

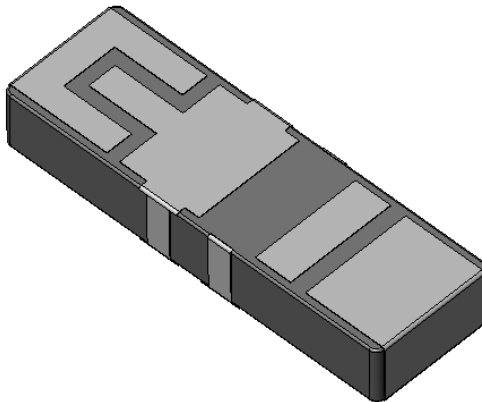
**Description:** Dual Feed GNSS/2.4GHz Ceramic

**Series:** Ceramic

**PART NUMBER:** W3064C

### Features:

- Omni directional radiation
- Low profile
- Compact size L x W x H (10 x 3.2 x 1.5 mm)
- Low weight (240 mg)
- Lead free materials
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product
- Flexible mounting orientation due to symmetrical pad layout



### Applications:

- GNSS L1 Band
- GPS L1 band (1.575 GHz)
- Bluetooth, WLAN, WiFi (2.4GHz – 2.483GHz)

All dimensions are in mm

Issue: 2049

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

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Suzhou New District  
Jiangsu Province, Suzhou 215009 PR China  
Tel: 86 512 6807 9998

**Description:** Dual Feed GNSS/2.4GHz Ceramic**Series:** Ceramic**PART NUMBER:** W3064C**ELECTRICAL SPECIFICATIONS**

Frequency	1575.42+/-1MHz 2400-2483.5MHz
Nominal Impedance	50 $\Omega$
VSWR	2:1
Port-to-Port Isolation	-20dB
Radiation Pattern	Omni
Peak Gain	-1dBi @1575.42MHz -0.5dBi @2400-2483.5MHz
Efficiency	70% @1575.42MHz 70% @2400-2483.5MHz
Polarization	Linear
Power Withstanding	5W

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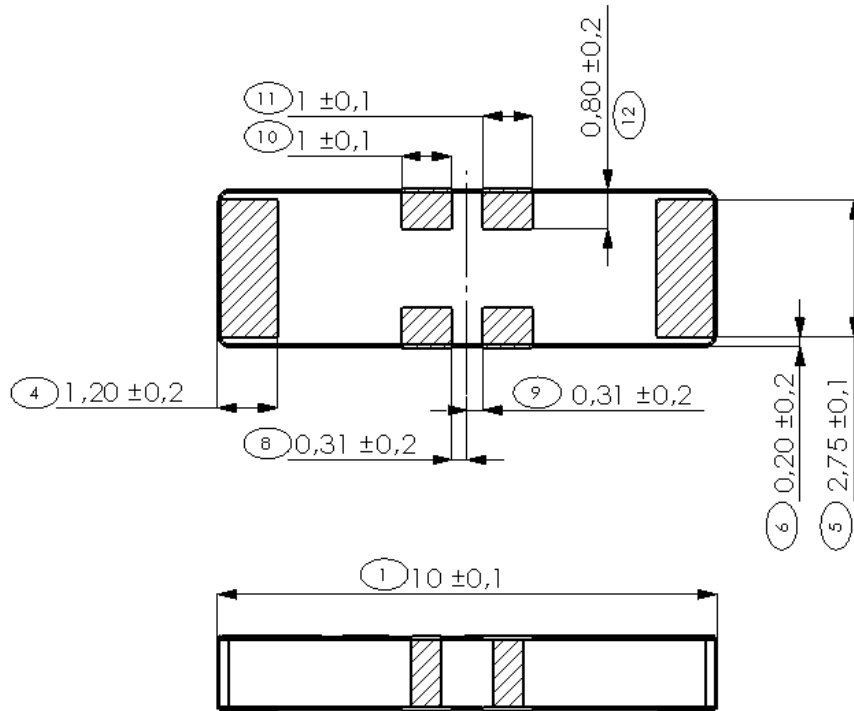
**Description:** Dual Feed GNSS/2.4GHz Ceramic**Series:** Ceramic**PART NUMBER:** W3064C**MECHANICAL SPECIFICATIONS**

Overall size	10*3.2*1.5 mm
Weight	240 mg

**ENVIRONMENTAL SPECIFICATIONS**

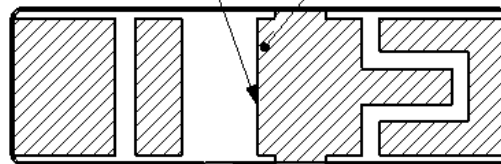
Operating Temperature	-40~+85 ° C
Storage Temperature	-40~+85 ° C
RoHS Compliant	Yes
MSL level	1

## MECHANICAL DRAWING



All tuning area dimension varies

Metalization removed, there might be visual changes on this side



No.	Terminal Name	Terminal Dimensions
1	Feed BT / GND	1.20 x 2.75 mm
2	Feed GNSS / GND	1.20 x 2.75 mm

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## MECHANICAL DRAWING

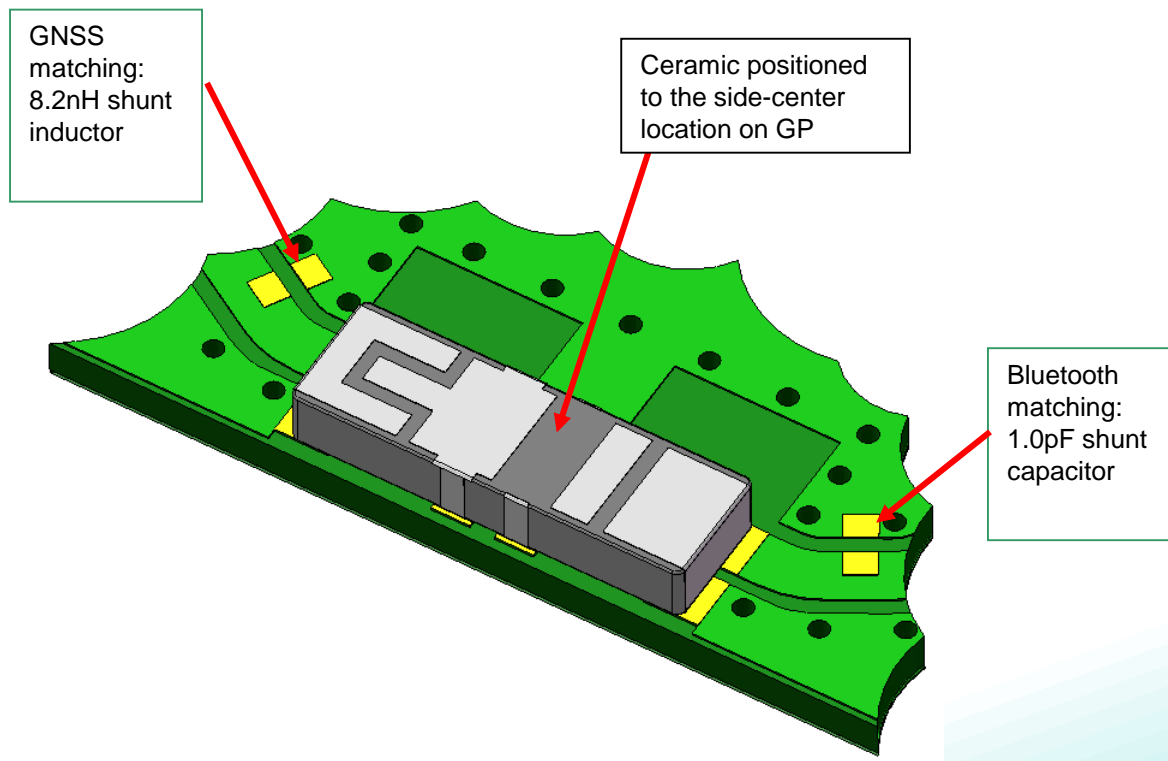
### Test Setup for Electrical Measurements

*Recommended test board- layout for electrical characteristic measurement*

- Test board size 96 mm x 45 mm, PWB ground removal area 10.8 mm x 6.4 mm.
- GNSS antenna matching is done with 8.2nH shunt inductor, for Bluetooth a 1.0pF shunt capacitor is used.

