NGCL1206UD1R905G1TRF

1905 MHz DECT Ceramic Chip Antenna

9001:2015 CERTIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC Components Corp.

Features

- Stable and reliable in performance
- Low profile, compact size
- SMT processes compatible
- RoHS Compliant

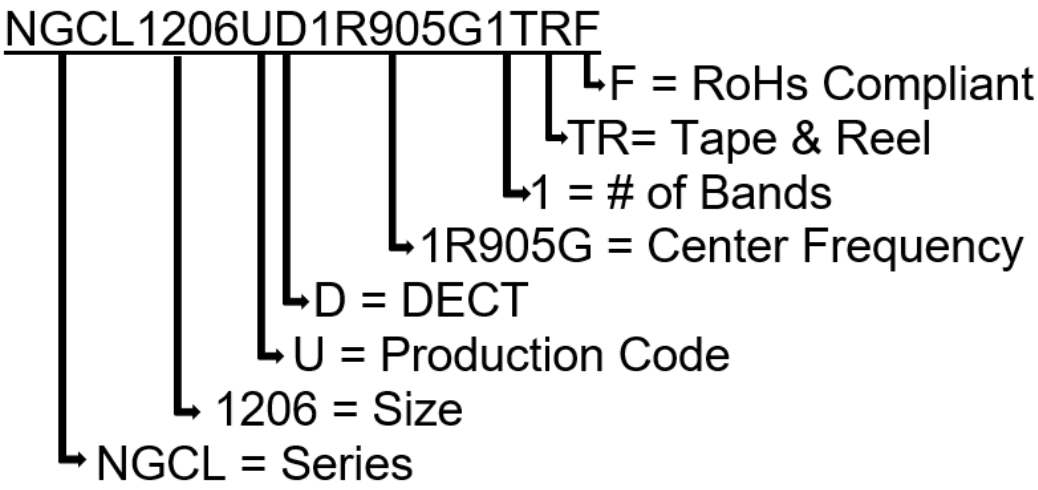
Applications

- Digital Enhanced Cordless Telecommunications, DECT (1880-1930 MHz)

Specifications

Electrical	
Frequency Range	1880 ~ 1930MHz
Center Frequency	1905 MHz
VSWR	2.0 Max
Peak Gain	1.5 dBi
Efficiency	74%
Maximum Input Power	2 W
Polarization	Linear
Impedance	50Ω
Environmental	
Operating Temperature	-40℃~+85℃
Storage Temperature	-5℃~+40℃ -40℃~+85℃ : After mounting on PCB
Relative Humidity	20% to 70% : Storage
Shelf Life	1 year
RoHs Compliant	Yes

