

NGCP4005UC0R798G5TRF

LTE Full-Band Ceramic Chip Antenna



Features

- Supporting LTE full-band/3G/2G
- Stable and reliable performance
- Compact Size
- SMT processes compatible
- RoHS Compliant



Applications

- LTE full-band/3G/2G
- LTE/ GSM/ CDMA/ DCS/ PCS/ WCDMA/ UMTS/ HSDPA / GPRS / EDGE / IMT

Specifications

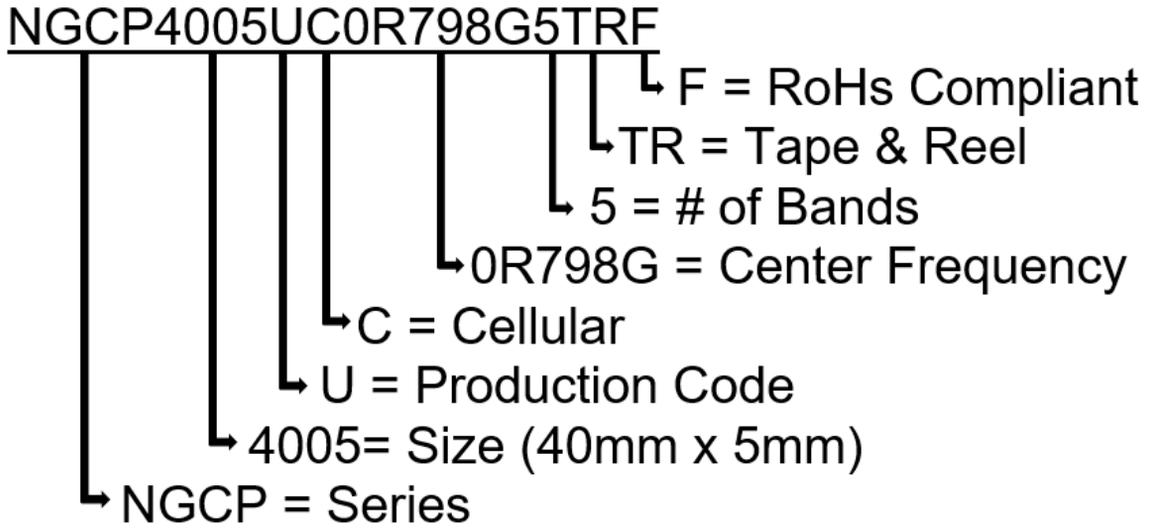
Electrical					
Frequency Range (MHz)	698 ~798	824~960	1710~2170	2300~2400	2490 ~2690
Peak Gain (typ.)	1.4 dBi	0.7 dBi	3.2 dBi	3.8 dBi	4.2 dBi
Efficiency (typ.)	65%	57%	69%	67%	62%
VSWR	<3.5 : 1				
Maximum Input Power	2 W				
Polarization	Linear				
Impedance	50Ω				
Environmental					
Operating Temperature	-40°C~+85°C				
Storage Temperature	-5°C~+40°C -40°C~+85°C - 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				

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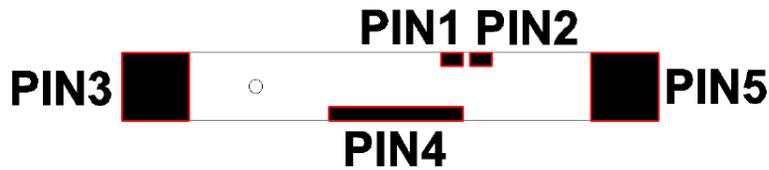
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Part Number Breakdown



Pin Definition



Bottom View

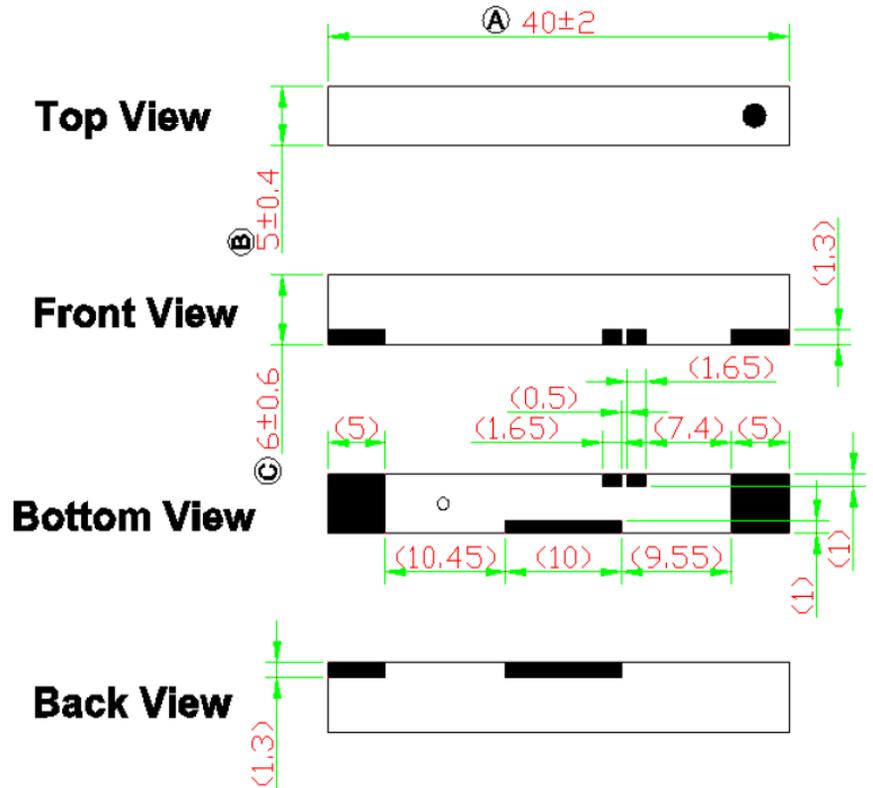
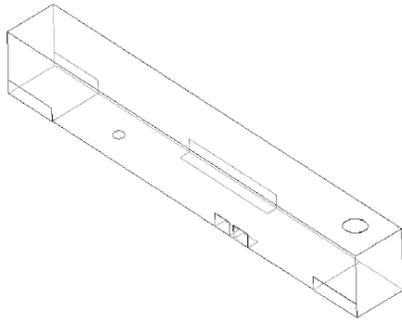
PIN	1	2	3~5
Soldering Pad	Tuning/Ground	Signal	N/C

