NGCM8060UU5R500G1TRF

3.5~8.5 GHz UWB Chip Antenna

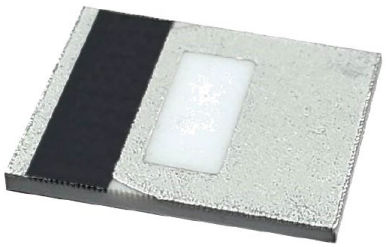
9001:2015 CERTIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC Components Corp.

Features

- UWB Antenna 3.5 ~ 8.5GHz
- Stable and reliable performance
- RoHs Complaint



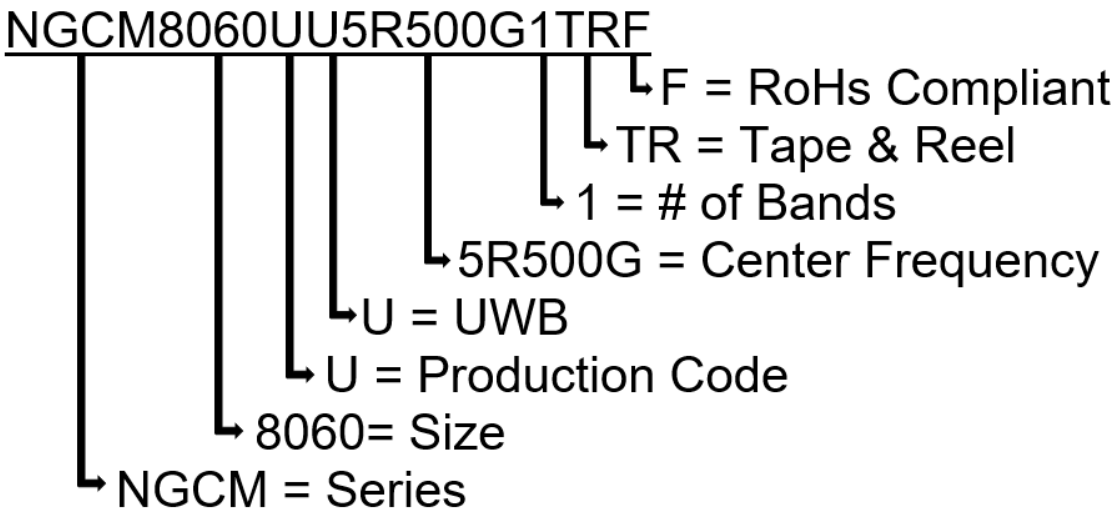
Applications

- Automotive sensors
- Ultra-wideband radios
- Precision surveying
- Remote controls
- Centimeter Level Positioning

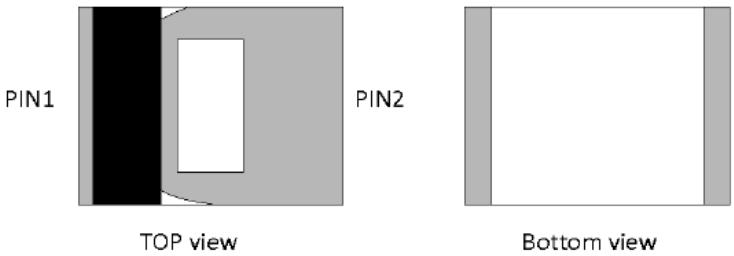
Specifications

Electrical	
Frequency Range	3500~8500MHz
Peak Gain	3.1 dBi typ.
Average Gain	-2.2 dB typ.
Efficiency	60% typ.
V.S.W.R	4.0 Max
Polarization	Linear
Impedance	50Ω
Environmental	
Operating Temperature	-40℃~+85℃
Storage Temperature	-5℃~+40℃ -40℃~+85℃ - After mounting on PCB
Relative Humidity	10% to 70% - Operating & Storage after mounting on PCB 20% to 70% - Storage
Shelf Life	1 year
RoHs Compliant	Yes

