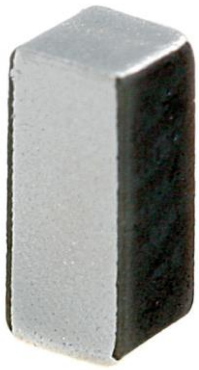
Pulse | LARSEN Antennas
A YAGEO Company

TECHNICAL DATA SHEET

Description: Monopole GPS, BT, WiFi

Series : Chip Antenna

PART NUMBER: W3043



Features:

- Multipurpose for various frequency applications
  - Option 1: GPS 1.575GHz
  - Option 2: WiFi 2.4-2.485GHz
- Compact size W x L x H:

  (3.2 x 1.6 x 1.1 mm)
- Low weight (33 mg)
- Fully SMD compatible
- Tape and reel packing

Applications:

- GPS
- Bluetooth, WLAN, WiFi, BLE
- IEEE 802.11a/b/g/n
- ZigBee IEEE 802.15.4
- 2.4 GHz ISM Band Systems

All dimensions are in mm / inches

Issue: 1920

RoHS COMPLIANT

For more information:

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99 Huo Ju Road(#29 Bldg,4th Phase
Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998

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ELECTRICAL SPECIFICATIONS

Antenna Type	Monopole
Frequency option1 @ GPS	1565-1585MHz
Frequency option2 @ Wifi	2400-2485MHz
Nominal Impedance	50 Ω
Radiation Pattern	Omni
Return Loss	-15 / -12 dB
Gain	2.1 / 4.5 dBi
Efficiency	38 / 45 %
Polarization	Vertical

MECHANICAL SPECIFICATIONS

Size	3.2 x 1.6 x 1.1 mm
Weight	0.03 g
MSL (Moisture Sensitivity Level)	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40~85 °C
Storage Temperature	-40~85 °C
RoHS Compliant	Yes

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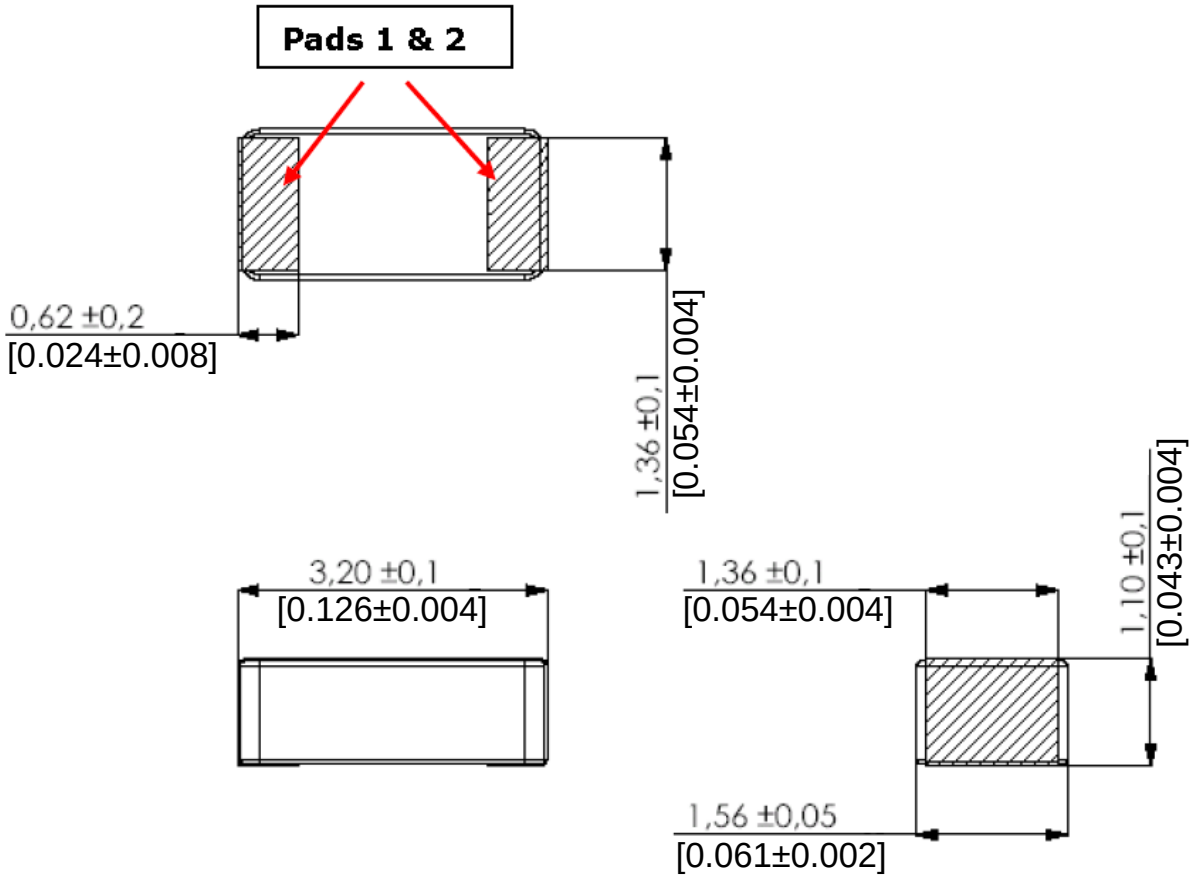
MECHANICAL DRAWING AND TERMINAL CONFIGURATION



Antenna features		
No.	Terminal Name	Terminal Dimensions
1	Feed / Support	0.62 x 1.36 mm
2	Feed / Support	0.62 x 1.36 mm
Antenna is symmetrical. Either of terminals 1 or 2 can be Feed / Support		