*3D- view of Test Setup*

- Test Setup: Antenna Positioned to the side-center location of test PCB 96mm long edge



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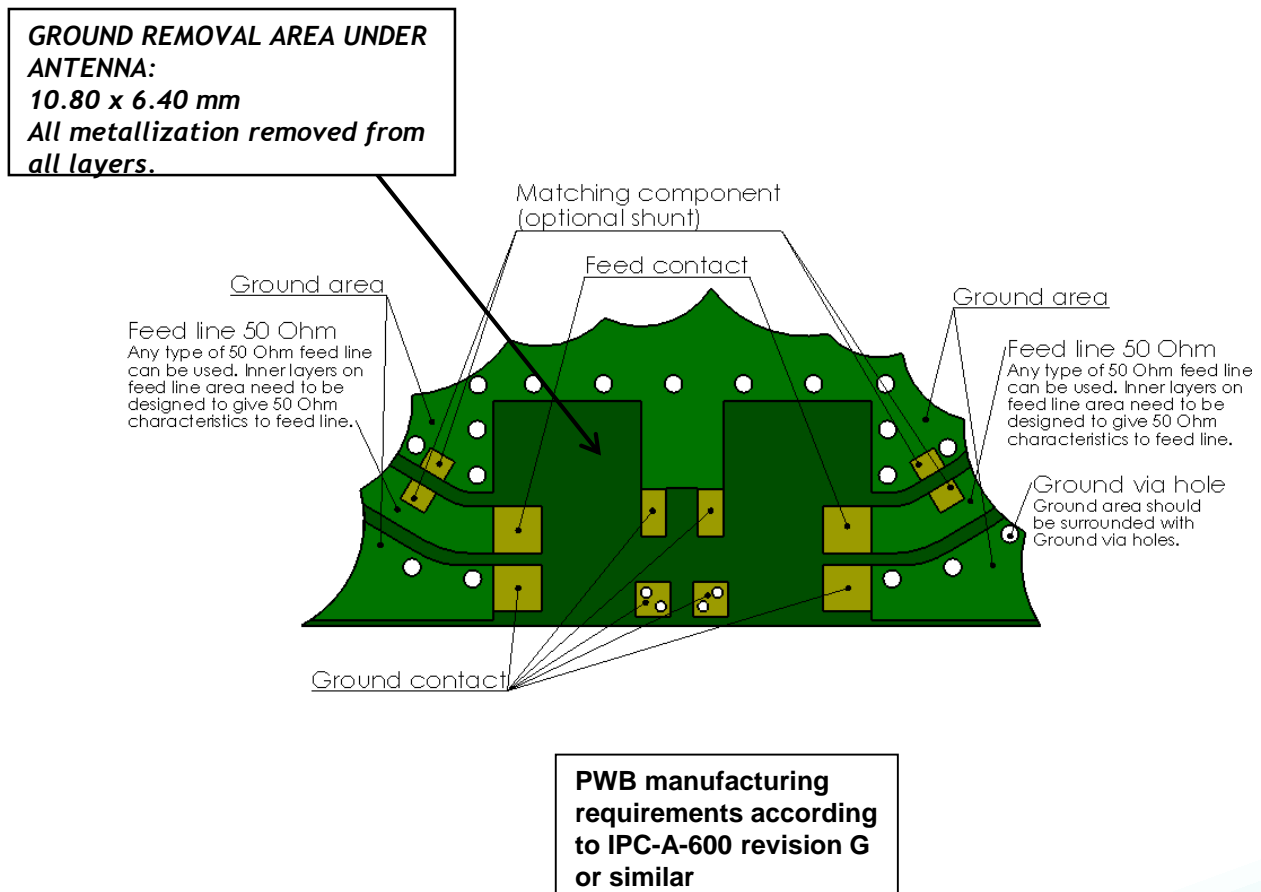
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## MECHANICAL DRAWING

### W3064C Layout information

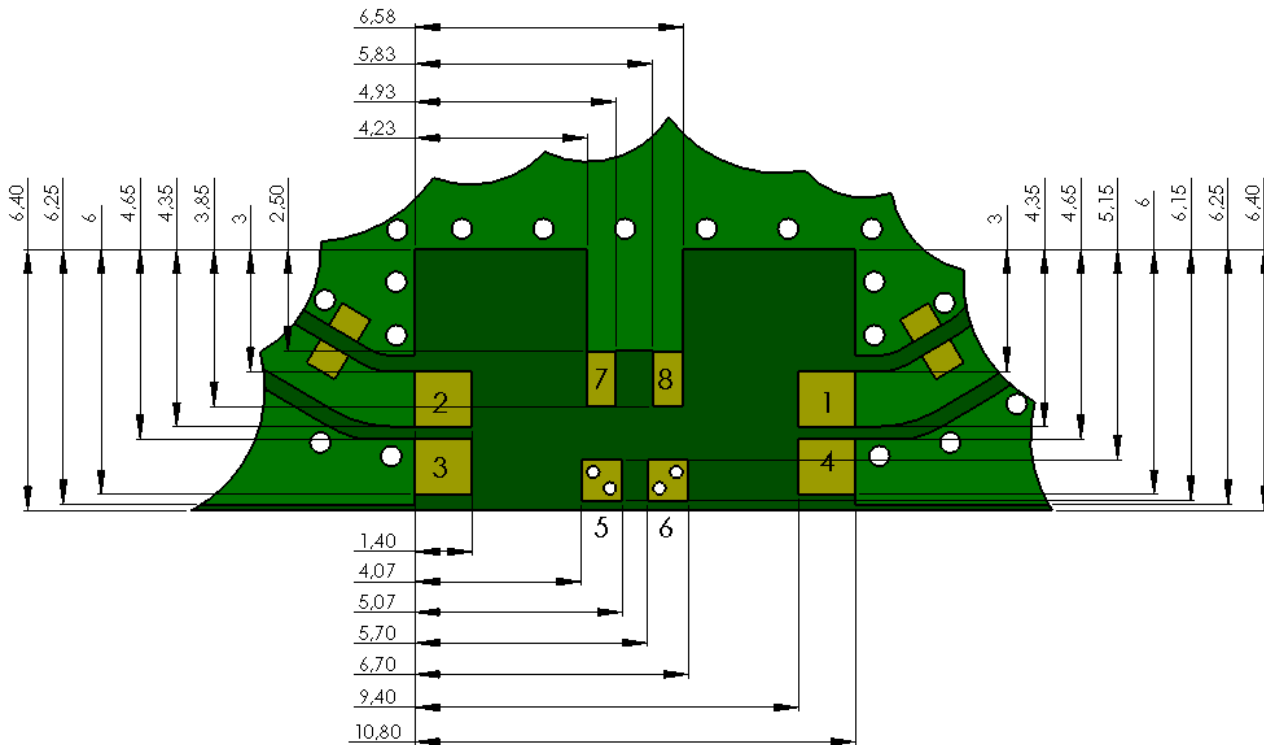
Ground Cleared Under Antenna. Ground removal area under antenna 10.8 mm x 6.4 mm.