Part Number Breakdown

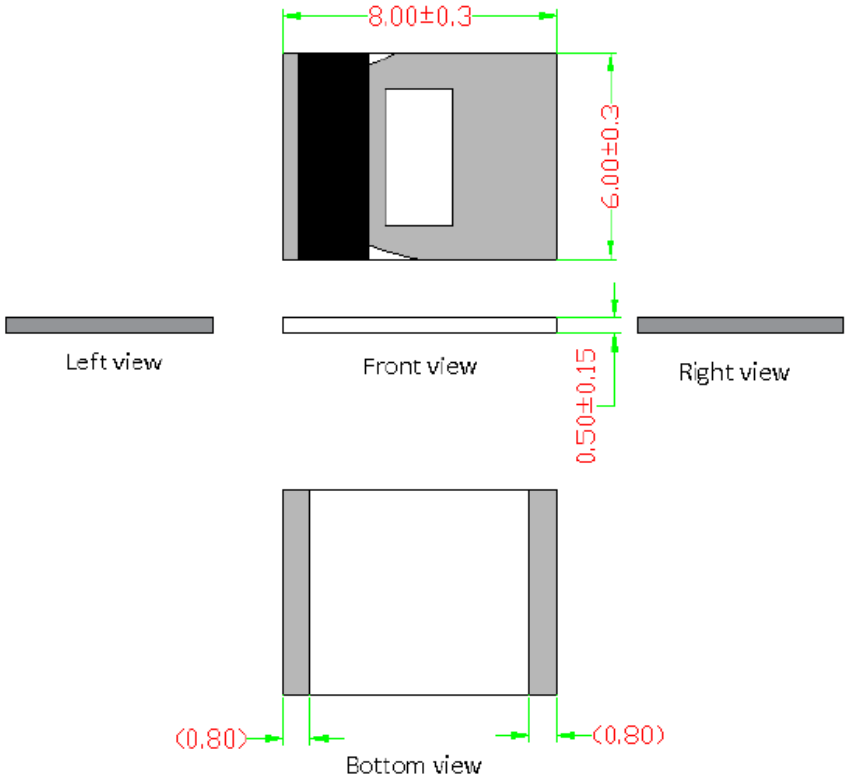


Pin Definition



PIN	1	2
Soldering PAD	Signal	N/A

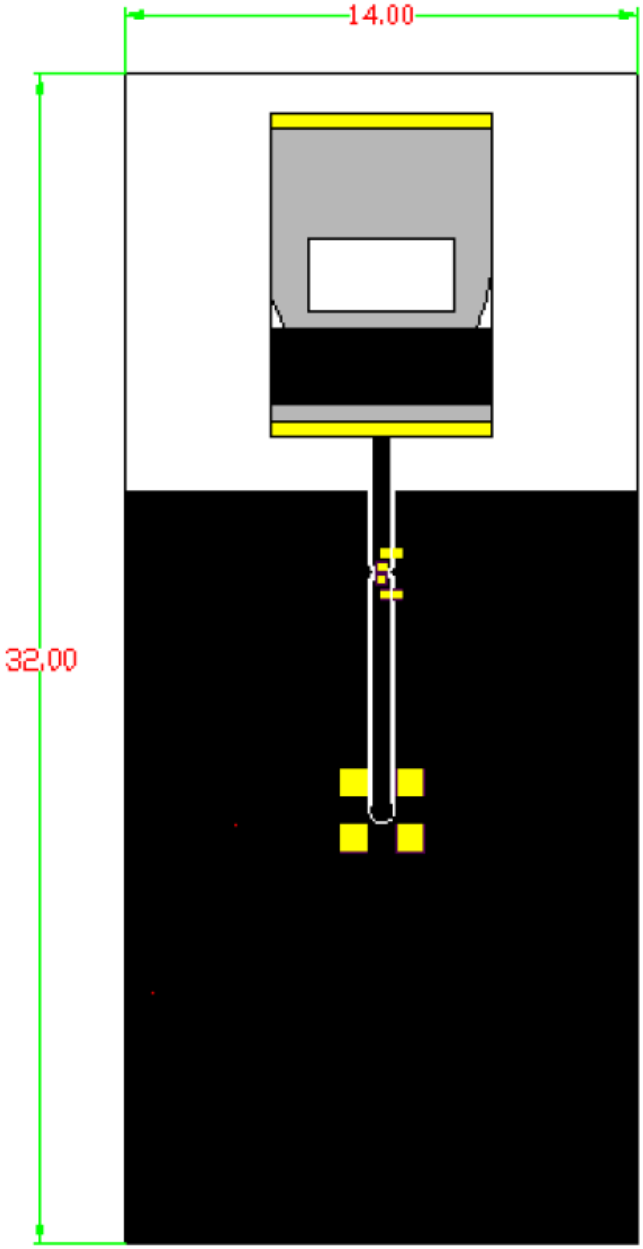
Dimension Drawing



Dimensions (mm) & Mechanical

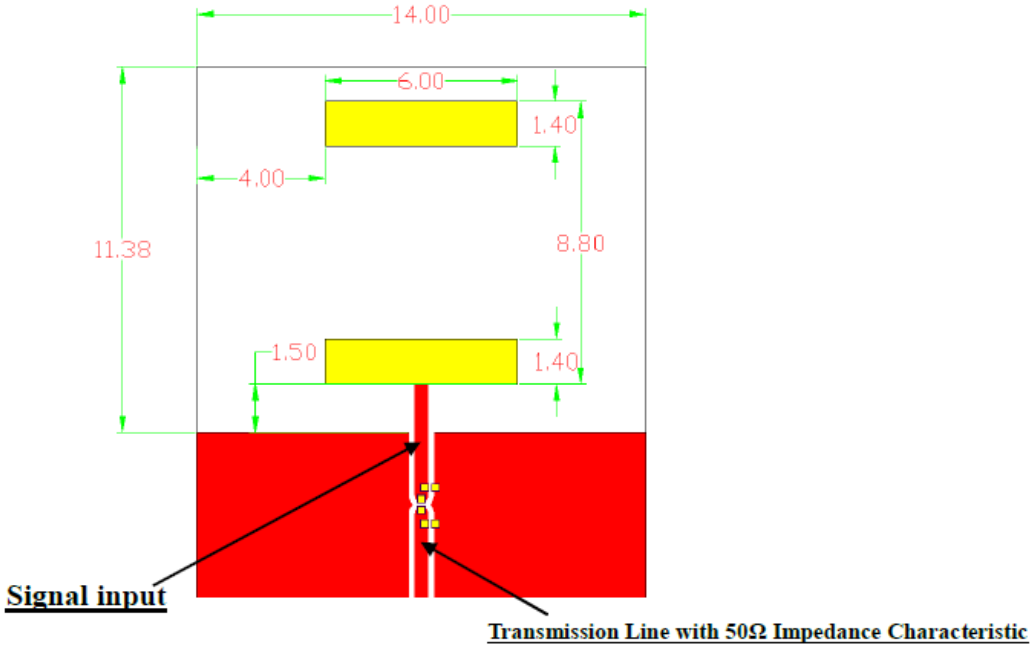
Body Length (A)	8 ± 0.3
Width (B)	6 ± 0.3
Thickness (C)	0.5 ± 0.15
Connection Type	SMT
Ground Plane	32 mm x 14 mm
Material	Ceramic

