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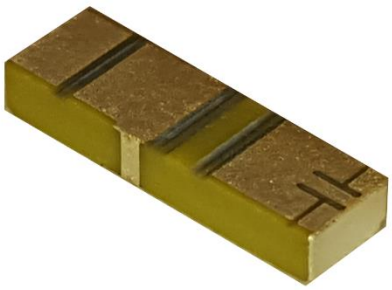
PulseLARSEN Antennas

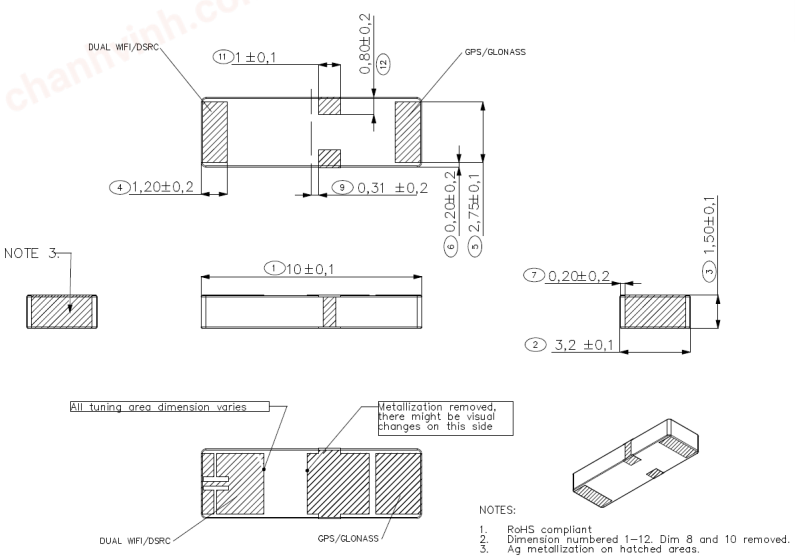
TECHNICAL DATA SHEET

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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18110 SE 34th St Bldg 2 Suite 250
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Pulse (Suzhou) Wireless Products Co, Inc.
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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PulseLARSEN Antennas

TECHNICAL DATA SHEET

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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TECHNICAL DATA SHEET

Description: GNSS-DUAL WIFI-DSRC ANT

Series: CERAMIC CHIP

PART NUMBER: W3095

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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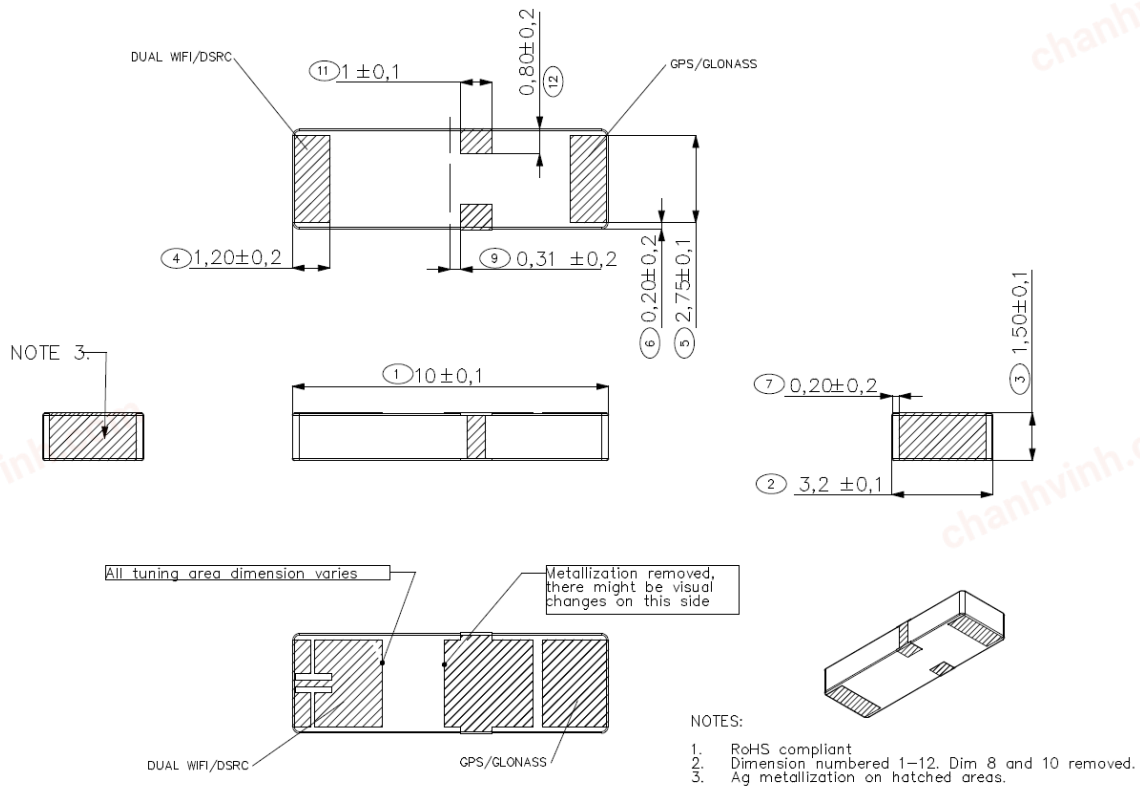
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Series: CERAMIC CHIP

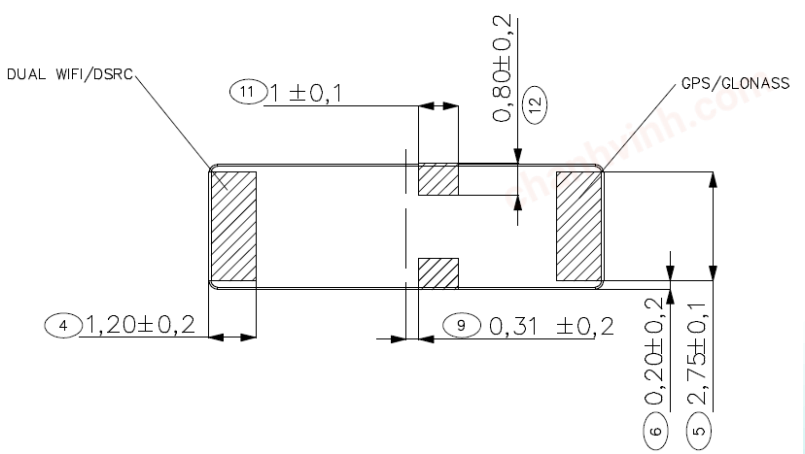
PART NUMBER: W3095

MECHANICAL DRAWING



Dimensions: (mm)

Details of antenna pad dimension on the bottom in mm.



