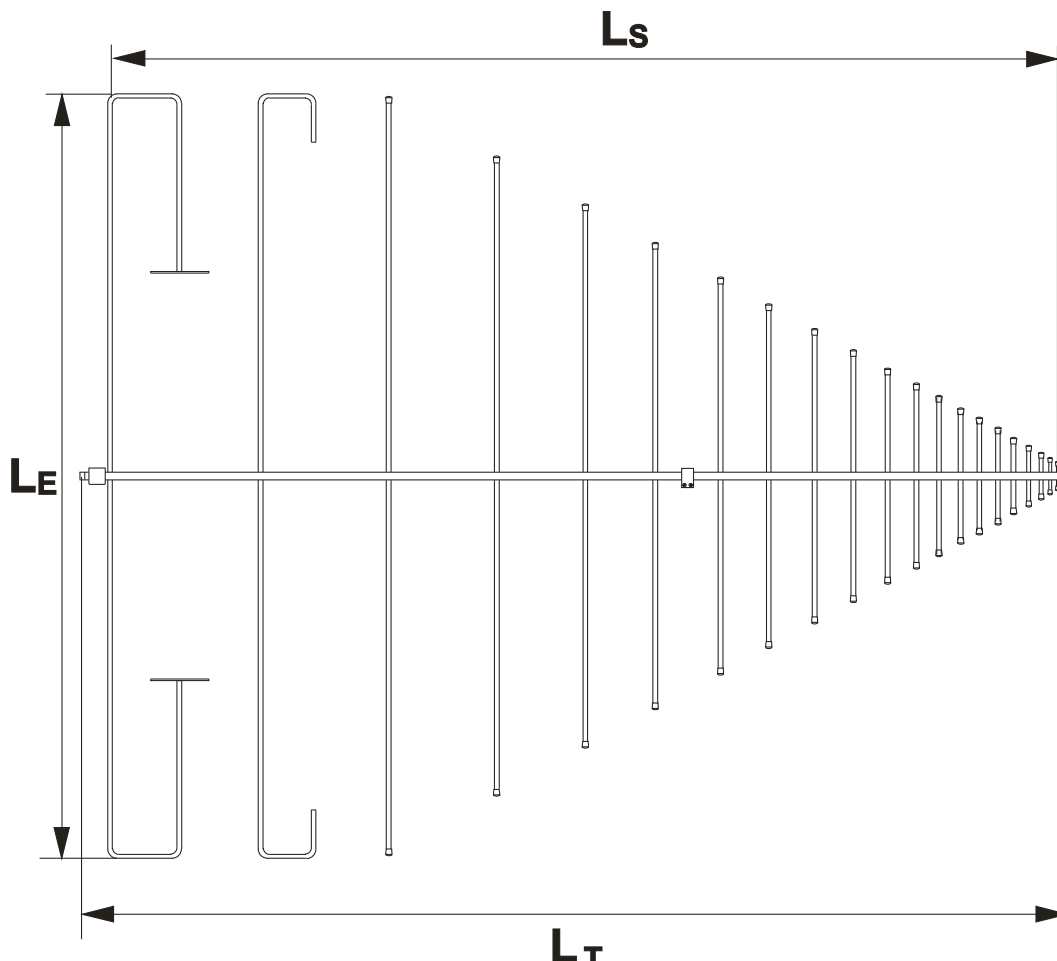


## Logarithmisch Periodische Breitbandantenne Logarithmic Periodic Broadband Antenna

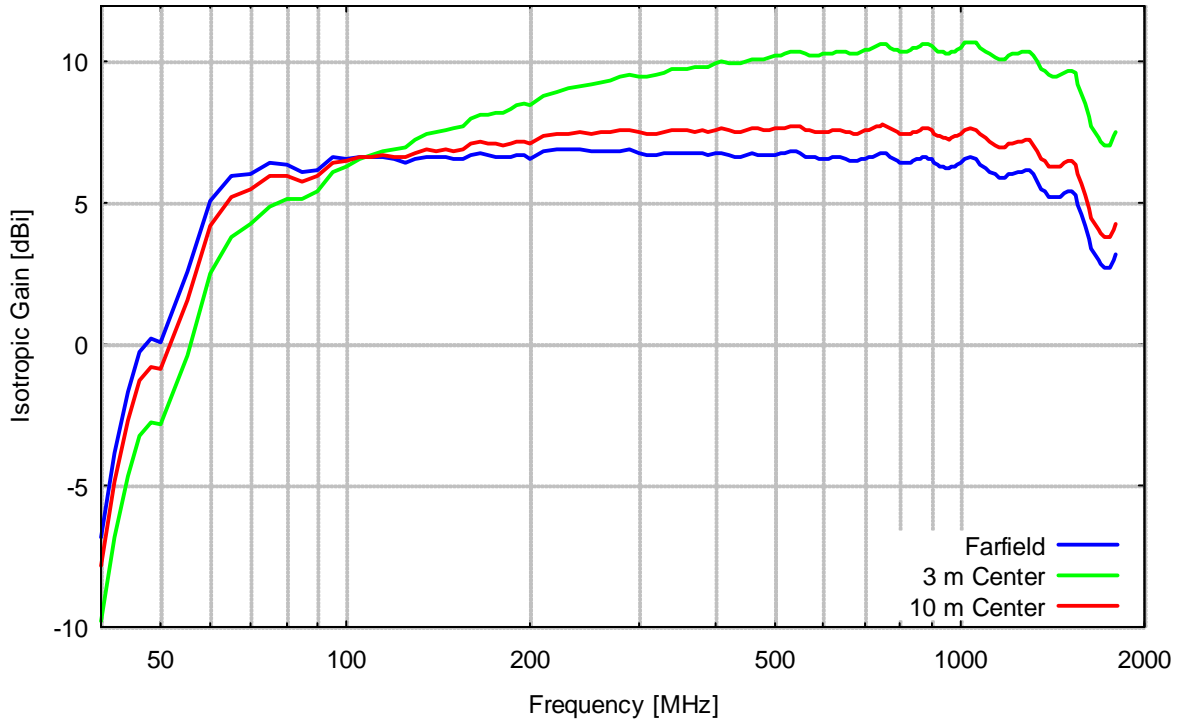


| Technische Daten:        |                 | Specifications:        |
|--------------------------|-----------------|------------------------|
| Frequenzbereich:         | 45 ... 1500 MHz | Frequency Range:       |
| Elementzahl:             | 24              | Number of Elements:    |
| Anschluss:               | N               | Connector:             |
| Impedanz:                | 50 Ω            | Impedance:             |
| VSWR:                    | < 2 (typ.: 1.5) | VSWR:                  |
| Max. Leistung:           | 1 kW            | Max. Input Power:      |
| Montage (Stativgewinde): | 3/8", M 12      | Mount (Camera Thread): |
| Material:                | Aluminium       | Material:              |
| LE:                      | 1.93 m          | LE:                    |
| LT:                      | 2.55 m          | LT:                    |
| LS:                      | 2.43 m          | LS:                    |
| Gewicht:                 | 5 kg            | Weight:                |

