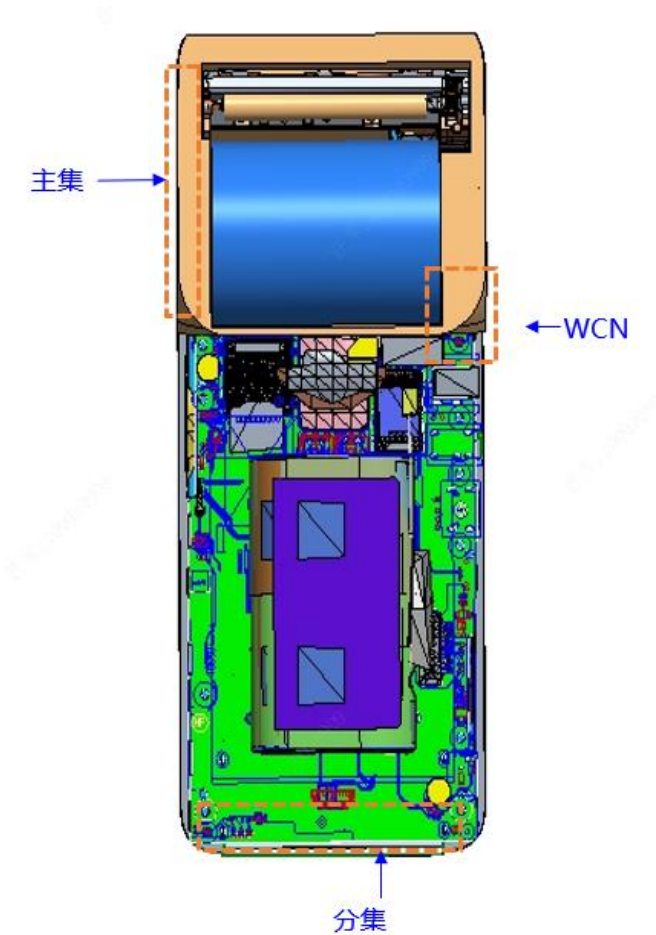


Antenna Product Specification

Entry Name	SP6987A
Frequency Channel	GSM:850/900/1800/1900 WCDMA:W I / II /IV/V/VIII FDD-LTE: B1/2/3/4/5/7/8/12/17/18/19/25/26/28/66 TDD-LTE:B38/40/41 WCN: GPS/2.4G/5G
Supplier Name	Etheta Communication Technology (Shenzhen) CO., Ltd

1. Type of Antenna: MONOPOLE

Antenna attachment type: Fixed/Internal mounted



2. Efficiency and Gain

Main Antenna - Efficiency and Gain:

BAND	Peak Gain (dBi)	Average Gain(dB)
GSM 850	-1.8	-6.5
GSM 900	-2.0	-6.7
GSM 1800	-1.1	-4
GSM 1900	-1.0	-2.6
WCDMA B1	-1.2	-1.7
WCDMA B2	-1.0	-2.7
WCDMA B4	-0.3	-2.8
WCDMA B5	-1.8	-6.5
WCDMA B8	-2.0	-6.7

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LTE B1	-1.2	-1.8
LTE B2	-1.0	-2.6
LTE B3	-1.1	-4
LTE B4	-0.3	-2.8
LTE B5	-1.8	-6.5
LTE B7	-1.6	-4.3
LTE B8	-2.0	-6.7
LTE B12	-1.1	-5.9
LTE B17	-1.1	-5.7
LTE B18	-1.6	-6.4
LTE B19	-1.8	-6.5
LTE B20	-1.0	-6.1
LTE B25	-1.0	-2.7
LTE B26	-1.8	-6.4
LTE B28	-1.1	-5.7
LTE B38	-1.4	-4.3
LTE B40	-0.4	-3
LTE B41	-0.6	-4.3
LTE B66	-0.3	-2.7

