

«Flat line» Patch antenna

1240 to 1300 MHz

Part Nr. 20614

Electrical data

Radiation at 1296 MHz

Effective electrical length	: 0.18λ
Isotropic gain	: 13.8 dBi
Aperture angle @ -3 dB	
- E-plane	: 2 x 19.1°
- H-plane	: 2 x 21.1°
First side lobe set	
- E-plane	: - 15 dB @ 65°
- H-plane	: - 25 dB @ 80°
Rear protection	: - 30 dB
Average stray radiation	
- E-plane	: - 20 dB
- H-plane	: - 25 dB

Bandwidth

Gain @ -1 dB	: 1240 to 1300 MHz
Nominal impedance	: 50 Ω
Impedance match bandwidth @ SWR <1.3/1.....	: 1240 to 1300 MHz
Acceptable RF power (CW/FM/PSK)	: 150 W

Array of 2 or 4 antennas

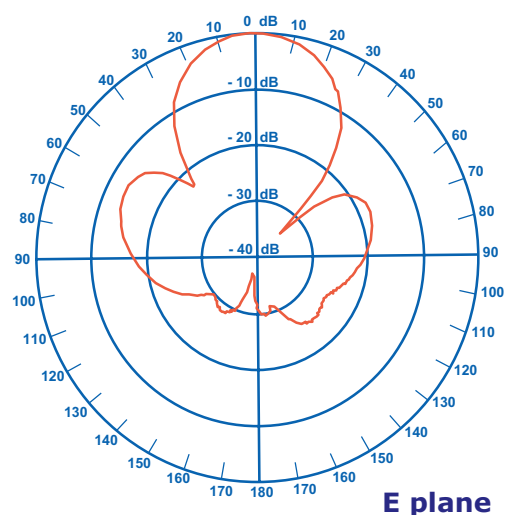
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance	: 1.53 λ
- Pratical distance	: 0.35 m
- H plane - Electrical distance	: 1.73 λ
- Pratical distance	: 0.40 m

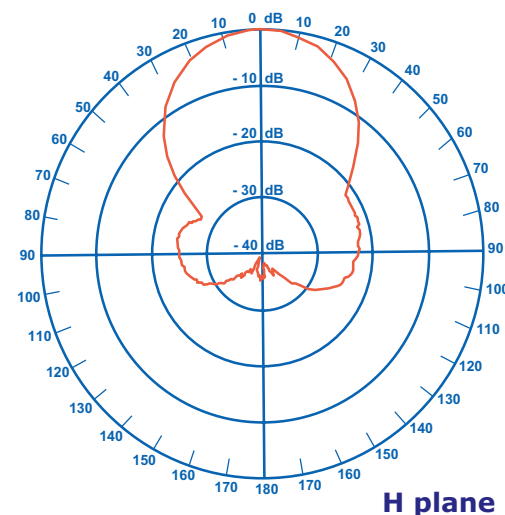
Mechanical data

Connector	: N
Overall length	: 300 x 390 x 50 mm
Mass	: 0.5 kg
Effective wind load	: 0.11 m ²
Approximate wind load (25 m/s - 55 mph)	: 4.1 daN
Approximate wind load (45 m/s - 100 mph)	: 13.3 daN

Radiation patterns



E plane



H plane



23 elements Yagi antenna

1240 to 1260 MHz

Part Nr. 20624



Electrical data

Radiation at 1255 MHz

Effective electrical length	: 7.61 λ
Isotropic gain	: 18.5 dBi
Aperture angle @ -3 dB	
- E-plane	: 2 x 9.6°
- H-plane	: 2 x 9.9°
First side lobe set	
- E-plane	: - 10.0 dB @ 25°
- H-plane	: - 8.7 dB @ 25°
Rear protection	: - 19.5 dB
Average stray radiation	
- E-plane	: - 36 dB
- H-plane	: - 28 dB

Bandwidth

Gain @ -1 dB	: 1205 to 1271 MHz
Nominal impedance	: 50 Ω
Impedance match bandwidth @ SWR <1.3/1.....	: 1250 to 1260 MHz
Acceptable RF power (continous duty)	: 300 W

