

PCB Antenna

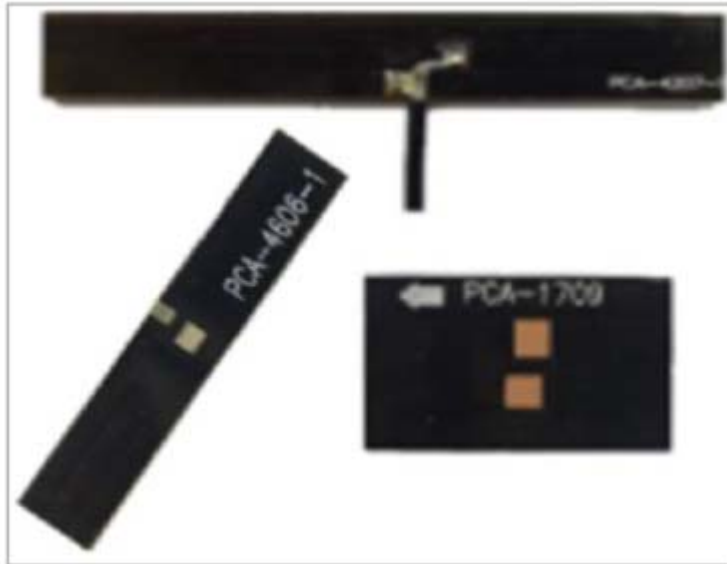
BTPA Series

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Checked: Feidi Pei		Customer:	
Version	Changed Reason	Changed by	Date
01	Original version	Chris	20191008

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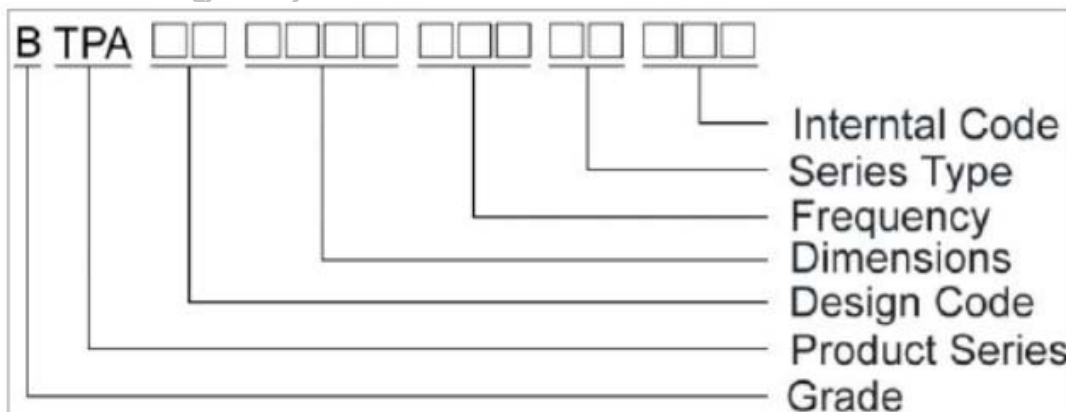
BTPA Series



Applications

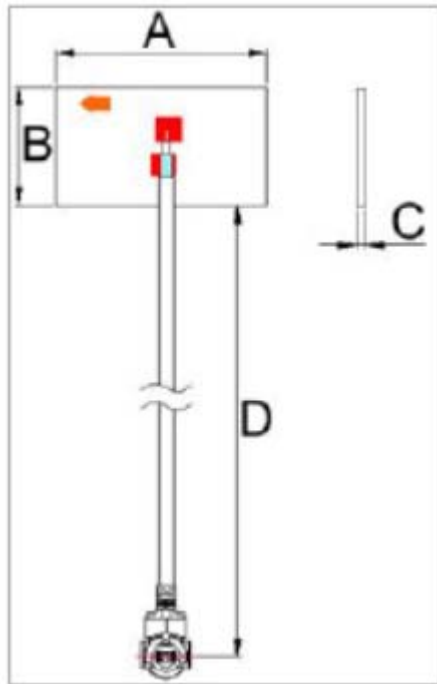
- Small size low-profile, low cost and lightweight type
- Wide bandwidth and Omni-directional
- Supported with Dip-type, SMD, and Co-axial cable connecting
- Customized