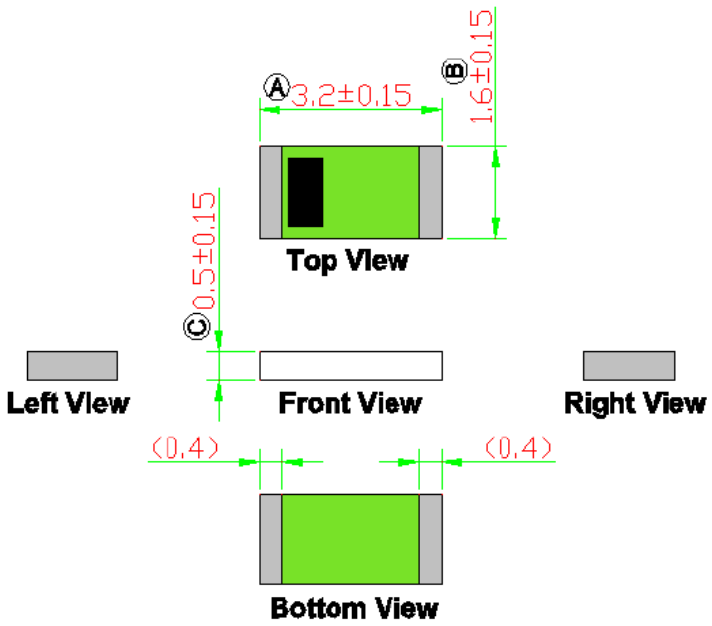
Part Number Breakdown



Pin Definition

PIN	1	2
Soldering PAD	Signal	Tuning / Ground

Dimension Drawing

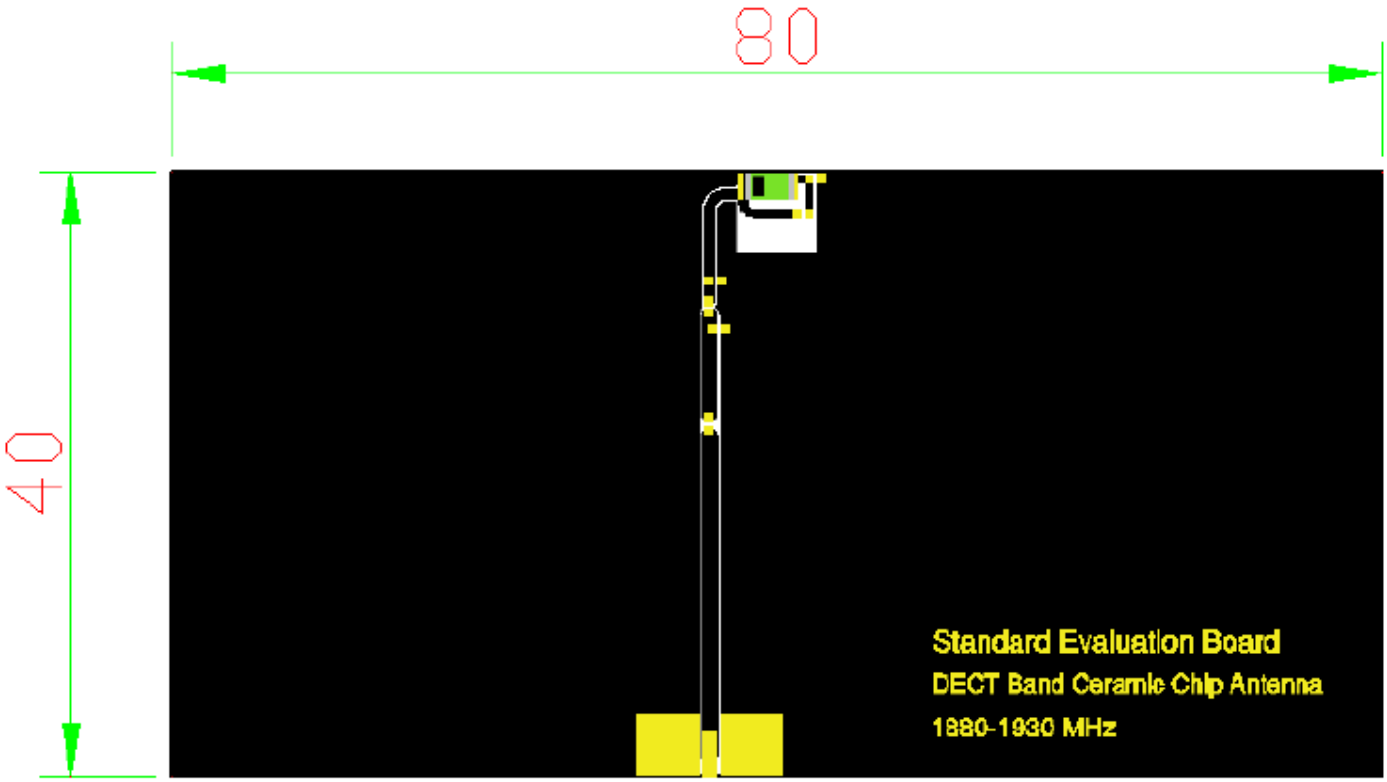


NOTE:
1.All materials are RoHS 2.0 compliant.
2."Ⓐ~Ⓒ" Critical Dimensions.
3."( )" Reference Dimensions.

Dimensions (mm) & Mechanical

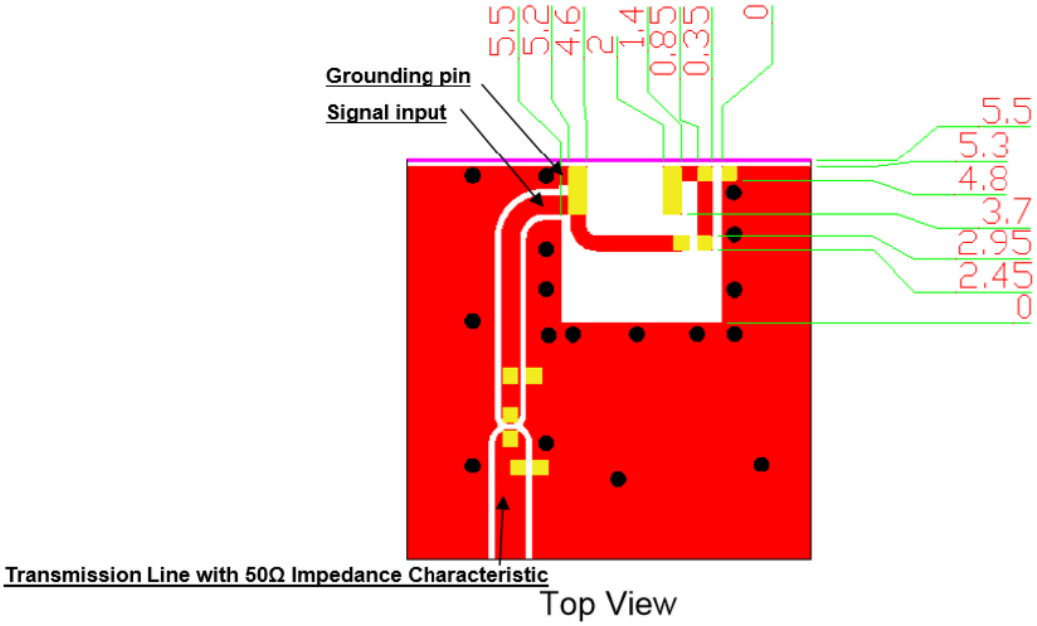
Body Length (A)	3.2 ± 0.15
Width (B)	1.6 ± 0.15
Thickness (C)	0.5 ± 0.15
Connection Type	SMT
Ground Plane	80 mm x 40 mm
Material	Ceramic