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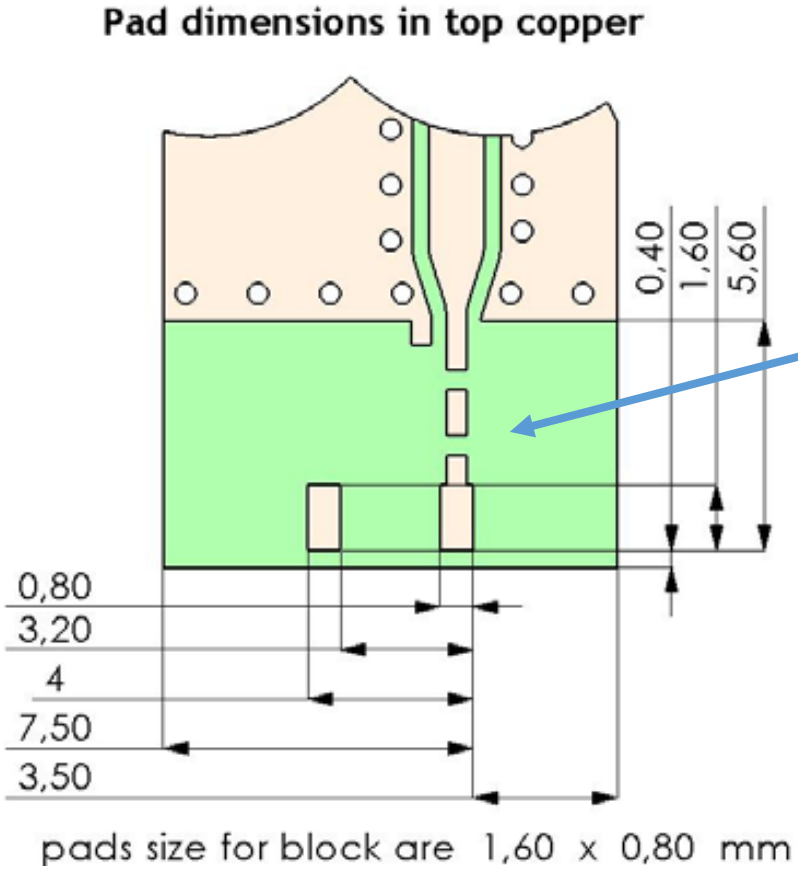
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

1. GROUND CLEARANCE AREA



All metallization should be removed from all PWB layers.

Clearance area dimensions can be adjusted to available board space.

PWB manufacturing requirements according to IPC-A-600 revision G or similar.

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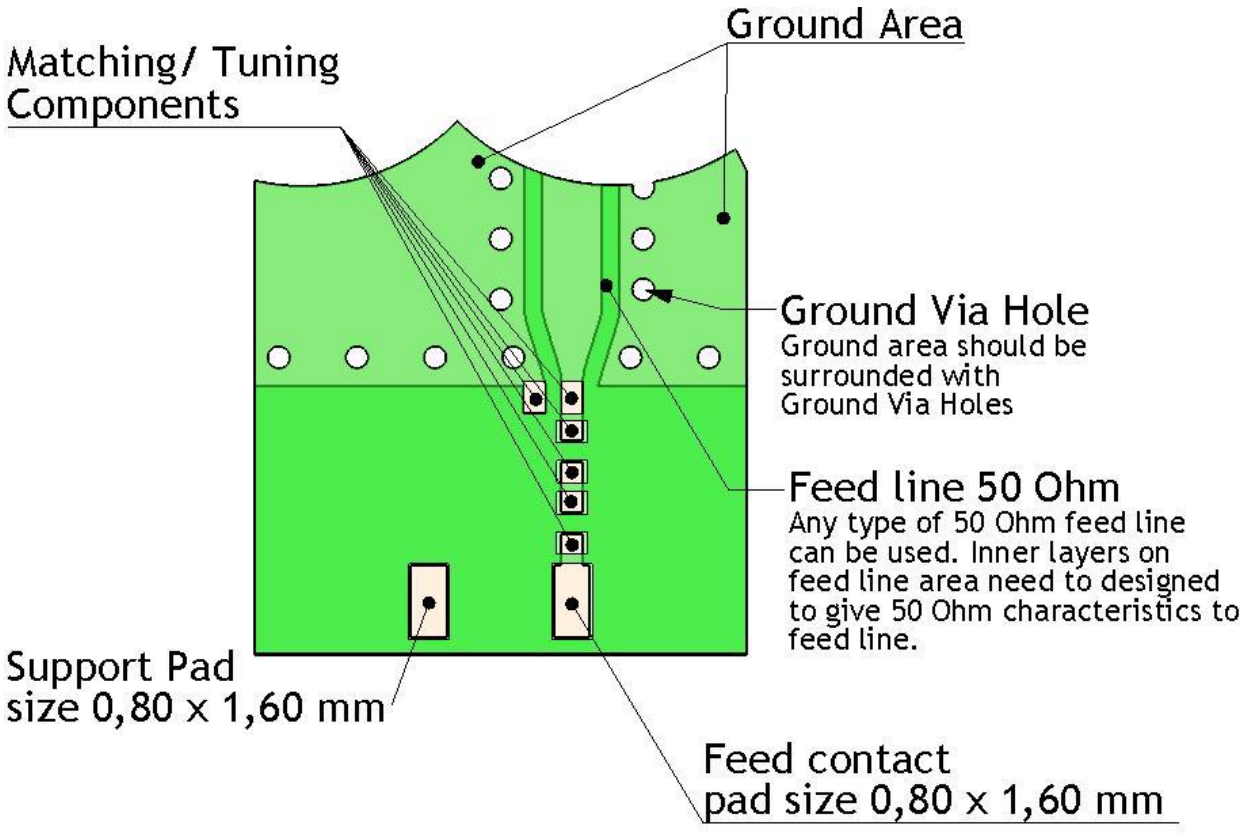
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

2. MATCHING/TUNING COMPONENTS

Component values depend on used ground clearance area and other device mechanics.