Internal Antenna Product Specification

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WCN - Efficiency and Gain

Freq (MHz)	Peak Gain(dBi)	Average Gain(dB)
2400~2483.5MHz	-1.1	-4.4
5150~5250MHz	-1.6	-4.5
5250~5350MHz	-1.8	-4.8
5470~5725MHz	-1.6	-5.4
5725~5850MHz	-3.1	-5.2
15750MHz	-0.6	-5

Sub Antenna - Efficiency and Gain:

BAND	Peak Gain(dBi)	Average Gain(dB)
GSM 850	-1.8	-6.5
GSM 900	-2.5	-6.5
GSM 1800	0.0	-4.7
GSM 1900	-0.2	-4.8
WCDMA B1	-1.2	-6
WCDMA B2	-0.2	-4.8
WCDMA B4	-1.3	-6.2
WCDMA B5	-1.8	-6.5
WCDMA B8	-2.5	-6.5

Internal Antenna Product Specification

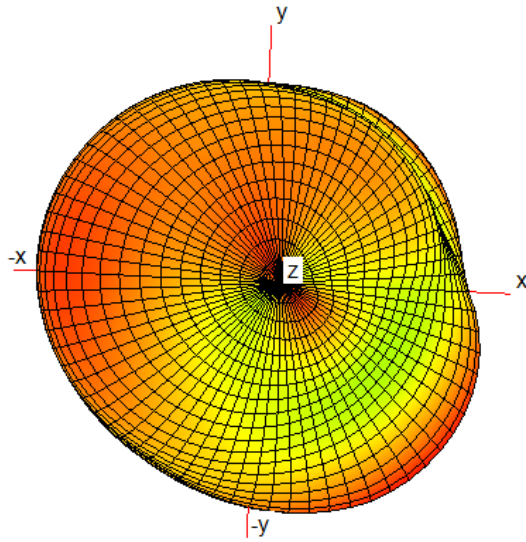
Rev:1.0

LTE B1	-2.3	-7.5
LTE B2	1.6	-3.2
LTE B3	-1.1	-5.5
LTE B4	-2.4	-7.5
LTE B5	-1.8	-6.5
LTE B7	-2.1	-7.8
LTE B8	-2.5	-6.5
LTE B12	-2.6	-7.6
LTE B17	-2.7	-7.8
LTE B18	-2	-5
LTE B19	-1.9	-4.7
LTE B20	-2.4	-6.3
LTE B25	1.3	-3.4
LTE B26	-1.8	-4.9
LTE B28	-2.9	-7.8
LTE B38	-0.2	-7.4
LTE B40	-0.8	-7.7
LTE B41	-0.38	-7.3
LTE B66	-2.2	-7.6

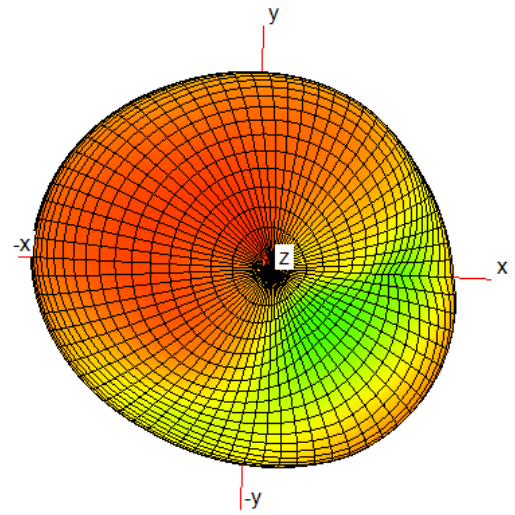
3. 3D Directional Pattern

Main Antenna:

