

## Description: GNSS-DUAL WIFI-DSRC ANT

Series: CERAMIC CHIP

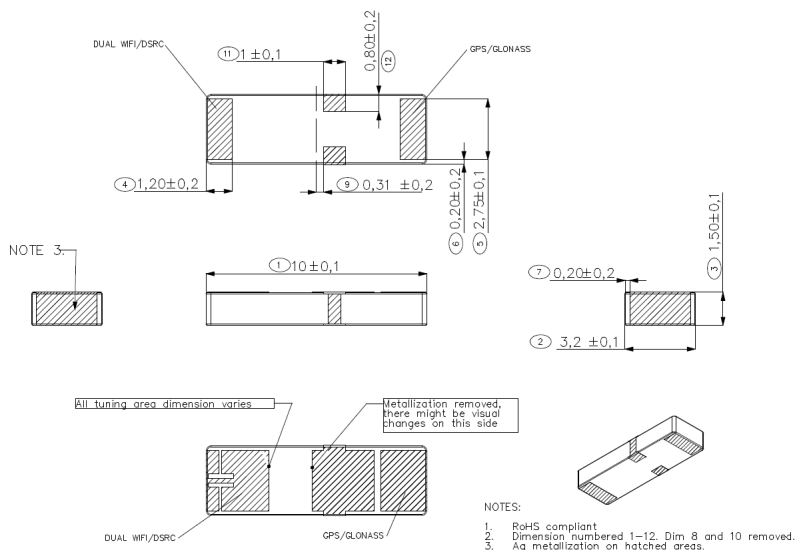
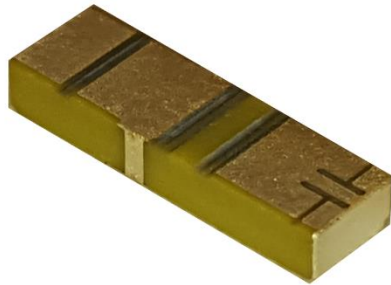
PART NUMBER: W3095

### Features:

- 3 in 1 solution on a ceramic chip with two separate feeds.
- Need smaller antenna space on PCB to integrate GPS/GLONASS, Dual WiFi and DSRC bands
- Compact Size (L x W x H) 10 x 3.2 x 1.5mm.
- Fully SMD compatible

### Applications:

- GPS / GLONASS (1575-1610MHz)
- IEEE 802.11 a/b/g/n compliant 2.4 and 5GHz. (2400-2485/ 4900-5850MHz)
- DSRC (5850-5925MHz)
- Mobile navigation device



All dimensions are in mm / inches

Issue: 1804

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Tel: 86 512 6807 9998



**Description:** GNSS-DUAL WIFI-DSRC ANT**Series:** CERAMIC CHIP**PART NUMBER:** W3095**ELECTRICAL SPECIFICATIONS**

Frequency, Port 1	1.575-1.610 GHz
Frequency, Port 2	2.4-2.485/ 4.9-5.925 GHz
Normal Impedance	50 Ohm
VSWR, Port 1	<2.5:1
VSWR, Port 2	<2:1at low band <2.8:1 at high band
Efficiency (Typ.), Port 1	60 %
Efficiency (Typ.), Port 2	80/ 50 %
Peak Gain, Port 1	1.5 dBi
Peak Gain, Port 2	2.5/ 3.5 dBi
Isolation (Min.) at 1.575-1.610 GHz	22 dB
Isolation (Min.) at 2.4-2.485 GHz	20 dB
Isolation (Min.) at 4.9-5.925 GHz	22 dB
Polarization	Linear
Interface	SMD Mount

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## MECHANICAL SPECIFICATIONS

Block material	Dielectric ceramic
Plating material	Ag
Weight	0.24 g
RoHS Compliant Product	
Tape and reel packing	
Lead free materials	
Lead free soldering compatible	

## ENVIRONMENTAL SPECIFICATIONS

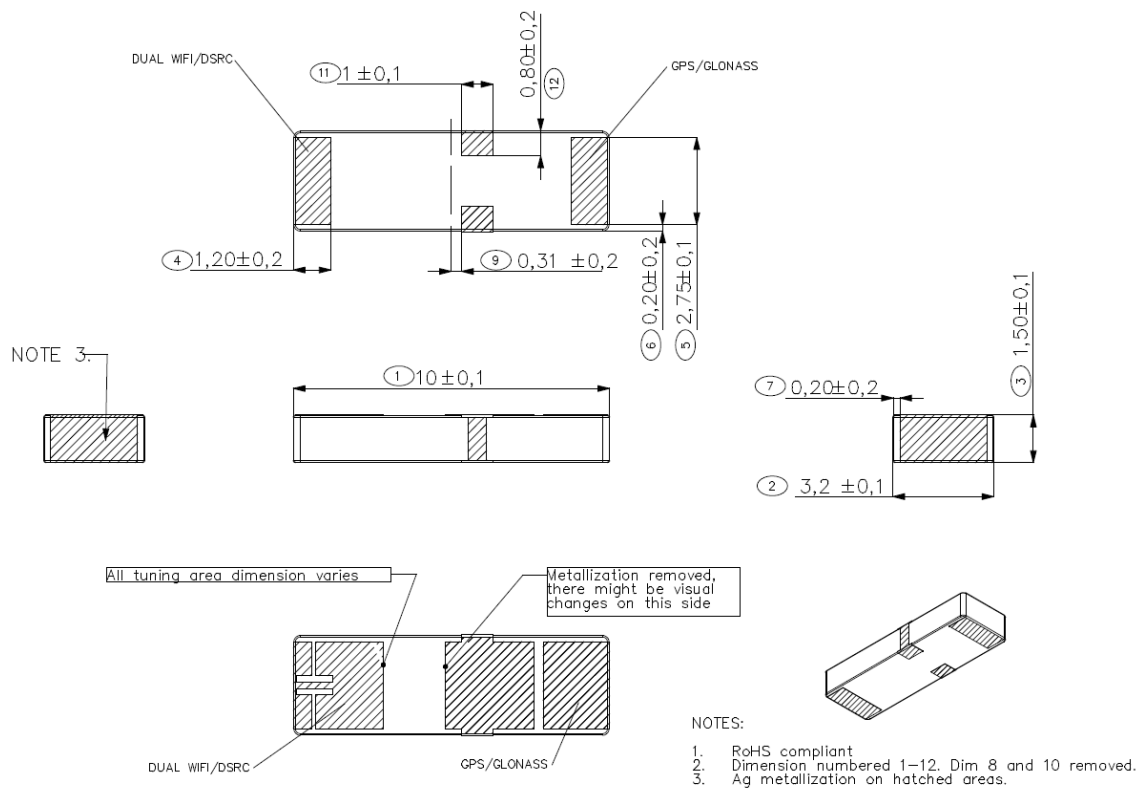
Operating temperature	-30 to +80° C
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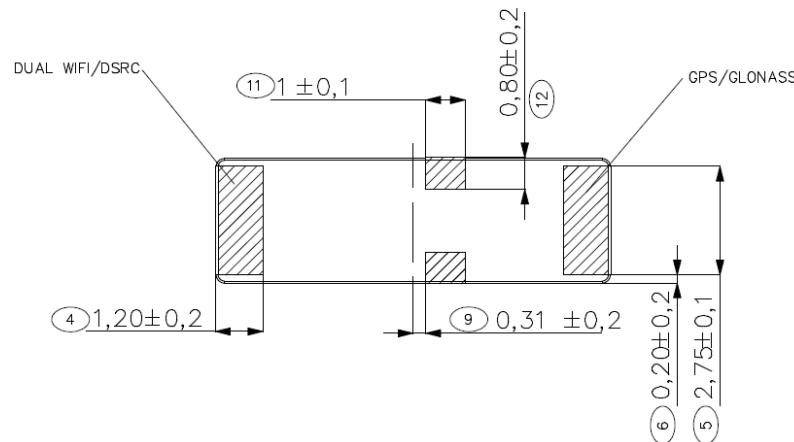
**PART NUMBER: W3095**

# MECHANICAL DRAWING



Dimensions: (mm)

Details of antenna pad dimension on the bottom in mm.



