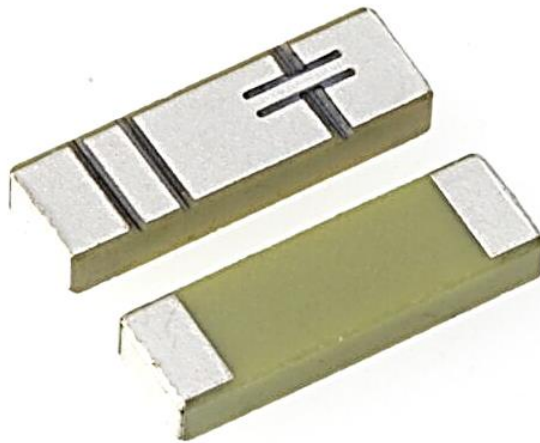


## Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

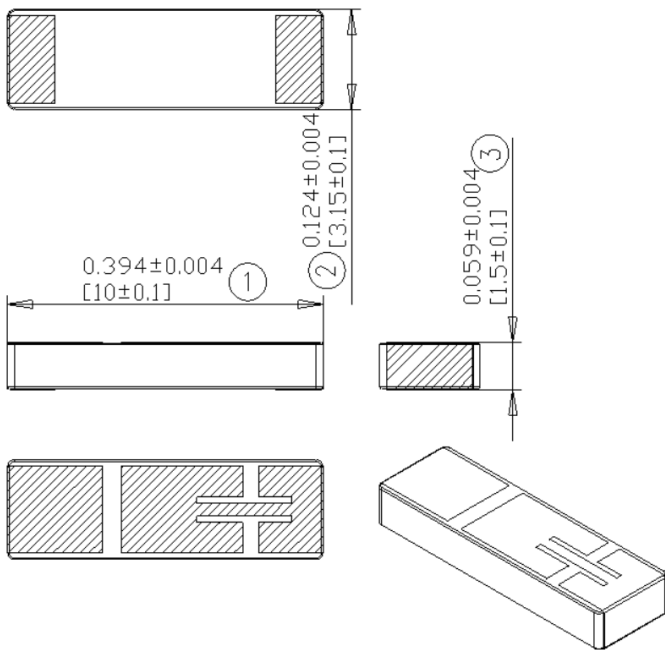


### Features:

- - Omnidirectional radiation
- - Low profile
- - Compact size WxLxH (10 x 3.2 x 1.5 mm)
- - Low weight (240 mg)
- - Fully SMD compatible
- - Lead free soldering compatible
- - Tape and reel packing
- - RoHS Compliant Product
- - Single feed point

### Applications:

- - IEEE 802.11a/b/g
- - 5 GHz WLAN
- - 2.4 GHz WLAN
- - 2.4 GHz ISM Band Systems
- - ZigBee IEEE 802.15.4



All dimensions are in inches/mm

Issue: 1719

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Pulse (Suzhou) Wireless Products Co, Inc.  
99 Huo Ju Road (#29 Bldg, 4<sup>th</sup> Phase  
Suzhou New District  
Jiangsu Province, Suzhou 215009 PR China  
Tel: 86 512 6807 9998



## Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

## ELECTRICAL SPECIFICATIONS

Frequency1	2.4-2.5GHz
Frequency2	5.15-5.85GHz
Nominal Impedance	50Ω
Return Loss Frequency1	-8 dB max
Return Loss Frequency2	-10 dB max
Efficiency Frequency1	60 %
Efficiency Frequency2	70 %
Peak Gain Frequency1	2.2dBi
Peak Gain Frequency2	4.5dBi
Polarization	Linear
Interface	SMD mount ceramic antenna

## Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

## MECHANICAL SPECIFICATIONS

Weight	0.24g
Size	10 x 3.2 x 1.5 mm

## ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40~+85° C
Temperature	-40~+85° C
Humidity	Cyclic 6 +25° C/+55° C 95%
Vibration	
Sinusoidal 2-8Hz	7.5 mm
Sinusoidal 8-200Hz	20 m/s <sup>2</sup>
Shocks	0.5 m/s
Salt mist	96 hours