710MHZ



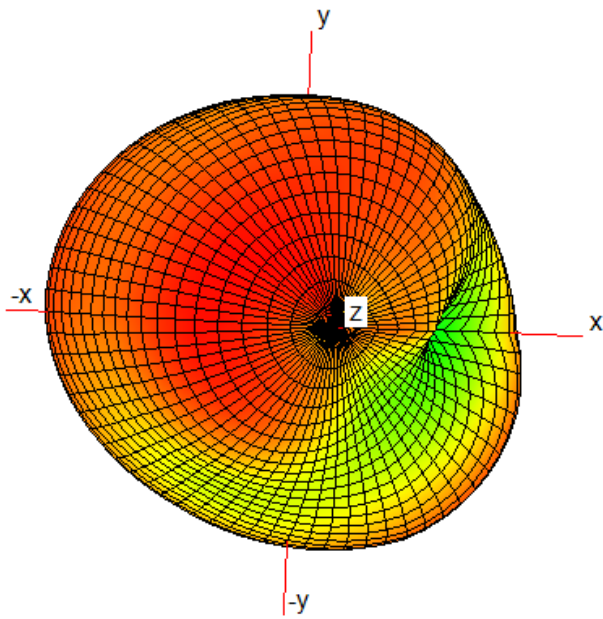
740MHZ



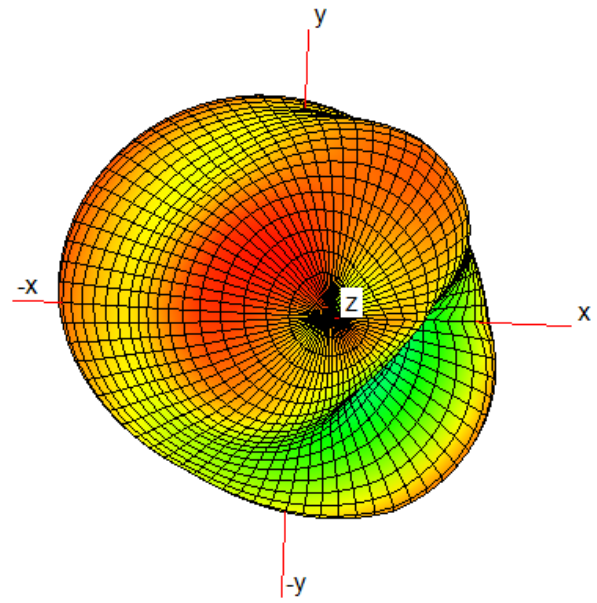
Internal Antenna Product Specification

Rev:1.0

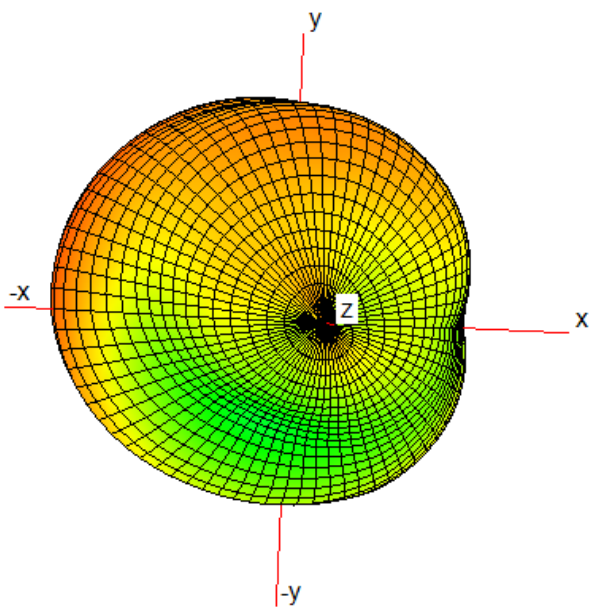
760MHZ