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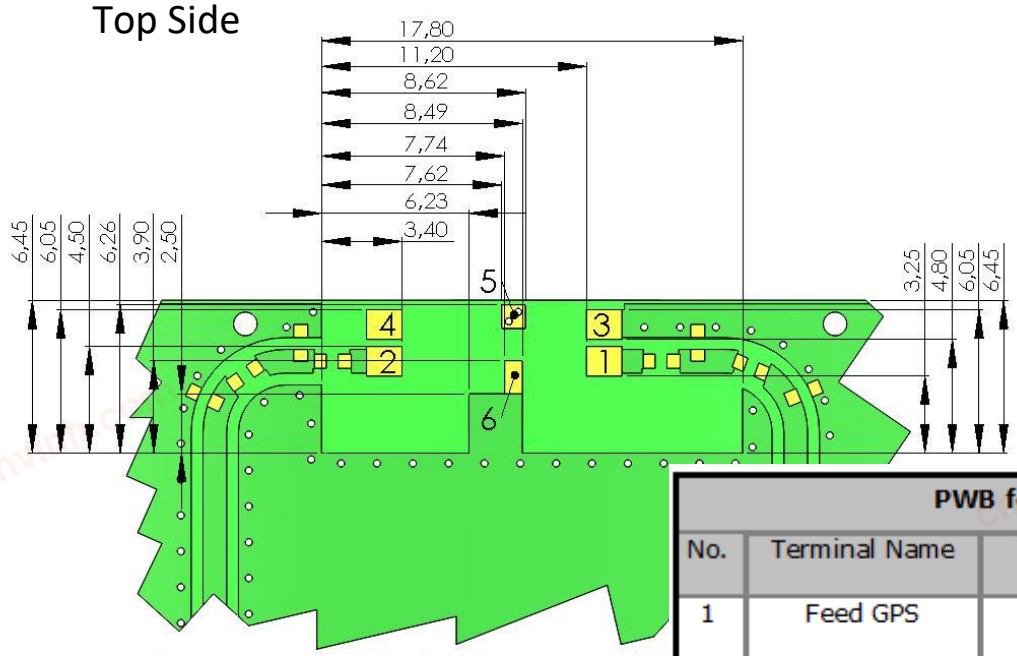
Series: CERAMIC CHIP

PART NUMBER: W3095

OTHER SPECIFICATIONS

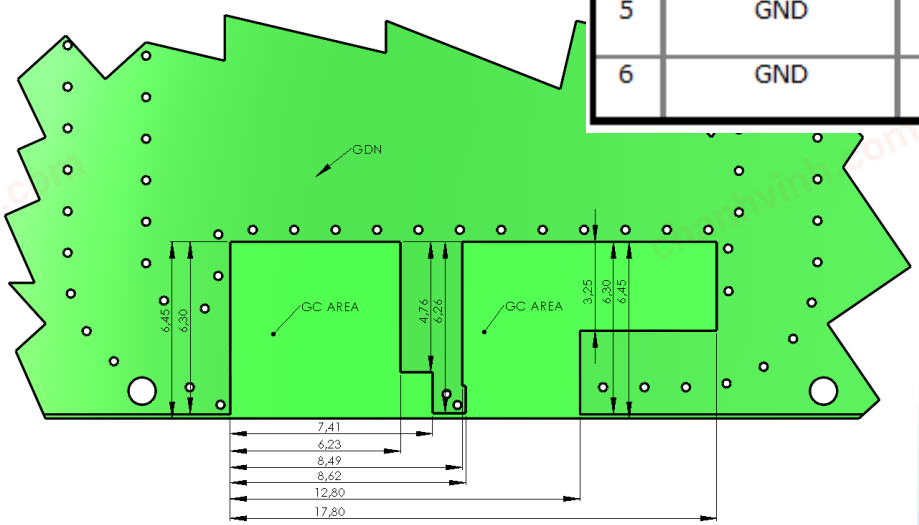
PCB Layout Recommendation

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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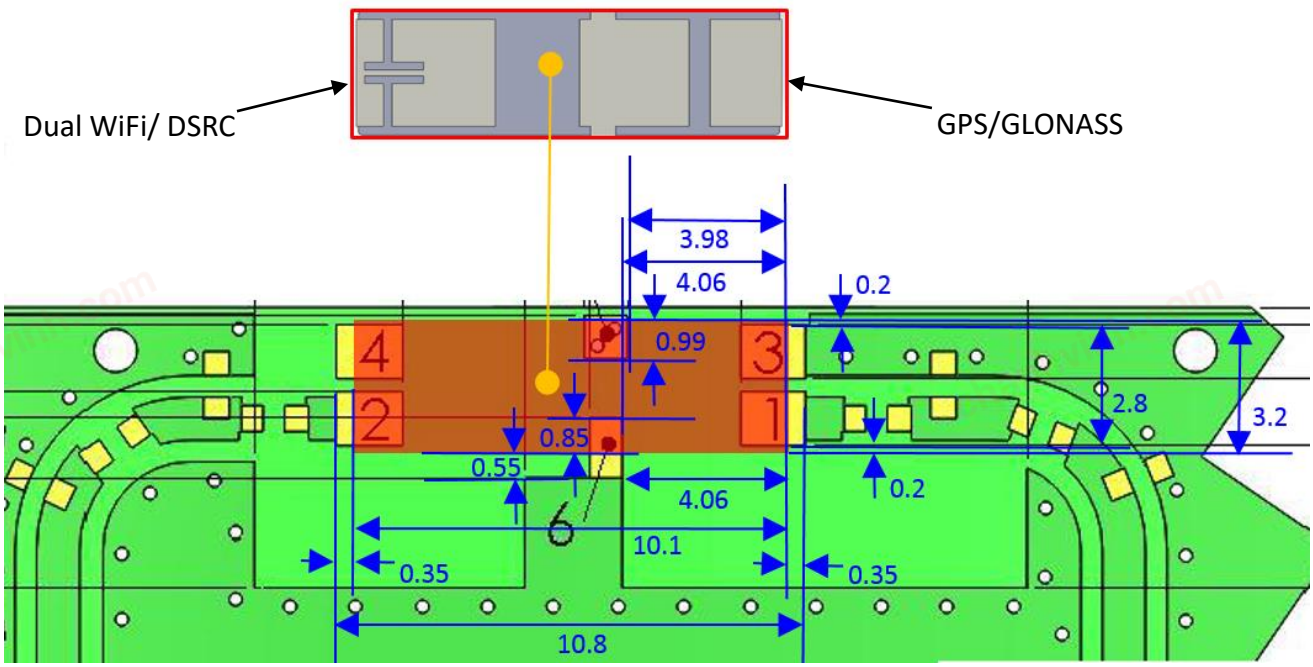
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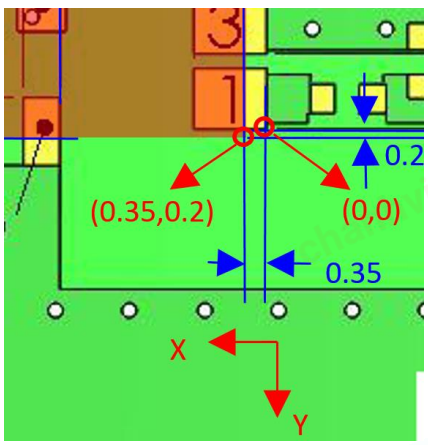
Series: CERAMIC CHIP