Array of 2 or 4 antennas

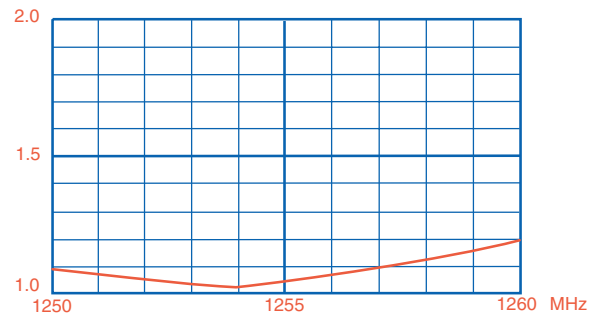
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance	: 2.95 λ
- Pratical distance	: 0.70 m
- H plane - Electrical distance	: 2.95 λ
- Pratical distance	: 0.70 m

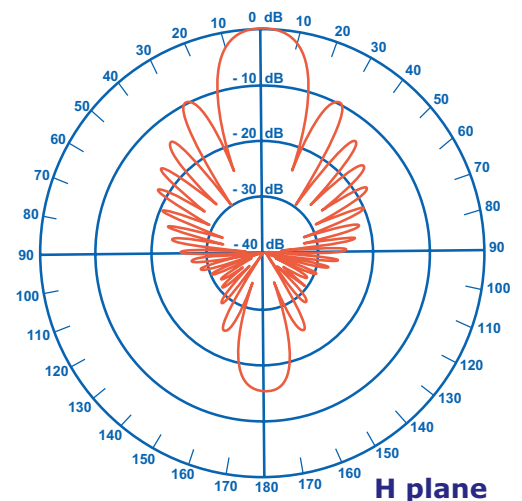
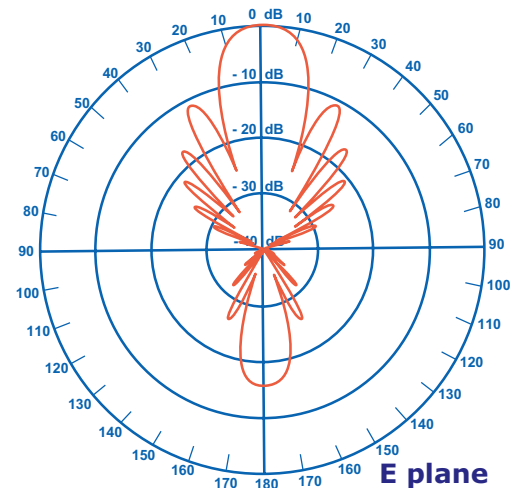
Mechanical data

Connector	: N
Overall length	: 1.85 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	: 2.5 daN
- Vertical polarization	: 2.1 daN
Approximate wind load (45 m/s - 100 mph)	
- Horizontal polarization	: 8.0 daN
- Vertical polarization	: 6.7 daN

SWR curve



Radiation patterns



35 elements Yagi antenna

1240 to 1260 MHz

Part Nr. 20636



Electrical data

Radiation at 1255 MHz

Effective electrical length	: 12.83 λ
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 Ω
Impedance match bandwidth @ SWR <1.3/1.....	: 1251 to 1267 MHz
Acceptable RF power (continous duty)	: 300 W

Array of 2 or 4 antennas

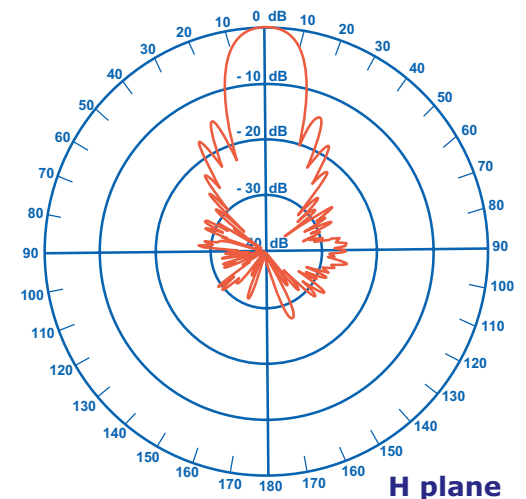
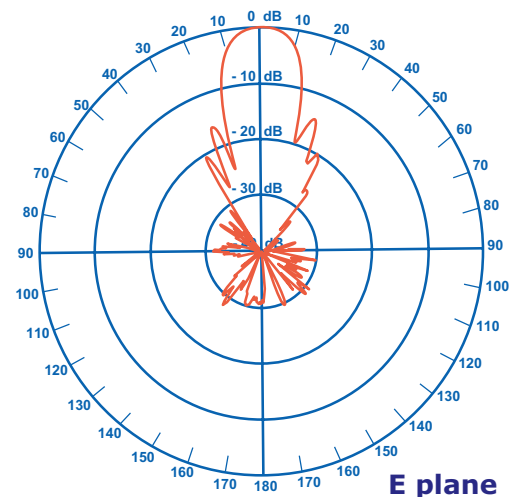
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance	: 3.40 λ
- Pratical distance	: 0.82 m
- H plane - Electrical distance	: 3.40 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	: 4.2 daN
Approximate wind load (45 m/s - 100 mph)	
- Horizontal polarization	: 16.1 daN
- Vertical polarization	: 13.6 daN