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Dimension Drawing



Dimensions (mm) & Mechanical

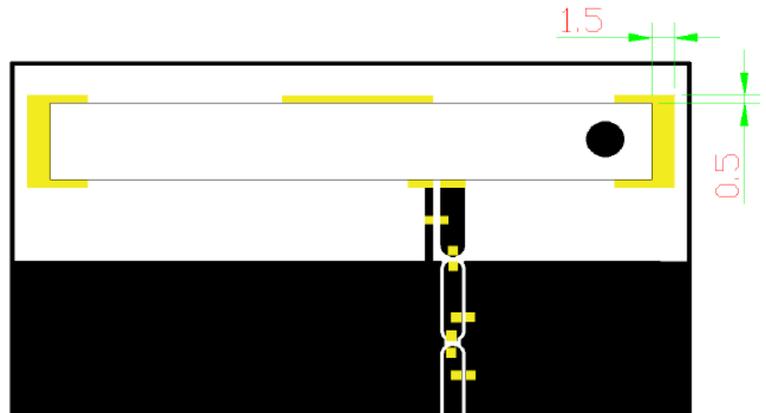
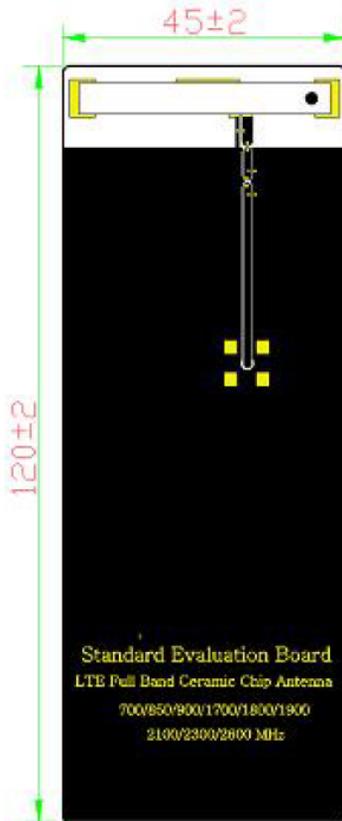
Body Length (A)	40 ± 2
Width (B)	5 ± 0.4
Thickness (C)	6 ± 0.6
Connection Type	SMT
Ground Plane	120 mm x 45 mm
Material	Ceramic

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Evaluation Board



Unit: mm

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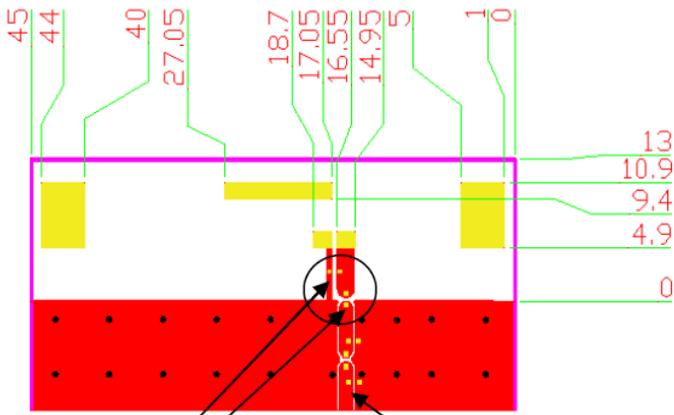
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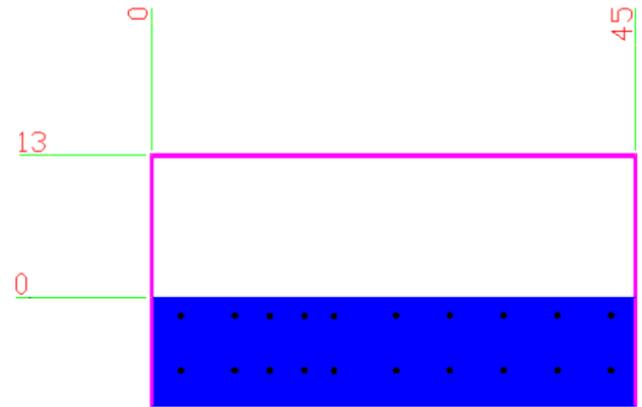
Solder Land Pattern

