

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**Series: Internal Antenna** 

**Description: 2.4/5GHz FPC antenna** 

PART NUMBER: W3918XXXX



## **Features:**

- 2400-2500 / 4900-5925 MHz
- Size 35.2 X 8.5 X 0.15 mm
- Efficiency > 60/70%
- VSWR < 2</li>
- Nominal impedance 50  $\Omega$
- Cable and connector can be customized

## **Applications:**

- WiFi, Bluetooth, BLE, ZigBee
- DSRC
- ISM band radios
- IoT, M2M

All dimensions are in mm / inches

Issue: 1714

In the effort to improve our products, we reserve the right to make changes judged to be necessary. CONFIDENTIAL AND PROPRIETARY INFORMATION

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#### **TECHNICAL DATA SHEET**

**Description: 2.4/5GHz FPC antenna** 

**Series: Internal Antenna** 

PART NUMBER: W3918XXXX

## This document covers all product variants of the following product family:

W3918B0050 50mm 1.13mm OD cable U.FL compatible connector

W3918B0100 100mm 1.13mm OD cable U.FL compatible connector

W3918T0050 50mm 1.13mm OD cable RP-SMA MALE, straight connector

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### **ELECTRICAL SPECIFICATIONS**

Frequency 2400-2500, 4900-5925MHz

Nominal Impedance  $50\Omega$ 

VSWR < 2

Gain 3dBi+/- 1dB@ 2.4GHz

4dBi+/-1dB@5GHz

Efficiency(%) 60/70%

Radiation Pattern Omni

Polarization: Linear

Power withstanding 2 W

Connector Optional

Cable type 1.13mm coaxial cable black

Cable length Optional

# (\*) All RF parameters measured on 2mm thick PC plate



#### **TECHNICAL DATA SHEET**

**Description: 2.4/5GHz FPC antenna** 

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## **MECHANICAL SPECIFICATIONS**

