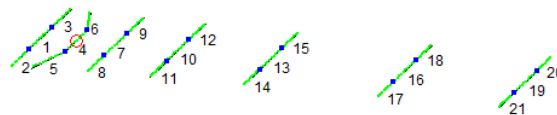


# 12,95 M 7el V-Yagi 12,30 dBI



For:	DXing 11 meter band
Antenna Type:	7 elements V-Yagi
	Bend Radiator (K6STI)
Designed by:	HPSD version 1.01 feb 2014
Boom length:	12,95 Meter
Gain:	12,3 dBI (@27,555 MHz, Peak gain: 12,35 dBI @ 28MHz)
FB	<32 dB
FR	<18 dB
Impedance:	50 ohms, direct fed
SWR	1:1 350 KHz.
SWR below	2:1 > 1500 KHz

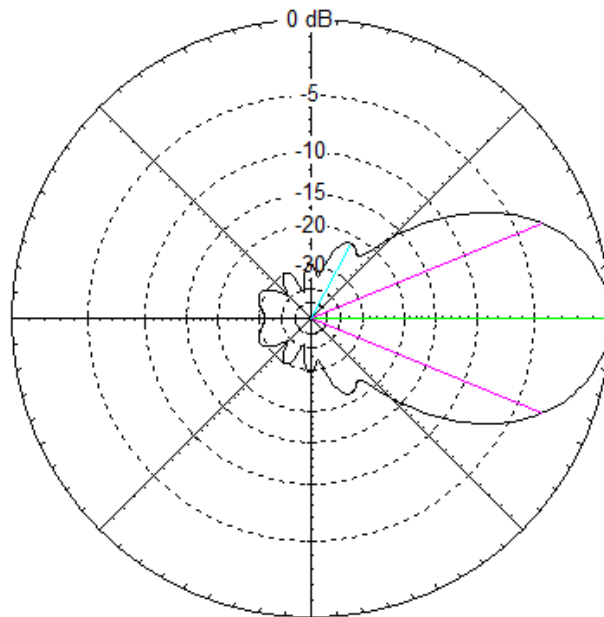
EZNEC Pro/4



The 7el V-yagi

Total Field

EZNEC Pro/4



27,555 MHz

Azimuth Plot  
Elevation Angle 0,0 deg.  
Outer Ring 12,3 dBi

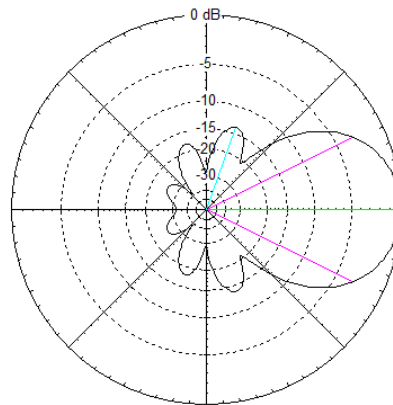
Cursor Az 0,0 deg.  
Gain 12,3 dBi  
0,0 dBmax

Slice Max Gain 12,3 dBi @ Az Angle = 0,0 deg.  
Front/Back 32,15 dB  
Beamwidth 44,2 deg.; -3dB @ 337,9, 22,1 deg.  
Sidelobe Gain -9,28 dBi @ Az Angle = 62,0 deg.  
Front/Sidelobe 21,58 dB

Above: The freespace azimuth plot. (including aluminium loss).

Total Field

EZNEC Pro/4



27,555 MHz

Elevation Plot  
Azimuth Angle 0,0 deg.  
Outer Ring 12,3 dBi

Cursor Elev 0,0 deg.  
Gain 12,3 dBi  
0,0 dBmax

Slice Max Gain 12,3 dBi @ Elev Angle = 0,0 deg.  
Front/Back 32,15 dB  
Beamwidth 52,4 deg.; -3dB @ 333,8, 26,2 deg.  
Sidelobe Gain -1,48 dBi @ Elev Angle = 70,0 deg.  
Front/Sidelobe 13,78 dB

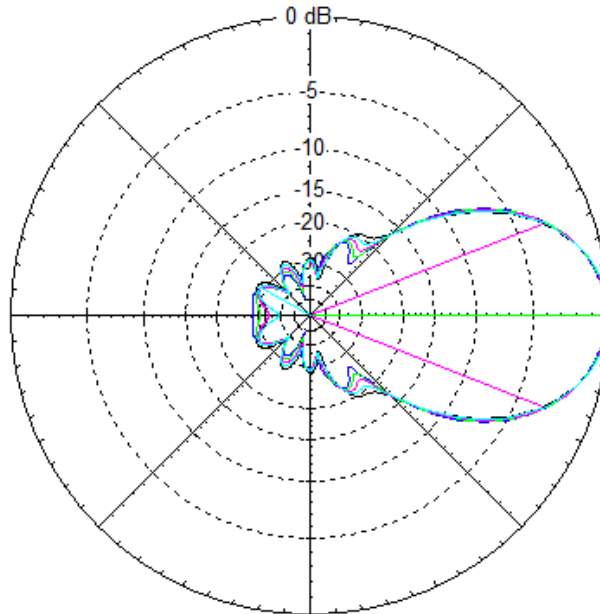
Above: The freespace elevation plot ! TIGTH.