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

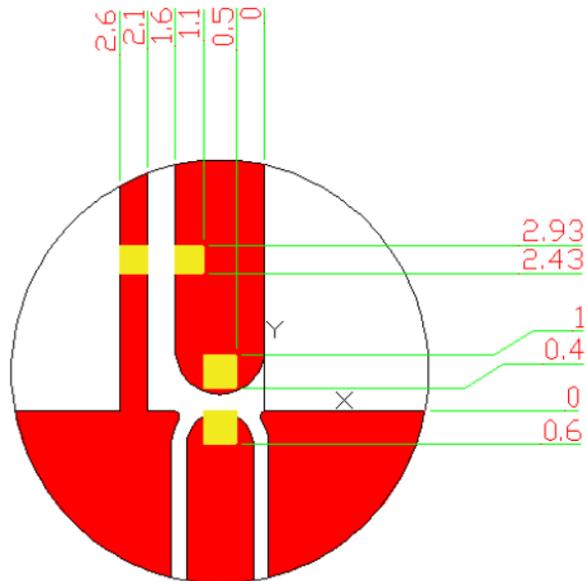


Bottom View



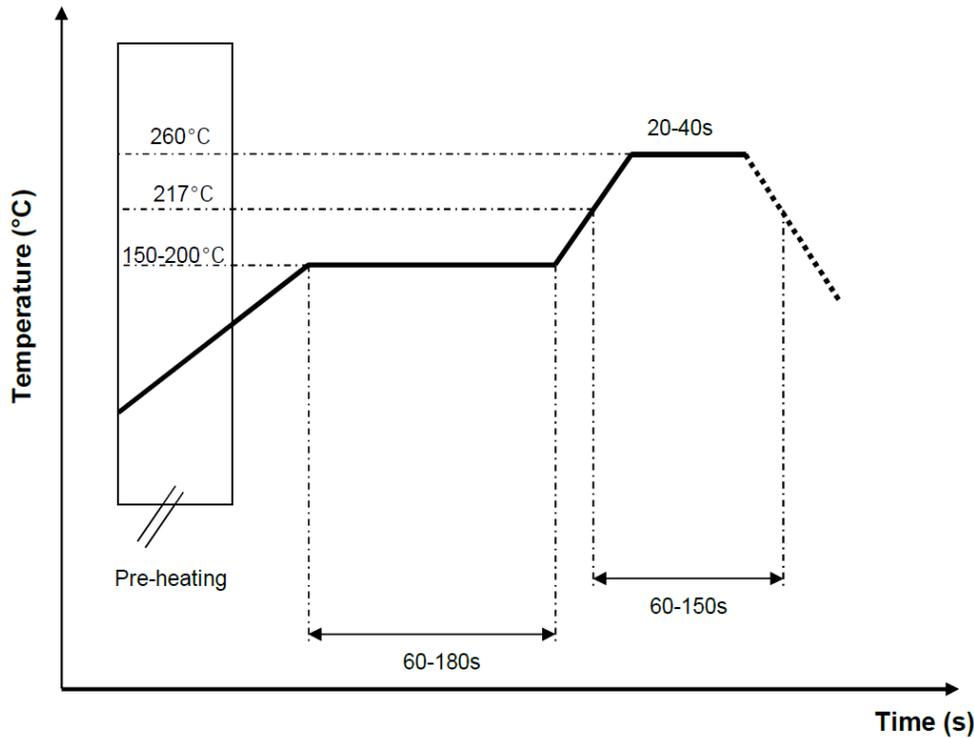
Grounding Pin
Signal Input

Transmission Line with 50Ω Impedance Characteristic

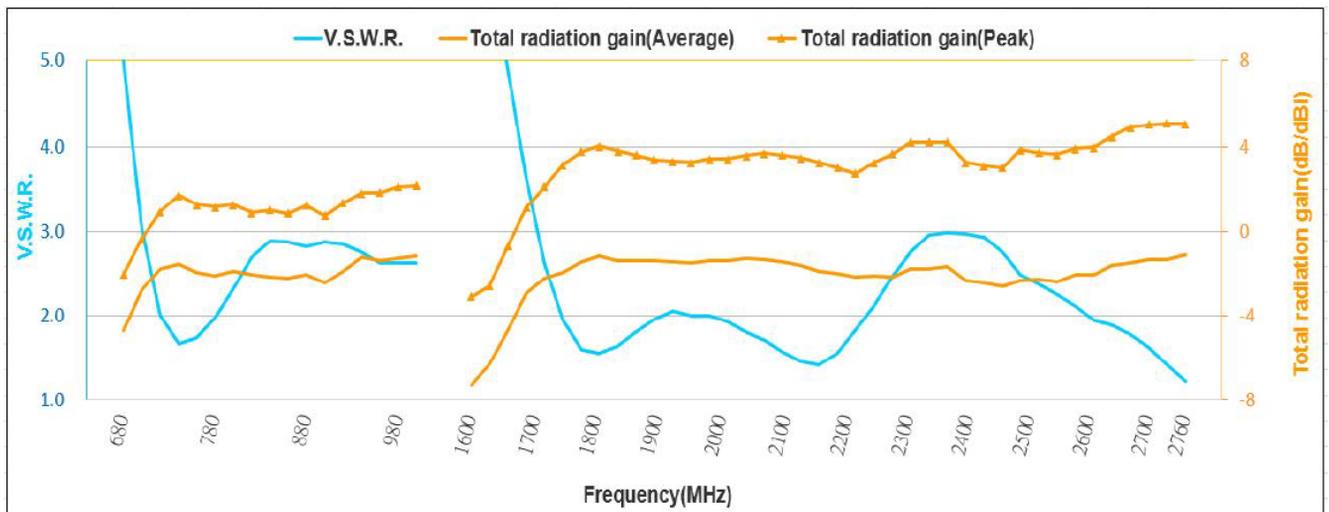


Soldering Conditions

