



Ralink's Printed PIFA Antenna Report for USB 2.4GHz ISM Band Working Frequency

**Editor: Brand
Data: 05/09/2007**

- The Construction of New –Type PIFA Antenna on Ralink’s USB Board

Ant A

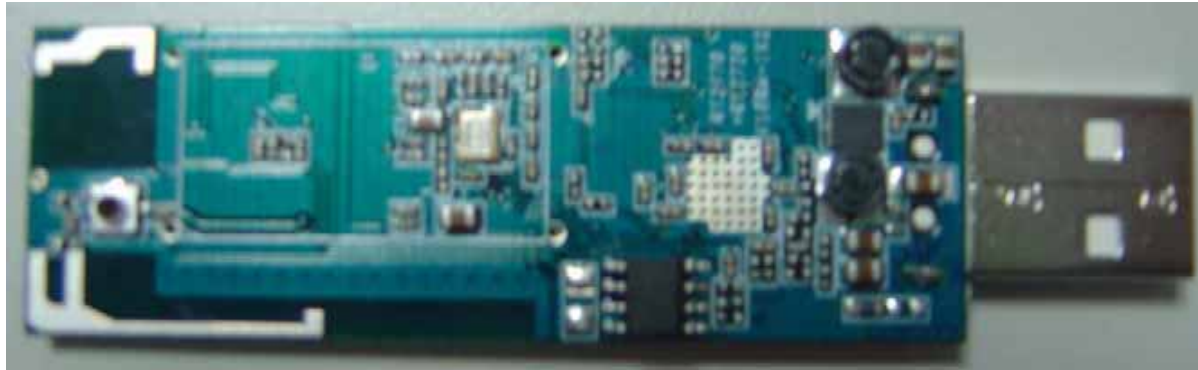
(TOP View)



• The Construction of New –Type PIFA Antenna on Ralink’s USB Board

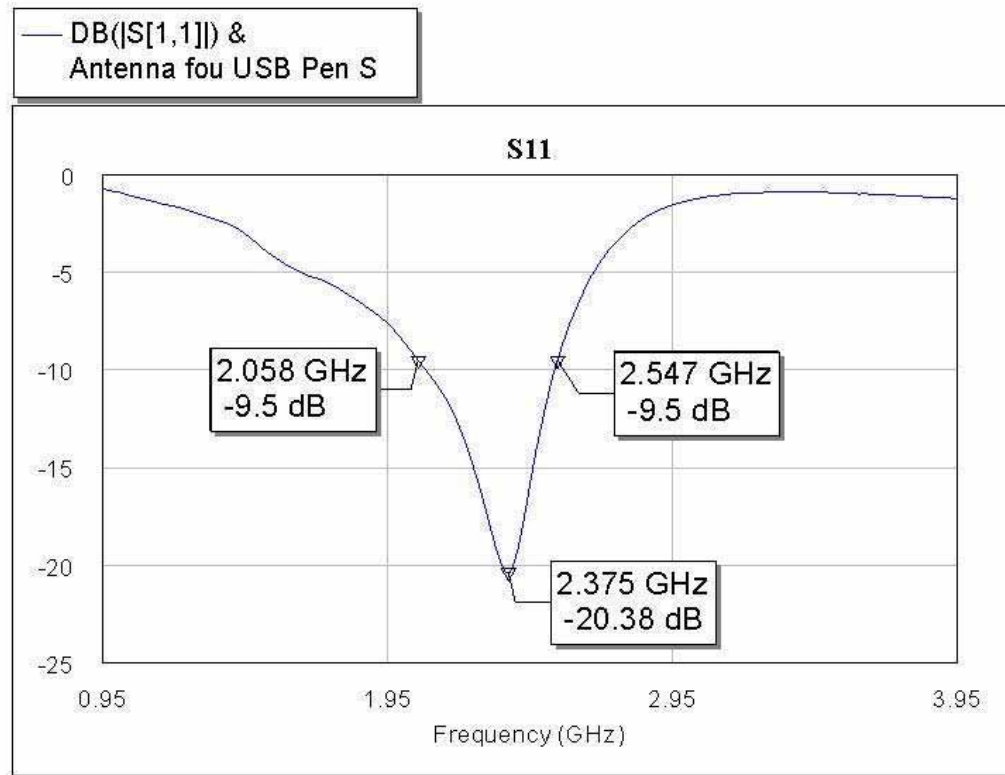
(Bottom View)

Ant B



• New-Type PIFA Antenna S11 on Ralink's USB Board

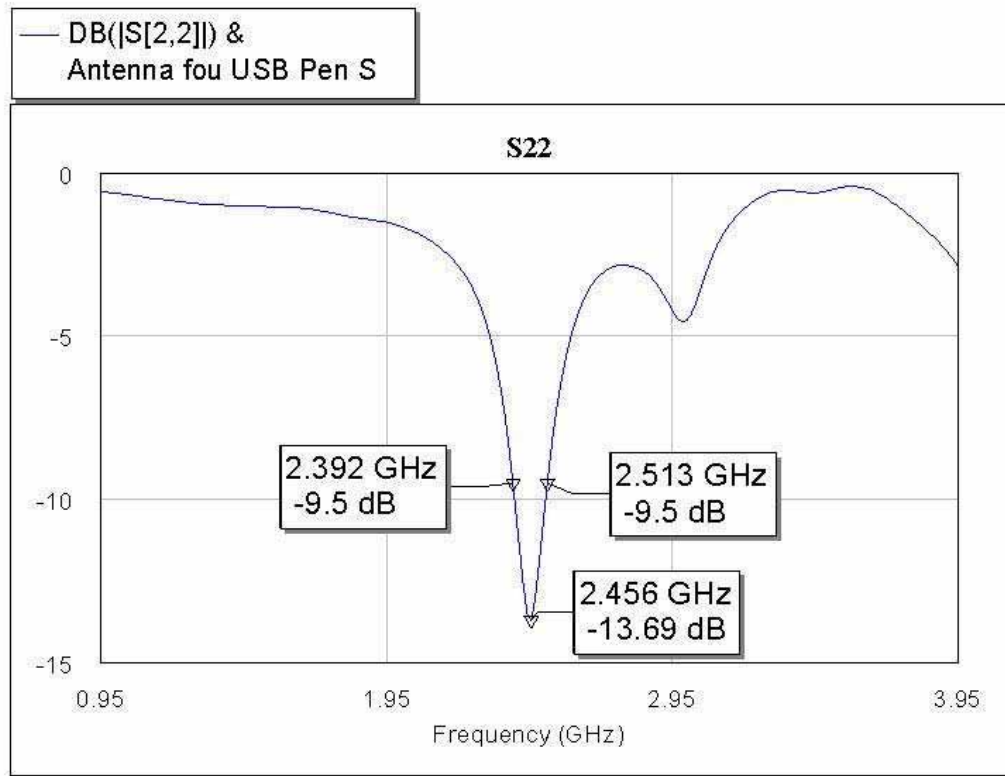
Ant A



	F1	F2	BW
1	2.058	2.547	21.24%

• New-Type PIFA Antenna S22 on Ralink's USB Board

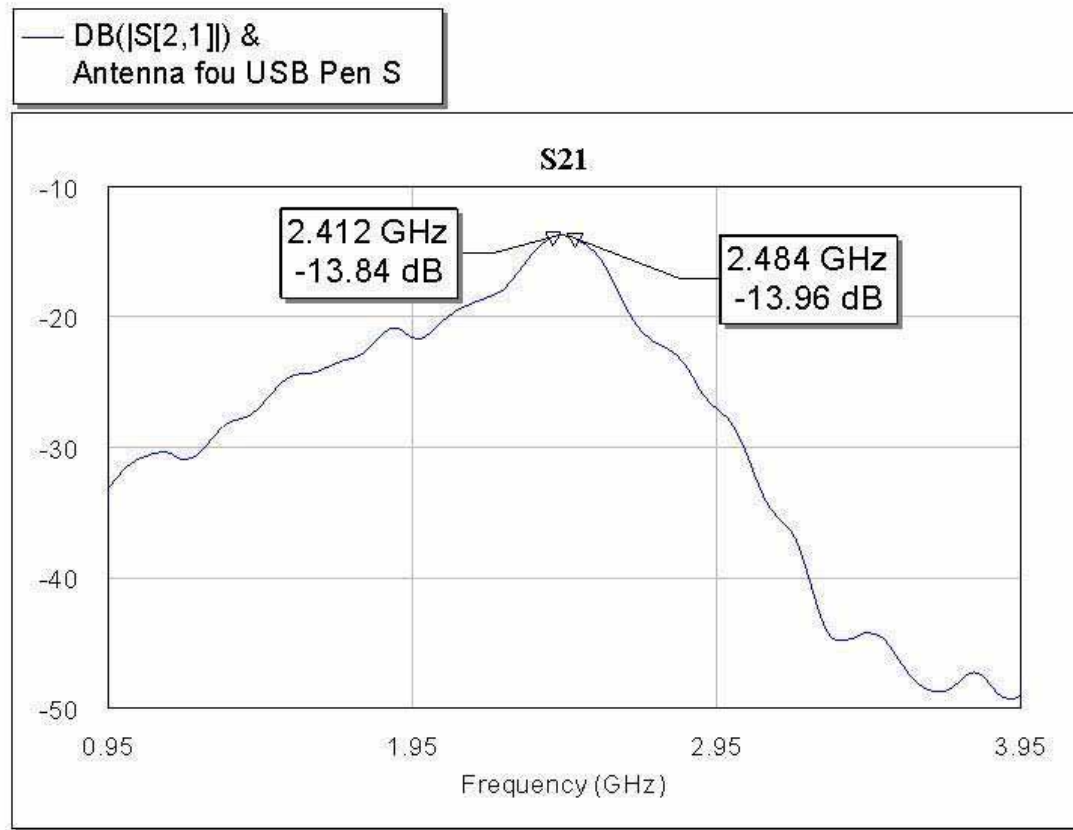
Ant B



	F1	F2	BW
1	2.392	2.513	4.93%

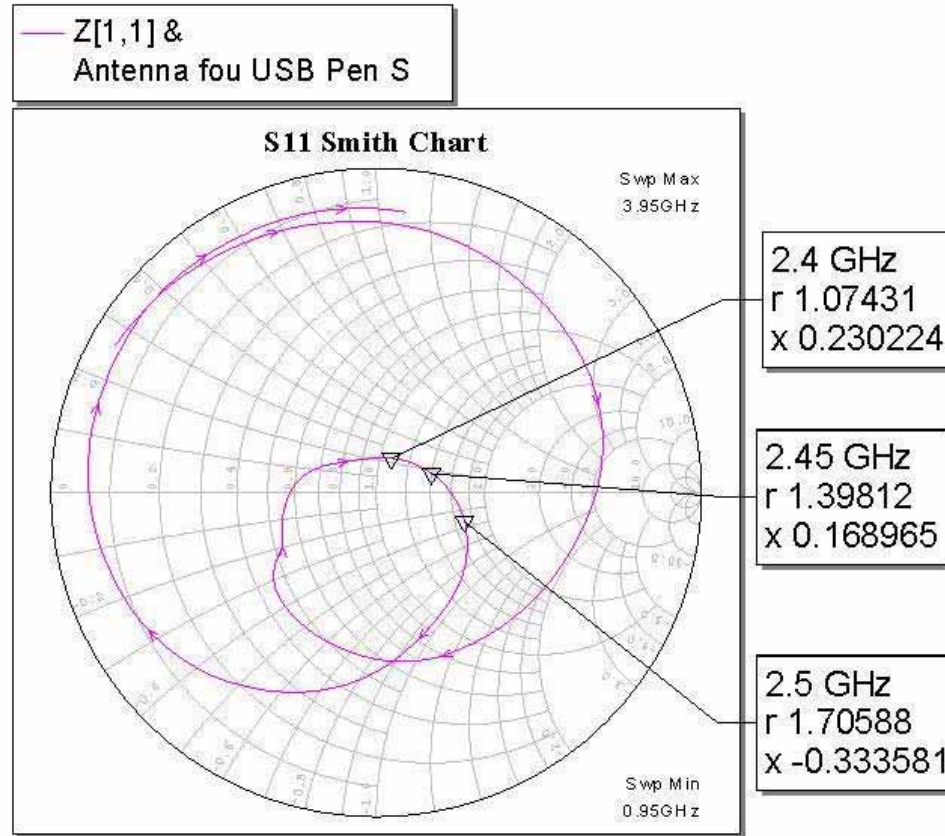
• New-Type PIFA Antenna S21 on Ralink's USB Board

