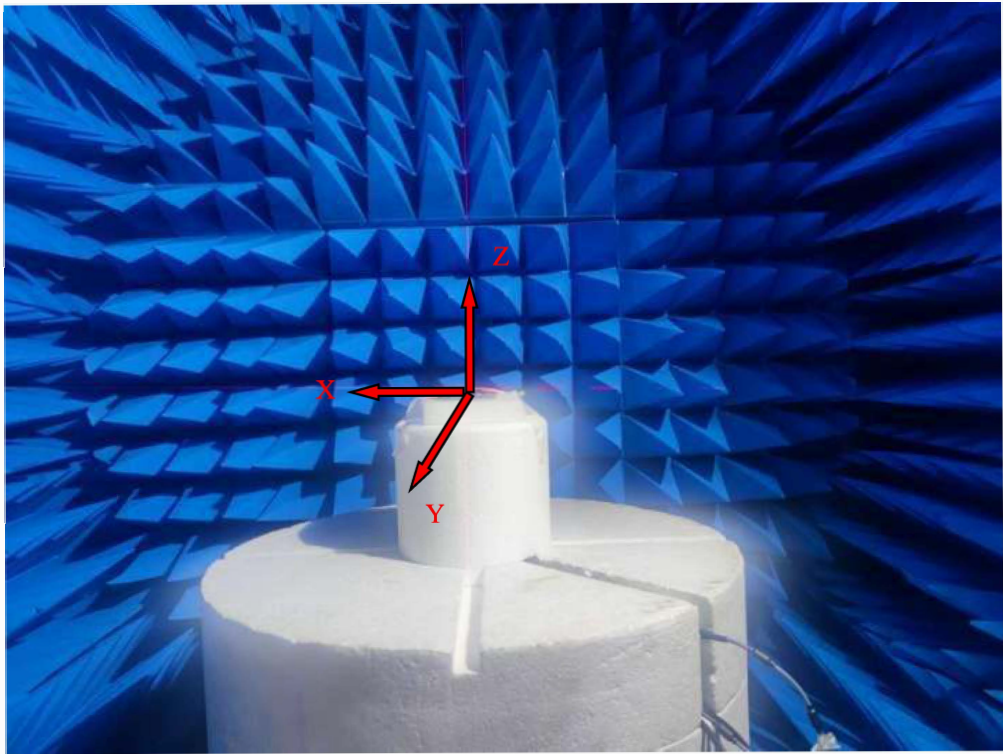


Antenn Report

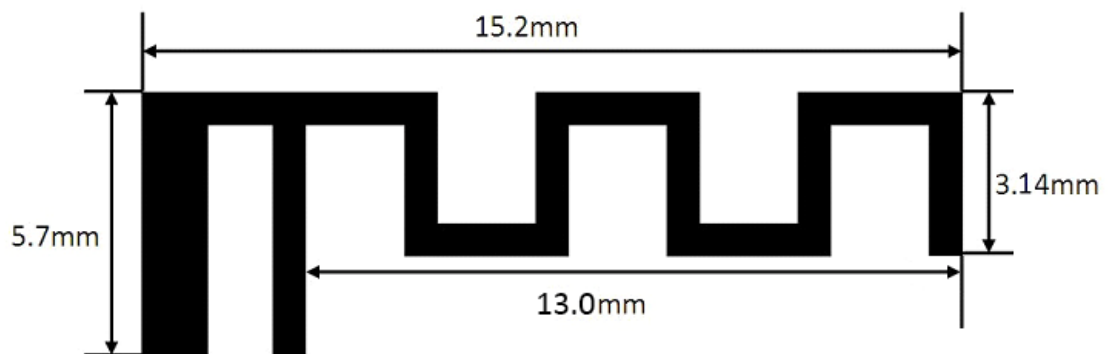
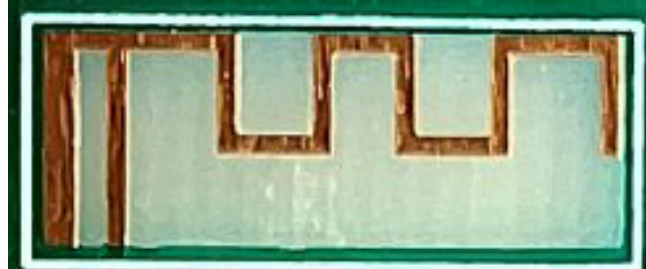
Manufacture: Hongzeng Toys Factory
Address: Lane 4, Fengxin 1st Road, Chenghai District, Shantou City, Guangdong Province, China

