



# fractus

Optimised Antennas  
for Wireless Devices

DATA SHEET · PRODUCTS & SERVICES

## Small SMD chip antenna for small high performance wireless headset devices



Fractus specialises in enabling effective mobile communications. Using fractal technology, we design and manufacture optimised antennas to make your wireless devices more competitive. Our mission is to help our clients develop innovative products and accelerate their time to market through our expertise in antenna design, testing and manufacturing.

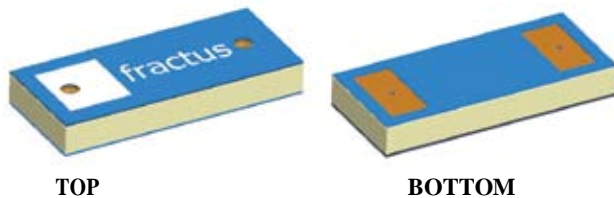
### Fractus® Slim Reach Xtend™ Bluetooth® Chip Antenna

P/N: FR05-S1-N-0-104

The Fractus Slim Reach Xtend Bluetooth Chip Antenna for wireless headsets is a tiny rectangular 3D-shaped antenna suitable for small headset devices operating at 2.4 GHz where high performance, low-cost and reduced form factor are mandatory. Its broad bandwidth ensures high quality signal reception and transmission across wireless devices and different plastic housing regardless of how a user positions the device.

Taking advantage of the space-filling properties of fractals, this small monopole antenna is ideal for use within indoor (highly scattered) environments. The Fractus Slim Reach Xtend Chip Antenna speeds your time to market by allowing you to easily integrate it within your industrial design (SMD mounting).

7 mm x 3 mm x 1 mm (image larger than real size)



TOP

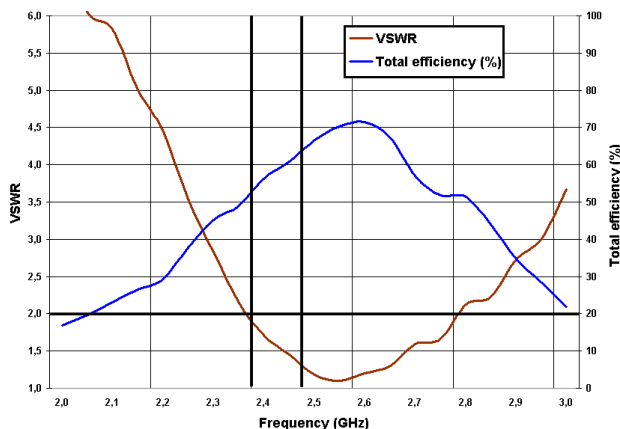
BOTTOM



PAT. US 7,148,850, US 7,202,822

### Product Benefits

- **Small form factor**  
Allows integration into space limited areas easily and efficiently with minimum clearance area.
- **Broad bandwidth**  
Ensures robust performance when considering different plastic housing and close body proximity.
- **High performance**  
Increases signal quality and device range due to a superior radiation efficiency.
- **Omnidirectional pattern**  
Optimises device usage due to a uniform radiation pattern.



| Technical Features     |                   |
|------------------------|-------------------|
| Frequency range        | 2.4 GHz – 2.5 GHz |
| Average Efficiency     | 61%               |
| Peak Gain              | 1.07 dB           |
| Radiation Pattern      | Omnidirectional   |
| VSWR                   | < 2:1             |
| Polarization           | Linear            |
| Weight (aprox.)        | 0.05 g            |
| Temperature            | -40 to + 85°C     |
| Impedance              | 50Ω               |
| Dimensions (L x W x H) | 7 mm x3 mm x1 mm  |

Measures from the evaluation board (40 mm x 20 mm x 1 mm PCB)

For additional information, please download the user manual from <http://www.fractus.com/main/fractus/documentation> or contact [info@fractus.com](mailto:info@fractus.com).