Issue: 1719

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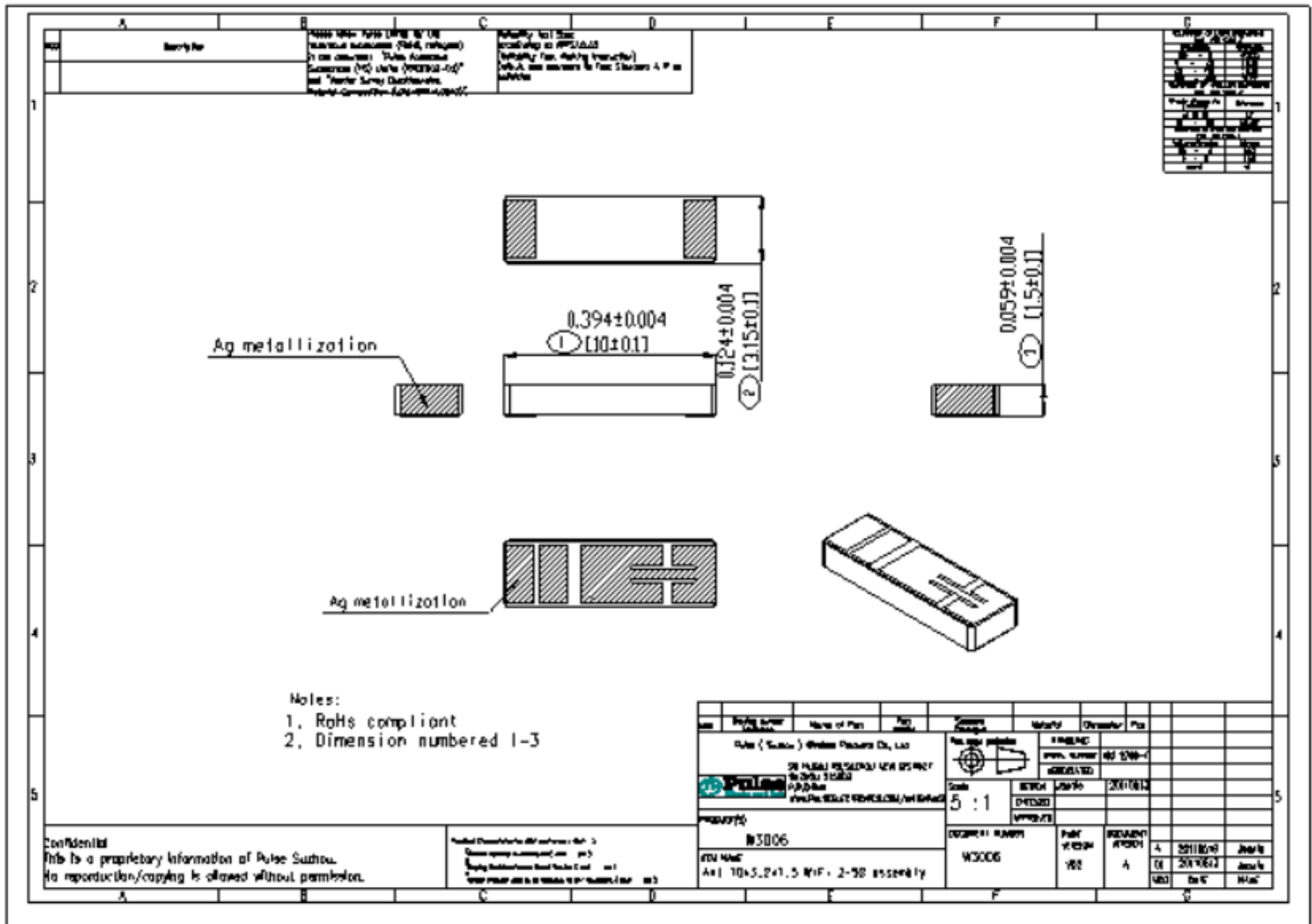
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# Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

## MECHANICAL DRAWING AND TERMINAL CONFIGURATION



Issue: 1719

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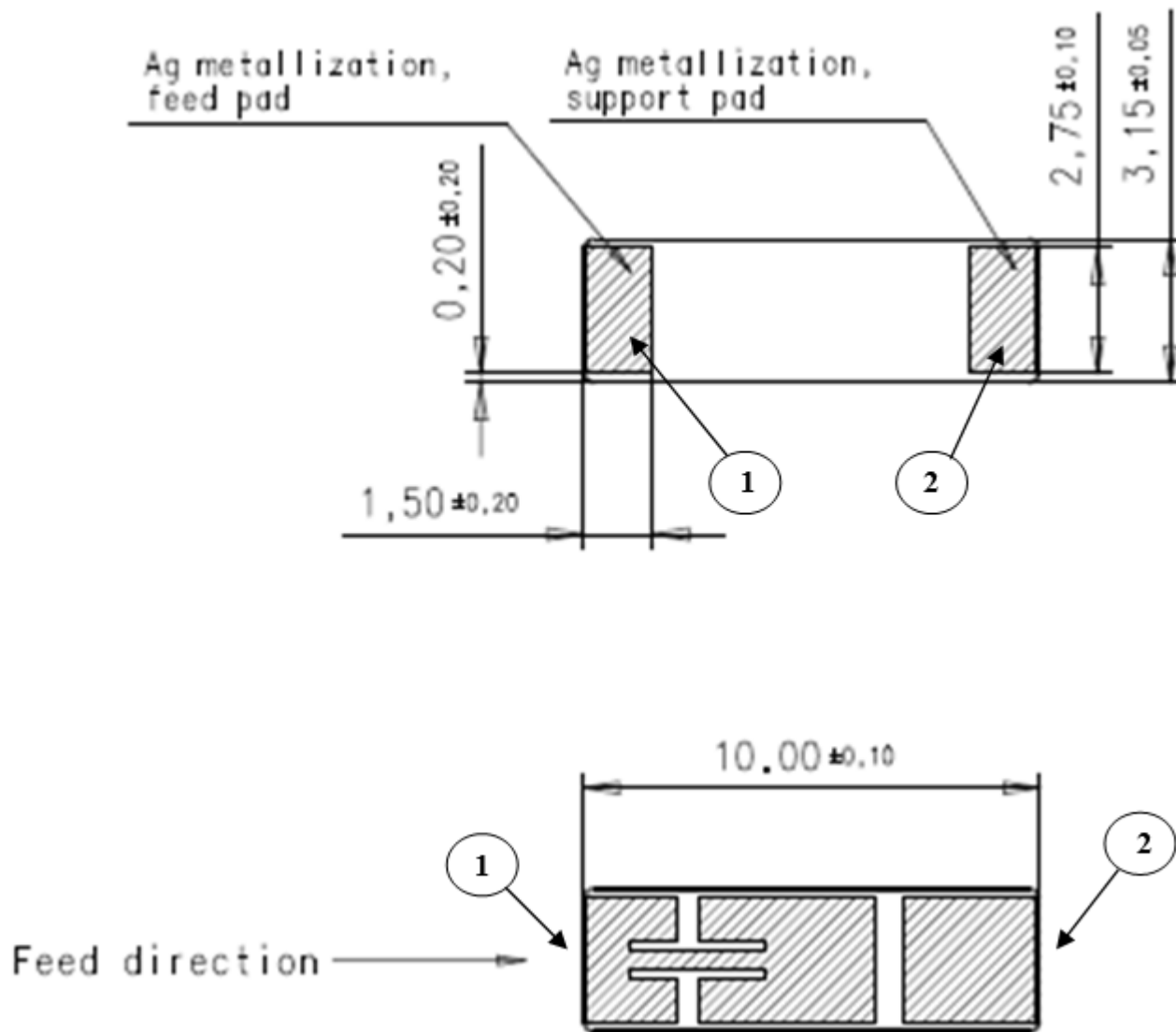
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## Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