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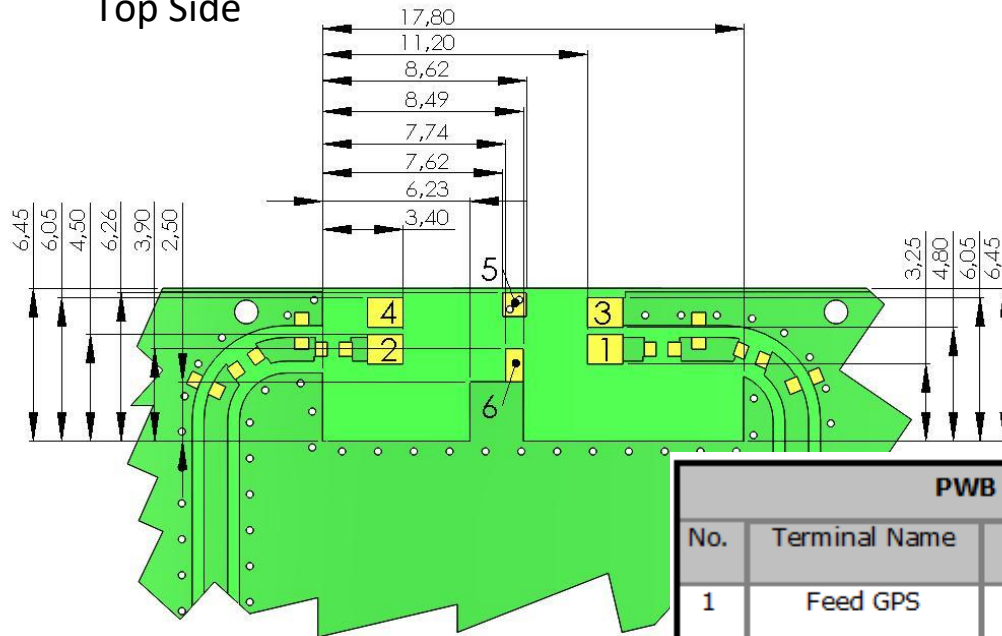
Series: CERAMIC CHIP

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## OTHER SPECIFICATIONS

### PCB Layout Recommendation

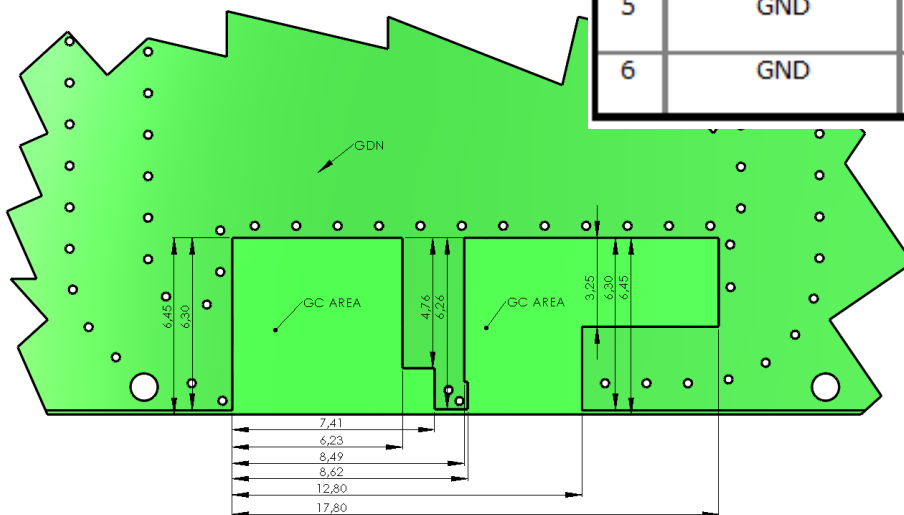
Top Side



#### PWB features

No.	Terminal Name	Terminal Dimensions
1	Feed GPS	1.25 x 1.50 mm
2	Feed 2,4-5,925GHZ	1.25 x 1.50 mm
3	GND	1.25 x 1.50 mm
4	Support pad	1.25 x 1.50 mm
5	GND	1.00 x 1.00 mm
6	GND	1.40x 0.75 mm

Bottom Side



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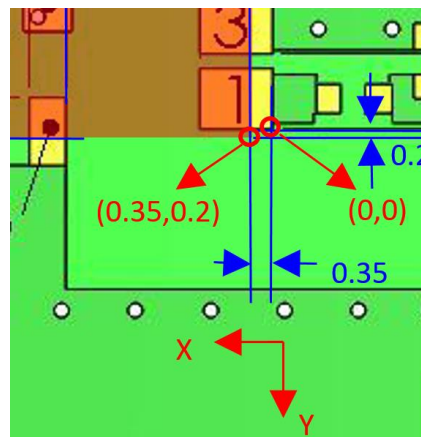
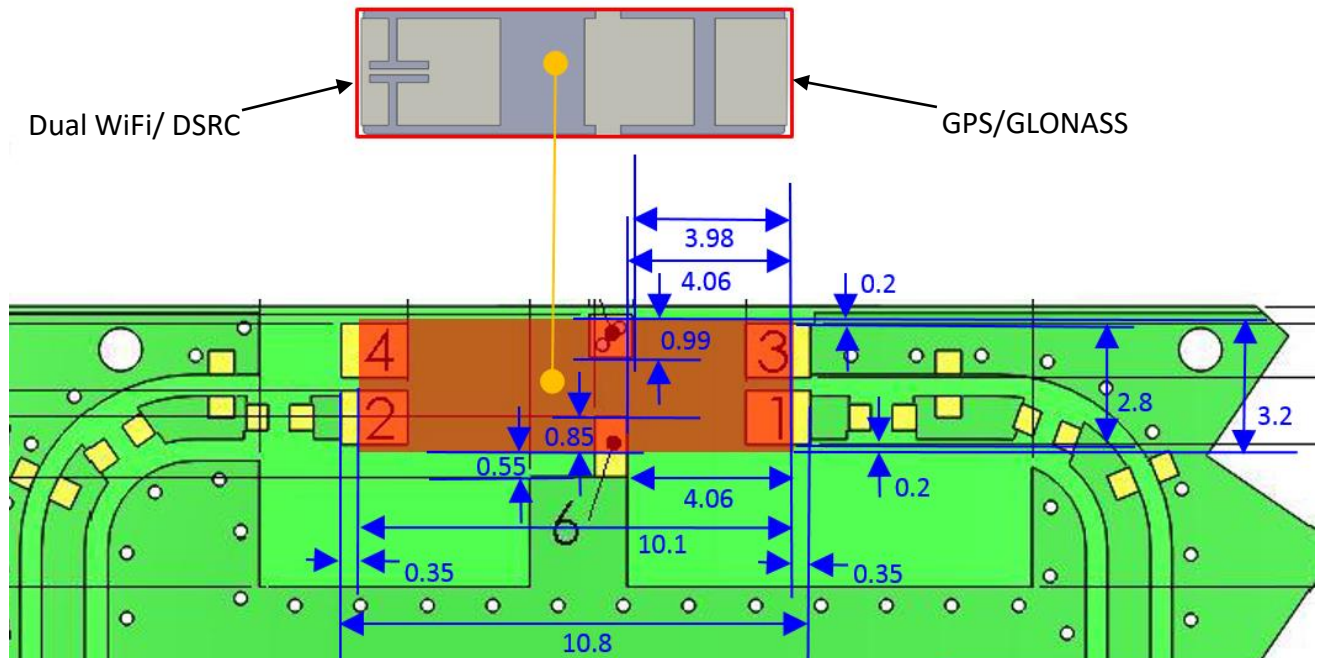
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## OTHER SPECIFICATIONS