Evaluation Board

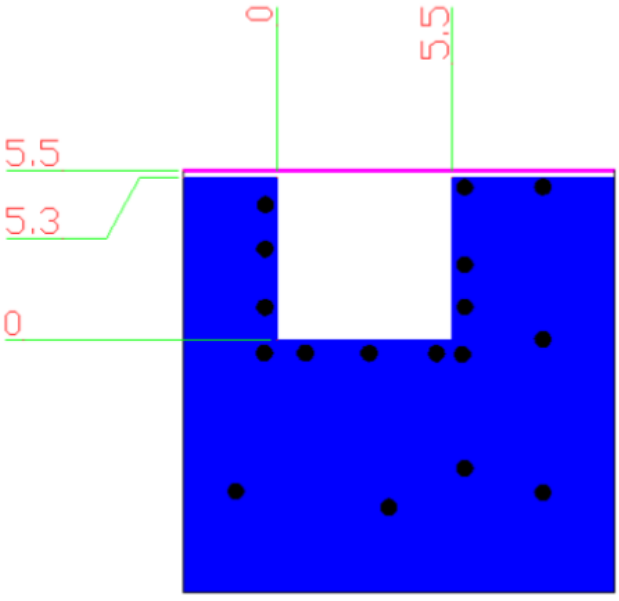


Solder Land Pattern

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

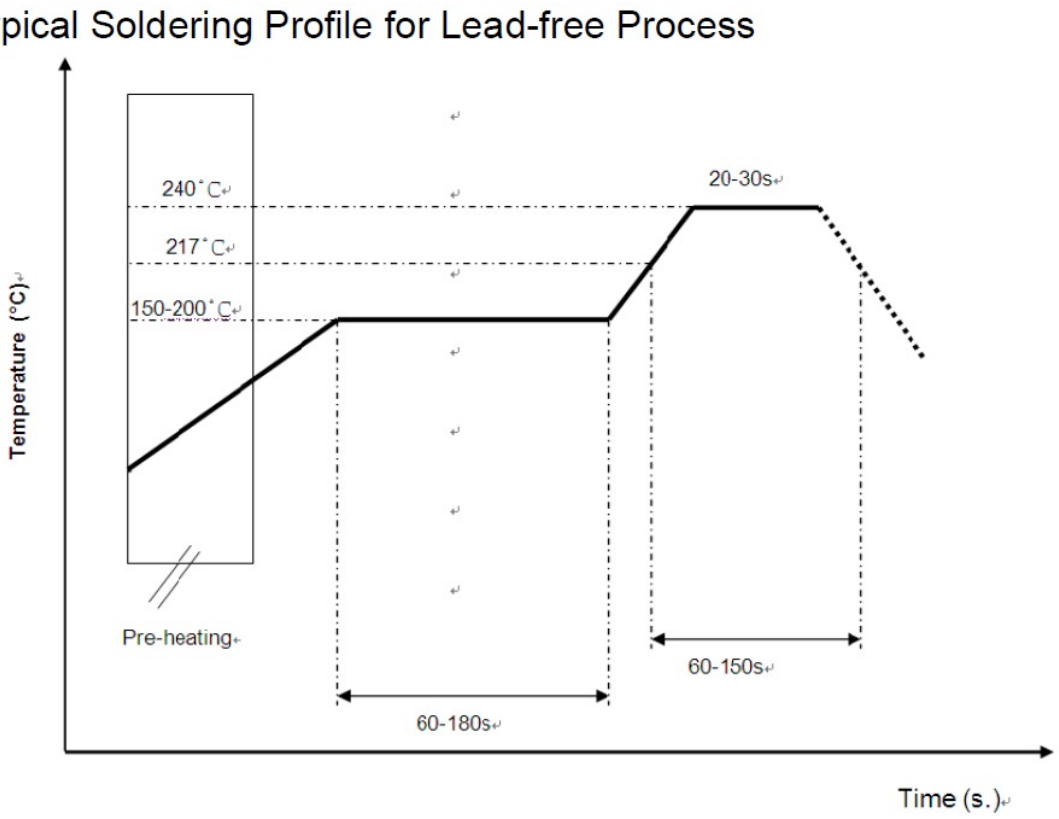


Top View



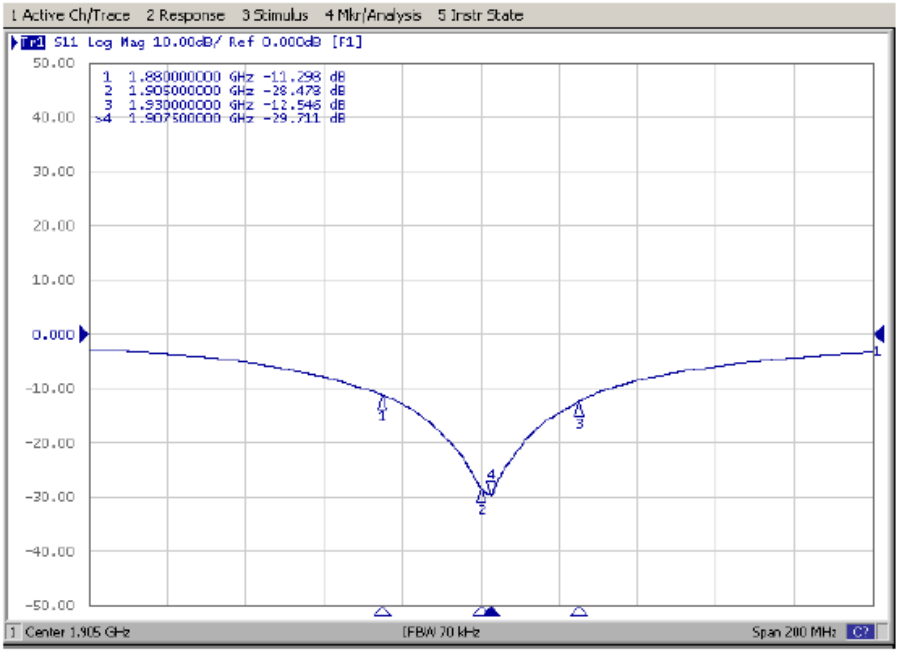
Bottom View

Soldering Conditions

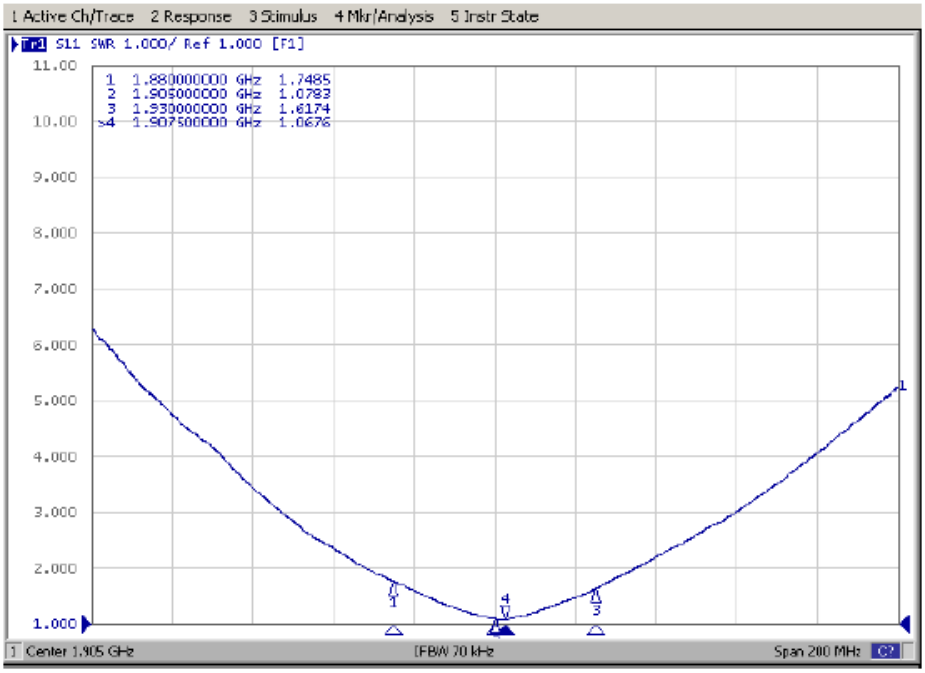


*Recommended solder paste alloy: SAC305 (Sn96.5 /Ag3 /Cu0.5) Lead Free solder paste