### MECHANICAL DRAWING AND TERMINAL CONFIGURATION



No.	Terminal Name	Terminal Dimensions
1	Feed	1.5 x 2.75 mm
2	Support pad	1.5 x 2.75 mm

Antenna feed pad can be identified by looking top surface metallization pattern

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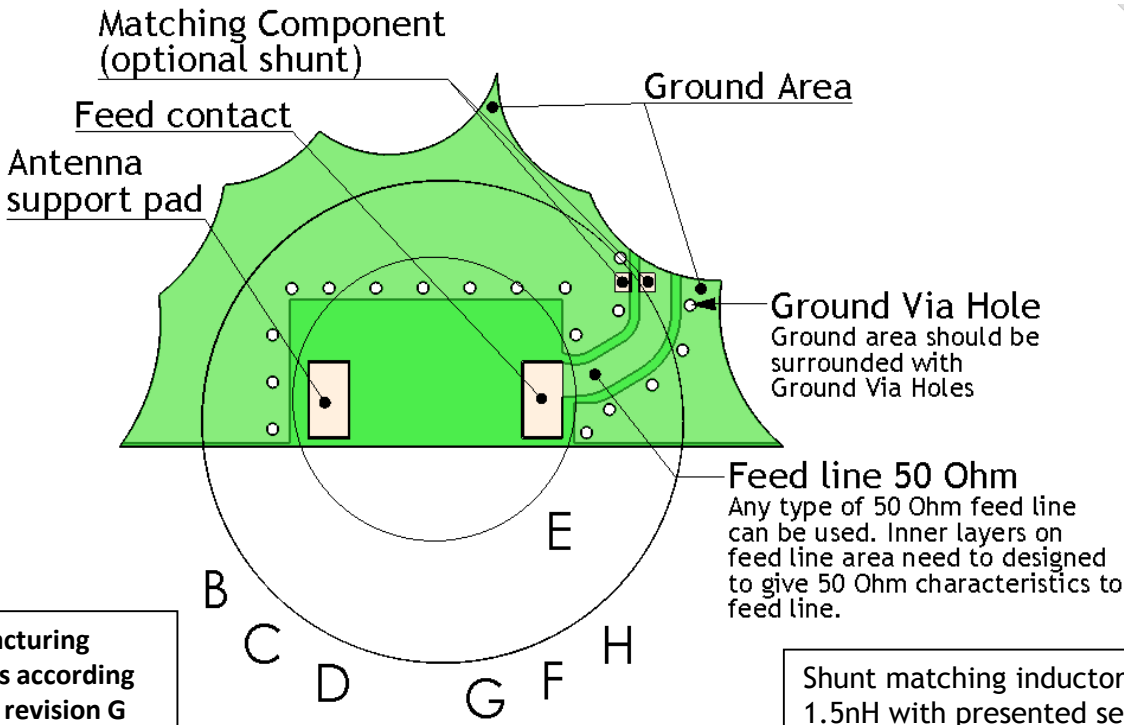
## Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

### MECHANICAL DRAWING AND TERMINAL CONFIGURATION

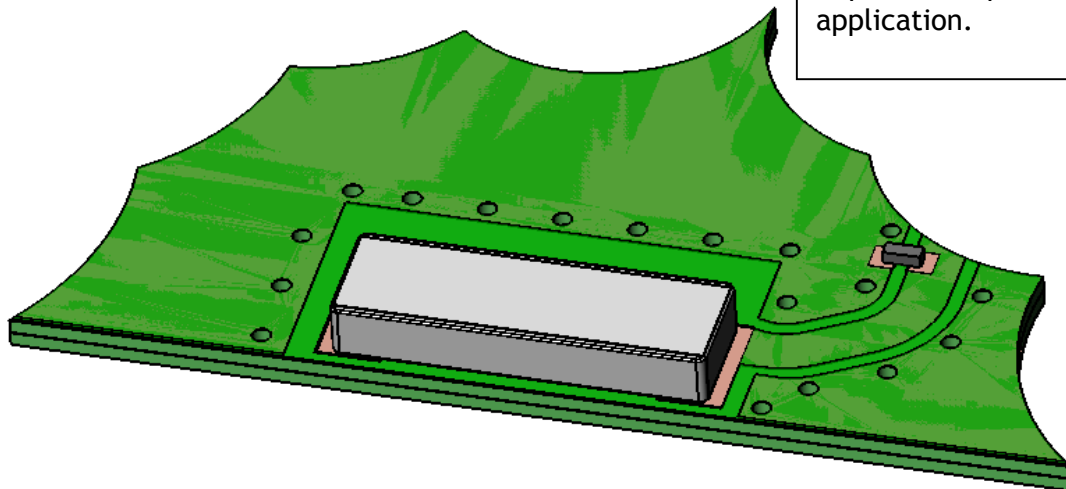
**Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm**



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

Shunt matching inductor, 1.5nH with presented setup.

