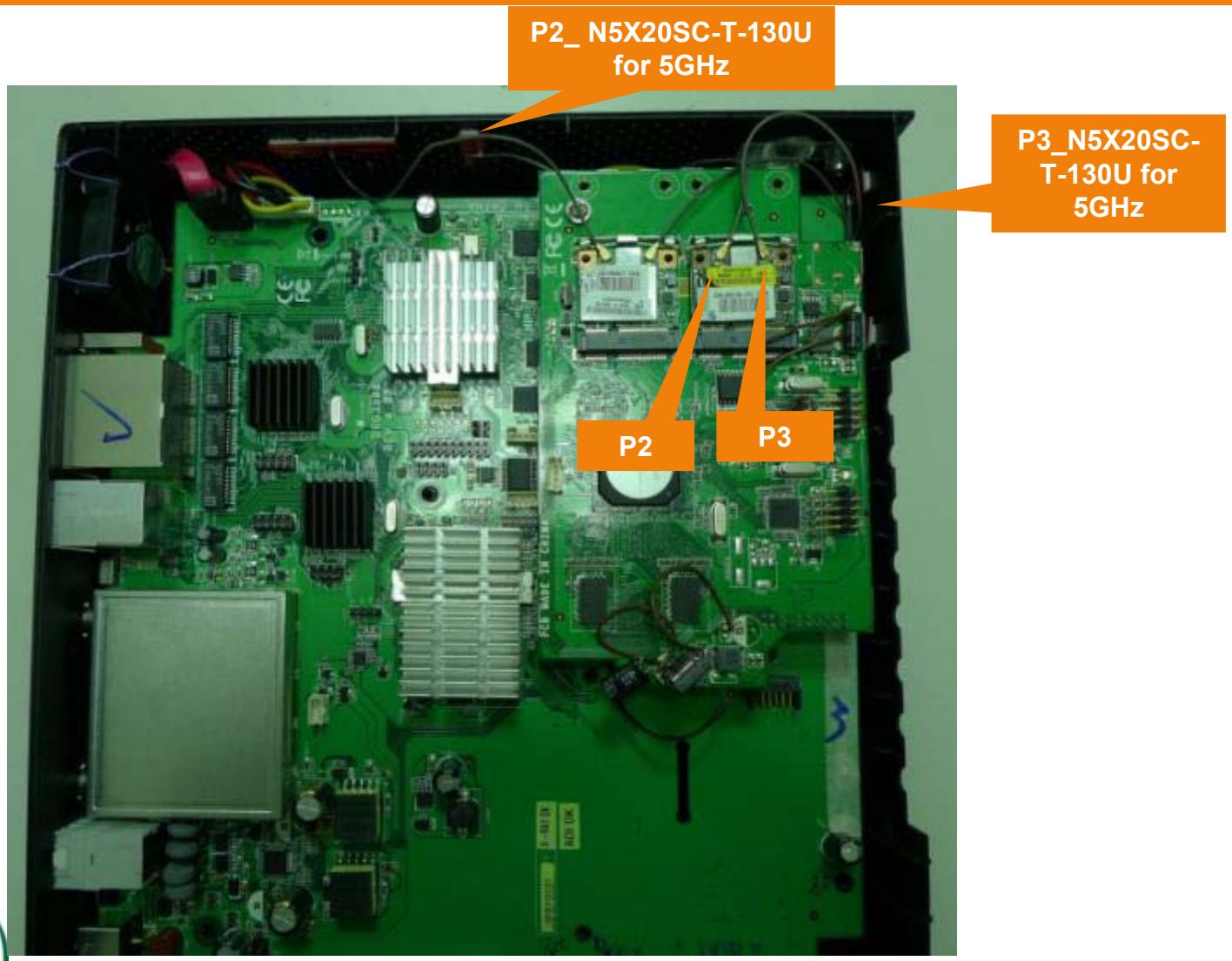
UNIHAN DRG7908 Antenna solution Report(N5X20SC-T-130U)

