

SC001BT/A Antenna Specification

Summary

Model	2.4GHz Antenna
Type	Monopole
Frequency	2400MHz~2485GHz
Gain	Average Gain 0.5dBi ; Max Gain 1.12 dBi
Direction	Omni-directional
Impedance	50 Ohm
Polarization	Horizontal and Vertical

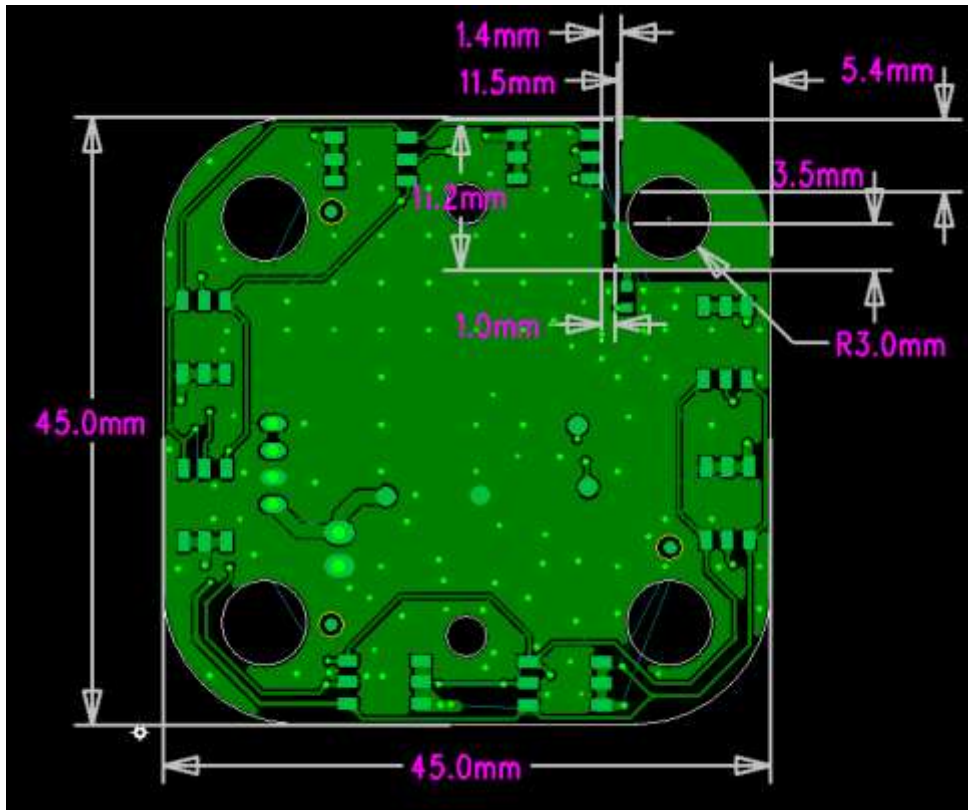
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Shenzhen, Guangdong Province, China