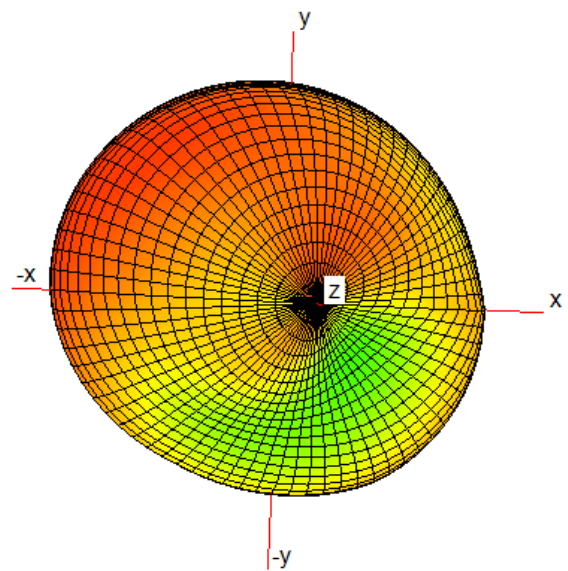
790MHZ



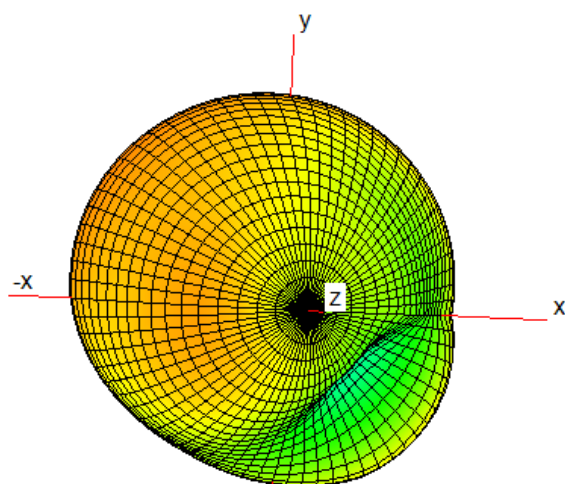
830MHZ



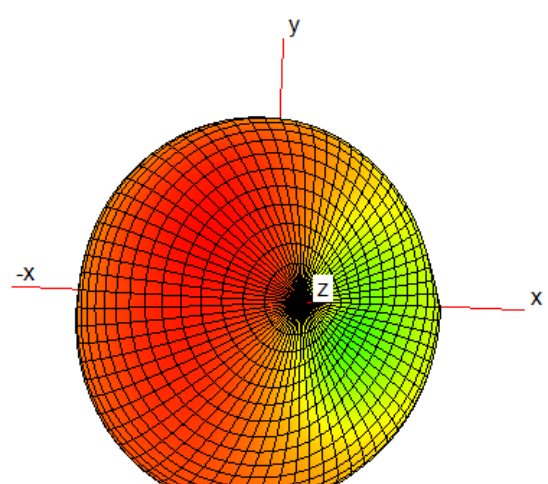
860MHZ



900MHZ



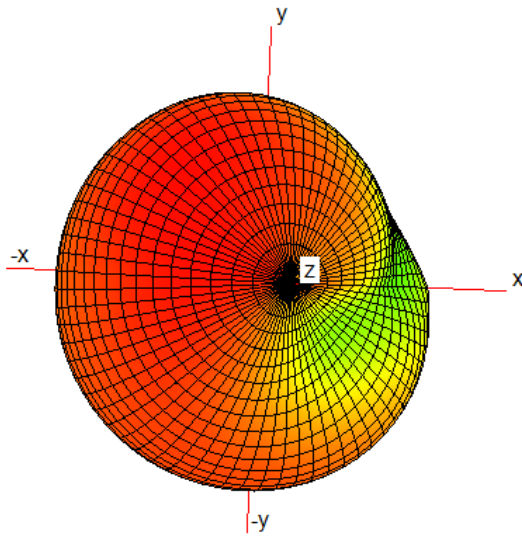
1710MHZ



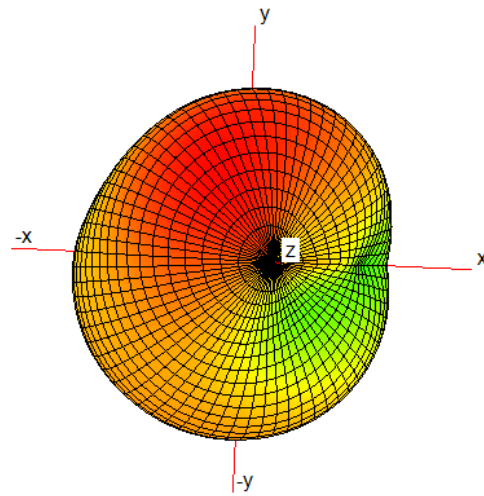