Frequency (MHz)	2400-2480
Peak Gain (dBi)	2.499
Average Gain (dBi)	> -4
VSWR	< 3.2
Impedance (Ω)	50 Ω
Antenna Type	PCB
Polarization	Linear

Testing environment: China Science and technology darkroom test system

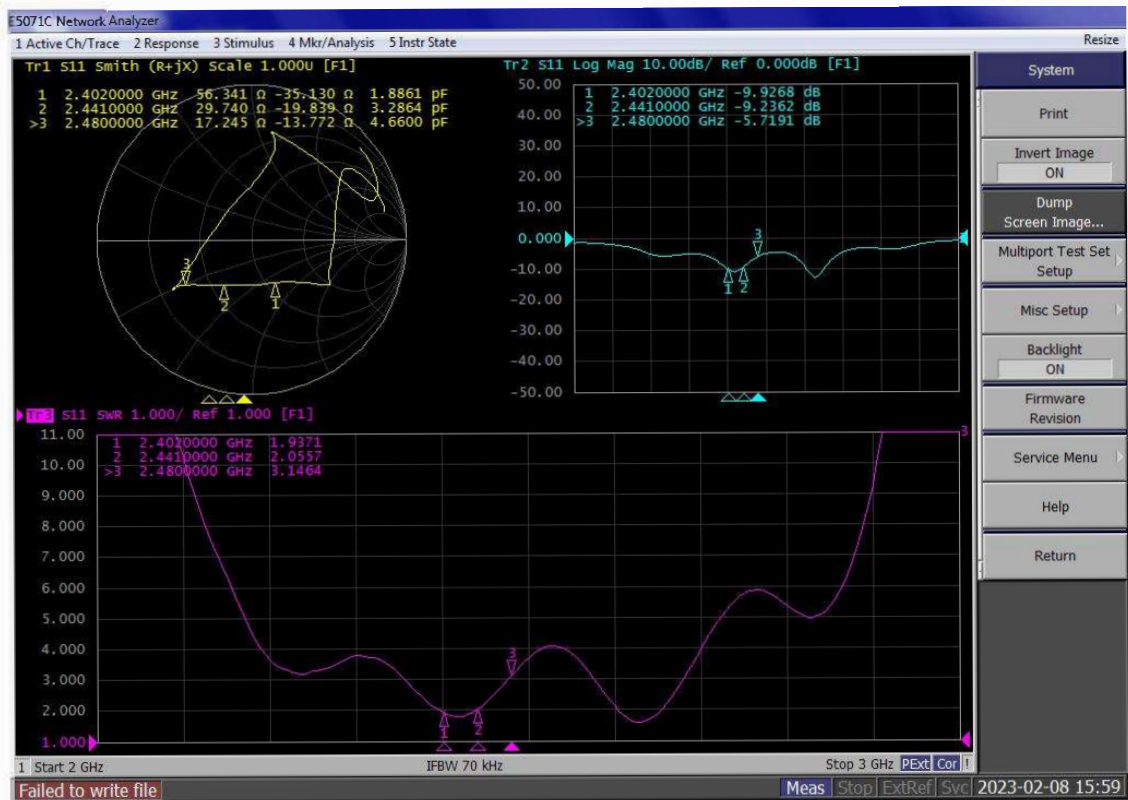


Antenna physical and physical dimensions



Antenna passive S-parameter:

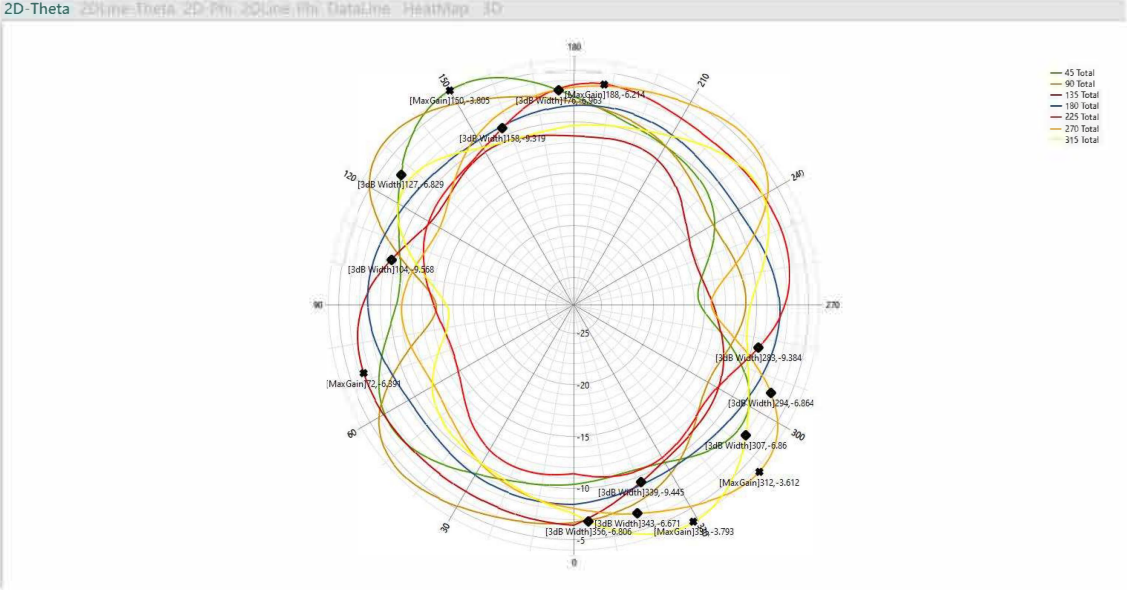
standing-wave ratio(VSWR) : RL(Retu r n Loss)and smith chart:



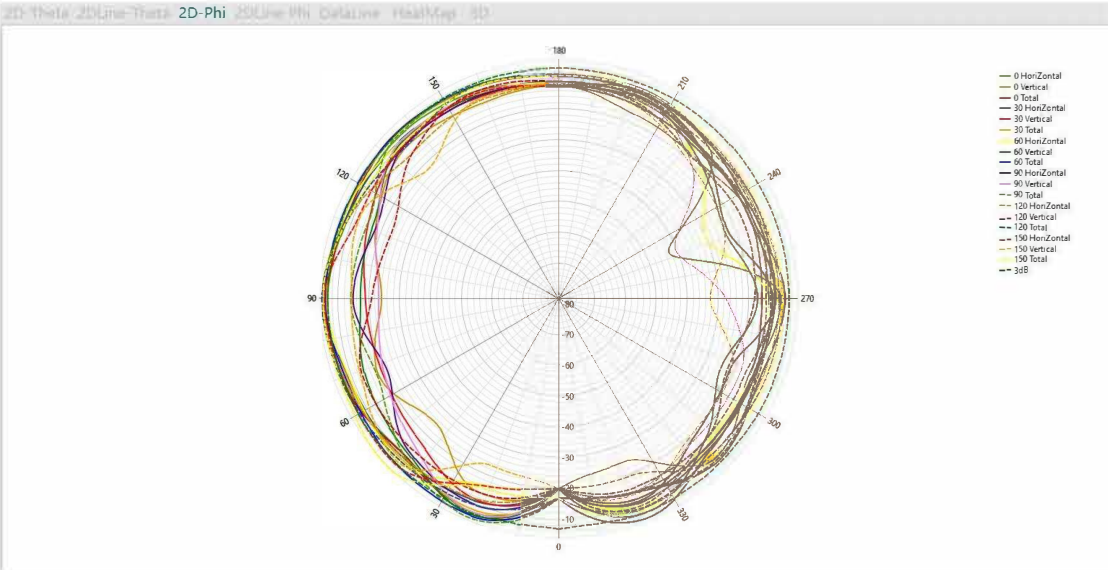
Antenna efficiency and gain:

Frequency (MHz)	Gain (dBi)	Efficiency (%)	AverageGain (dBi)	Efficiency (dB)
2400	1.433	59.329%	-2.717	-2.267
2410	0.927	51.861%	-3.416	-2.852
2420	0.829	52.112%	-3.166	-2.831
2430	0.881	49.299%	-3.258	-3.072
2440	1.192	50.672%	-3.144	-2.952
2450	1.688	53.067%	-2.735	-2.752
2460	2.194	59.423%	-2.276	-2.260
2470	2.118	56.680%	-2.438	-2.466
2480	2.499	61.727%	-2.112	-2.095
Average	1.529	54.908%	-2.806	-2.616
Peak	2.499	61.727%	-2.112	-2.095