### Antenna Alignment on PCB Layout



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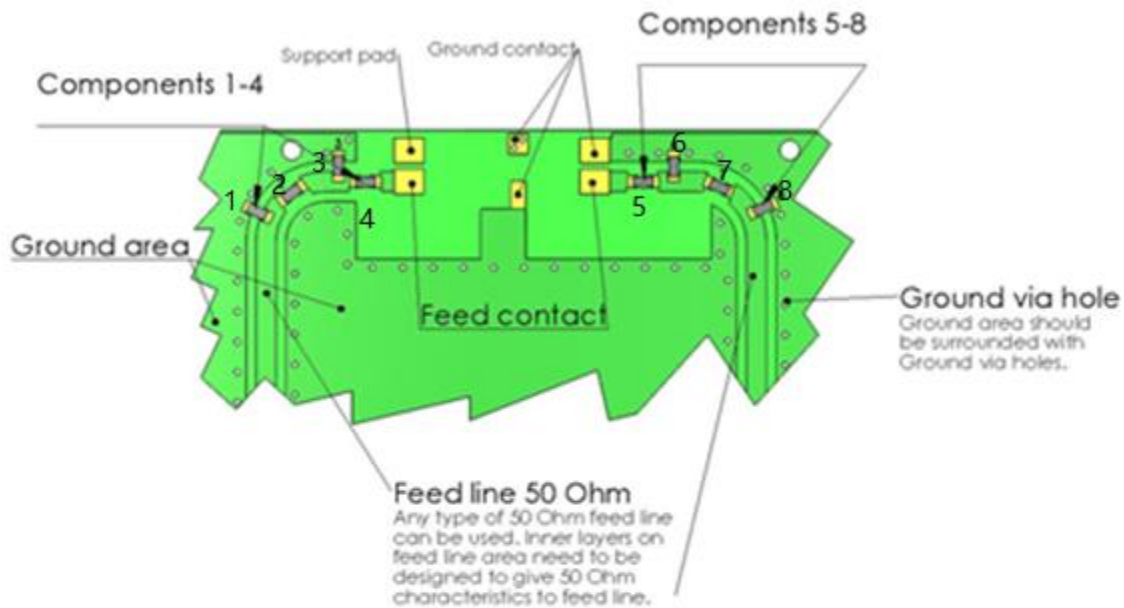
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## OTHER SPECIFICATIONS

### Suggested Matching on PCB



Antenna	Component NO.	Value
2.4-5.925GHz	1	Optional, not in use
2.4-5.925GHz	2	0 Ohm
2.4-5.925GHz	3	2.2nH
2.4-5.925GHz	4	1.2pF
GPS/Glonass	5	0 Ohm
GPS/Glonass	6	1.8pF
GPS/Glonass	7	0 Ohm
GPS/Glonass	8	Optional, not in use

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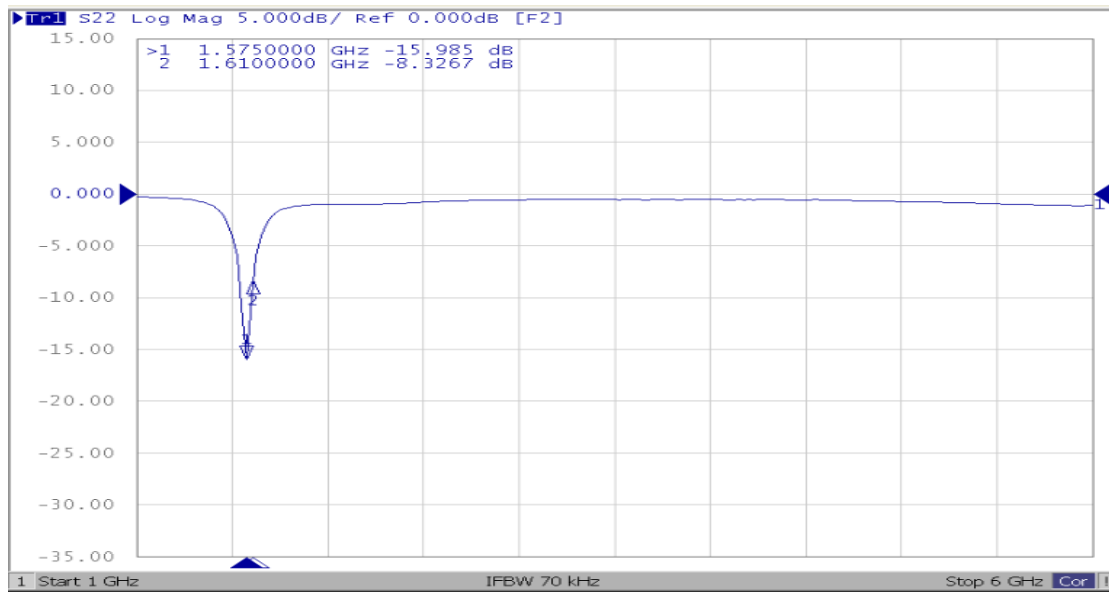
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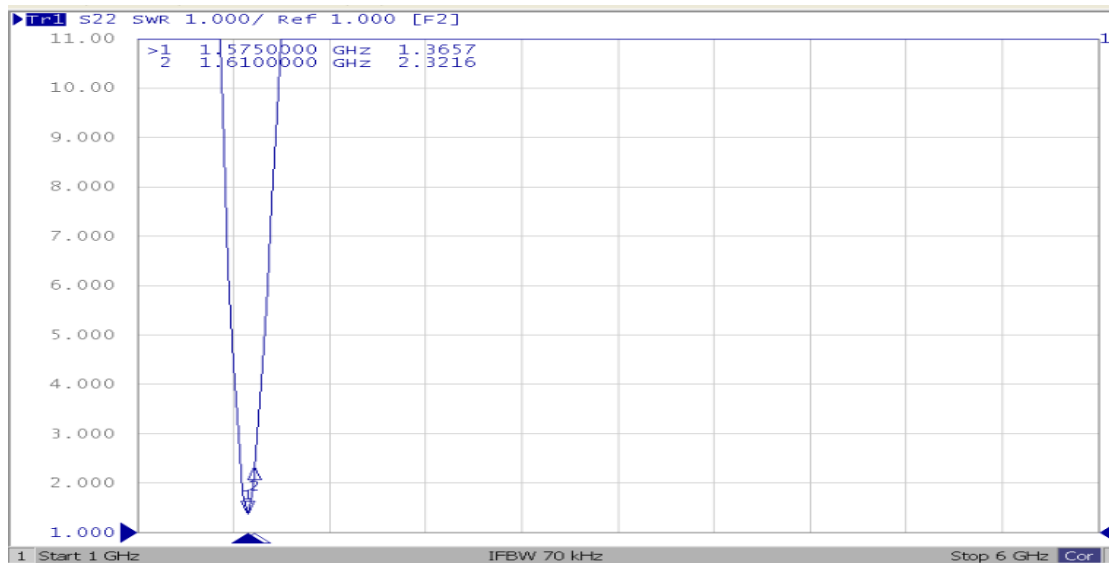
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## CHARTS

