



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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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Description: On-ground BLE/NFC combo

Series: Embedded Antenna

PART NUMBER: W5101

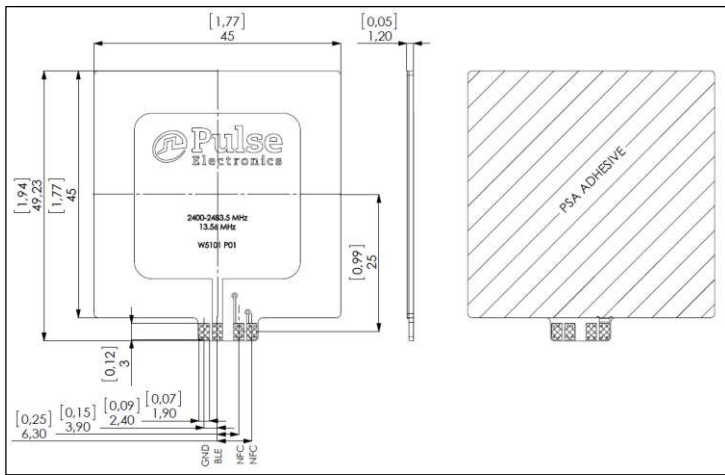


Features:

- Own feed ports for 2.4GHz and NFC 13.56MHz
- Ultra thin 1.2mm
- Surface area 45x45mm
- Operates on top of metal ground plane
- Mounting with adhesive tape

Applications:

- Devices using 2.4GHz radios and 13.56MHz NFC connectivity
- BLE, Bluetooth, Zigbee, ISM 2.4GHz
- Pairing, sharing



All dimensions are in mm / inches

Issue: 1613

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

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Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998



Description: On-ground BLE/NFC combo**Series:** Embedded Antenna**PART NUMBER:** W5101**ELECTRICAL SPECIFICATIONS**

Frequency P1	2400-2483.5 MHz
Frequency P2	13.56 MHz
P1 nominal Impedance	50Ω
P1 VSWR	<3:1
P1 Gain in free space	0.5dBi
P1 Gain over metal plate	1.5dBi
P2 Inductance in free space	1.13μH
P2 Q-value in free space	46
P2 Self Resonant Frequency in free space	57.6MHz
P2 Inductance over metal plate	1.11μH
P2 Q-value over metal plate	33
P2 Self Resonant Frequency over metal plate	53.8MHz
Connector type	Contact pads

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Description: On-ground BLE/NFC combo**Series:** Embedded Antenna**PART NUMBER:** W5101**MECHANICAL SPECIFICATIONS**

Color	Black
Weight	5.7 g
Fixing system	Pressure sensitive adhesive

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40 to 85°C
Storage temperature	MIL STD 810G: 24h at 85°C and 24h at -40°C
Temperature shock	MIL STD 810G: Method 503.5, -40 for 1 hr to +85 C for 1 hr @ 15 deg.C/min rate of change; 3 cycles
Humidity	MIL STD 810G: 24h at 60°C and 95%RH
Drop test	Top, bottom, side. 3 times/orientation, 40"

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Description: On-ground BLE/NFC combo

Series: Embedded Antenna

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MECHANICAL DRAWING

NOTES: UNLESS OTHERWISE SPECIFIED
 1. INTERPRET THIS SPECIFICATION PER PULSE PQ: 7.004.000 AND STANDARDS REFERENCED THEREIN.
 2. VISUAL QUALITY PER PULSE PQ S.030.000 CLASS III
 3. PRODUCT IS FREE FROM FINGERPRINTS, DUST, GREASE OR SIMILAR EXTERNAL AGENTS
 4. DIMENSIONS WITH * ARE FOR INSPECTION, ONLY DIMENSIONS WITH DIMENSION NUMBER NEED TO BE MEASURED

Item	Ordering number	Name of Part	Part Number	Standard Catalogue	Antenna	Dimensions	Qty
3	0750482.001	Copper tape					1
4	0250146.001	Fiber					1
3	0750484.001	ISBITE					1
2	0750481.001	ISBITE					1
1	0250143.001	BLE/NFC PCB					1

Customer:
 Please follow Pulse (links of hazardous substances (RoHS, Halogen) in the document) Pulse (hazardous substances (RoHS, Halogen) and "Vendor Survey Questionnaire, Antenna Comparison (Pulse&Amp;Larsen)

Material Declaration:
 Recycled content: none
 Hazardous Chemicals: none
 RoHS compliance: solder required: total 0 pcs.
 Halogen compliance: solder required: total 0 pcs.
 Process capability: solder required: and ongoing statistical process control required: total 0 pcs.