July 22, 2011

Antenna Installation method

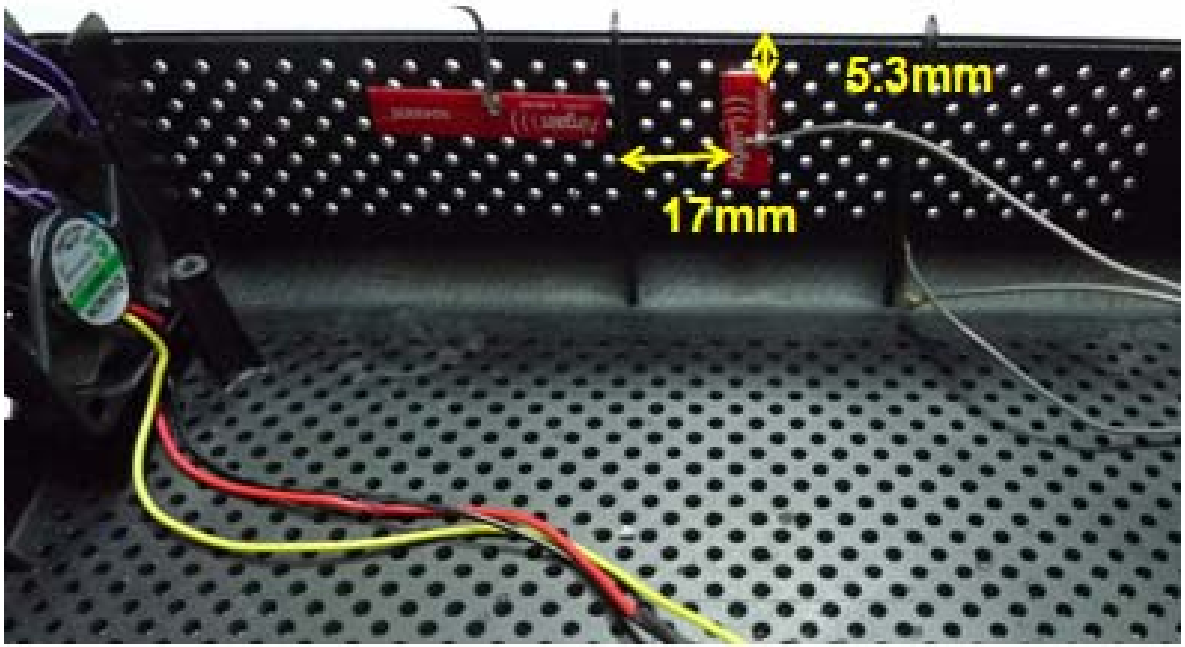


N5X20SC

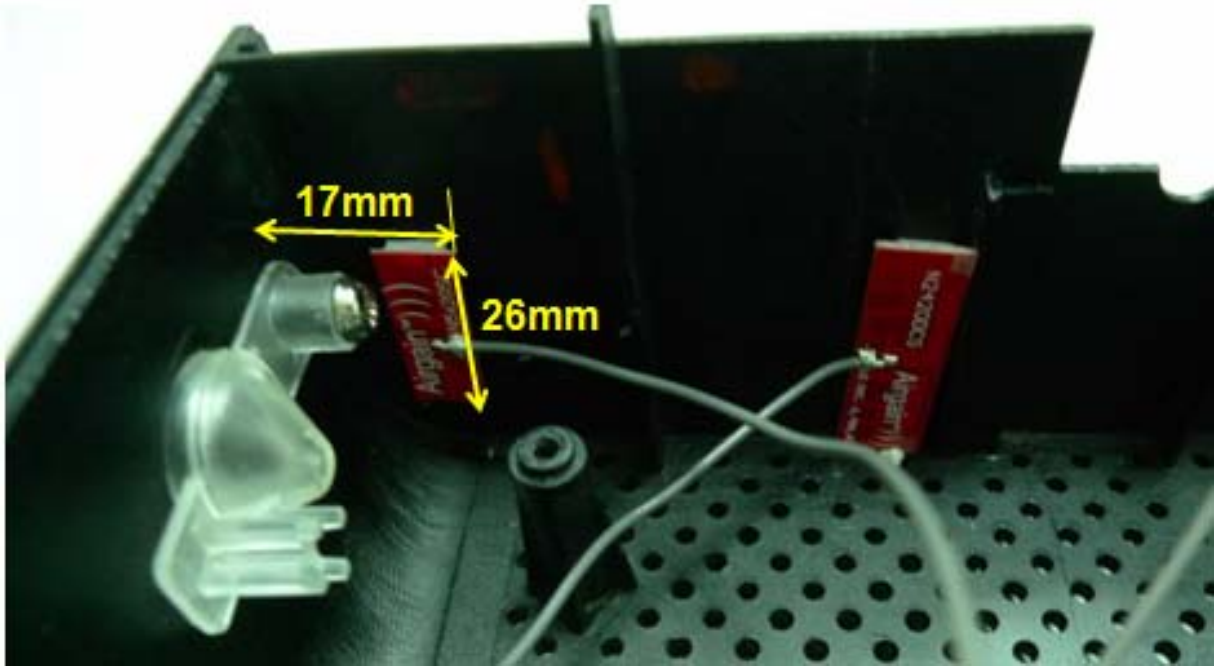
- Features
  - Single-Band
  - Single feed, low profile design
  - Superior performance in both vertical and horizontal orientations
  - Simple case mount accommodates easy integration in existing form factors

