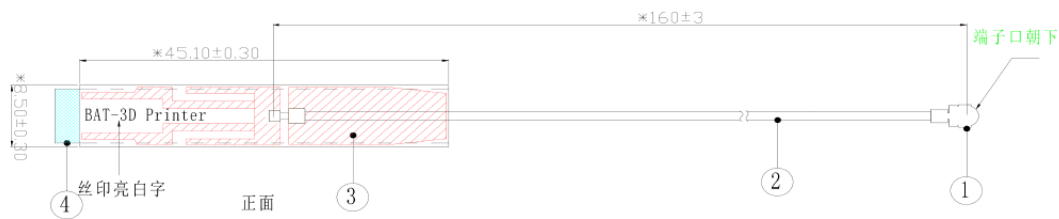


Specification For Approval

Client:	Shining 3D Tech Co., Ltd. No. 1398, Xiangbin Road, Wenyan, Xiaoshan, Hangzhou, Zhejiang, P.R. China
Supplier	Gaoke Ant Co., Ltd. 3rd Floor, Building c, Longdong First Industrial Zone, No. 163, Yinglong Road, Tianhe District, Guangzhou City, Guangdong China
Customer P/N	74300063
Production Name	2.4&5G Internal antenna

Construction design



Technical parameters

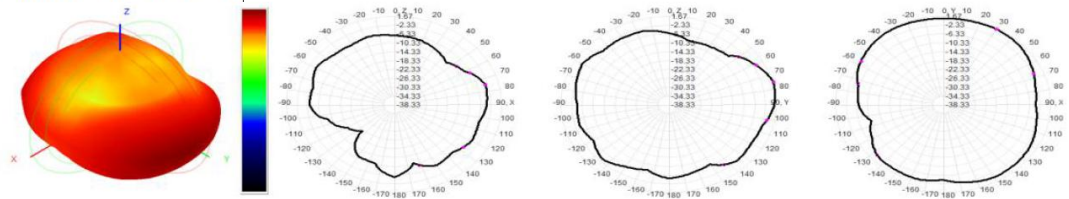
Design Specifications	Typical
Antenna Type	internal antenna (FPC)
working Frequency	2400-2500MHz, 5150-5850MHz
Gain	2.47dBi Max@2400-2500MHz 3.52dBi Max@5150-5250MHz 4.28dBi Max@5725-5850MHz
VSWR	≤3.70
Polarization	H/V
Radiation pattern	Omni
impedance	50Ω
Power handling	33dBm
Weight	≤5g
Operating Temp	-40°C~85°C

Standing wave ratio & return loss diagram

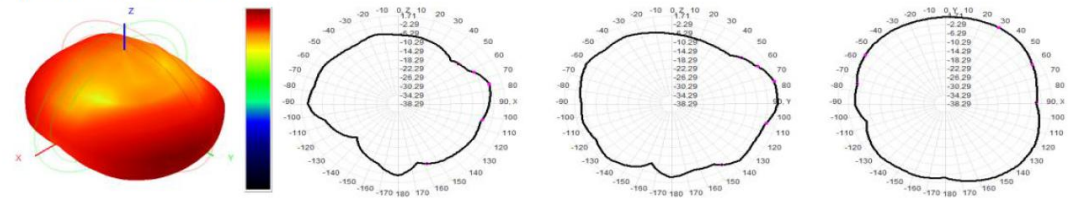


Radiation pattern (3D&2D)

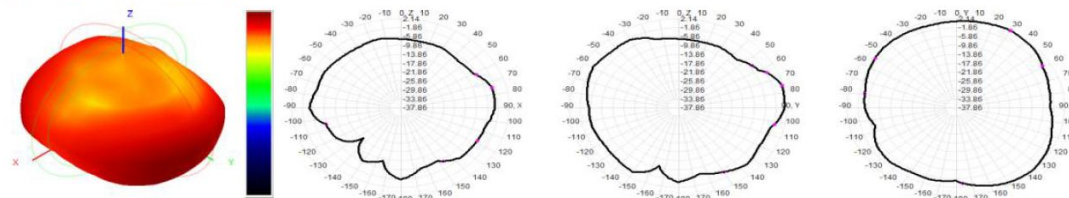
2400M 3D-E1-E2-H



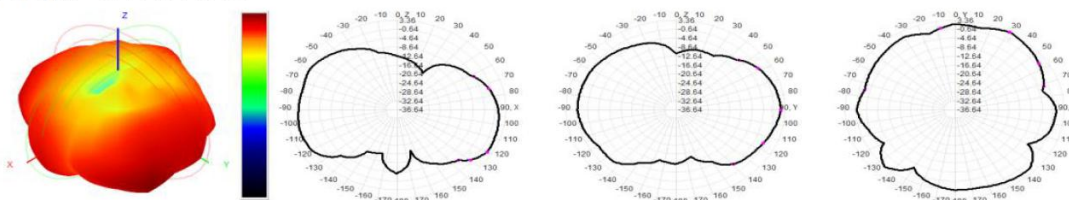
2450M 3D-E1-E2-H



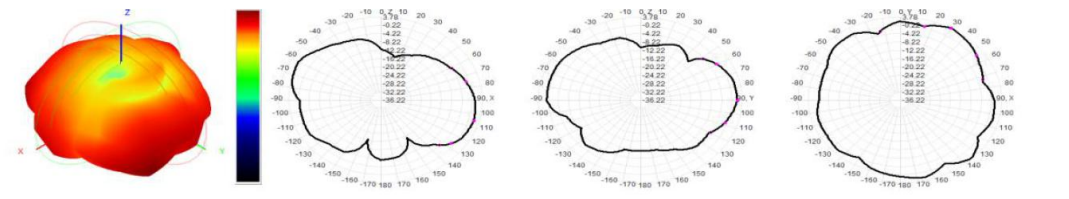
2500M 3D-E1-E2-H



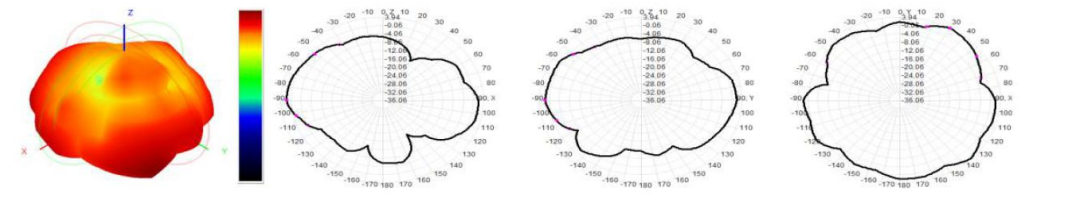
5150M 3D-E1-E2-H



5500M 3D-E1-E2-H



5850M 3D-E1-E2-H



Antenna Gain List:

Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400.0	2.40	42.51
2410.0	2.28	42.72
2420.0	2.19	43.45
2430.0	2.17	43.92
2440.0	2.11	43.19
2450.0	2.23	43.20
2460.0	2.35	43.49
2470.0	2.47	44.22
2480.0	2.31	43.09
2490.0	2.24	43.59
2500.0	2.24	45.38
5150.0	3.36	51.35
5200.0	3.52	52.10
5250.0	3.30	50.30
5300.0	2.99	49.81
5350.0	3.25	52.05
5400.0	3.13	47.06
5450.0	3.39	47.24
5500.0	3.88	50.67
5550.0	3.78	50.84
5600.0	3.78	51.75
5650.0	4.09	54.19
5700.0	4.28	55.82
5750.0	4.03	52.24
5800.0	3.98	52.17
5850.0	3.94	54.15