### Terminal Configuration



MECHANICAL DRAWING

Recommended Antenna Pad Dimensions on PWB Layout (Top surface)



PWB features		
No.	Terminal Name	Terminal Dimensions
1	Feed BT/GNSS*	1.35 x 1.40 mm
2	Feed GNSS/BT*	1.35 x 1.40 mm
3	GND	1.35 x 1.40 mm
4	GND	1.35 x 1.40 mm
5	GND	1.00 x 1.00 mm
6	GND	1.00 x 1.00 mm
7	GND	1.35 x 0.70 mm
8	GND	1.35 x 0.75 mm

**\*Antenna orientation can be rotated freely by 180 degrees because of the symmetrical pad layout.**

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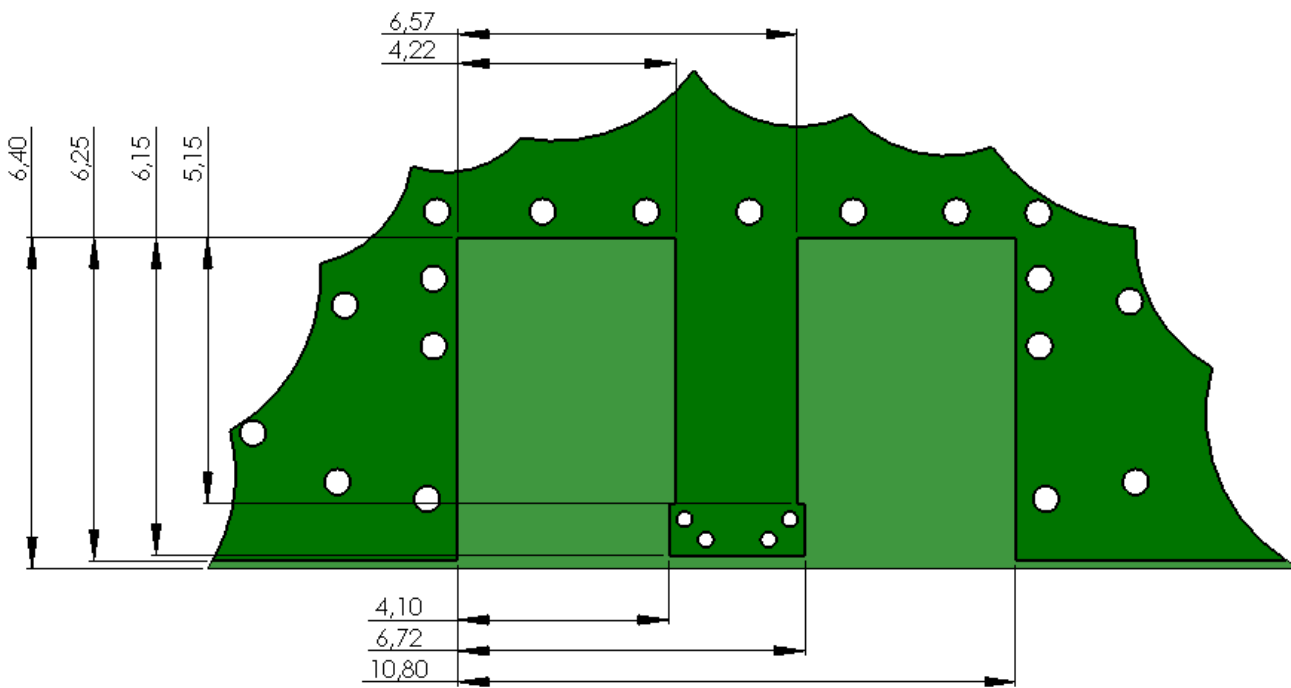
**Series:** Ceramic

**PART NUMBER:** W3064C

**MECHANICAL DRAWING**

**Recommended Antenna Dimensions on PWB Layout (Bottom surface)**

Ground Cleared Under Antenna. Ground removal area under antenna 10.8 mm x 6.4 mm.



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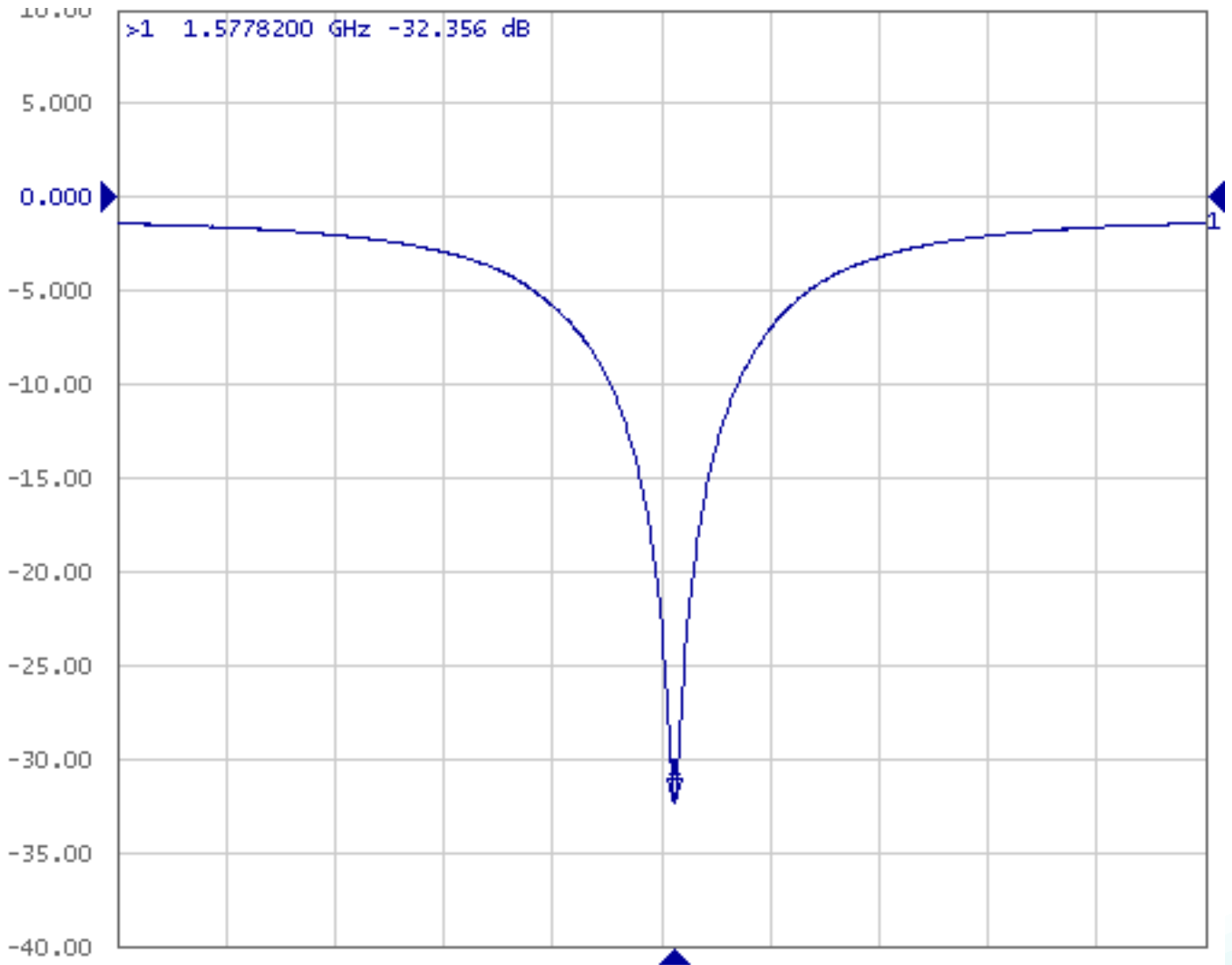
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## CHARTS

