

USR-S100 PCB Antenna test report

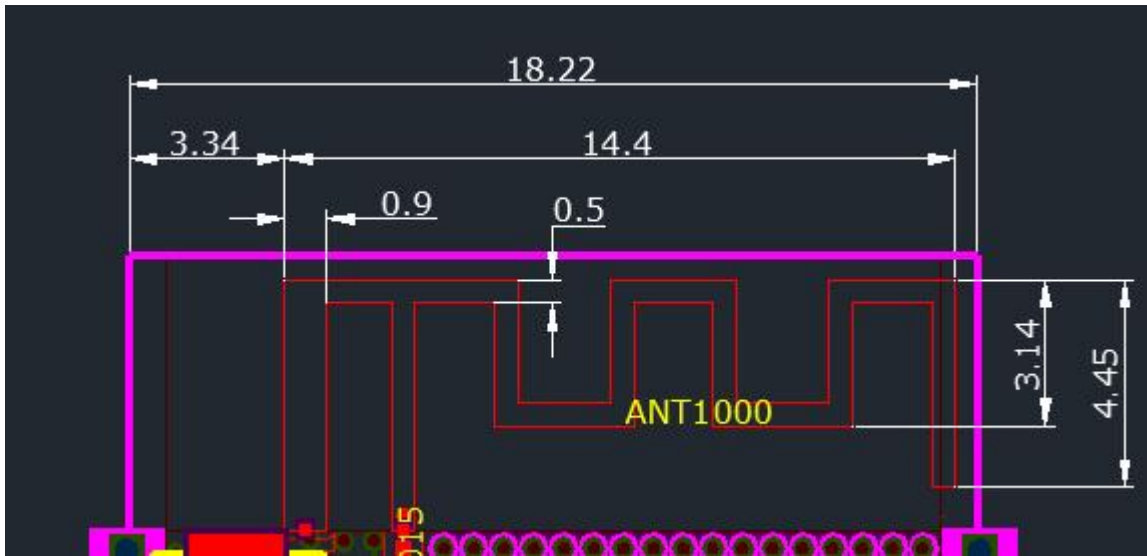
Ver: V1.0.0



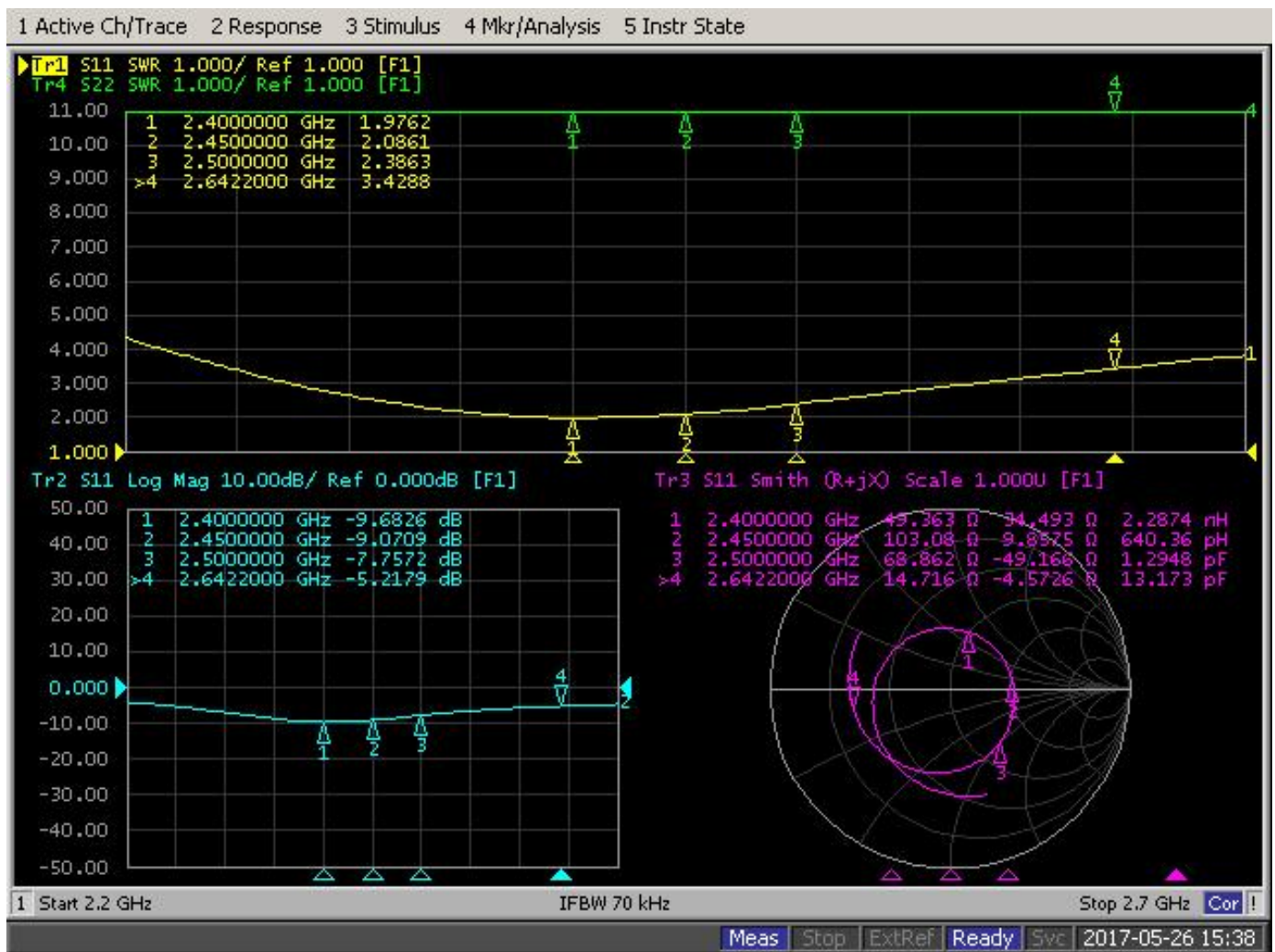
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1. Antenna size



