

Reflected W Beam

model of a reflected W beam for 20m, 17m & 15m feeding from the bottom via low impedance line

Following data are used to create the the XYZ coordinates with the file: reflectedW-single-band-koordinaten.xls

20m

length of half reflector:	569 cm
length of half radiator:	540 cm
length of reflector insulator:	9 cm
length of radiator insulator:	10 cm

17m

length of half reflector:	441 cm
length of half radiator:	428 cm
length of reflector insulator:	9 cm
length of radiator insulator:	10 cm

15m

length of half reflector:	378 cm
length of half radiator:	374 cm
length of reflector insulator:	7 cm
length of radiator insulator:	10 cm

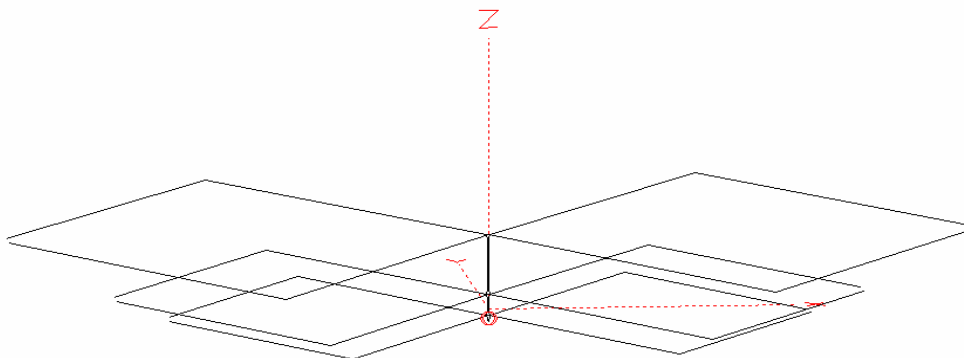
Distance between 20/17m elements: 40 cm

Distance between 17/15m elements: 14 cm

wire: 1,5 mm² noninsulated

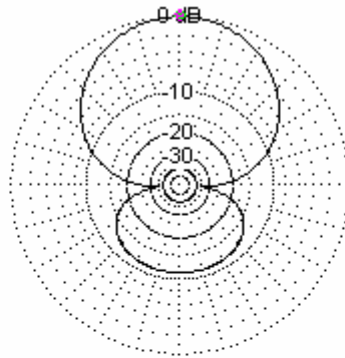
all results in free space, no losses

EZNEC+



^ Total Field

EZNEC+

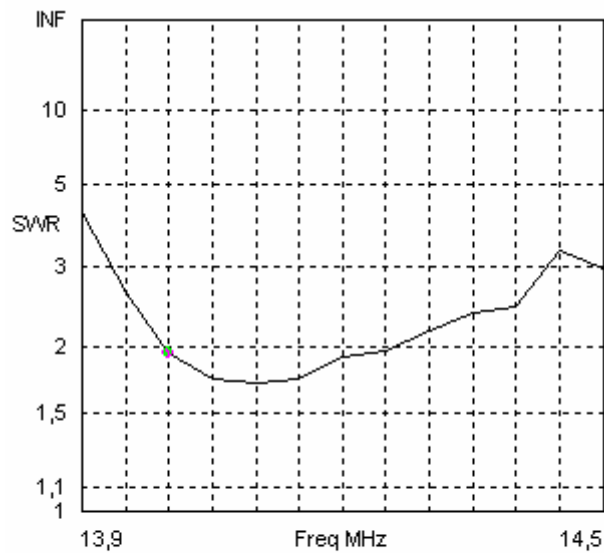


14 MHz

Azimuth Plot
Elevation Angle 0,0 deg.
Outer Ring 6,6 dBi

Cursor Az 90,0 deg.
Gain 6,6 dBi
0,0 dBmax

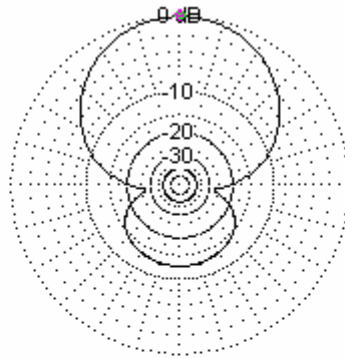
Slice Max Gain 6,6 dBi @ Az Angle = 90,0 deg.
Front/Back 11,28 dB
Beamwidth 82,0 deg.; -3dB @ 49,0, 131,0 deg.
Sidelobe Gain -4,68 dBi @ Az Angle = 269,0 deg.
Front/Sidelobe 11,28 dB



Freq 14 MHz Source # 1
SWR 1,95 Z0 50 ohms
Z 26,87 + j 9,396 ohms
Refl Coeff 0,3224 at 150,93 deg.