### GPS Return Loss



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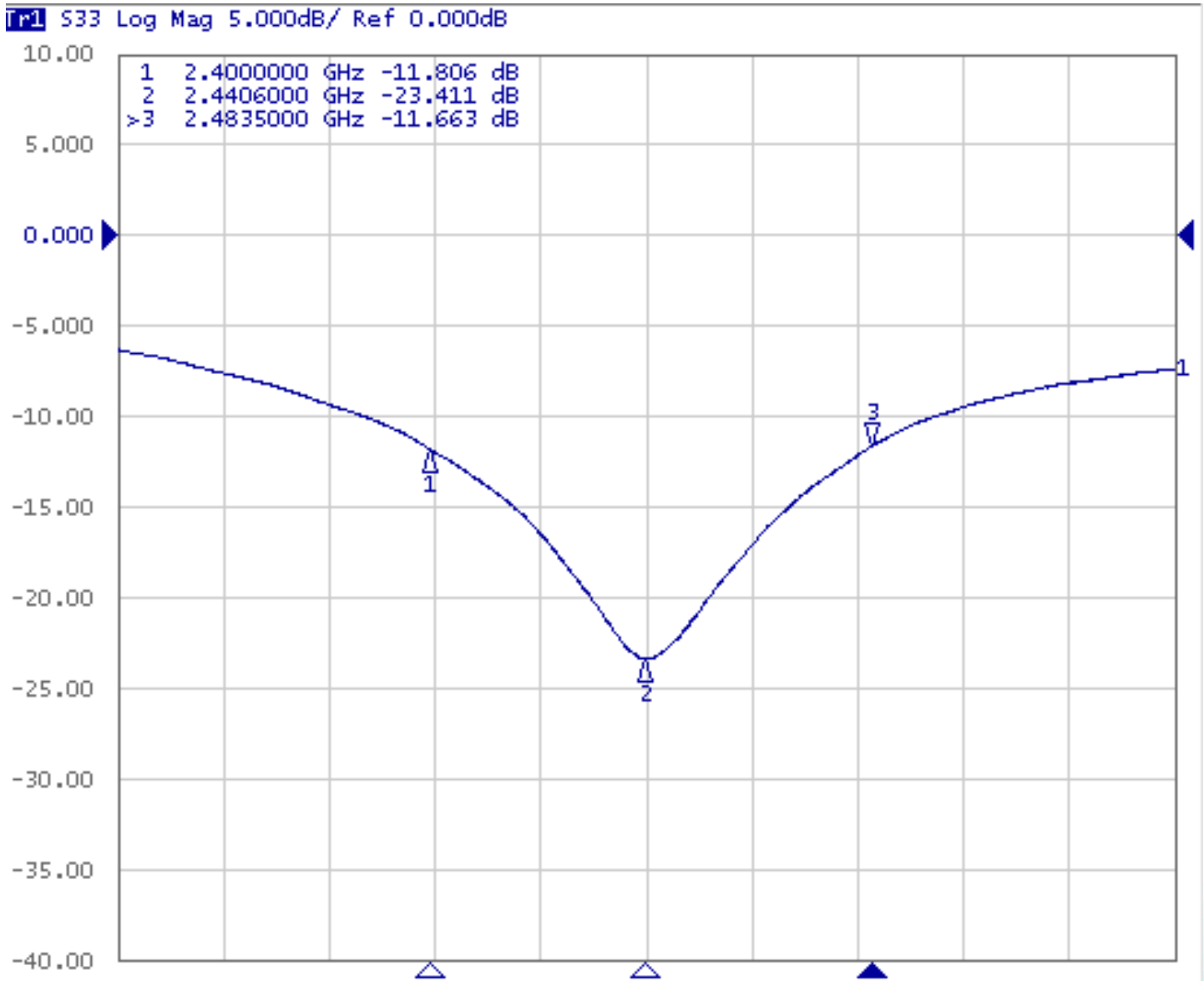
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### CHARTS

#### BT Return Loss



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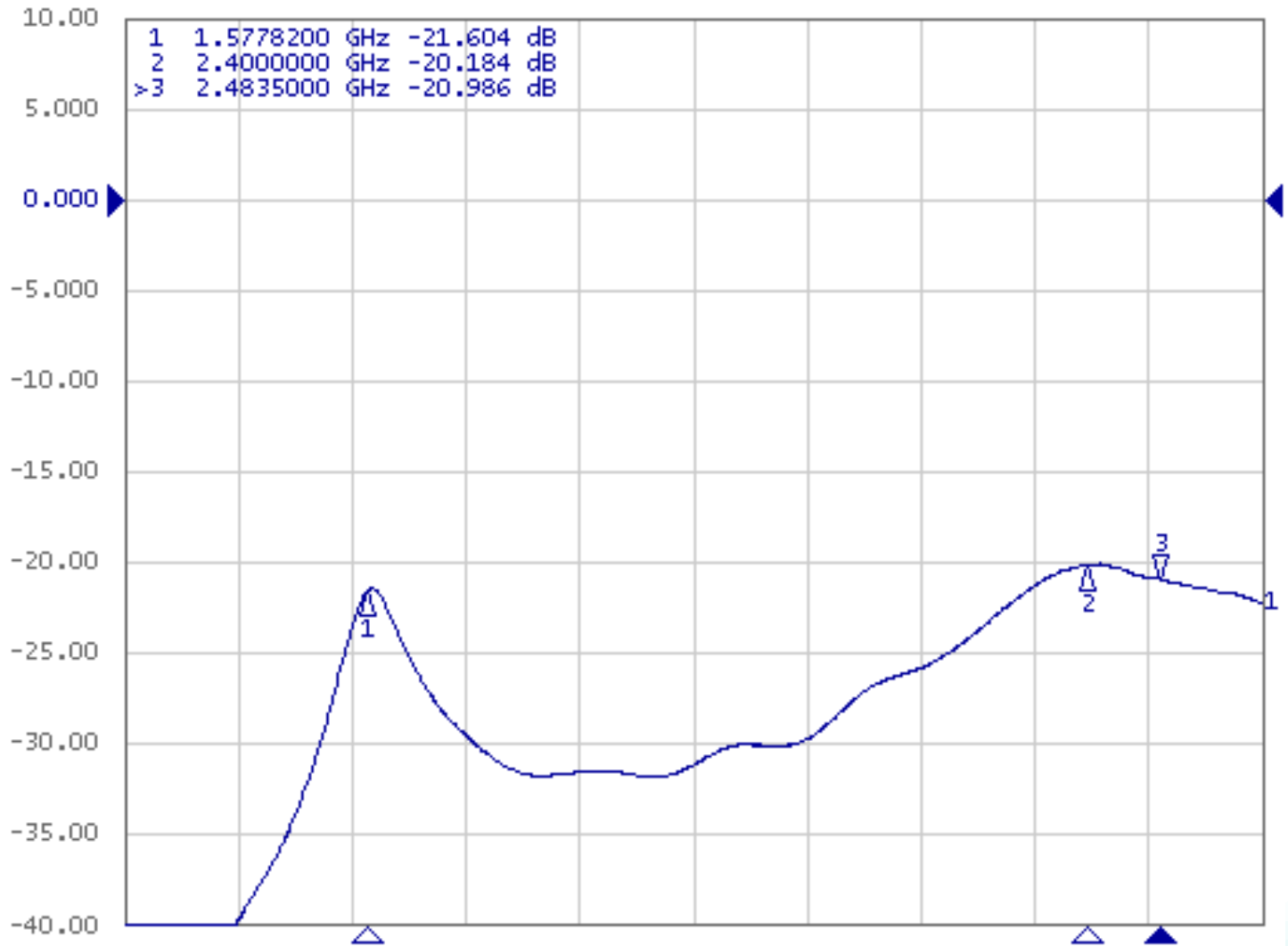
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## CHARTS

