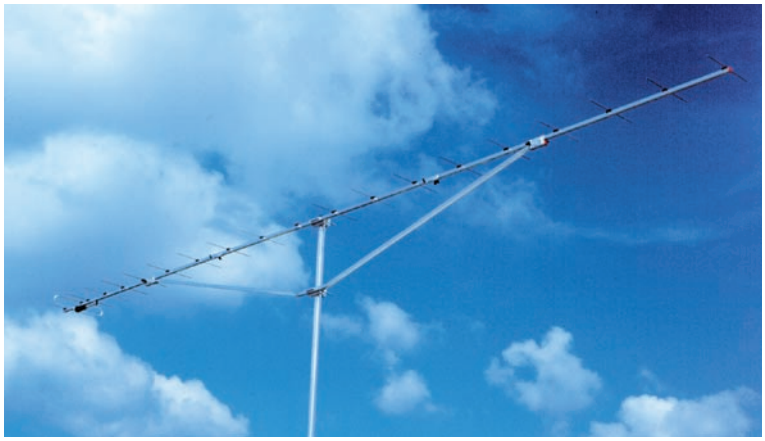
21 elements Yagi antenna

434 to 440 MHz

Part Nr. 220922



Electrical data

Radiation at 438.5 MHz

Effective electrical length ..... : 6.67 λ
Isotropic gain ..... : 18.2 dBi
Aperture angle @ -3 dB
- E-plane ..... : 2 x 11.5°
- H-plane ..... : 2 x 11.9°

First side lobe set
- E-plane ..... : - 13.8 dB @ 29°
- H-plane ..... : - 12.0 dB @ 30°

Rear protection ..... : - 29.7 dB
Average stray radiation
- E-plane ..... : - 35 dB
- H-plane ..... : - 24 dB

Bandwidth

Gain @ -1 dB ..... : 417 to 442 MHz
Nominal impedance ..... : 50 Ω
Impedance match bandwidth @ SWR <1.3/1..... : 435.0 to 441.0 MHz
Acceptable RF power (continous duty) ..... : 1000 W

Array of 2 or 4 antennas

(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance ..... : 2.36 λ
- Pratical distance ..... : 1.62 m
- H plane - Electrical distance ..... : 2.36 λ
- Pratical distance ..... : 1.62 m

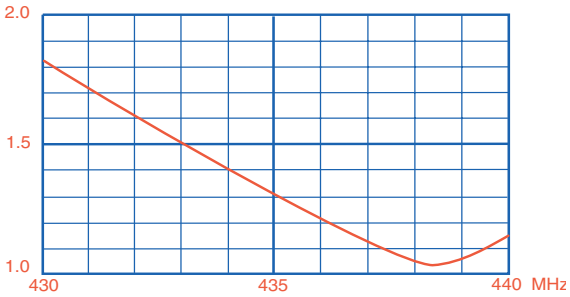
Mechanical data

Connector ..... : N
Overall length ..... : 4.60 m
Mass ..... : 3.1 kg
Effective wind load
- Horizontal polarization ..... : 0.16 m²
- Vertical polarization ..... : 0.13 m²

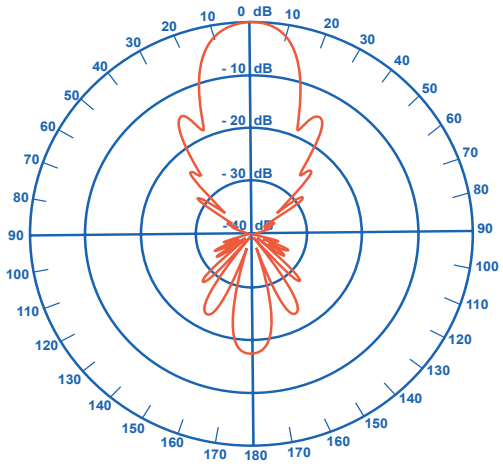
Approximate wind load (25 m/s - 55 mph)
- Horizontal polarization ..... : 6.5 daN
- Vertical polarization ..... : 5.3 daN

Approximate wind load (45 m/s - 100 mph)
- Horizontal polarization ..... : 21.1 daN
- Vertical polarization ..... : 17.1 daN

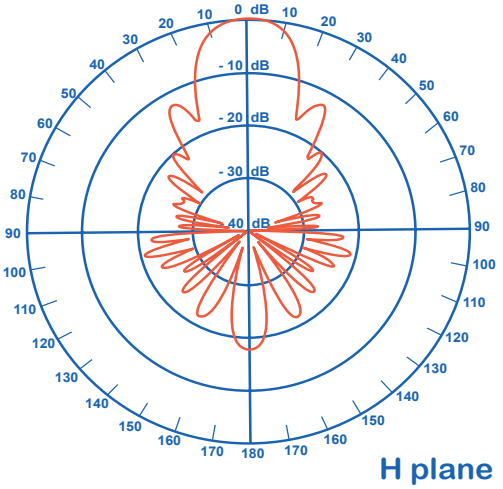
SWR Curve



Radiation patterns



E plane



H plane