Copper extension on board can be used for frequency fine tuning.



PWB features		
No.	Terminal Name	Terminal Dimensions
1	Feed	0.8 x 1.60 mm
2	Mech support pad	0.8 x 1.60 mm

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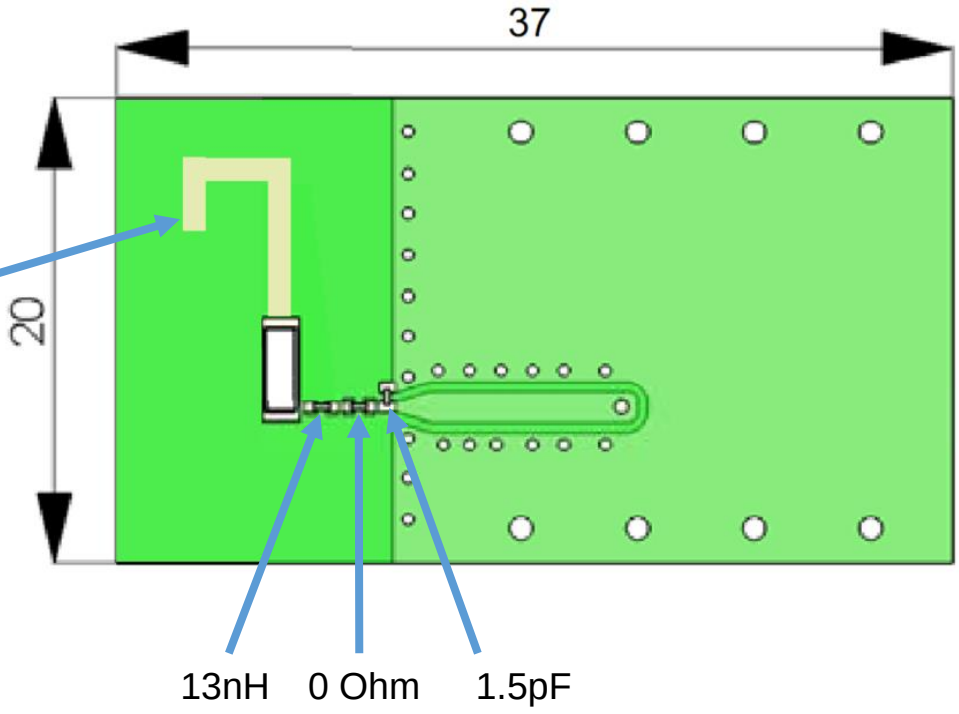
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

3.TYPICAL ELECTRICAL CHARACTERISTICS(T=25 °C)

Measured on 37x20mm test board, ground clearance area 12x20mm

W3043 GPS:

Optional frequency fine tuning done with metal strip on board



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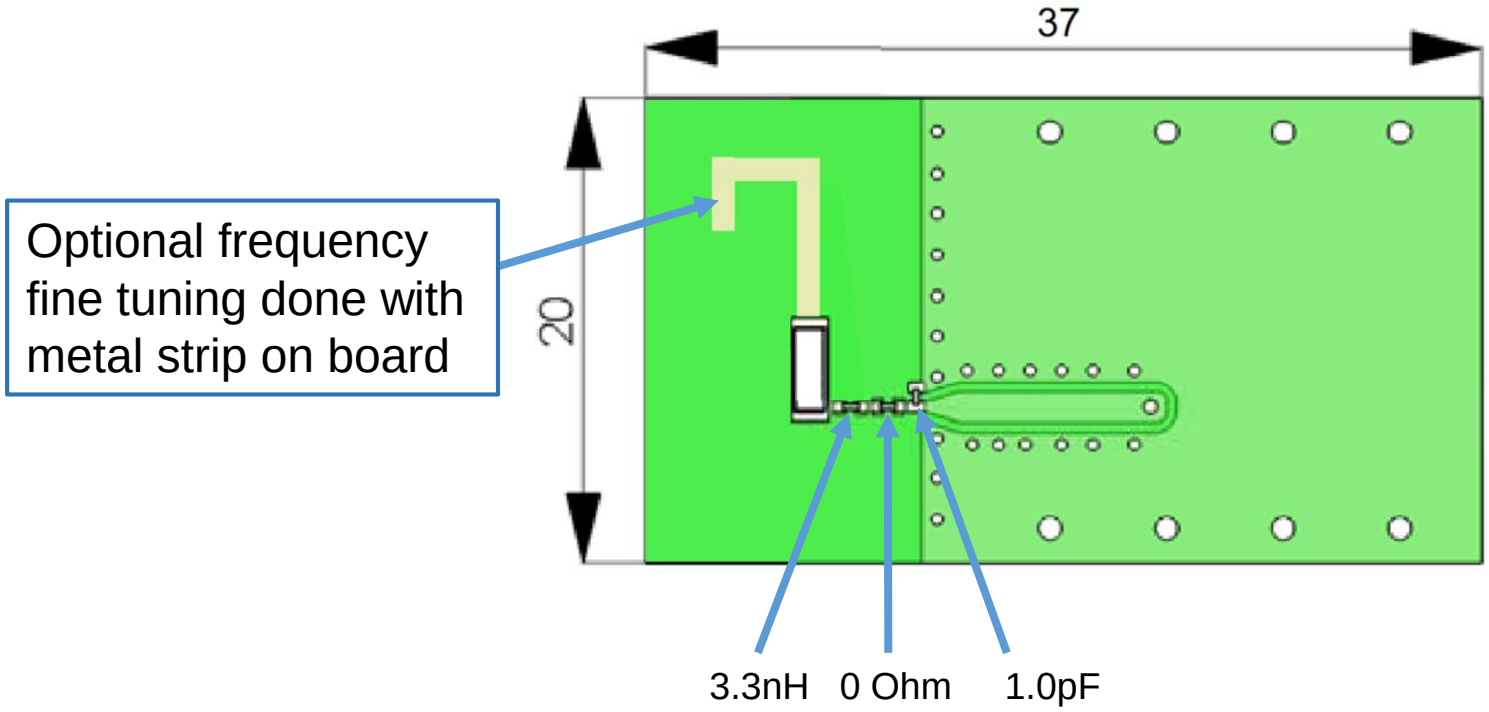
W3043 BT, WLAN, WiFi 2.4GHz:



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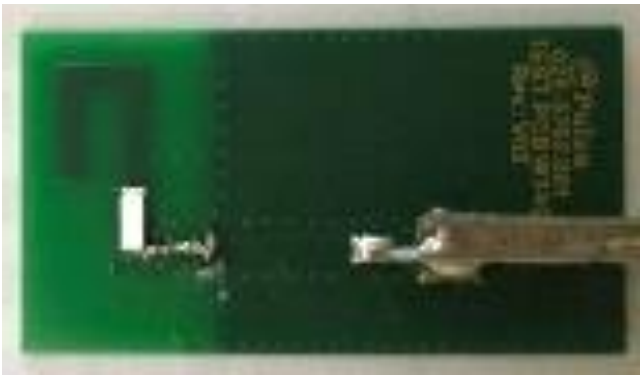
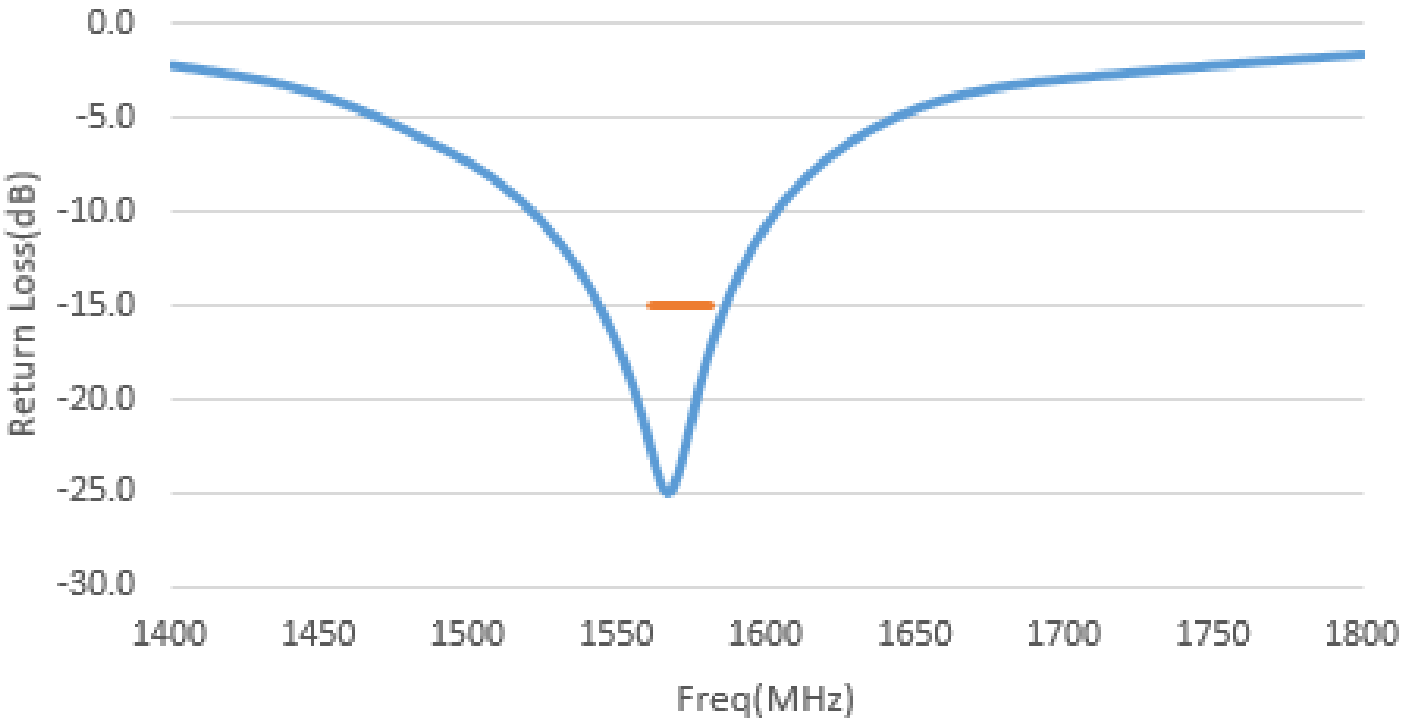
CHARTS