PART NUMBER: W3095

OTHER SPECIFICATIONS

Antenna Alignment on PCB Layout





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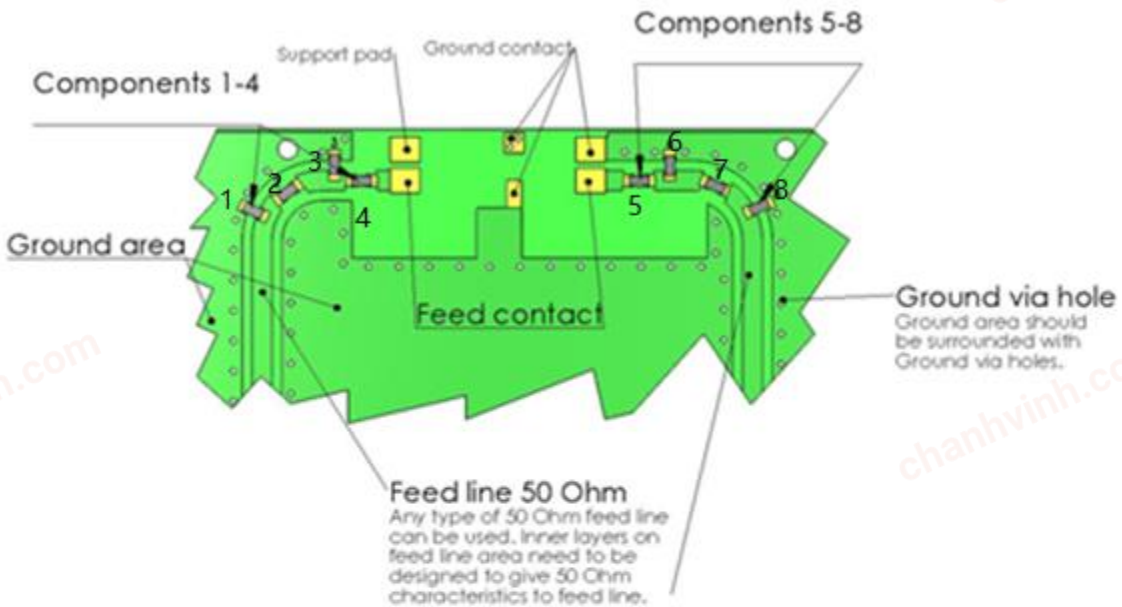
Description: GNSS-DUAL WIFI-DSRC ANT

Series: CERAMIC CHIP

PART NUMBER: W3095

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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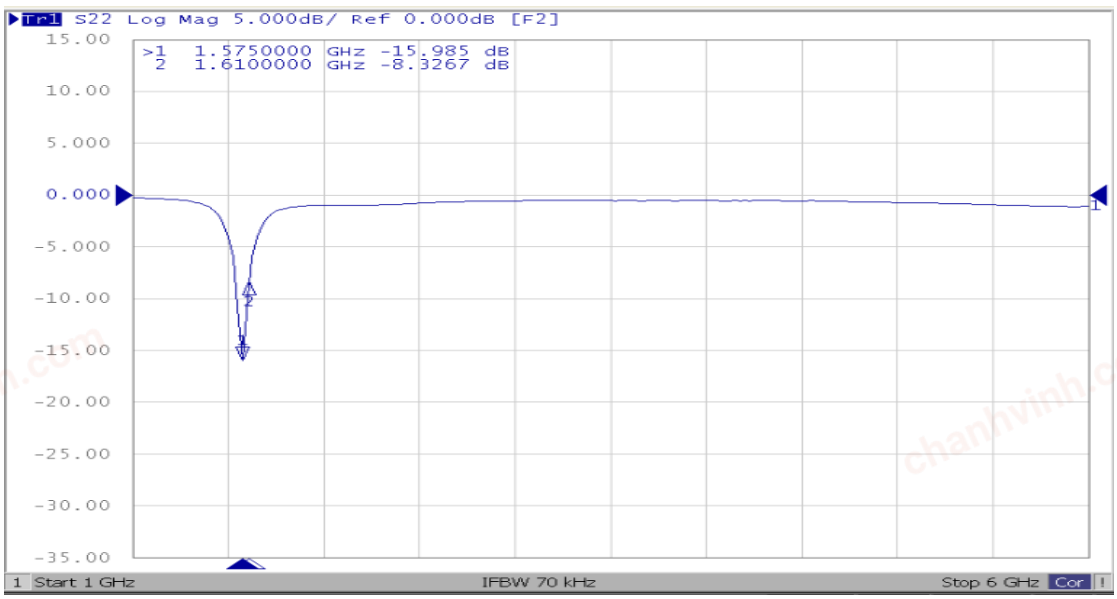
Series: CERAMIC CHIP

PART NUMBER: W3095

CHARTS

Typical GPS/GLONASS antenna Return Loss

LOG



VSWR



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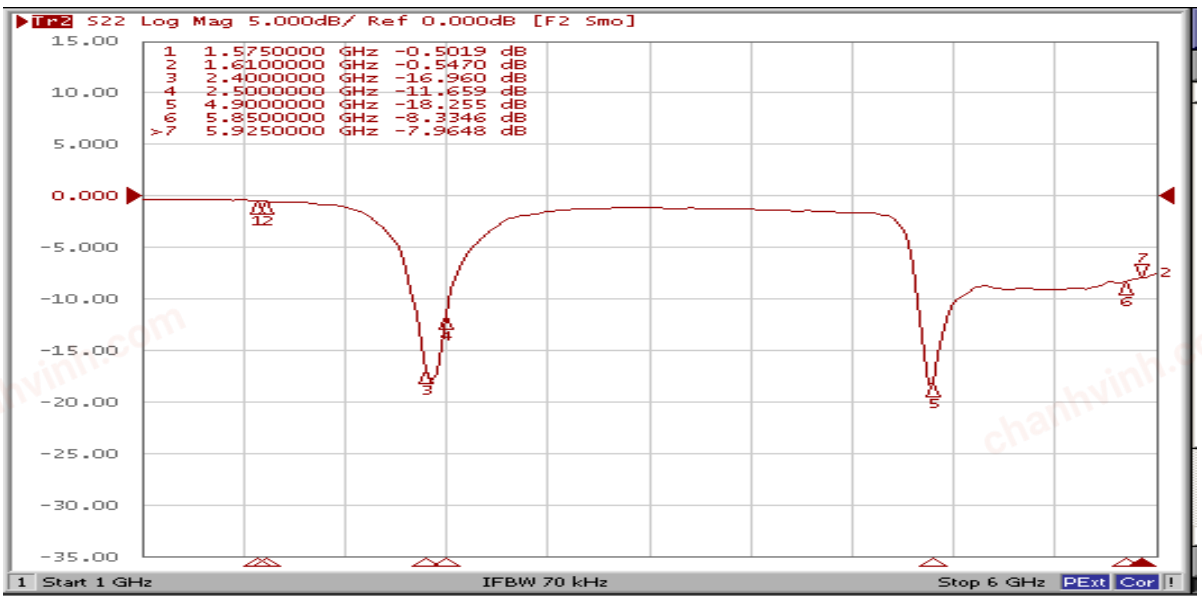
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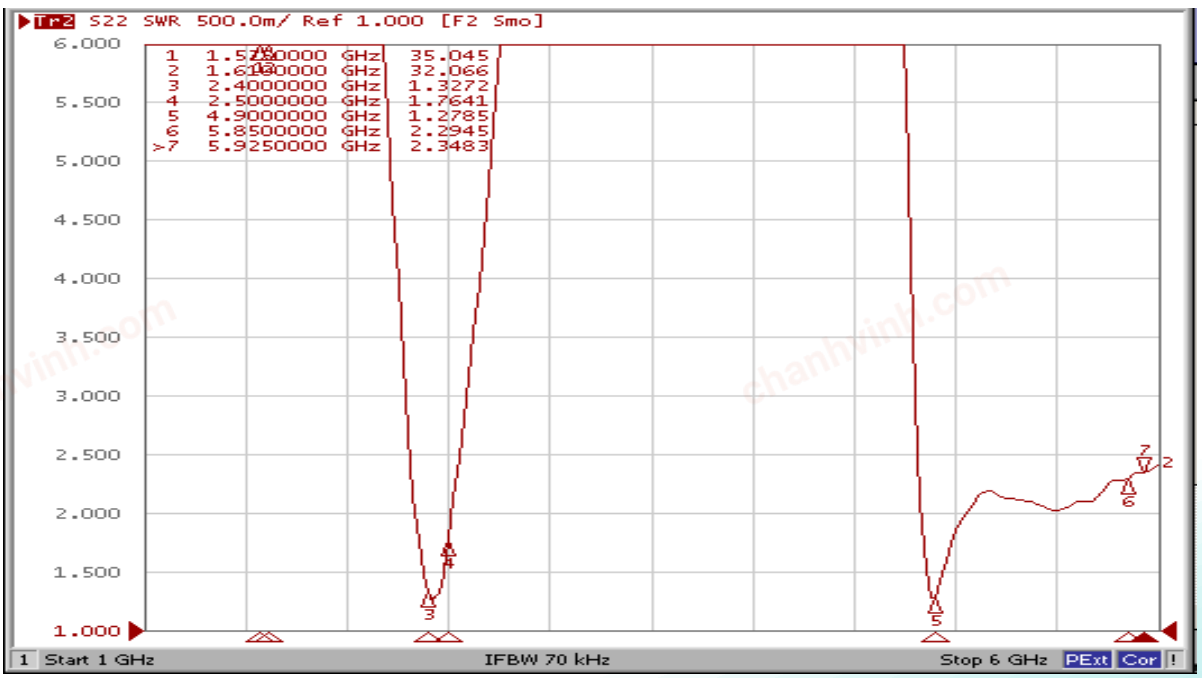
CHARTS