Evaluation Board

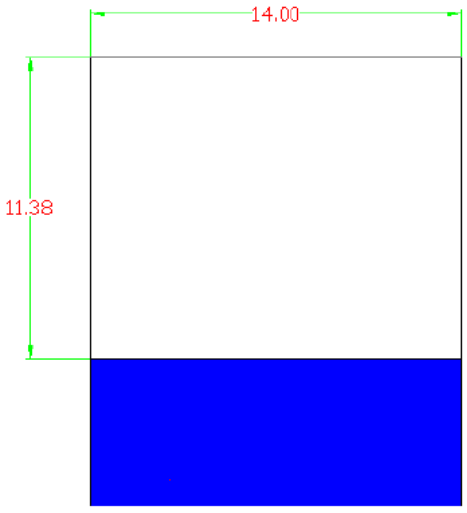


Solder Land Pattern

The gold areas represent the solder land pattern. Any recommendations on the matching circuit will be provided according to the customer's installation conditions.

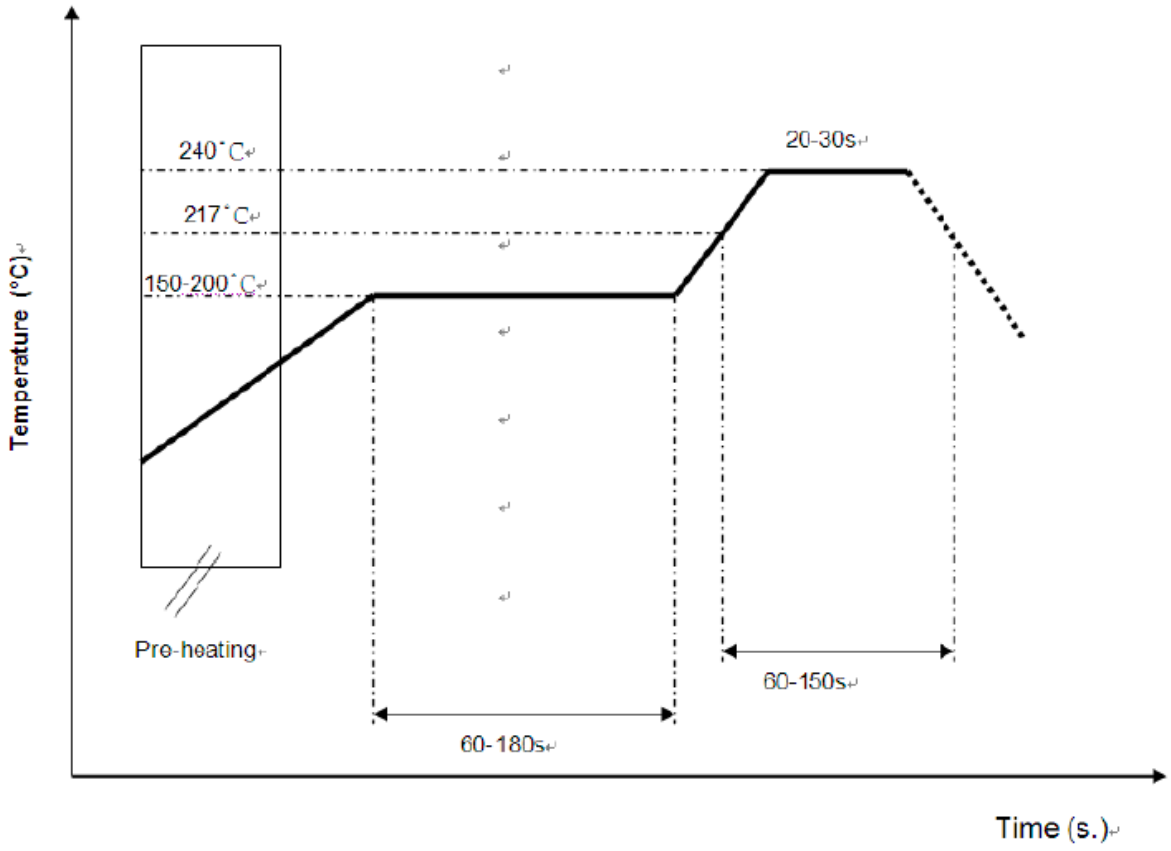


Top View



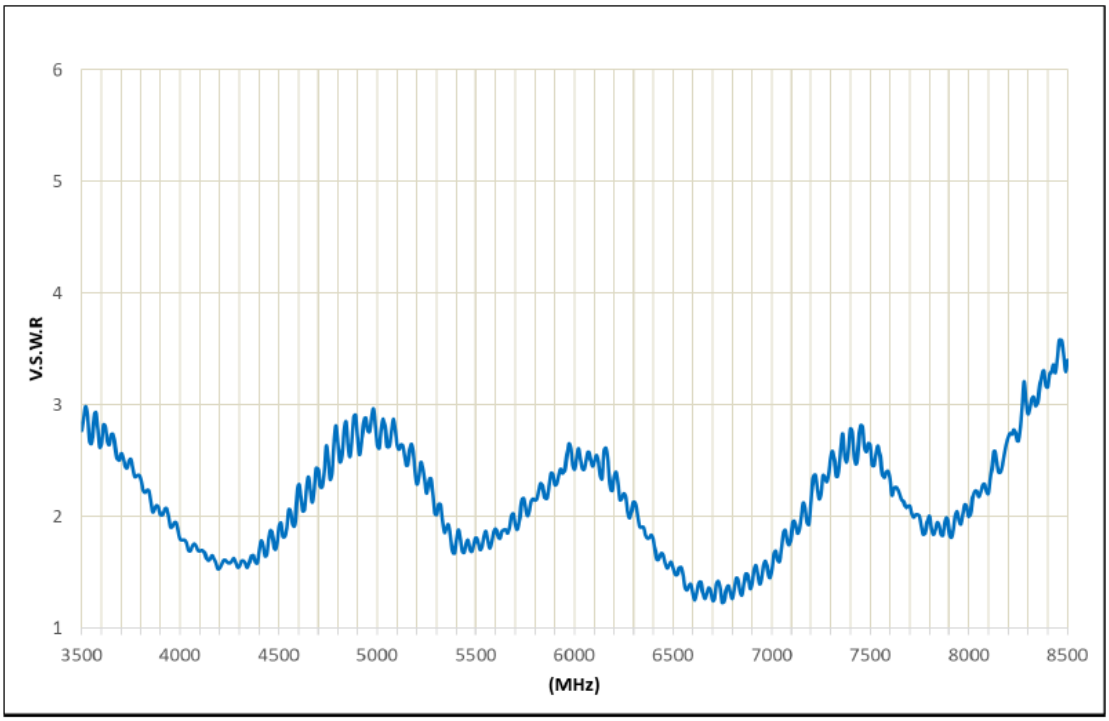
Bottom View

Soldering Conditions

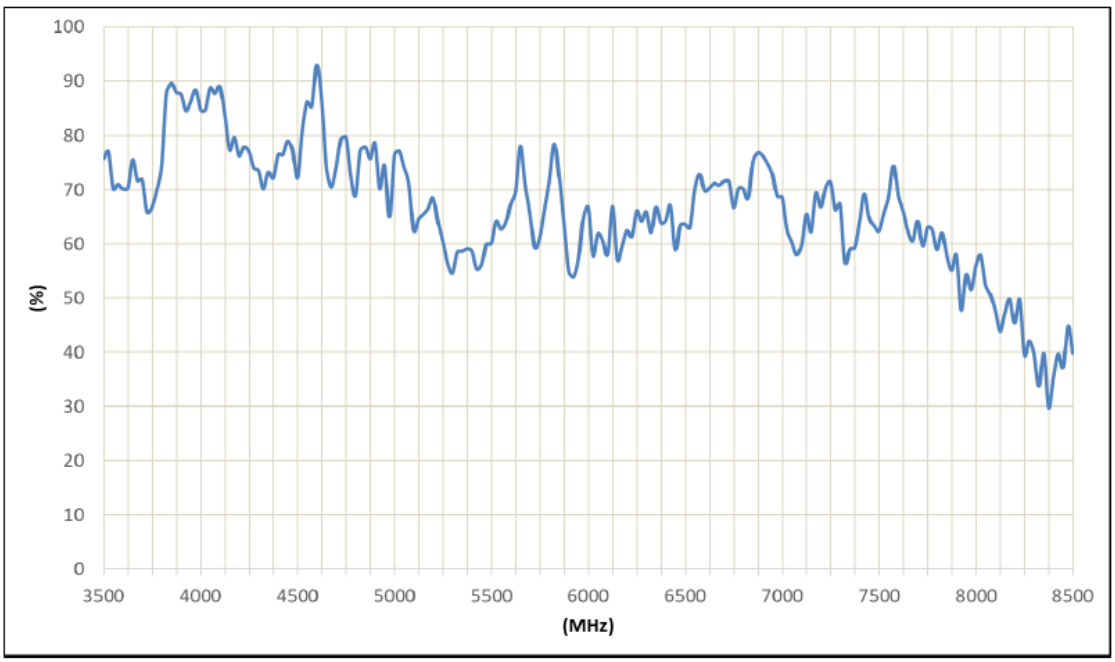


*Recommended solder paste alloy: SAC305 (Sn96.5 /Ag3 /Cu0.5) Lead Free solder paste

