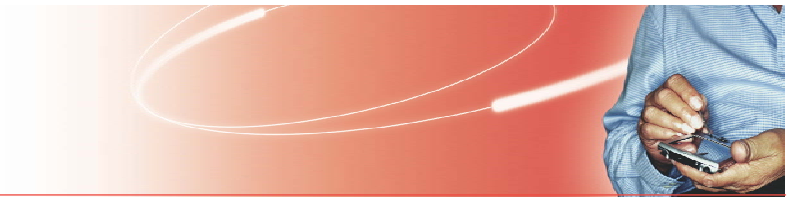
fractus
Optimised Antennas
for Wireless Devices

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.

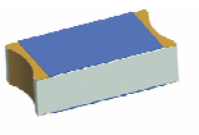
Fractus® Micro Reach Xtend™ 2.4GHz Chip Antenna P/N: FR05-S1-N-0-110

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.

(image larger than actual size)

Front



Back

This product is protected by at least the following patents PAT. US 7,148,850, US 7,202,822 and other domestic and international patents pending

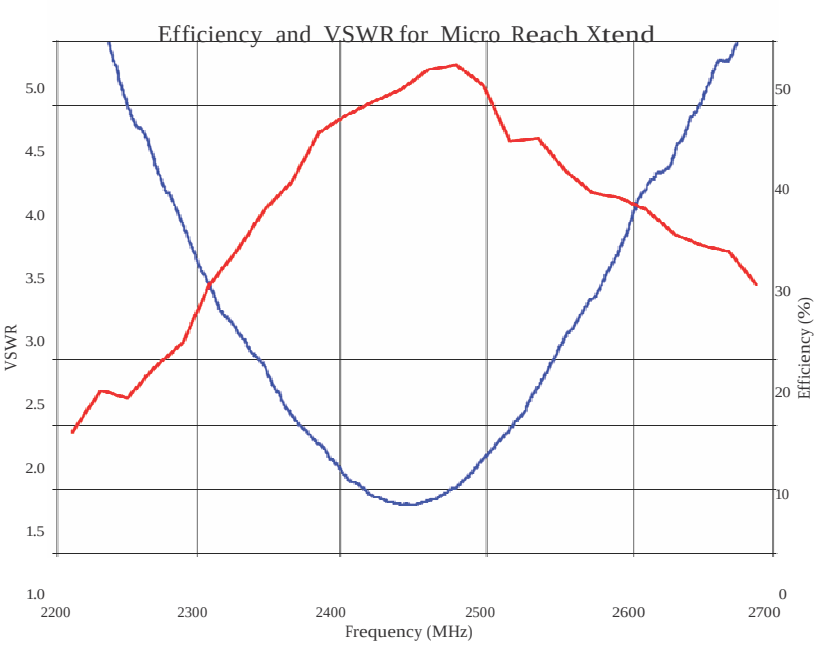
Product Benefits

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.

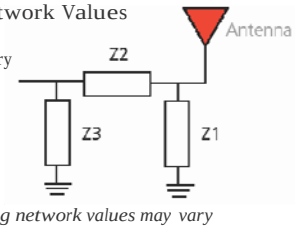


Frequency Range	2.4 - 2.5 GHz
Average Efficiency	> 45 %
Peak Gain	> -0.5 dBi
VSWR	< 2:1
Weight	0.10 g
Temperature	-40 to +85 °C
Impedance	50 Ω Unbalanced
Dimensions	See User Manual p.7

Measured results from a reference evaluation board of 40x20 mm, with a 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.