Product Identification

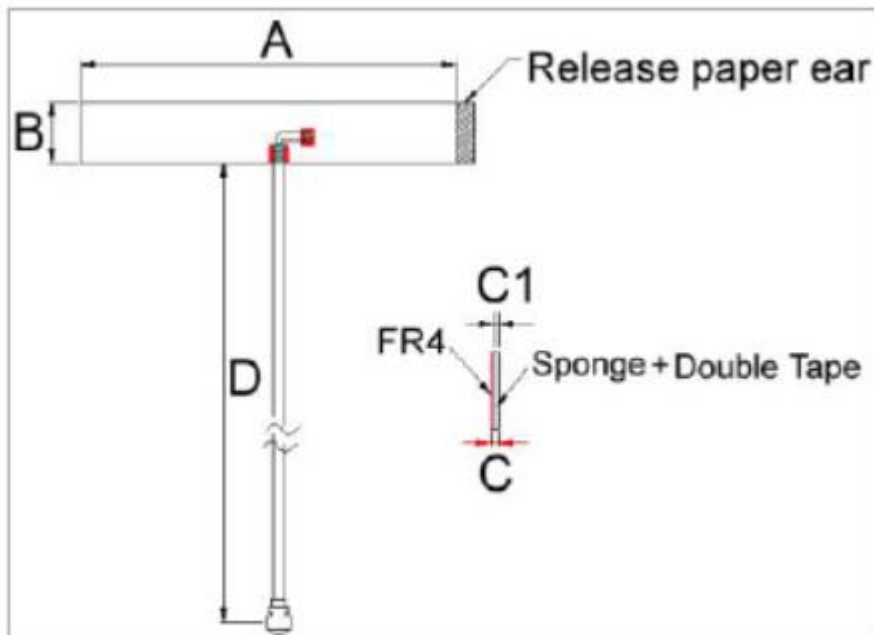


Shape and Dimensions

- Config1



- Config2

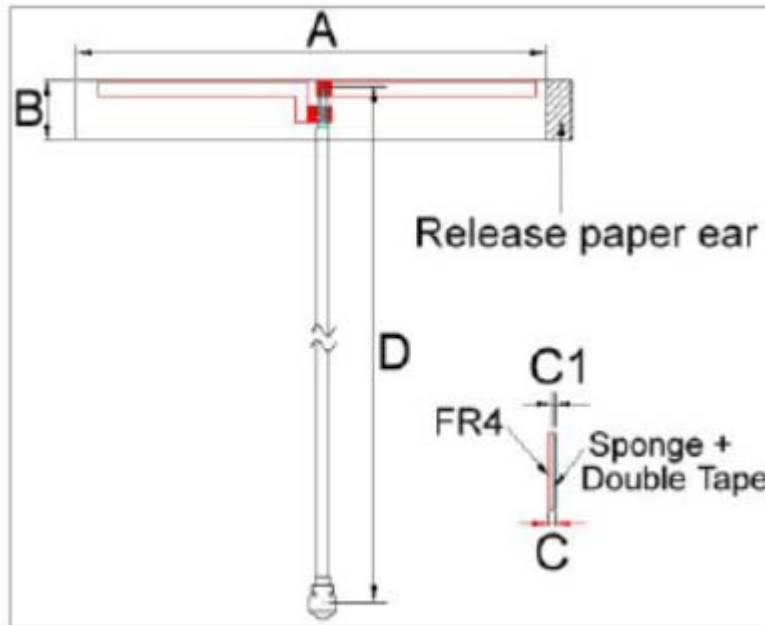


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- Config3



Dimensions in mm

TYPE	FIG	A	B	C	C1	D
BTPA0017095G0C1B19	1	17.5	9.8	0.8	NA	110±5
BTPA00420725GC1A04	2	42	6.5	1.8±0.5	1.0±0.3	150±5
BTPA0046062G4C1B03	3	46.5	6	2.1±0.5	1.3±0.3	110±3