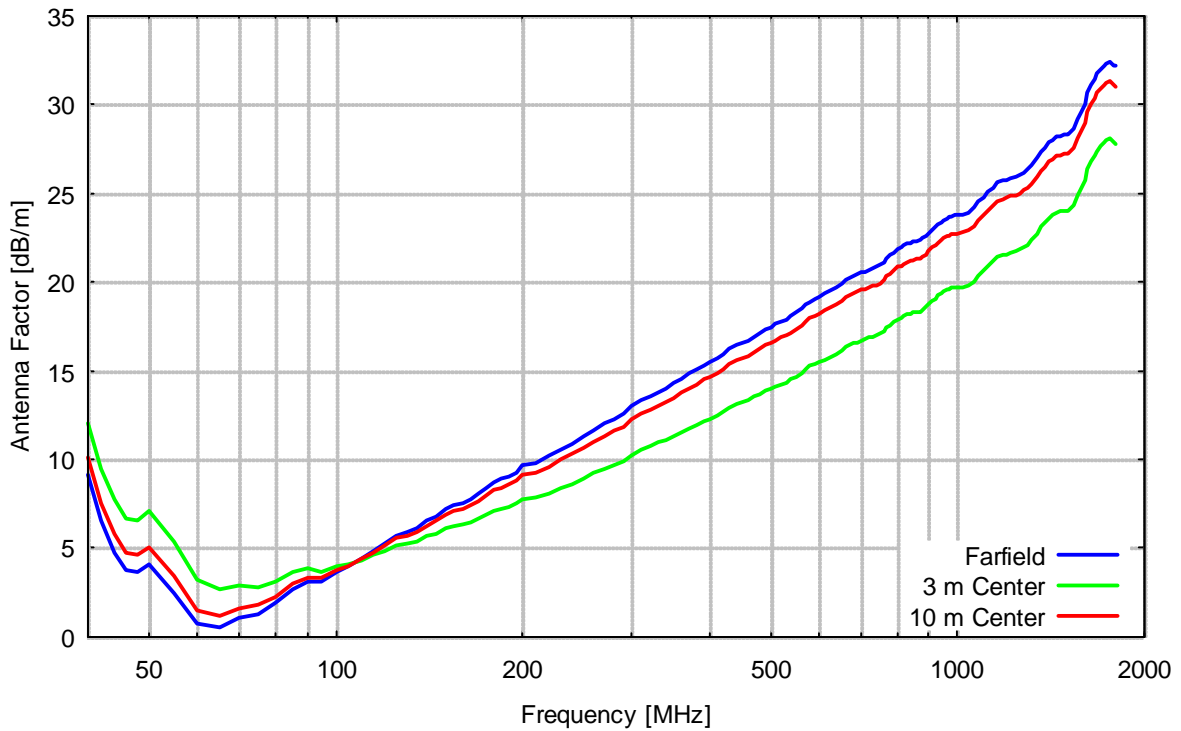


Daten für kurze Messentfernungen gemessen von der Antennenmitte  
Data for short measuring distances measured from antenna center

VULP 9118 G special



VULP 9118 G special





**Daten für kurze Messentfernungen gemessen von der Antennenmitte**  
*Data for short measuring distances measured from antenna center*

| Frequency | Gain Farfield | Ant.-Fact Farfield | gi (10 m) Center | k (10m) Center | gi (3m) Center | k (3m) Center |
|-----------|---------------|--------------------|------------------|----------------|----------------|---------------|
| MHz       | dBi           | dB/m               | dBi              | dB/m           | dBi            | dB/m          |
| 40.0      | -6.84         | 9.10               | -7.84            | 10.10          | -9.81          | 12.08         |
| 42.0      | -3.84         | 6.52               | -4.84            | 7.53           | -6.81          | 9.50          |
| 44.0      | -1.68         | 4.76               | -2.68            | 5.77           | -4.65          | 7.74          |
| 46.0      | -0.27         | 3.74               | -1.27            | 4.75           | -3.24          | 6.72          |
| 48.0      | 0.21          | 3.63               | -0.79            | 4.64           | -2.76          | 6.61          |
| 50.0      | 0.11          | 4.08               | -0.89            | 5.09           | -2.86          | 7.06          |
| 55.0      | 2.60          | 2.42               | 1.60             | 3.43           | -0.37          | 5.40          |
| 60.0      | 5.08          | 0.70               | 4.24             | 1.55           | 2.54           | 3.25          |
| 65.0      | 5.96          | 0.51               | 5.26             | 1.22           | 3.82           | 2.66          |
| 70.0      | 6.06          | 1.06               | 5.48             | 1.64           | 4.26           | 2.86          |
| 75.0      | 6.41          | 1.31               | 5.94             | 1.78           | 4.92           | 2.80          |
| 80.0      | 6.36          | 1.92               | 5.98             | 2.30           | 5.15           | 3.14          |
| 85.0      | 6.08          | 2.72               | 5.79             | 3.02           | 5.13           | 3.67          |
| 90.0      | 6.17          | 3.13               | 5.95             | 3.36           | 5.45           | 3.86          |
| 95.0      | 6.62          | 3.15               | 6.47             | 3.31           | 6.11           | 3.66          |
| 100.0     | 6.58          | 3.64               | 6.49             | 3.73           | 6.28           | 3.94          |
| 105.0     | 6.68          | 3.96               | 6.65             | 4.00           | 6.56           | 4.08          |
| 110.0     | 6.64          | 4.40               | 6.66             | 4.39           | 6.70           | 4.35          |
| 115.0     | 6.63          | 4.80               | 6.69             | 4.74           | 6.84           | 4.60          |
| 120.0     | 6.57          | 5.23               | 6.67             | 5.13           | 6.92           | 4.88          |
| 125.0     | 6.47          | 5.68               | 6.62             | 5.54           | 6.98           | 5.18          |
| 130.0     | 6.61          | 5.88               | 6.79             | 5.70           | 7.24           | 5.26          |
| 135.0     | 6.67          | 6.15               | 6.89             | 5.94           | 7.43           | 5.40          |
| 140.0     | 6.63          | 6.51               | 6.88             | 6.26           | 7.50           | 5.65          |
| 145.0     | 6.62          | 6.82               | 6.90             | 6.54           | 7.60           | 5.85          |
| 150.0     | 6.55          | 7.19               | 6.86             | 6.88           | 7.63           | 6.11          |
| 155.0     | 6.58          | 7.44               | 6.92             | 7.11           | 7.76           | 6.27          |
| 160.0     | 6.74          | 7.56               | 7.10             | 7.20           | 8.00           | 6.30          |
| 165.0     | 6.79          | 7.77               | 7.18             | 7.39           | 8.15           | 6.42          |
| 170.0     | 6.74          | 8.08               | 7.14             | 7.68           | 8.17           | 6.66          |
| 175.0     | 6.67          | 8.41               | 7.10             | 7.98           | 8.18           | 6.90          |
| 180.0     | 6.63          | 8.69               | 7.08             | 8.25           | 8.21           | 7.11          |
| 185.0     | 6.66          | 8.90               | 7.12             | 8.44           | 8.31           | 7.25          |
| 190.0     | 6.74          | 9.05               | 7.22             | 8.57           | 8.46           | 7.33          |
| 195.0     | 6.72          | 9.30               | 7.22             | 8.80           | 8.51           | 7.51          |
| 200.0     | 6.59          | 9.65               | 7.11             | 9.13           | 8.46           | 7.78          |
| 210.0     | 6.84          | 9.82               | 7.39             | 9.28           | 8.81           | 7.85          |
| 220.0     | 6.89          | 10.17              | 7.46             | 9.60           | 8.97           | 8.09          |
| 230.0     | 6.89          | 10.56              | 7.49             | 9.97           | 9.07           | 8.39          |
| 240.0     | 6.91          | 10.91              | 7.53             | 10.29          | 9.18           | 8.64          |
| 250.0     | 6.84          | 11.34              | 7.48             | 10.69          | 9.20           | 8.97          |
| 260.0     | 6.84          | 11.67              | 7.50             | 11.02          | 9.28           | 9.24          |
| 270.0     | 6.82          | 12.03              | 7.50             | 11.35          | 9.34           | 9.51          |
| 280.0     | 6.87          | 12.30              | 7.57             | 11.59          | 9.47           | 9.70          |
| 290.0     | 6.91          | 12.56              | 7.62             | 11.84          | 9.56           | 9.90          |
| 300.0     | 6.78          | 12.98              | 7.51             | 12.25          | 9.49           | 10.27         |
| 310.0     | 6.74          | 13.31              | 7.48             | 12.56          | 9.51           | 10.53         |
| 320.0     | 6.72          | 13.60              | 7.48             | 12.85          | 9.55           | 10.77         |
| 330.0     | 6.77          | 13.82              | 7.54             | 13.05          | 9.64           | 10.95         |
| 340.0     | 6.81          | 14.04              | 7.59             | 13.26          | 9.74           | 11.11         |
| 350.0     | 6.81          | 14.29              | 7.60             | 13.50          | 9.78           | 11.32         |