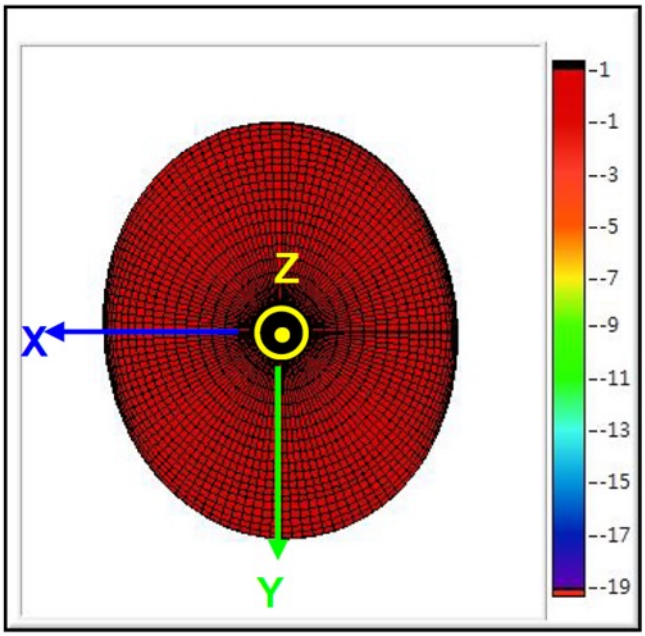
Return Loss (S_{11})

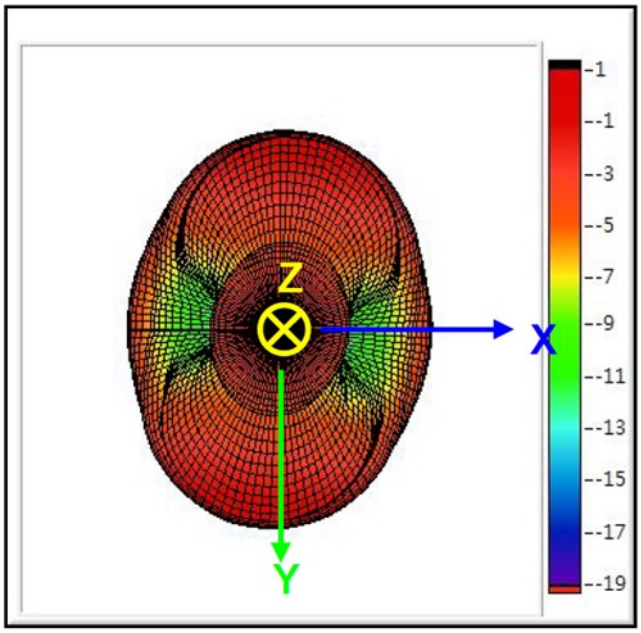


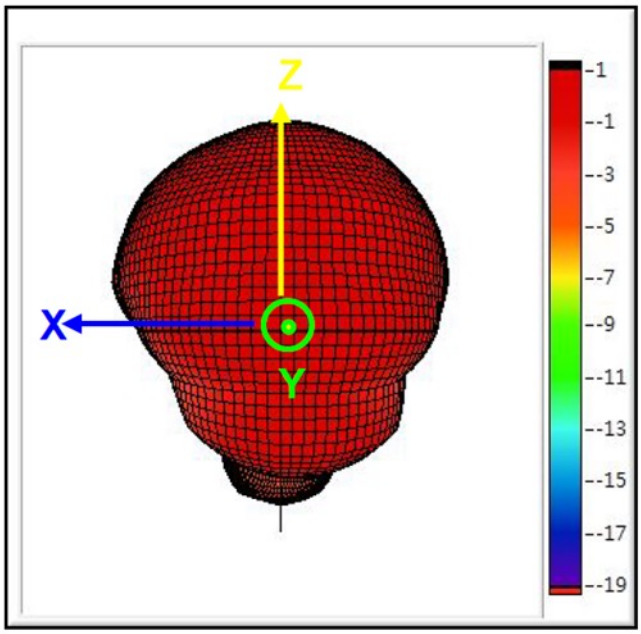
VSWR (S_{11})