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Electrical Characteristics

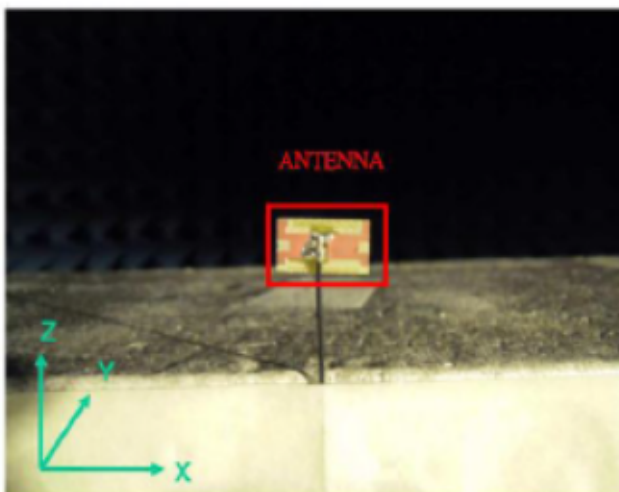
TYPE	Frequency GHz	Impedance (Ω)	ReturnLoss dB(Max)	VSWR Max	Radiation	Peak Gain (dBi)	Polarization
BTPA0017095G0C1B19	5.15~5.85	50	-10	NA	Omni	2.67	Vertical
BTPA00420725GC1A04	2.4~2.5; 5.15~5.85	50	-10	NA	Omni	2.82 3.12	Vertical
BTPA0046062G4C1B03	2.4~2.5	50	-10	2	Omni	3	Vertical

Physical Properties

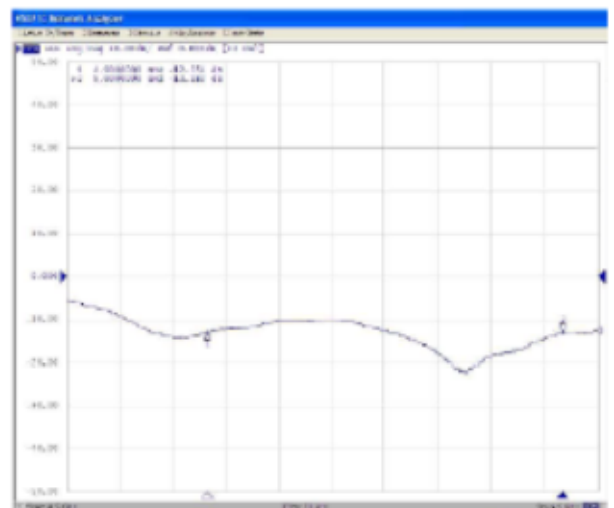
TYPE	Antenna Material	Cable	Color	Connector	Double Tape
BTPA0017095G0C1B19	FR4	RF-113	Black	IPEX Compatible	NA
BTPA00420725GC1A04	FR4	RF-113	Black	IPEX Compatible	3M 9448
BTPA0046062G4C1B03	FR4	RF-113	Gray	IPEX Compatible	3M 9448