Ant B→A



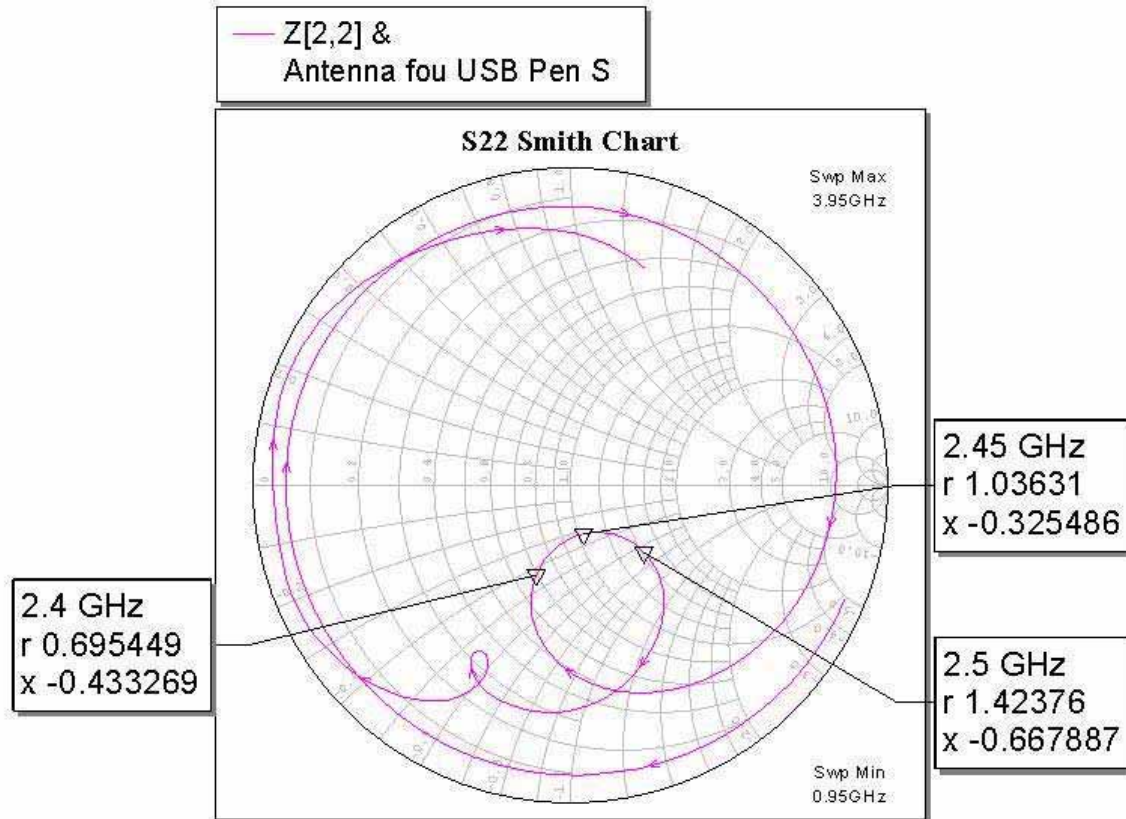
• New-Type PIFA Antenna S11 Smith Chart on Ralink's USB Board

Ant A

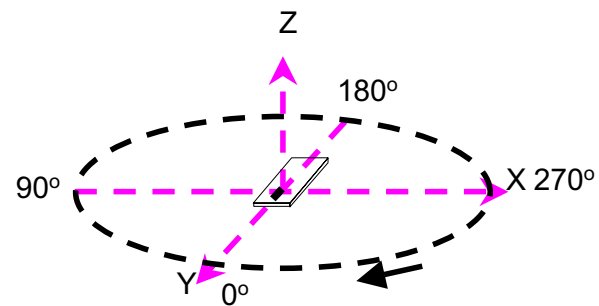


• New-Type PIFA Antenna S22 Smith Chart on Ralink's USB Board

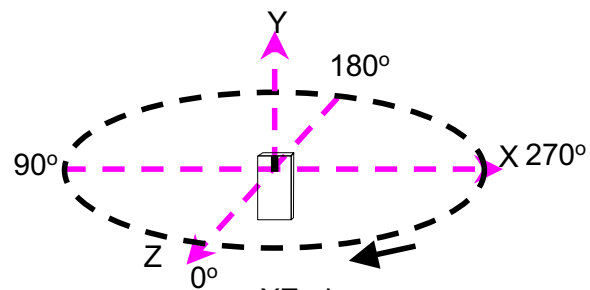
Ant B



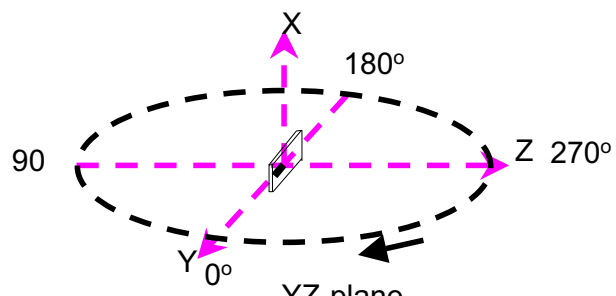
• New-Type PIFA Antenna Scanning Direction



XY-plane scanning direction



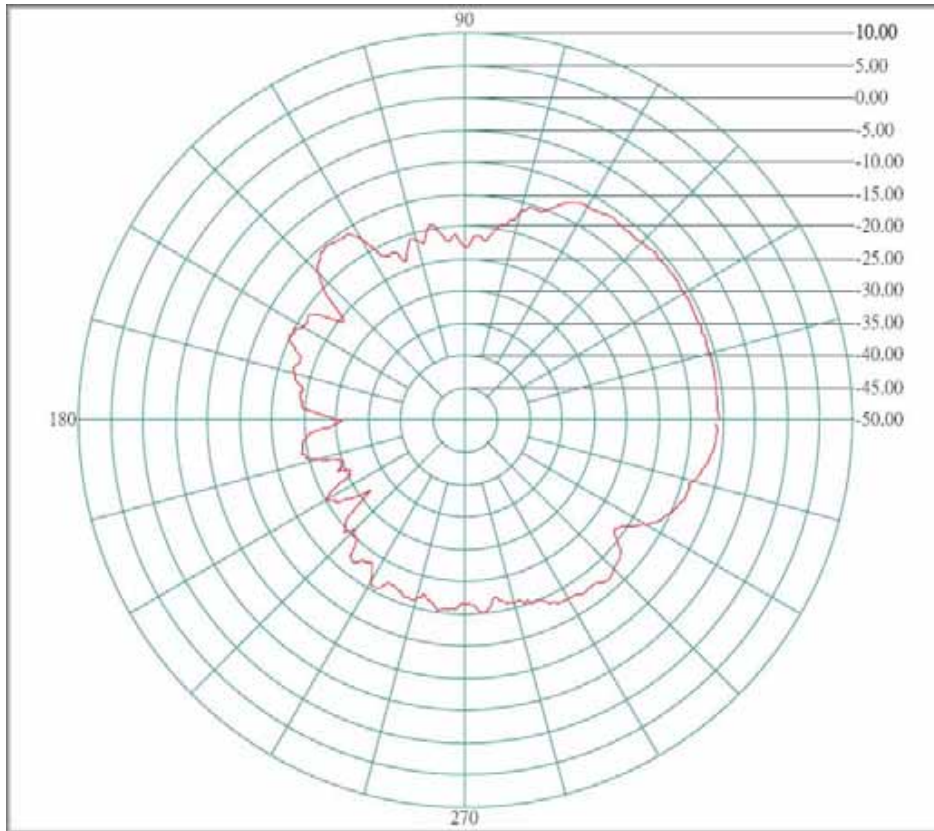
XZ-plane scanning direction



YZ-plane scanning direction

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

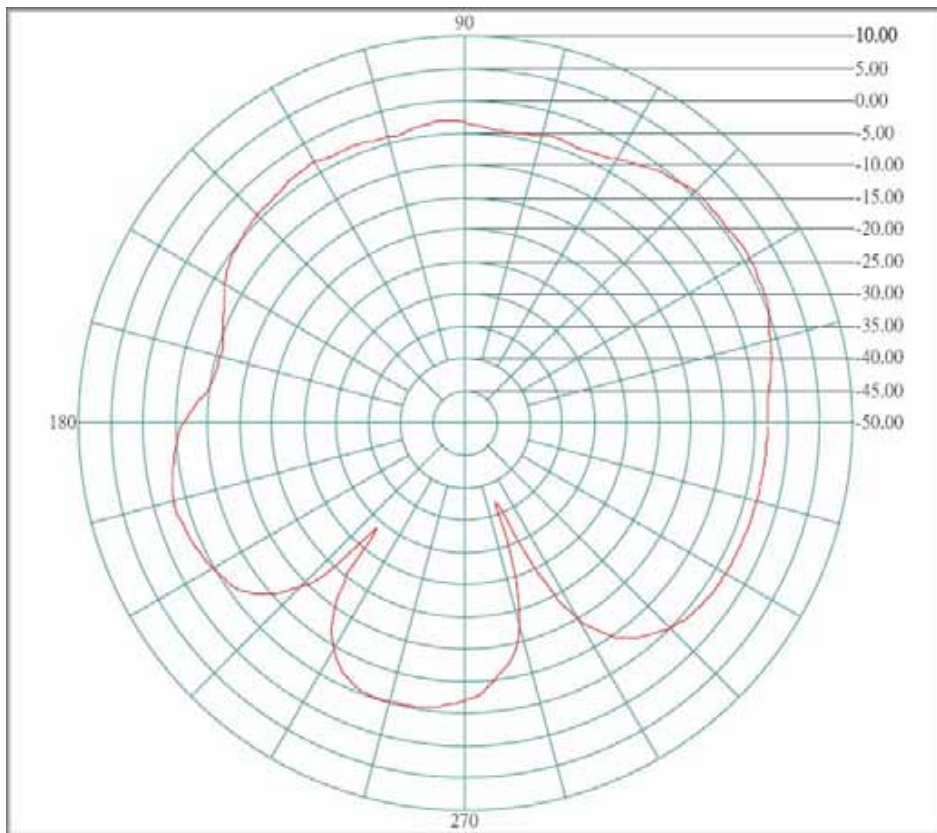
1. XY- Plane Ant A.



	Peak (dBi)	Average (dBi)
Vertical	-10.53	-15.84

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

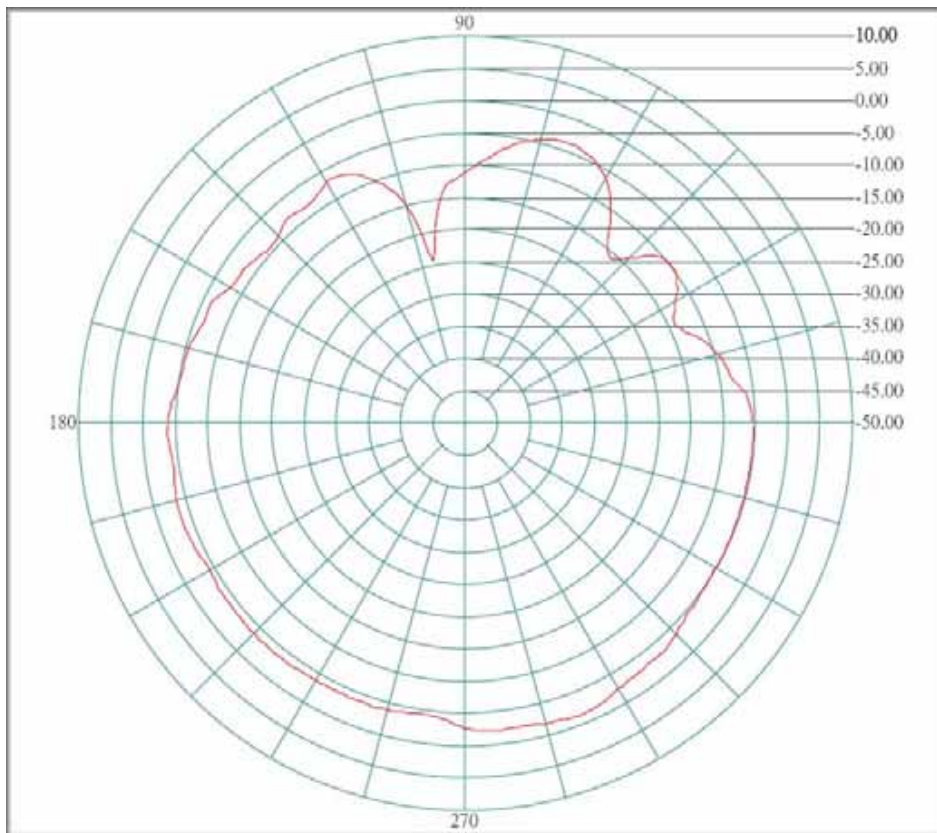
2. XY- Plane Ant A.



	Peak (dBi)	Average (dBi)
Horizontal	1.11	-3.95

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

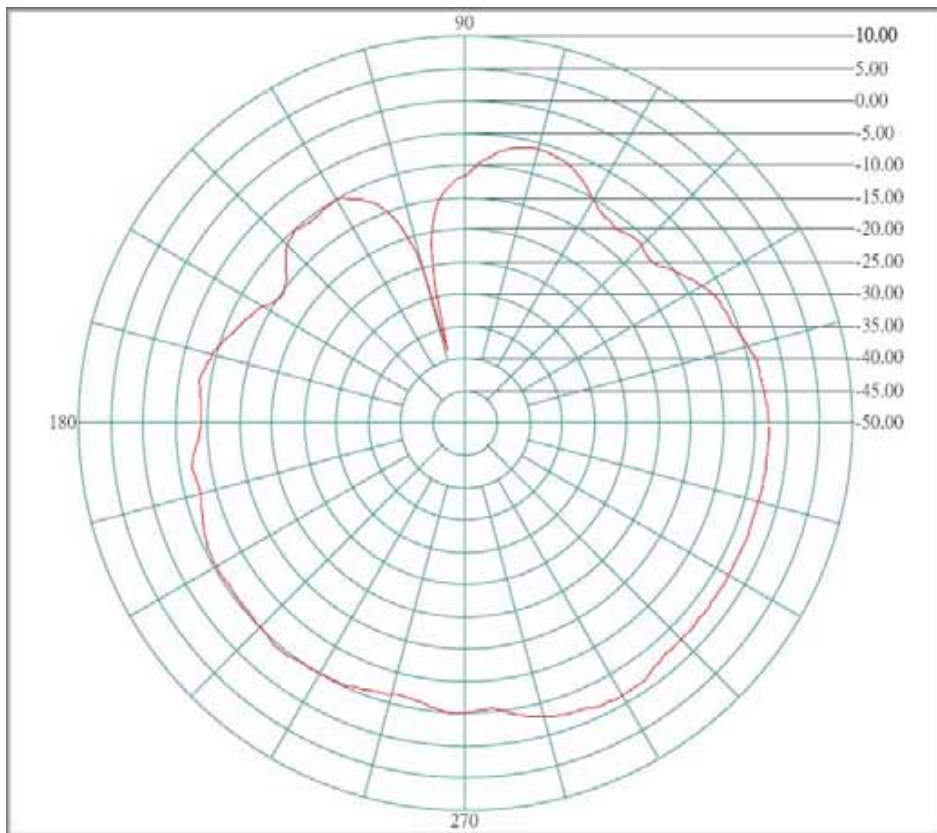
3. XY- Plane Ant B.