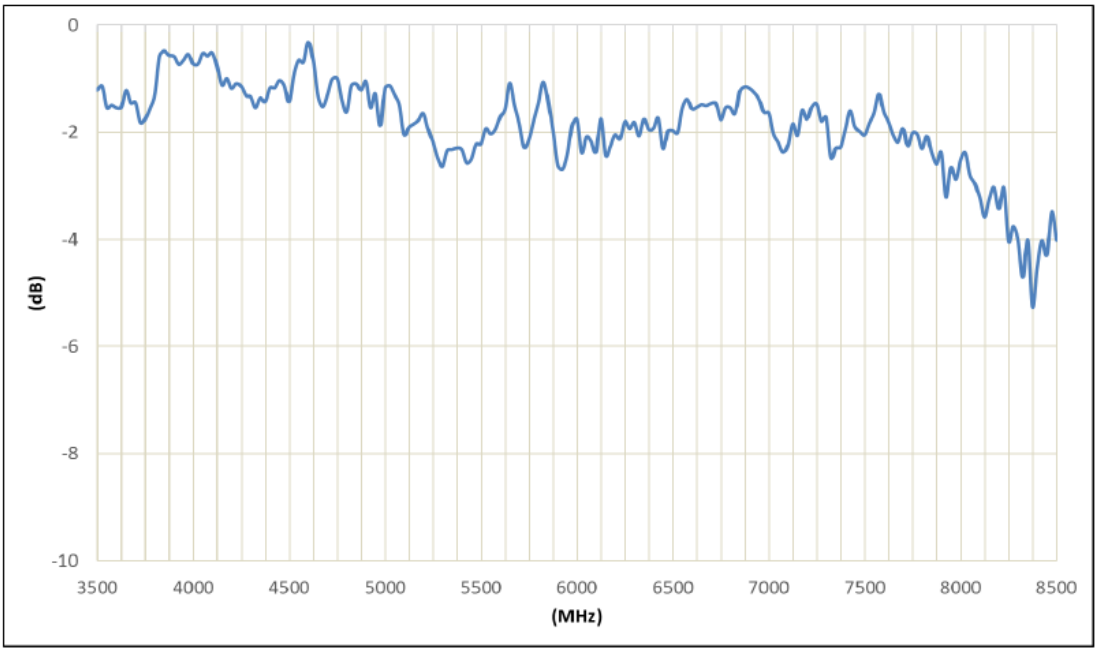
VSWR



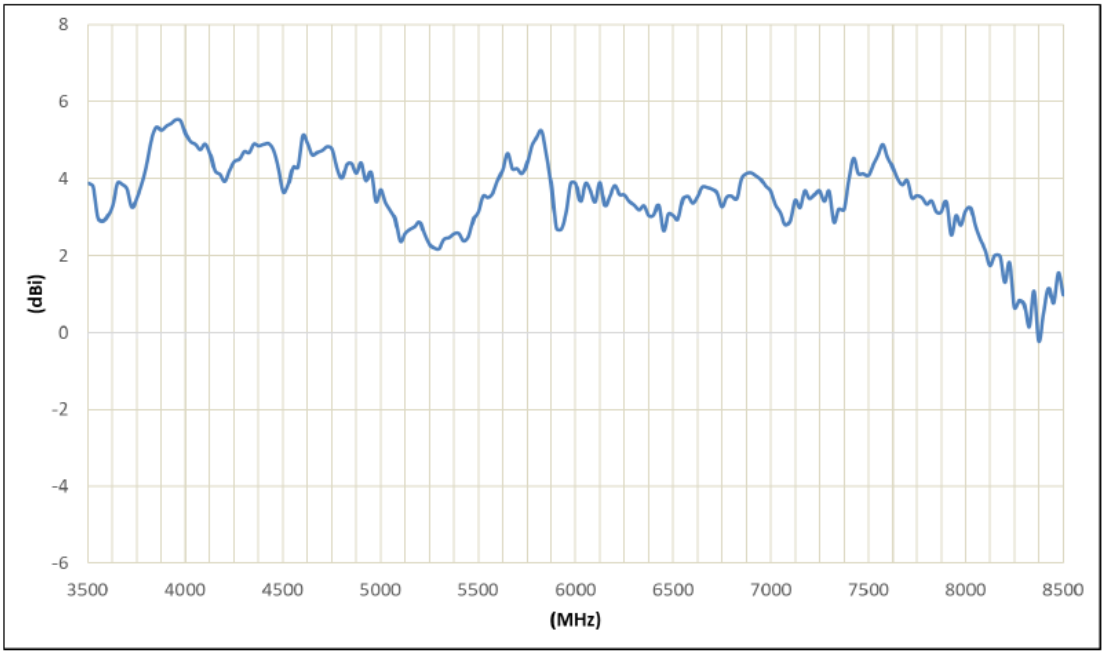
Efficiency (%)



Average Gain (dB)