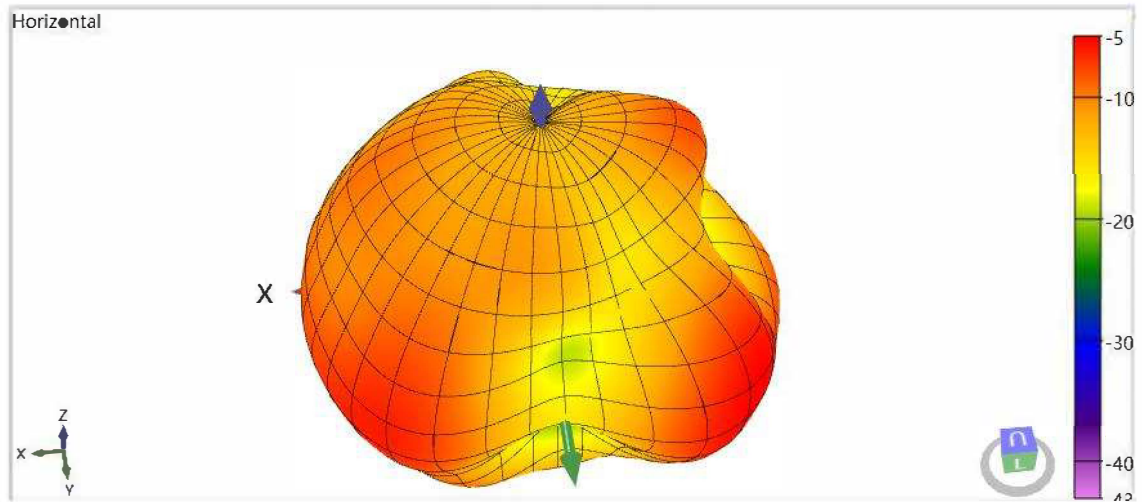
Antenna2440MHz 2D-Theta Pattern



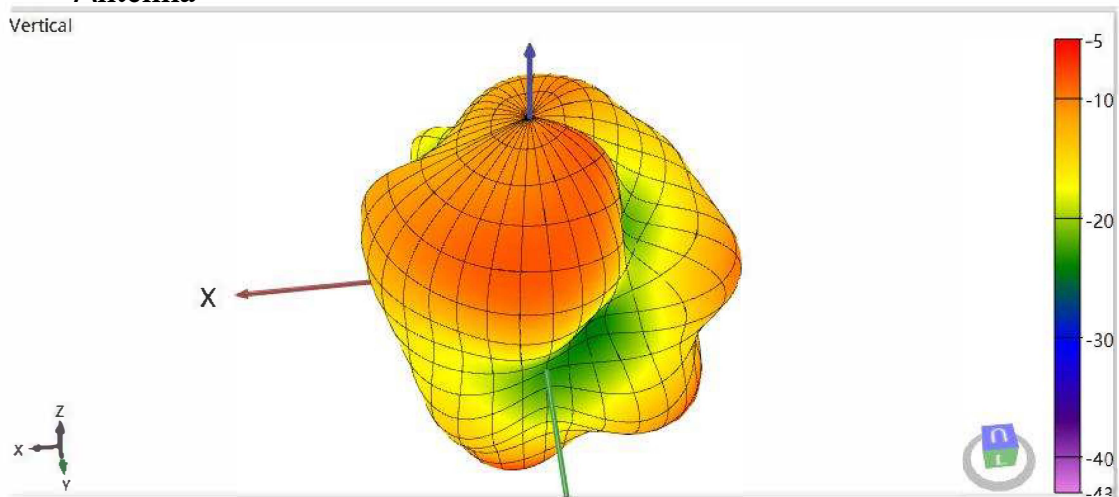
Antenna2440MHz 2D-Phi Pattern



Antenna 2440MHz 3D-Horizontal Pattern



Antenna 2440MHz 3D-Vertical Pattern



2440MHz 3D-Total Pattern