	Peak (dBi)	Average (dBi)
Vertical	-1.16	-5.14

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

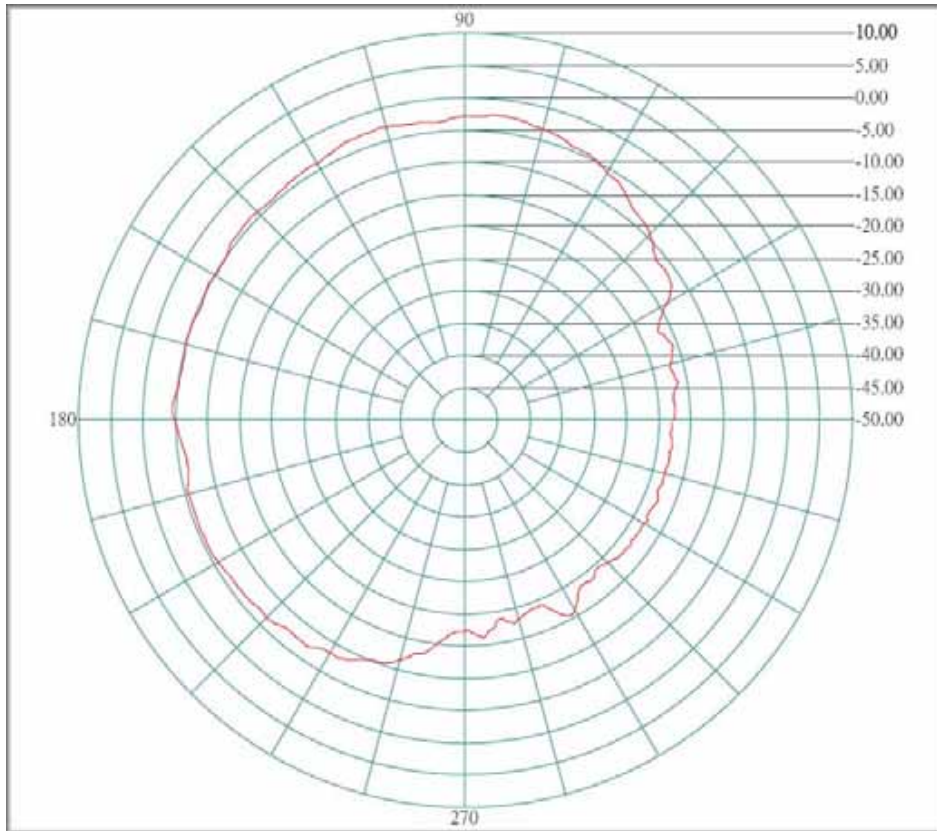
4. XY- Plane Ant B.



	Peak (dBi)	Average (dBi)
Horizontal	-1.00	-5.60

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

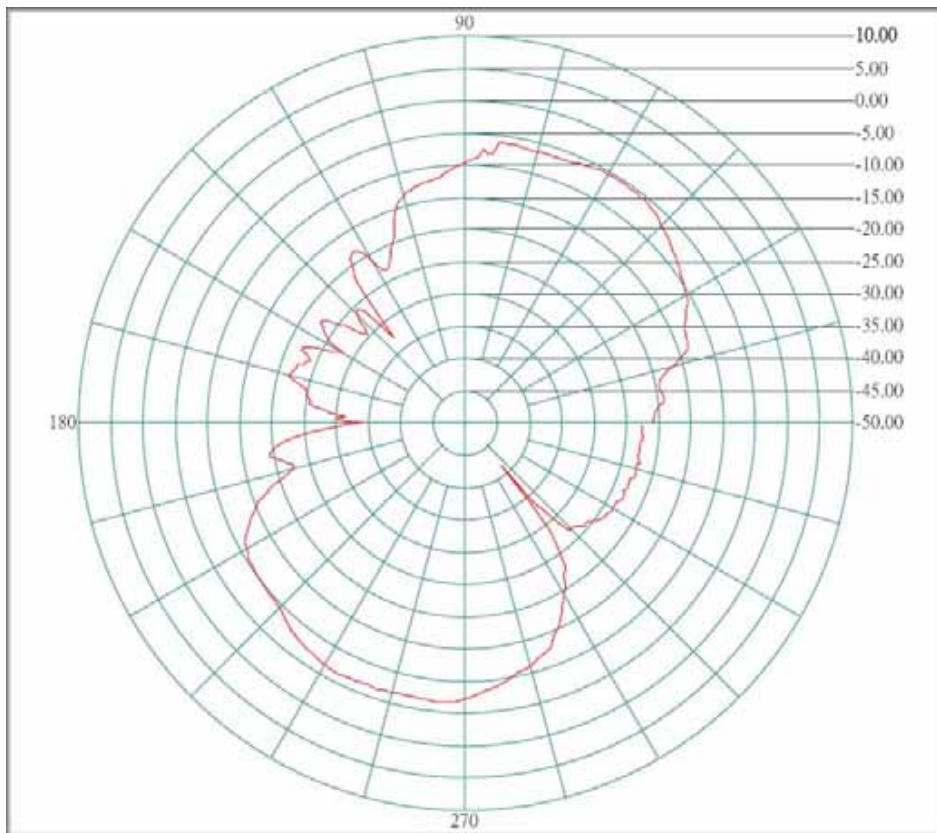
5. XZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Vertical	-2.48	-7.10

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

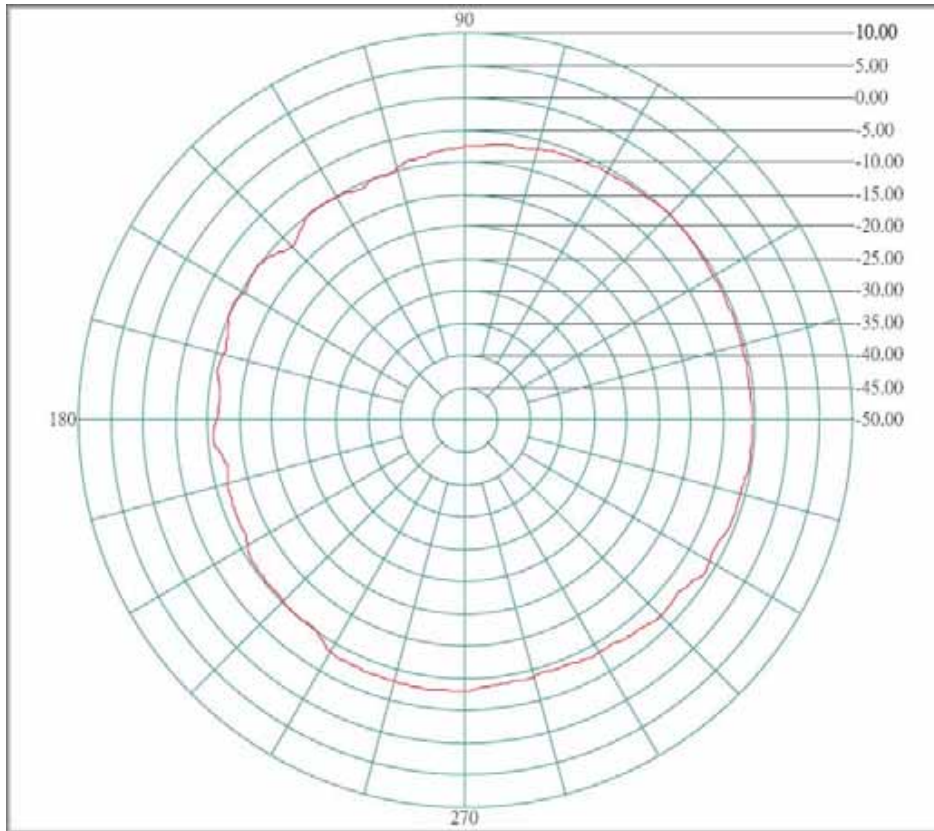
6. XZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Horizontal	-5.33	-10.84

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

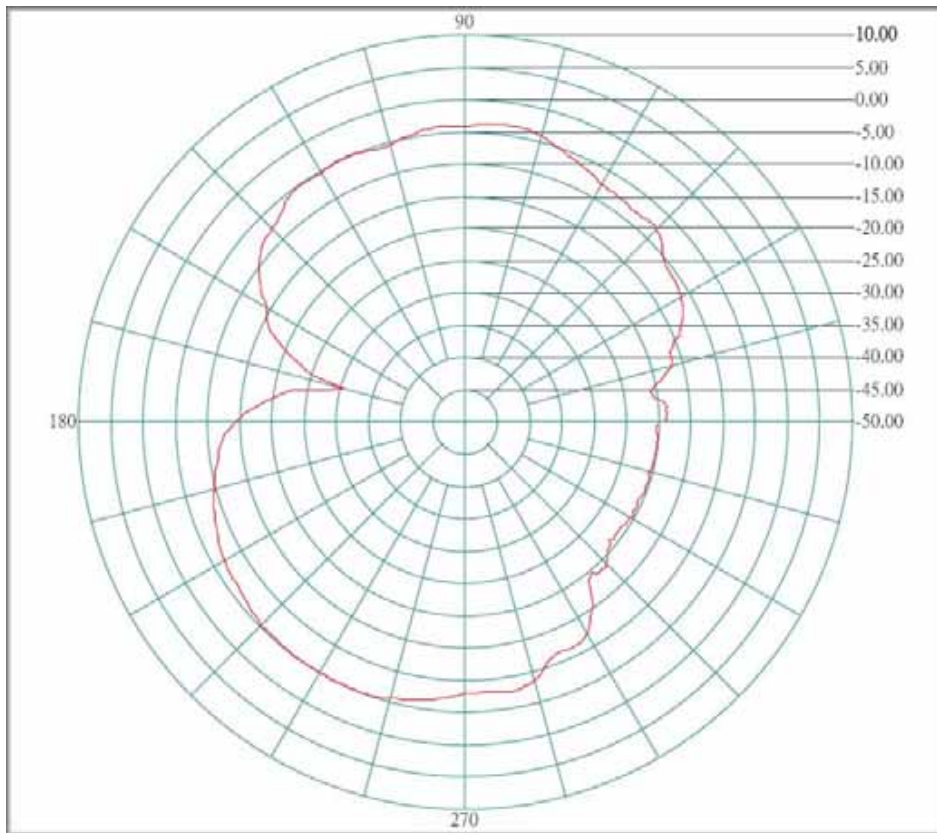
7. XZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Vertical	-4.97	-7.69

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

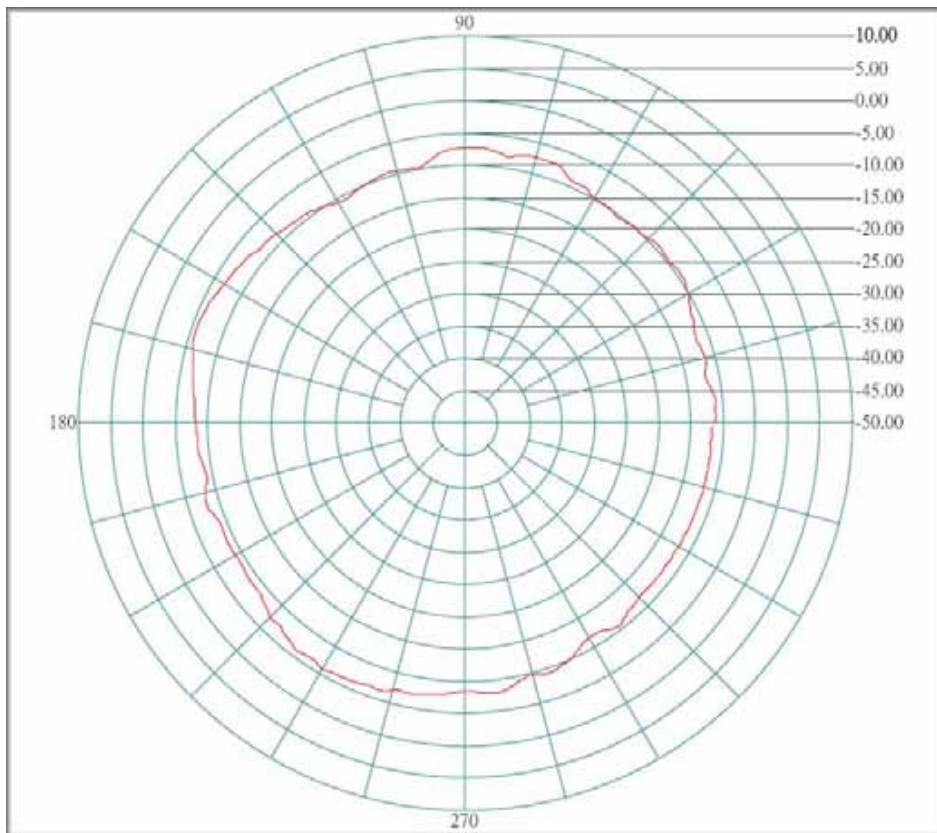
8. XZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Horizontal	-3.47	-8.12

