

# 25 elements Yagi antenna

## 2300 to 2420 MHz

## Part Nr. 20745



### Electrical data

#### Radiation at 2400 MHz

|                                   |                  |
|-----------------------------------|------------------|
| Effective electrical length ..... | : 10.0 $\lambda$ |
| Isotropic gain .....              | : 18.1 dBi       |
| Aperture angle @ -3 dB            |                  |
| - E-plane .....                   | : 2 x 7.2°       |
| - H-plane .....                   | : 2 x 7.3°       |
| First side lobe set               |                  |
| - E-plane .....                   | : - 11 dB @ 22°  |
| - H-plane .....                   | : - 9.5 dB @ 22° |
| Rear protection .....             | : - 25 dB        |
| Average stray radiation           |                  |
| - E-plane .....                   | : - 23 dB        |
| - H-plane .....                   | : - 22 dB        |

### Bandwidth

|   |                    |
|---|--------------------|
| Gain @ -1 dB .....                          | : 2300 to 2450 MHz |
| Nominal impedance .....                     | : 50 $\Omega$      |
| Impedance match bandwidth @ SWR <1.3/1..... | : 2300 to 2420 MHz |
| Acceptable RF power (continuous duty) ..... | : 200 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 ..... | : 3.33 $\lambda$ |
| - Pratical distance .....             | : 0.42 m         |
| - H plane - Electrical distance ..... | : 3.33 $\lambda$ |
| - Pratical distance .....             | : 0.42 m         |

### Mechanical data

|  |                        |
|--|------------------------|
| Connector .....                          | : N                    |
| Overall length .....                     | : 1.45 m               |
| Mass .....                               | : 0.95 kg              |
| Effective wind load                      |                        |
| - Horizontal polarization .....          | : 0.056 m <sup>2</sup> |
| - Vertical polarization .....            | : 0.032 m <sup>2</sup> |
| Approximate wind load (25 m/s - 55 mph)  |                        |
| - Horizontal polarization .....          | : 2.2 daN              |
| - Vertical polarization .....            | : 1.2 daN              |
| Approximate wind load (45 m/s - 100 mph) |                        |
| - Horizontal polarization .....          | : 6.9 daN              |
| - Vertical polarization .....            | : 4.0 daN              |

### Radiation patterns