2. S parameter



Pic1 S parameter

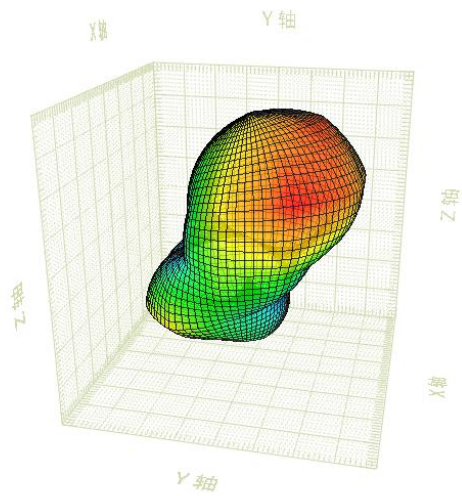
3. Antenna gain and efficiency

TRP(dBm)	-1.69	-1.59	-1.88	-1.83	-2.13	-2.15	-2.08	-2.04	-2.32	-1.89	-2.18
Fre(mhz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak EIRP(dBm)	1.27	1.32	0.95	0.88	0.66	0.71	0.81	0.78	0.48	0.69	0.37
Peak Gain(dBi)	1.27	1.32	0.95	0.88	0.66	0.71	0.81	0.78	0.48	0.69	0.37
Efficiency(dB)	-1.48	-1.38	-1.66	-1.61	-1.91	-1.94	-1.87	-1.84	-2.13	-1.7	-2
Efficiency(%)	71.12	72.78	68.23	69.02	64.42	63.97	65.01	65.46	61.24	67.61	63.1
Directivity	2.75	2.7	2.61	2.49	2.57	2.65	2.68	2.62	2.61	2.39	2.37
NHPRP $\pi/4$ (dBm)	-2.74	-2.64	-2.94	-2.89	-3.19	-3.21	-3.12	-3.08	-3.35	-2.91	-3.19
NHPRP $\pi/6$ (dBm)	-4.3	-4.2	-4.51	-4.46	-4.75	-4.76	-4.66	-4.61	-4.88	-4.43	-4.7
Min. EIRP(dBm)	-11.22	-10.75	-10.69	-10.79	-11.02	-10.11	-9.87	-9.35	-9.82	-9.16	-9.82
Upper Hem. PRP(dBm)	-4.76	-4.66	-4.95	-4.91	-5.19	-5.21	-5.15	-5.12	-5.43	-5	-5.3
Lower Hem. PRP(dBm)	-4.63	-4.54	-4.82	-4.77	-5.08	-5.12	-5.03	-4.99	-5.24	-4.8	-5.09
Ant. Port Input Pwr.(dBm)	0	0	0	0	0	0	0	0	0	0	0