### Typical GPS/GLONASS antenna Return Loss LOG



### VSWR



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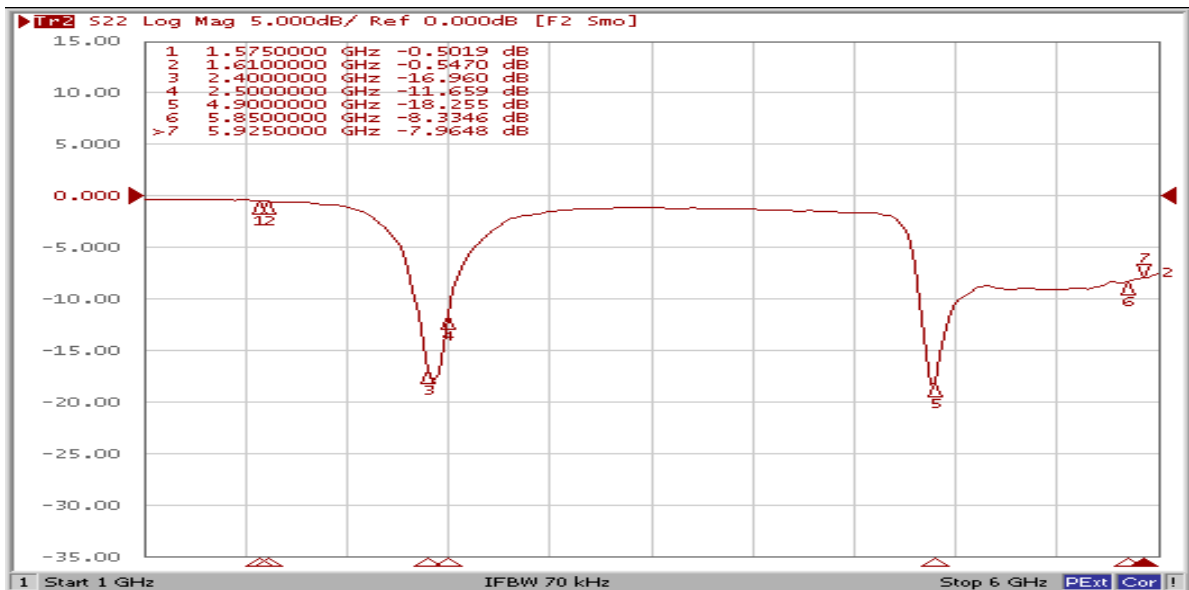
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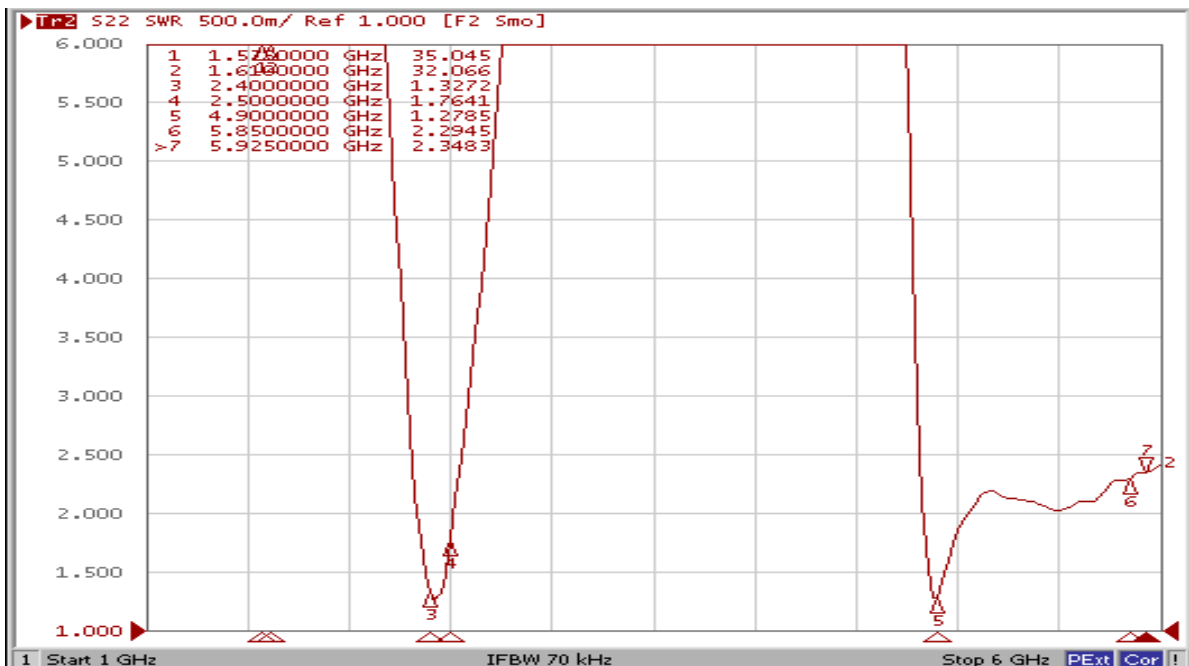
### CHARTS