Typical WIFI antenna Return Loss

LOG



VSWR



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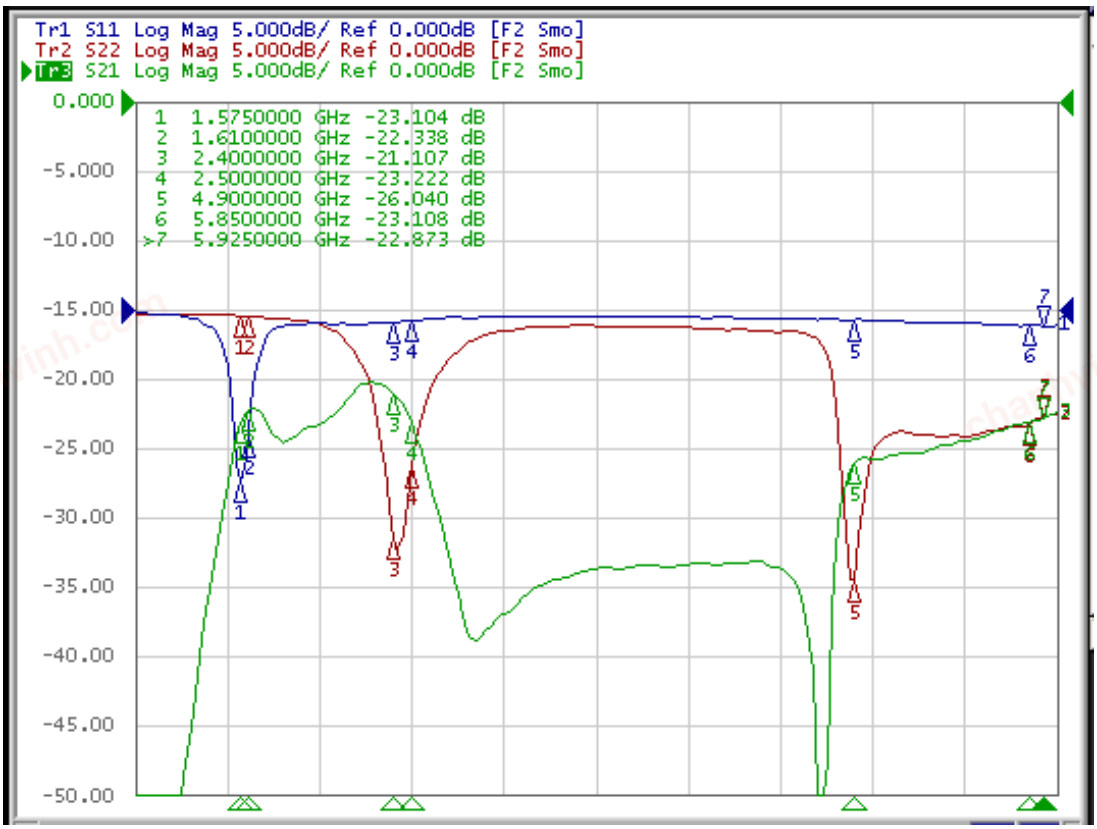
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CHARTS

Typical Isolation

Isolation



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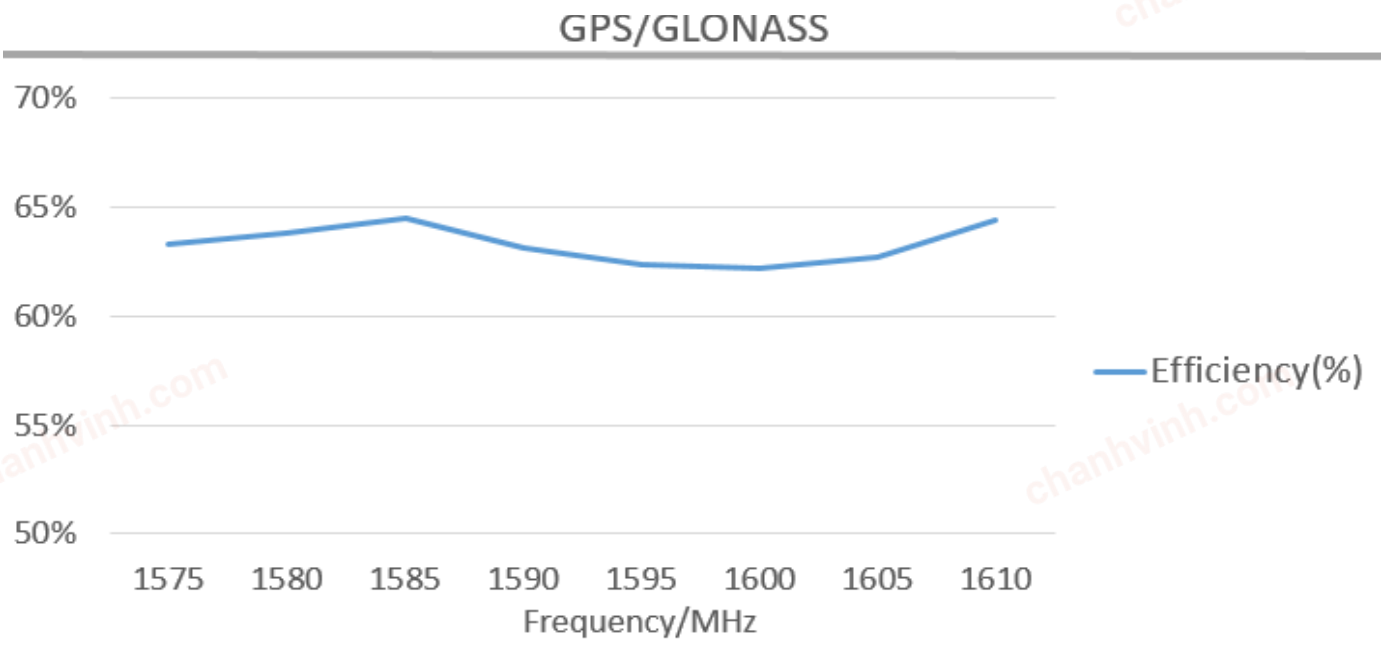
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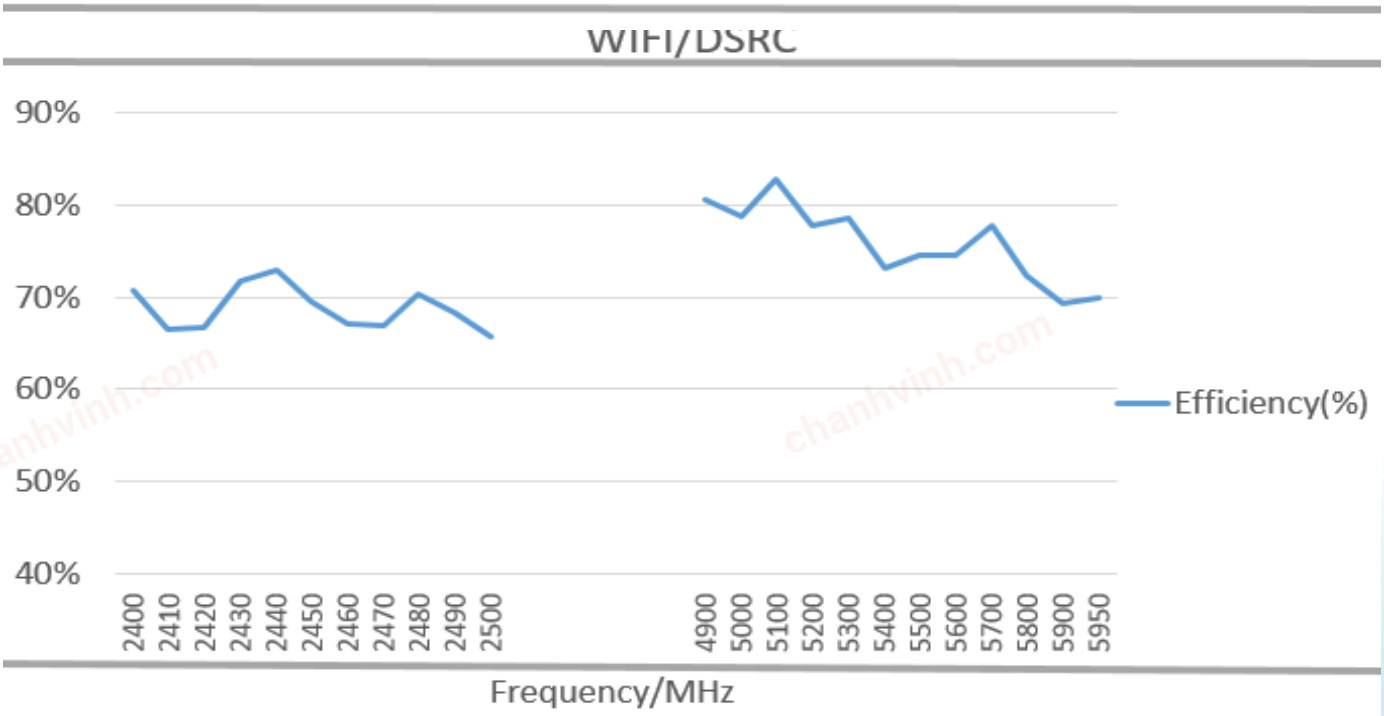
Series: CERAMIC CHIP