Internal Antenna Product Specification

Rev:1.0

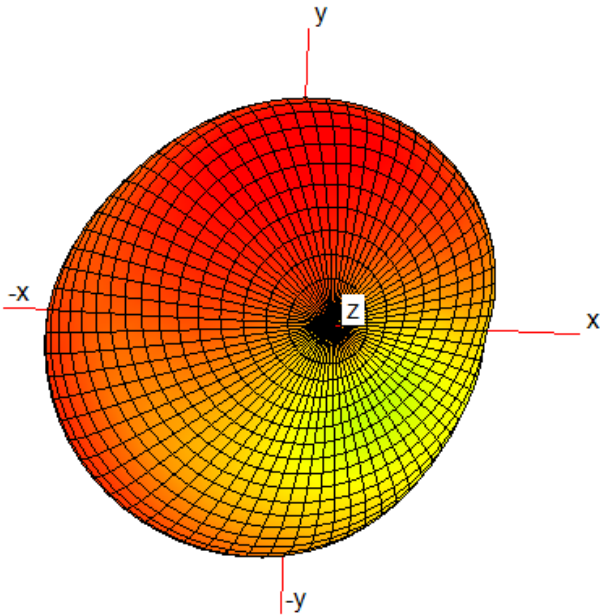
1760MHZ



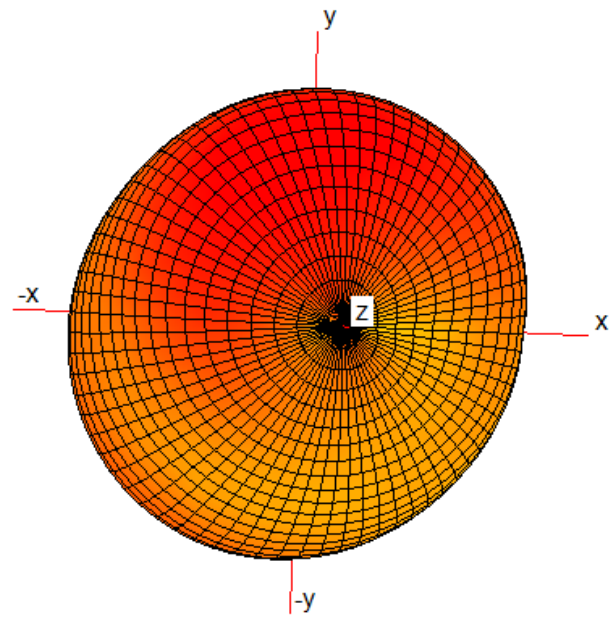
1840MHZ



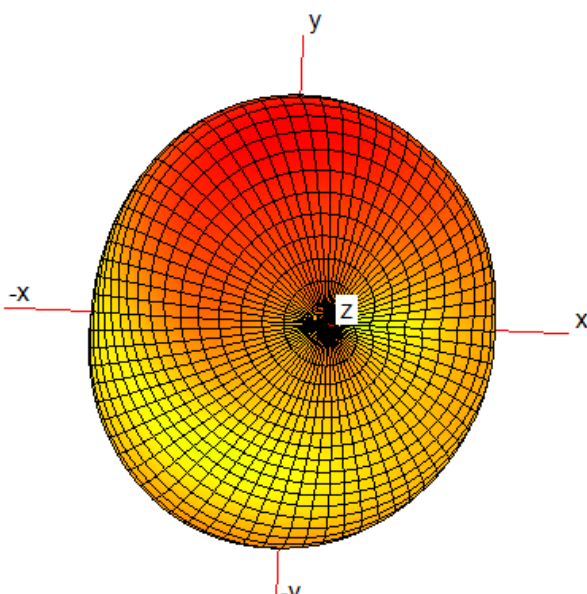
1900MHZ