#### Typical WIFI antenna Return Loss

LOG



VSWR



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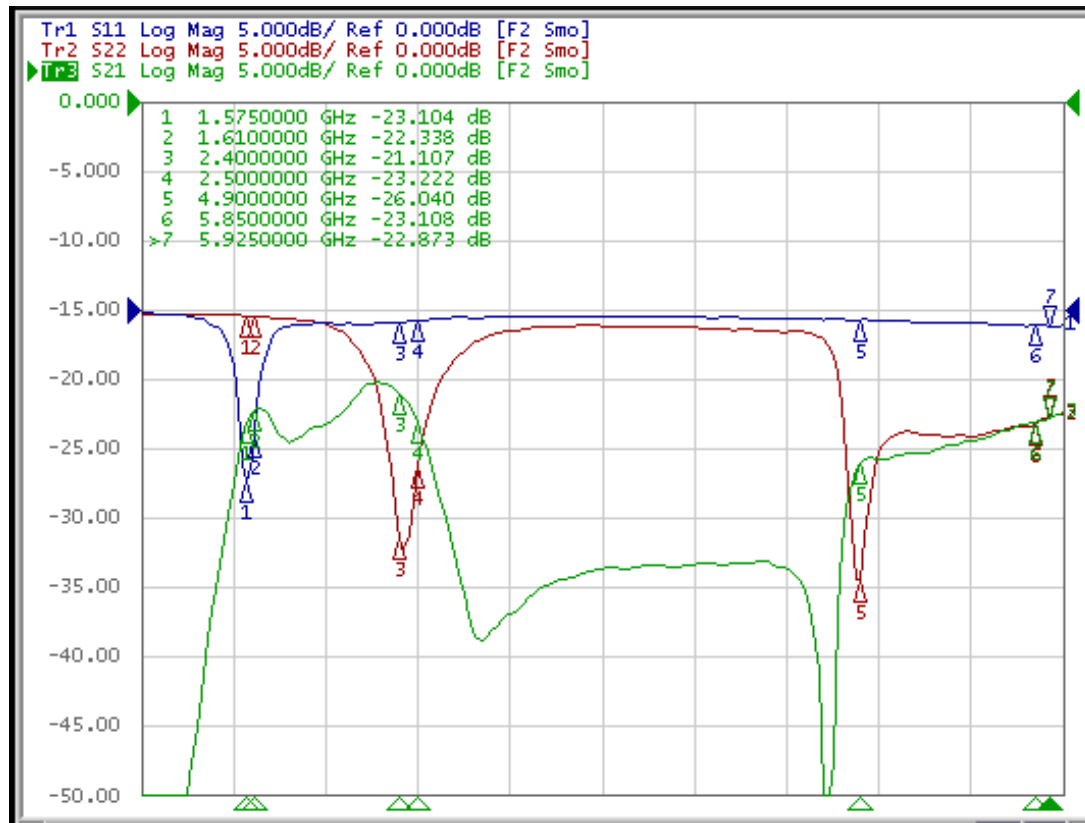
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PART NUMBER: W3095

## CHARTS

### Typical Isolation

### Isolation



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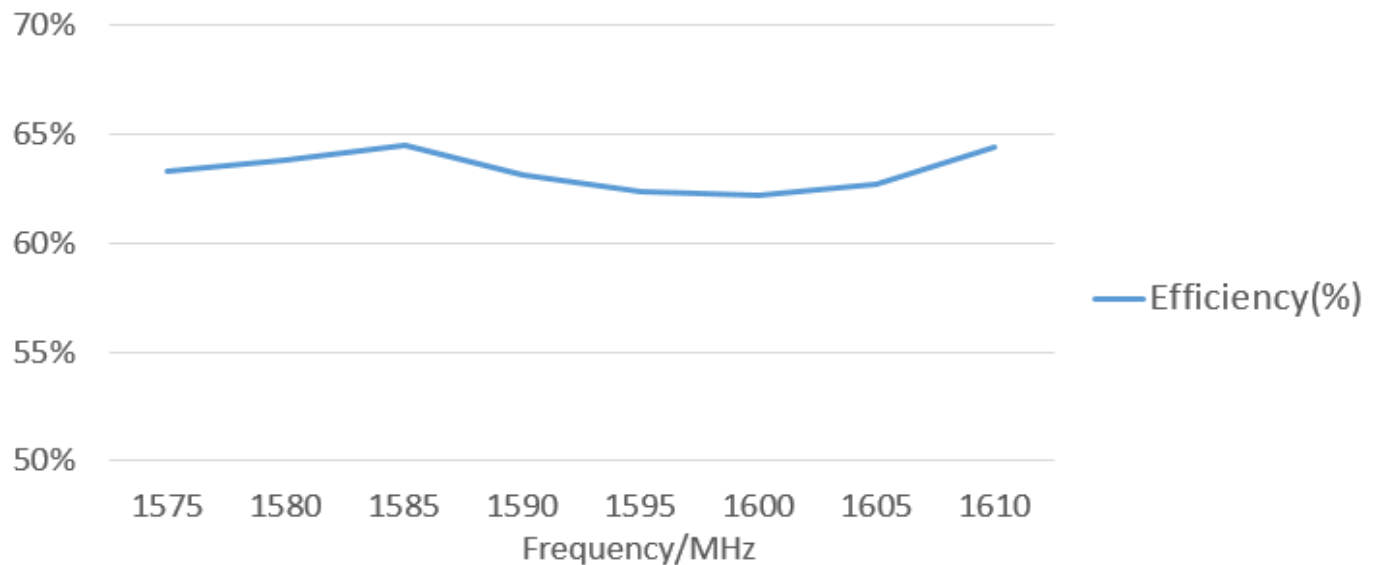
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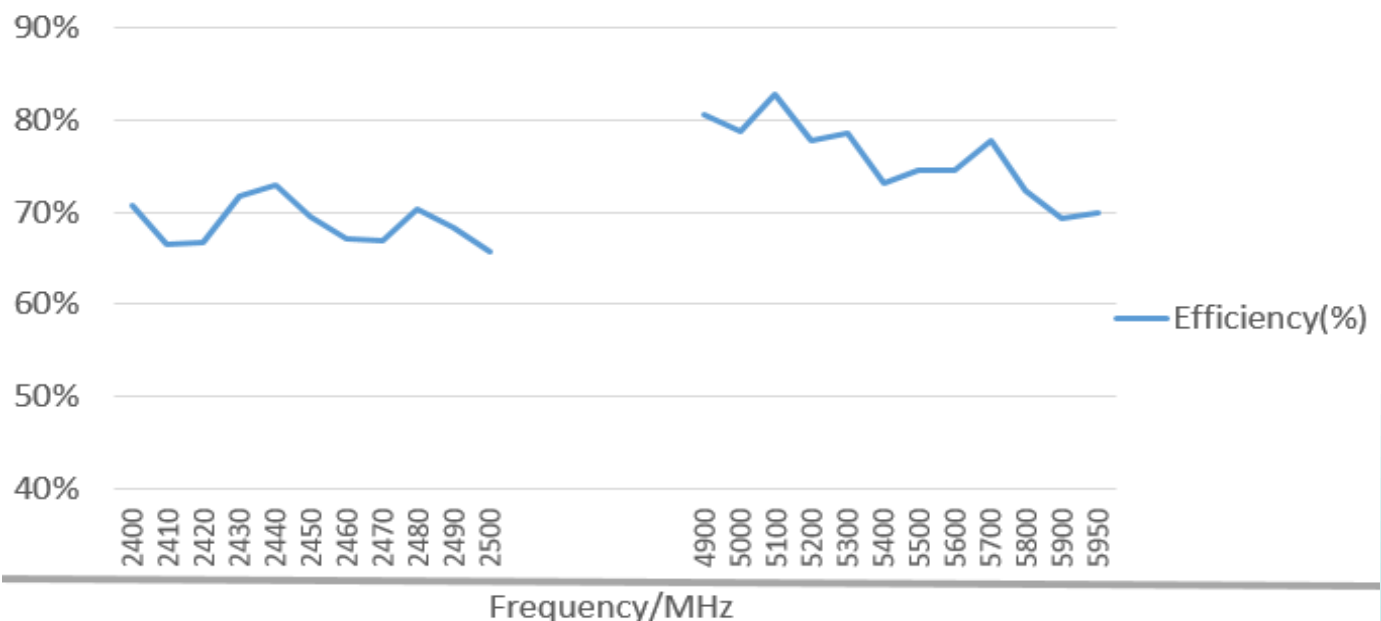
## CHARTS