Typical Soldering Profile for Lead-free Process

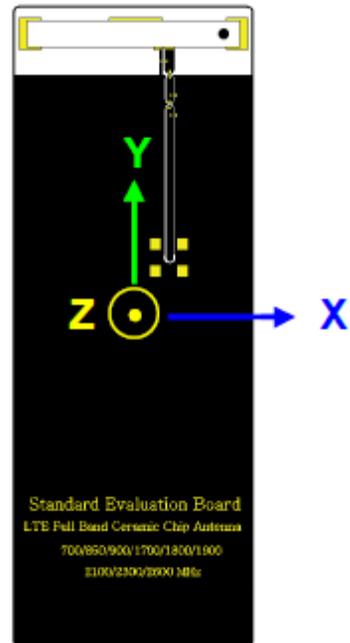
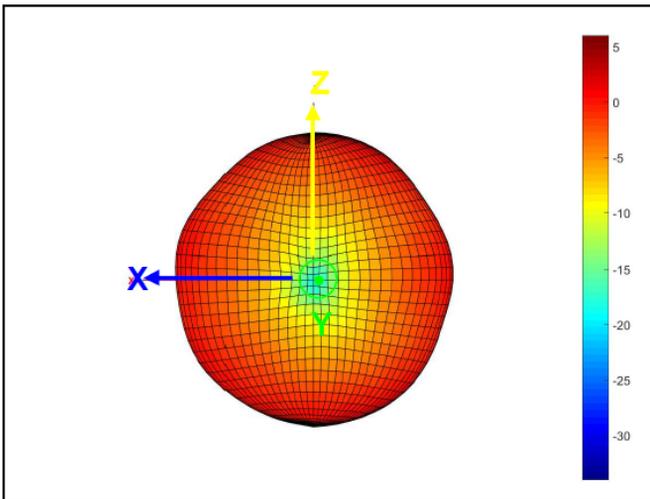
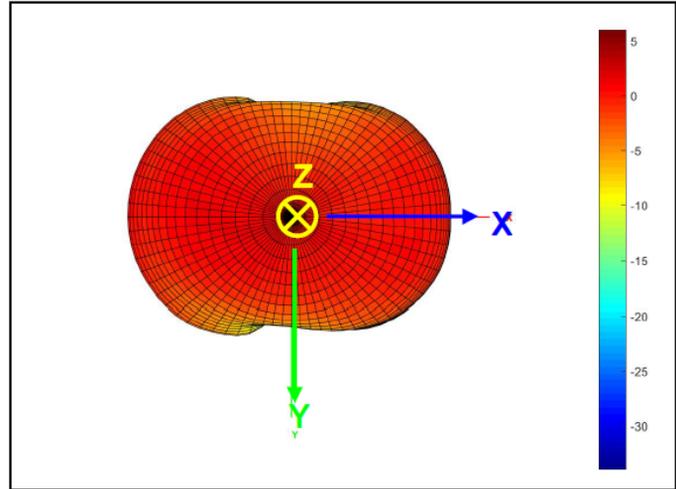
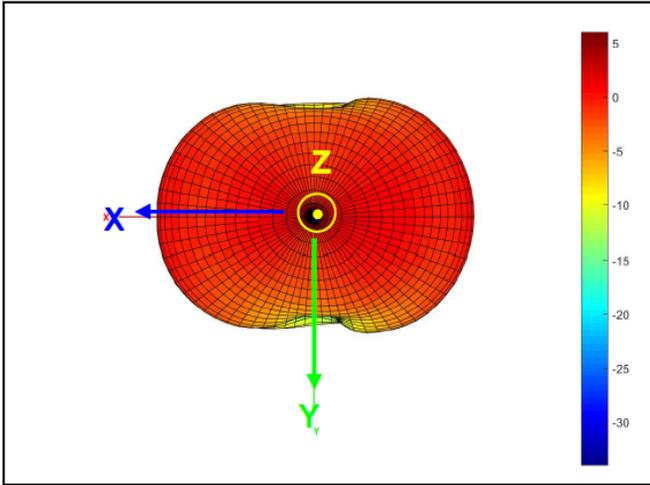


Frequency vs. VSWR and Total Radiation Gain



3D Radiation Gain Pattern:

698~798 MHz Band @ 748 MHz (unit: dBi)

