

Description: On-ground BLE/NFC combo

Series: Embedded Antenna

PART NUMBER: W5101

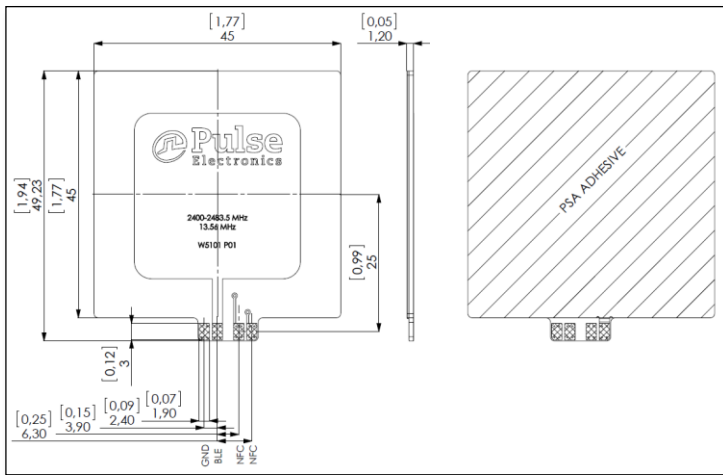


Features:

- 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

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

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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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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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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 5.030.000 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

Part	Quantity	Part Number	Description	Material	Dimensions	Notes
1	1	0750480.001	Copper tape			
4	1	0250146.001	Fiber			
3	1	0750484.001	ISBITE			
2	1	0750481.001	ISBITE			
1	1	0250140.001	BLE/NFC PCB			

Recycling partner allowed to use.

Functional Characteristics list:
 Process capability studies required total: 0 pcs.
 Process capability studies required and ongoing statistical process control required total: 0 pcs.

Material Declaration

Please follow Pulse limits of hazardous substances (RoHS, Halogen) in the document Pulse Inspection Substrate (PIS) and Vendor Survey Questionnaire, Antenna Comparison (QW60A1-0304)

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 Fax: +1 949 272 1501
 www.pulseelectronics.com/en/antenna

Sheet Number: 1/2
 General Tolerance: ± 0.15
 Customer Number: 30140300
 Scale: 2:1 (A2)
 Document Number: W5101
 Part Name: P01
 Document Version: 01