Standard	IEEE 802.11n and 802.11a
Frequency Range	4.9 to 5.9 GHz
Peak Gain	2.4GHz→-6.57dBi ; 5GHz→5.12dBi ; (With DRG7908)
VSWR	2:1
Feed Impedance	50 Ohms
Power Handling	30 dBm
Interface	50 ohm, 1.13mm diameter, micro coax cable, U.FL Compatible Plug
Antenna Dimensions (LxWxH)	21x8x0.5(mm)
Antenna type	PCB type

Antenna location (P2)



Antenna location (P3)

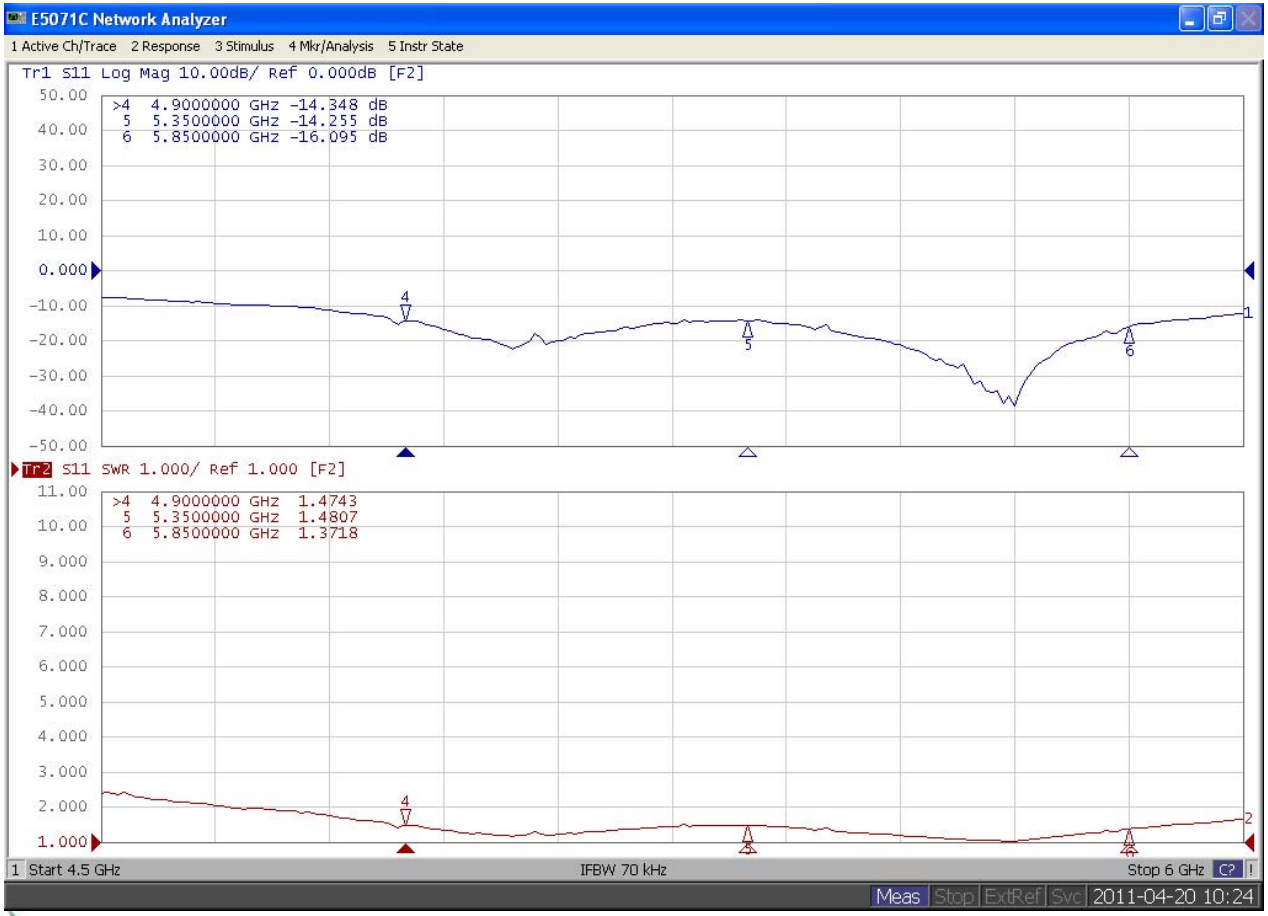


S-parameter

- Measurement Method