Pic 2 Antenna gain and efficiency

4. Antenna radiated field type

$\theta: 69^\circ$
 $\varphi: 13^\circ$

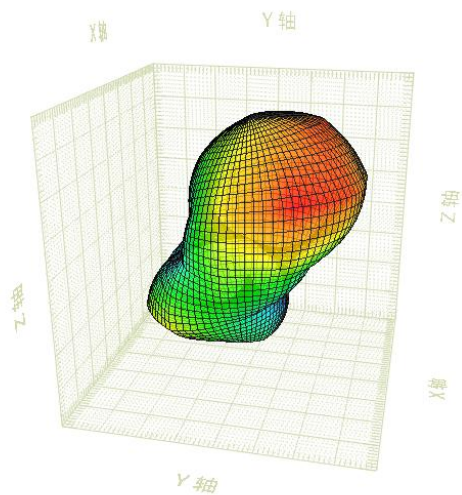


Fre(mhz):2400
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01

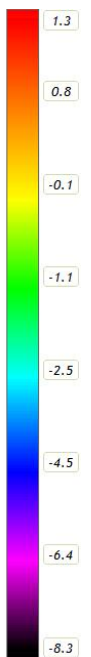


Pic1 2.400GHz Antenna radiated field type

$\theta: 69^\circ$
 $\varphi: 13^\circ$

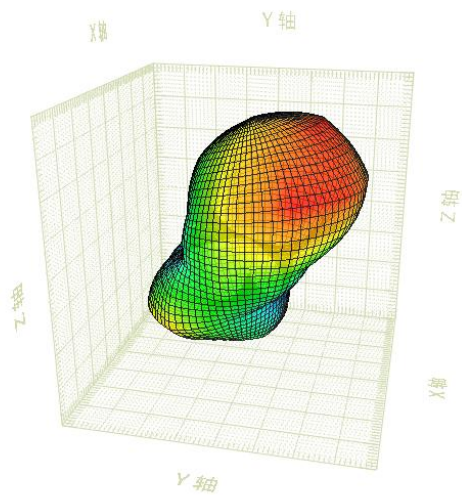


Fre(mhz): 2410
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01



Pic2 2.410GHz Antenna radiated field type

$\theta: 69^\circ$
 $\varphi: 13^\circ$

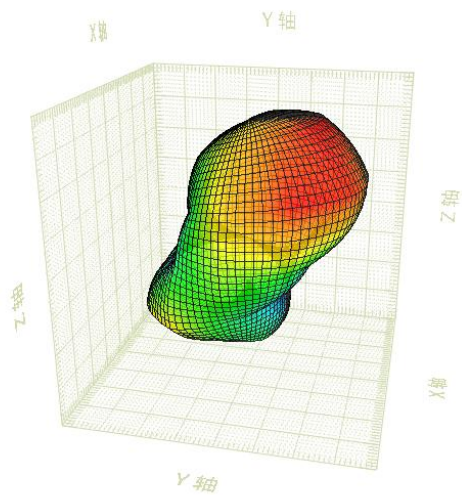


Fre(mhz): 2420
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01



Pic3 2.420GHz Antenna radiated field type

$\theta: 69^\circ$
 $\varphi: 13^\circ$

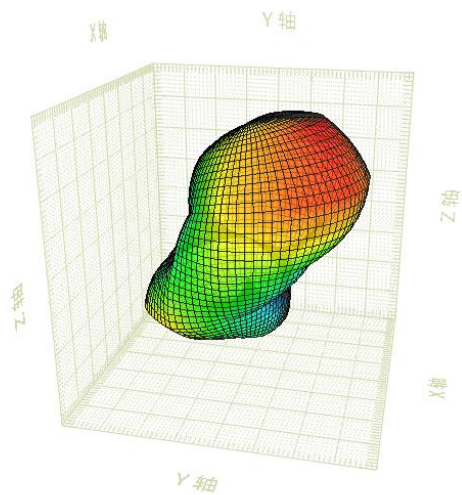


