

23 elements Yagi antenna

1260 to 1300 MHz

Part Nr. 20623



Electrical data

Radiation at 1296 MHz

Effective electrical length	: 7.43 λ
Isotropic gain	: 18.1 dBi
Aperture angle @ -3 dB	
- E-plane	: 2 x 10.1°
- H-plane	: 2 x 10.3°
First side lobe set	
- E-plane	: - 10.6 dB @ 27°
- H-plane	: - 9.3 dB @ 28°
Rear protection	: - 21 dB
Average stray radiation	
- E-plane	: - 37 dB
- H-plane	: - 28 dB

Bandwidth

Gain @ -1 dB	: 1246 to 1326 MHz
Nominal impedance	: 50 Ω
Impedance match bandwidth @ SWR <1.3/1.....	: 1290 to 1302 MHz
Acceptable RF power (continuous duty)	: 300 W

Array of 2 or 4 antennas

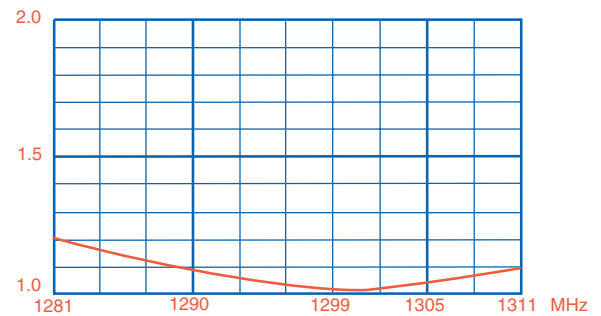
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance	: 3.05 λ
- Pratical distance	: 0.70 m
- H plane - Electrical distance	: 3.05 λ
- Pratical distance	: 0.70 m

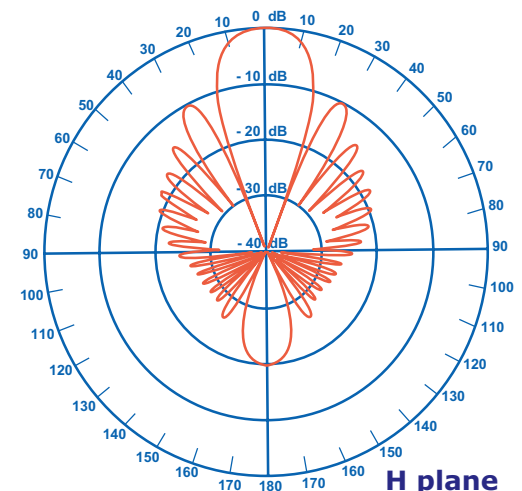
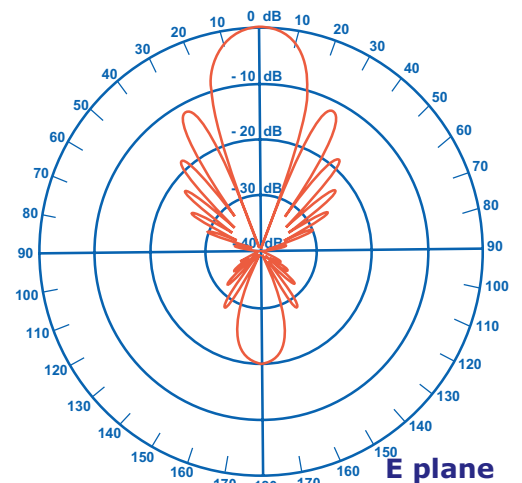
Mechanical data

Connector	: N
Overall length	: 1.75 m
Mass	: 1.4 kg
Effective wind load	
- Horizontal polarization	: 0.06 m ²
- Vertical polarization	: 0.05 m ²
Approximate wind load (25 m/s - 55 mph)	
- Horizontal polarization	: 2.4 daN
- Vertical polarization	: 2.0 daN
Approximate wind load (45 m/s - 100 mph)	
- Horizontal polarization	: 7.9 daN
- Vertical polarization	: 6.5 daN