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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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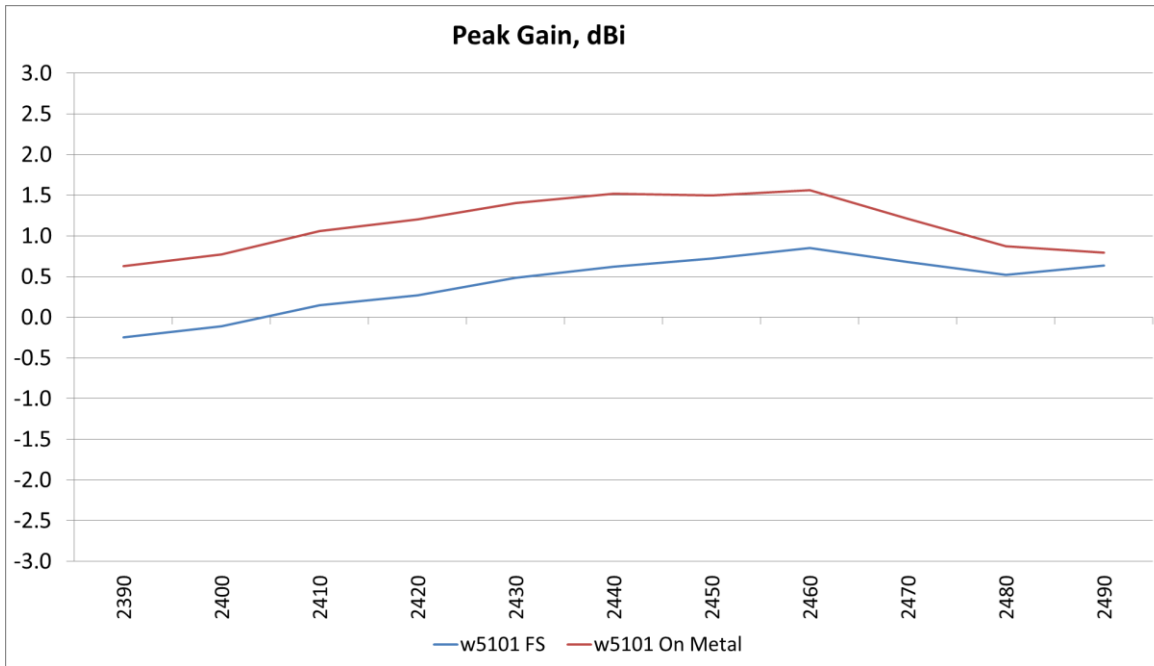
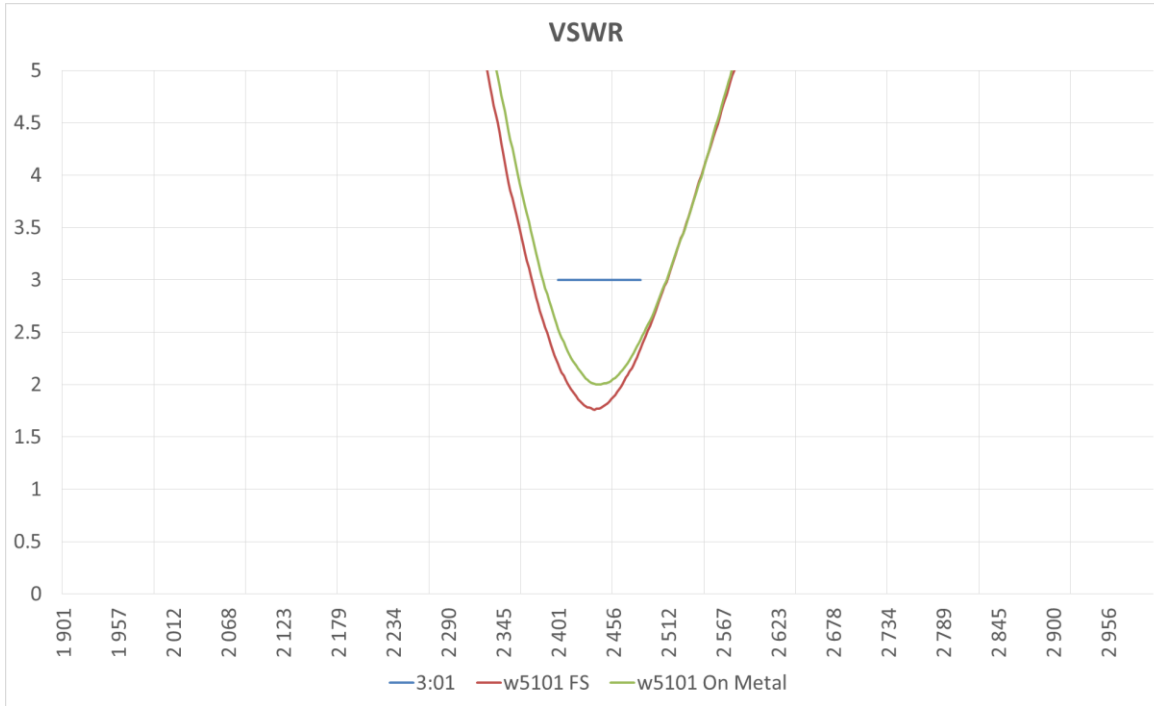
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CHARTS