Test set up



Return Loss @ GPS



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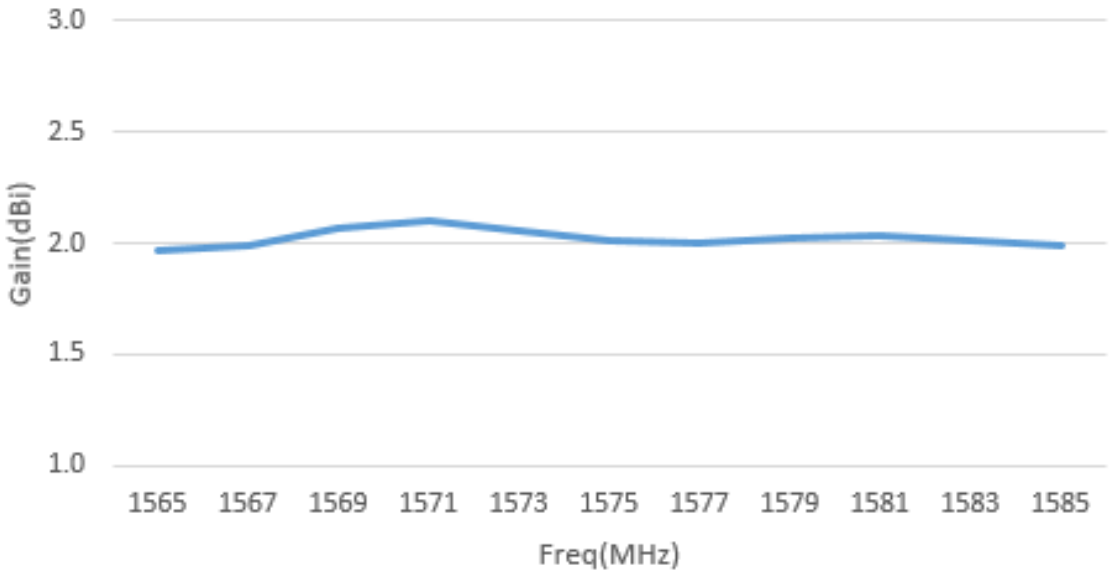
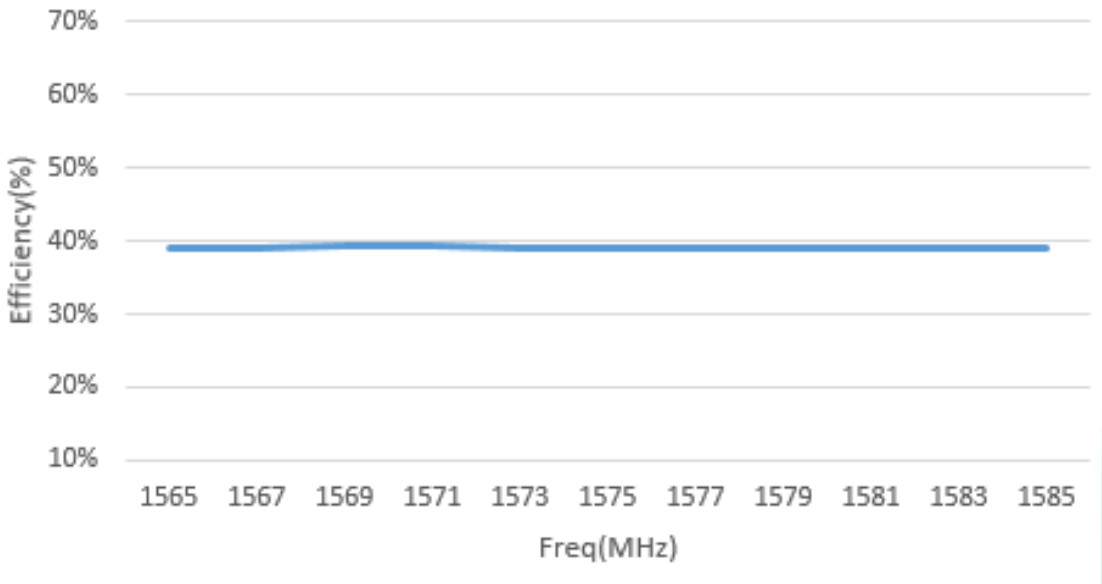
Peak gain @ GPS



Efficiency @ GPS



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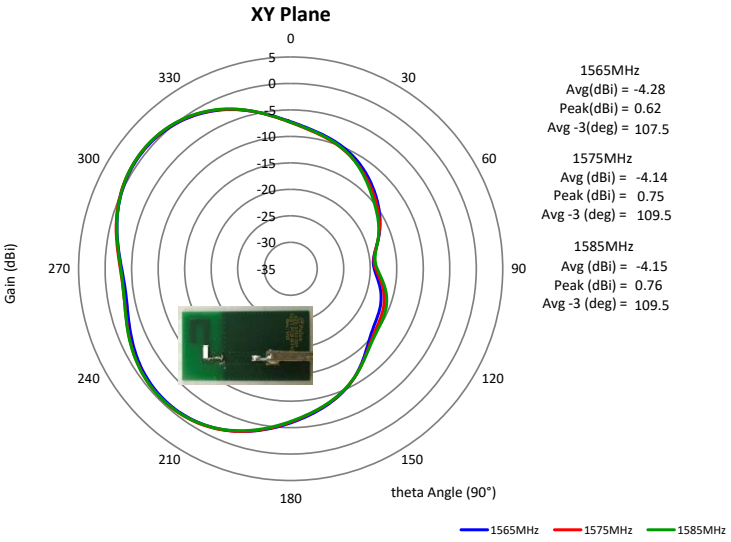
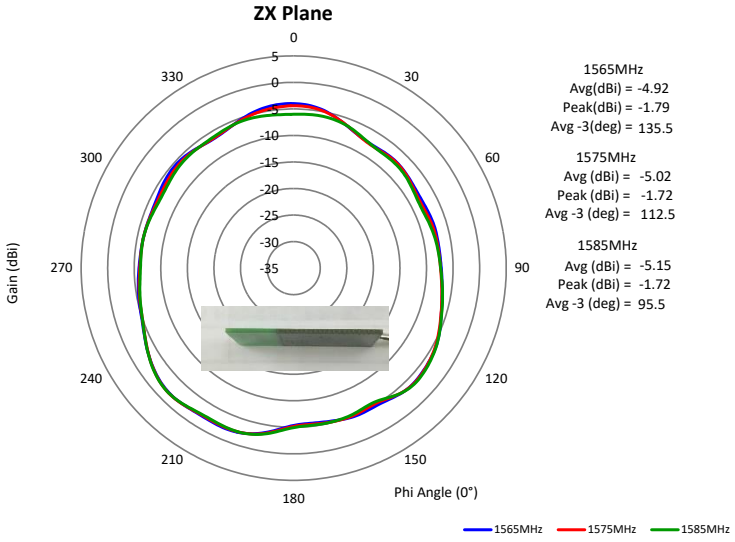
Radiation pattern @ GPS