SWR curve



Radiation patterns



35 elements Yagi antenna

1260 to 1300 MHz

Part Nr. 20635



Electrical data

Radiation at 1296 MHz

Effective electrical length	: 13.6 λ
Isotropic gain	: 20.8 dBi
Aperture angle @ -3 dB	
- E-plane	: 2 x 9.6°
- H-plane	: 2 x 9.8°
First side lobe set	
- E-plane	: - 16.5 dB @ 21°
- H-plane	: - 16.0 dB @ 24°
Rear protection	: - 18 dB
Average stray radiation	
- E-plane	: - 30 dB
- H-plane	: - 24 dB

Bandwidth

Gain @ -1 dB	: 1280 to 1314 MHz
Nominal impedance	: 50 Ω
Impedance match bandwidth @ SWR <1.3/1.....	: 1293 to 1302 MHz
Acceptable RF power (continous duty)	: 300 W

Array of 2 or 4 antennas

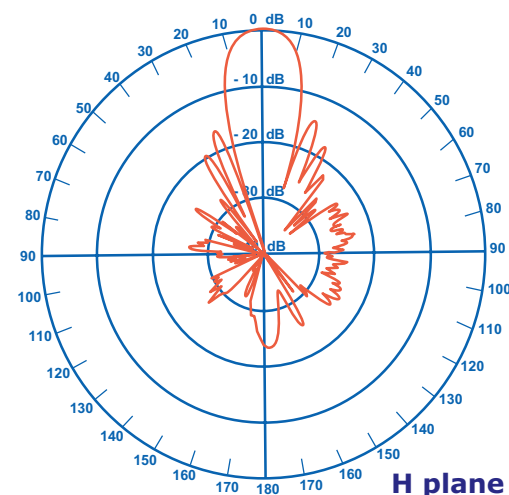
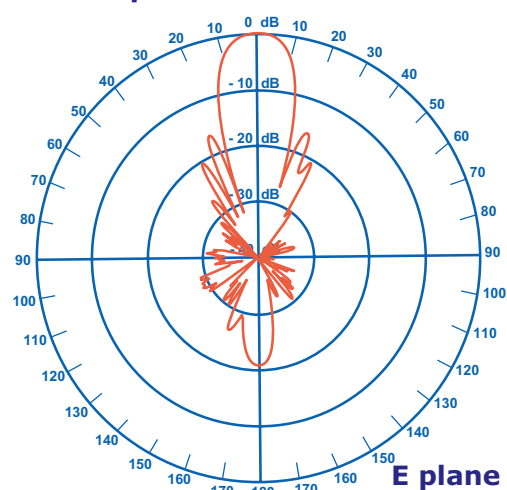
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance	: 3.55 λ
- Pratical distance	: 0.82 m
- H plane - Electrical distance	: 3.55 λ
- 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 ²
- Vertical polarization	: 0.11 m ²
Approximate wind load (25 m/s - 55 mph)	
- Horizontal polarization	: 5.0 daN
- Vertical polarization	: 4.1 daN
Approximate wind load (45 m/s - 100 mph)	
- Horizontal polarization	: 16.1 daN
- Vertical polarization	: 13.5 daN

Radiation patterns



4x35 elements Yagi antenna

1260 to 1300 MHz

Part Nr. 20644

Electrical data

Radiation at 1296 MHz

Effective electrical length : 13.6 λ

Isotropic gain : 27.0 dBi

Aperture angle @ -3 dB

- E-plane : 2 x 4.0°

- H-plane : 2 x 4.0°

First side lobe set

- E-plane : - 10 dB @ 12°

- H-plane : - 9 dB @ 12°

Rear protection : - 18 dB

Average stray radiation

- E-plane : - 30 dB

- H-plane : - 24 dB

Bandwidth

Gain @ -1 dB : 1280 to 1314 MHz

Nominal impedance : 50 Ω

Impedance match bandwidth @ SWR <1.3/1..... : 1293 to 1302 MHz

Acceptable RF power (continuous duty) : 300 W

Mechanical data

Connector : N

Overall length : 3.07 m

Mass : 15 kg

Effective wind load

- Horizontal polarization : 0.52 m²

- Vertical polarization : 0.44 m²

Approximate wind load (25 m/s - 55 mph)