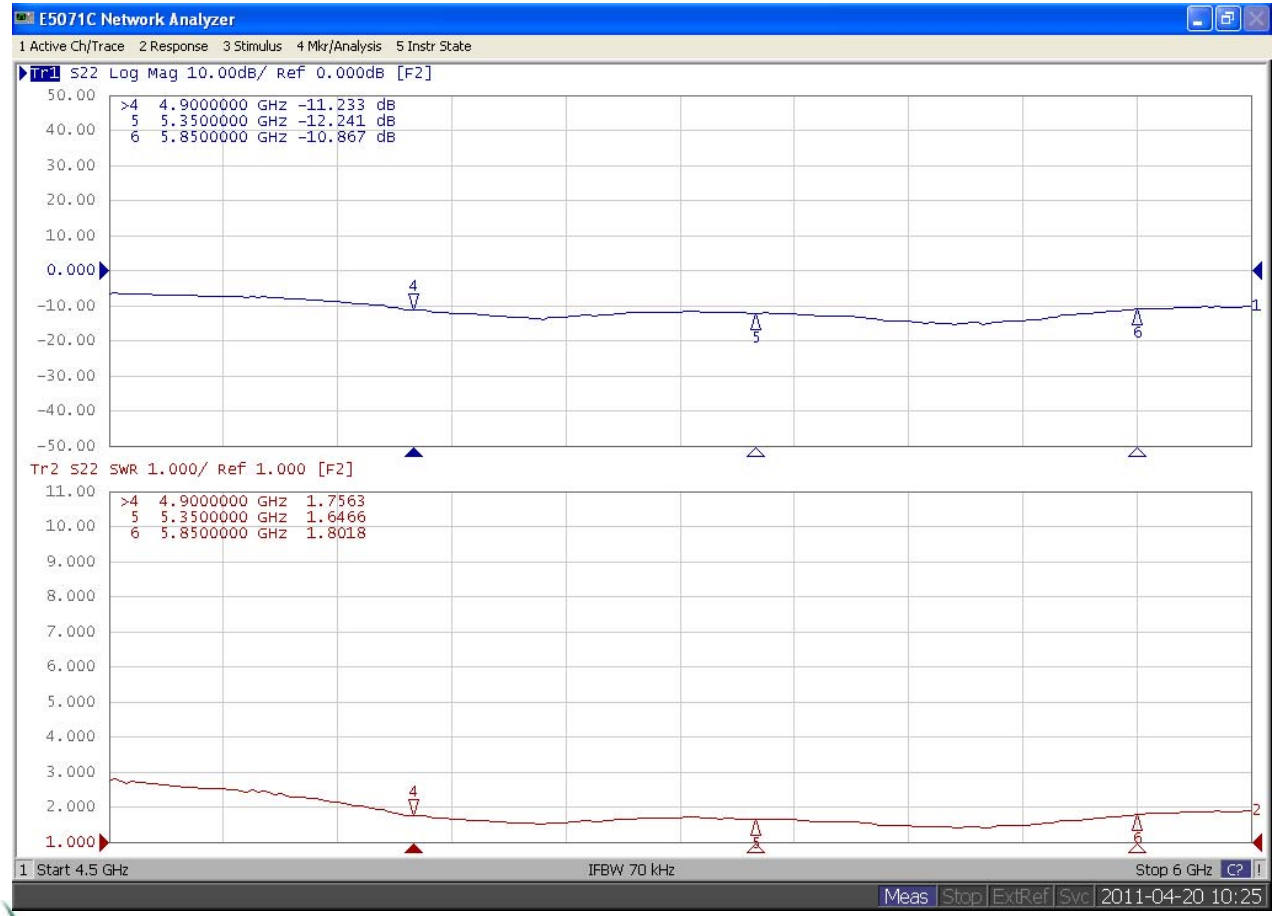
S-parameter

- P2_ N5X20SC-T-130U for 5GHz



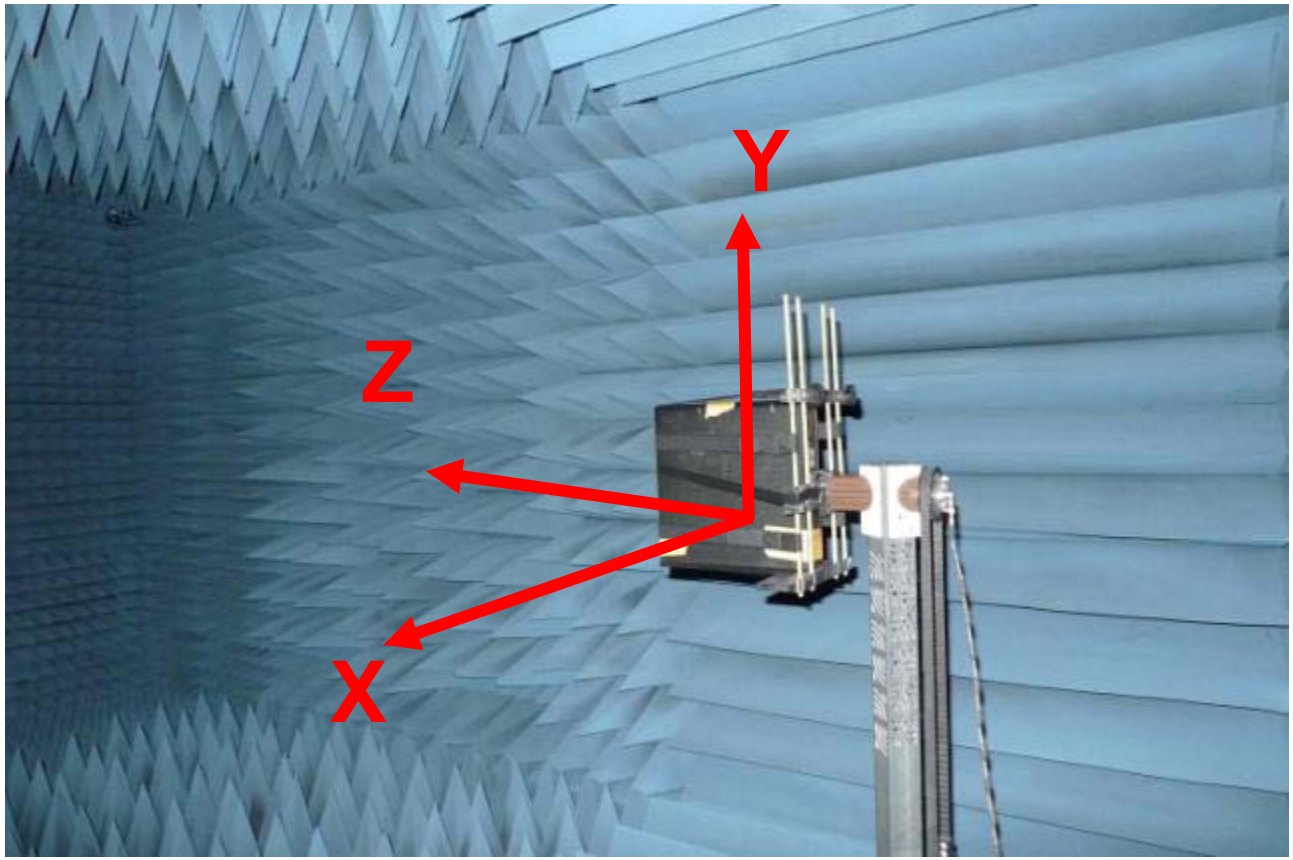
S-parameter

- P3_ N5X20SC-T-130U for 5GHz



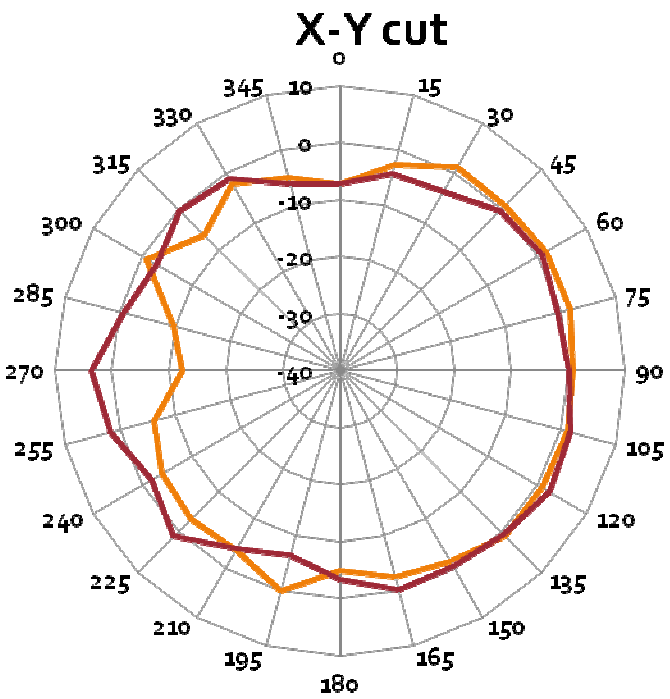