Exact inductor value depends on specific application.



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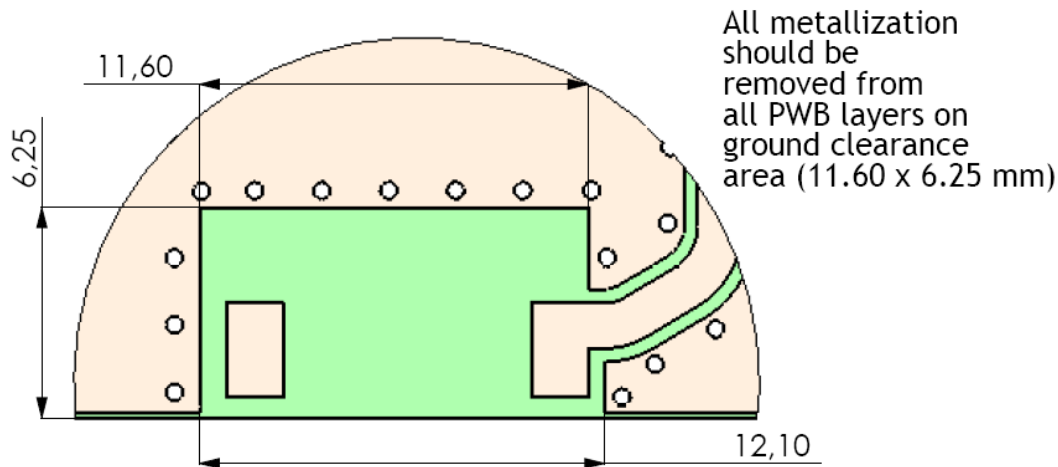
## Description: Dual Band WLAN Ceramic

Series: Ceramic

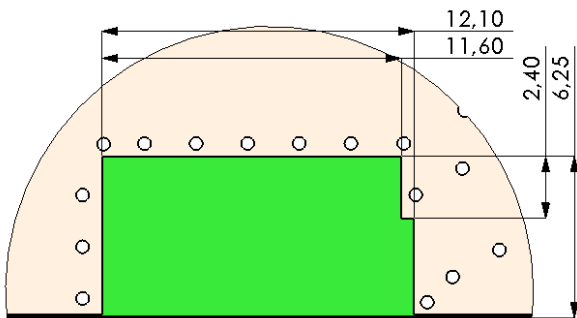
PART NUMBER: W3006

### MECHANICAL DRAWING AND TERMINAL CONFIGURATION

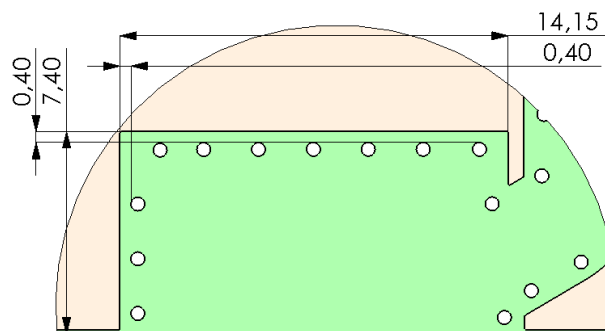
Ground clearance area (11.60 x 6.25 mm)



Opening in bottom/inner ground layers



Opening in other layers (no ground/ RF)



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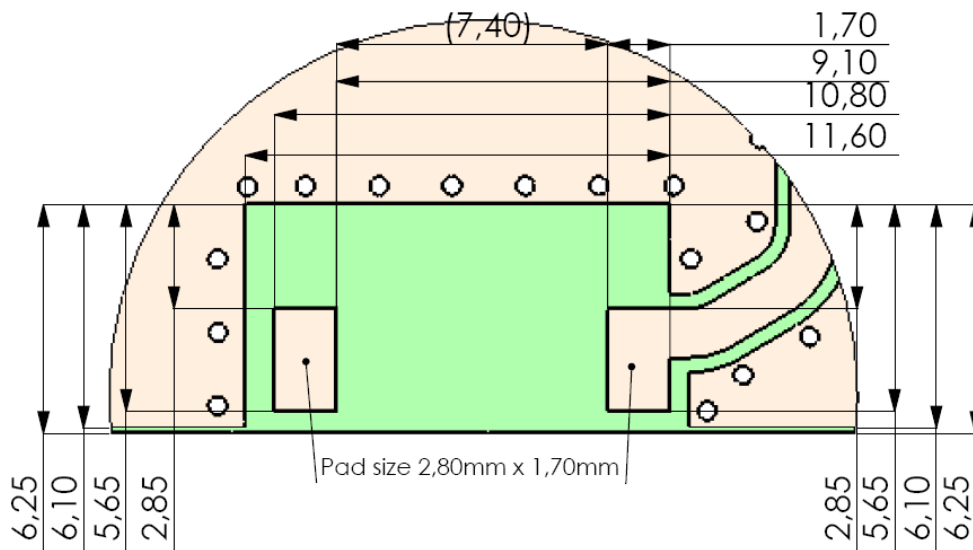
Series: Ceramic