### Isolation Between GPS And BT

▶ S34 Log Mag 5.000dB/ Ref 0.000dB



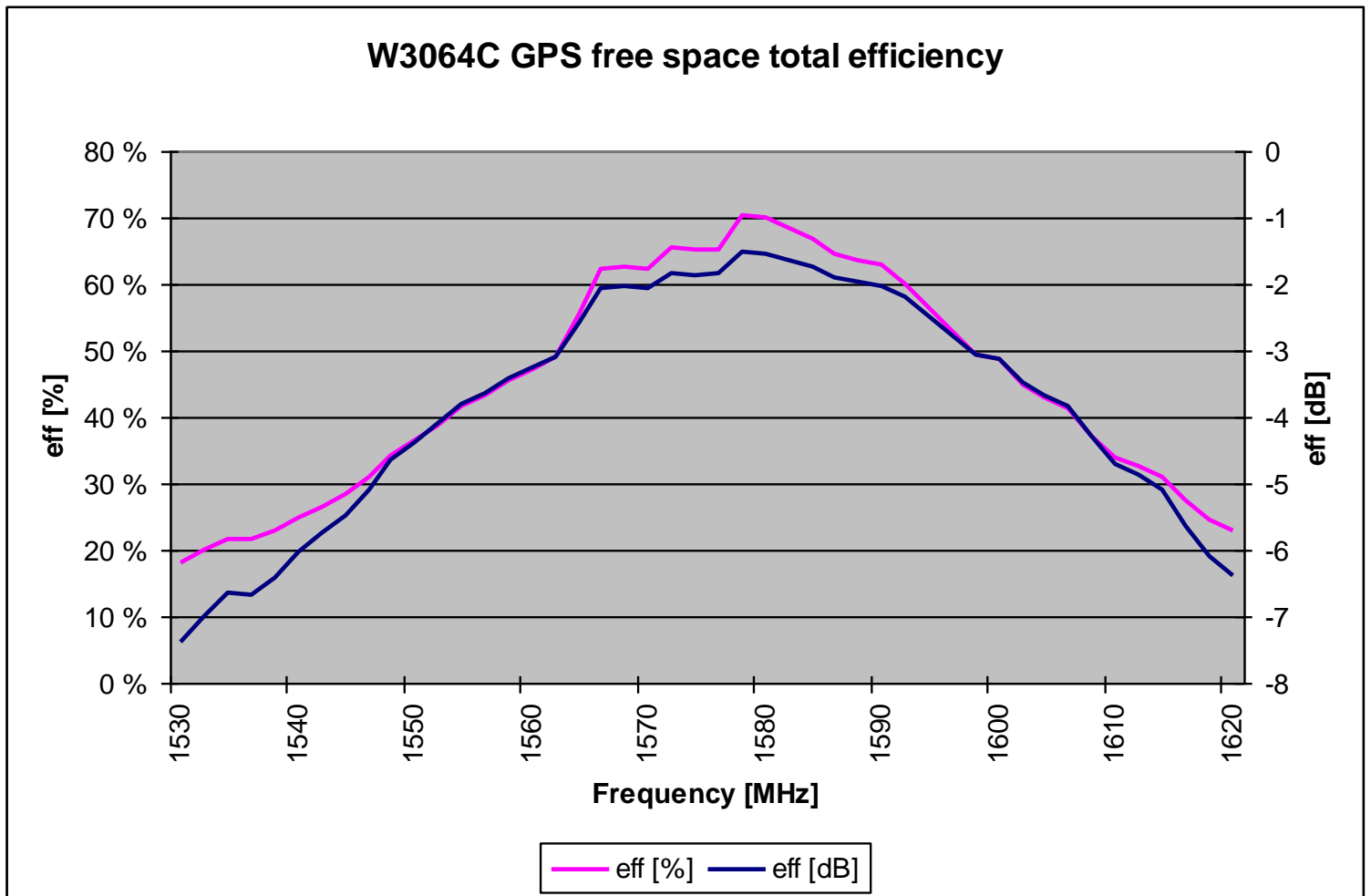
Description: Dual Feed GNSS/2.4GHz Ceramic

Series: Ceramic

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## CHARTS

### Efficiency



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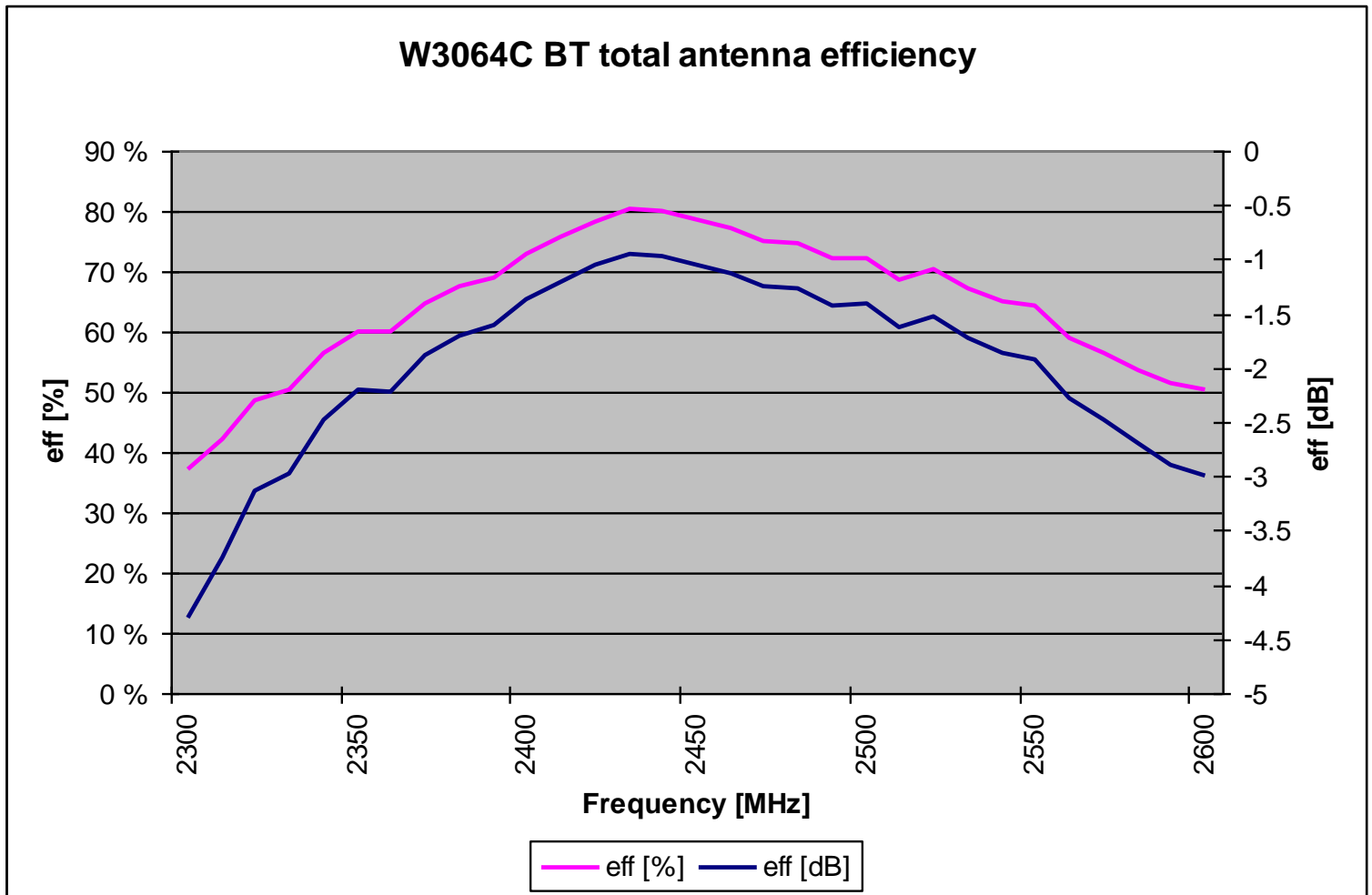
Description: Dual Feed GNSS/2.4GHz Ceramic