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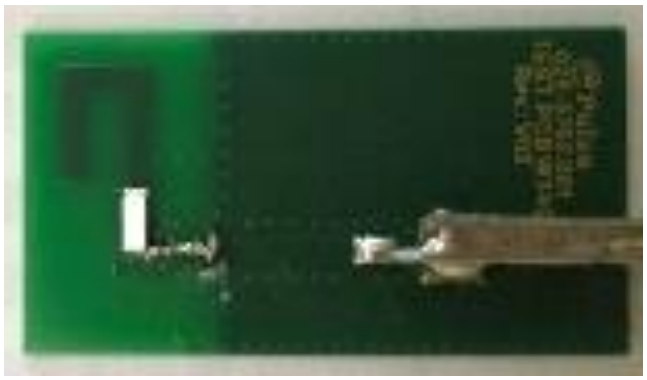
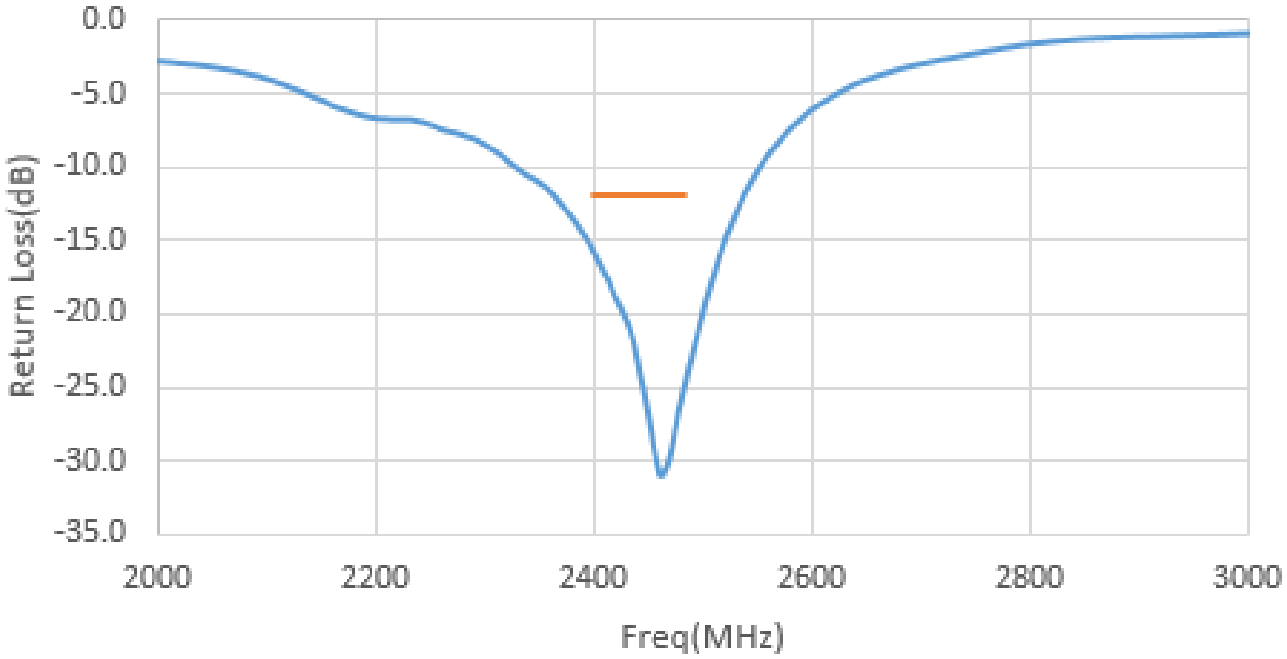
Test set up