- BTFA0024055G0C1A13

Experimental Setup



Return Loss S11

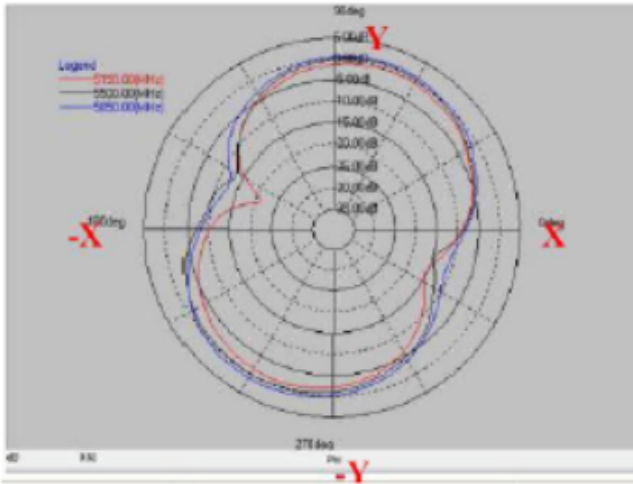


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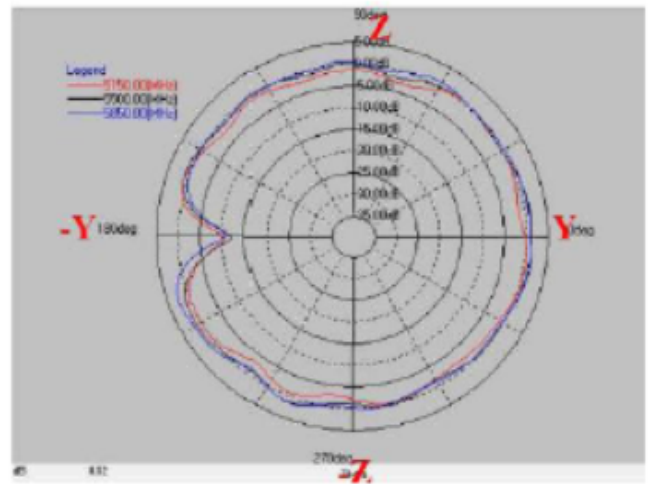
<https://www.psgtek.com>

Frequency(MHz): 5150~5850. Pattern Field : X-Y plane



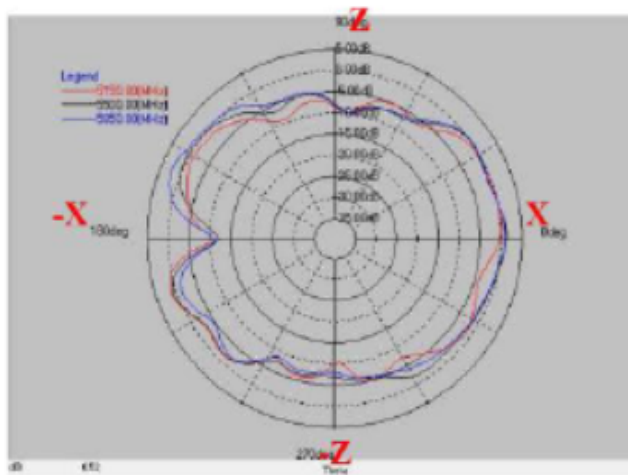
Layer	Max value	Min value	Average
5150(MHz)	-0.57 dB	-21.11 dB	-4.18 dB
5500(MHz)	0.57 Db	-14.73 dB	-2.89 dB
5850(MHz)	1.05 dB	-12.68 dB	-2.18 dB

Frequency(MHz): 5150~5850. Pattern Field : Y-Z plane



Layer	Max value	Min value	Average
5150(MHz)	0.87 dB	-10.45 dB	-1.27 dB
5500(MHz)	1.33 dB	-12.56 dB	-0.30 dB
5850(MHz)	2.67 dB	-11.11 dB	0.01 dB

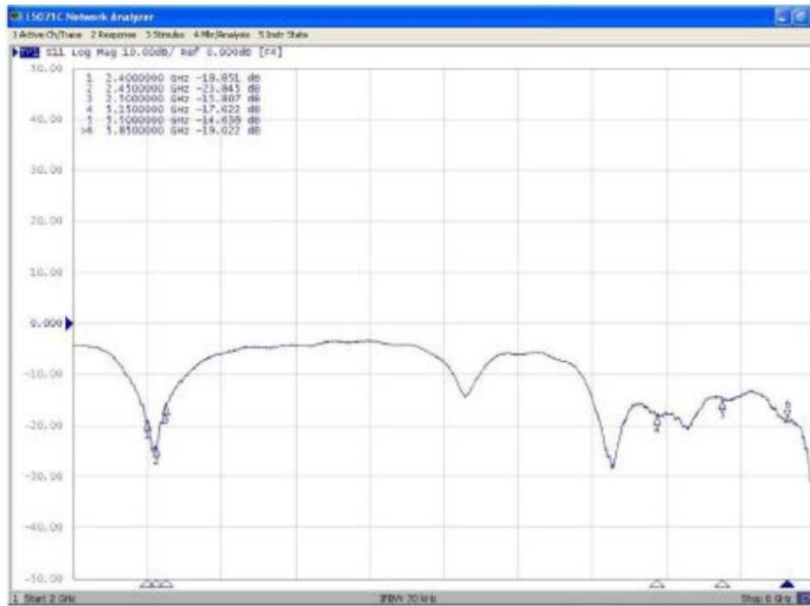
Frequency(MHz): 5150~5850. Pattern Field : X-Z plane