PART NUMBER: W3095

CHARTS

Typical Antenna Total Efficiency





Issue: 1804

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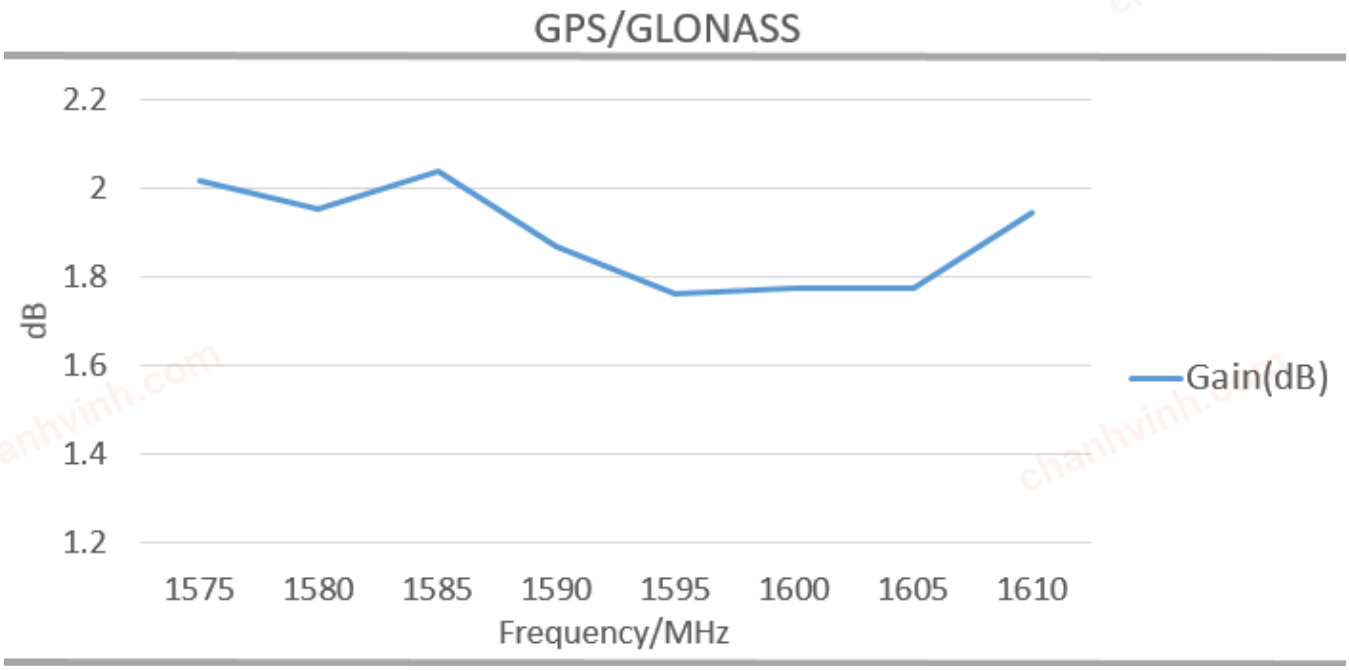
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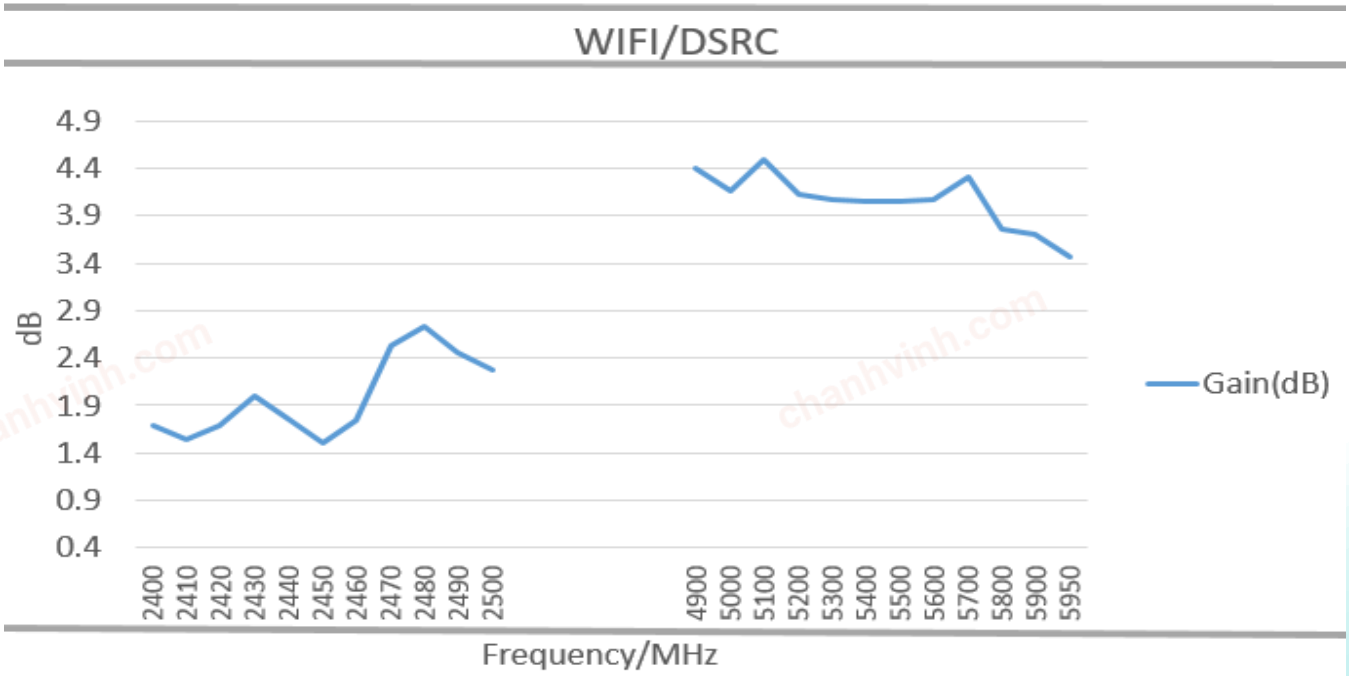
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PART NUMBER: W3095