Return Loss @ Wifi



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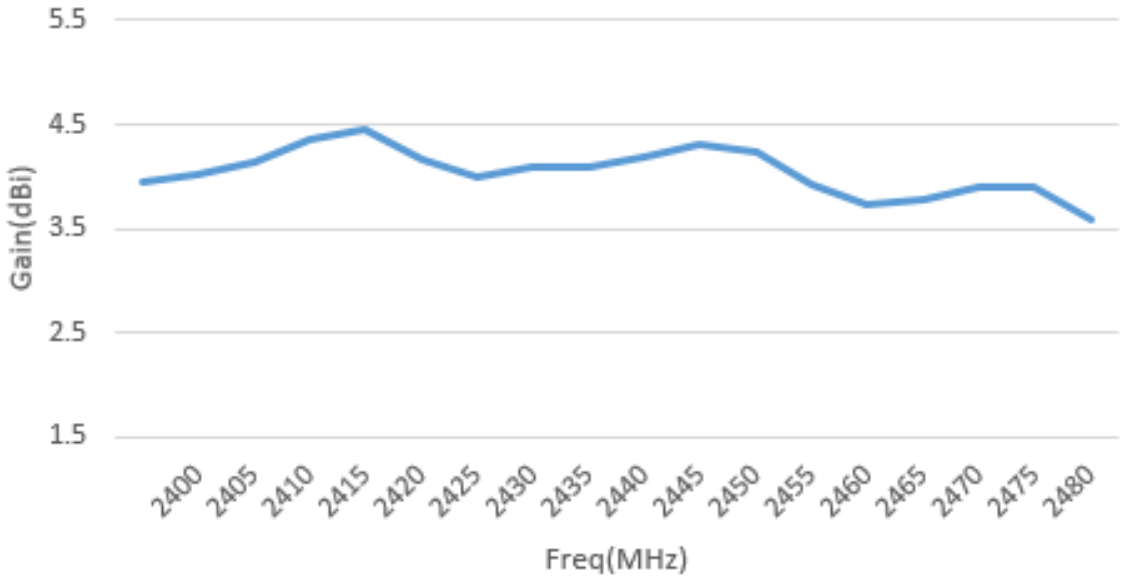
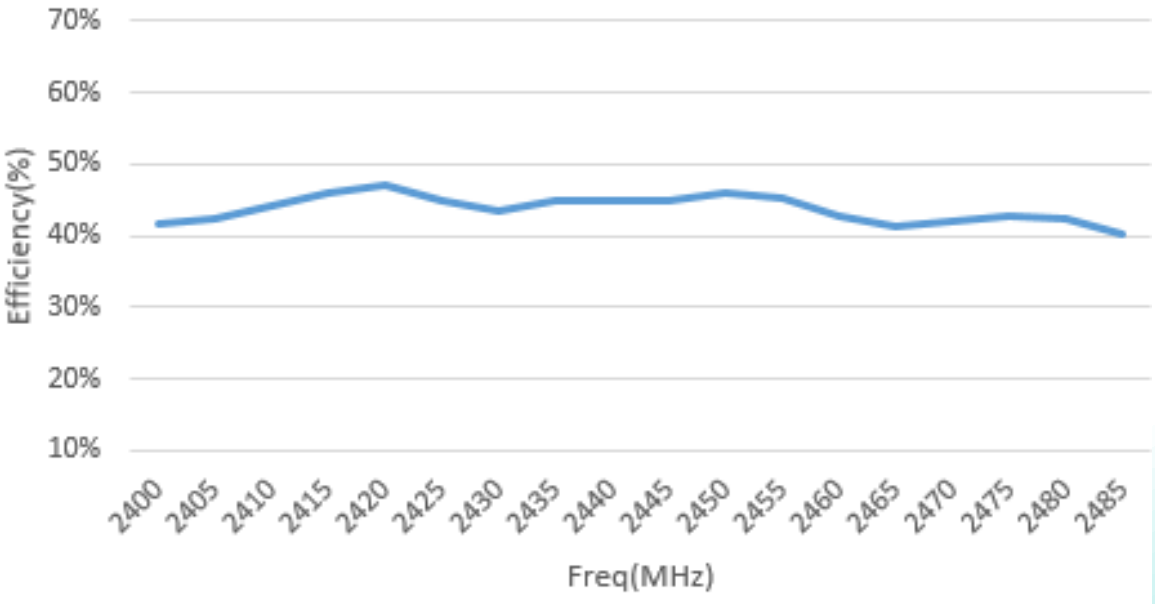
Peak gain @ Wifi



Efficiency @ Wifi



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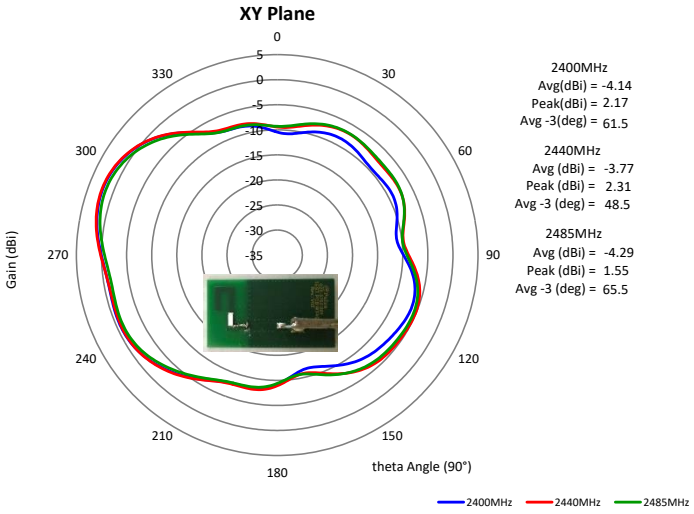
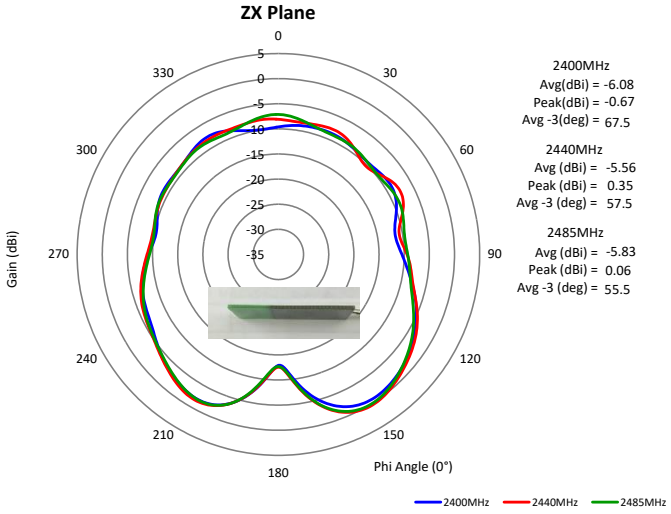
Radiation pattern @ Wifi





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Recommendation for reflow soldering process