Radiator material FPC

Color Black

Adhesive 3M467

Thickness(with adhesive, no liner) 0.15 mm

FPC size(L X W X T) 35.2 X 8.5 X 0.15 mm

## **ENVIRONMENTAL SPECIFICATIONS**

Operating temperature

-40/+85 ° C



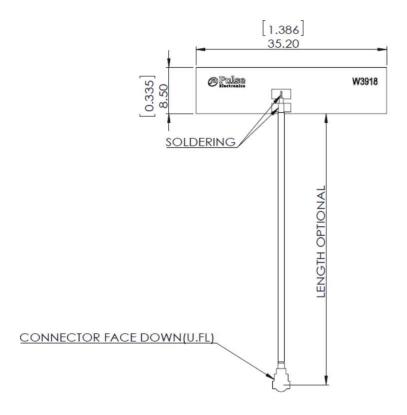


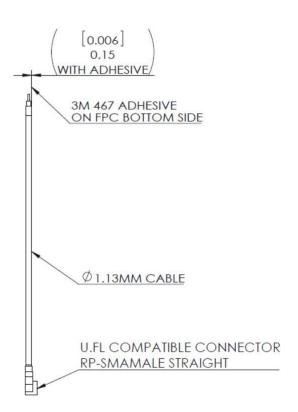


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## **MECHANICAL DRAWING**







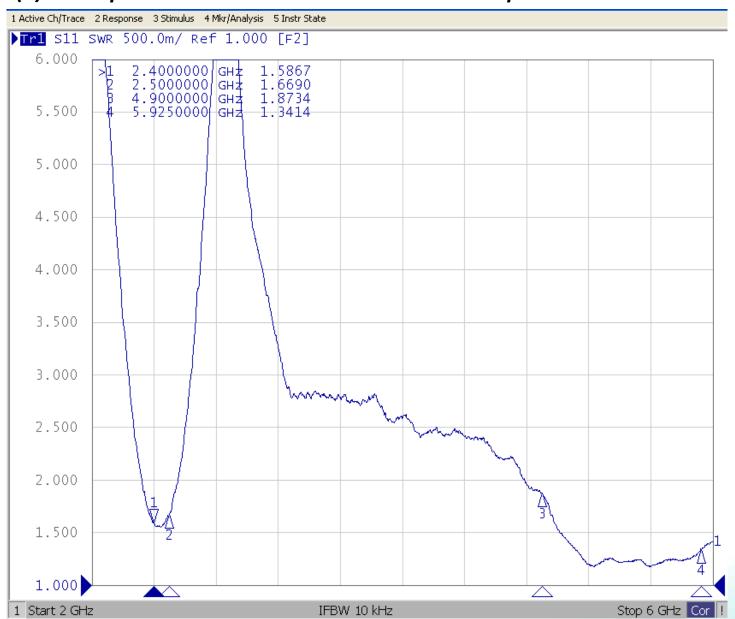


**Series: Internal Antenna** 

**PART NUMBER: W3918XXXX** 

#### **CHARTS**

# (\*) All RF parameters measured on 2mm thick PC plate



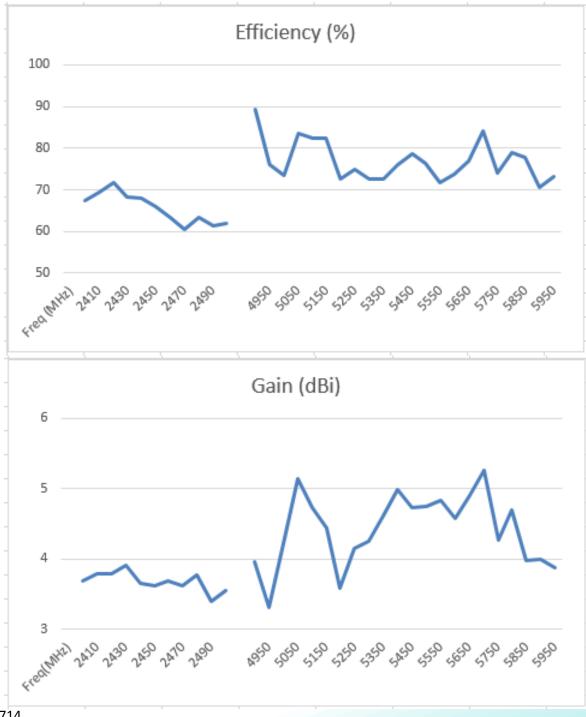




**Series: Internal Antenna** 

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## **CHARTS** (\*) All RF parameters measured on 2mm thick PC plate



Issue: 1714



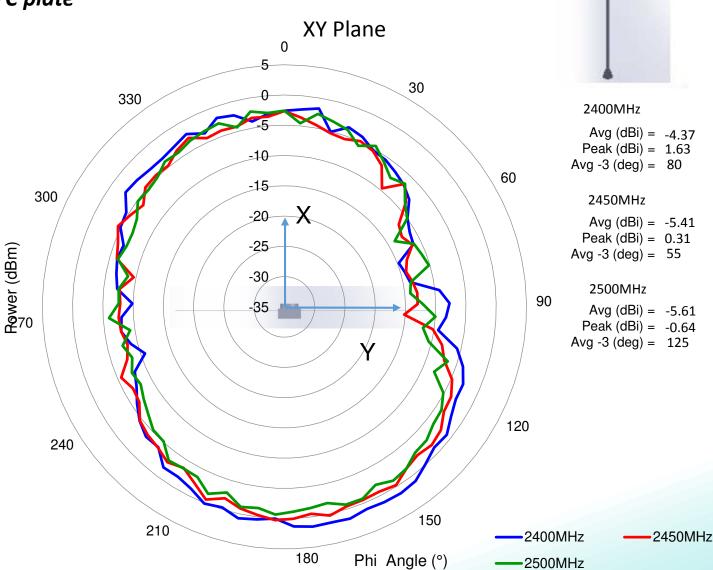
**Series: Internal Antenna** 

**PART NUMBER: W3918XXXX** 

## **CHARTS**

Typical free space radiation pattern WIFI2.4GHz

(\*) All RF parameters measured on 2mm thick PC plate



Issue: 1714

ROHS



**Series: Internal Antenna** 

**PART NUMBER: W3918XXXX** 

#### **CHARTS**

Typical free space radiation pattern WIFI2.4GHz (\*) All RF parameters measured on 2mm thick PC plate **ZX Plane** 30 330 2400MHz Avg (dBi) = -0.69Peak (dBi) = 3.61 Avg - 3 (deg) = 42.60 300 2450MHz -20 Avg (dBi) = -1.18Peak (dBi) = 3.38 Power (dBm) -25 Avg - 3 (deg) = 40-30 2500MHz 90 -35 Avg (dBi) = -1.31270 Peak (dBi) = 3.22Avg -3 (deg) = 42.