PART NUMBER: W3006

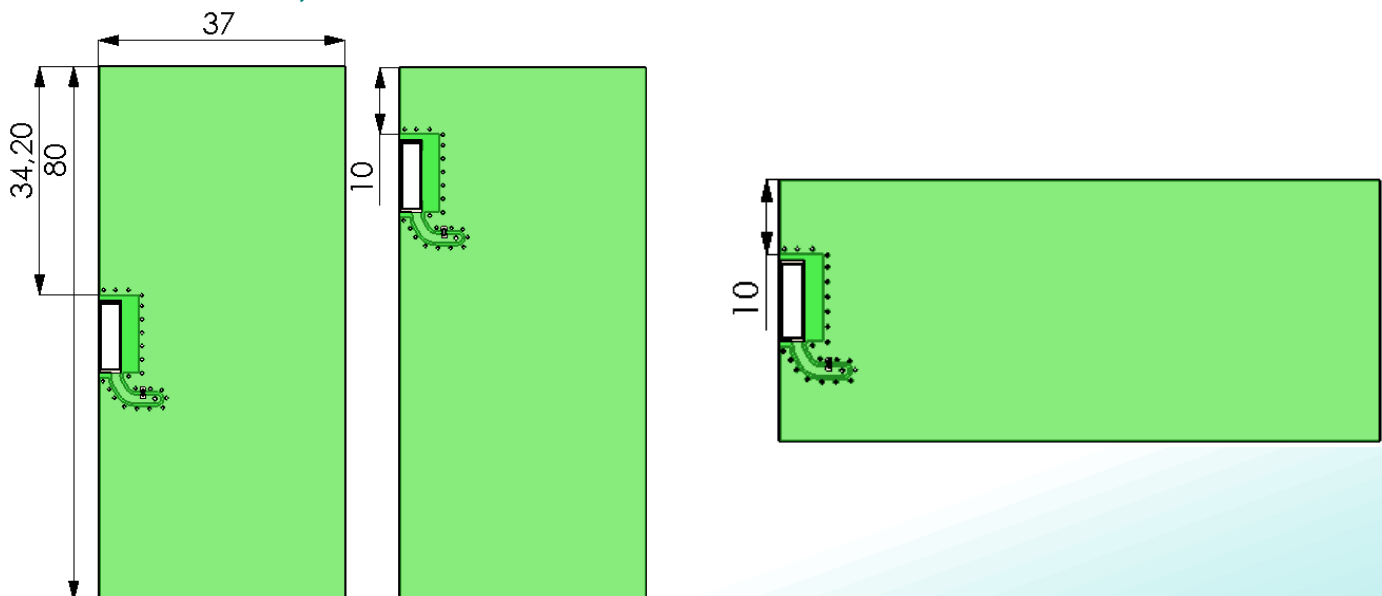
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

Recommended Antenna Pad Dimensions on PWB Layout (top surface)

Pad dimensions in top copper



Recommended test board layout for electrical characteristic measurement, test board outline size 80 x 37mm



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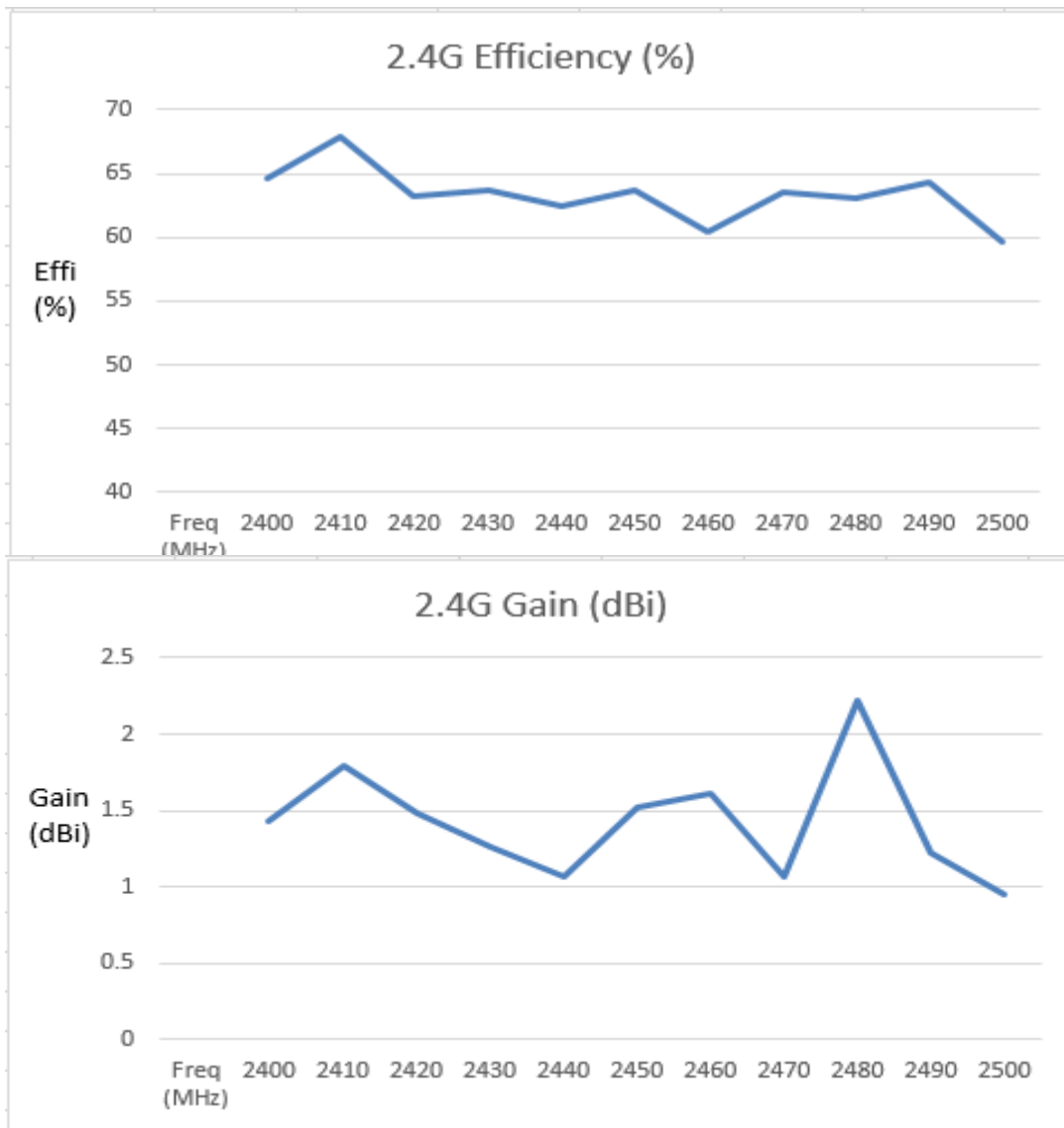
Series: Ceramic