Radiation pattern

- Chamber Orientation



Radiation pattern

- 5.5GHZ (X-Y cut)

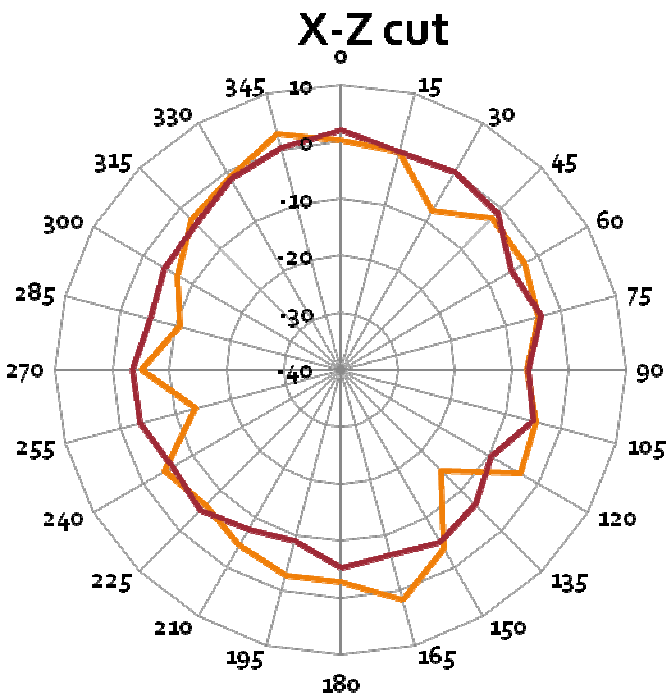


P2_ N2401D-T-130Ufor 5GHz

P3_ N2401D-T-100Ufor 5GHz

Radiation pattern

- 5.5GHZ (X-Z cut)