| Frequency | Gain Farfield | Ant.-Fact Farfield | gi (10 m) Center | k (10m) Center | gi (3m) Center | k (3m) Center |
|-----------|---------------|--------------------|------------------|----------------|----------------|---------------|
| MHz       | dBi           | dB/m               | dBi              | dB/m           | dBi            | dB/m          |
| 360.0     | 6.77          | 14.57              | 7.57             | 13.78          | 9.79           | 11.56         |
| 370.0     | 6.75          | 14.83              | 7.56             | 14.02          | 9.81           | 11.78         |
| 380.0     | 6.75          | 15.07              | 7.57             | 14.25          | 9.85           | 11.97         |
| 390.0     | 6.72          | 15.32              | 7.55             | 14.49          | 9.86           | 12.18         |
| 400.0     | 6.78          | 15.48              | 7.62             | 14.64          | 9.96           | 12.30         |
| 410.0     | 6.78          | 15.70              | 7.63             | 14.85          | 10.00          | 12.47         |
| 420.0     | 6.73          | 15.96              | 7.58             | 15.10          | 9.97           | 12.71         |
| 430.0     | 6.67          | 16.22              | 7.53             | 15.36          | 9.96           | 12.93         |
| 440.0     | 6.64          | 16.45              | 7.51             | 15.58          | 9.95           | 13.14         |
| 450.0     | 6.71          | 16.58              | 7.59             | 15.70          | 10.06          | 13.22         |
| 460.0     | 6.76          | 16.71              | 7.64             | 15.83          | 10.13          | 13.34         |
| 470.0     | 6.74          | 16.93              | 7.63             | 16.04          | 10.13          | 13.53         |
| 480.0     | 6.71          | 17.13              | 7.60             | 16.24          | 10.12          | 13.72         |
| 490.0     | 6.69          | 17.33              | 7.59             | 16.43          | 10.15          | 13.88         |
| 500.0     | 6.74          | 17.46              | 7.65             | 16.55          | 10.22          | 13.98         |
| 510.0     | 6.75          | 17.63              | 7.66             | 16.71          | 10.25          | 14.12         |
| 520.0     | 6.77          | 17.77              | 7.69             | 16.85          | 10.29          | 14.25         |
| 530.0     | 6.82          | 17.88              | 7.74             | 16.97          | 10.36          | 14.34         |
| 540.0     | 6.82          | 18.04              | 7.74             | 17.12          | 10.39          | 14.48         |
| 550.0     | 6.78          | 18.25              | 7.71             | 17.32          | 10.37          | 14.66         |
| 560.0     | 6.68          | 18.51              | 7.61             | 17.57          | 10.29          | 14.89         |
| 570.0     | 6.64          | 18.70              | 7.57             | 17.76          | 10.25          | 15.09         |
| 580.0     | 6.62          | 18.87              | 7.56             | 17.93          | 10.25          | 15.24         |
| 590.0     | 6.60          | 19.04              | 7.54             | 18.09          | 10.25          | 15.38         |
| 600.0     | 6.59          | 19.19              | 7.54             | 18.24          | 10.27          | 15.52         |
| 610.0     | 6.58          | 19.35              | 7.53             | 18.39          | 10.28          | 15.65         |
| 620.0     | 6.62          | 19.45              | 7.57             | 18.49          | 10.32          | 15.75         |
| 630.0     | 6.65          | 19.55              | 7.61             | 18.60          | 10.37          | 15.84         |
| 640.0     | 6.66          | 19.68              | 7.62             | 18.72          | 10.40          | 15.94         |
| 650.0     | 6.60          | 19.88              | 7.56             | 18.91          | 10.34          | 16.14         |
| 660.0     | 6.53          | 20.08              | 7.50             | 19.11          | 10.29          | 16.32         |
| 670.0     | 6.52          | 20.23              | 7.49             | 19.25          | 10.31          | 16.44         |
| 680.0     | 6.52          | 20.35              | 7.49             | 19.38          | 10.31          | 16.56         |
| 690.0     | 6.56          | 20.44              | 7.54             | 19.46          | 10.37          | 16.63         |
| 700.0     | 6.60          | 20.53              | 7.58             | 19.54          | 10.41          | 16.71         |
| 710.0     | 6.63          | 20.61              | 7.61             | 19.63          | 10.46          | 16.78         |
| 720.0     | 6.68          | 20.69              | 7.66             | 19.70          | 10.51          | 16.86         |
| 730.0     | 6.72          | 20.77              | 7.71             | 19.78          | 10.57          | 16.91         |
| 740.0     | 6.77          | 20.83              | 7.76             | 19.85          | 10.62          | 16.98         |
| 750.0     | 6.78          | 20.94              | 7.77             | 19.95          | 10.66          | 17.06         |
| 760.0     | 6.76          | 21.08              | 7.75             | 20.08          | 10.64          | 17.20         |
| 770.0     | 6.63          | 21.32              | 7.63             | 20.32          | 10.53          | 17.42         |
| 780.0     | 6.57          | 21.50              | 7.57             | 20.49          | 10.47          | 17.59         |
| 790.0     | 6.51          | 21.66              | 7.51             | 20.66          | 10.43          | 17.74         |
| 800.0     | 6.45          | 21.83              | 7.45             | 20.83          | 10.37          | 17.91         |
| 810.0     | 6.45          | 21.94              | 7.46             | 20.93          | 10.39          | 18.00         |
| 820.0     | 6.46          | 22.04              | 7.47             | 21.03          | 10.40          | 18.09         |
| 830.0     | 6.47          | 22.14              | 7.48             | 21.12          | 10.41          | 18.19         |
| 840.0     | 6.51          | 22.19              | 7.52             | 21.18          | 10.48          | 18.23         |
| 850.0     | 6.55          | 22.26              | 7.56             | 21.25          | 10.52          | 18.29         |
| 860.0     | 6.60          | 22.31              | 7.62             | 21.29          | 10.59          | 18.32         |
| 870.0     | 6.67          | 22.34              | 7.69             | 21.32          | 10.66          | 18.35         |
| 880.0     | 6.66          | 22.45              | 7.68             | 21.43          | 10.65          | 18.46         |
| 890.0     | 6.61          | 22.60              | 7.63             | 21.58          | 10.62          | 18.58         |