P1



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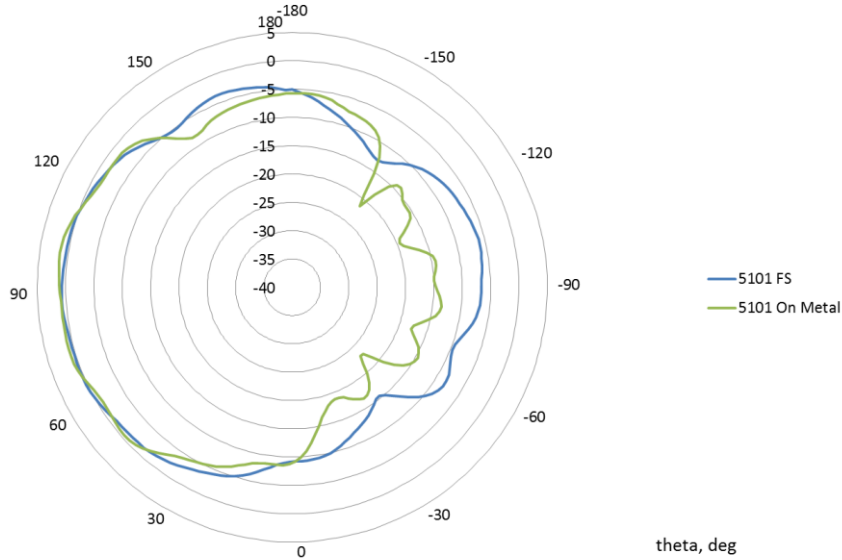
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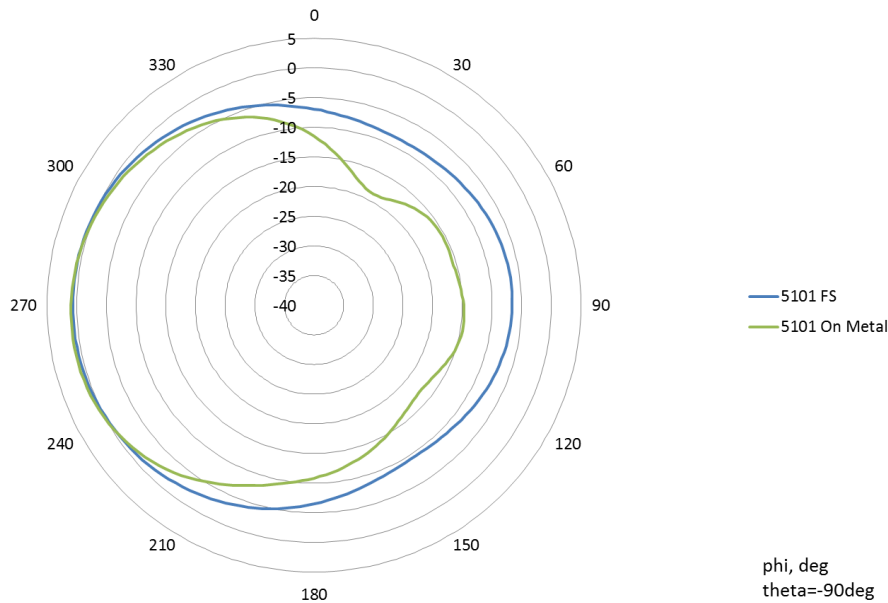
CHARTS

P1

Vertical plane



Horizontal plane



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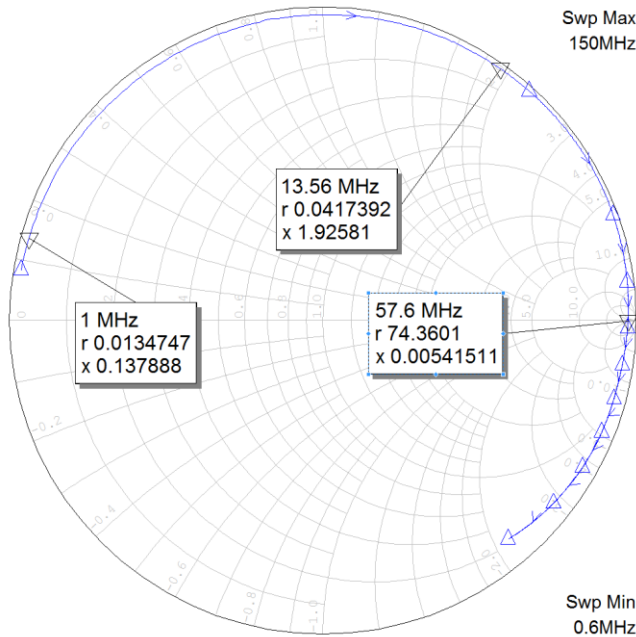
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CHARTS

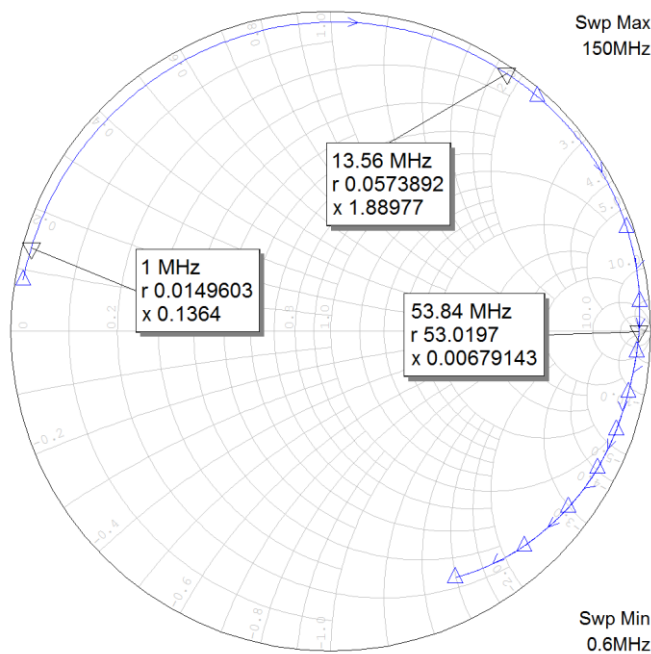
P2

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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