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

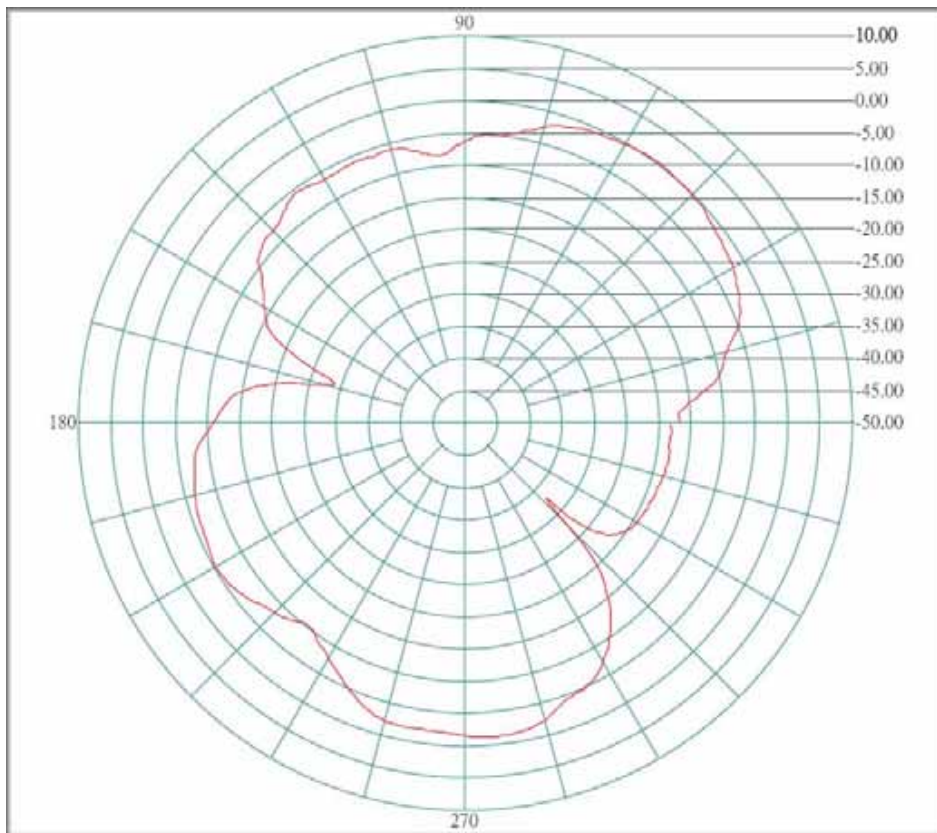
9. YZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Vertical	-5.82	-8.70

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

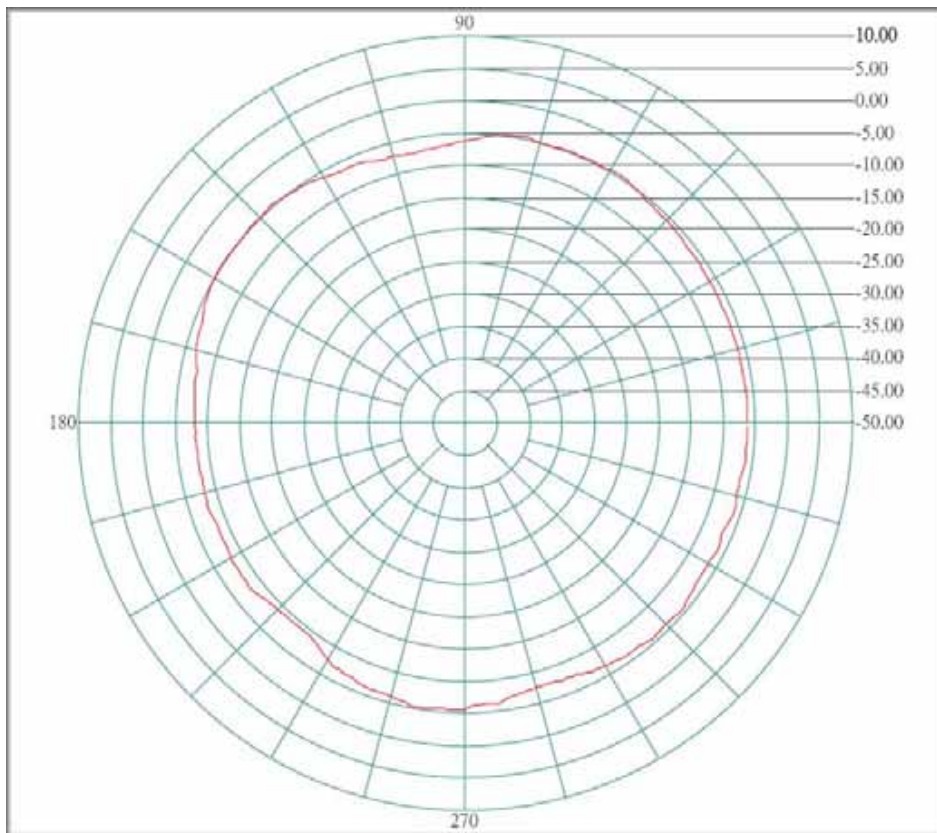
10. YZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Horizontal	0.36	-5.14

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

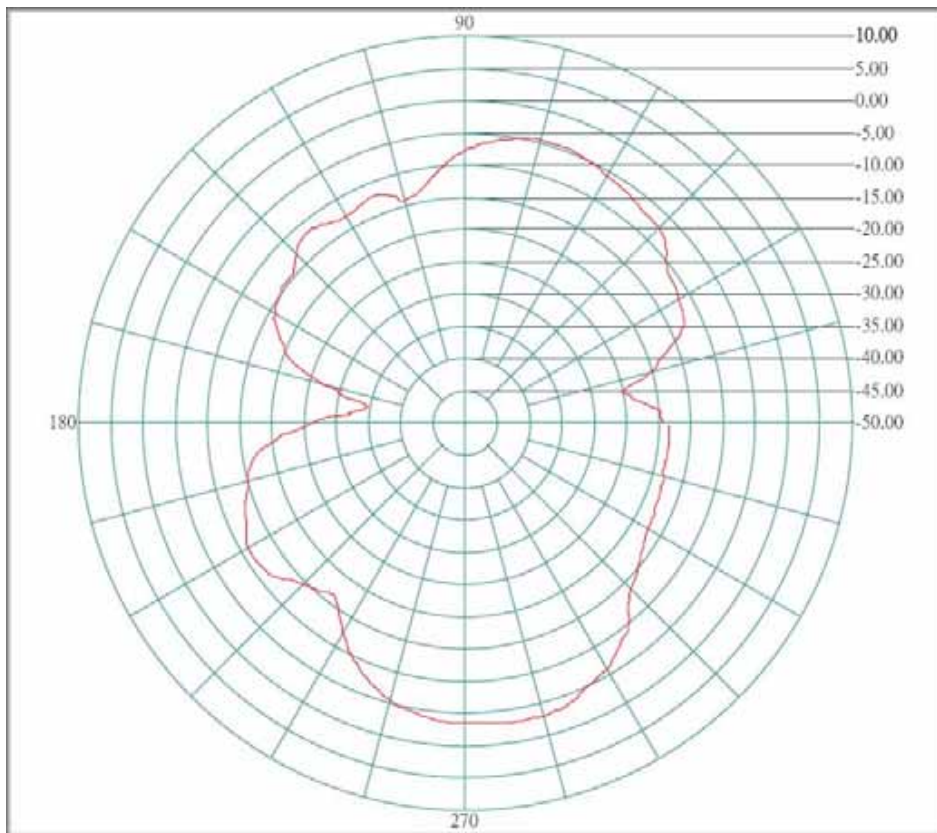
11. YZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Vertical	-4.66	-6.28

• New-Type PIFA Antenna Radiation Pattern at 2400MHz

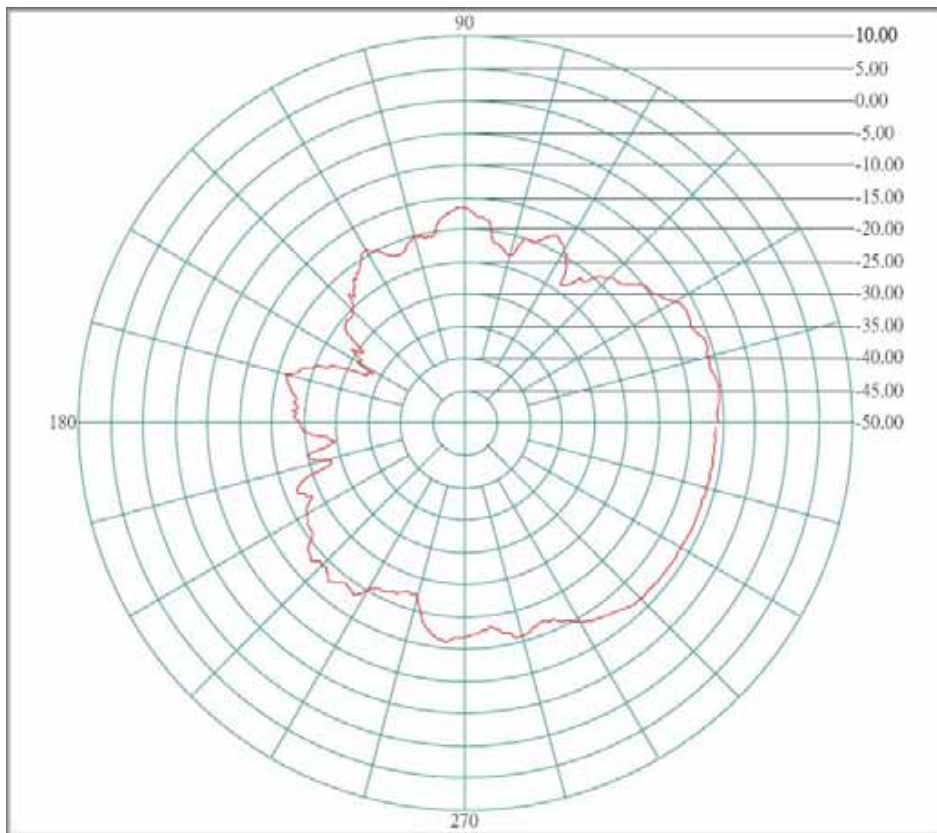
12. YZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Horizontal	-2.83	-9.01

• New-Type PIFA Antenna Radiation Pattern at 2450MHz

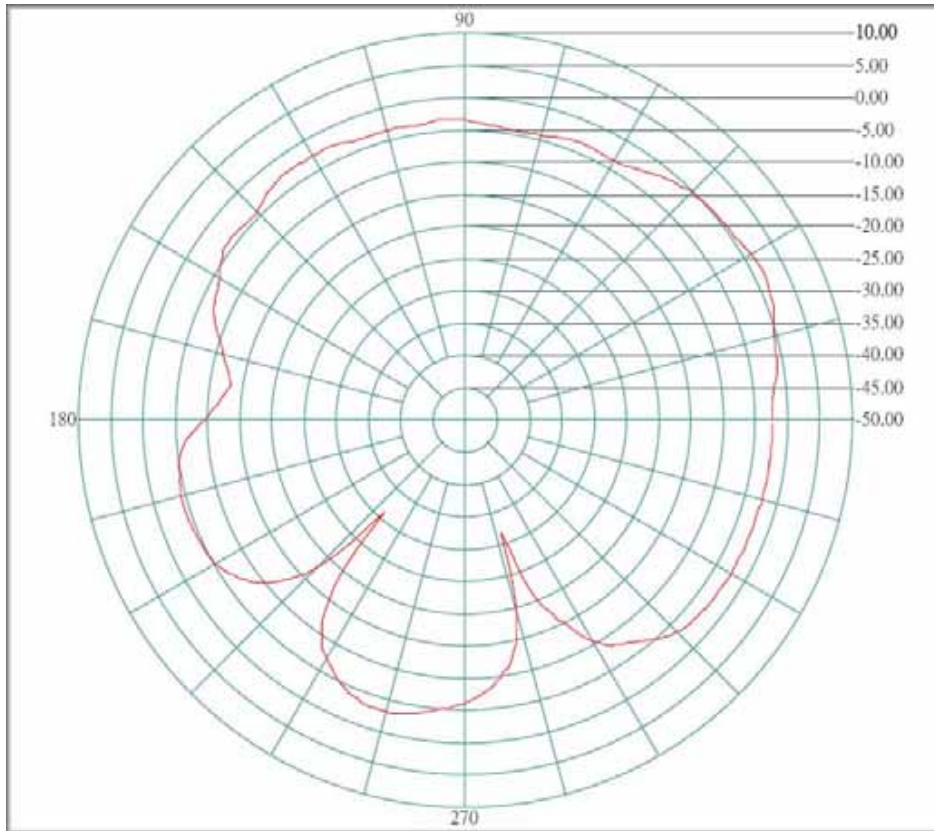
1. XY- Plane Ant A.



	Peak (dBi)	Average (dBi)
Vertical	-10.14	-15.61

• New-Type PIFA Antenna Radiation Pattern at 2450MHz

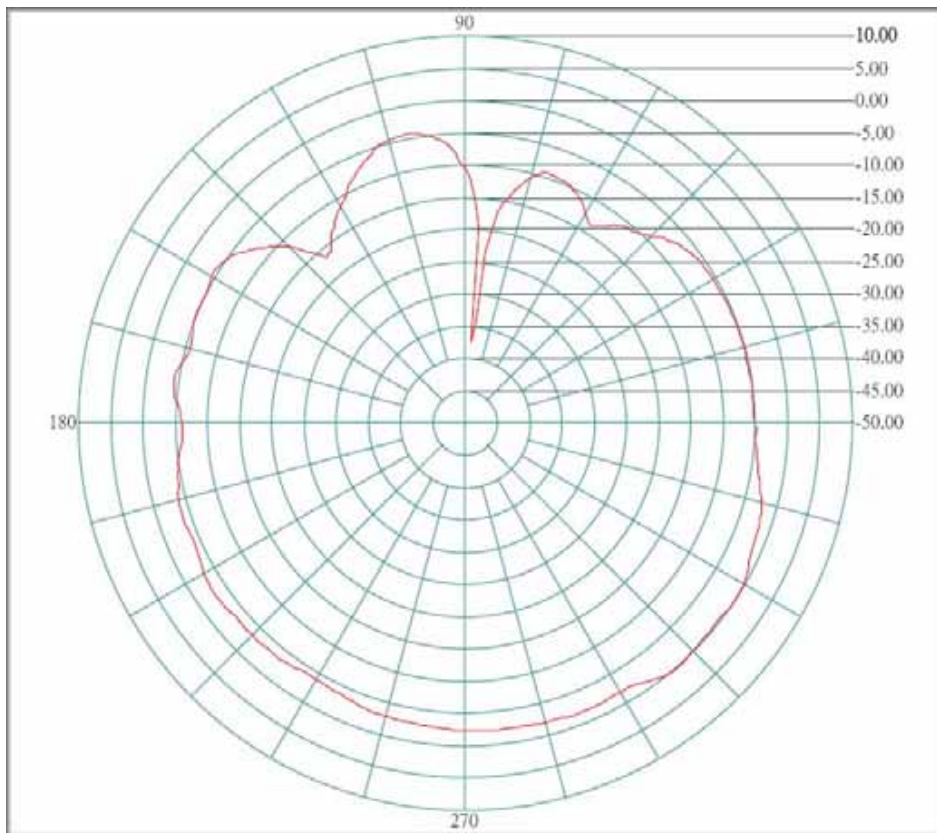
2. XY- Plane Ant A.