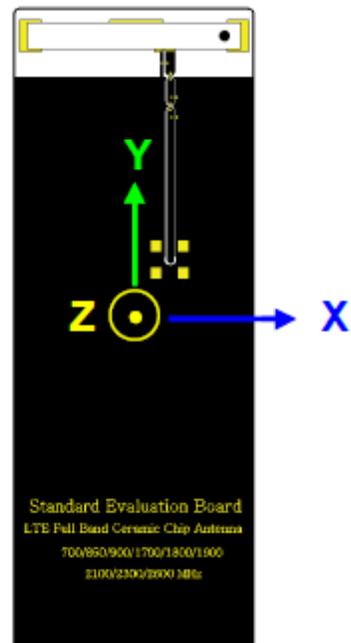
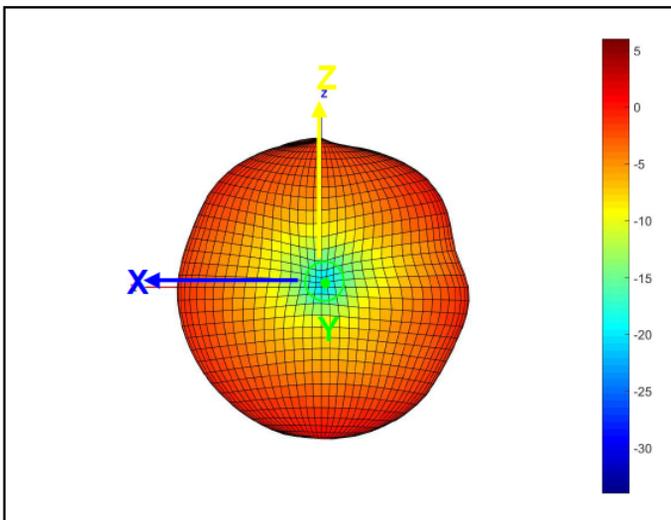
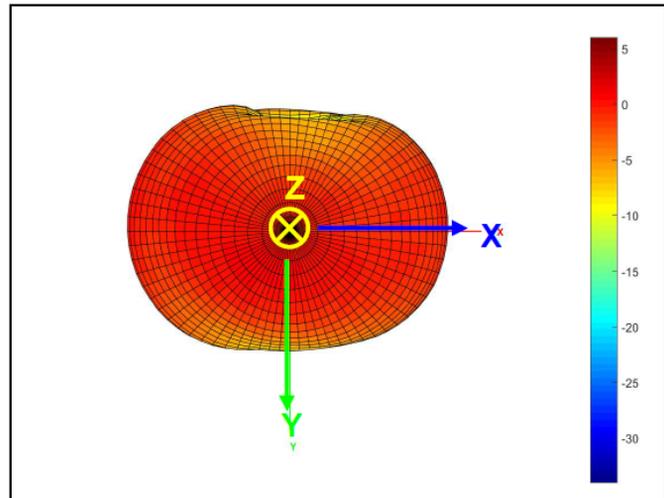
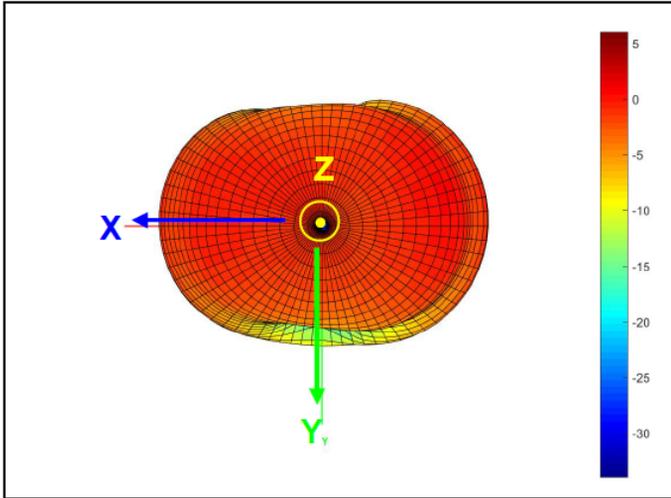


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824~960MHz Band @ 900 MHz (unit: dBi)

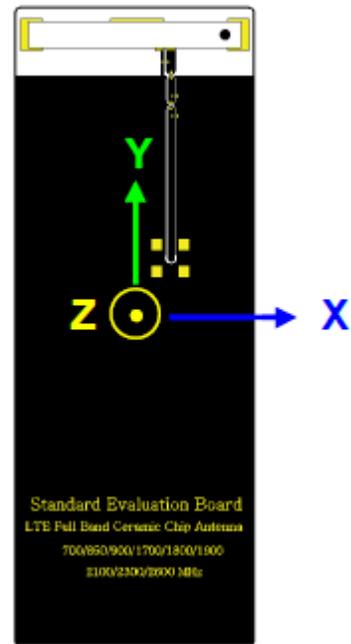
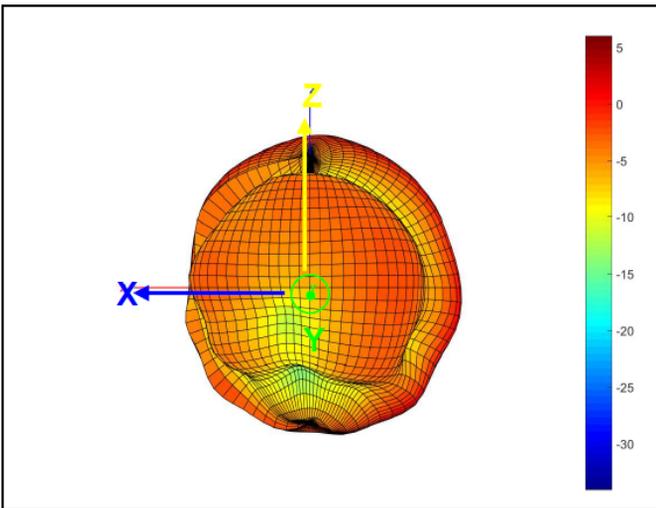
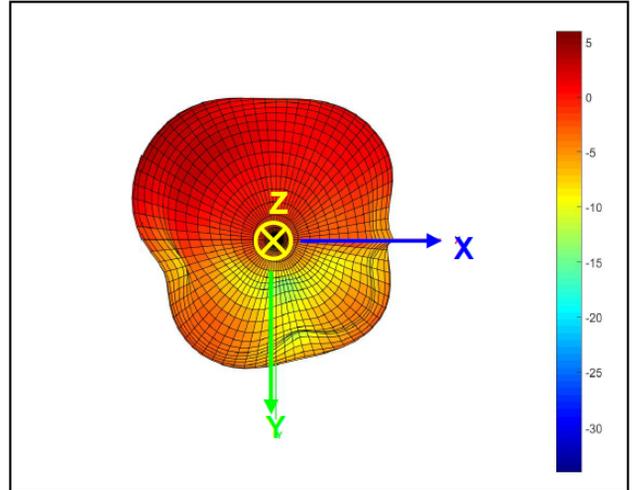
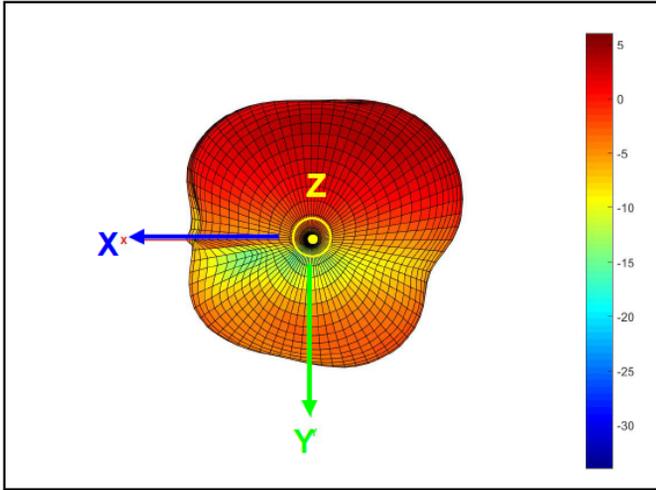