CHARTS

Typical Antenna Peak Gain





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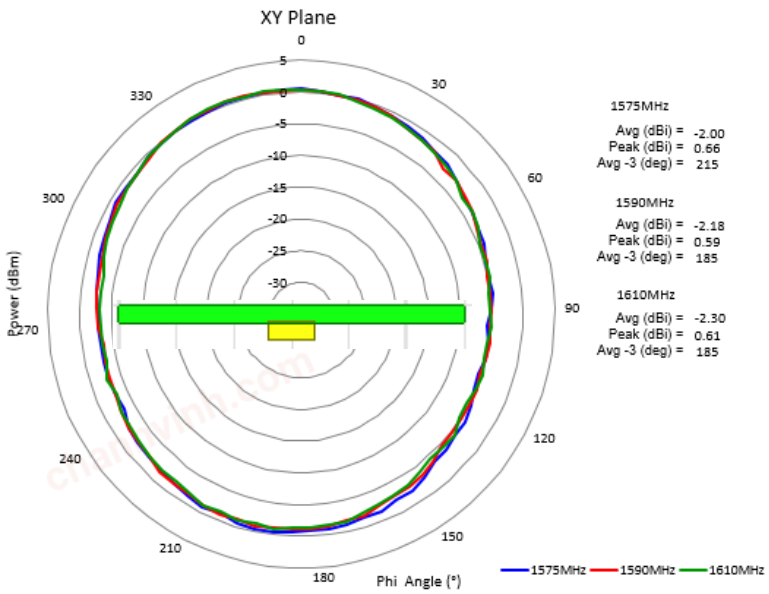
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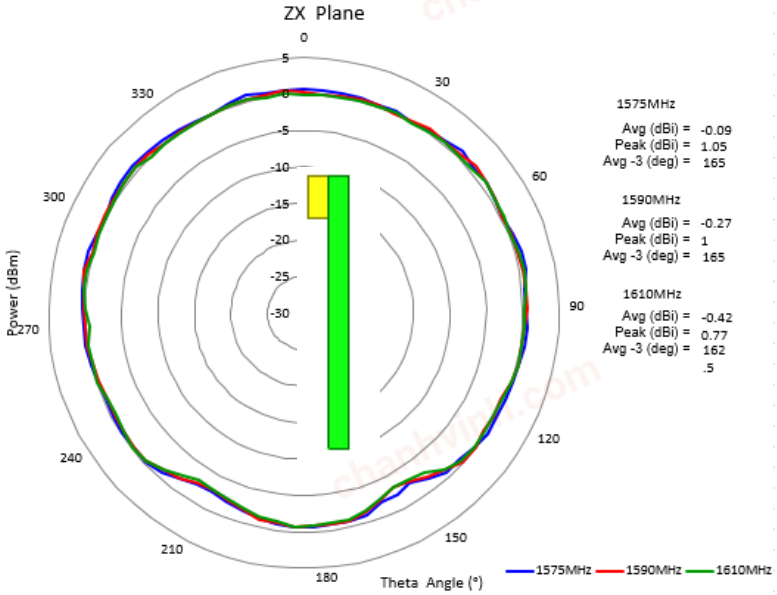
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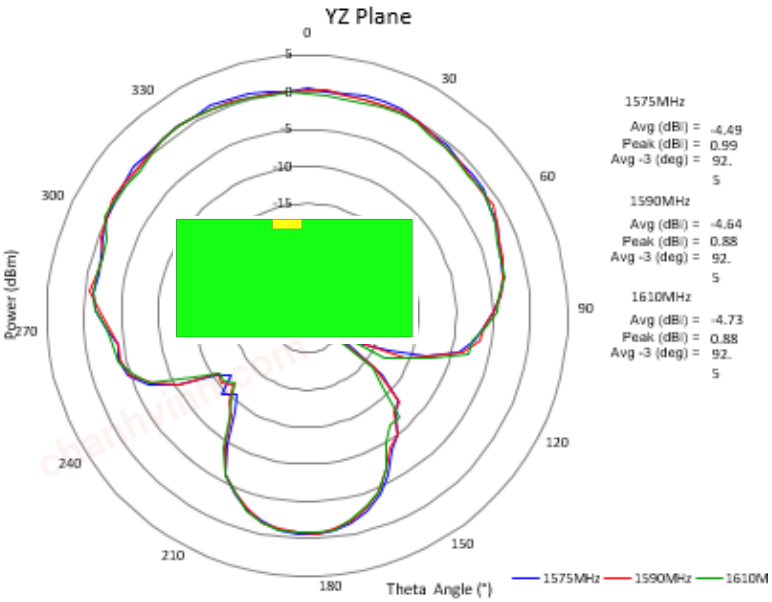
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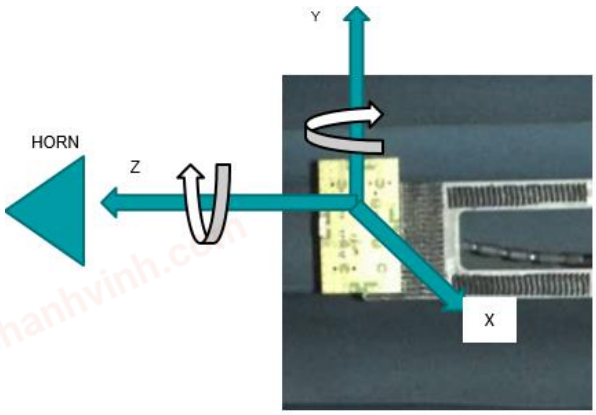
CHARTS