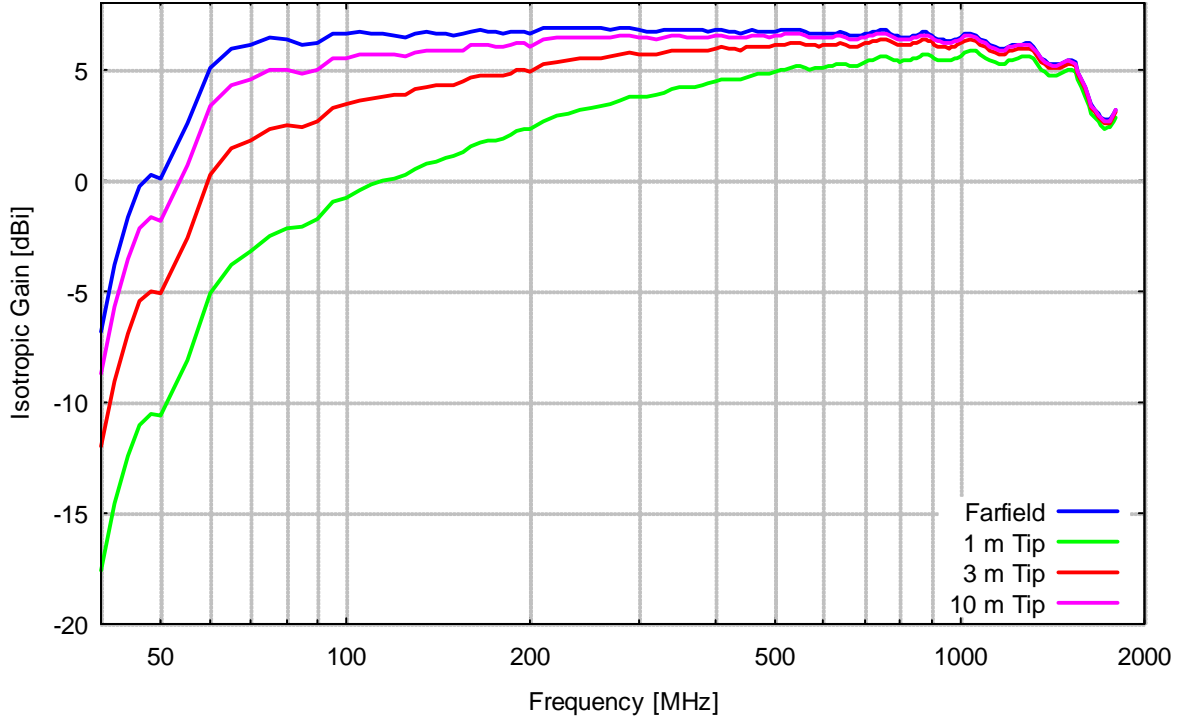
| Frequency | Gain Farfield | Ant.-Fact Farfield | gi (10 m) Center | k (10m) Center | gi (3m) Center | k (3m) Center |
|-----------|---------------|--------------------|------------------|----------------|----------------|---------------|
| MHz       | dBi           | dB/m               | dBi              | dB/m           | dBi            | dB/m          |
| 900.0     | 6.56          | 22.74              | 7.58             | 21.72          | 10.57          | 18.73         |
| 910.0     | 6.47          | 22.93              | 7.49             | 21.91          | 10.48          | 18.92         |
| 920.0     | 6.36          | 23.14              | 7.39             | 22.11          | 10.40          | 19.10         |
| 930.0     | 6.33          | 23.26              | 7.36             | 22.23          | 10.37          | 19.22         |
| 940.0     | 6.32          | 23.36              | 7.35             | 22.34          | 10.36          | 19.33         |
| 950.0     | 6.27          | 23.51              | 7.30             | 22.47          | 10.33          | 19.45         |
| 960.0     | 6.26          | 23.60              | 7.29             | 22.57          | 10.32          | 19.55         |
| 970.0     | 6.31          | 23.64              | 7.34             | 22.61          | 10.37          | 19.59         |
| 980.0     | 6.33          | 23.71              | 7.36             | 22.68          | 10.39          | 19.66         |
| 990.0     | 6.36          | 23.77              | 7.40             | 22.74          | 10.44          | 19.69         |
| 1000.0    | 6.43          | 23.79              | 7.47             | 22.75          | 10.51          | 19.71         |
| 1020.0    | 6.58          | 23.81              | 7.62             | 22.77          | 10.69          | 19.71         |
| 1040.0    | 6.62          | 23.94              | 7.66             | 22.90          | 10.73          | 19.84         |
| 1060.0    | 6.55          | 24.17              | 7.60             | 23.13          | 10.68          | 20.05         |
| 1080.0    | 6.38          | 24.51              | 7.43             | 23.46          | 10.51          | 20.38         |
| 1100.0    | 6.25          | 24.79              | 7.30             | 23.75          | 10.38          | 20.67         |
| 1120.0    | 6.12          | 25.09              | 7.17             | 24.03          | 10.27          | 20.93         |
| 1140.0    | 6.03          | 25.33              | 7.08             | 24.28          | 10.18          | 21.18         |
| 1160.0    | 5.93          | 25.58              | 6.99             | 24.52          | 10.11          | 21.40         |
| 1180.0    | 5.91          | 25.75              | 6.97             | 24.69          | 10.09          | 21.57         |
| 1200.0    | 6.03          | 25.77              | 7.09             | 24.71          | 10.23          | 21.57         |
| 1220.0    | 6.07          | 25.88              | 7.13             | 24.82          | 10.27          | 21.68         |
| 1240.0    | 6.13          | 25.96              | 7.19             | 24.90          | 10.33          | 21.76         |
| 1260.0    | 6.14          | 26.09              | 7.21             | 25.02          | 10.36          | 21.86         |
| 1280.0    | 6.16          | 26.20              | 7.23             | 25.14          | 10.38          | 21.98         |
| 1300.0    | 6.16          | 26.34              | 7.23             | 25.27          | 10.38          | 22.12         |
| 1320.0    | 6.01          | 26.63              | 7.08             | 25.55          | 10.26          | 22.38         |
| 1340.0    | 5.78          | 26.98              | 6.85             | 25.91          | 10.03          | 22.74         |
| 1360.0    | 5.53          | 27.36              | 6.60             | 26.29          | 9.78           | 23.11         |
| 1380.0    | 5.41          | 27.60              | 6.49             | 26.53          | 9.68           | 23.34         |
| 1400.0    | 5.26          | 27.88              | 6.34             | 26.81          | 9.53           | 23.61         |
| 1420.0    | 5.23          | 28.04              | 6.31             | 26.96          | 9.50           | 23.77         |
| 1440.0    | 5.21          | 28.17              | 6.29             | 27.10          | 9.48           | 23.91         |
| 1460.0    | 5.25          | 28.26              | 6.33             | 27.18          | 9.54           | 23.96         |
| 1480.0    | 5.35          | 28.28              | 6.43             | 27.19          | 9.64           | 23.98         |
| 1500.0    | 5.43          | 28.31              | 6.51             | 27.23          | 9.72           | 24.02         |
| 1520.0    | 5.41          | 28.45              | 6.49             | 27.37          | 9.70           | 24.15         |
| 1540.0    | 5.29          | 28.68              | 6.38             | 27.59          | 9.61           | 24.36         |
| 1560.0    | 4.93          | 29.15              | 6.02             | 28.07          | 9.25           | 24.84         |
| 1580.0    | 4.59          | 29.60              | 5.68             | 28.52          | 8.91           | 25.29         |
| 1600.0    | 4.23          | 30.07              | 5.32             | 28.99          | 8.55           | 25.76         |
| 1620.0    | 3.72          | 30.69              | 4.81             | 29.60          | 8.04           | 26.37         |
| 1640.0    | 3.42          | 31.09              | 4.51             | 30.01          | 7.76           | 26.76         |
| 1660.0    | 3.19          | 31.43              | 4.28             | 30.34          | 7.53           | 27.09         |
| 1680.0    | 2.99          | 31.74              | 4.08             | 30.65          | 7.33           | 27.40         |
| 1700.0    | 2.84          | 31.99              | 3.93             | 30.90          | 7.18           | 27.65         |
| 1720.0    | 2.70          | 32.24              | 3.79             | 31.14          | 7.04           | 27.89         |
| 1740.0    | 2.70          | 32.33              | 3.80             | 31.24          | 7.06           | 27.97         |
| 1760.0    | 2.72          | 32.41              | 3.82             | 31.31          | 7.08           | 28.05         |
| 1780.0    | 3.00          | 32.23              | 4.10             | 31.13          | 7.36           | 27.86         |
| 1800.0    | 3.18          | 32.14              | 4.28             | 31.05          | 7.54           | 27.78         |