	Peak (dBi)	Average (dBi)
Horizontal	1.76	-3.62

• New-Type PIFA Antenna Radiation Pattern at 2450MHz

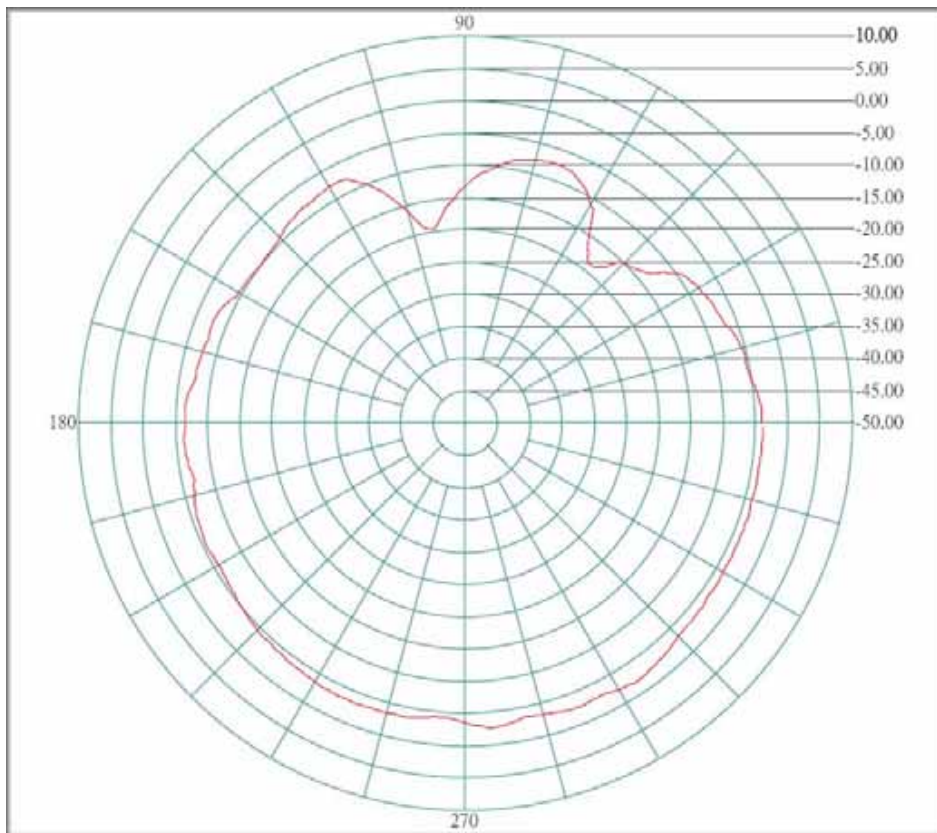
3. XY- Plane Ant B.



	Peak (dBi)	Average (dBi)
Vertical	0.39	-4.01

• New-Type PIFA Antenna Radiation Pattern at 2450MHz

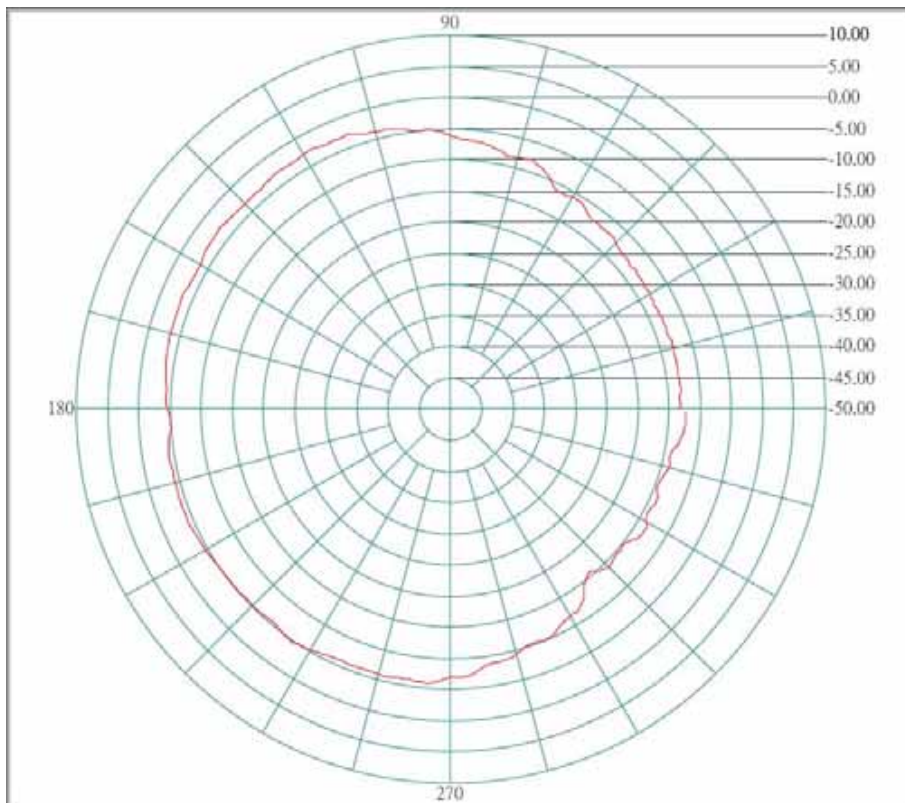
4. XY- Plane Ant B.



	Peak (dBi)	Average (dBi)
Horizontal	-1.78	-5.54

• New-Type PIFA Antenna Radiation Pattern at 2450MHz

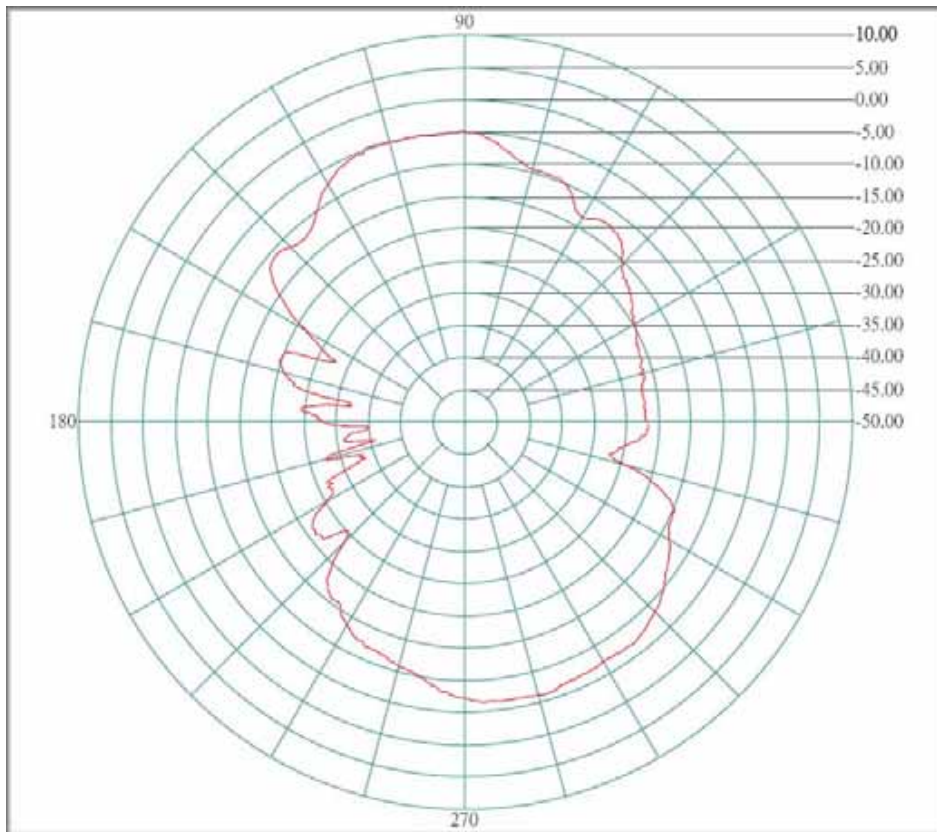
5. XZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Vertical	-2.81	-6.46

• New-Type PIFA Antenna Radiation Pattern at 2450MHz

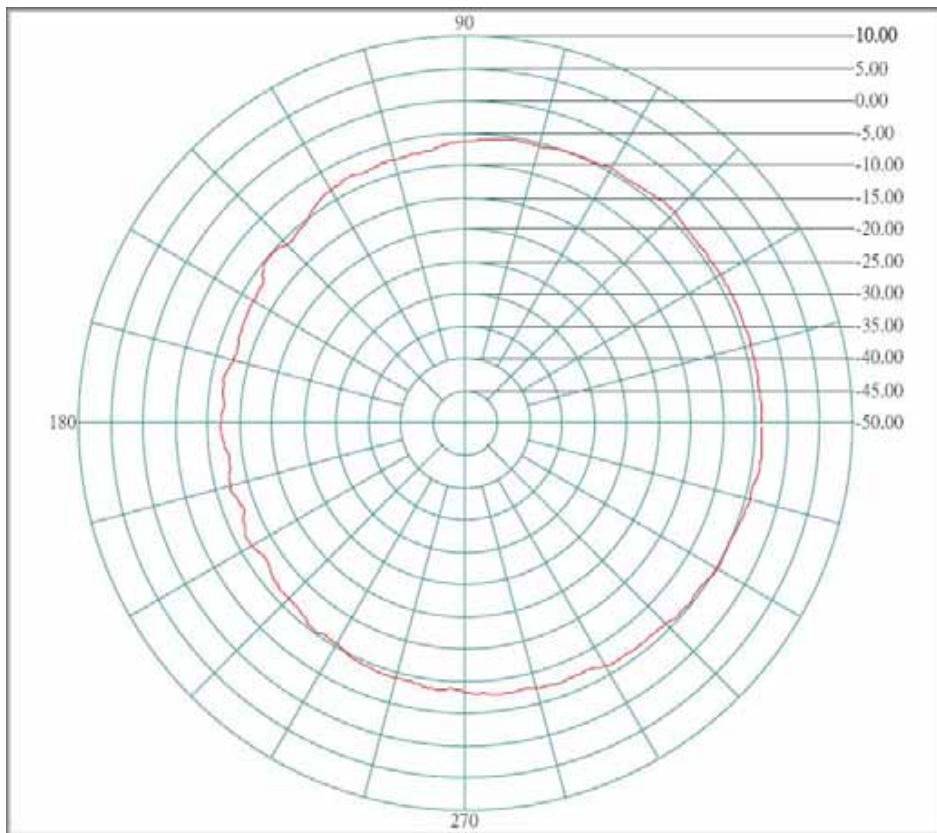
6. XZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Horizontal	-4.90	-10.51

• **New-Type PIFA Antenna Radiation Pattern at 2450MHz**

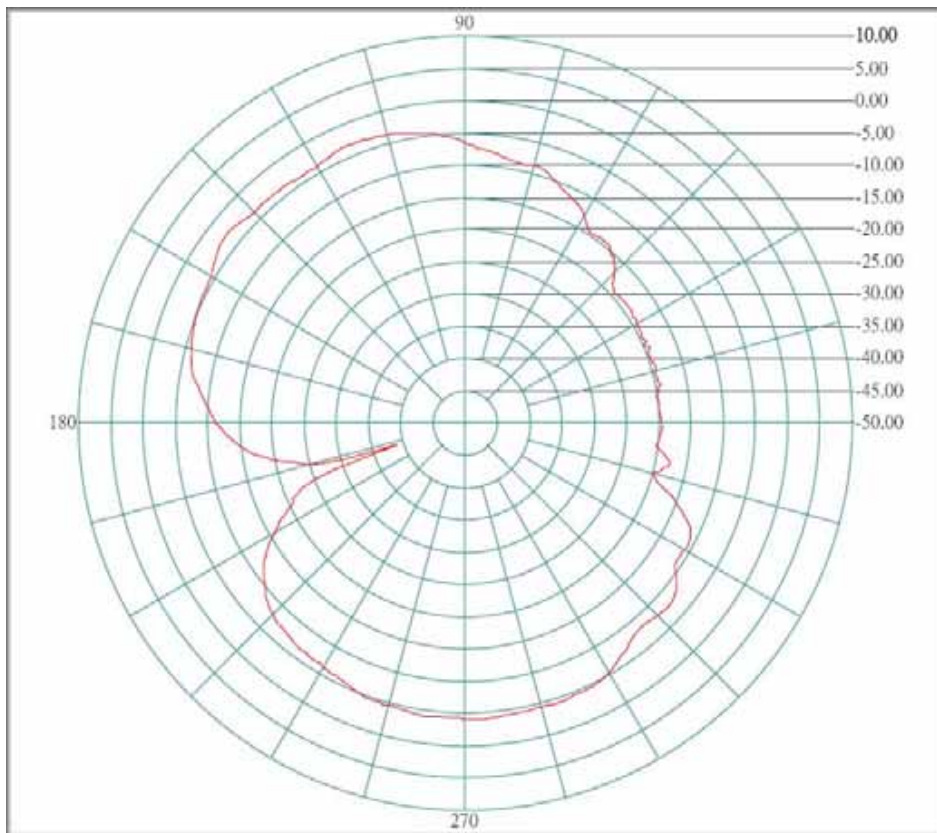
7. XZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Vertical	-3.60	-6.81