Typical free space radiation pattern—GPS/GLONASS









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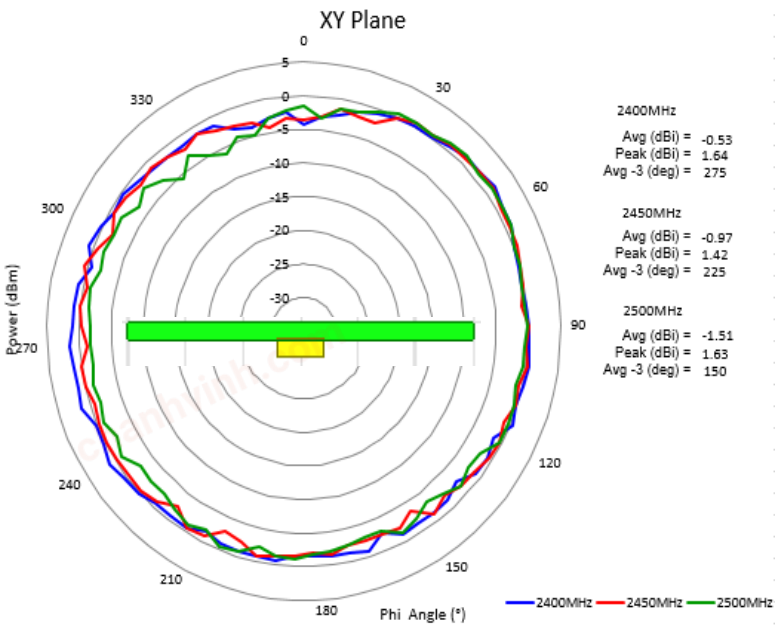
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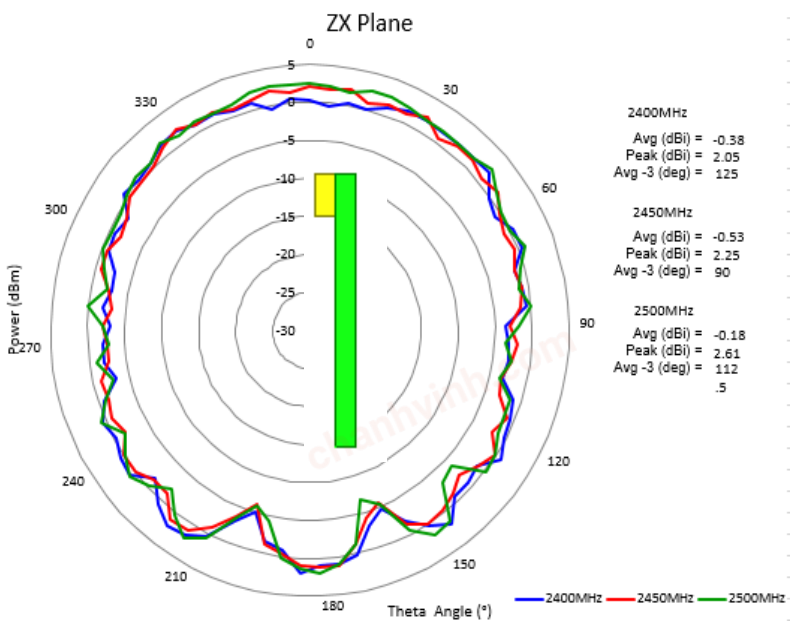
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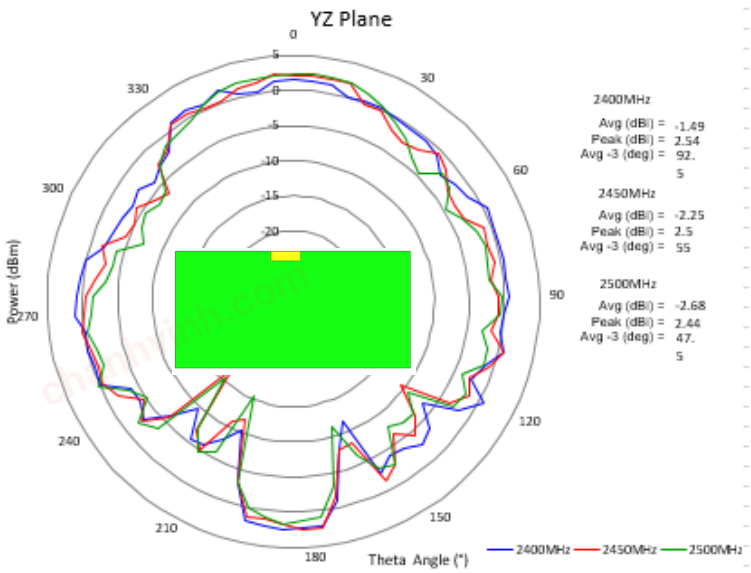
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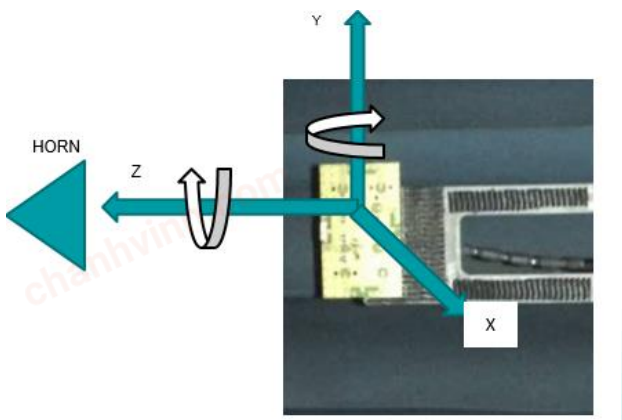
CHARTS

Typical free space radiation pattern—2.4G









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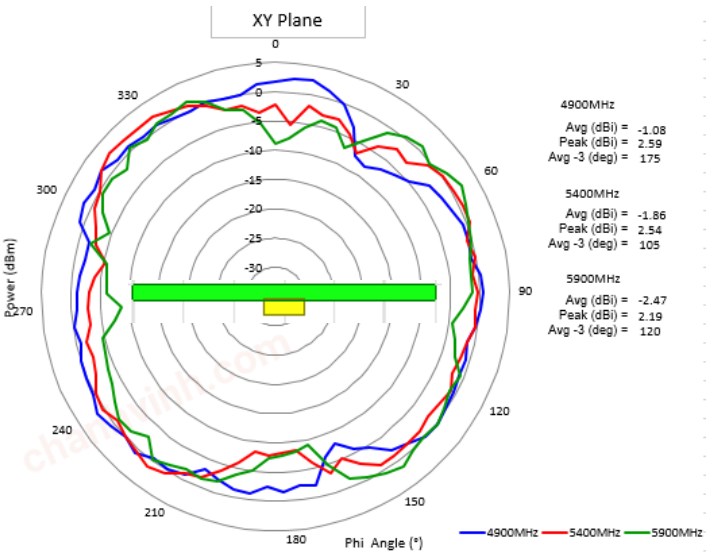
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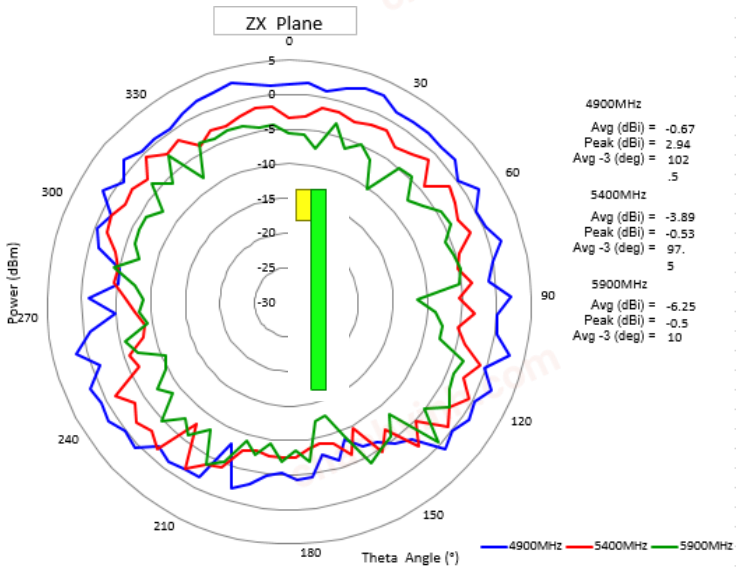
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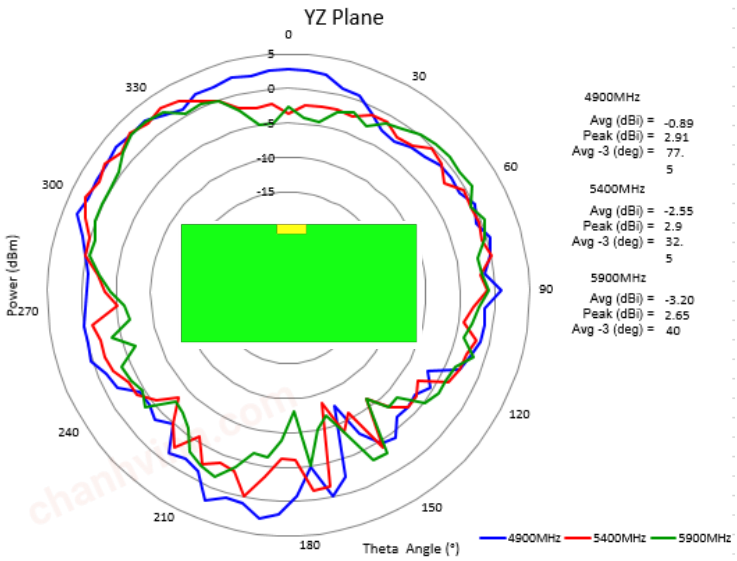
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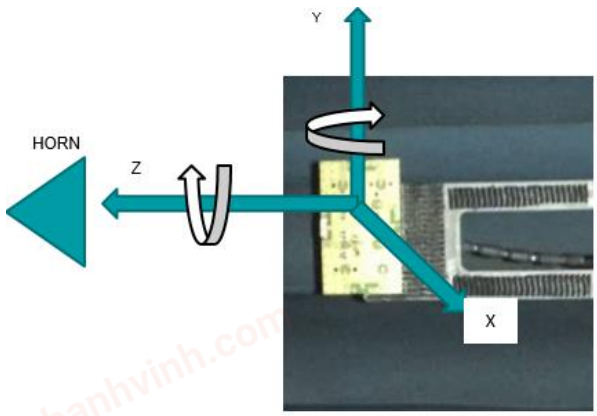
CHARTS