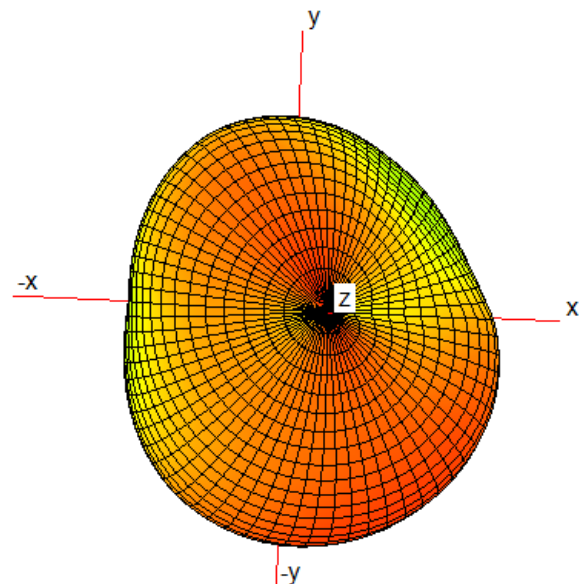
1940MHZ



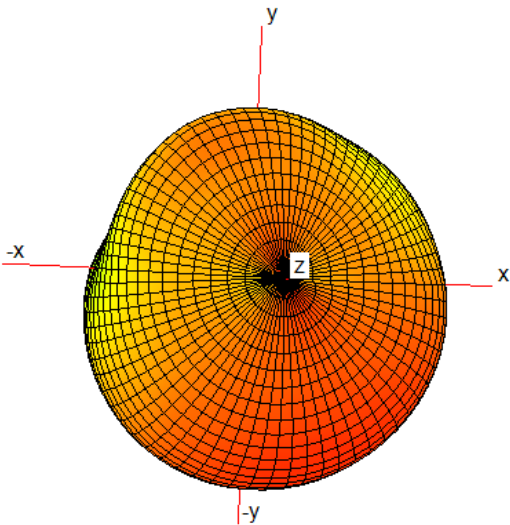
1980MHZ



2100MHZ

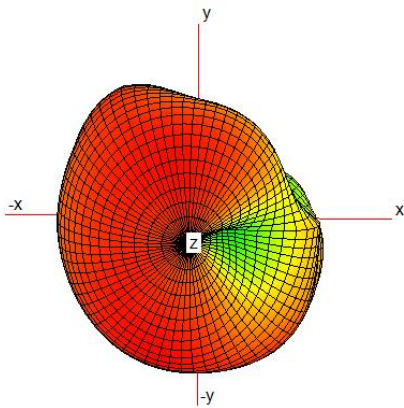


2160MHZ

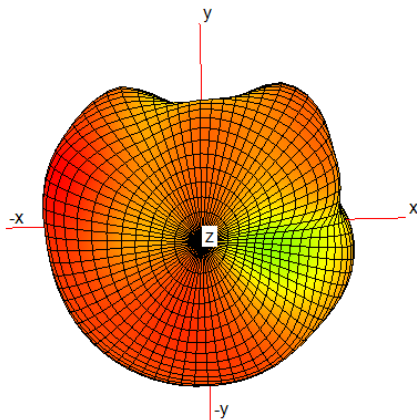


WCN :