• New-Type PIFA Antenna Radiation Pattern at 2450MHz

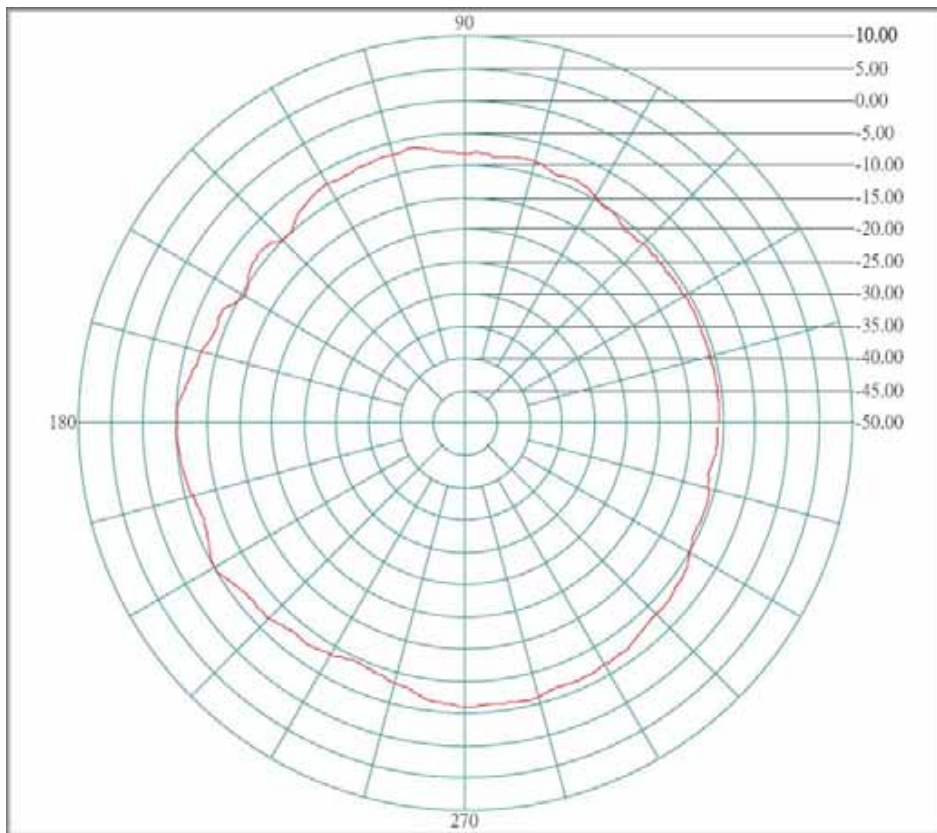
8. XZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Horizontal	-2.82	-7.18

• New-Type PIFA Antenna Radiation Pattern at 2450MHz

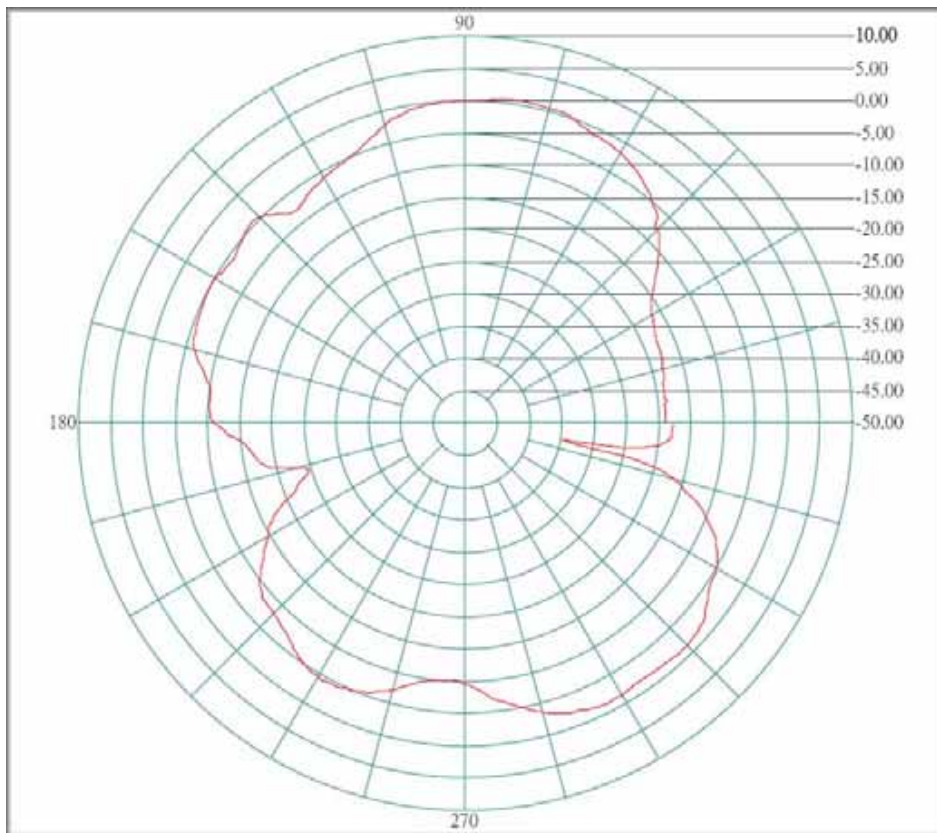
9. YZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Vertical	-5.18	-7.87

• New-Type PIFA Antenna Radiation Pattern at 2450MHz

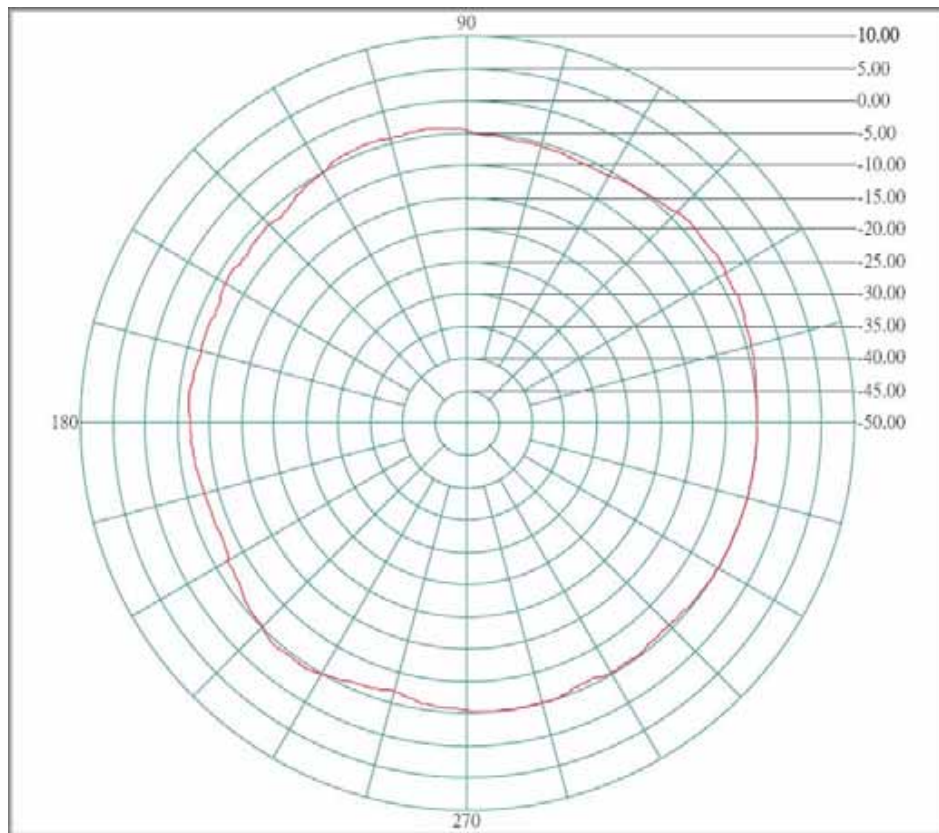
10. YZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Horizontal	0.75	-4.86

• **New-Type PIFA Antenna Radiation Pattern at 2450MHz**

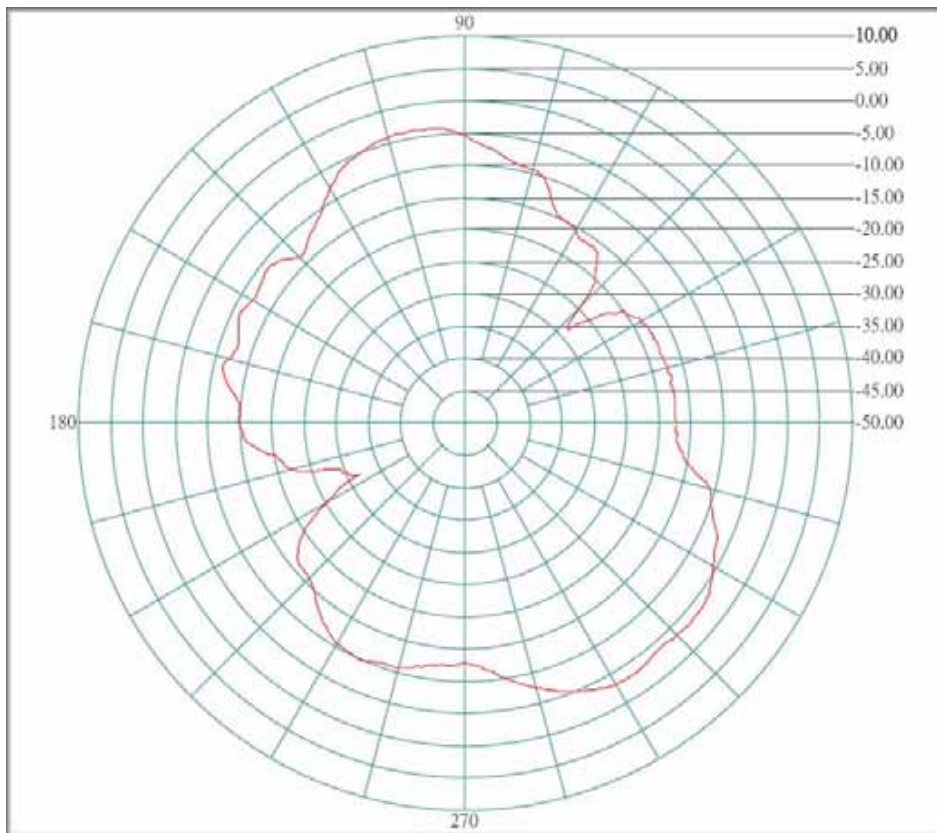
11. YZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Vertical	-3.30	-5.34

• New-Type PIFA Antenna Radiation Pattern at 2450MHz

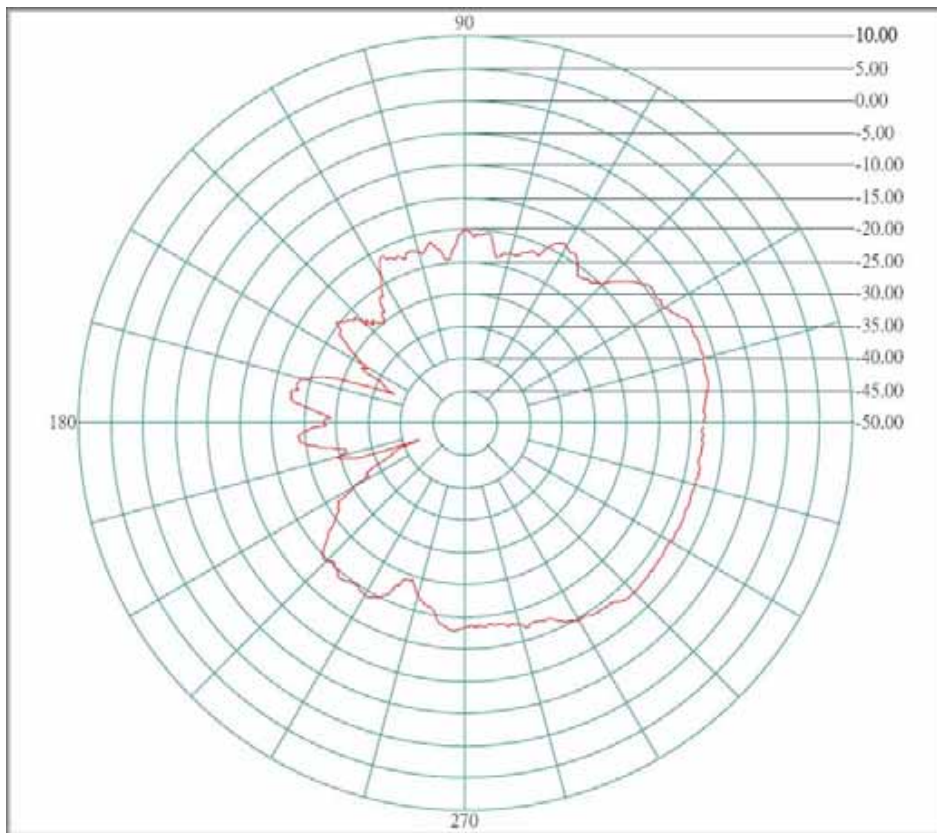
12. YZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Horizontal	-2.86	-9.03

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

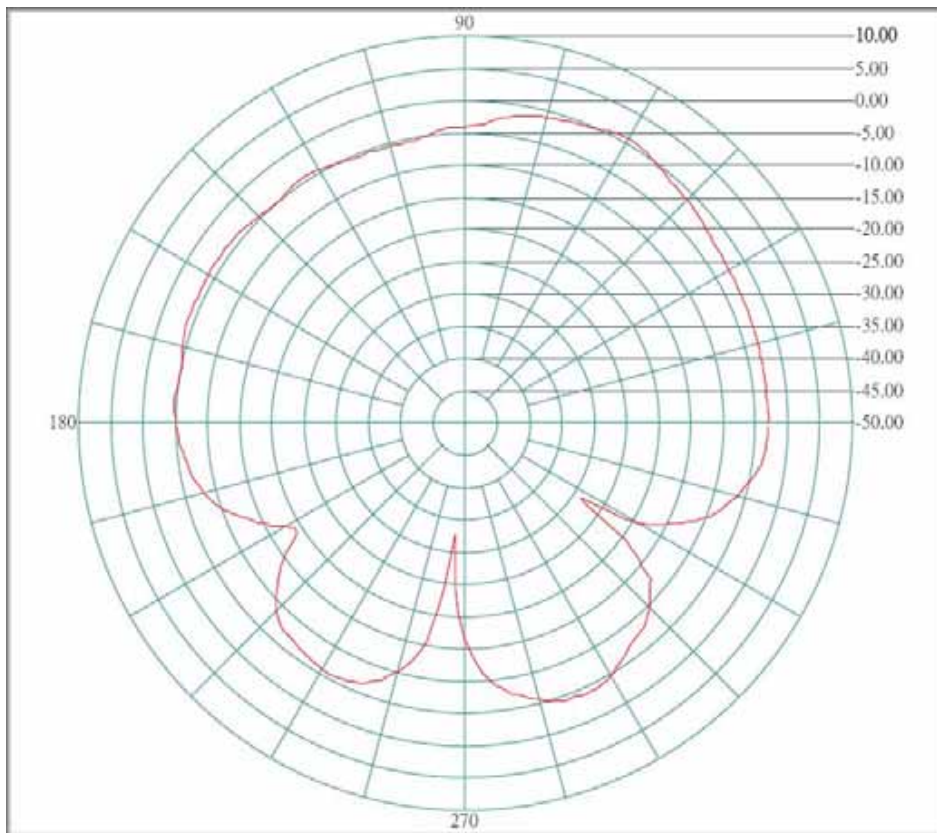
1. XY- Plane Ant A.