120

2400MHz

2500MHz

150

Theta Angle

2450MHz

210

240

180



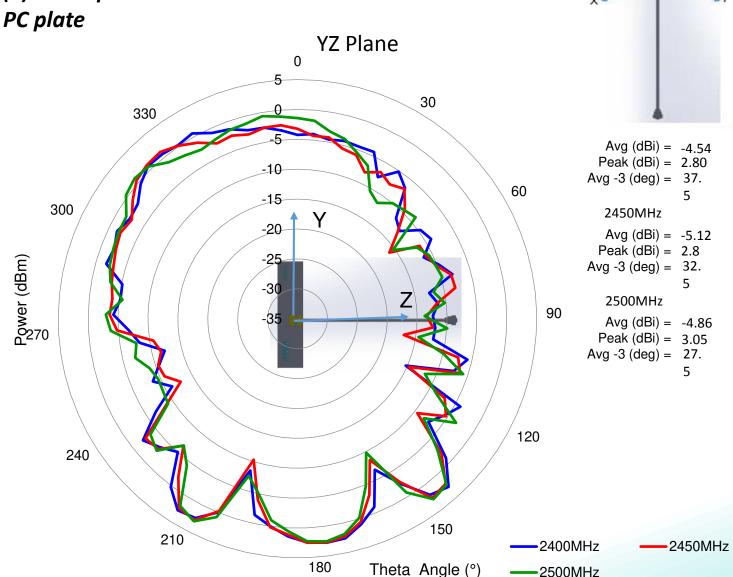
**Series: Internal Antenna** 

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#### **CHARTS**

Typical free space radiation pattern WIFI2.4GHz

(\*) All RF parameters measured on 2mm thick

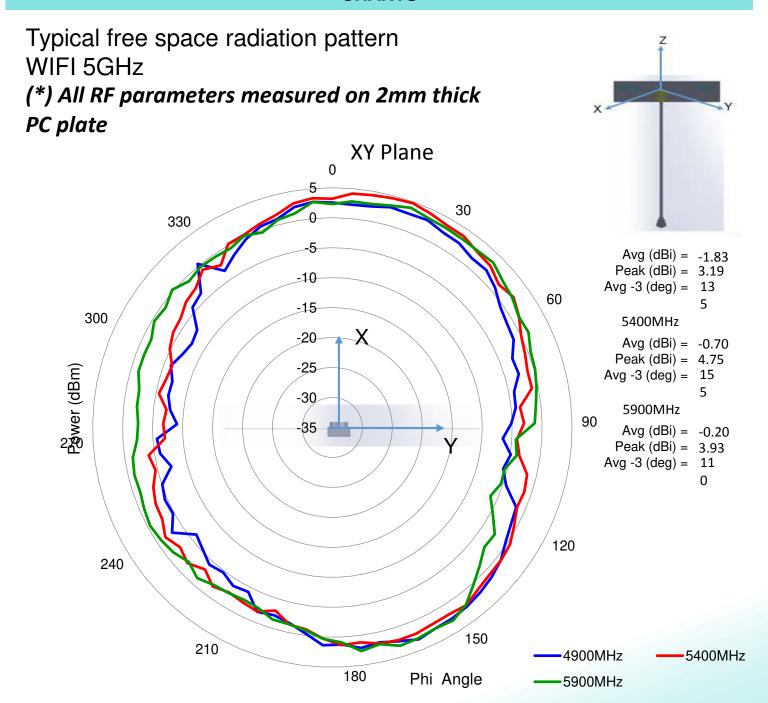




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**PART NUMBER: W3918XXXX** 

### **CHARTS**





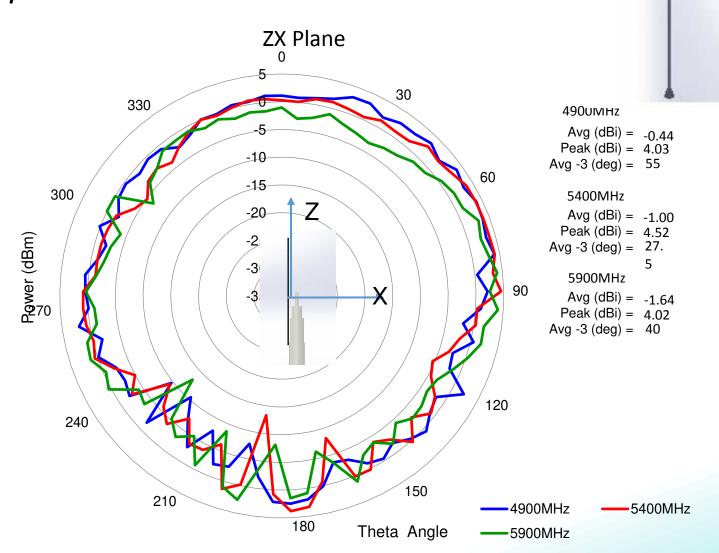
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**PART NUMBER: W3918XXXX** 

#### **CHARTS**

Typical free space radiation pattern WIFI 5GHz

(\*) All RF parameters measured on 2mm thick PC plate





**Series: Internal Antenna** 

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#### **CHARTS**

Typical free space radiation pattern WIFI 5GHz (\*) All RF parameters measured on 2mm thick PC plate YZ Plane 0 5 30 330 Avg (dBi) = -3.28Peak (dBi) = 3.54 Avg - 3 (deg) = 4060 -15 300 5400MHz -20 Avg (dBi) = -3.11Peak (dBi) = 2.9-25 Pwer (dBm) Avg -3 (deg) = 47. 5900MHz 90 Avg (dBi) = -2.48Peak (dBi) = 2.48 Avg - 3 (deg) = 50120 240 150 210 4900MHz 5400MHz 180 Theta Angle 5900MHz





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## **PACKAGING**

10PCS/PE bag 10 PE bag/foam bag 50 foam bag/ carton box

Total 5000PCS/Carton box