Radiation patterns



4x35 elements Yagi antenna

1240 to 1260 MHz

Part Nr. 20640

Electrical data

Radiation at 1255 MHz

Effective electrical length : 12.83 λ

Isotropic gain : 26.6 dBi

Aperture angle @ -3 dB

- E-plane : 2 x 4°

- H-plane : 2 x 4.1°

First side lobe set

- E-plane : - 10 dB @ 12°

- H-plane : - 9 dB @ 12°

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 Ω

Impedance match bandwidth @ SWR <1.3/1..... : 1251 to 1267 MHz

Acceptable RF power (continuous duty) : 300 W

Mechanical data

Connector : N

Overall length : 3.07 m

Mass : 15.0 kg

Effective wind load

- Horizontal polarization : 0.52 m²

- Vertical polarization : 0.44 m²

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

- Horizontal polarization : 11.0 daN

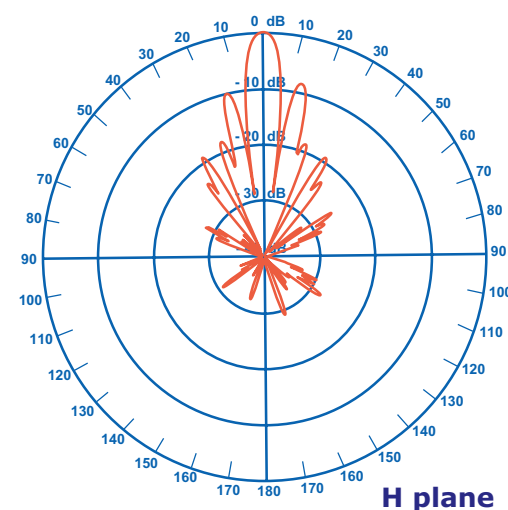
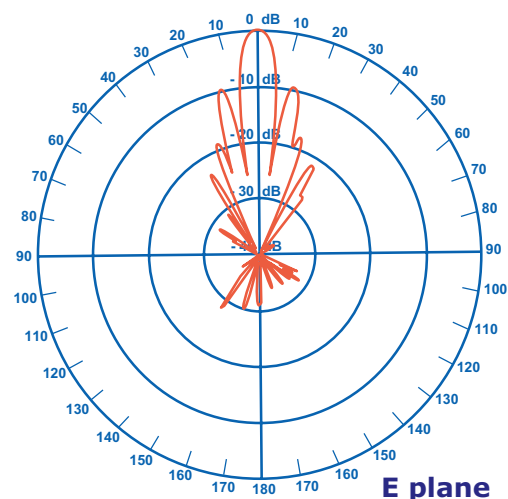
- Vertical polarization : 9.2 daN