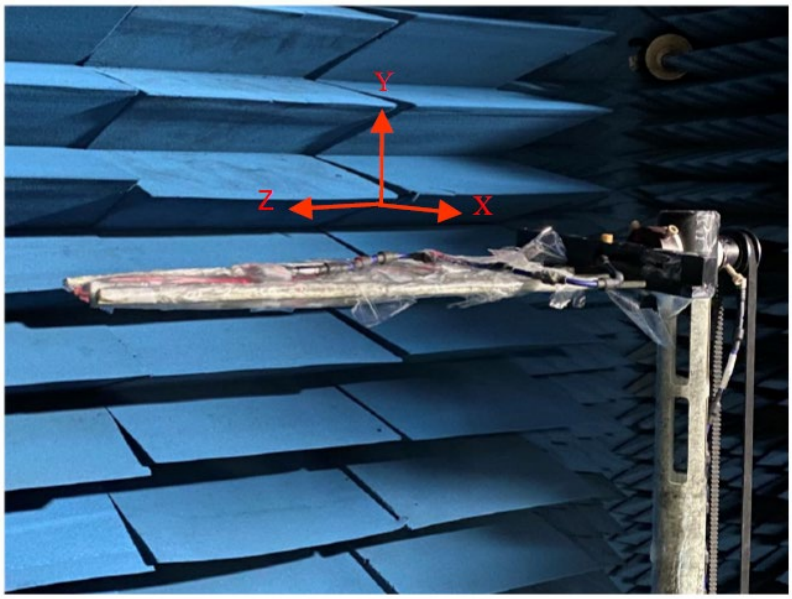


Peak Gain (dBi)

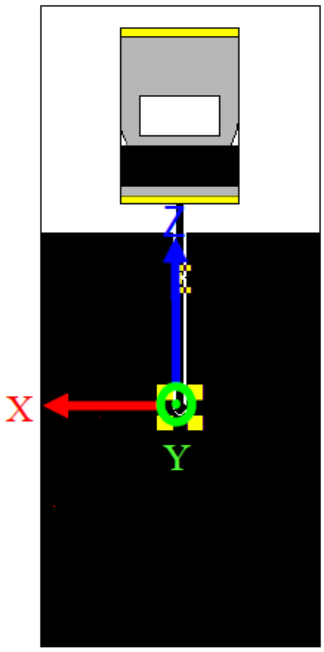


Antenna Radiation Pattern Measurement:

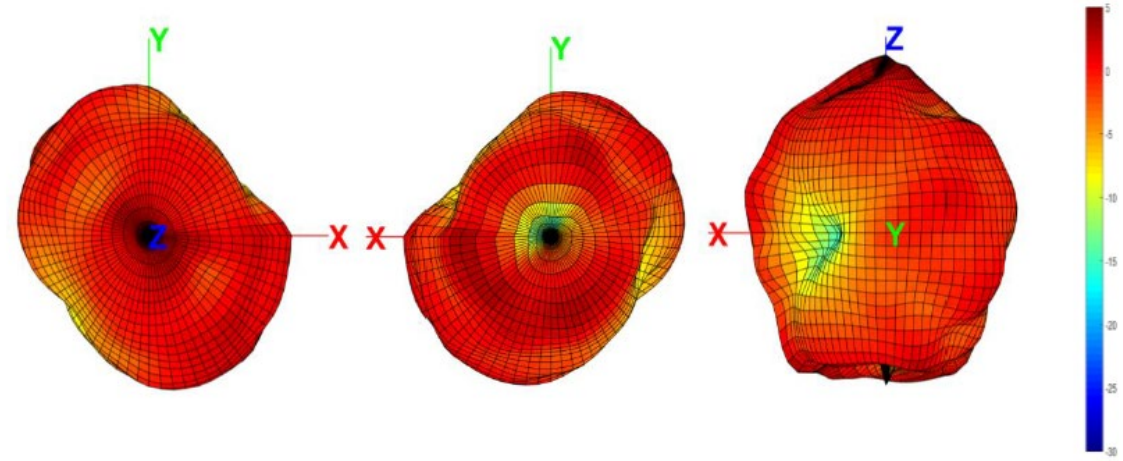
The antenna radiation patterns are measured in a 3D Anechoic Chamber. The measurement setup is as show below.