Product: W5101
Part Name: BLE/NFC ANTENNA

Sheet Number: 1/2
Scale: 2:1 (A2)
Revision: P01 01

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Description: On-ground BLE/NFC combo

Series: Embedded Antenna

PART NUMBER: W5101

OTHER SPECIFICATIONS

Test setup over metal (80x80mm²). Material Ni plated steel
Antenna contact points shown for BLE(P1) and NFC (P2)



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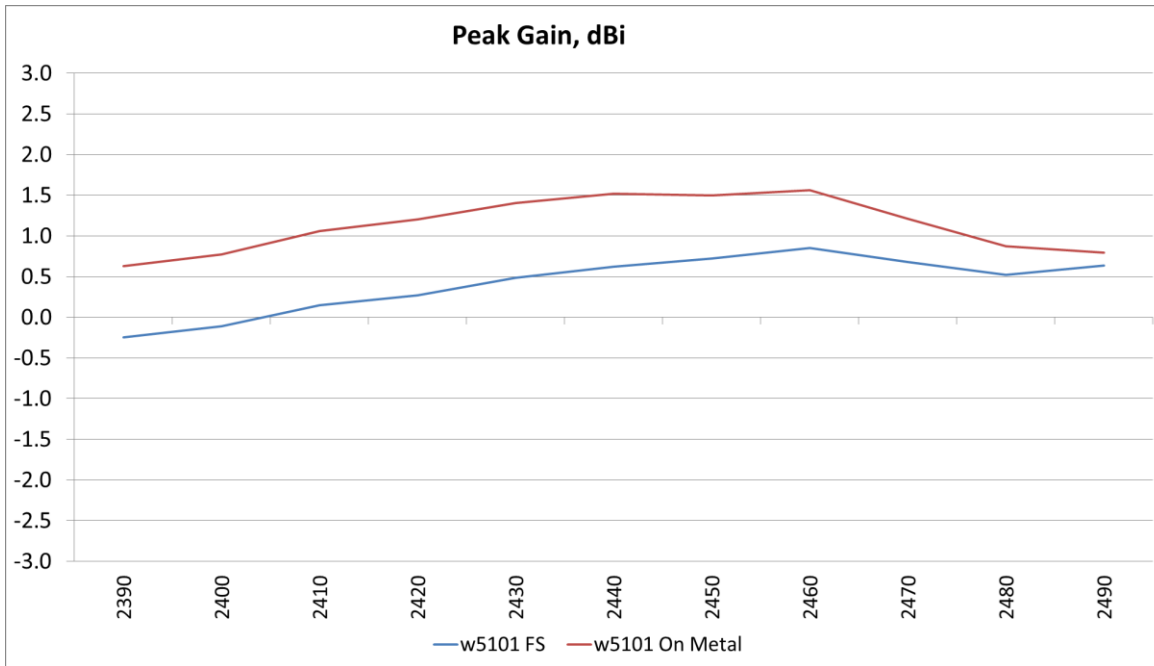
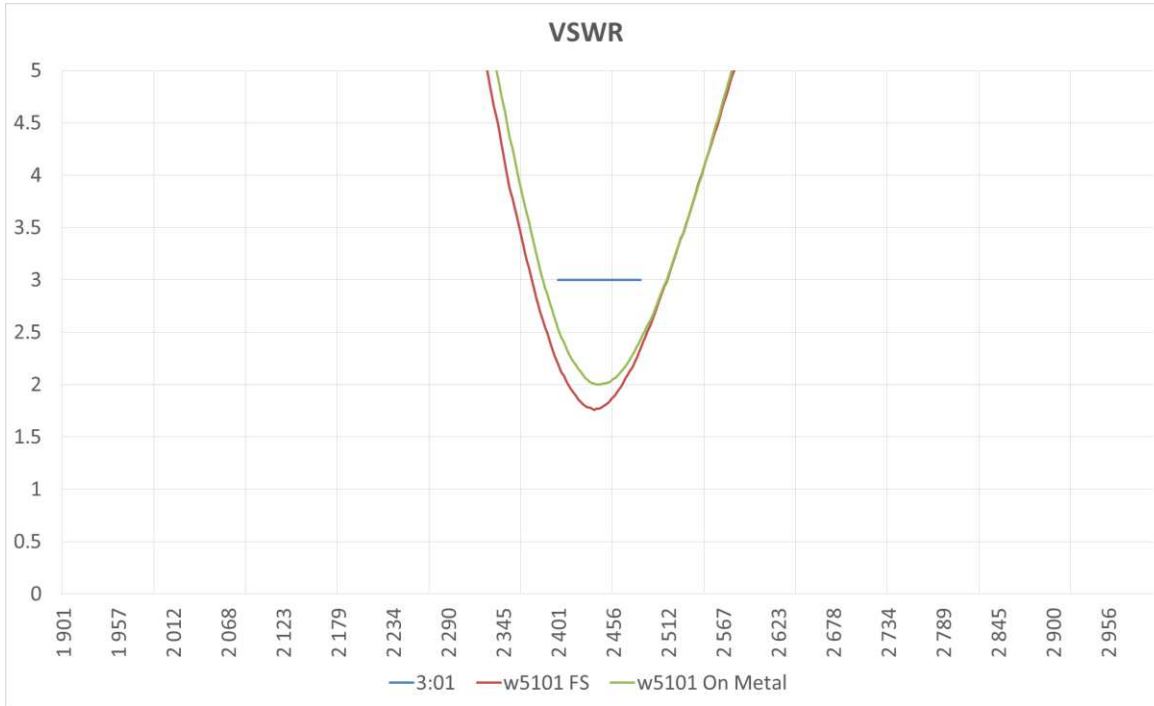
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CHARTS