### Typical Antenna Total Efficiency

#### GPS/GLONASS



#### WIFI/DSRC



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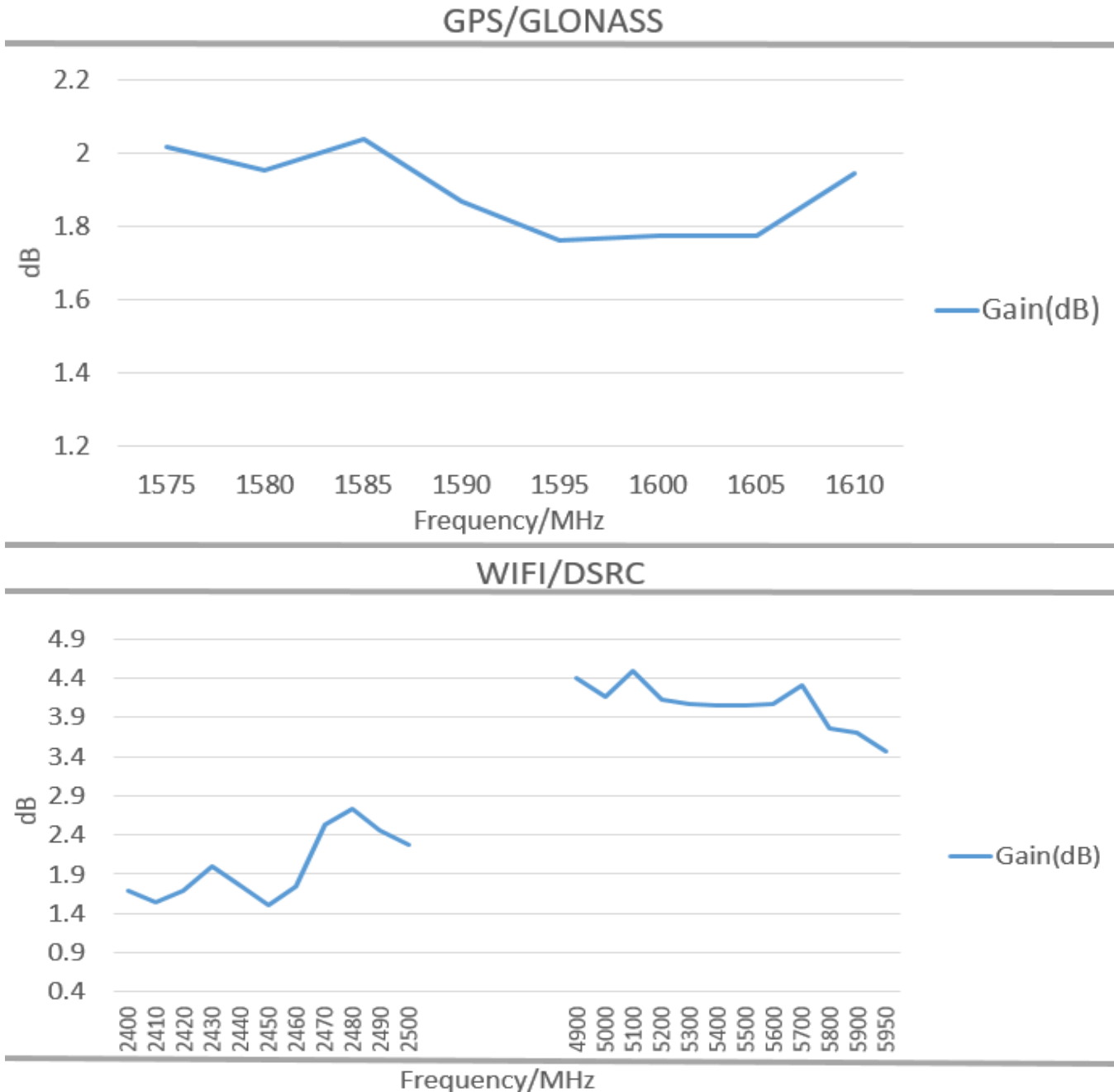
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## CHARTS

### Typical Antenna Peak Gain



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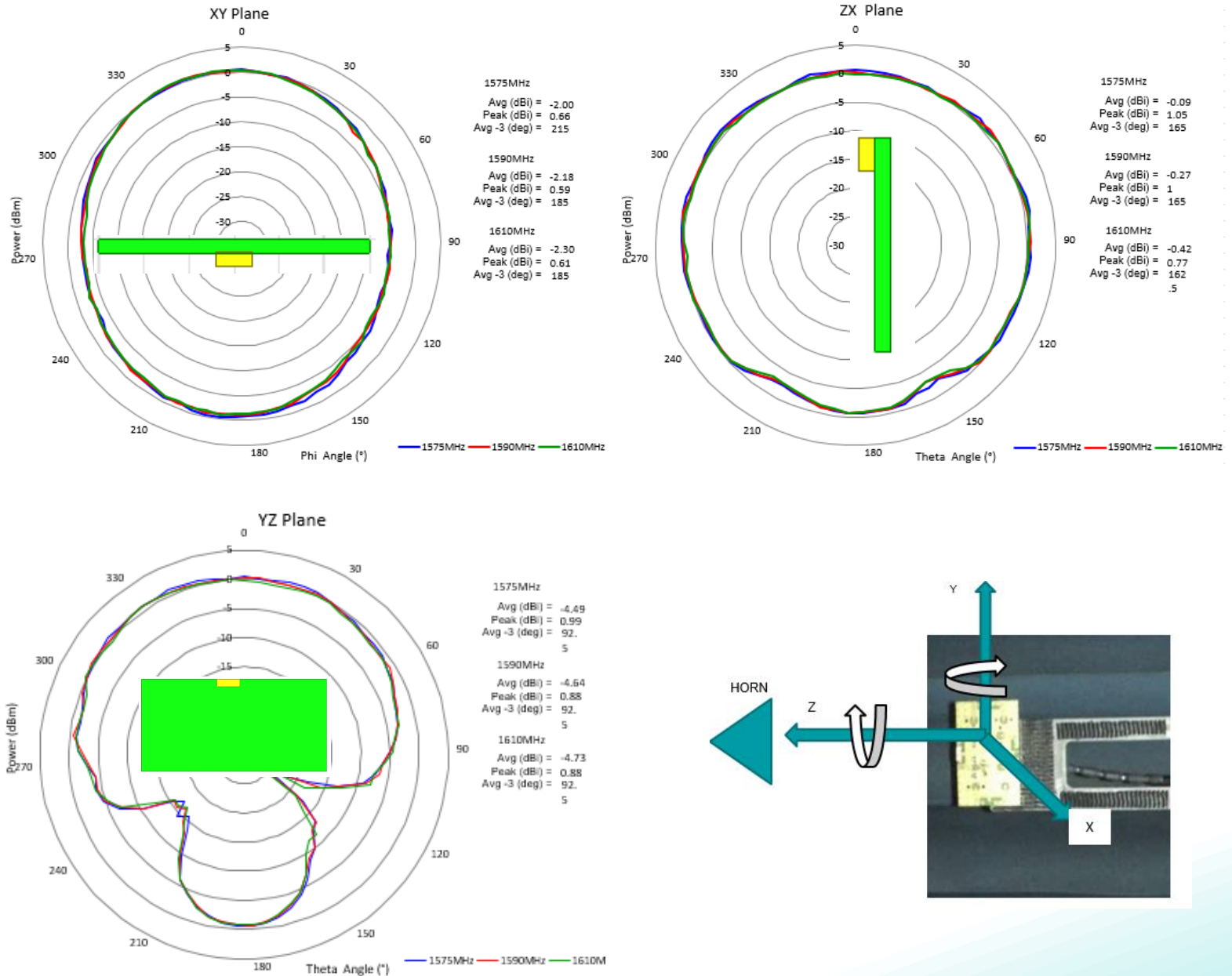
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### CHARTS