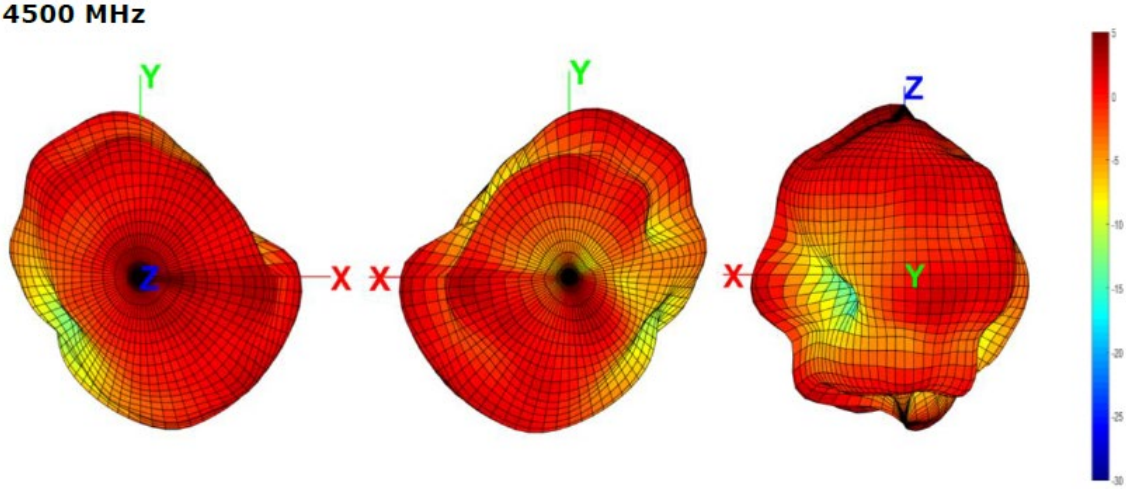
3D Radiation Gain Pattern



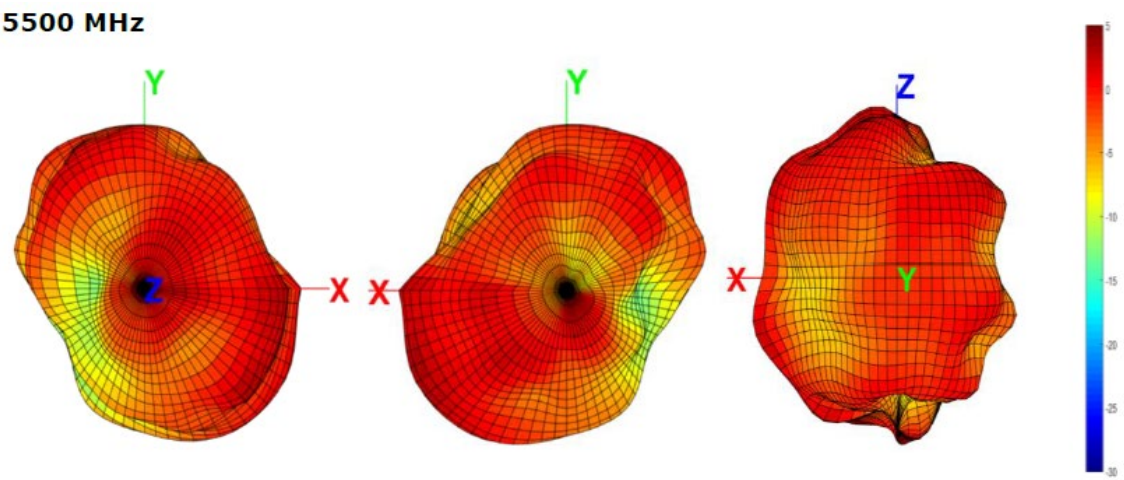
3500 MHz



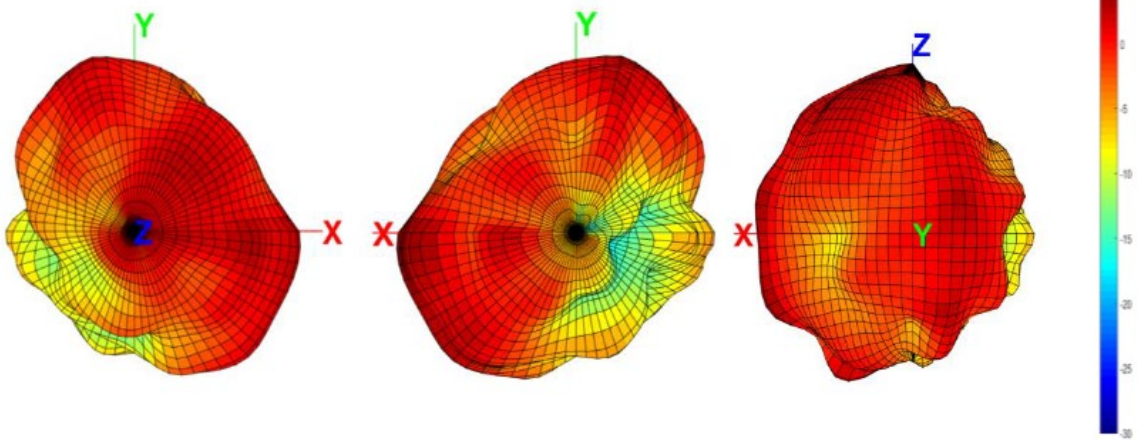
4500 MHz



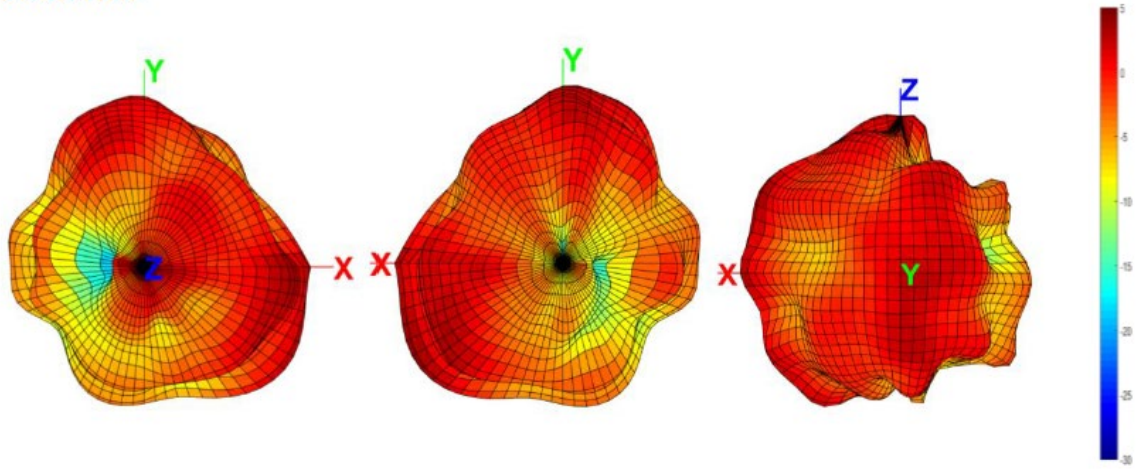
5500 MHz



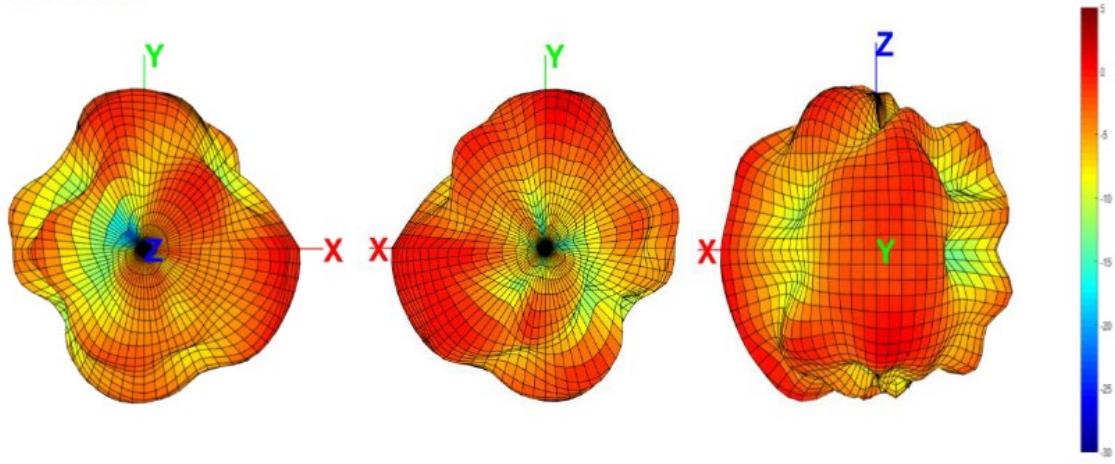