Fre(mhz): 2430
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01

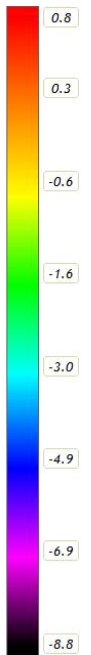


Pic4 2.430GHzAntenna radiated field type

θ : 69°
 φ : 13°

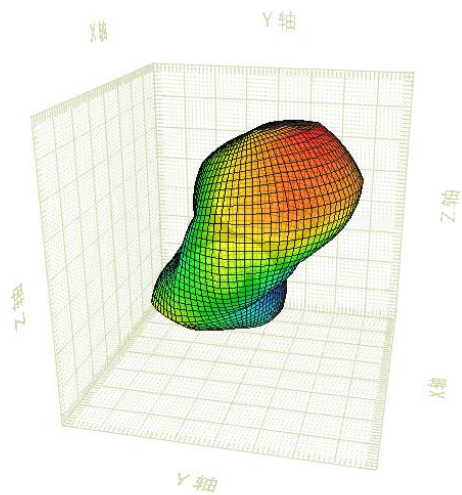


Fre(mhz): 2440
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01

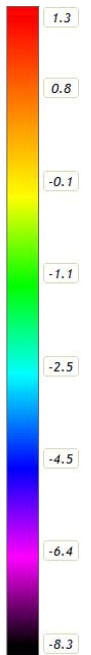


Pic5 2.440GHz Antenna radiated field type

θ : 69°
 φ : 13°

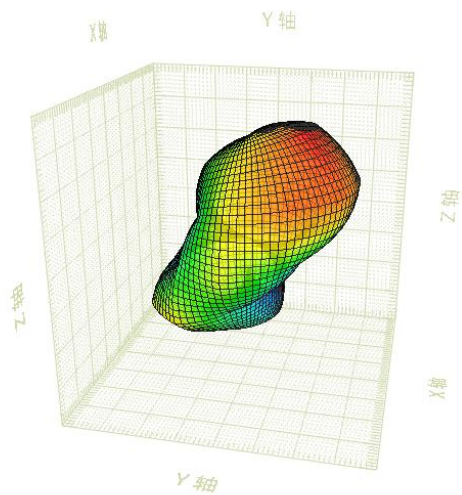


Fre(mhz): 2450
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01



Pic6 2.450GHz Antenna radiated field type

θ : 69°
 φ : 13°

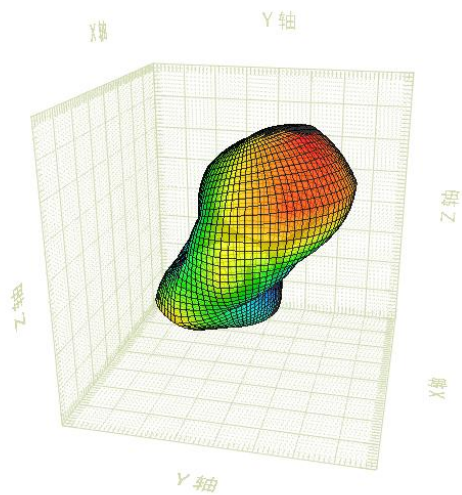


Fre(mhz): 2460
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01

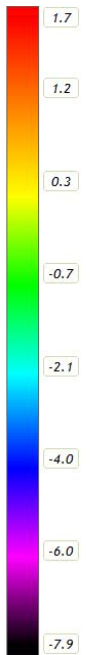


Pic7 2.460GHz Antenna radiated field type

θ : 69°
 φ : 13°

