

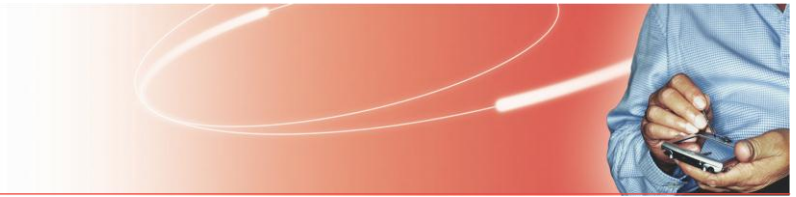


# fractus

Optimised Antennas  
for Wireless Devices

DATA SHEET · PRODUCTS & SERVICES

## Small SMD Chip antenna for miniature wireless products



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® Micro Reach Xtend™ 2.4GHz Chip Antenna

P/N: FR05-S1-N-0-110

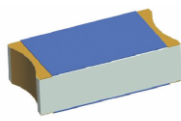
Fractus® Micro Reach Xtend™ Chip Antenna is a very small size and low cost antenna that combines reduced clearance area required within the customer PCB with its high performance and integration flexibility. This makes it ideal for small consumer electronics devices such as small wireless headsets and highly integrated multifunction mobile handsets.

Taking advantage of the space-filling properties of fractals, this small monopole antenna is perfect to use within indoor (highly scattered) environment.

**4.1 mm x 2 mm x 1 mm** (image larger than real size)



TOP



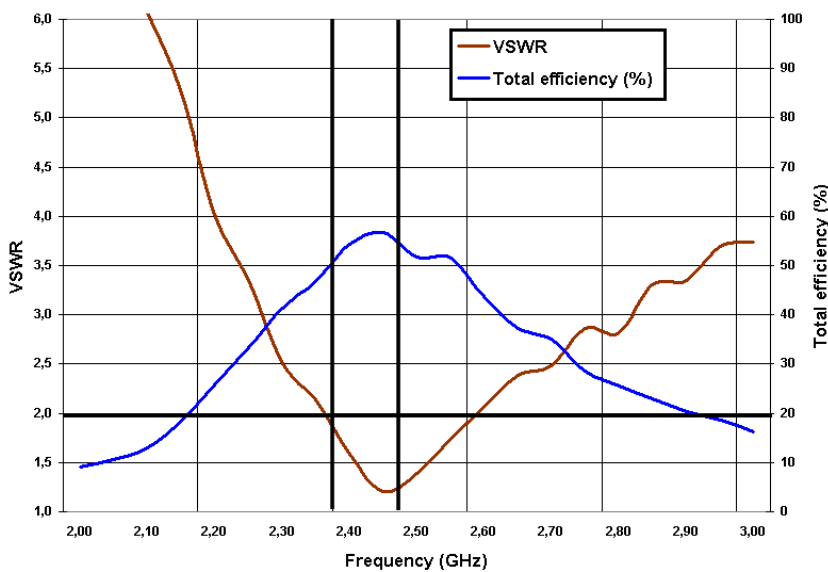
BOTTOM



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.
- **Low cost**  
Enables product developers to reduce BoM cost increasing device competitiveness.
- **Omnidirectional pattern**  
Optimises device usage due to a uniform radiation pattern.
- **Broad bandwidth**  
Ensures robust performance when considering different plastic housing and close body proximity.

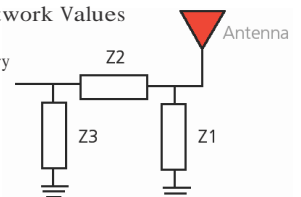


Technical Features	
Frequency range	2.4 GHz - 2.5 GHz
Average Efficiency	54.2 %
Peak Gain	0.2 dB
Radiation Pattern	Omnidirectional
VSWR	< 2:1
Polarization	Linear
Weight (approx.)	0.01 g
Temperature	-40 to + 85°C
Impedance	50Ω
Dimensions (L x W x H)	4.1 mm x 2 mm x 1 mm

Measures from the evaluation board (40 mm x20 mm x 1 mm PCB) with 2 element matching network

Matching Network Values

- Z1: Not necessary
- Z2: L=7.5 nH
- Z3: C=1.2 pF



Optimal matching network values may vary depending on the antenna environment.

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).