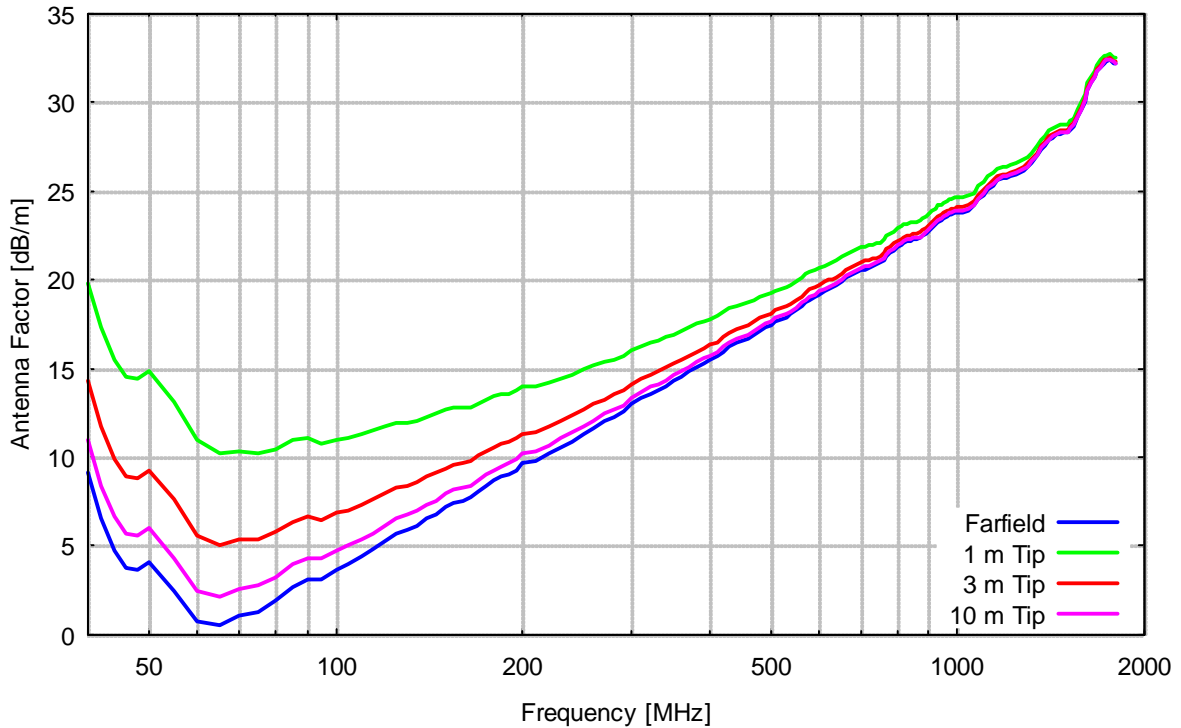


Daten für kurze Messentfernungen gemessen von der Antennenspitze  
Data for short measuring distances measured from antenna tip

VULP 9118 G special



VULP 9118 G special



**Daten für kurze Messentfernungen gemessen von der Antennenspitze**  
*Data for short measuring distances measured from antenna tip*

| Frequency | Gain (Iso.)<br>Farfield | Ant.-Fact<br>Farfield | gi (10 m)<br>Tip | k (10m)<br>Tip | gi (3m)<br>Tip | k (3m)<br>Tip | gi (1m)<br>Tip | k (1m)<br>Tip |
|-----------|-------------------------|-----------------------|------------------|----------------|----------------|---------------|----------------|---------------|
| MHz       | dBi                     | dB/m                  | dBi              | dB/m           | dBi            | dB/m          | dBi            | dB/m          |
| 40.0      | -6.84                   | 9.10                  | -8.74            | 11.00          | -12.03         | 14.29         | -17.60         | 19.86         |
| 42.0      | -3.84                   | 6.52                  | -5.74            | 8.43           | -9.03          | 11.71         | -14.60         | 17.28         |
| 44.0      | -1.68                   | 4.76                  | -3.58            | 6.67           | -6.87          | 9.95          | -12.44         | 15.53         |
| 46.0      | -0.27                   | 3.74                  | -2.17            | 5.65           | -5.46          | 8.93          | -11.03         | 14.50         |
| 48.0      | 0.21                    | 3.63                  | -1.69            | 5.54           | -4.98          | 8.82          | -10.55         | 14.39         |
| 50.0      | 0.11                    | 4.08                  | -1.79            | 5.99           | -5.08          | 9.27          | -10.65         | 14.85         |
| 55.0      | 2.60                    | 2.42                  | 0.70             | 4.33           | -2.59          | 7.61          | -8.16          | 13.18         |
| 60.0      | 5.08                    | 0.70                  | 3.32             | 2.46           | 0.23           | 5.56          | -5.14          | 10.93         |
| 65.0      | 5.96                    | 0.51                  | 4.33             | 2.15           | 1.41           | 5.07          | -3.77          | 10.25         |
| 70.0      | 6.06                    | 1.06                  | 4.54             | 2.58           | 1.77           | 5.35          | -3.23          | 10.35         |
| 75.0      | 6.41                    | 1.31                  | 4.98             | 2.74           | 2.35           | 5.37          | -2.49          | 10.21         |
| 80.0      | 6.36                    | 1.92                  | 5.01             | 3.27           | 2.51           | 5.78          | -2.19          | 10.47         |
| 85.0      | 6.08                    | 2.72                  | 4.81             | 4.00           | 2.42           | 6.38          | -2.12          | 10.93         |
| 90.0      | 6.17                    | 3.13                  | 4.97             | 4.34           | 2.68           | 6.63          | -1.74          | 11.04         |
| 95.0      | 6.62                    | 3.15                  | 5.48             | 4.30           | 3.28           | 6.49          | -1.00          | 10.78         |
| 100.0     | 6.58                    | 3.64                  | 5.50             | 4.72           | 3.39           | 6.83          | -0.77          | 10.99         |
| 105.0     | 6.68                    | 3.96                  | 5.65             | 5.00           | 3.62           | 7.02          | -0.42          | 11.07         |
| 110.0     | 6.64                    | 4.40                  | 5.65             | 5.40           | 3.71           | 7.34          | -0.23          | 11.28         |
| 115.0     | 6.63                    | 4.80                  | 5.68             | 5.75           | 3.80           | 7.63          | -0.04          | 11.47         |
| 120.0     | 6.57                    | 5.23                  | 5.66             | 6.14           | 3.85           | 7.96          | 0.10           | 11.70         |
| 125.0     | 6.47                    | 5.68                  | 5.60             | 6.56           | 3.85           | 8.31          | 0.21           | 11.94         |
| 130.0     | 6.61                    | 5.88                  | 5.77             | 6.73           | 4.08           | 8.42          | 0.52           | 11.97         |
| 135.0     | 6.67                    | 6.15                  | 5.86             | 6.96           | 4.23           | 8.60          | 0.76           | 12.07         |