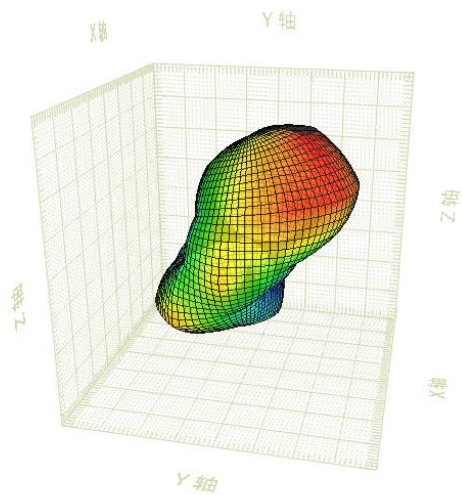


Fre(mhz): 2470
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01

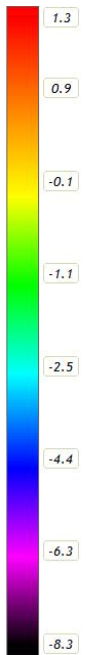


Pic8 2.470GHz Antenna radiated field type

$\theta: 69^\circ$
 $\varphi: 13^\circ$

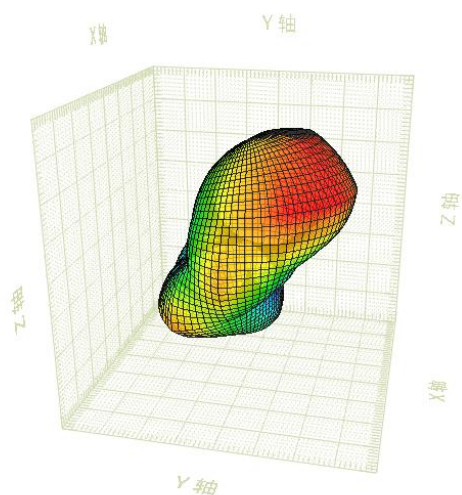


Fre(mhz): 2480
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01



Pic9 2.480GHz Antenna radiated field type

$\theta: 69^\circ$
 $\varphi: 13^\circ$

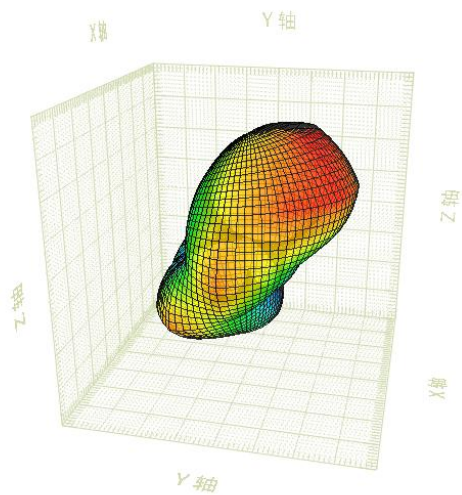


Fre(mhz): 2490
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01

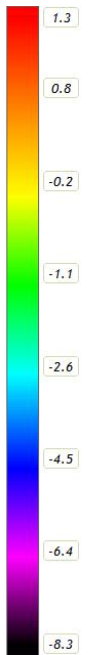


Pic10 2.490GHz Antenna radiated field type

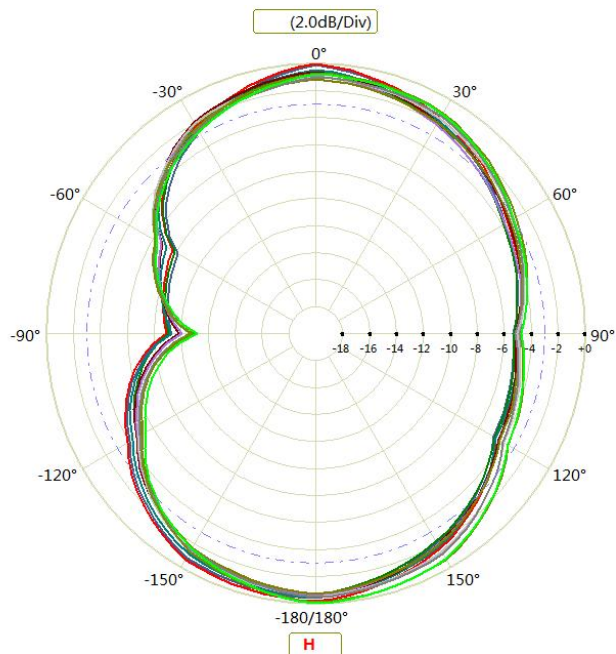
θ : 69°
 φ : 13°



Fre(mhz): 2500
MODEL:2.4
Test surfaces: 3D
port:AT0
Date:2023.12.21
Time:10:10:01