	Peak (dBi)	Average (dBi)
Vertical	-11.44	-17.09

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

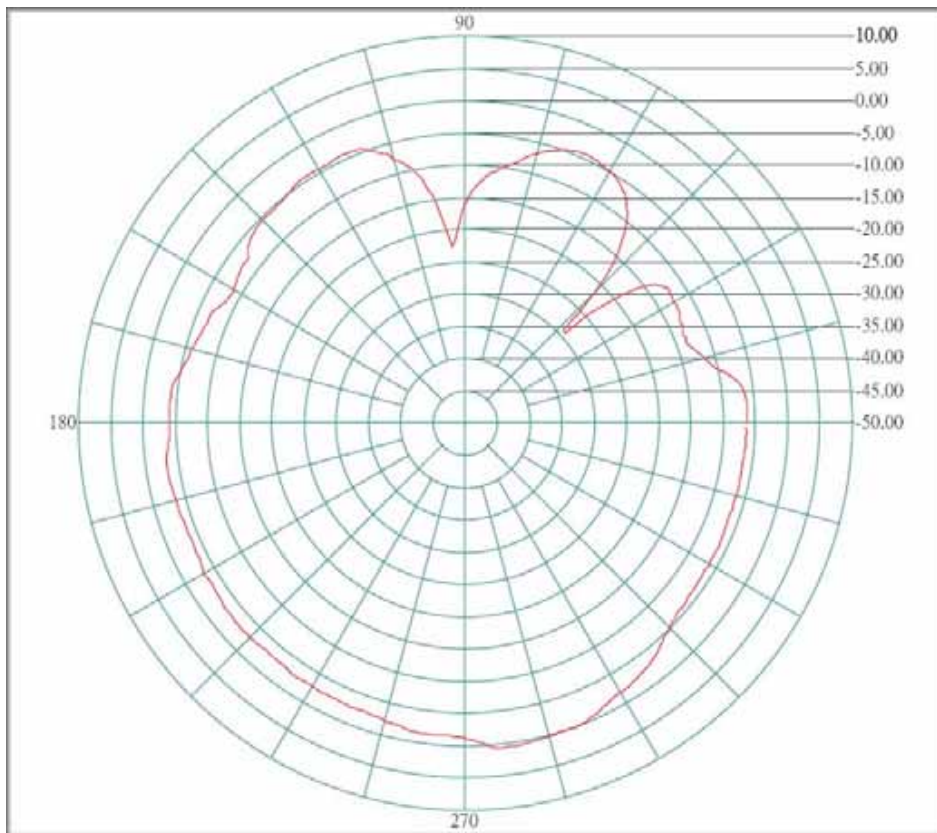
2. XY- Plane Ant A.



	Peak (dBi)	Average (dBi)
Horizontal	0.89	-4.56

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

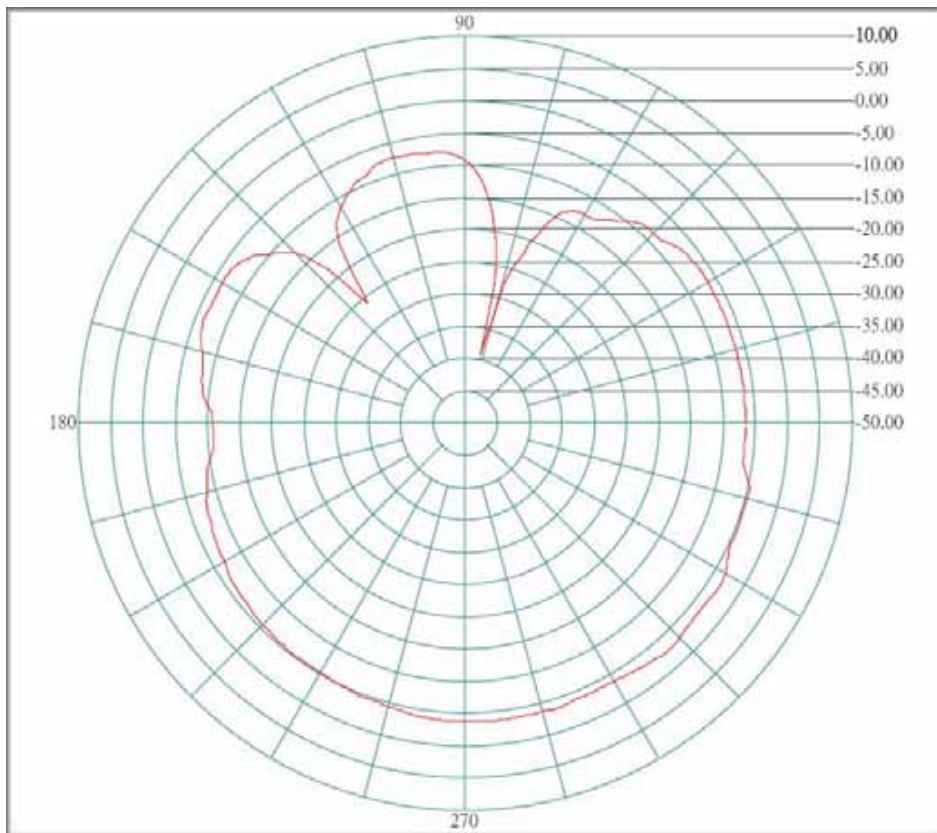
3. XY- Plane Ant B.



	Peak (dBi)	Average (dBi)
Vertical	0.85	-4.40

• New-Type PIFA Antenna Radiation Pattern at 25000MHz

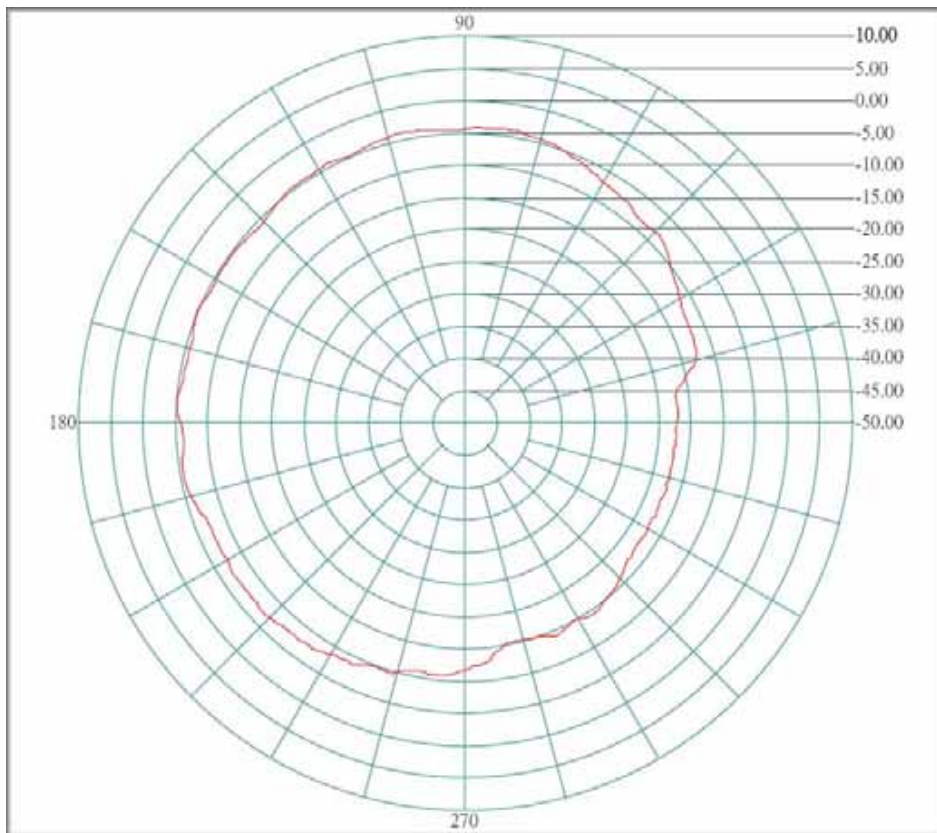
4. XY- Plane Ant B.



	Peak (dBi)	Average (dBi)
Horizontal	-2.50	-6.24

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

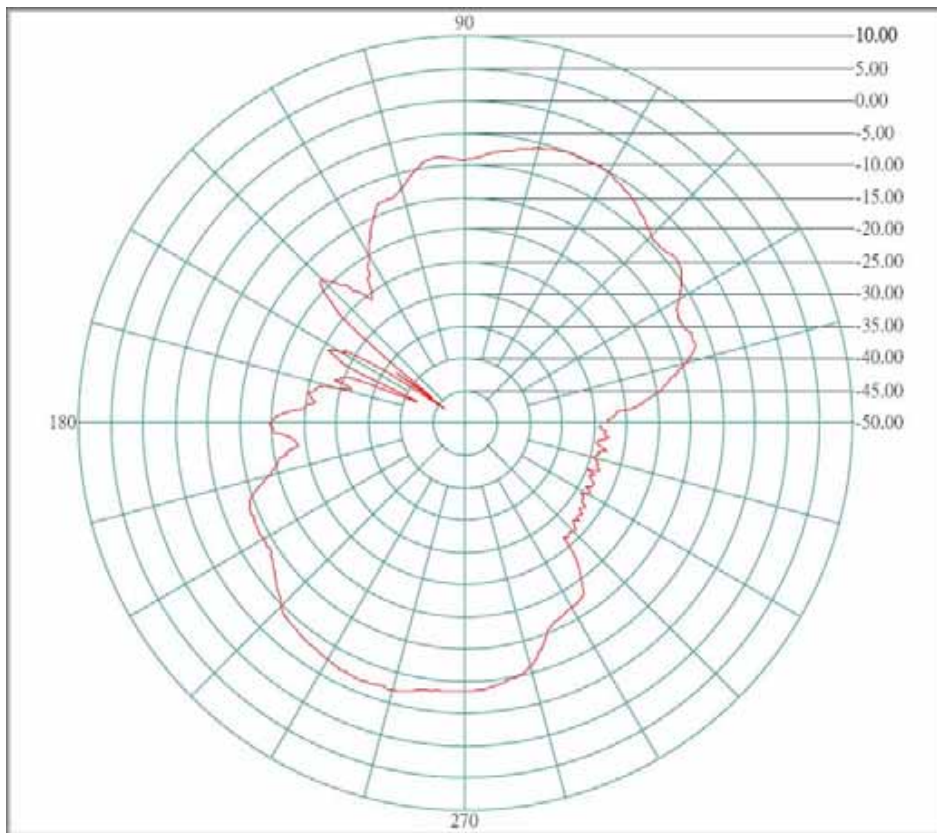
5. XZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Vertical	-3.95	-7.66

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

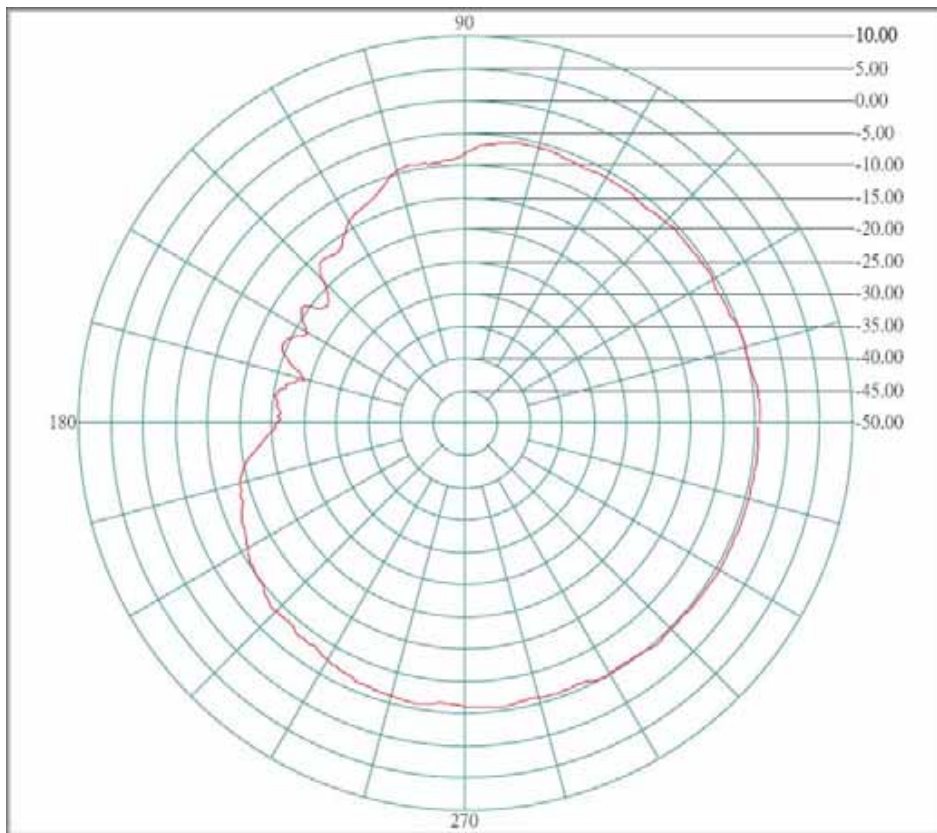
6. XZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Horizontal	-5.06	-11.20