Some manufacturers would say “low noise urban antenn

### Total Field

27,4 MHz  
27,5 MHz  
27,6 MHz  
27,7 MHz  
\* 27,8 MHz

EZNEC Pro/4



Azimuth Plot  
Elevation Angle 0,0 deg.  
Outer Ring 12,35 dBi

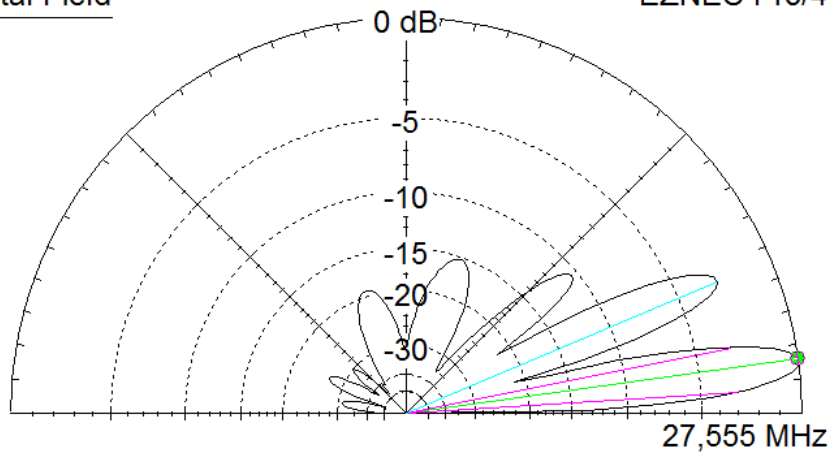
Cursor Az 0,0 deg.  
Gain 12,35 dBi  
0,0 dBmax

Slice Max Gain 12,35 dBi @ Az Angle = 0,0 deg.  
Front/Back 32,49 dB  
Beamwidth 42,6 deg.; -3dB @ 338,7, 21,3 deg.  
Sidelobe Gain -15,2 dBi @ Az Angle = 151,0 deg.  
Front/Sidelobe 27,55 dB

Above: the freespace azimuth plots at different freq.

