



DUAL BAND VHF AND L1 GPS RAILWAY ANTENNA

146 ÷ 174 MHz, 1575.42 MHz

BFLD2-R/F
146/174

POLOMARCONI.IT

POLOMARCONI offers a very wide range of wireless products. Our products can be tailored according to the customer's need.

TRANSPORT

Electrical Specifications

VHF BAND

| | |
|--|--------------------------------|
| Frequency band (MHz) | 146 ÷ 174 |
| Impedance (Ω) | 50 |
| VSWR | |
| 146÷174MHz band | $\leq 2.0:1$ |
| 158.100÷158.375MHz band | $\leq 1.6:1$ |
| 163.100÷163.375MHz band | $\leq 1.6:1$ |
| Continuous Max. Power (W) | 30 |
| Polarization | vertical |
| Gain (dB) over $\lambda/4$ monopole antenna | 0 |
| Operation Temp. Range ($^{\circ}\text{C}$) | $-40^{\circ} \div +70^{\circ}$ |

SATELLITE NAVIGATION AND GEOLOCALIZATION BAND

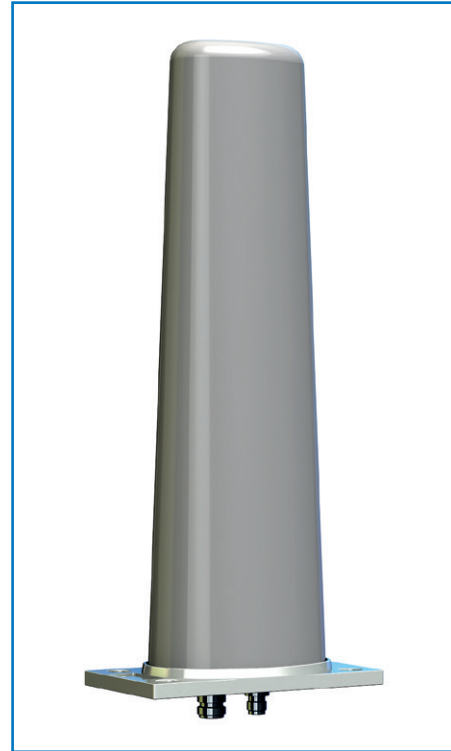
| | |
|--|---|
| Frequency band (MHz) | 1574.42 ÷ 1576.42 |
| Impedance (Ω) | 50 |
| Polarization | Right Hand Circular Polarization (RHCP) |
| Gain (dBic) | ≥ 25 (typical 27), @ $T_0=25^{\circ}\text{C}$, $V_{DC}=5\text{V}$ |
| Noise Figure (dB) | ≤ 2.5 , @ $T_0=25^{\circ}\text{C}$, $V_{DC}=5\text{V}$ |
| Operating supply voltage (V_{DC}) | $3.0 \div 7.0$ |
| Current consumption (mA) | ≤ 35 , @ $T_0=25^{\circ}\text{C}$, $V_{DC}=5\text{V}$ |
| Satellite navigation and geolocalization supported systems | GPS |
| Operating Temp. Range ($^{\circ}\text{C}$) | $-40 \div +70$ |



Patent n° 1548873

Antenna for train with protective means against high voltages.

Patent has been used by SNCF and by the most important producers of trains.



Mechanical Specifications

| | |
|---|---|
| Connectors | N f for VHF band TNC f for Satellite navigation and geolocalization band |
| Dimensions (Height from installation surface x Width x Depth, mm) | 360x80x145 |
| Weight (kg) | abt. 1.2 |
| Materials | |
| base | Aluminium with SURTEC 650 galvanic treatment |
| radome | High impact polycarbonate |
| Mounting | at the center of a metallic conductive surface with minimum sizes of 2000x1000mm. |



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Environmental Specifications

ATMOSPHERIC and CLIMATIC CONDITIONS according to EN 50155 and EN 60068

MECHANICAL CONDITIONS according to EN 50155

EMC according to EN 50121-3-2

HIGH VOLTAGE PROTECTION according to EN 50153 and EN 50124-1

DC GROUNDING, HIGH CURRENT PROTECTION according to EN 50153, UIC 758, UIC 533, EN 50388 and EN 50123

Short-circuit currents flow / time before breaking
70 kA / 5 ms – 40 kA / 100 ms (DC)
31.5 kA / 10 ms – 15 kA / 100 ms (AC)

RoHS 2011/65/EU compliant

FLAMMABILITY RATING according to EN 45545-2

IP rating: IP67

MOUNTING FLANGE

Mounting: at the center of a metallic conductive surface with minimum sizes of 2000x1000mm; it's advisable to keep the mounting surface clean and free from paint for an optimal electrical contact. Mounting flange holes are indicated in the relevant mounting instructions document

Grounding and high voltage protection: Our antennas have passed the strict SNCF's tests that approved our products as protected against lightning and high-tension lines thanks to our patented DC and AC grounded system.

Multiband: Our multi-band antennas can operate in all frequency ranges simultaneously.

Advantage: GPS LNA amplifier included; there is no need of an external low noise GPS amplifier as the internal GPS antenna is already amplified.

DRILLING MASK