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

- Horizontal polarization : 35.4 daN

- Vertical polarization : 30.0 daN

Radiation patterns



4x23 elements Yagi antenna

1240 to 1260 MHz

Part Nr. 20648

Electrical data

Radiation at 1255 MHz

Effective electrical length : 7.61 λ

Isotropic gain : 24.5 dBi

Aperture angle @ -3 dB

- E-plane : 2 x 4.8°

- H-plane : 2 x 5°

First side lobe set

- E-plane : - 12 dB @ 15°

- H-plane : - 11 dB @ 15°

Rear protection : - 19.5 dB

Average stray radiation

- E-plane : - 36 dB

- H-plane : - 28 dB

Bandwidth

Gain @ -1 dB : 1205 to 1271 MHz

Nominal impedance : 50 Ω

Impedance match bandwidth @ SWR <1.3/1..... : 1250 to 1260 MHz

Acceptable RF power (continuous duty) : 300 W

Mechanical data

Connector : N

Overall length : 1.85 m

Mass : 8.4 kg

Effective wind load

- Horizontal polarization : 0.24 m²

- Vertical polarization : 0.20 m²

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

- Horizontal polarization : 5.5 daN

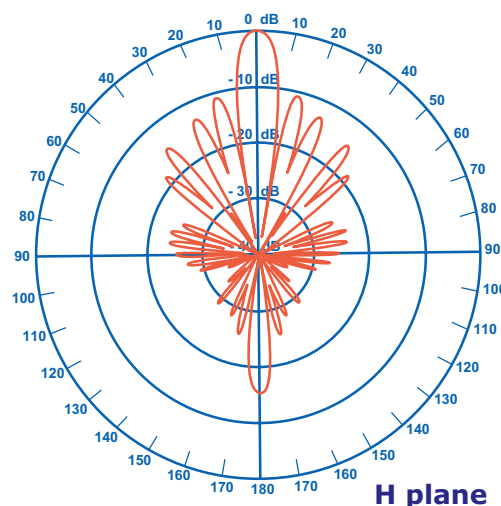
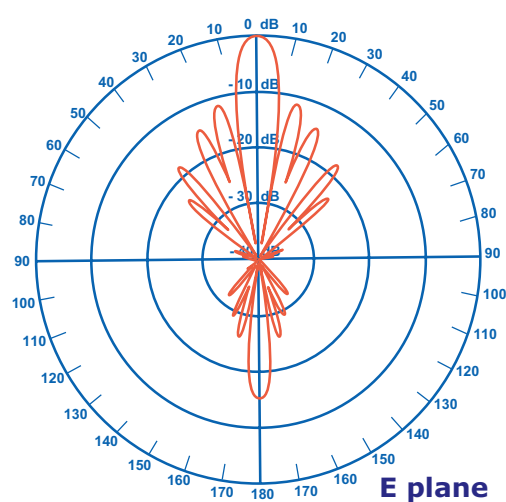
- Vertical polarization : 4.6 daN

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

- Horizontal polarization : 17.6 daN

- Vertical polarization : 14.7 daN

Radiation patterns



55 elements Yagi antenna

1240 to 1260 MHz

Part Nr. 20650



Electrical data

Radiation at 1255 MHz

Effective electrical length	: 19.3 λ
Isotropic gain	: 21.8 dBi
Aperture angle @ -3 dB	
- E-plane	: 2 x 6.6°
- H-plane	: 2 x 8.7°
First side lobe set	
- E-plane	: - 10 dB @ 17°
- H-plane	: - 9.6 dB @ 17°
Rear protection	: - 24.6 dB
Average stray radiation	
- E-plane	: - 42 dB
- H-plane	: - 32 dB

Bandwidth

Gain @ -1 dB	: 1233 to 1271 MHz
Nominal impedance	: 50 Ω
Impedance match bandwidth @ SWR <1.3/1.....	: 1250 to 1260 MHz
Acceptable RF power (continuous duty)	: 300 W

Array of 2 or 4 antennas

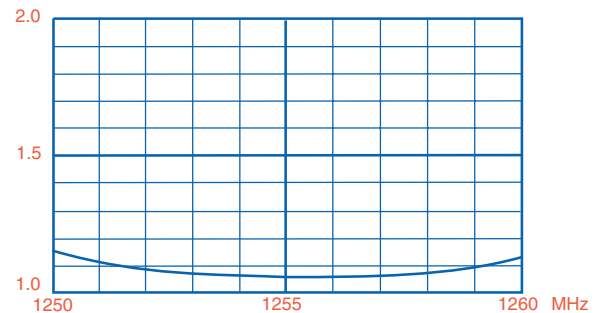
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance	: 4.40 λ
- Pratical distance	: 1.05 m
- H plane - Electrical distance	: 4.40 λ
- Pratical distance	: 1.05 m