P1



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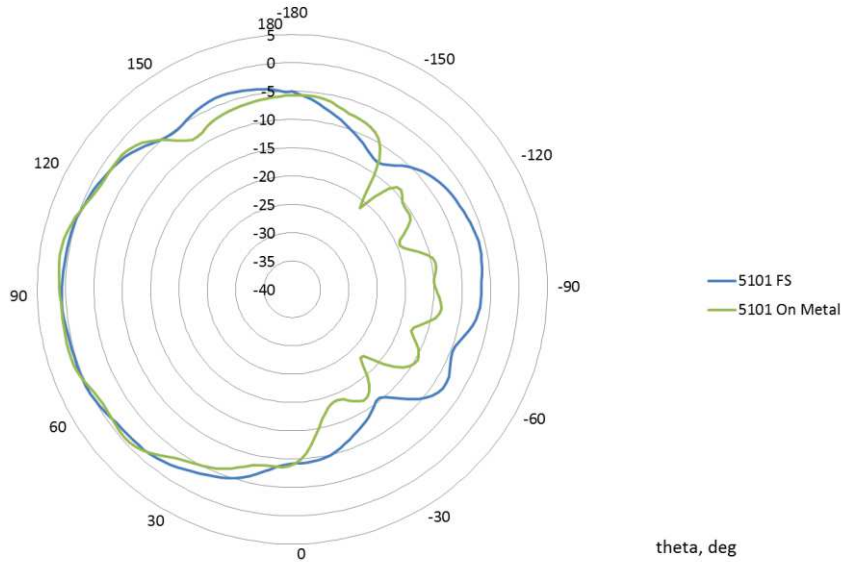
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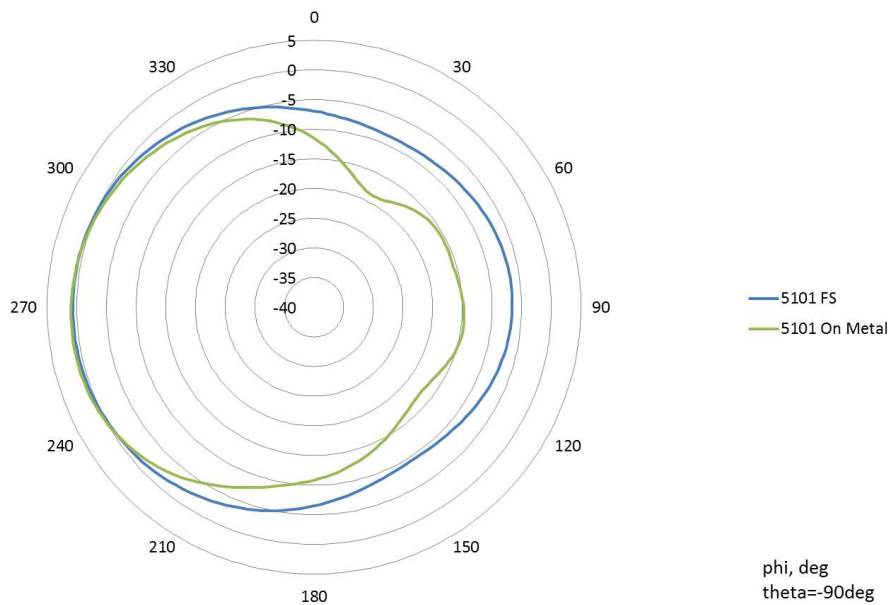
CHARTS