PART NUMBER: W3006

### CHARTS

Measured on the 80x37mm test board with matching circuit, 1.5nH shunt inductor  
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm

### Free space efficiency and maximum gain for 2.4G



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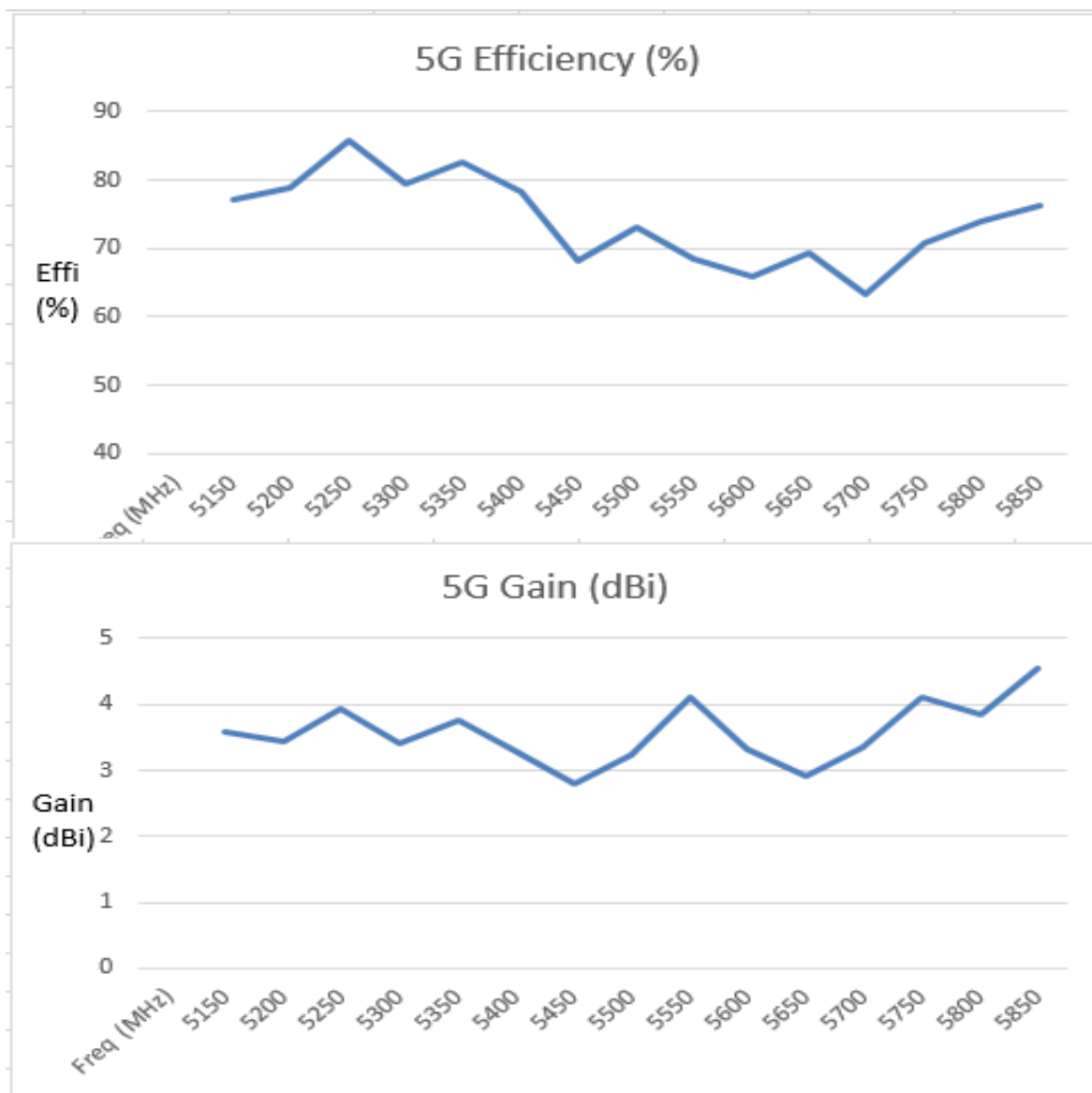
Series: Ceramic