Series: Ceramic

PART NUMBER: W3064C

## CHARTS

### Efficiency



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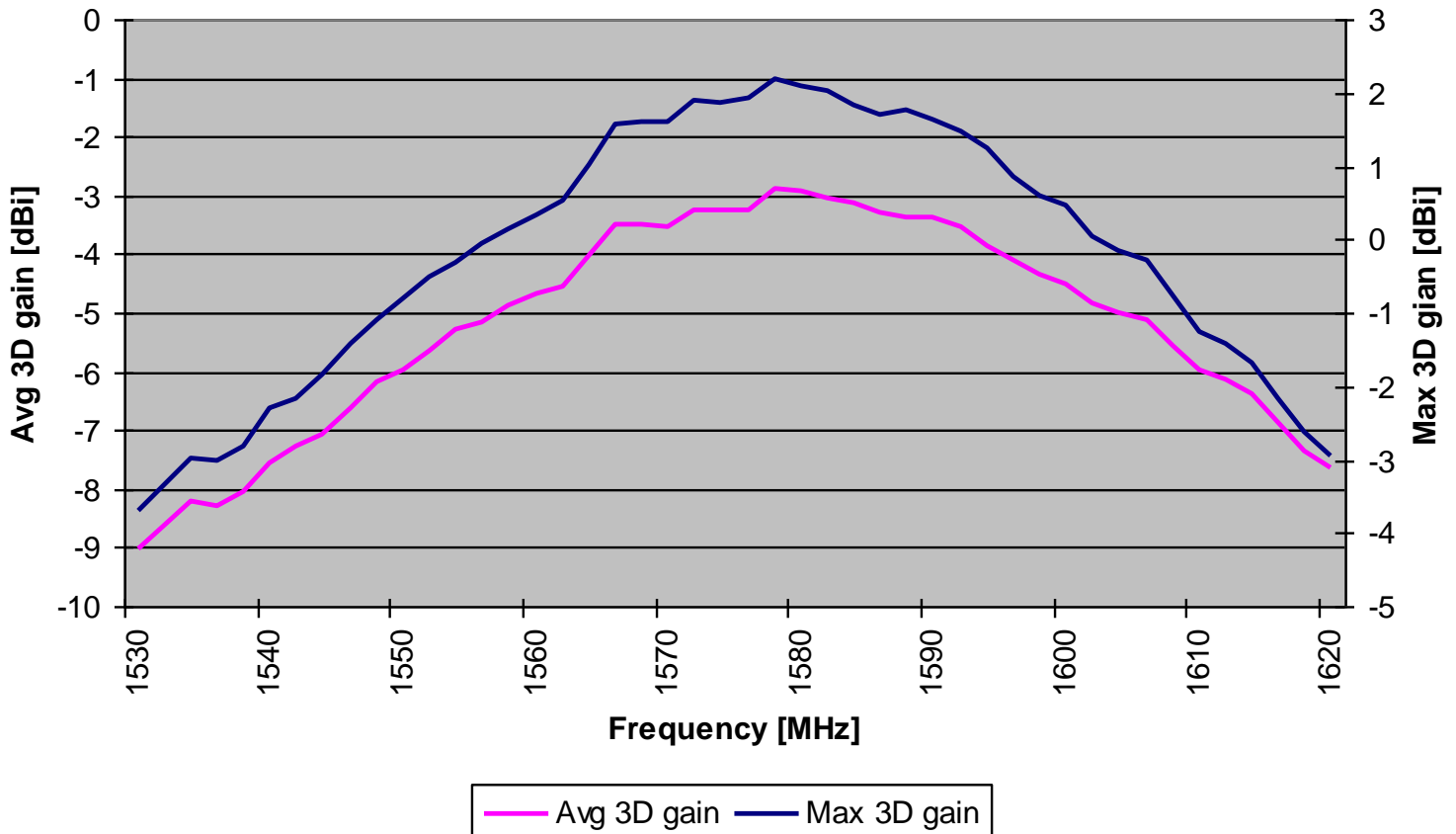
Series: Ceramic

PART NUMBER: W3064C

## CHARTS

### Peak Gain(dBi)

W3064C GPS antenna gain [dBi]



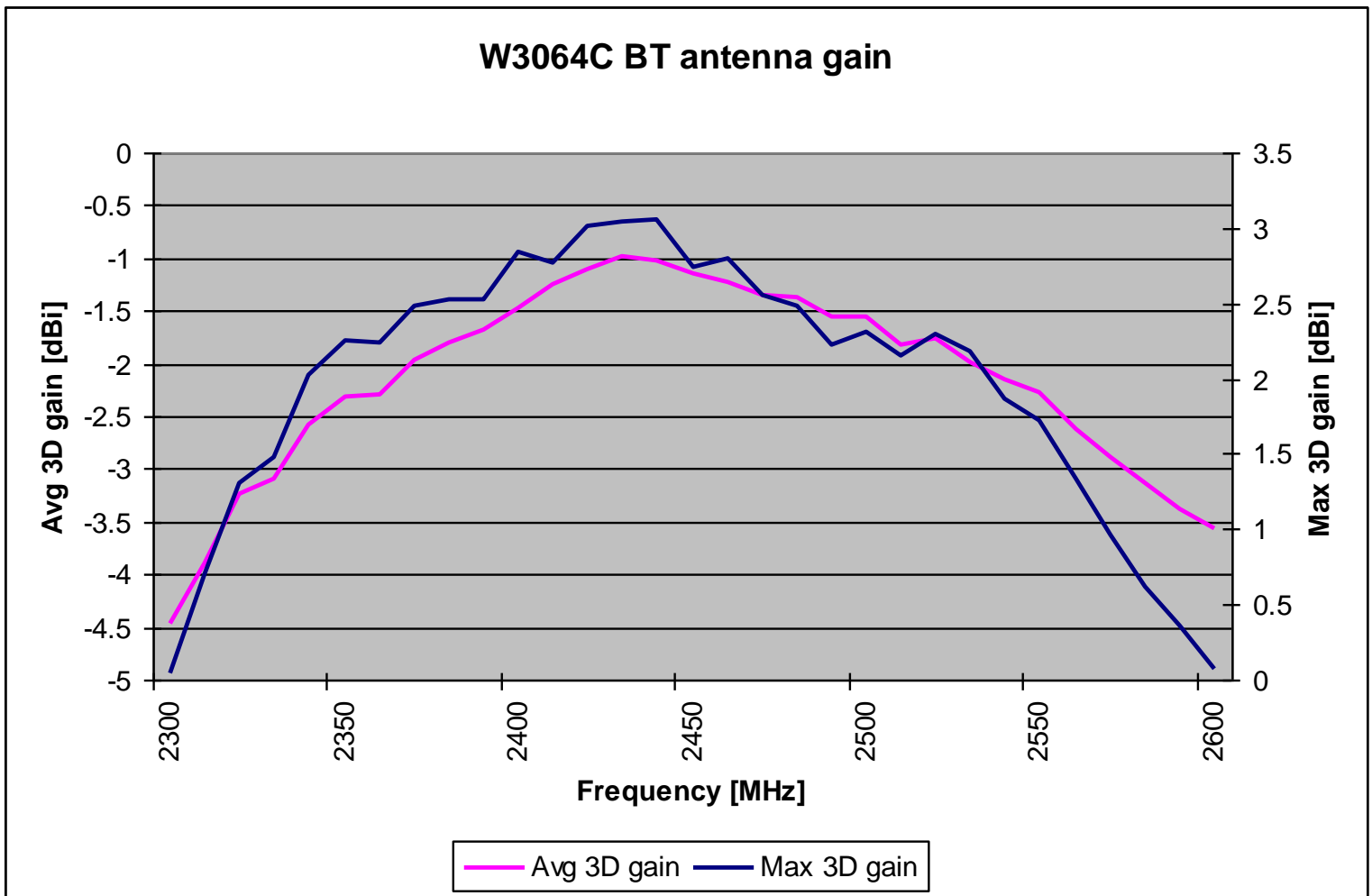
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## CHARTS

