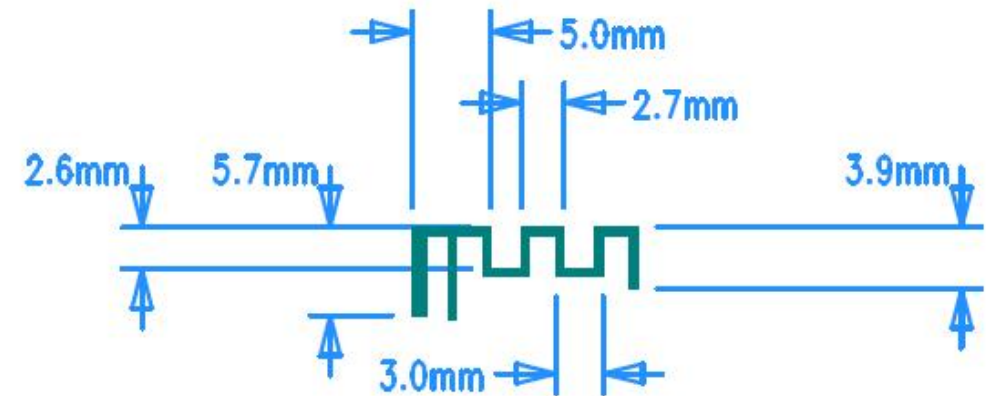


Product specification

1. Type of antenna: PCB Antenna
(Antenna module on the system board)

Type of antenna	Onboard antenna module F type
manufacturer	Topway EM Enterprise Ltd.
address	8F., Block B, Building 6, Baoneng Science and technology park, Qingxiang RD., Qinghu Industrial Park, Longhua New District, Shenzhen, China 518109

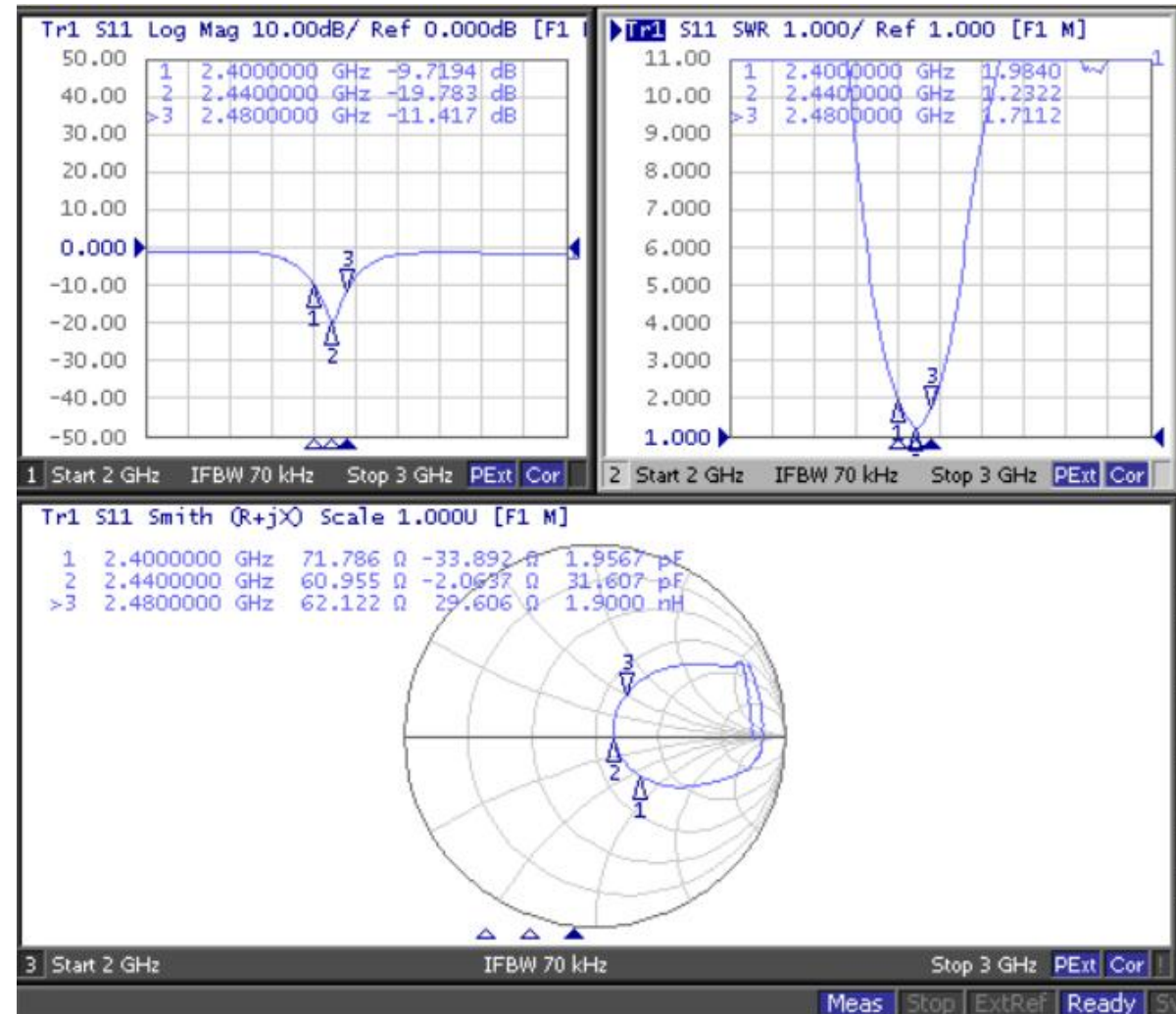


2. Electrical Characteristics

No.	Item	Specifications
1	Frequenc Range	2400 ~ 2500MHz
2	Band Width	100MHz typ.
3	The average gain	0.7 dBi
4	max gain	0.89 dBi
5	V. S. W. R	≤ 2.0
6	Polarization	Linear
7	Azimuth Beam width	Omni-directional
8	Impedance	50 Ω