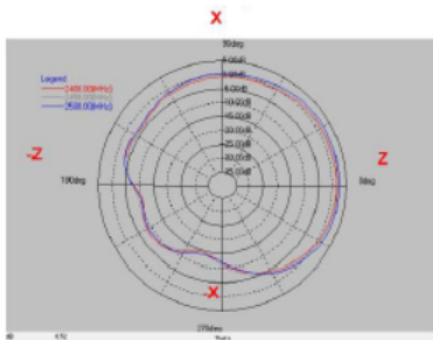
Layer	Max value	Min value	Average
5150(MHz)	1.30 dB	-10.45 dB	-3.31 dB
5500(MHz)	1.25 dB	-12.56 dB	-2.53 dB
5850(MHz)	2.25 dB	-11.19 dB	-2.43 dB



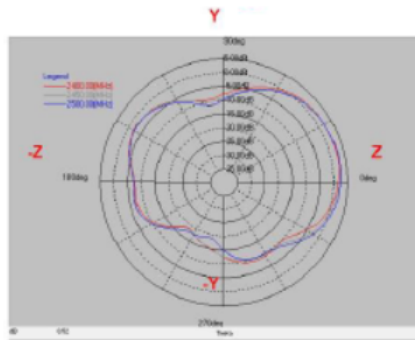
- BTPA00420725GC1A04



Frequency(MHz) : 2400~2500. Pattern Field : Z-X plane Frequency(MHz) : 2400~2500. Pattern Field : Z-Y plane



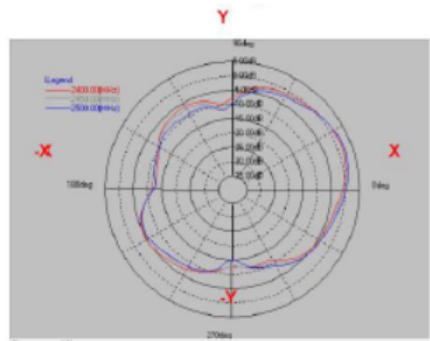
Layer	Max value	Min value	Average
2400(MHz)	1.66 dB	-14.74 dB	-2.07 dB
2450(MHz)	2.26 dB	-14.76 dB	-1.53 dB
2500(MHz)	2.58 dB	-14.02 dB	-1.02 dB



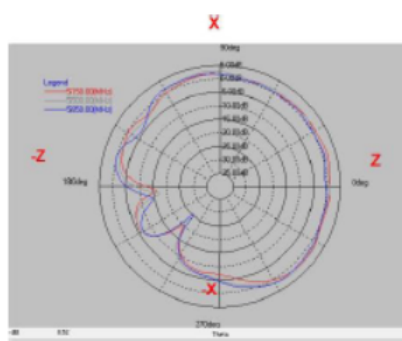
Layer	Max value	Min value	Average
2400(MHz)	2.42 dB	-18.93 dB	-3.22 dB
2450(MHz)	2.73 dB	-18.60 dB	-3.11 dB
2500(MHz)	2.82 dB	-19.18 dB	-3.03 dB