### Peak Gain(dBi)



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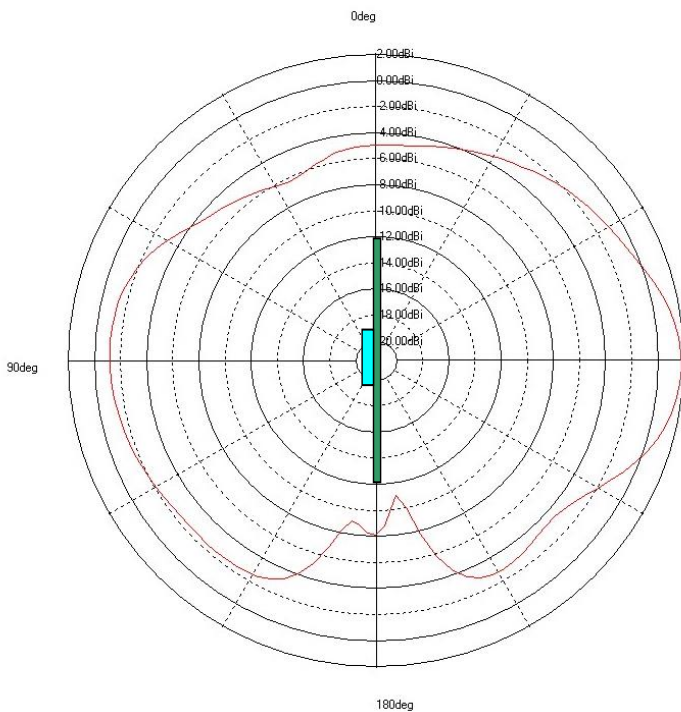
**PART NUMBER:** W3064C

## CHARTS

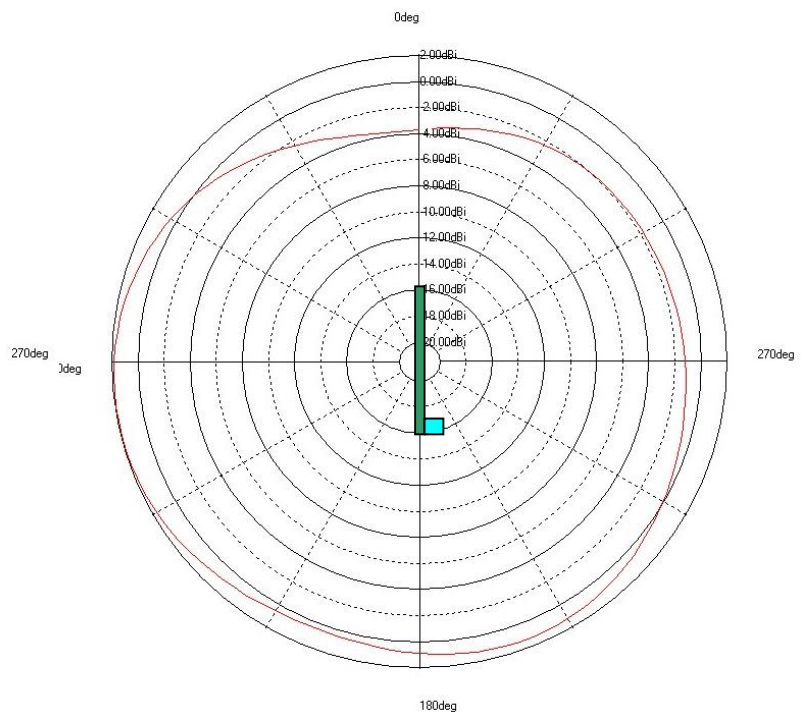
### Free Space Radiation Pattern

1575MHz

#### Elevation Plane



#### Horizontal Plane



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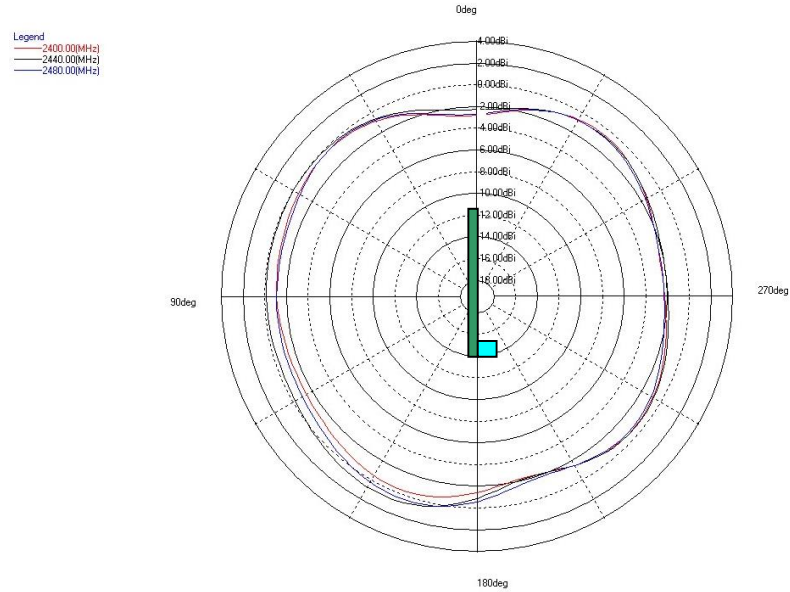
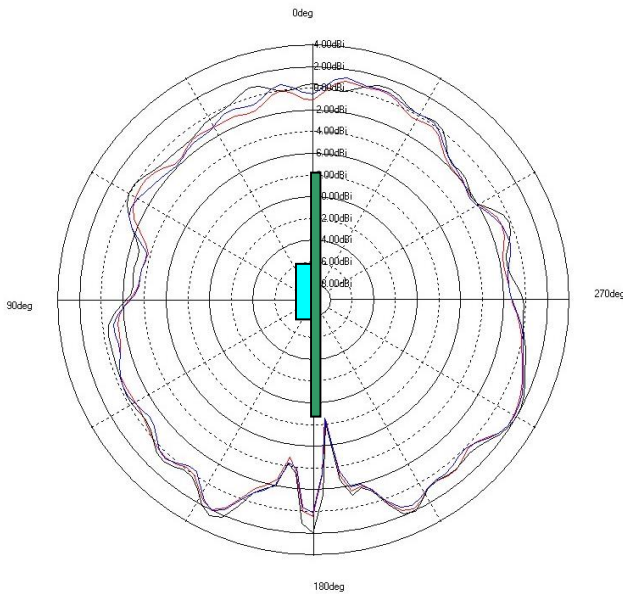
## CHARTS