#### Typical free space radiation pattern—GPS/GLONASS



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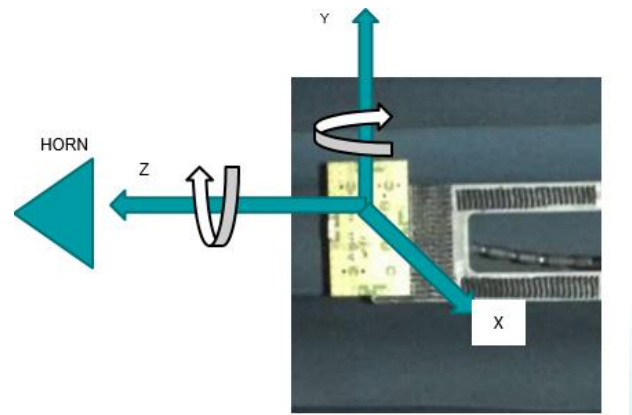
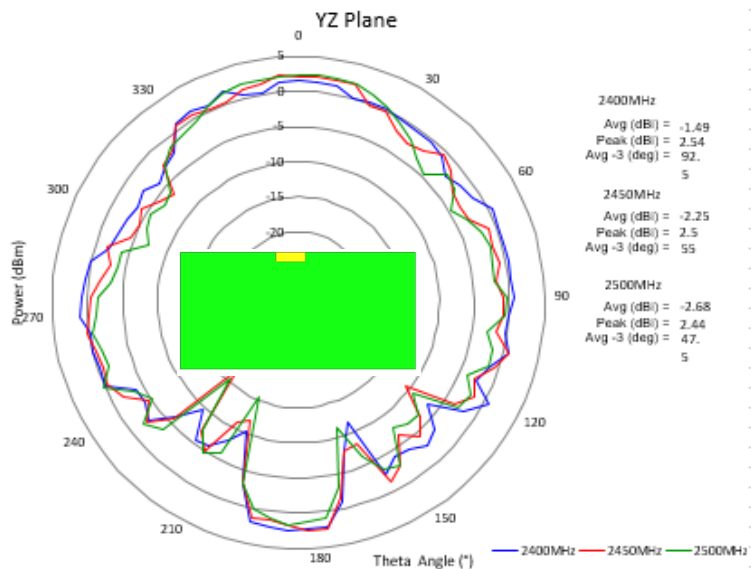
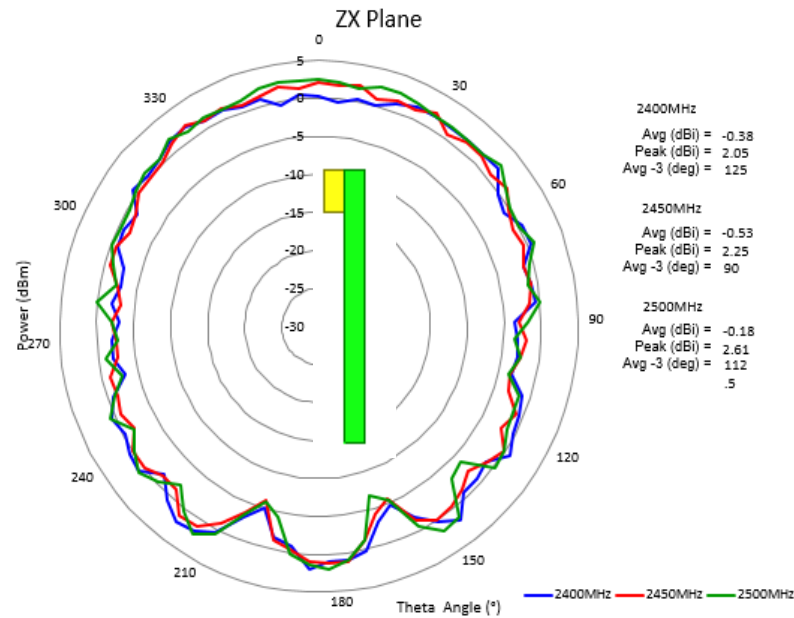
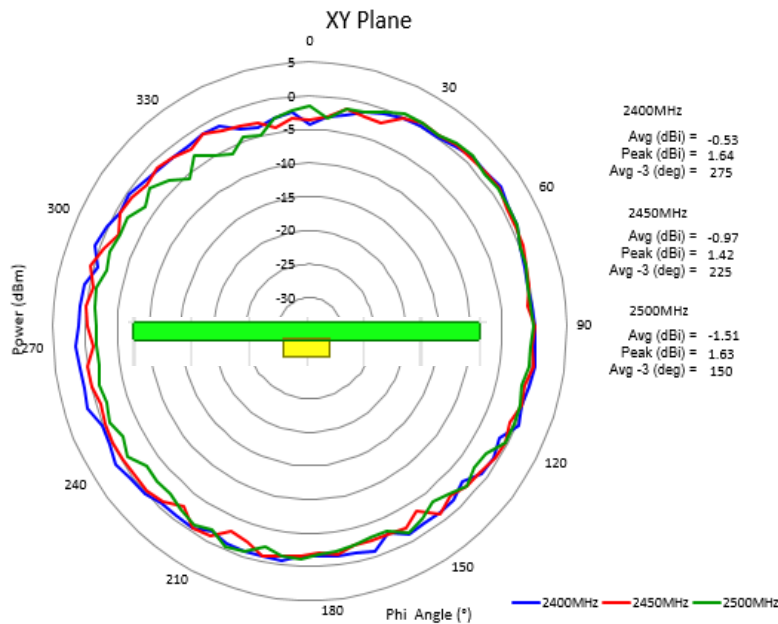
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## CHARTS