### Total Field

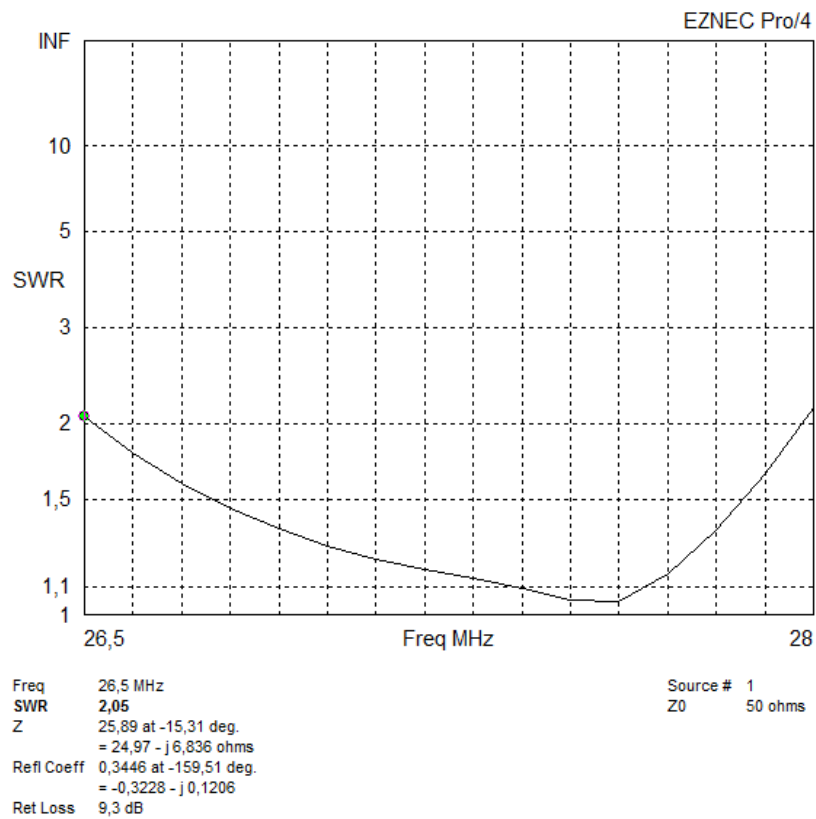
EZNEC Pro/4



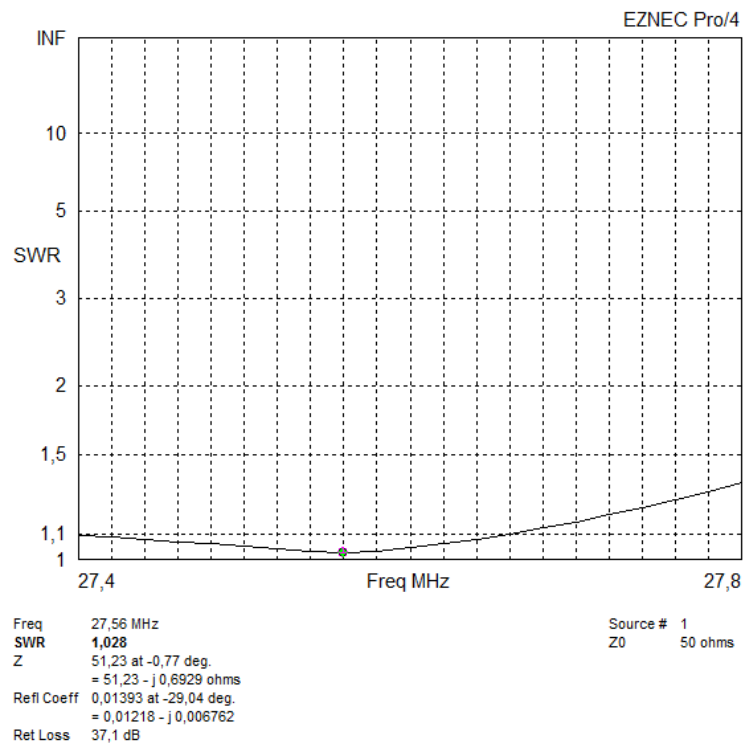
Elevation Plot  
Azimuth Angle 0,0 deg.  
Outer Ring 17,72 dBi  
  
Slice Max Gain 17,72 dBi @ Elev Angle = 8,0 deg.  
Beamwidth 7,7 deg.; -3dB @ 3,7, 11,4 deg.  
Sidelobe Gain 15,02 dBi @ Elev Angle = 23,0 deg.  
Front/Sidelobe 2,7 dB

Cursor Elev 8,0 deg.  
Gain 17,72 dBi  
0,0 dBmax

Above: The “real” elevation plot. Using average ground conditions and when placed 20 meter above ground.



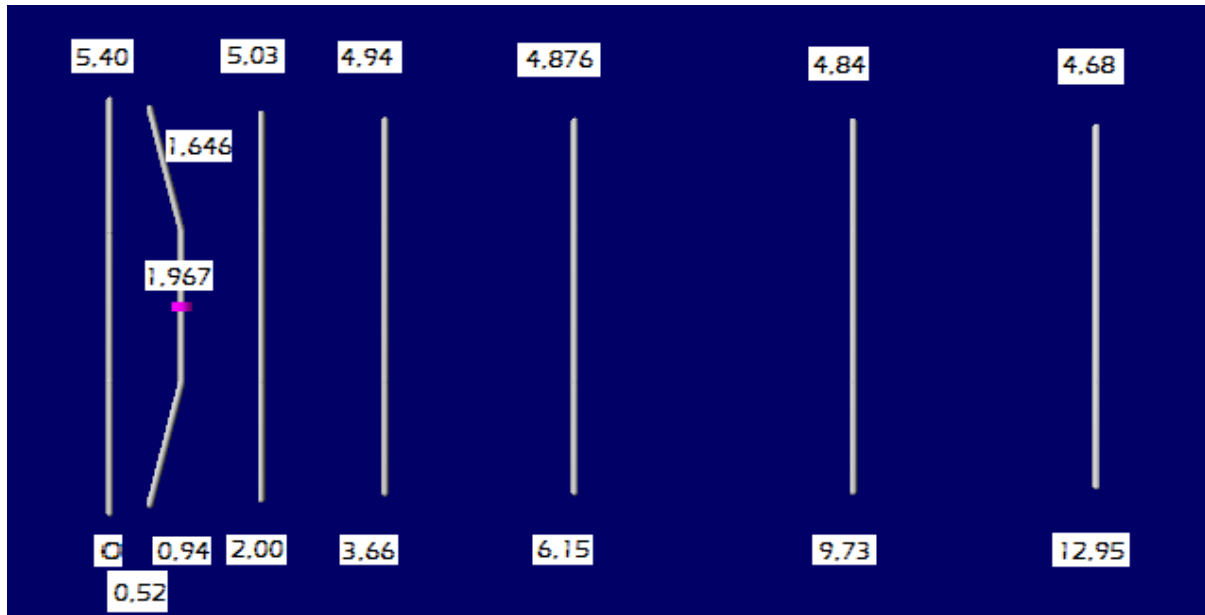
The 2:1 SWR bandwidth: 1500 KHz



SWR plot between 27,4 MHz and 27,8 MHz

All elements are made out of: 25mm and 22mm tubing.

25mm is the centre part of each element and is 1,967 meters long. Inserted on both ends are the remaining 22mm tubing.



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All dimensions are provided in Meters