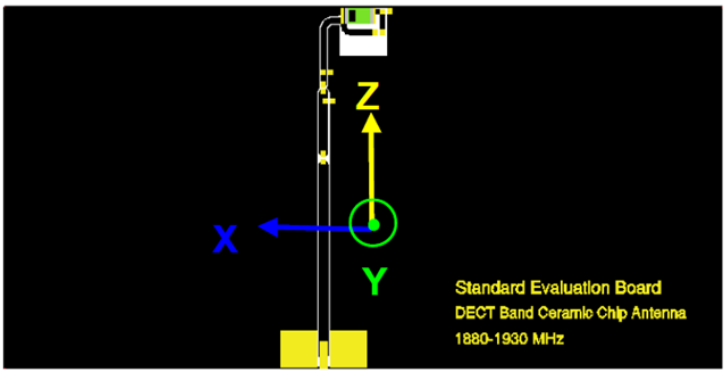


Radiation Pattern :
3D Gain Patterns @ 1880 MHZ

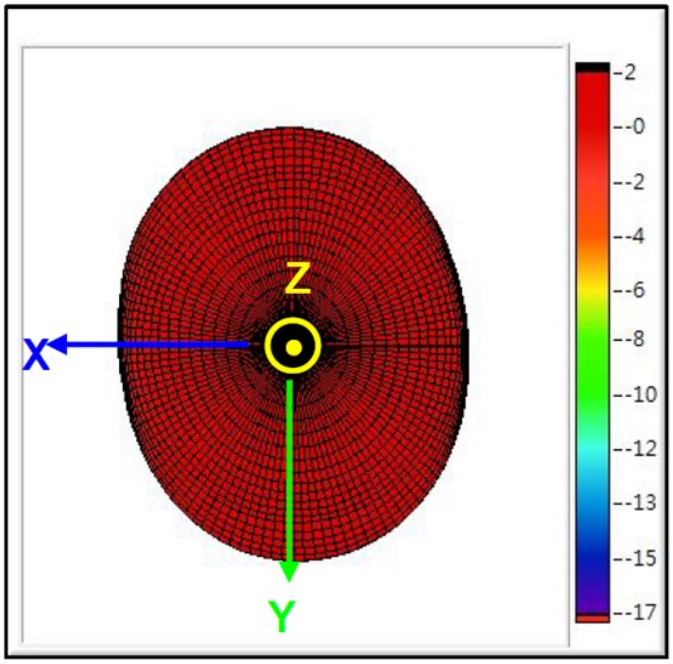


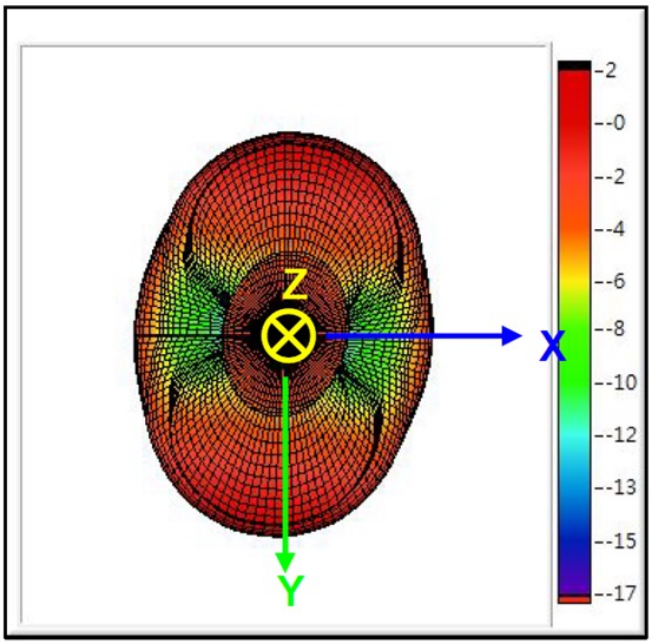


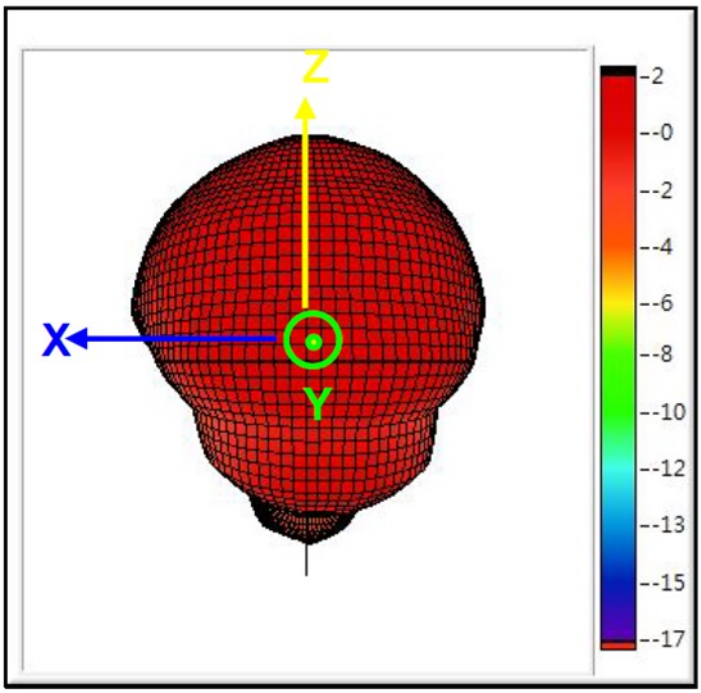


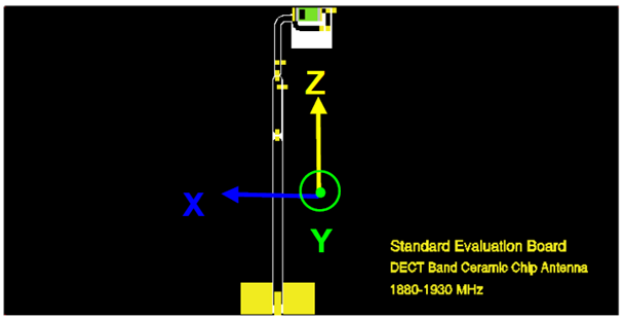


3D Gain Patterns @ 1905 MHZ

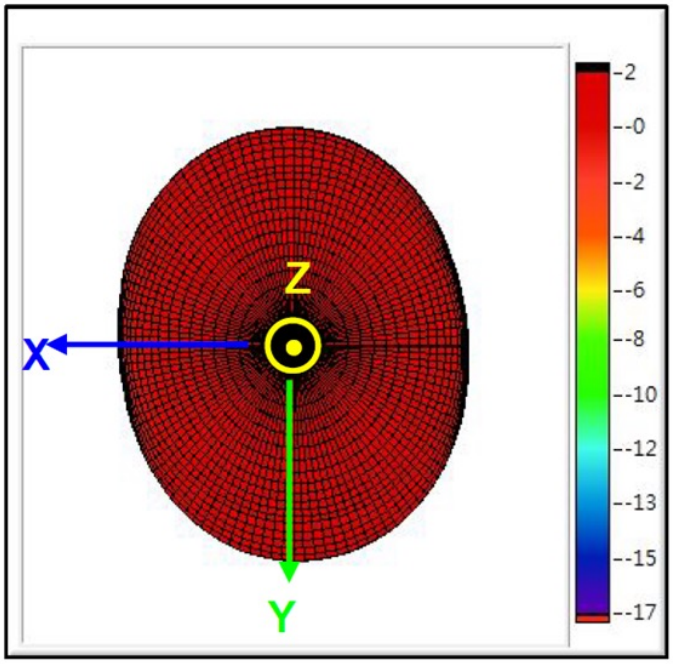


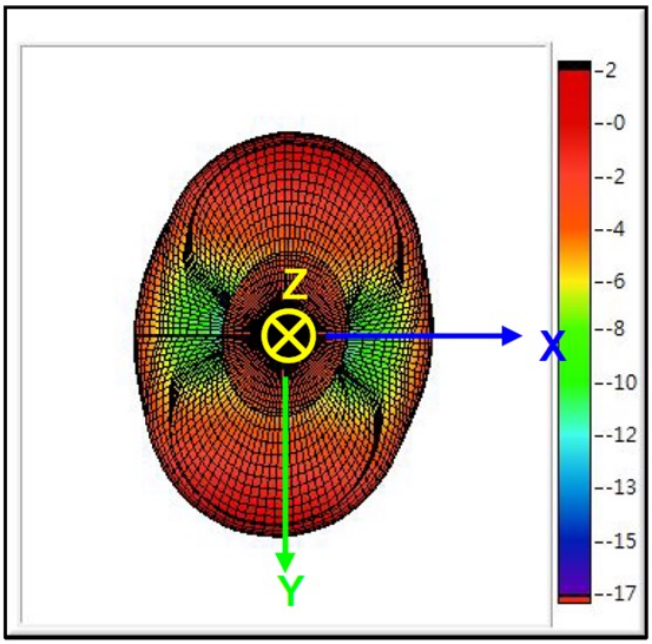


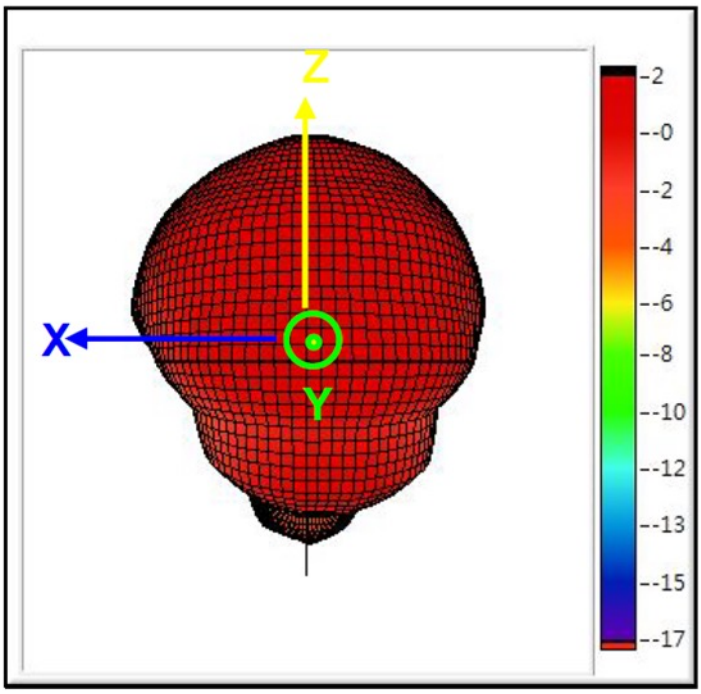