- Horizontal polarization : 11 daN

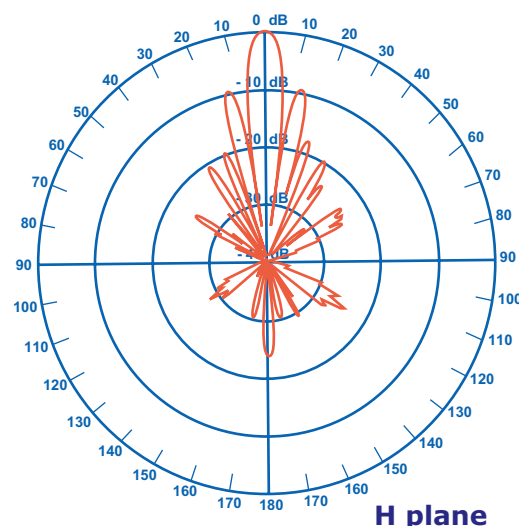
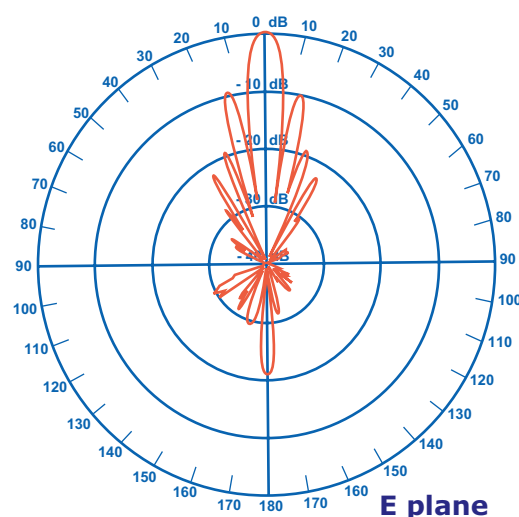
- Vertical polarization : 10.6 daN

Approximate wind load (45 m/s - 100 mph)

- Horizontal polarization : 35.4 daN

- Vertical polarization : 29.7 daN

Radiation patterns



55 elements Yagi antenna

1260 to 1300 MHz

Part Nr. 20655



Electrical data

Radiation at 1296 MHz

Effective electrical length	: 19.9 λ
Isotropic gain	: 21.9 dBi
Aperture angle @ -3 dB	
- E-plane	: 2 x 6.6°
- H-plane	: 2 x 8.7°
First side lobe set	
- E-plane	: - 10.0 dB @ 17°
- H-plane	: - 9.6 dB @ 17°
Rear protection	: - 23.7 dB
Average stray radiation	
- E-plane	: - 42 dB
- H-plane	: - 32 dB

Bandwidth

Gain @ -1 dB	: 1253 to 1297 MHz
Nominal impedance	: 50 Ω
Impedance match bandwidth @ SWR <1.3/1.....	: 1290 to 1300 MHz
Acceptable RF power (continuous duty)	: 300 W

Array of 2 or 4 antennas

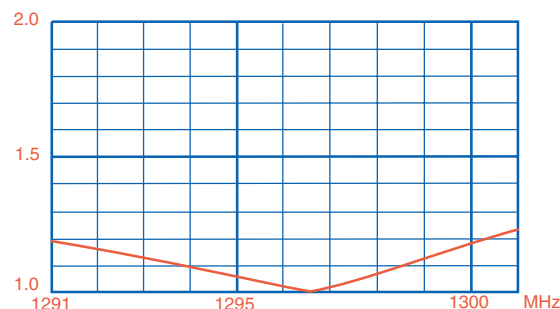
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance	: 4.53 λ
- Pratical distance	: 1.05 m
- H plane - Electrical distance	: 4.53 λ
- Pratical distance	: 1.05 m