1575MHZ



2400MHZ

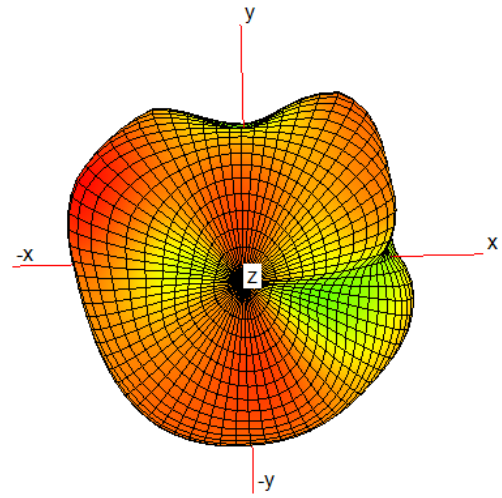
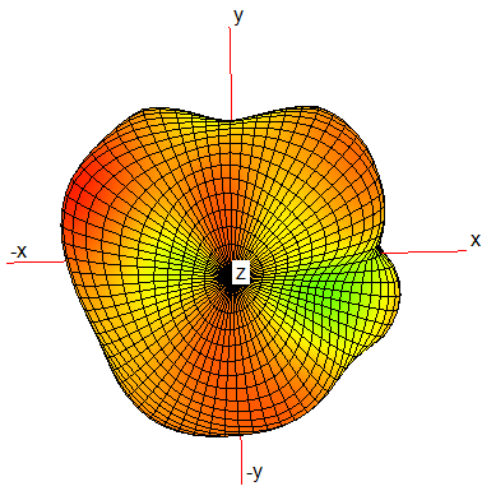


2480MHZ

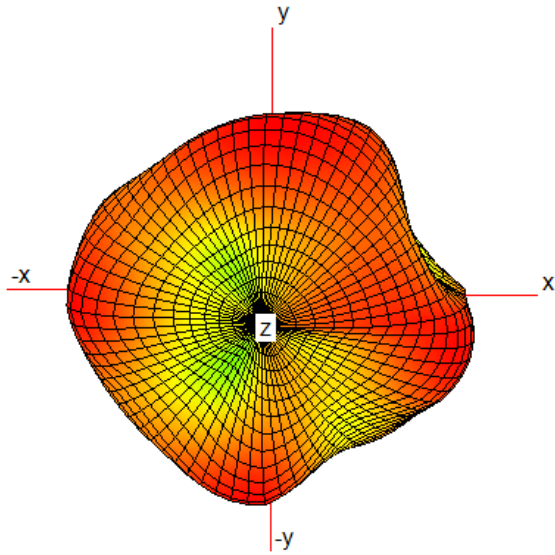
2500MHZ

Internal Antenna Product Specification

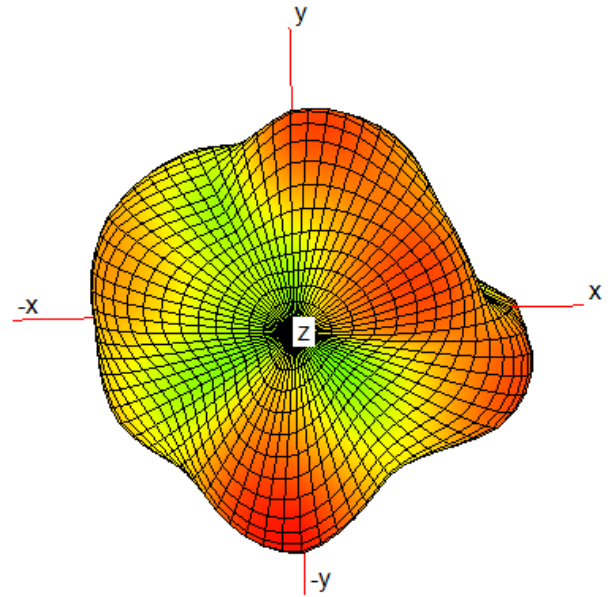
Rev:1.0



5150MHZ



5350MHZ



5850MHZ