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1710 ~ 2170 MHz Band @ 1950 MHz (unit: dBi)

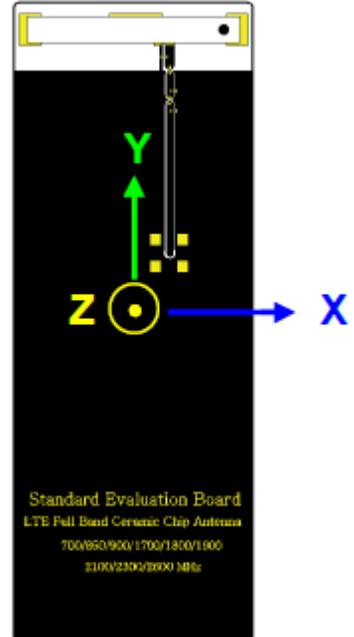
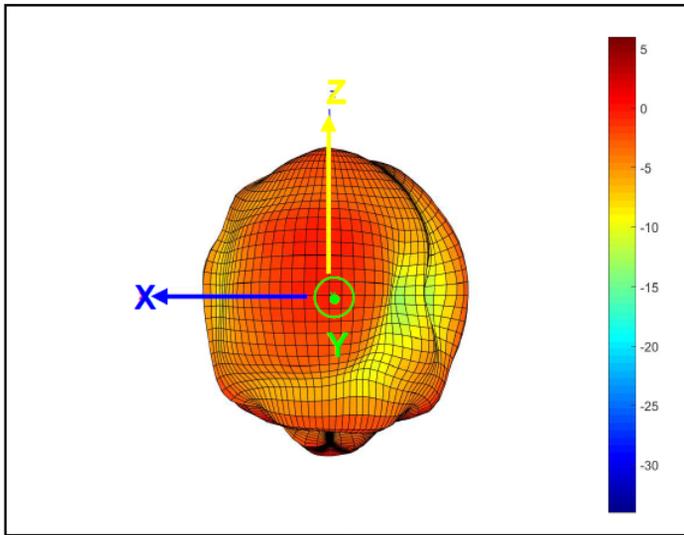
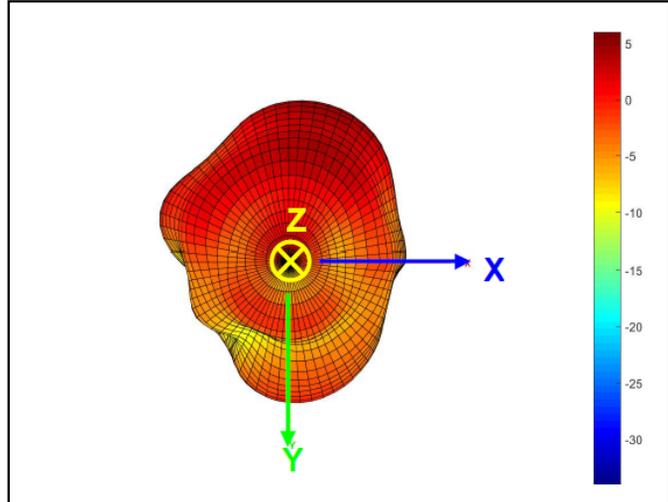
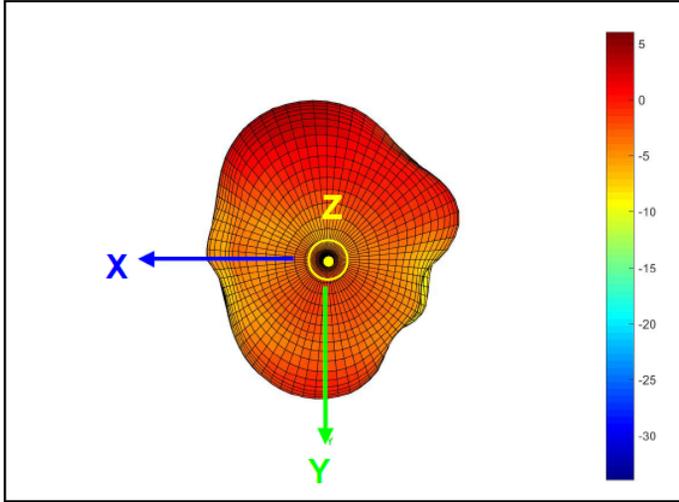