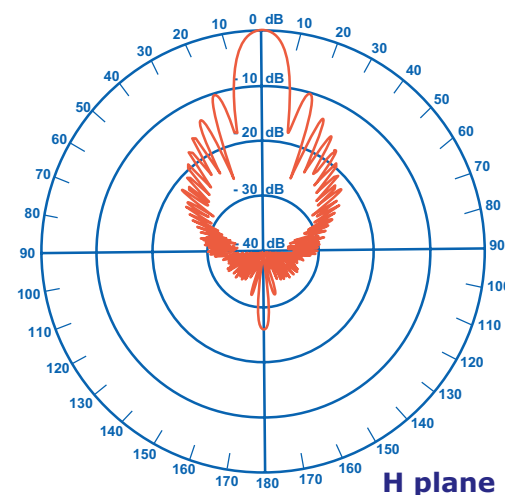
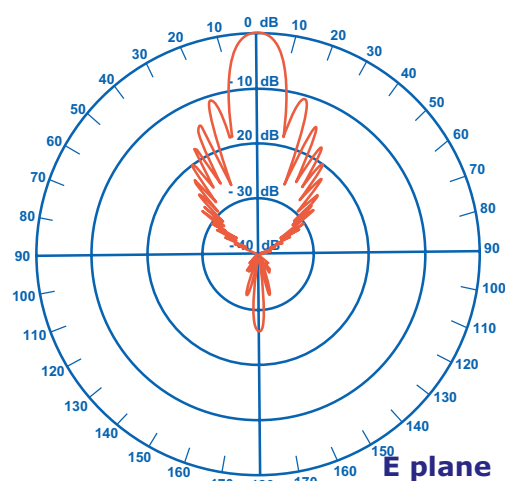
Mechanical data

Connector	: N
Overall length	: 4.64 m
Mass	: 4.0 kg
Effective wind load	
- Horizontal polarization	: 0.20 m ²
- Vertical polarization	: 0.12 m ²
Approximate wind load (25 m/s - 55 mph)	
- Horizontal polarization	: 7.5 daN
- Vertical polarization	: 4.7 daN
Approximate wind load (45 m/s - 100 mph)	
- Horizontal polarization	: 24.6 daN
- Vertical polarization	: 15.1 daN

SWR curve



Radiation patterns



4x55 elements Yagi antenna

1260 to 1300 MHz

Part Nr. 20666

Electrical data

Radiation at 1296 MHz

Effective electrical length: 19.9 λ

Isotropic gain: 27.9 dBi

Aperture angle @ -3 dB

- E-plane: 2 x 3.3°

- H-plane: 2 x 4.4°

First side lobe set

- E-plane: - 11 dB @ 10°

- H-plane: - 11 dB @ 10°

Rear protection: - 23.7 dB

Average stray radiation

- E-plane: - 42 dB

- H-plane: - 32 dB

Bandwidth

Gain @ -1 dB: 1253 to 1297 MHz

Nominal impedance: 50 Ω

Impedance match bandwidth @ SWR <1.3/1.....: 1290 to 1300 MHz

Acceptable RF power (continuous duty): 300 W

Mechanical data

Connector: N

Overall length: 4.64 m

Mass: 24 kg

Effective wind load

- Horizontal polarization: 0.80 m²

- Vertical polarization: 0.48 m²

Approximate wind load (25 m/s - 55 mph)

- Horizontal polarization: 16.5 daN

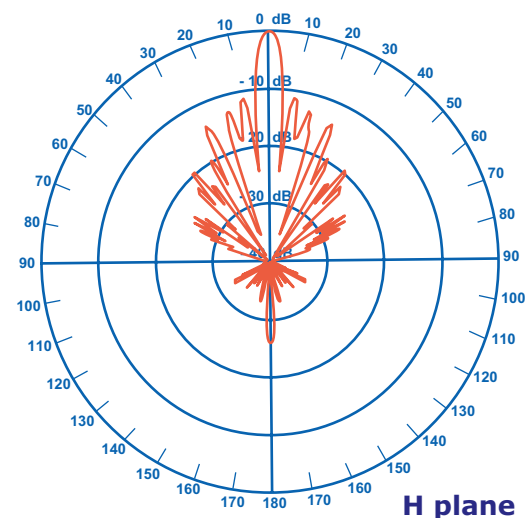
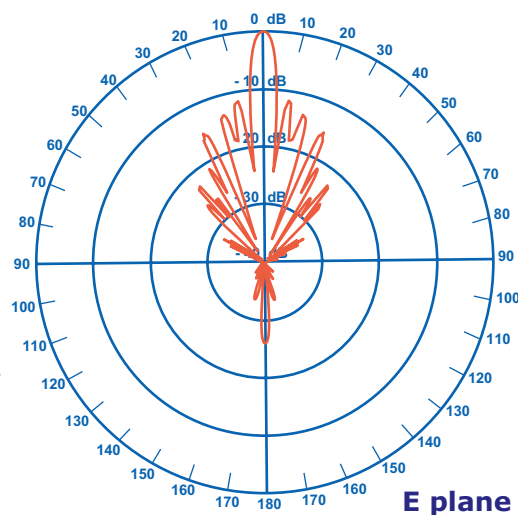
- Vertical polarization: 10.3 daN

