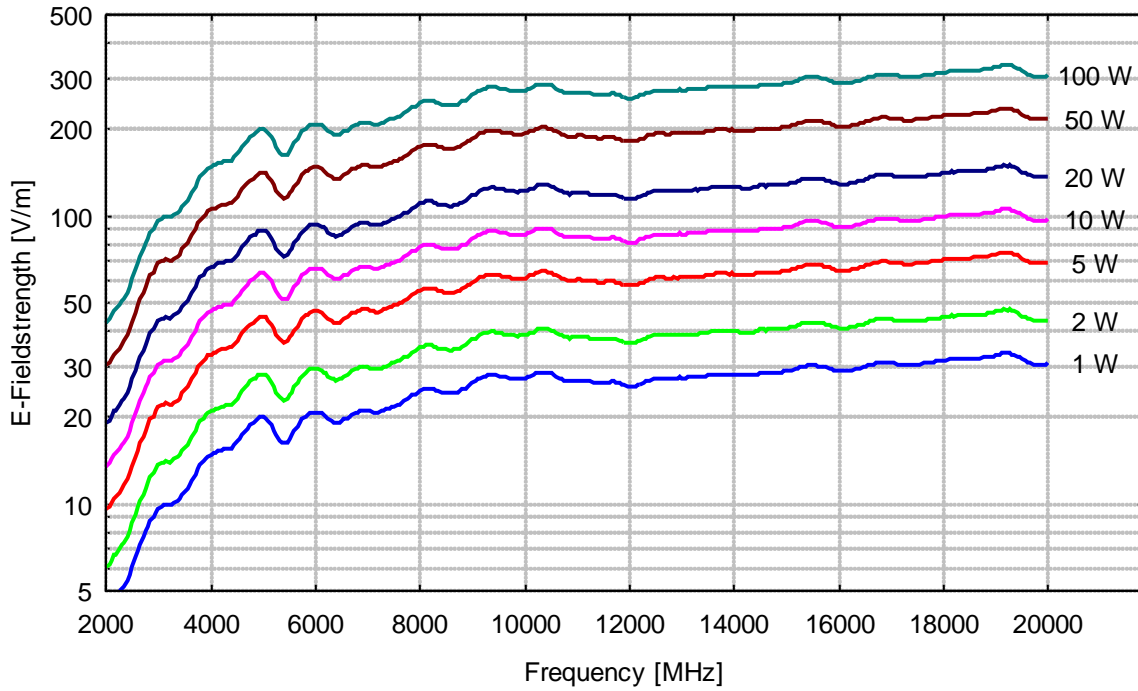
***The safety precautions and relevant standards must be considered while performing tests with high field-strength! Ignoring these standards and precautions may result in severe danger for health!***

|                                   |      |      |      |      |      |      |                                   |
|-----------------------------------|------|------|------|------|------|------|-----------------------------------|
| 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] |

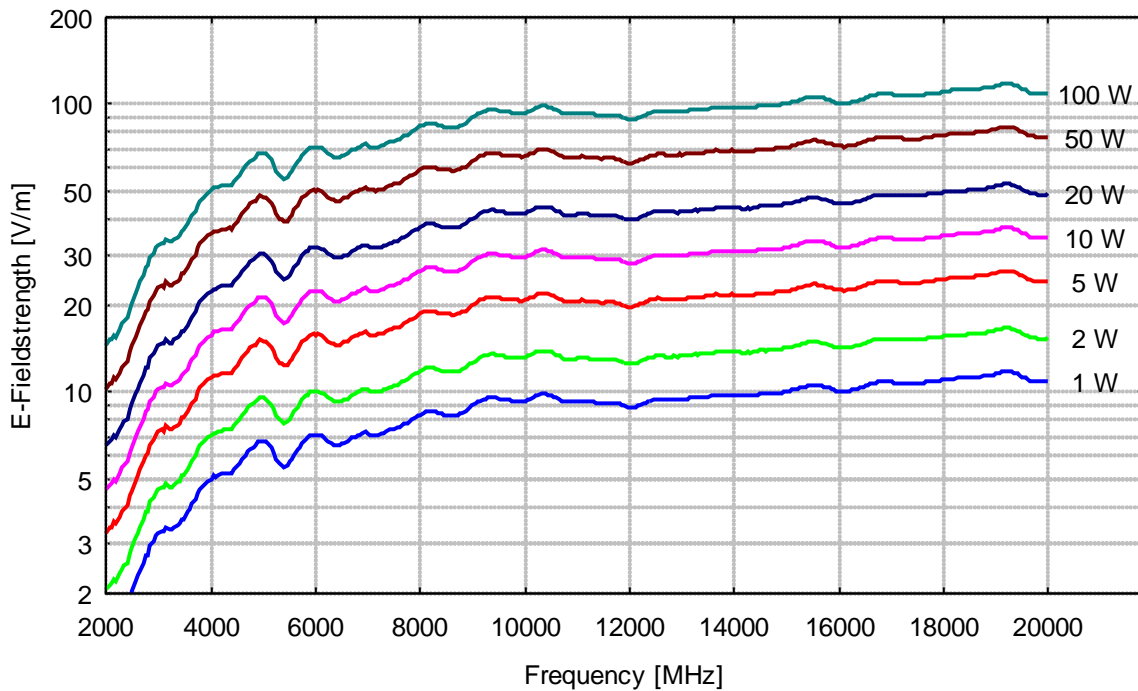


**Erzeugte Elektrische Feldstärke vor der Antennenspitze  
unmoduliert, Eingangsleistung an SMA-Buchse, Reflexionsfreie Umgebung  
Generated Electrical Fieldstrength in front of Antenna Tip  
no modulation, Input Power at SMA-Connector, Anechoic Environmental Conditions**

Distance Tip-EuT: 1 m



Distance Tip-EuT: 3 m





## Stehwellenverhältnis

VSWR

