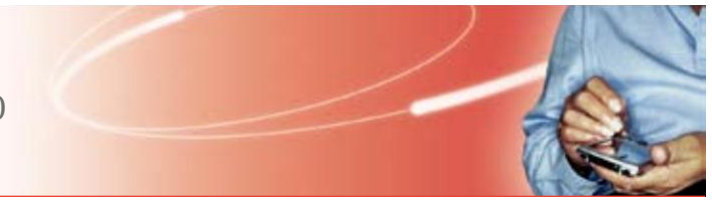
fractus
Optimised Antennas
for Wireless Devices

DATA SHEET · PRODUCTS & SERVICES

Small SMD chip antenna for USB and MIMO Cardbuses a/b/g/n 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® Compact Dual-band Reach Xtend™ Chip Antenna P/N: FR05-S1-NO-1-004

The Fractus Compact Dual-band Reach Xtend Chip Antenna for 802.11 a/b/g/n WLAN systems is a tiny rectangular 3D-shaped antenna specifically designed for high performance USB devices and other small PCB devices operating at both 2.4 GHz and 5 GHz bands, where high performance and low-cost are mandatory. Its small dimensions allows various configurations within the USB devices and may help Card-bus devices in the enhancement of their throughput by using MIMO algorithms with more than 2 antennas.

Taking advantage of the space-filling properties of fractals, this small monopole antenna is ideal for use within indoor (highly scattered) environments. The Fractus Compact Dual-band 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 2 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 small USB devices easily and efficiently with minimum clearance area.

High efficiency

Increases your device range, signal quality battery life.

Multiband behaviour

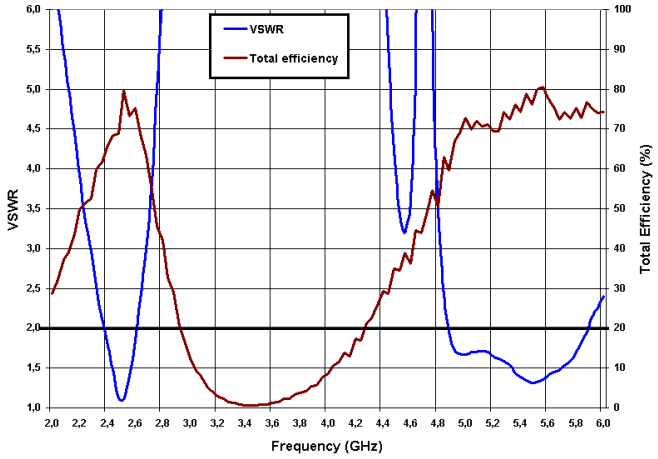
Provides superior performance for both 2.4 and 5 GHz ISM bands in the same structureareas easily and efficiently.

Omnidirectional pattern

Optimises device usage due to a uniform radiation pattern.

Worldwide functionality

Enables devices to work globally in WLAN systems: Europe/US/Asia.



Technical Features	802.11 b/g/n	802.11 a/n
Frequency Range	2.4-2.5 GHz	4.9-5.875 GHz
Peak Gain	1.77 dB	4.9 dB
VSWR	< 2:1	< 2:1
Average Efficiency	70%	73.7%
Radiation Pattern	Omnidirectional	
Weight (aprox.)	0.1 g	
Temperature	-40 to +85º C	
Impedance	50 Ω	
Antenna Dimensions (L x W x H)	7 mm x 3 mm x 2 mm	

Measures from the evaluation board (55.4 mm x 20 mm x 0.8 mm PCB)

For additional information, please download the user manual from http://www.fractus.com/main/fractus/documentation or contact info@fractus.com.

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