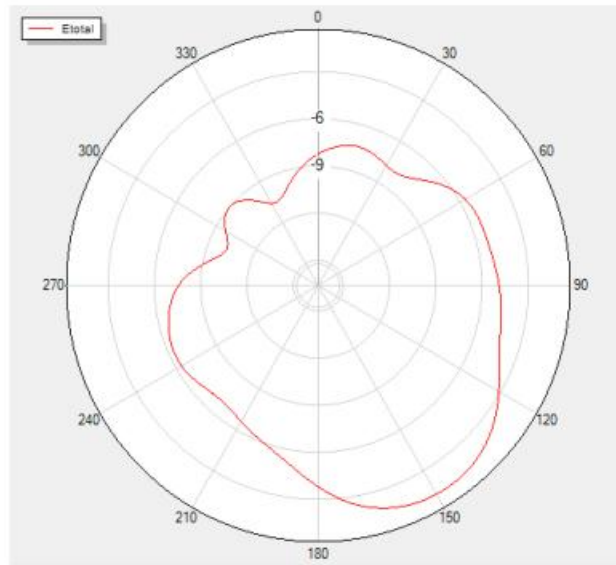
All the technical data and information contained herein are subject to change without prior notice

3. Return Loss

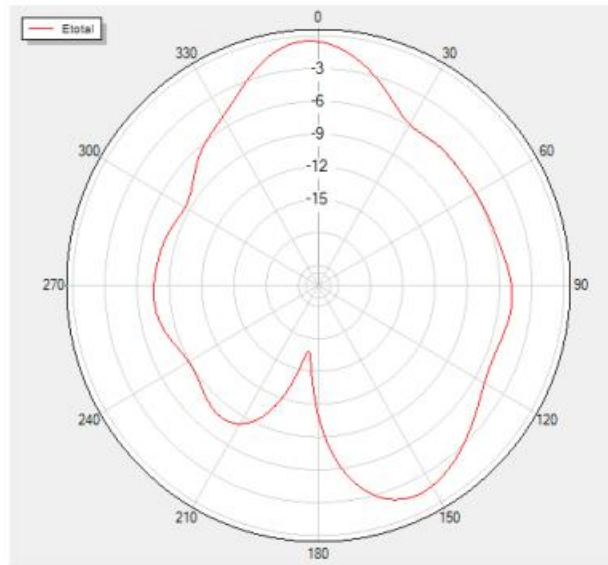


4. Radiation Pattern

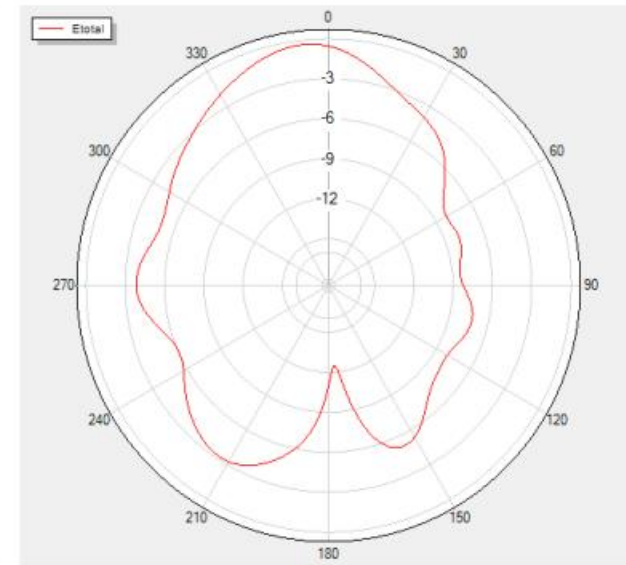
Theta=90 Freq=2400MHz



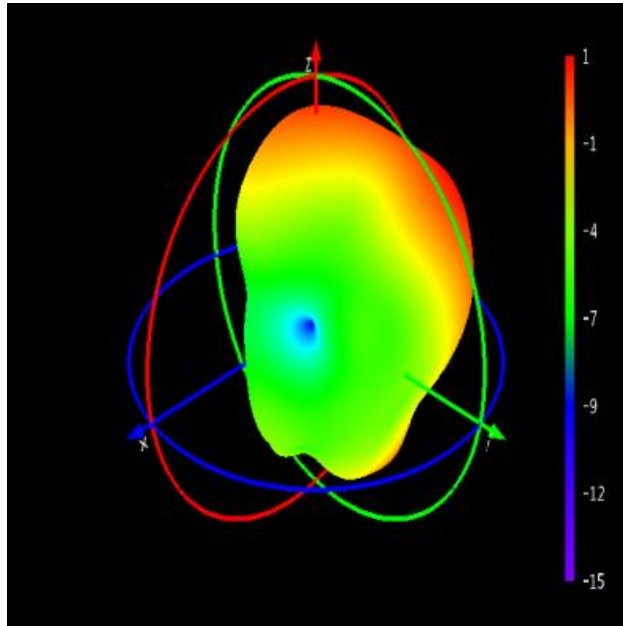
Phi=90 Freq=2400MHz



Phi=0 Freq=2400MHz



3D Radiation Pattern



Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	0.76	0.89	0.14
Efficiency (%)	33.69	35.79	34.57