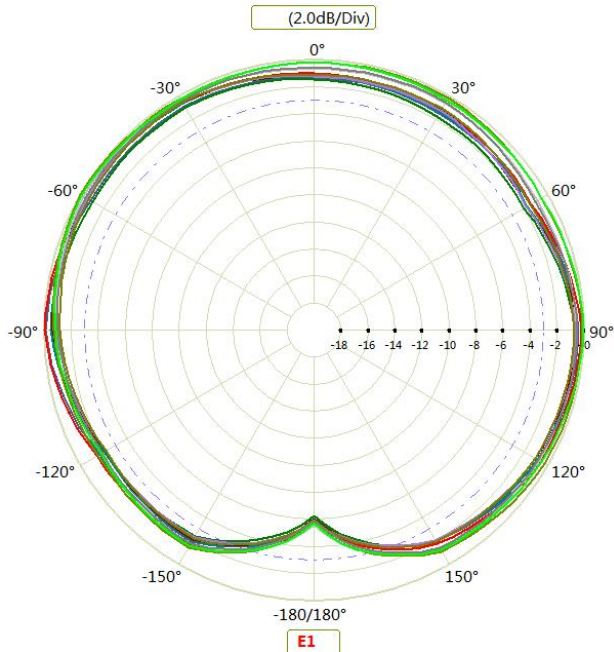


Pic11 2.500GHz Antenna radiated field type



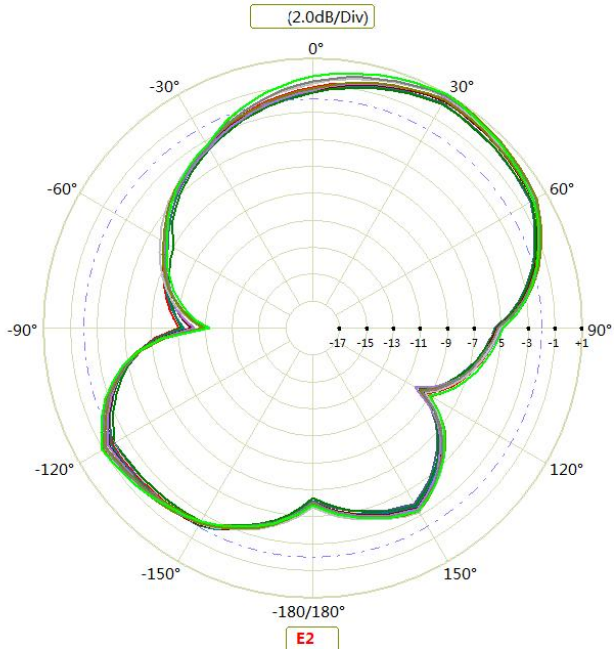
hm_1_passive_trp(h)	2500M
hm_1_passive_trp(h)	2490M
hm_1_passive_trp(h)	2480M
hm_1_passive_trp(h)	2470M
hm_1_passive_trp(h)	2460M
hm_1_passive_trp(h)	2450M
hm_1_passive_trp(h)	2440M
hm_1_passive_trp(h)	2430M
hm_1_passive_trp(h)	2420M
hm_1_passive_trp(h)	2410M
hm_1_passive_trp(h)	2400M

Pic1 H-plane antenna radiation pattern



Pic2 E1 antenna radiation pattern

vm_1_passive_trp(e1)	2500M
vm_1_passive_trp(e1)	2490M
vm_1_passive_trp(e1)	2480M
vm_1_passive_trp(e1)	2470M
vm_1_passive_trp(e1)	2460M
vm_1_passive_trp(e1)	2450M
vm_1_passive_trp(e1)	2440M
vm_1_passive_trp(e1)	2430M
vm_1_passive_trp(e1)	2420M
vm_1_passive_trp(e1)	2410M
vm_1_passive_trp(e1)	2400M



Pic3 E2 antenna radiation pattern

vm_2_passive_trp(e2)	2500M
vm_2_passive_trp(e2)	2490M
vm_2_passive_trp(e2)	2480M
vm_2_passive_trp(e2)	2470M
vm_2_passive_trp(e2)	2460M
vm_2_passive_trp(e2)	2450M
vm_2_passive_trp(e2)	2440M
vm_2_passive_trp(e2)	2430M
vm_2_passive_trp(e2)	2420M
vm_2_passive_trp(e2)	2410M
vm_2_passive_trp(e2)	2400M