	Method of heat transfer	Controlled hot air convection
1	Average temperature gradient in preheating	2.5 °C/s
2	Soak time	2-3 minutes
3	Max temperature gradient in reflow	3 °C/s
4	Time above 217 °C	Max 60 sec
5	Time above 230 °C	Max 50 sec
6	Time above 250 °C	Max 10 sec
7	Peak temperature in reflow	260 °C for 5 seconds
8	Temperature gradient in cooling	Max -5 °C/s

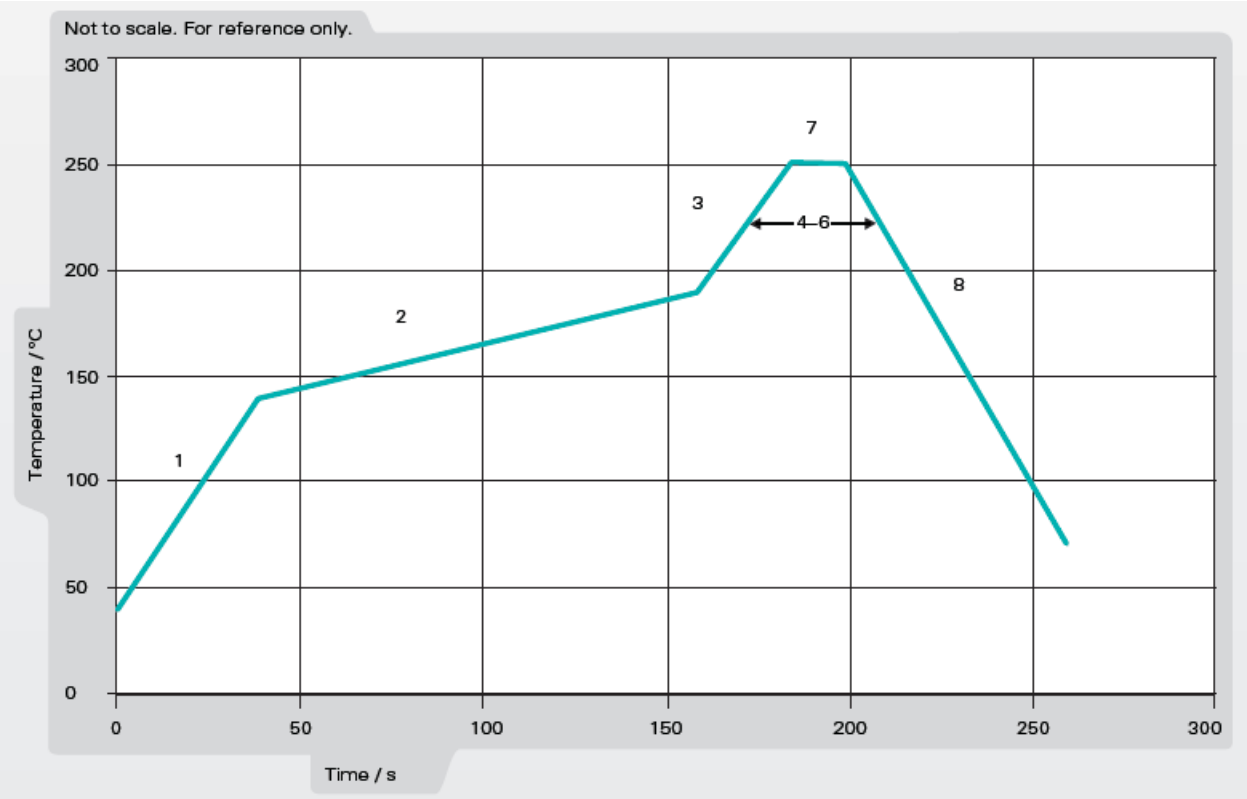

Figure 2. Maximum temperature profile recommendation for reflow soldering process

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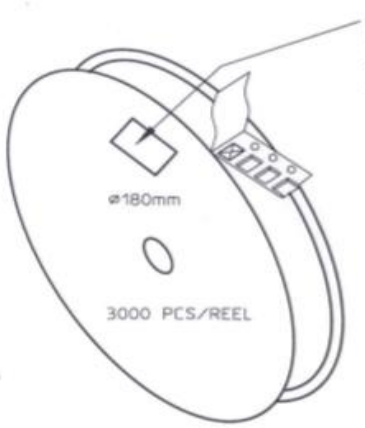
PACKAGING

Tape and reel packing is used.
3000pcs antenna/reel, 10 reels/inbox, 2 inbox(60000pcs antenna)/outbox.



REEL LABEL INFORMATION:
- TRACEABILITY
- QUANTITY
- PRODUCT CODE

CARRIER TAPE H85-00125
width=8,00 depth=1,22
COVER TAPE H85-00126
width=5,60

LENGTH OF TAPE:

- Leader section: min 350 mm before component section
- Trailer section: min 40 mm after component section.

Empty part cavities at leader and trailer section of the tape must be sealed with top cover tape.

BOX H85-00128 (182x182x132)	1 pcs
- LABEL	1 pcs/BOX
REEL H85-00127 (D180,W12)	10 pcs
- REEL LABEL	1 pcs/REEL

LEVEL

NOT MOISTURE SENSITIVE 1

These Devices do not require special storage conditions provided:

1. They are maintained at conditions equal to or less than 30℃ and 85% RH.
2. They are solder reflowed at a peak body temperture which does not exceed 260℃.

Note: Level and body temperture defined by IPC/JEDEC J-STD-020

RoHS COMPLIANT

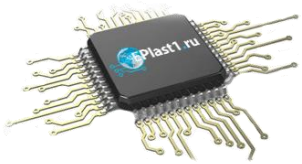
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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