

# 35 elements Yagi antenna

## 1240 to 1260 MHz

## Part Nr. 20636



### Electrical data

#### Radiation at 1255 MHz

Effective electrical length .....	: 12.83 $\lambda$
Isotropic gain .....	: 20.4 dBi
Aperture angle @ -3 dB	
- E-plane .....	: 2 x 7.9°
- H-plane .....	: 2 x 8.1°
First side lobe set	
- E-plane .....	: - 17.5 dB @ 22°
- H-plane .....	: - 16.5 dB @ 22°
Rear protection .....	: - 22.5 dB
Average stray radiation	
- E-plane .....	: - 35 dB
- H-plane .....	: - 30 dB

### Bandwidth

Gain @ -1 dB .....	: 1205 to 1271 MHz
Nominal impedance .....	: 50 $\Omega$
Impedance match bandwidth @ SWR <1.3/1.....	: 1251 to 1267 MHz
Acceptable RF power (continuous duty) .....	: 300 W

### Array of 2 or 4 antennas

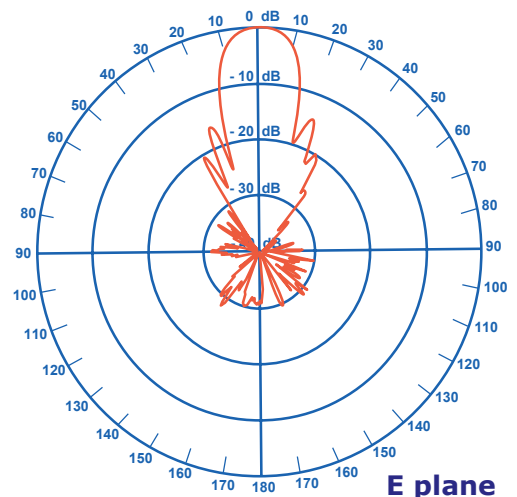
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance .....	: 3.40 $\lambda$
- Pratical distance .....	: 0.82 m
- H plane - Electrical distance .....	: 3.40 $\lambda$
- Pratical distance .....	: 0.82 m

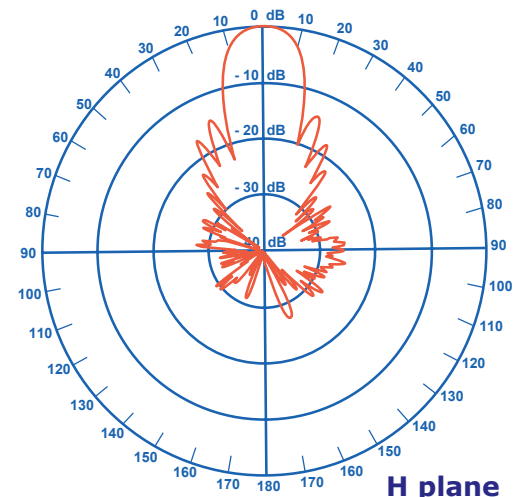
### Mechanical data

Connector .....	: N
Overall length .....	: 3.07 m
Mass .....	: 2.5 kg
Effective wind load	
- Horizontal polarization .....	: 0.13 m <sup>2</sup>
- Vertical polarization .....	: 0.11 m <sup>2</sup>
Approximate wind load (25 m/s - 55 mph)	
- Horizontal polarization .....	: 5.0 daN
- Vertical polarization .....	: 4.2 daN
Approximate wind load (45 m/s - 100 mph)	
- Horizontal polarization .....	: 16.1 daN
- Vertical polarization .....	: 13.6 daN

### Radiation patterns



**E plane**



**H plane**

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**AFT**