### Free Space Radiation Pattern

2400MHz 2440MHz 2480MHz

#### Elevation Plane

#### Horizontal Plane



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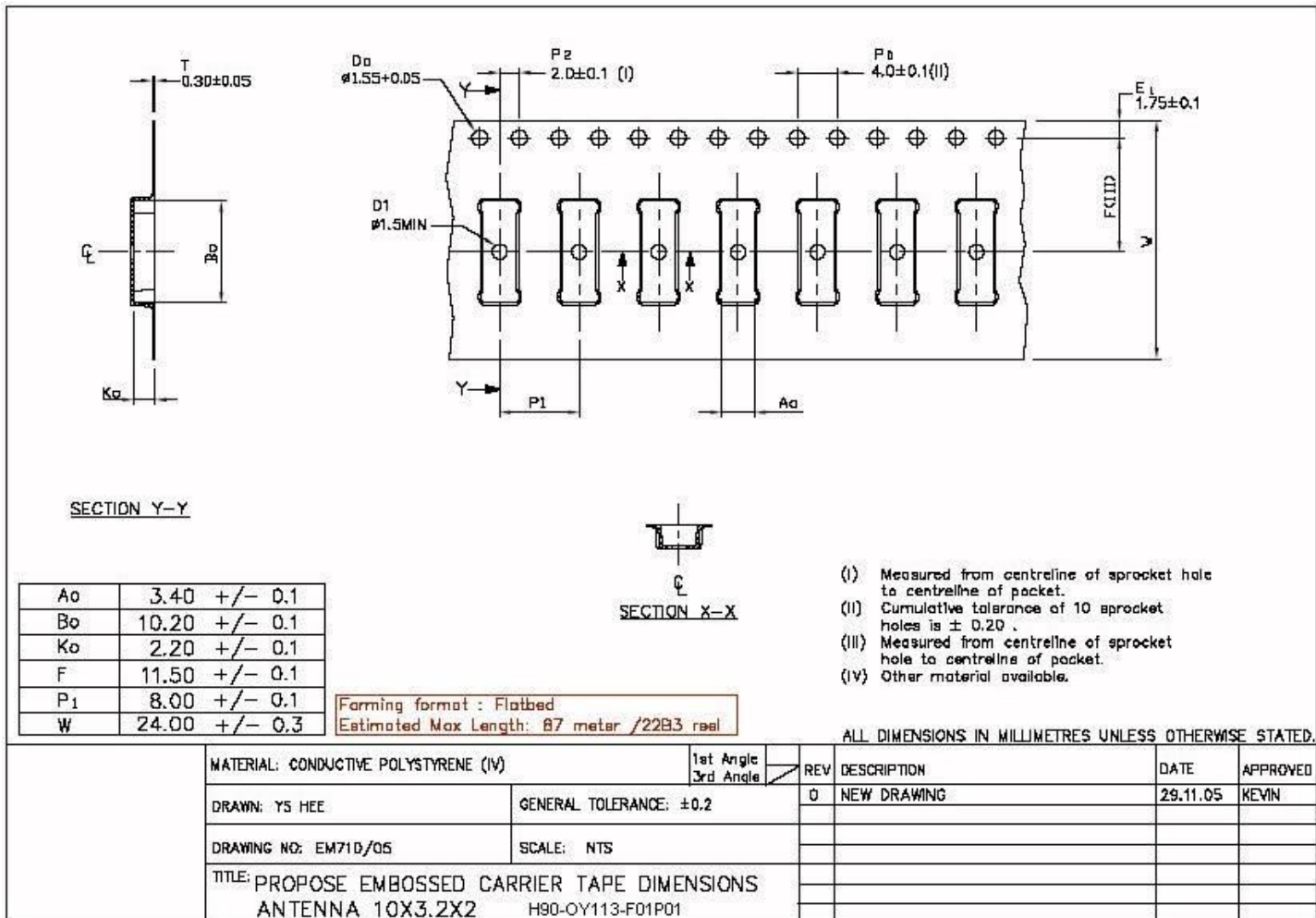
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## PACKAGING

### General

Tape and reel packing is used. Carrier tape, reel and box dimensions are presented in following pictures. 1K Antenna per Reel, 2K Antenna per Inbox, 6K Antenna per Outbox

### Carrier tape



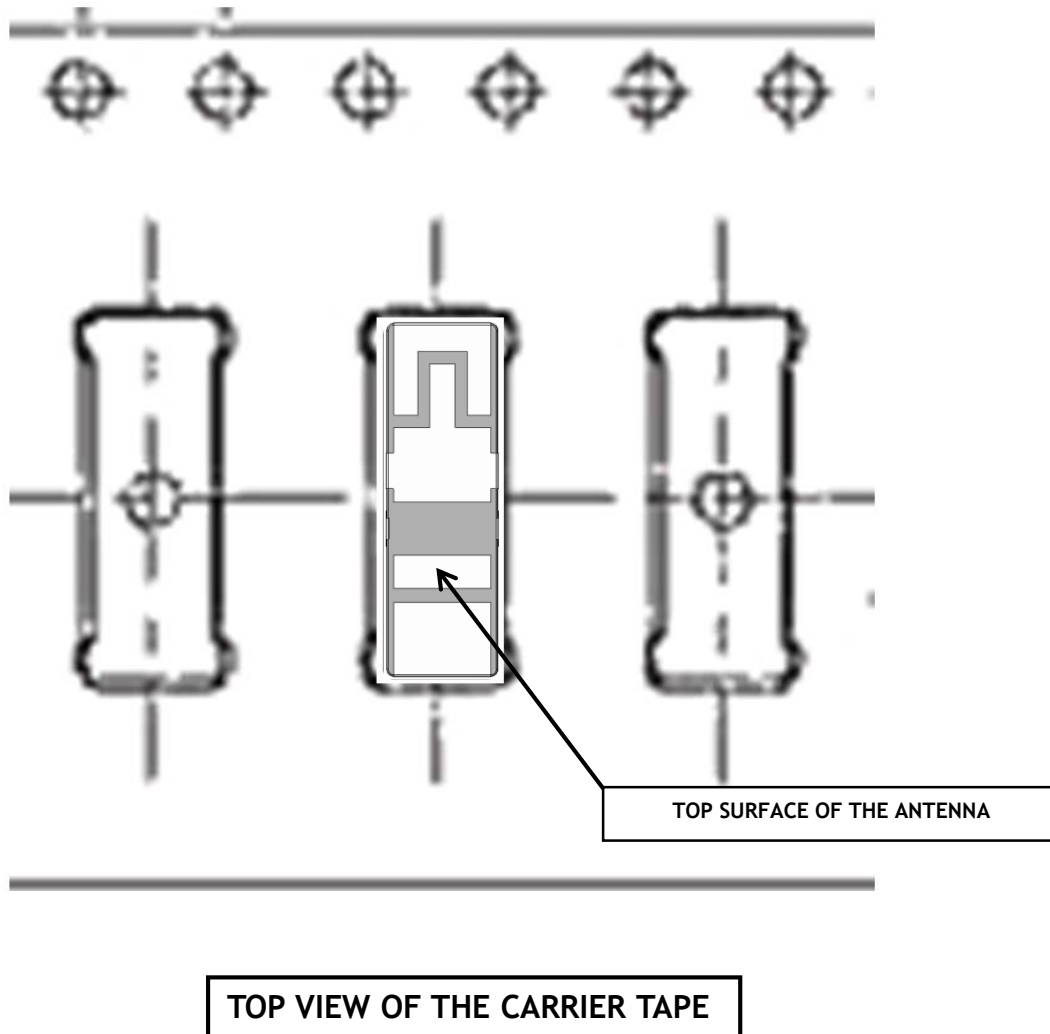
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## PACKAGING

Top view of the carrier tape

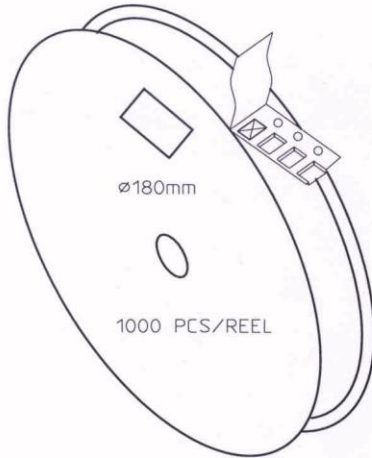


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### PACKAGING

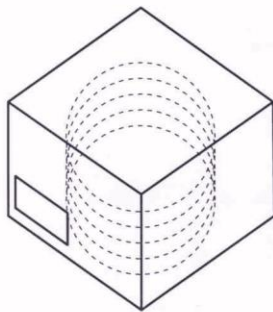


CARRIER TAPE H85-00188  
width=24,00 depth=2.20  
COVER TAPE H85-00159  
width=21.20


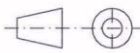
LENGTH OF TAPE:

- 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 (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-OY113-F01P01		APPRD BY		D
					C
					B
					A
DENOMINATION	PACKING FORM		VERSION		MOD/DATE/NAME

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