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

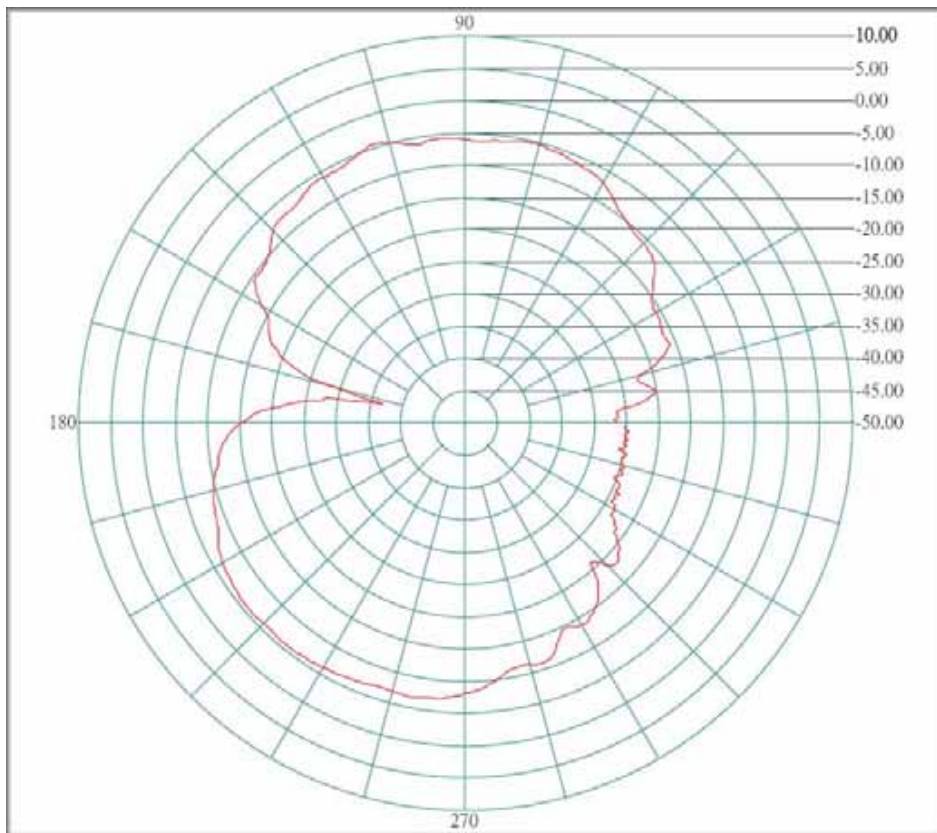
7. XZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Vertical	-4.11	-7.12

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

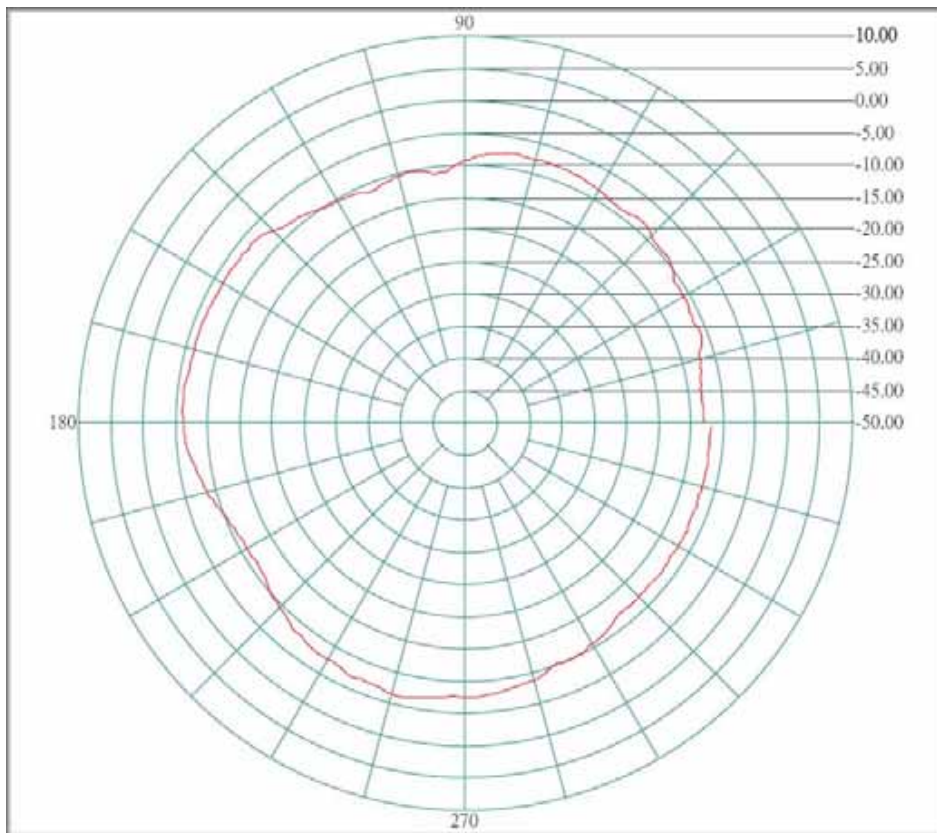
8. XZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Horizontal	-4.60	-9.07

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

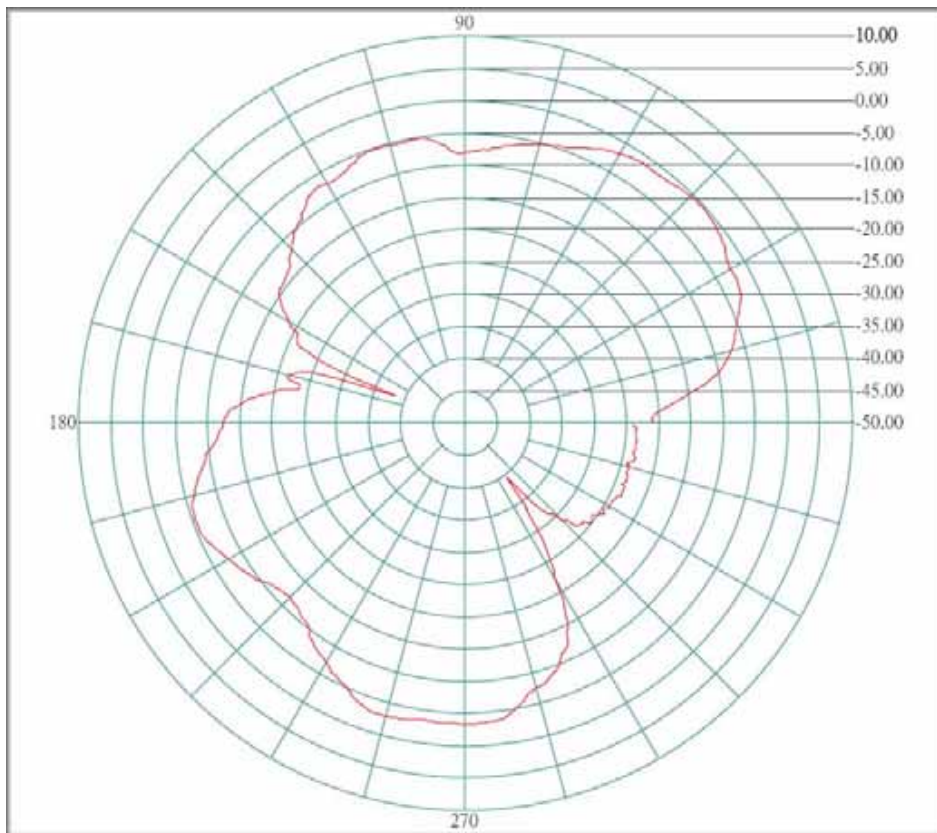
9. YZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Vertical	-6.07	-8.83

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

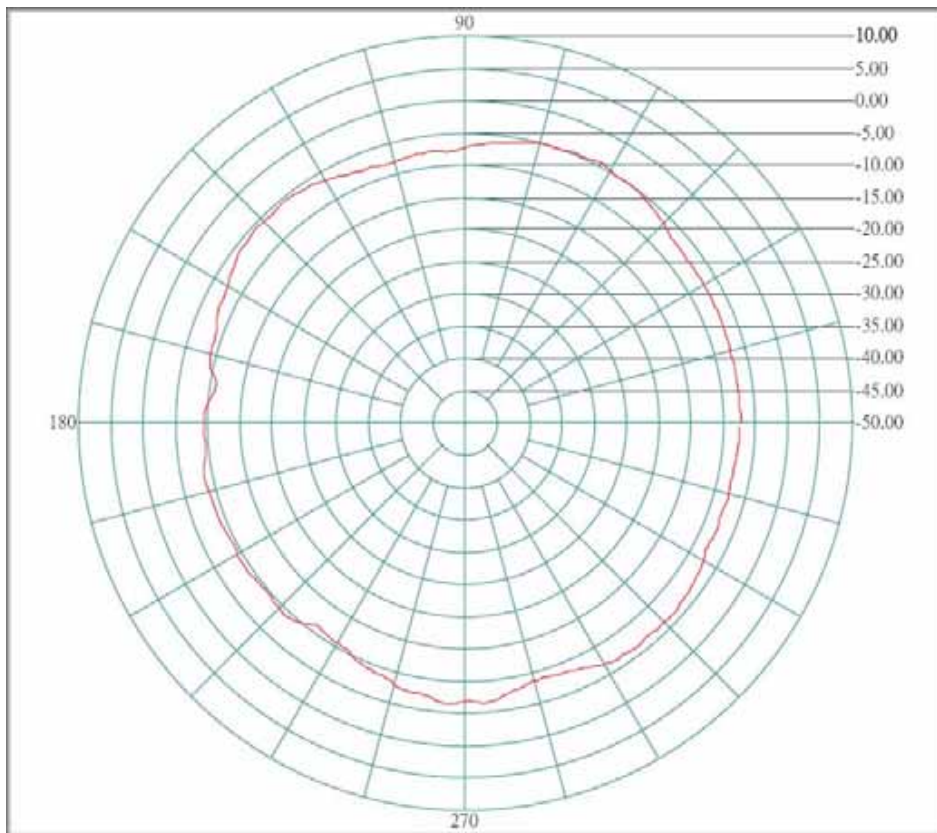
10. YZ- Plane Ant A.



	Peak (dBi)	Average (dBi)
Horizontal	-0.19	-6.49

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

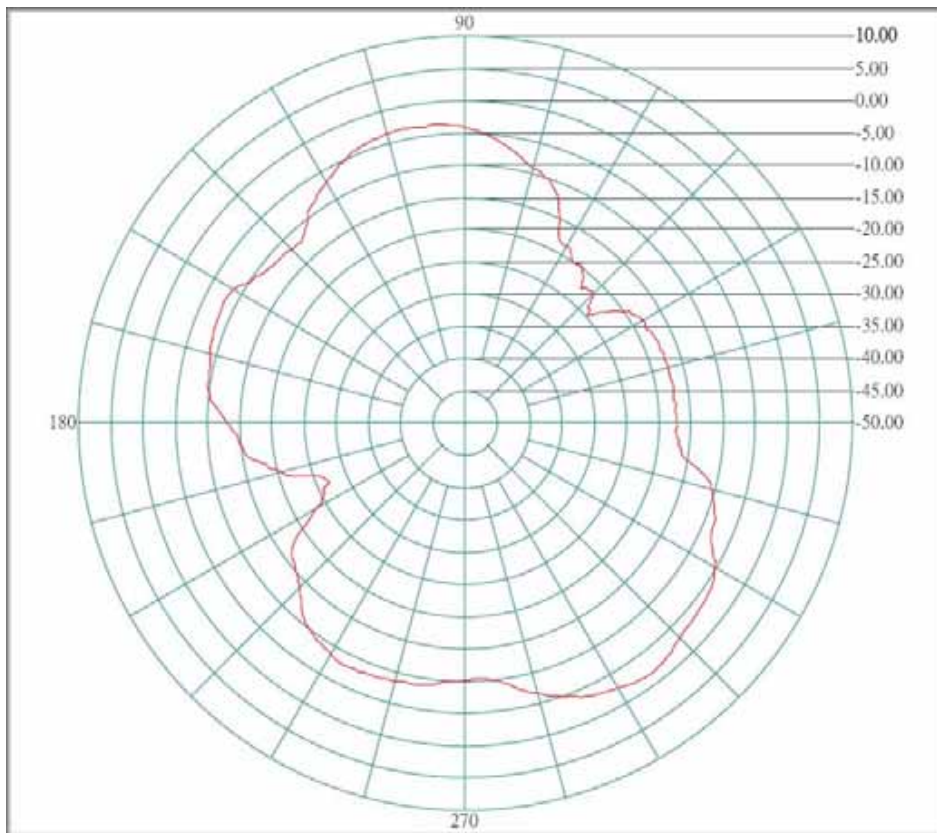
11. YZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Vertical	-4.53	-7.28

• New-Type PIFA Antenna Radiation Pattern at 2500MHz

12. YZ- Plane Ant B.



	Peak (dBi)	Average (dBi)
Horizontal	-1.53	-7.98