Typical free space radiation pattern—5G









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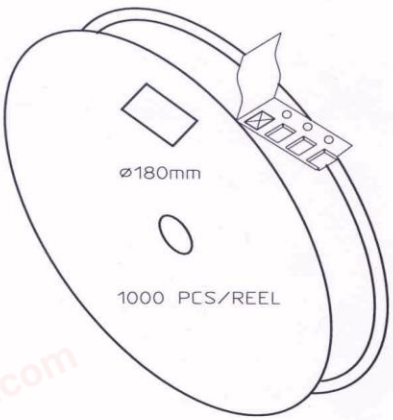
TECHNICAL DATA SHEET

Description: GNSS-DUAL WIFI-DSRC ANT

Series: CERAMIC CHIP

PART NUMBER: W3095

PACKAGING



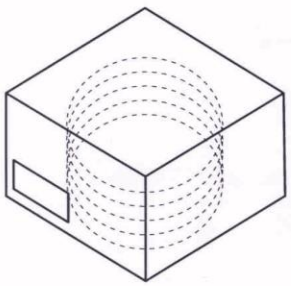
CARRIER TAPE H85-00188
width=24,00 depth=2.20
COVER TAPE H85-00159
width=21.20

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 (182x182x125)	1 pcs
- LABEL	1 pcs/BOX
REEL H85-00160 (D180,W28)	4 pcs
- REEL LABEL	1 pcs/REEL



MATERIAL					
HANDLINGS					
		RATIO	DRWN	160107 PeHa	H
			DGNER		G
			CHKD		F
			APPRD		E
PRODUCT H90-0Y113-F01P01			APPRD BY		D
					C
					B
DENOMINATION PACKING FORM			VERSION		A
					MOD/DATE/NAME

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

TECHNICAL DATA SHEET

Description: GNSS-DUAL WIFI-DSRC ANT

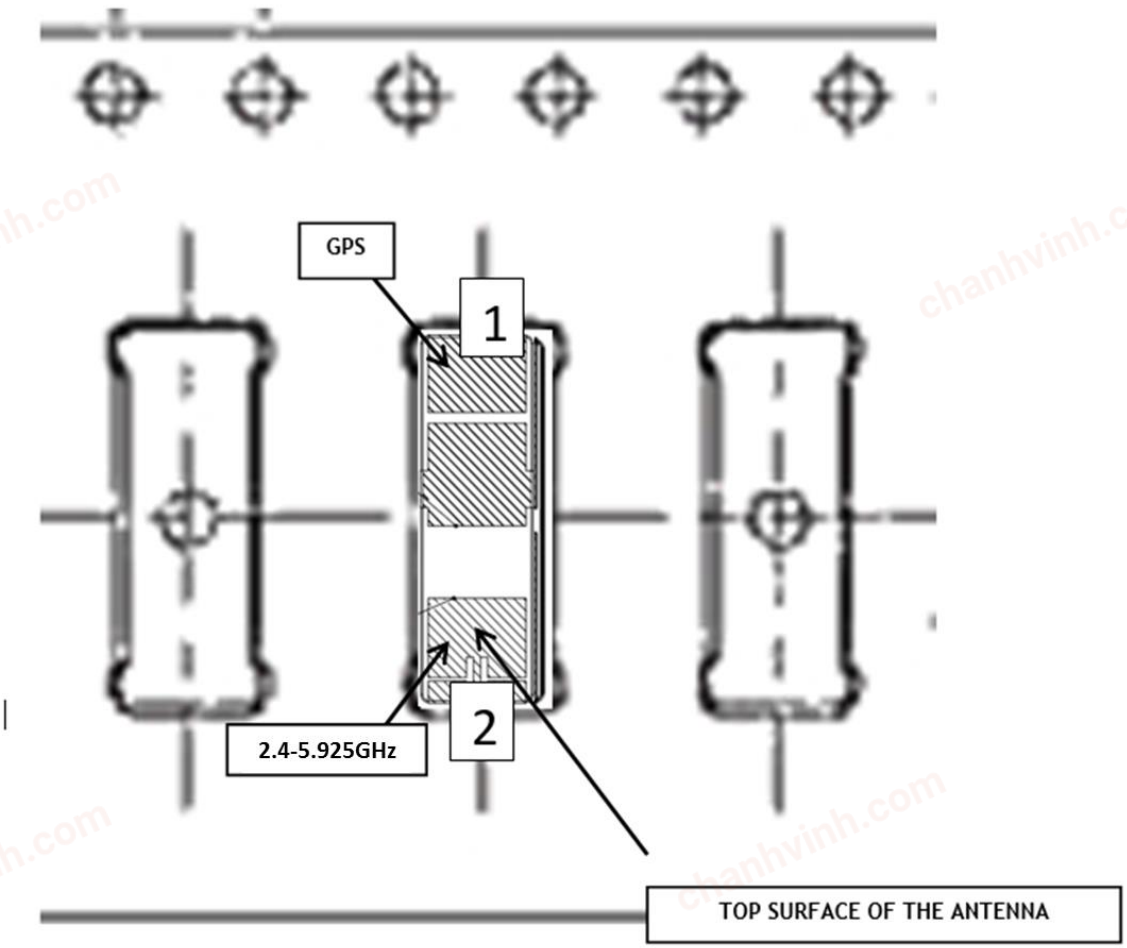
Series: CERAMIC CHIP

PART NUMBER: W3095

Block Orientation

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

Top view of the carrier tape



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