| 140.0     | 6.63                    | 6.51                  | 5.85             | 7.29           | 4.26           | 8.88          | 0.87           | 12.27         |
| 145.0     | 6.62                    | 6.82                  | 5.87             | 7.58           | 4.33           | 9.12          | 1.02           | 12.43         |
| 150.0     | 6.55                    | 7.19                  | 5.82             | 7.92           | 4.33           | 9.41          | 1.09           | 12.65         |
| 155.0     | 6.58                    | 7.44                  | 5.88             | 8.15           | 4.42           | 9.60          | 1.26           | 12.77         |
| 160.0     | 6.74                    | 7.56                  | 6.06             | 8.25           | 4.64           | 9.66          | 1.54           | 12.76         |
| 165.0     | 6.79                    | 7.77                  | 6.13             | 8.44           | 4.76           | 9.81          | 1.73           | 12.84         |
| 170.0     | 6.74                    | 8.08                  | 6.10             | 8.73           | 4.76           | 10.07         | 1.78           | 13.05         |
| 175.0     | 6.67                    | 8.41                  | 6.05             | 9.03           | 4.74           | 10.34         | 1.83           | 13.25         |
| 180.0     | 6.63                    | 8.69                  | 6.02             | 9.30           | 4.75           | 10.58         | 1.89           | 13.43         |
| 185.0     | 6.66                    | 8.90                  | 6.07             | 9.50           | 4.83           | 10.74         | 2.03           | 13.54         |
| 190.0     | 6.74                    | 9.05                  | 6.16             | 9.63           | 4.95           | 10.84         | 2.21           | 13.59         |
| 195.0     | 6.72                    | 9.30                  | 6.16             | 9.86           | 4.98           | 11.04         | 2.29           | 13.73         |
| 200.0     | 6.59                    | 9.65                  | 6.05             | 10.19          | 4.90           | 11.34         | 2.27           | 13.97         |
| 210.0     | 6.84                    | 9.82                  | 6.32             | 10.34          | 5.22           | 11.44         | 2.68           | 13.99         |
| 220.0     | 6.89                    | 10.17                 | 6.40             | 10.67          | 5.34           | 11.73         | 2.89           | 14.18         |
| 230.0     | 6.89                    | 10.56                 | 6.42             | 11.04          | 5.40           | 12.05         | 3.03           | 14.43         |
| 240.0     | 6.91                    | 10.91                 | 6.46             | 11.37          | 5.48           | 12.34         | 3.19           | 14.64         |
| 250.0     | 6.84                    | 11.34                 | 6.41             | 11.77          | 5.48           | 12.70         | 3.26           | 14.92         |
| 260.0     | 6.84                    | 11.67                 | 6.42             | 12.09          | 5.53           | 12.99         | 3.38           | 15.14         |
| 270.0     | 6.82                    | 12.03                 | 6.42             | 12.43          | 5.56           | 13.29         | 3.47           | 15.37         |
| 280.0     | 6.87                    | 12.30                 | 6.49             | 12.68          | 5.66           | 13.51         | 3.64           | 15.52         |
| 290.0     | 6.91                    | 12.56                 | 6.54             | 12.93          | 5.73           | 13.73         | 3.77           | 15.69         |
| 300.0     | 6.78                    | 12.98                 | 6.42             | 13.34          | 5.64           | 14.12         | 3.73           | 16.03         |
| 310.0     | 6.74                    | 13.31                 | 6.40             | 13.65          | 5.64           | 14.41         | 3.79           | 16.26         |
| 320.0     | 6.72                    | 13.60                 | 6.39             | 13.94          | 5.66           | 14.66         | 3.86           | 16.46         |
| 330.0     | 6.77                    | 13.82                 | 6.45             | 14.14          | 5.73           | 14.86         | 3.97           | 16.62         |
| 340.0     | 6.81                    | 14.04                 | 6.50             | 14.35          | 5.81           | 15.04         | 4.11           | 16.74         |
| 350.0     | 6.81                    | 14.29                 | 6.51             | 14.59          | 5.84           | 15.26         | 4.17           | 16.93         |



