

## Antennas 700-1000 MHz Antennas ST421R Series

### ST421R-SF3SNF Mobile omni, 0 dBd, low profile, radome enclosed, 870-960 MHz

- · Omni-directional transit antenna with heavy duty fiberglass radome with polyurethane coating
  - Covers both public GSM and railway GSM-R frequency bands
  - · Ideal for height-restricted applications
  - Aerodynamic design reduces wind-loading

The ST421 is an omni-directional antenna which covers both the public GSM and railway GSM-R frequency bands.

This extremely rugged radome-enclosed antenna is specifically designed for rail and heavy transport applications. Its low profile makes it ideal for train use where antenna height is limited by restrictive loading gauges.

## **Application Notes**

- For optimal operation, the ST421R should be mounted on a 24x24 inch ground plane. The antenna should still perform using a 10x10 inch ground plane but won't be optimized.
- IP rating = 65



| Region   | United States         | Europe, Middle East and Africa   | Caribbean and Latin America    | Canada and rest of the world                             |
|--|-----------------------|--|--------------------------------|--|
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| Product Specification Sheet<br>EPR 016775<br>Customer Tech Manual 005888 |                       | ST421R-SF3SNF<br>Sinclair's commitment to product leadership may result in i | Issue: 11                      | Dated: 02-03-17<br>Dated: 02-03-17                       |



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| Frequency Range           | MHz              | 870 to 960        |    |
|---------------------------|------------------|-------------------|----|
| Bandwidth                 | MHz              | 90                |    |
| Connector                 |                  | N-Female (Socket) |    |
| Gain (nominal)            | dBd (dBi)        | unity (2.1)       | *1 |
| Input VSWR (max)          |                  | 1.5:1             |    |
| Polarization              |                  | vertical          |    |
| Impedance                 | Ω 50             |                   |    |
| Pattern                   | Omni-directional |                   |    |
| Average Power Input (max) | W 200            |                   |    |
| Lightning protection      |                  | DC ground         |    |

### Notes

\*1 : nominal, ref. to 1/4-wave monopole

### **Mechanical Specifications**

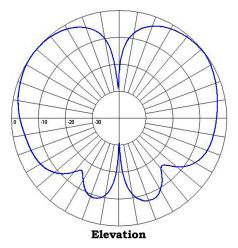
| Width                  | in (mm)          | 3.7 (94)             |  |  |
|------------------------|------------------|----------------------|--|--|
| Length/ Height         | in (mm)          | 2.09 (53)            |  |  |
| Length                 | in (mm)          | 7.37 (187)           |  |  |
| Radome material        | Grey, Fiberglass |                      |  |  |
| Actual shipping weight | lbs (kg)         | 2.5 (1.14)           |  |  |
| Shipping dimensions    | in (mm)          | 10x5x5 (254x127x127) |  |  |
| Ground Plane (min)     | in (mm)          | 10x10                |  |  |
| Mounting hardware      |                  | BOLT M6 x 25, A2     |  |  |
| Ingress protection     |                  | 65                   |  |  |

°F (°C)

#### **Environmental Specifications**

Temperature range

-22 to +140 (-30 to +60)



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| Customer Tech Manual 005888               |                       | Sinclair's commitment to product leadership may result in improvement or change to this product |                                |  |  |

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