Frequency(MHz) : 2400~2500. Pattern Field : X-Y plane

Frequency(MHz) : 5150~5850. Pattern Field : Z-X plane



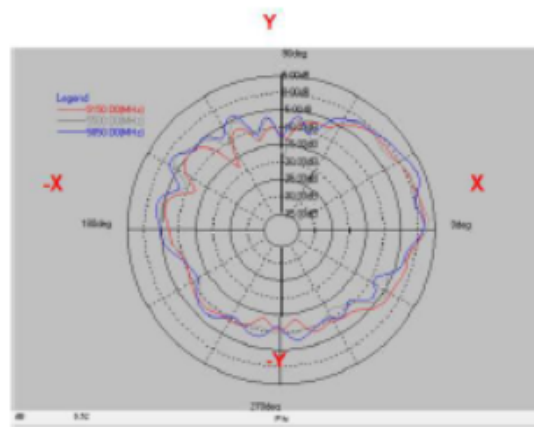
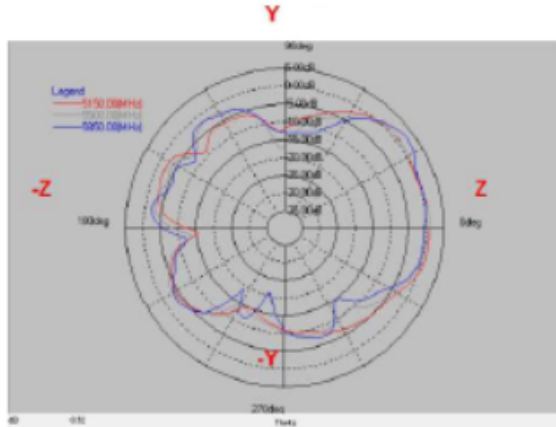
Layer	Max value	Min value	Average
2400(MHz)	1.64 dB	-12.87 dB	-4.24 dB
2450(MHz)	2.07 dB	-21.91 dB	-4.24 dB
2500(MHz)	2.28 dB	-15.30 dB	-4.22 dB



Layer	Max value	Min value	Average
5150(MHz)	1.95 dB	-19.79 dB	-0.87 dB
5500(MHz)	2.82 dB	-22.02 dB	-0.54 dB
5850(MHz)	1.93 dB	-25.20 dB	-0.86 dB

Frequency(MHz) : 5150~5850. Pattern Field: Z-Y plane

Frequency(MHz) : 5150~5850. Pattern Field: X-Y plane

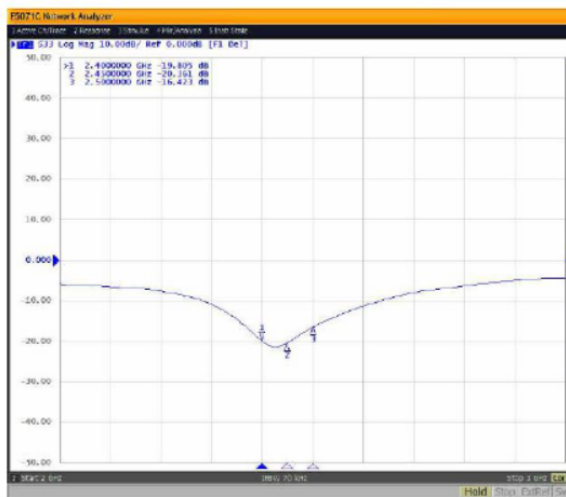


Layer	Max value	Min value	Average
5150(MHz)	1.17 dB	-15.67 dB	-3.69 dB
5500(MHz)	1.07 dB	-17.54 dB	-3.84 dB
5850(MHz)	2.86 dB	-21.22 dB	-3.87 dB