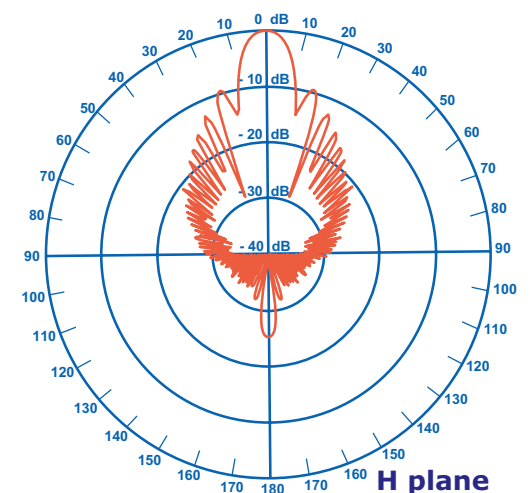
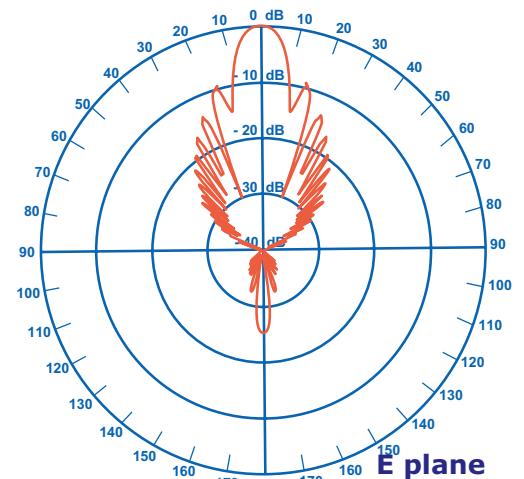
Mechanical data

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	: 4.8 daN
Approximate wind load (45 m/s - 100 mph)	
- Horizontal polarization	: 24.6 daN
- Vertical polarization	: 15.2 daN

SWR curve



Radiation patterns



4x55 elements Yagi antenna

1240 to 1260 MHz

Part Nr. 20660

Electrical data

Radiation at 1255 MHz

Effective electrical length : 19.3 λ

Isotropic gain : 26.3 dBi

Aperture angle @ -3 dB

- E-plane : 2 x 3.3°

- H-plane : 2 x 4.3°

First side lobe set

- E-plane : - 12 dB @ 9°

- H-plane : - 12 dB @ 9°

Rear protection : - 24.6 dB

Average stray radiation

- E-plane : - 42 dB

- H-plane : - 32 dB

Bandwidth

Gain @ -1 dB : 1233 to 1271 MHz

Nominal impedance : 50 Ω

Impedance match bandwidth @ SWR <1.3/1..... : 1250 to 1260 MHz

Acceptable RF power (continuous duty) : 300 W

Mechanical data

Connector : N

Overall length : 4.64 m

Mass : 24.0 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

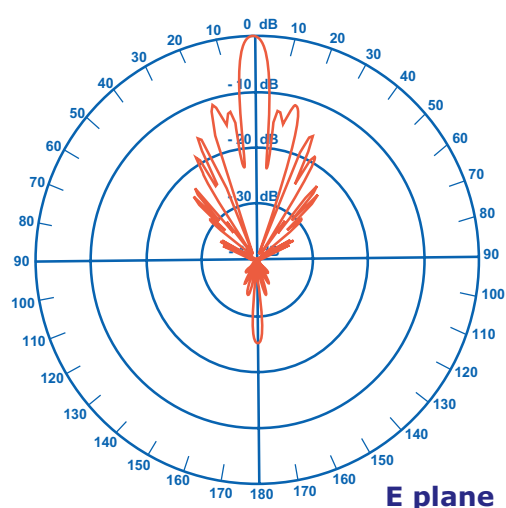
- Vertical polarization : 10.6 daN

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

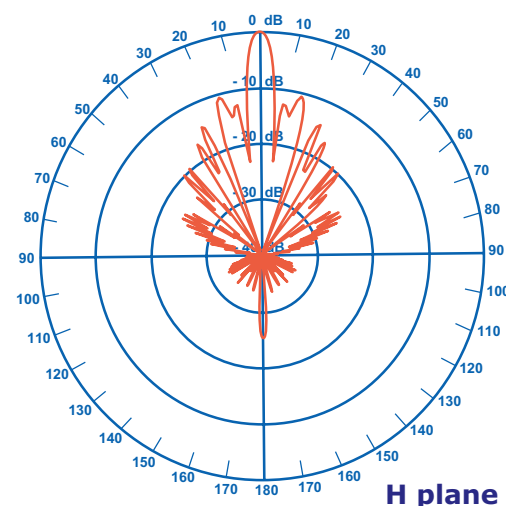
- Horizontal polarization : 54.1 daN

- Vertical polarization : 33.4 daN

Radiation patterns



E plane



H plane