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2300 ~ 2400 MHz Band @ 2350 MHz (unit: dBi)

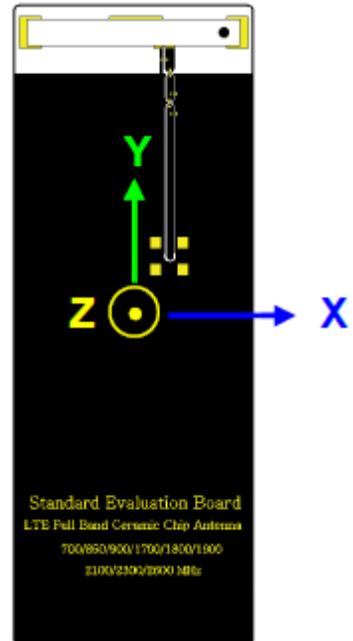
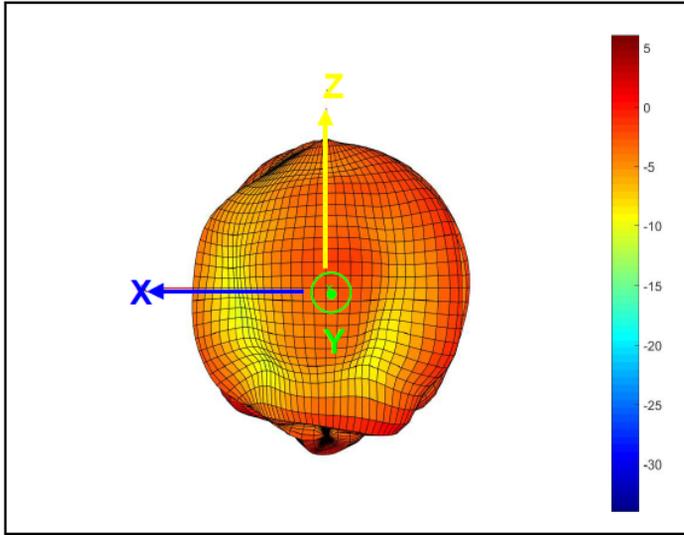
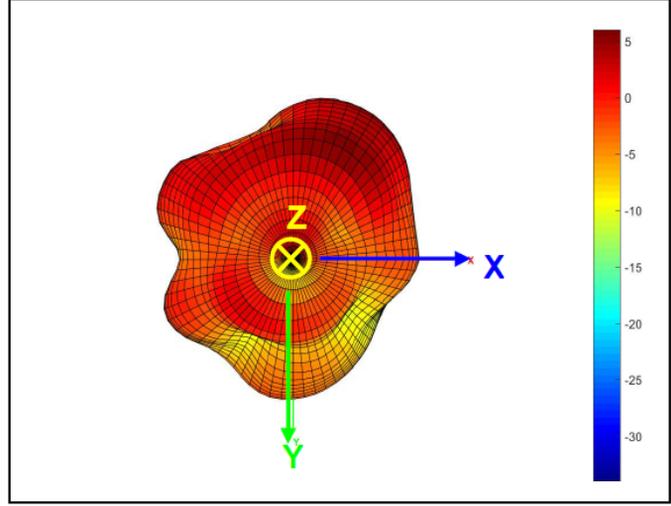
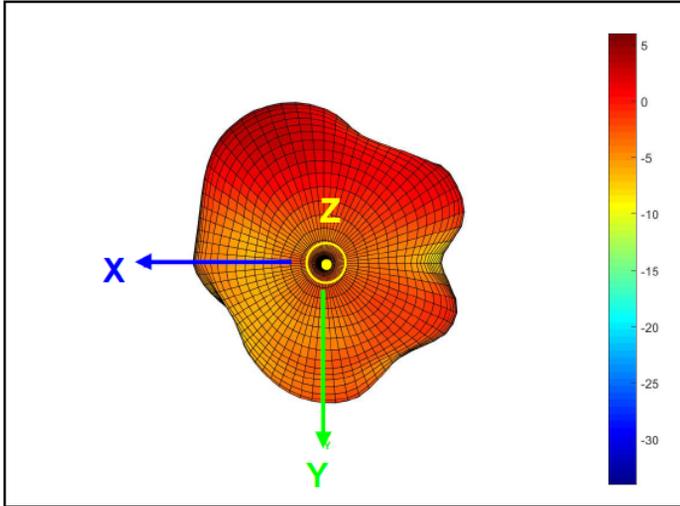