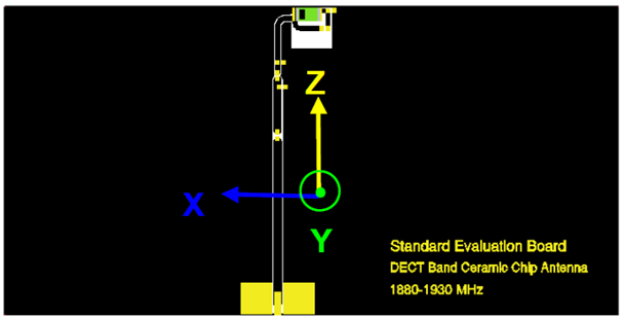


3D Gain Patterns @ 1930 MHZ







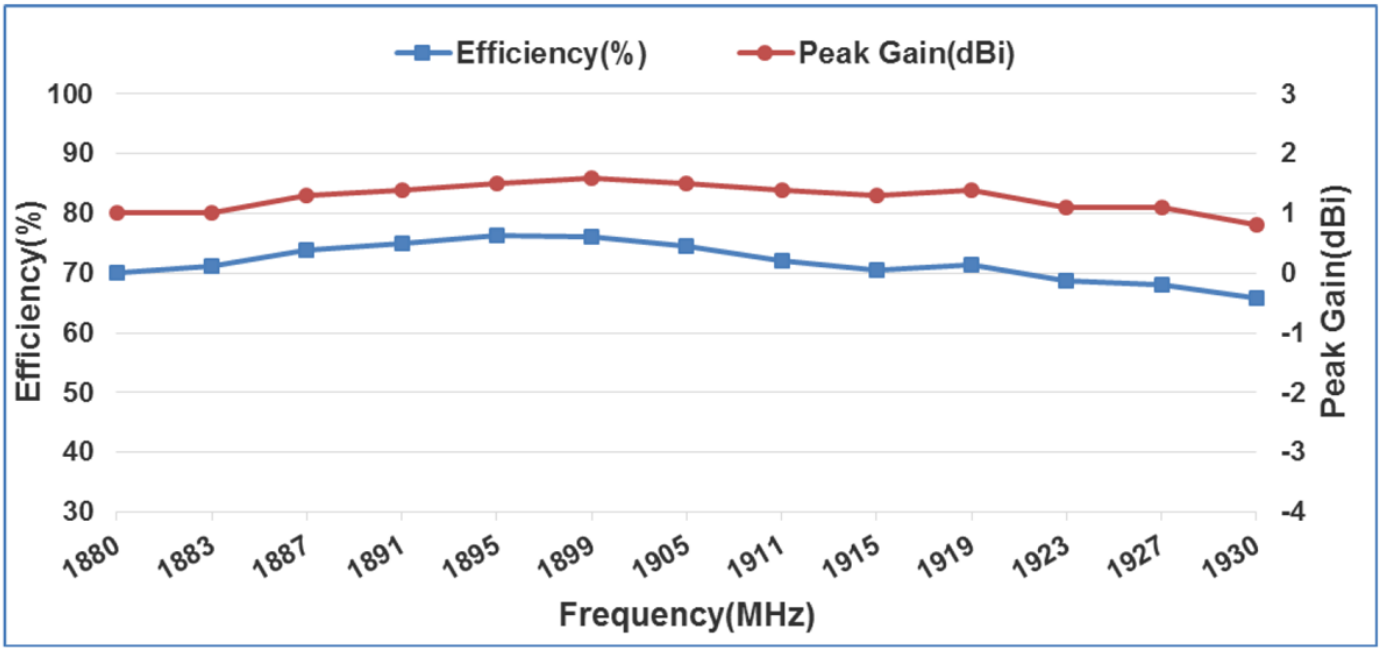


Efficiency Table

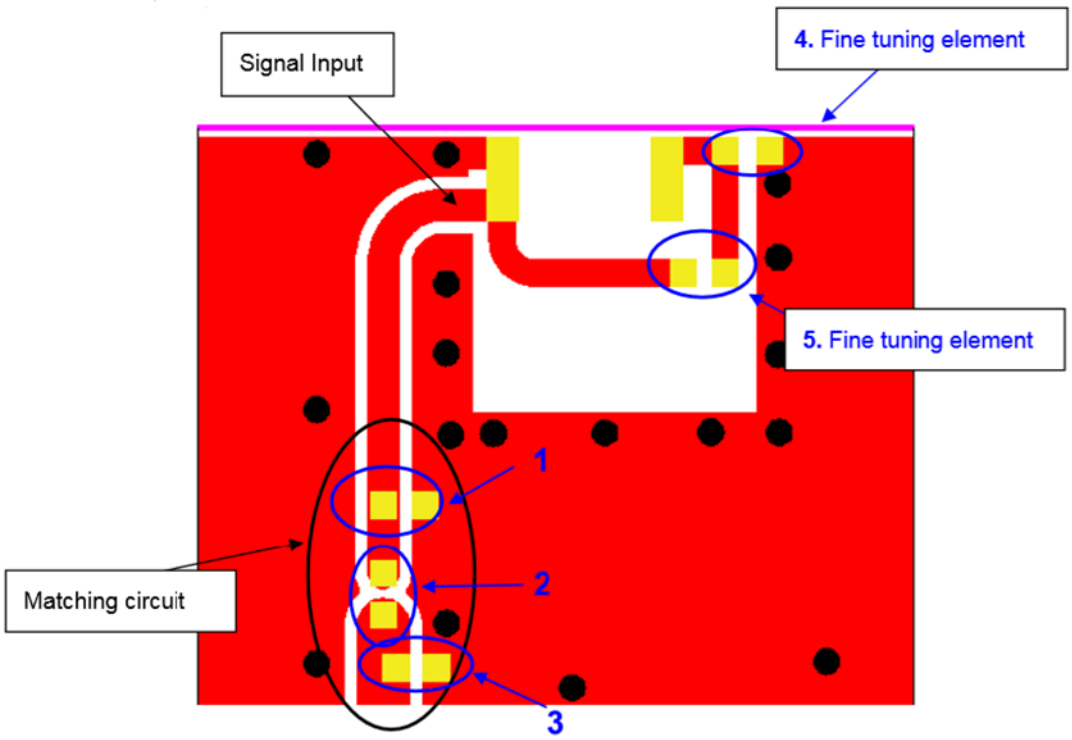
Frequency(MHz)	1880	1881	1883	1885	1887	1889	1891	1893	1895	1897	1899	1901	1903	1905
Efficiency(dB)	-1.6	-1.5	-1.5	-1.4	-1.3	-1.3	-1.3	-1.2	-1.2	-1.2	-1.2	-1.2	-1.3	-1.3
Efficiency(%)	70.0	70.2	71.1	72.6	73.9	73.7	75.0	75.8	76.3	75.5	76.1	75.6	74.3	74.5
Peak Gain(dBi)	1.0	1.0	1.0	1.1	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.5	1.5

Frequency(MHz)	1907	1909	1911	1913	1915	1917	1919	1921	1923	1925	1927	1929	1930
Efficiency(dB)	-1.4	-1.4	-1.4	-1.5	-1.5	-1.5	-1.5	-1.6	-1.6	-1.6	-1.7	-1.8	-1.8
Efficiency(%)	72.6	72.3	72.0	71.5	70.6	71.2	71.4	69.9	68.7	68.5	68.1	66.1	65.8
Peak Gain(dBi)	1.4	1.4	1.4	1.4	1.3	1.4	1.4	1.3	1.1	1.1	1.1	0.9	0.8