P1

Vertical plane



Horizontal plane



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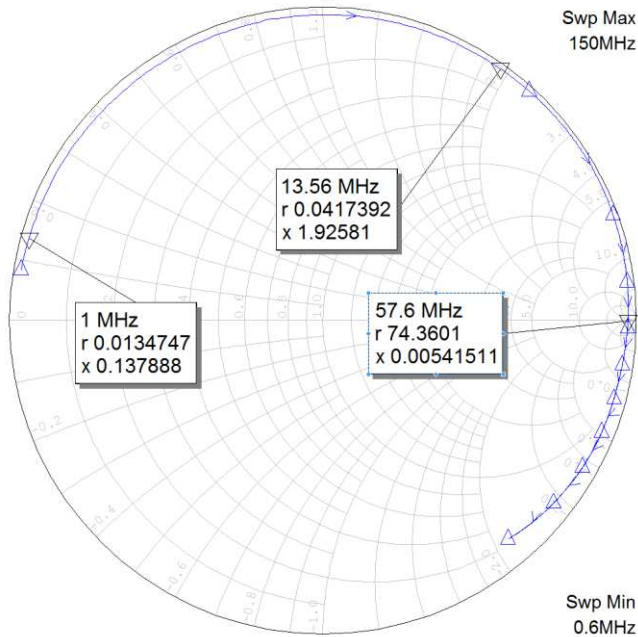
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CHARTS

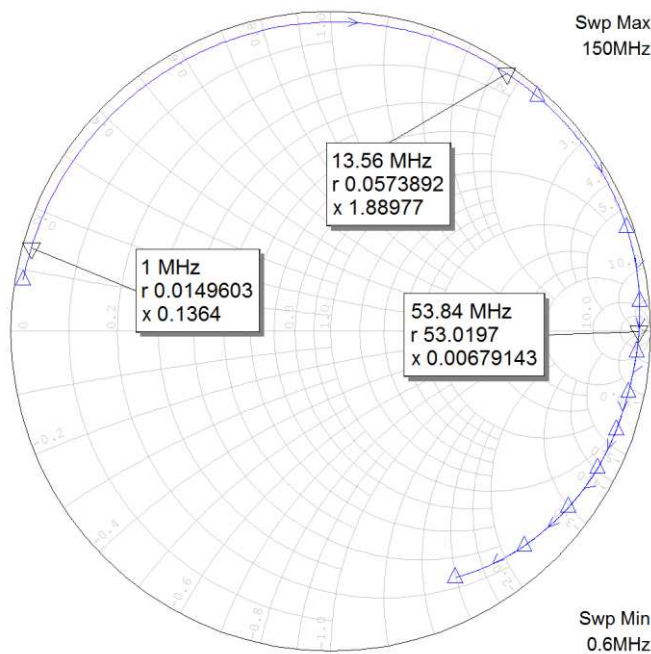
P2

Free Space 1



L @13.56MHz, μ H	1.13
Q @13.56MHz	46
SRF, MHz	57.6

On Metal 1



L @13.56MHz, μ H	1.11
Q @13.56MHz	33
SRF, MHz	53.8

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PACKAGING

Sealed plastic bag 60x90mm

ASSEMBLY

Pull off adhesive cover from backside and attach. Apply pressure 10N/cm² for 4 seconds to activate pressure sensitive adhesive.

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