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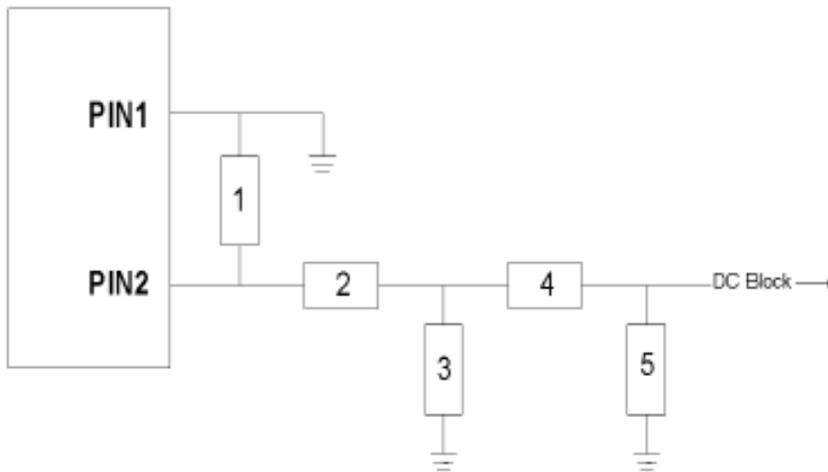
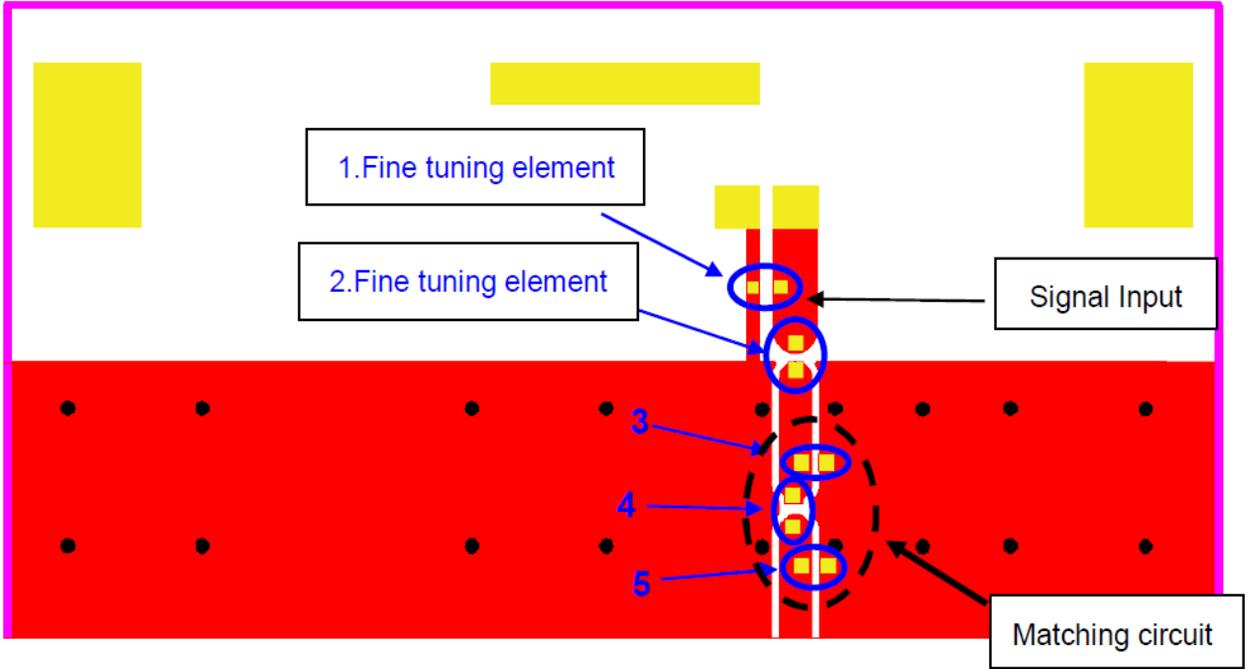
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2490 ~ 2690 MHz Band @ 2590 MHz (unit: dBi)



Frequency Tuning & Matching Circuit



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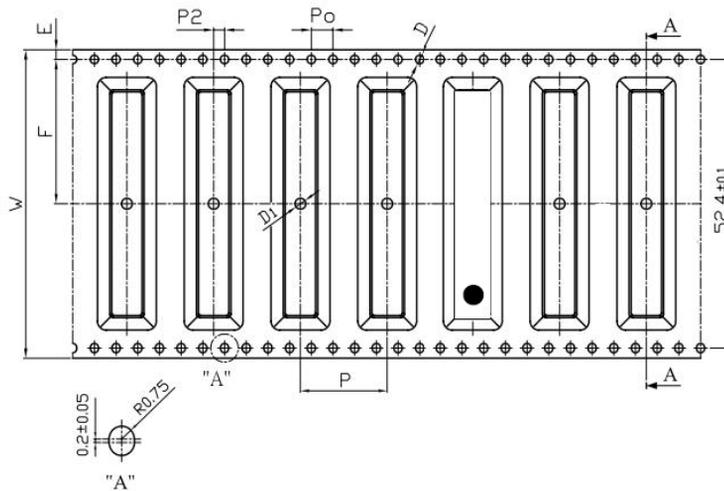
System Matching Circuit Component

Location	Description	Tolerance	NIC Part Number
1	5.6 nH (0402)	±0.1nH	NML04B5N6TRF
2	3.6 pF, (0402)	±0.05 pF	NMC-Q0402NPO3R6A25TRPF
3 & 5	-	-	-
4 Fine Tuning Elements	0 Ω, (0402)	-	NRC04Z0TRF

Packing

- (1) Quantity / Reel: 600 pcs / Reel
- (2) Plastic tape: Clear Non Anti-static Polystyrene

a. Tape Drawing



b. Tape Dimensions (unit: mm)

Feature	Specifications	Tolerances
W	56.00	±0.30
P	16.00	±0.10
E	1.75	±0.10
F	26.20	±0.15
P2	2.00	±0.15
D	1.50	+0.10 -0.00
D1	2.00	±0.10
Po	4.00	±0.10
10Po	40.00	±0.20