Approximate wind load (45 m/s - 100 mph)

- Horizontal polarization: 54.1 daN

- Vertical polarization: 33.2 daN

Radiation patterns



4x23 elements Yagi antenna

1260 to 1300 MHz

Part Nr. 20696

Electrical data

Radiation at 1296 MHz

Effective electrical length: 7.43λ

Isotropic gain: 24.5 dBi

Aperture angle @ -3 dB

- E-plane: $2 \times 5^\circ$

- H-plane: $2 \times 5.1^\circ$

First side lobe set

- E-plane: - 9 dB @ 15°

- H-plane: - 9 dB @ 16°

Rear protection: - 21 dB

Average stray radiation

- E-plane: - 37 dB

- H-plane: - 28 dB

Bandwidth

Gain @ -1 dB: 1246 to 1326 MHz

Nominal impedance: 50Ω

Impedance match bandwidth @ SWR <1.3/1.....: 1290 to 1302 MHz

Acceptable RF power (continous duty): 300 W

Mechanical data

Connector: N

Overall length: 1.75 m

Mass: 8.4 kg

Effective wind load

- Horizontal polarization: 0.30 m^2

- Vertical polarization: 0.25 m^2

Approximate wind load (25 m/s - 55 mph)

- Horizontal polarization: 5.3 daN

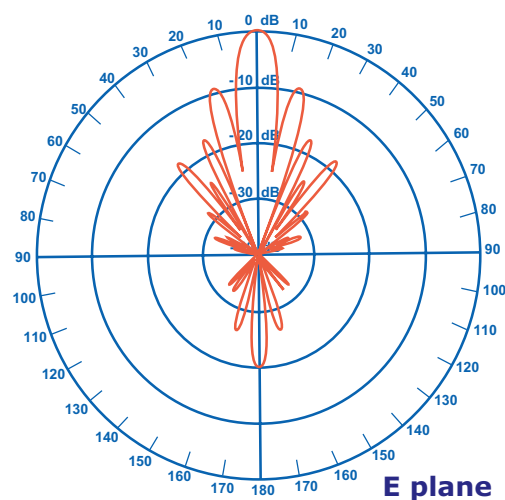
- Vertical polarization: 4.4 daN

Approximate wind load (45 m/s - 100 mph)

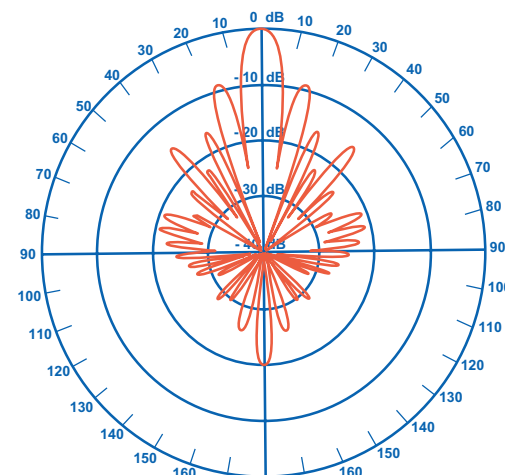
- Horizontal polarization: 17.4 daN

- Vertical polarization: 14.3 daN

Radiation patterns



E plane



H plane