### Typical free space radiation pattern—2.4G



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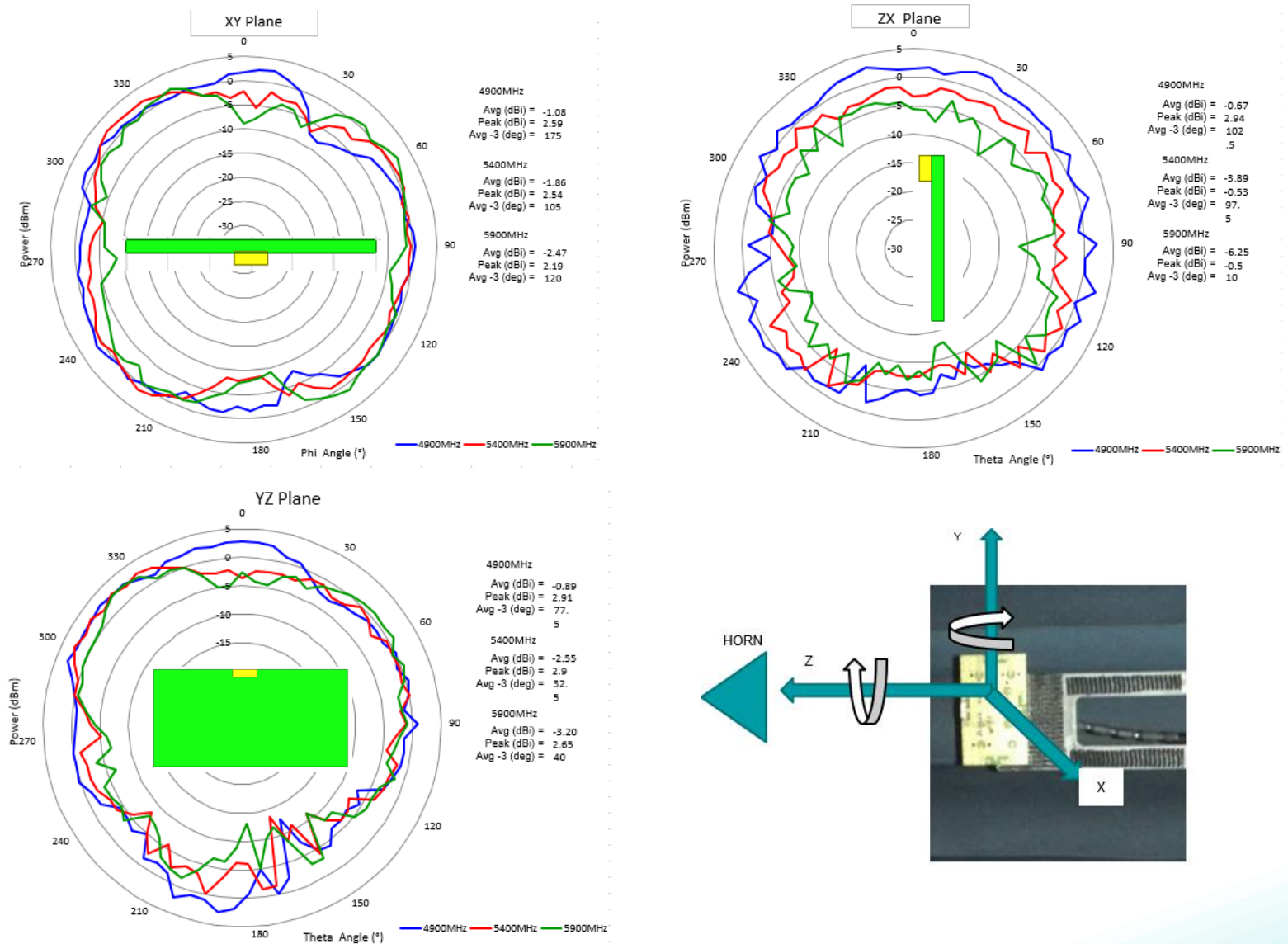
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## CHARTS

### Typical free space radiation pattern—5G



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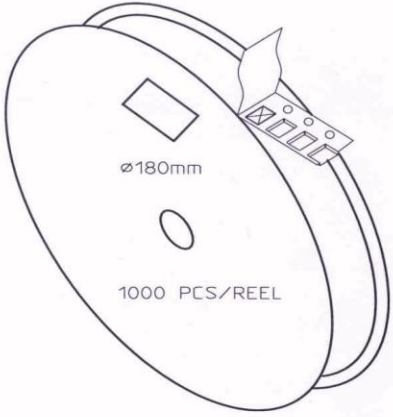
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## PACKAGING

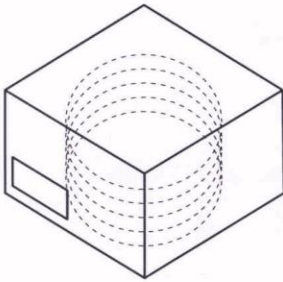


CARRIER TAPE H85-00188  
width=24,00 depth=2.20  
COVER TAPE H85-00159  
width=21.20

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.


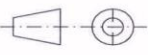


BOX H85-00128 1 pcs  
(182x182x125)

- LABEL 1 pcs/BOX

REEL H85-00160 4 pcs  
(D180, W28)

- REEL LABEL 1 pcs/REEL

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

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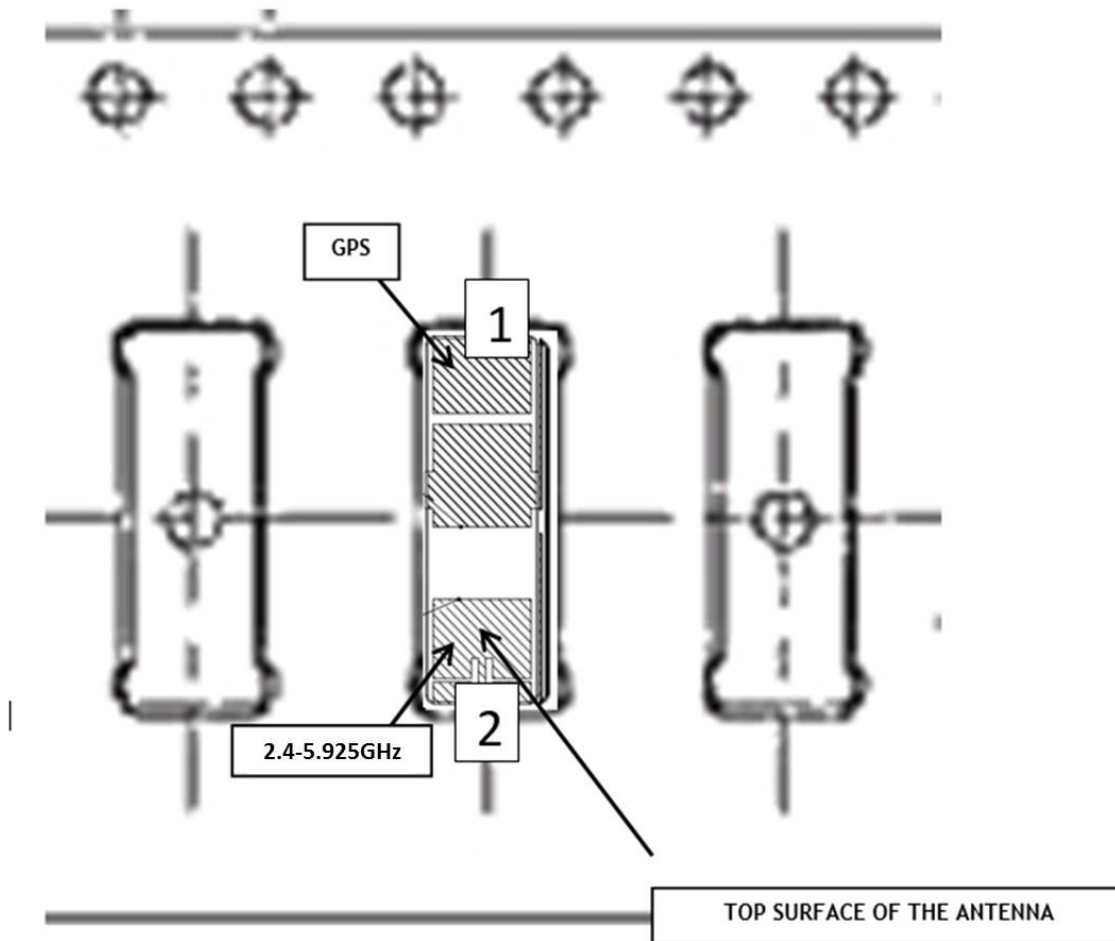
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### Block Orientation

Antenna soldering pads facing down to the bottom of the carrier tape

Top view of the carrier tape



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Web: <http://oceanchips.ru/>

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