PART NUMBER: W3006

### CHARTS

Measured on the 80x37mm test board with matching circuit, 1.5nH shunt inductor  
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm

### Free space efficiency and maximum gain for 5G



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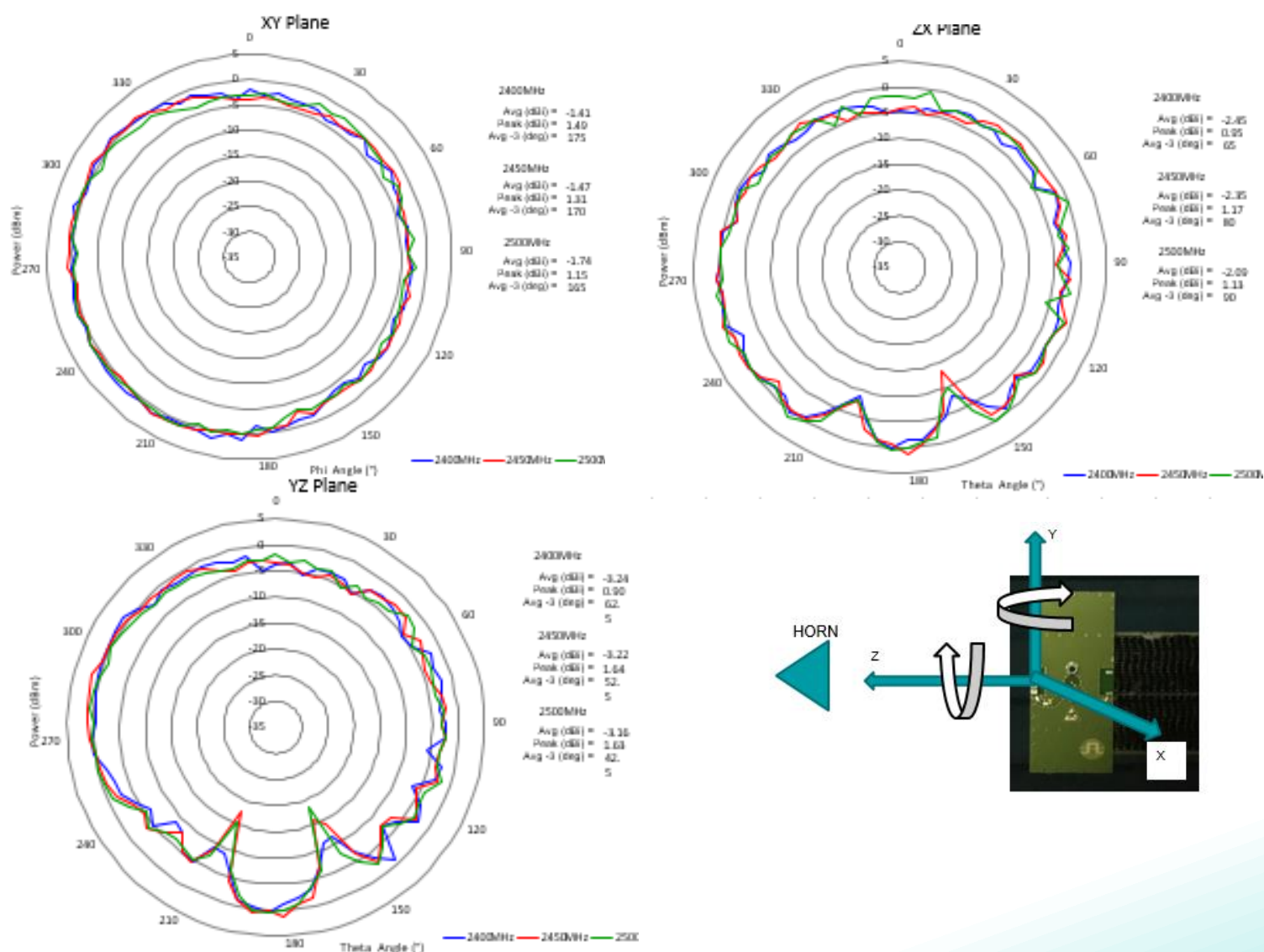
Series: Ceramic

PART NUMBER: W3006

### CHARTS

Measured on the 80x37mm test board with matching circuit, 1.5nH shunt inductor  
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm

### 2.4 GHz Typical Free Space Radiation Patterns



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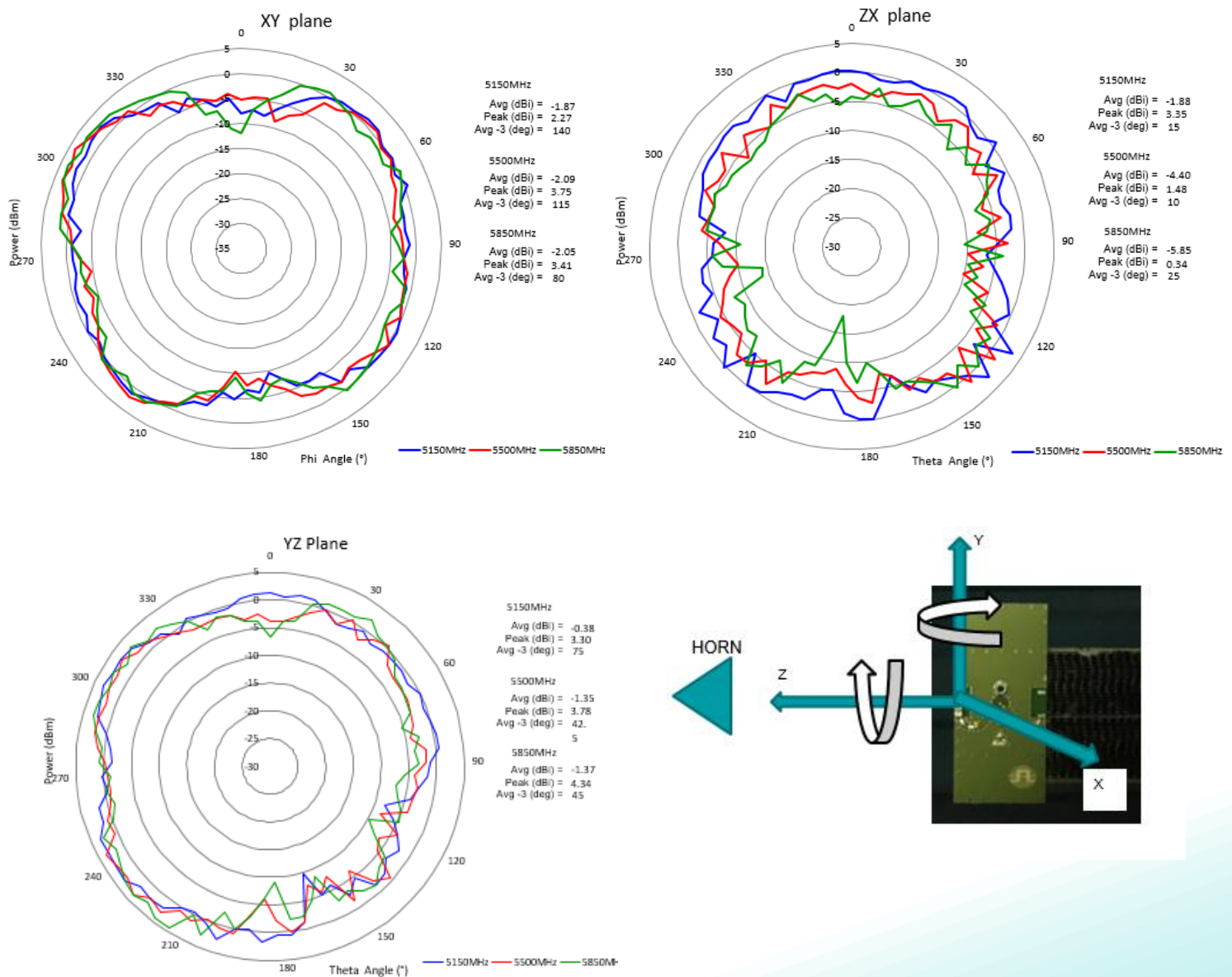
Series: Ceramic

PART NUMBER: W3006

## CHARTS

Measured on the 80x37mm test board with matching circuit, 1.5nH shunt inductor  
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm

## 5GHz Typical Free Space Radiation Patterns



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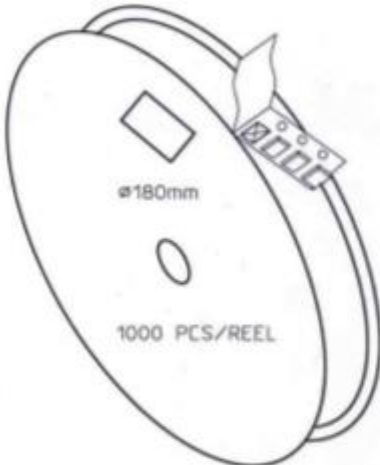
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## Description: Dual Band WLAN Ceramic

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PART NUMBER: W3006

### PACKAGING

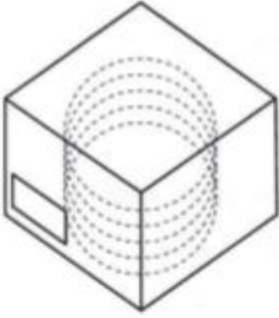


CARRIER TAPE H85-00168  
width=24,00 depth=2.20  
COVER TAPE H85-00159  
width=21.20

LENGTH OF TAPE:


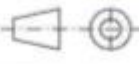
- Leader section: min 350 mm before component section
- Trailer section: min 40 mm after component section.

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



BOX H85-00128 1 pcs  
(182x182x125)  
- LABEL 1 pcs/BOX

REEL H85-00160 3 pcs  
(D180, W28)  
- REEL LABEL 1 pcs/REEL

MATERIAL			
HANDLINGS			
		RATIO	160107 PeHa H
		DRWN	
		OGNER	G
		CHKD	F
		APPRD	E
PRODUCT H90-OY113-F01P01  DENOMINATION PACKING FORM		APPRD BY	D
			C
			B
			A
		VERSION	MOD/DATE/NAME

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