^ Total Field

EZNEC+

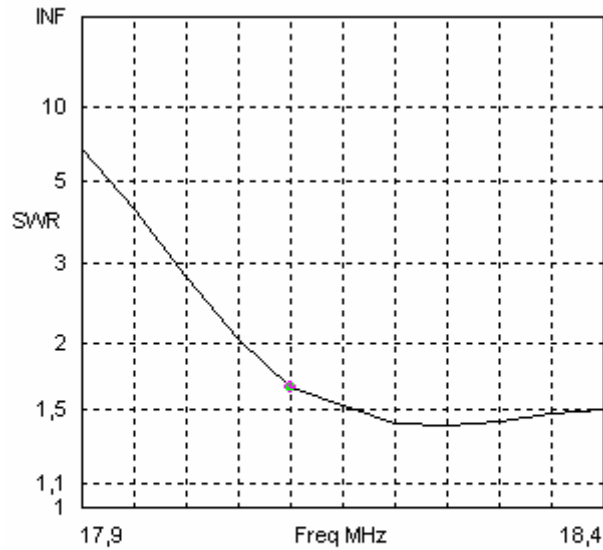


18,068 MHz

Azimuth Plot
 Elevation Angle 0,0 deg.
 Outer Ring 6,42 dBi

Cursor Az 90,0 deg.
 Gain 6,42 dBi
 0,0 dBmax

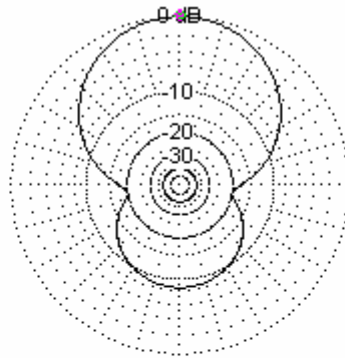
Slice Max Gain 6,42 dBi @ Az Angle = 90,0 deg.
 Front/Back 12,59 dB
 Beamwidth 82,4 deg.; -3dB @ 48,8, 131,2 deg.
 Sidelobe Gain -6,17 dBi @ Az Angle = 270,0 deg.
 Front/Sidelobe 12,59 dB



Freq 18,1 MHz Source # 1
 SWR 1,65 Z0 50 ohms
 Z 32,08 + j 9,293 ohms
 Refl Coeff 0,2444 at 146,13 deg.

^ Total Field

EZNEC+

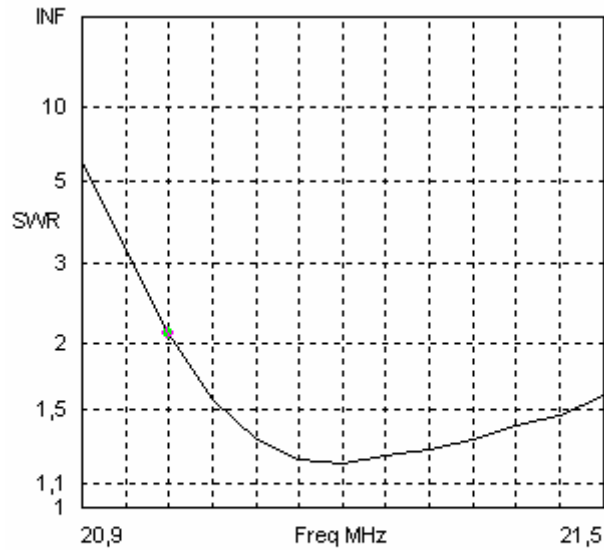


21 MHz

Azimuth Plot
Elevation Angle 0,0 deg.
Outer Ring 7,19 dBi

Cursor Az 90,0 deg.
Gain 7,19 dBi
0,0 dBmax

Slice Max Gain 7,19 dBi @ Az Angle = 90,0 deg.
Front/Back 8,55 dB
Beamwidth 83,4 deg.; -3dB @ 48,3, 131,7 deg.
Sidelobe Gain -1,37 dBi @ Az Angle = 270,0 deg.
Front/Sidelobe 8,55 dB



Freq 21 MHz Source # 1
SWR 2,11 Z0 50 ohms
Z 24,27 + j 6,822 ohms
Refl Coeff 0,3569 at 159,9 deg.