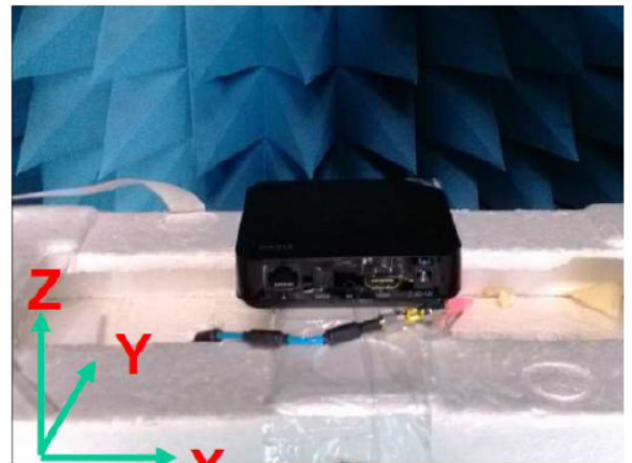
Layer	Max value	Min value	Average
5150(MHz)	1.84 dB	-18.20 dB	-4.72 dB
5500(MHz)	3.11 dB	-19.19 dB	-4.54 dB
5850(MHz)	3.12 dB	-13.07 dB	-3.99 dB

- BTPA0046062G4C1B03

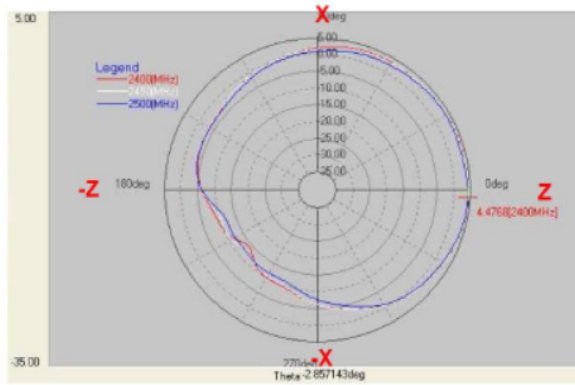
Return Loss



Experimental Setup

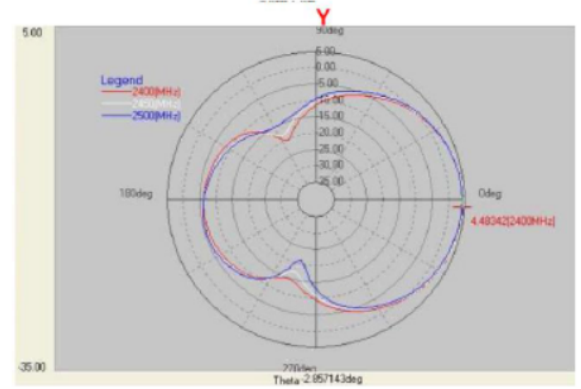


Frequency(MHz) : 2400~2500. Pattern Field : X-Z plane



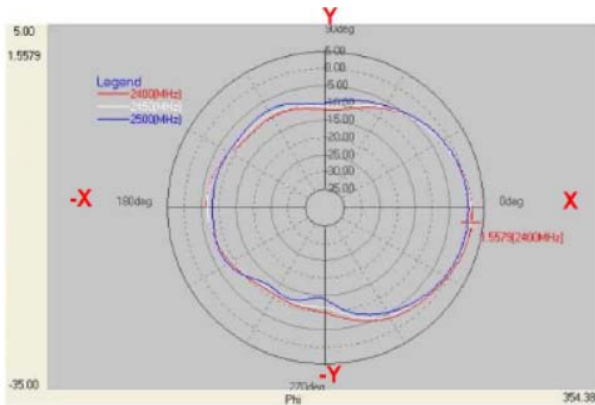
Layer	Max value	Average
2400(MHz)	4.48 dB	0.47 dB
2450(MHz)	4.61 dB	0.47 dB
2500(MHz)	4.35 dB	0.03 dB

Frequency(MHz) : 2400~2500. Pattern Field : Y-Z plane



Layer	Max value	Average
2400(MHz)	4.48 dB	-1.74 dB
2450(MHz)	4.58 dB	-1.71 dB
2500(MHz)	4.28 dB	-1.89 dB

Frequency(MHz) : 2400~2500. Pattern Field : X-Y plane



Layer	Max value	Average
2400(MHz)	1.56 dB	-4.52 dB
2450(MHz)	1.33 dB	-4.76 dB
2500(MHz)	0.58 dB	-4.93 dB

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