

# 19 elements Yagi antenna

## 430 to 440 MHz

## Part Nr. 20919



### Electrical data

#### Radiation at 432 MHz

Effective electrical length .....	: 4.02 $\lambda$
Isotropic gain .....	: 16.4 dBi
Aperture angle @ -3 dB	
- E-plane .....	: 2 x 14.8°
- H-plane .....	: 2 x 15.7°
First side lobe set	
- E-plane .....	: - 16.0 dB @ 38°
- H-plane .....	: - 12.9 dB @ 38°
Rear protection .....	: - 23.6 dB
Average stray radiation	
- E-plane .....	: - 38 dB
- H-plane .....	: - 28 dB

### Bandwidth

Gain @ -1 dB .....	: 415 to 442 MHz
Nominal impedance .....	: 50 $\Omega$
Impedance match bandwidth @ SWR <1.3/1.....	: 431.0 to 439.0 MHz
Acceptable RF power (continous duty) .....	: 1000 W

### Array of 2 or 4 antennas

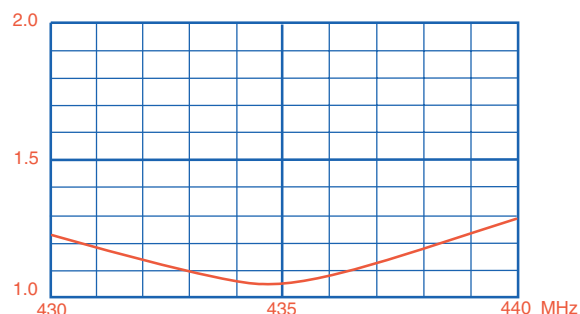
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance .....	: 1.80 $\lambda$
- Pratical distance .....	: 1.25 m
- H plane - Electrical distance .....	: 1.80 $\lambda$
- Pratical distance .....	: 1.25 m

### Mechanical data

Connector .....	: N
Overall length .....	: 2.82 m
Mass .....	: 1.9 kg
Effective wind load	
- Horizontal polarization .....	: 0.06 m <sup>2</sup>
- Vertical polarization .....	: 0.09 m <sup>2</sup>
Approximate wind load (25 m/s - 55 mph)	
- Horizontal polarization .....	: 2.3 daN
- Vertical polarization .....	: 3.5 daN
Approximate wind load (45 m/s - 100 mph)	
- Horizontal polarization .....	: 7.5 daN
- Vertical polarization .....	: 11.3 daN

### SWR curve



### Radiation patterns