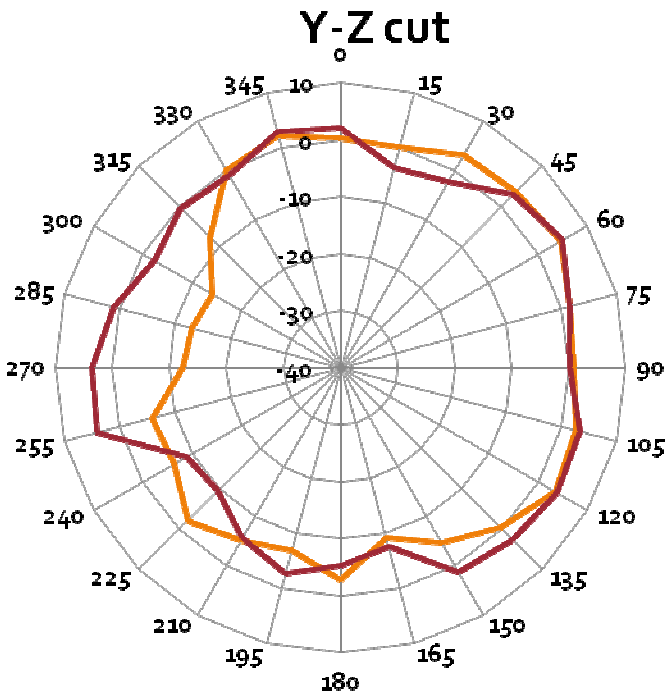


P2_ N2401D-T-130Ufor 5GHz

P3_ N2401D-T-100Ufor 5GHz

Radiation pattern

- 5.5GHZ (Y-Z cut)



P2_ N2401D-T-130Ufor 5GHz

P3_ N2401D-T-100Ufor 5GHz

P2&P3 Peak Gain & Efficiency

	P2		P3	
	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)
2.412GHz	-7.85	16.39	-7.06	1.60
2.417GHz	-7.82	16.49	-6.97	1.48
2.422GHz	-7.90	16.19	-7.08	1.35
2.427GHz	-7.96	15.98	-7.05	1.25
2.432GHz	-8.06	15.60	-7.18	1.14
2.437GHz	-8.12	15.39	-7.26	1.05
2.442GHz	-8.06	15.62	-7.20	0.99
2.447GHz	-7.94	16.03	-7.09	0.96
2.452GHz	-7.84	16.41	-7.05	0.94
2.457GHz	-7.69	17.01	-6.88	0.93
2.462GHz	-7.51	17.72	-6.80	0.93
2.467GHz	-7.38	18.25	-6.67	0.92
2.472GHz	-7.31	18.54	-6.57	0.89

P2&P3 Peak Gain & Efficiency

	P2		P3	
	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)
5.180GHz	4.92	75.59	5.04	77.21
5.200GHz	4.87	72.79	4.83	74.76
5.250GHz	4.79	74.36	4.62	73.10
5.300GHz	4.10	71.70	4.23	68.50
5.350GHz	4.61	77.43	4.41	77.94
5.400GHz	4.71	75.75	4.67	77.33
5.450GHz	4.98	71.58	4.58	73.09
5.500GHz	4.64	69.01	4.91	70.90
5.550GHz	4.45	70.54	5.08	75.72
5.600GHz	4.65	69.36	4.96	75.73
5.650GHz	4.90	72.62	4.59	75.48
5.700GHz	4.97	71.24	4.26	71.29
5.750GHz	5.12	76.00	4.90	76.70
5.800GHz	4.85	71.62	4.55	71.42
5.806GHz	4.95	73.27	4.60	73.19