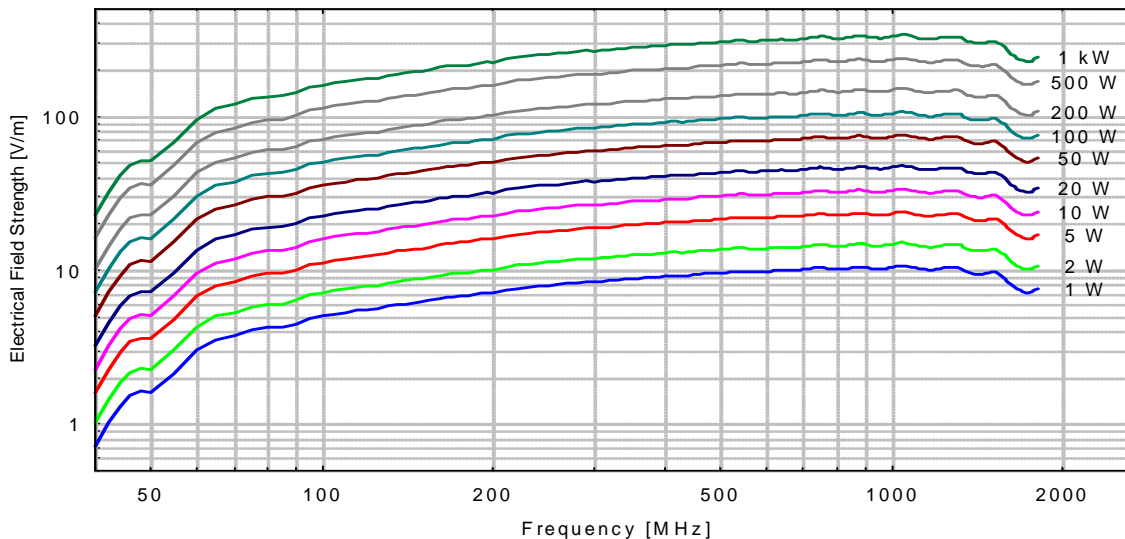
| Frequency | Gain (Iso.)<br>Farfield | Ant.-Fact<br>Farfield | gi (10 m)<br>Tip | k (10m)<br>Tip | gi (3m)<br>Tip | k (3m)<br>Tip | gi (1m)<br>Tip | k (1m)<br>Tip |
|-----------|-------------------------|-----------------------|------------------|----------------|----------------|---------------|----------------|---------------|
| MHz       | dBi                     | dB/m                  | dBi              | dB/m           | dBi            | dB/m          | dBi            | dB/m          |
| 360.0     | 6.77                    | 14.57                 | 6.48             | 14.87          | 5.82           | 15.52         | 4.20           | 17.15         |
| 370.0     | 6.75                    | 14.83                 | 6.46             | 15.12          | 5.83           | 15.75         | 4.24           | 17.34         |
| 380.0     | 6.75                    | 15.07                 | 6.47             | 15.34          | 5.86           | 15.96         | 4.31           | 17.51         |
| 390.0     | 6.72                    | 15.32                 | 6.45             | 15.59          | 5.85           | 16.19         | 4.34           | 17.70         |
| 400.0     | 6.78                    | 15.48                 | 6.52             | 15.74          | 5.94           | 16.32         | 4.47           | 17.79         |
| 410.0     | 6.78                    | 15.70                 | 6.53             | 15.95          | 5.97           | 16.51         | 4.53           | 17.94         |
| 420.0     | 6.73                    | 15.96                 | 6.48             | 16.20          | 5.93           | 16.76         | 4.52           | 18.17         |
| 430.0     | 6.67                    | 16.22                 | 6.43             | 16.46          | 5.89           | 16.99         | 4.53           | 18.36         |
| 440.0     | 6.64                    | 16.45                 | 6.40             | 16.68          | 5.88           | 17.21         | 4.53           | 18.56         |
| 450.0     | 6.71                    | 16.58                 | 6.48             | 16.80          | 5.97           | 17.31         | 4.67           | 18.62         |
| 460.0     | 6.76                    | 16.71                 | 6.54             | 16.94          | 6.04           | 17.44         | 4.75           | 18.72         |
| 470.0     | 6.74                    | 16.93                 | 6.52             | 17.14          | 6.03           | 17.63         | 4.77           | 18.89         |
| 480.0     | 6.71                    | 17.13                 | 6.50             | 17.35          | 6.01           | 17.83         | 4.77           | 19.07         |
| 490.0     | 6.69                    | 17.33                 | 6.48             | 17.54          | 6.02           | 18.00         | 4.82           | 19.20         |
| 500.0     | 6.74                    | 17.46                 | 6.54             | 17.66          | 6.08           | 18.11         | 4.91           | 19.29         |
| 510.0     | 6.75                    | 17.63                 | 6.55             | 17.82          | 6.11           | 18.26         | 4.95           | 19.42         |
| 520.0     | 6.77                    | 17.77                 | 6.58             | 17.96          | 6.14           | 18.40         | 5.01           | 19.53         |
| 530.0     | 6.82                    | 17.88                 | 6.63             | 18.07          | 6.21           | 18.50         | 5.09           | 19.61         |
| 540.0     | 6.82                    | 18.04                 | 6.64             | 18.23          | 6.22           | 18.65         | 5.13           | 19.74         |
| 550.0     | 6.78                    | 18.25                 | 6.60             | 18.43          | 6.19           | 18.83         | 5.12           | 19.90         |
| 560.0     | 6.68                    | 18.51                 | 6.50             | 18.68          | 6.11           | 19.08         | 5.06           | 20.12         |
| 570.0     | 6.64                    | 18.70                 | 6.46             | 18.87          | 6.07           | 19.27         | 5.02           | 20.32         |
| 580.0     | 6.62                    | 18.87                 | 6.45             | 19.04          | 6.06           | 19.43         | 5.04           | 20.45         |
| 590.0     | 6.60                    | 19.04                 | 6.43             | 19.20          | 6.05           | 19.58         | 5.05           | 20.58         |
| 600.0     | 6.59                    | 19.19                 | 6.43             | 19.36          | 6.06           | 19.73         | 5.08           | 20.70         |
| 610.0     | 6.58                    | 19.35                 | 6.42             | 19.51          | 6.06           | 19.87         | 5.11           | 20.82         |
| 620.0     | 6.62                    | 19.45                 | 6.46             | 19.61          | 6.10           | 19.97         | 5.15           | 20.92         |
| 630.0     | 6.65                    | 19.55                 | 6.50             | 19.71          | 6.14           | 20.06         | 5.21           | 20.99         |
| 640.0     | 6.66                    | 19.68                 | 6.51             | 19.83          | 6.17           | 20.18         | 5.26           | 21.08         |
| 650.0     | 6.60                    | 19.88                 | 6.45             | 20.03          | 6.11           | 20.37         | 5.20           | 21.28         |
| 660.0     | 6.53                    | 20.08                 | 6.38             | 20.23          | 6.05           | 20.56         | 5.17           | 21.44         |
| 670.0     | 6.52                    | 20.23                 | 6.38             | 20.36          | 6.05           | 20.69         | 5.19           | 21.55         |
| 680.0     | 6.52                    | 20.35                 | 6.38             | 20.49          | 6.05           | 20.82         | 5.19           | 21.68         |
| 690.0     | 6.56                    | 20.44                 | 6.42             | 20.57          | 6.11           | 20.89         | 5.27           | 21.73         |
| 700.0     | 6.60                    | 20.53                 | 6.46             | 20.66          | 6.15           | 20.97         | 5.31           | 21.81         |
| 710.0     | 6.63                    | 20.61                 | 6.50             | 20.75          | 6.19           | 21.05         | 5.38           | 21.87         |
| 720.0     | 6.68                    | 20.69                 | 6.55             | 20.82          | 6.24           | 21.12         | 5.43           | 21.94         |
| 730.0     | 6.72                    | 20.77                 | 6.59             | 20.90          | 6.30           | 21.19         | 5.51           | 21.98         |
| 740.0     | 6.77                    | 20.83                 | 6.64             | 20.96          | 6.35           | 21.26         | 5.56           | 22.05         |
| 750.0     | 6.78                    | 20.94                 | 6.65             | 21.07          | 6.37           | 21.35         | 5.60           | 22.12         |
| 760.0     | 6.76                    | 21.08                 | 6.63             | 21.20          | 6.35           | 21.49         | 5.58           | 22.25         |
| 770.0     | 6.63                    | 21.32                 | 6.51             | 21.44          | 6.23           | 21.72         | 5.49           | 22.46         |
| 780.0     | 6.57                    | 21.50                 | 6.45             | 21.61          | 6.17           | 21.89         | 5.43           | 22.63         |
| 790.0     | 6.51                    | 21.66                 | 6.39             | 21.78          | 6.13           | 22.04         | 5.41           | 22.76         |
| 800.0     | 6.45                    | 21.83                 | 6.33             | 21.95          | 6.07           | 22.21         | 5.35           | 22.93         |
| 810.0     | 6.45                    | 21.94                 | 6.34             | 22.05          | 6.08           | 22.31         | 5.39           | 23.00         |
| 820.0     | 6.46                    | 22.04                 | 6.35             | 22.15          | 6.09           | 22.40         | 5.40           | 23.10         |
| 830.0     | 6.47                    | 22.14                 | 6.36             | 22.24          | 6.10           | 22.50         | 5.41           | 23.19         |
| 840.0     | 6.51                    | 22.19                 | 6.40             | 22.30          | 6.16           | 22.55         | 5.49           | 23.22         |
| 850.0     | 6.55                    | 22.26                 | 6.44             | 22.37          | 6.20           | 22.61         | 5.53           | 23.28         |
| 860.0     | 6.60                    | 22.31                 | 6.50             | 22.41          | 6.26           | 22.65         | 5.62           | 23.29         |
| 870.0     | 6.67                    | 22.34                 | 6.57             | 22.44          | 6.33           | 22.68         | 5.69           | 23.32         |
| 880.0     | 6.66                    | 22.45                 | 6.56             | 22.55          | 6.32           | 22.79         | 5.68           | 23.43         |
| 890.0     | 6.61                    | 22.60                 | 6.51             | 22.70          | 6.28           | 22.92         | 5.66           | 23.54         |