6500 MHz



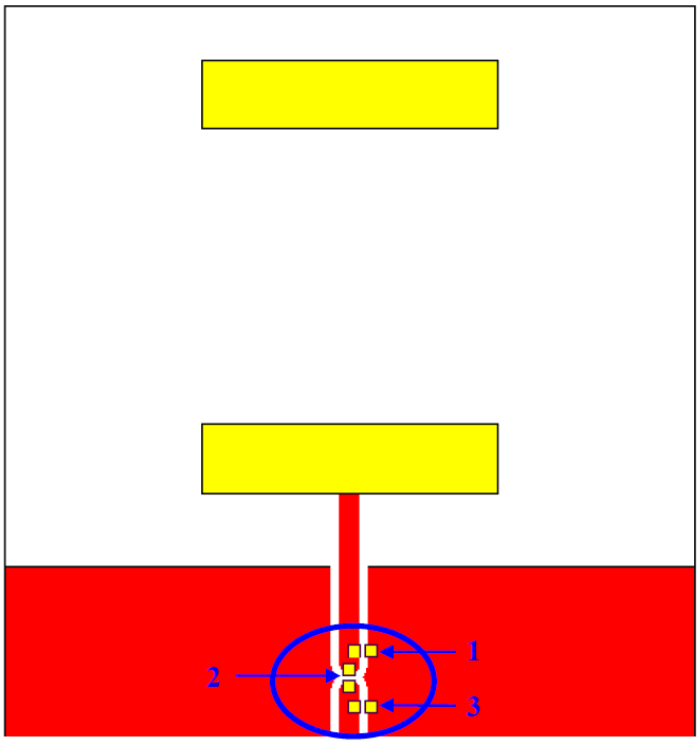
7500 MHz

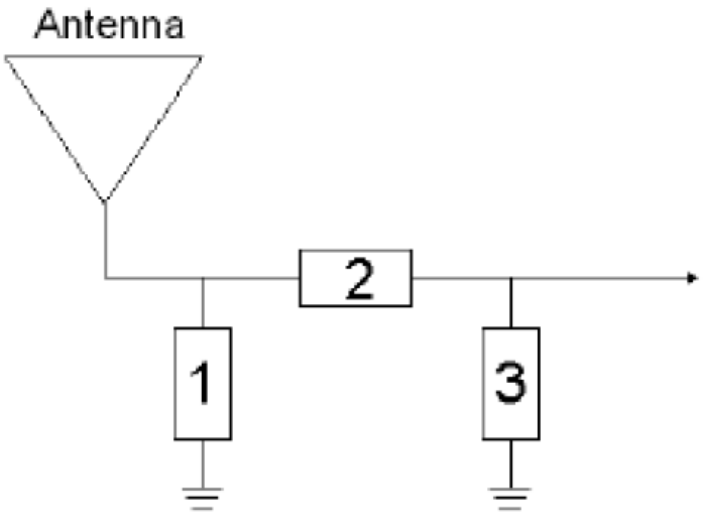


8500 MHz



Frequency Tuning & Matching Circuit





System Matching Circuit Component

Location	Description	Tolerance	NIC Part Number
1 & 3	-	-	-
2	0Ω, (0402)	5%	NRC04ZOTRF