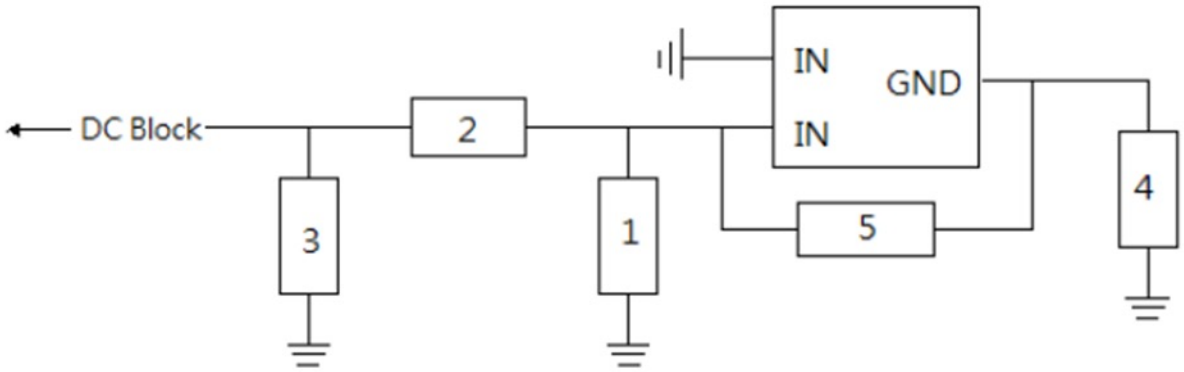
Efficiency Vs. Frequency



Frequency Tuning

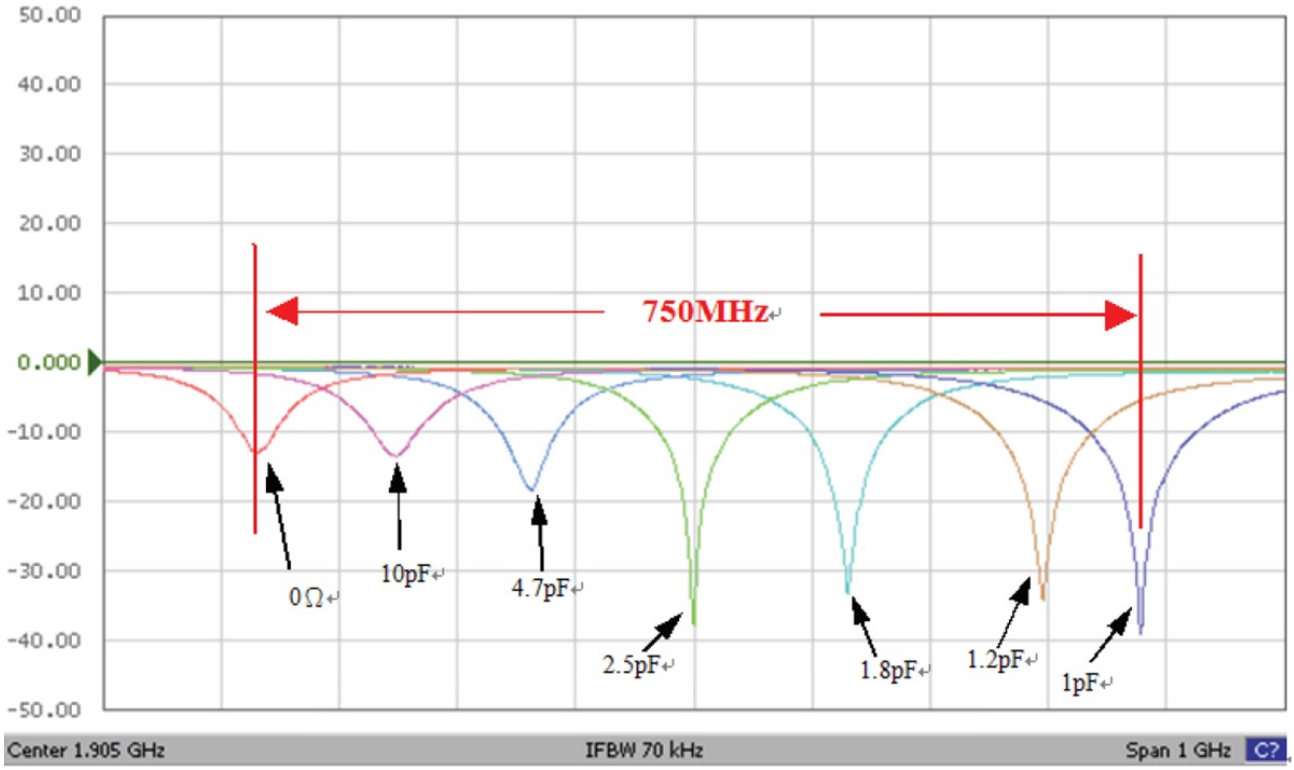


Matching Circuit



System Matching Circuit Component

Location	Description	Tolerance	NIC Part Number
1	1.2pF, (0402)	±0.05pF	NMC-Q0402NPO1R2A50TRPF
2	0Ω, (0402)	-	NRC04ZOTRF
3	N/A	-	-
4 Fine Tuning Element	2.4pF, (0402)	±0.1pF	NMC-Q0402NPO2R4B50TRPF
5 Fine Tuning Element	0.5pF, (0402)	±0.05pF	NMC-Q0402NPO0R5A50TRPF

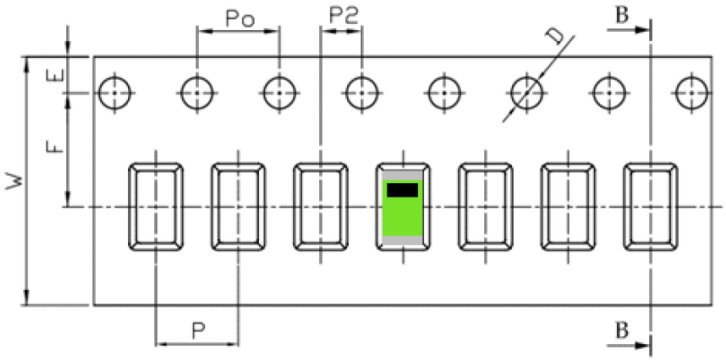


Packing

(1) Quantity/Reel: 5000 pcs /Reel

(2) Plastic tape:

a. Tape Drawing



b. Tape Dimensions (unit: mm)

Feature	Specifications	Tolerances
W	12.00	±0.30
P	4.00	±0.10
E	1.75	±0.10
F	5.50	±0.10
P2	2.00	±0.10
D	1.50	+0.10 -0.00
Po	4.00	±0.10
10Po	40.00	±0.20

c. Reel Drawing