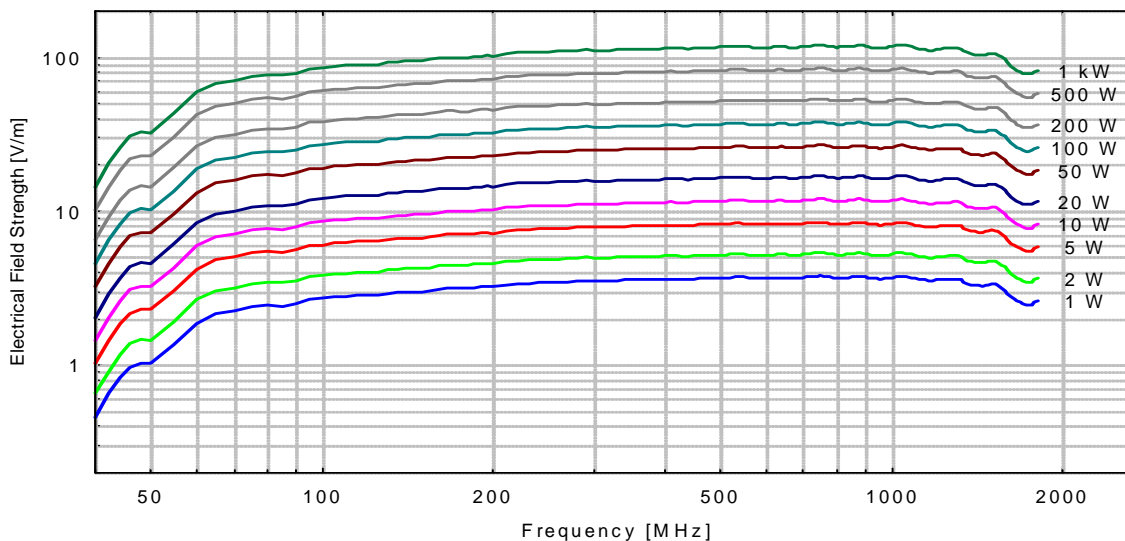
| Frequency | Gain (Iso.)<br>Farfield | Ant.-Fact<br>Farfield | gi (10 m)<br>Tip | k (10m)<br>Tip | gi (3m)<br>Tip | k (3m)<br>Tip | gi (1m)<br>Tip | k (1m)<br>Tip |
|-----------|-------------------------|-----------------------|------------------|----------------|----------------|---------------|----------------|---------------|
| MHz       | dBi                     | dB/m                  | dBi              | dB/m           | dBi            | dB/m          | dBi            | dB/m          |
| 900.0     | 6.56                    | 22.74                 | 6.46             | 22.84          | 6.23           | 23.07         | 5.61           | 23.69         |
| 910.0     | 6.47                    | 22.93                 | 6.37             | 23.03          | 6.14           | 23.26         | 5.52           | 23.88         |
| 920.0     | 6.36                    | 23.14                 | 6.26             | 23.23          | 6.05           | 23.45         | 5.45           | 24.04         |
| 930.0     | 6.33                    | 23.26                 | 6.23             | 23.35          | 6.02           | 23.57         | 5.42           | 24.17         |
| 940.0     | 6.32                    | 23.36                 | 6.22             | 23.46          | 6.01           | 23.68         | 5.41           | 24.27         |
| 950.0     | 6.27                    | 23.51                 | 6.18             | 23.60          | 5.97           | 23.80         | 5.40           | 24.37         |
| 960.0     | 6.26                    | 23.60                 | 6.17             | 23.70          | 5.96           | 23.90         | 5.39           | 24.47         |
| 970.0     | 6.31                    | 23.64                 | 6.22             | 23.74          | 6.01           | 23.94         | 5.44           | 24.51         |
| 980.0     | 6.33                    | 23.71                 | 6.24             | 23.81          | 6.03           | 24.01         | 5.46           | 24.58         |
| 990.0     | 6.36                    | 23.77                 | 6.27             | 23.86          | 6.08           | 24.06         | 5.53           | 24.60         |
| 1000.0    | 6.43                    | 23.79                 | 6.34             | 23.88          | 6.15           | 24.07         | 5.60           | 24.62         |
| 1020.0    | 6.58                    | 23.81                 | 6.50             | 23.89          | 6.31           | 24.08         | 5.79           | 24.60         |
| 1040.0    | 6.62                    | 23.94                 | 6.54             | 24.02          | 6.35           | 24.21         | 5.83           | 24.73         |
| 1060.0    | 6.55                    | 24.17                 | 6.47             | 24.25          | 6.29           | 24.43         | 5.80           | 24.92         |
| 1080.0    | 6.38                    | 24.51                 | 6.30             | 24.59          | 6.12           | 24.77         | 5.63           | 25.26         |
| 1100.0    | 6.25                    | 24.79                 | 6.17             | 24.88          | 5.99           | 25.05         | 5.50           | 25.55         |
| 1120.0    | 6.12                    | 25.09                 | 6.05             | 25.16          | 5.88           | 25.33         | 5.41           | 25.79         |
| 1140.0    | 6.03                    | 25.33                 | 5.96             | 25.40          | 5.79           | 25.57         | 5.32           | 26.04         |
| 1160.0    | 5.93                    | 25.58                 | 5.86             | 25.65          | 5.70           | 25.81         | 5.26           | 26.25         |
| 1180.0    | 5.91                    | 25.75                 | 5.84             | 25.82          | 5.68           | 25.98         | 5.24           | 26.42         |
| 1200.0    | 6.03                    | 25.77                 | 5.97             | 25.84          | 5.82           | 25.99         | 5.40           | 26.40         |
| 1220.0    | 6.07                    | 25.88                 | 6.01             | 25.94          | 5.86           | 26.09         | 5.44           | 26.51         |
| 1240.0    | 6.13                    | 25.96                 | 6.07             | 26.02          | 5.92           | 26.17         | 5.50           | 26.59         |
| 1260.0    | 6.14                    | 26.09                 | 6.08             | 26.15          | 5.94           | 26.29         | 5.55           | 26.68         |
| 1280.0    | 6.16                    | 26.20                 | 6.10             | 26.26          | 5.96           | 26.40         | 5.57           | 26.79         |
| 1300.0    | 6.16                    | 26.34                 | 6.10             | 26.40          | 5.96           | 26.54         | 5.57           | 26.93         |
| 1320.0    | 6.01                    | 26.63                 | 5.95             | 26.68          | 5.82           | 26.81         | 5.46           | 27.17         |
| 1340.0    | 5.78                    | 26.98                 | 5.72             | 27.04          | 5.59           | 27.17         | 5.23           | 27.53         |
| 1360.0    | 5.53                    | 27.36                 | 5.47             | 27.42          | 5.34           | 27.55         | 4.98           | 27.91         |
| 1380.0    | 5.41                    | 27.60                 | 5.36             | 27.66          | 5.24           | 27.78         | 4.90           | 28.11         |
| 1400.0    | 5.26                    | 27.88                 | 5.21             | 27.93          | 5.09           | 28.05         | 4.75           | 28.39         |
| 1420.0    | 5.23                    | 28.04                 | 5.18             | 28.09          | 5.06           | 28.21         | 4.72           | 28.54         |
| 1440.0    | 5.21                    | 28.17                 | 5.16             | 28.23          | 5.04           | 28.35         | 4.70           | 28.68         |
| 1460.0    | 5.25                    | 28.26                 | 5.20             | 28.30          | 5.09           | 28.41         | 4.78           | 28.72         |
| 1480.0    | 5.35                    | 28.28                 | 5.30             | 28.32          | 5.19           | 28.43         | 4.88           | 28.74         |
| 1500.0    | 5.43                    | 28.31                 | 5.38             | 28.36          | 5.27           | 28.47         | 4.96           | 28.78         |
| 1520.0    | 5.41                    | 28.45                 | 5.36             | 28.49          | 5.25           | 28.60         | 4.94           | 28.91         |
| 1540.0    | 5.29                    | 28.68                 | 5.25             | 28.72          | 5.15           | 28.82         | 4.87           | 29.10         |
| 1560.0    | 4.93                    | 29.15                 | 4.89             | 29.20          | 4.79           | 29.30         | 4.51           | 29.58         |
| 1580.0    | 4.59                    | 29.60                 | 4.55             | 29.65          | 4.45           | 29.75         | 4.17           | 30.03         |
| 1600.0    | 4.23                    | 30.07                 | 4.19             | 30.12          | 4.09           | 30.22         | 3.81           | 30.50         |
| 1620.0    | 3.72                    | 30.69                 | 3.68             | 30.73          | 3.58           | 30.83         | 3.30           | 31.11         |
| 1640.0    | 3.42                    | 31.09                 | 3.38             | 31.14          | 3.29           | 31.23         | 3.04           | 31.48         |
| 1660.0    | 3.19                    | 31.43                 | 3.15             | 31.47          | 3.06           | 31.56         | 2.81           | 31.81         |
| 1680.0    | 2.99                    | 31.74                 | 2.95             | 31.78          | 2.86           | 31.87         | 2.61           | 32.12         |
| 1700.0    | 2.84                    | 31.99                 | 2.80             | 32.03          | 2.71           | 32.12         | 2.46           | 32.37         |
| 1720.0    | 2.70                    | 32.24                 | 2.66             | 32.27          | 2.57           | 32.36         | 2.32           | 32.61         |
| 1740.0    | 2.70                    | 32.33                 | 2.67             | 32.37          | 2.58           | 32.45         | 2.36           | 32.67         |
| 1760.0    | 2.72                    | 32.41                 | 2.69             | 32.44          | 2.60           | 32.53         | 2.38           | 32.75         |
| 1780.0    | 3.00                    | 32.23                 | 2.97             | 32.26          | 2.88           | 32.34         | 2.66           | 32.57         |
| 1800.0    | 3.18                    | 32.14                 | 3.15             | 32.18          | 3.06           | 32.26         | 2.84           | 32.49         |

**Erzeugte Feldstärke (unmoduliert) bei verschiedenen Eingangsleistungen**  
*Generated Fieldstrength (unmodulated) at several input power levels*

VULP 9118 G special 1 m Tip-EuT



VULP 9118 G special 3 m Tip-EuT



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