Antenna pattern and Size

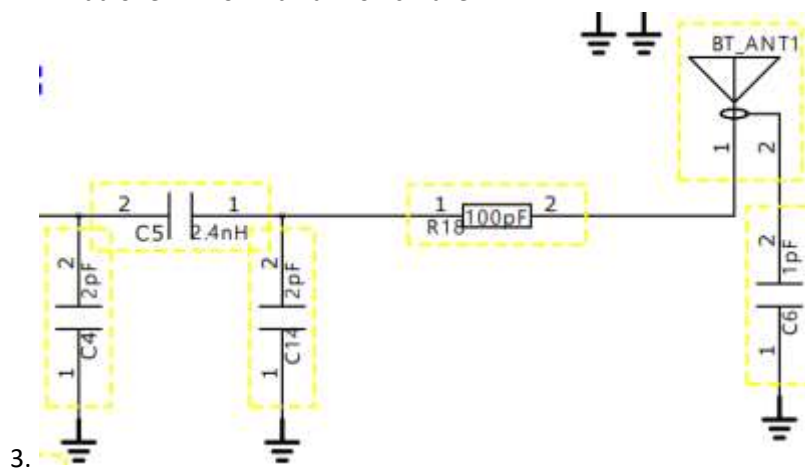
1. Antenna Size

11.5mm*11.2mm ; PCB layout H= 1.2mm; PCB material: FR4 $\epsilon_r = 4.25$



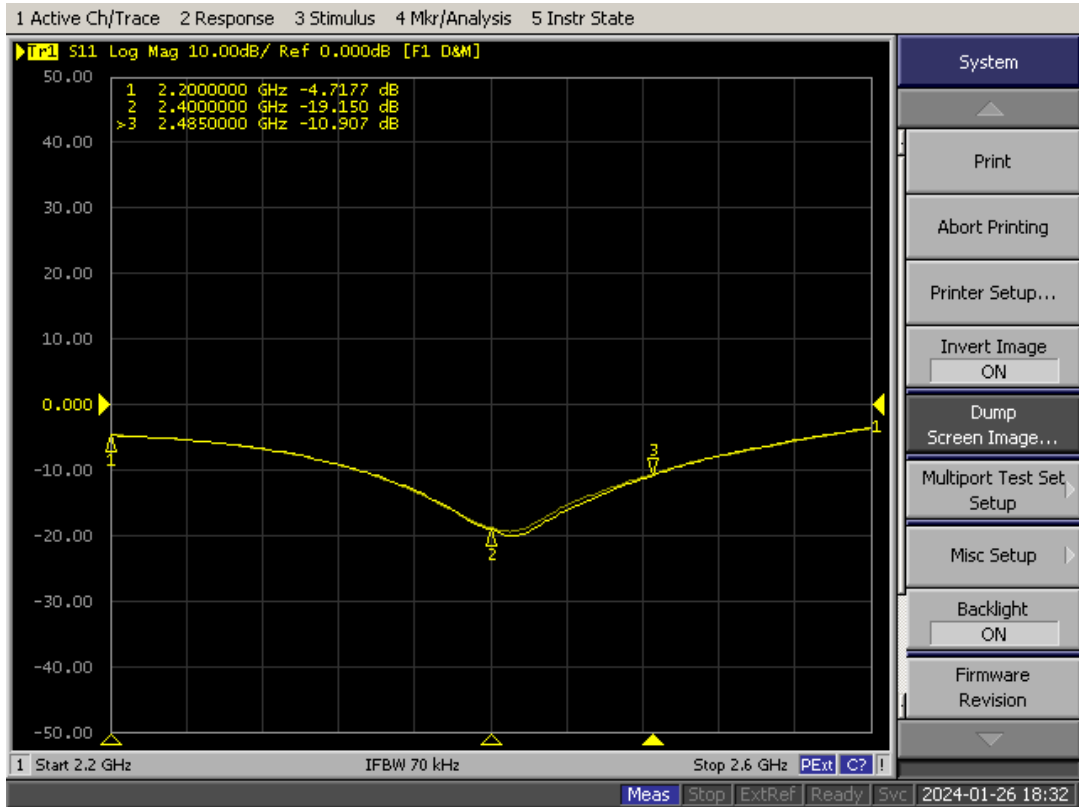
2. Antenna Matching circuit

Add one LPF for 2rd harmonic wave.



二、Antenna Performance

1. VSWR

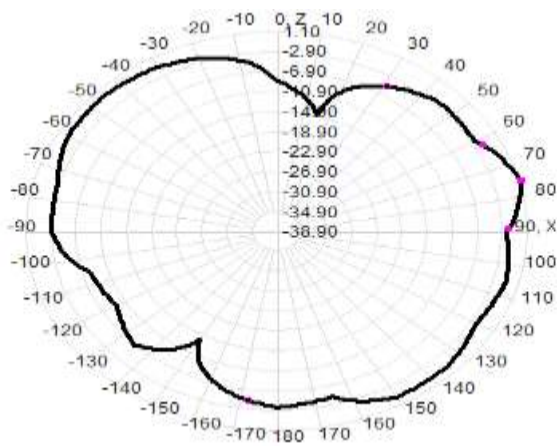


2. Gain and Directional

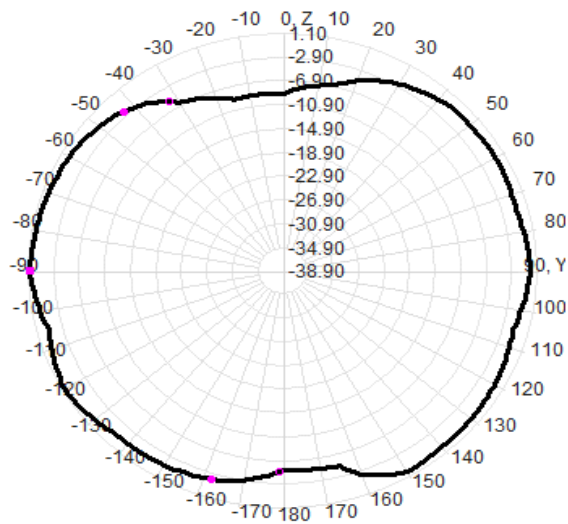
Frequency ID	1	2	3	4	5	6
Frequency (MHz)	2400.0	2420.0	2440.0	2460.0	2480.0	2500.0
Efficiency (dBi)	-1.71	-2.59	-3.19	-2.93	-3.39	-4.12
Gain (dBi)	1.12	0.44	0.05	0.11	-0.37	-0.92
Efficiency (%)	67.47	55.05	47.97	50.91	45.77	38.71
Directivity (dB)	2.83	3.03	3.24	3.04	3.02	3.20
Peak Gain Position (Theta)	75.00	75.00	75.00	75.00	75.00	90.00
Peak Gain Position (Phi)	345.00	0.00	0.00	0.00	0.00	285.00
Efficiency ThetaPol (%)	51.83	44.47	40.53	42.19	37.57	31.67
Efficiency PhiPol (%)	15.64	10.58	7.45	8.72	8.20	7.03
Upper Hem. Efficiency (%)	35.41	29.58	26.72	28.56	25.50	21.55
Lower Hem. Efficiency (%)	32.06	25.48	21.25	22.35	20.27	17.16

2.1 2.4GHz Test result

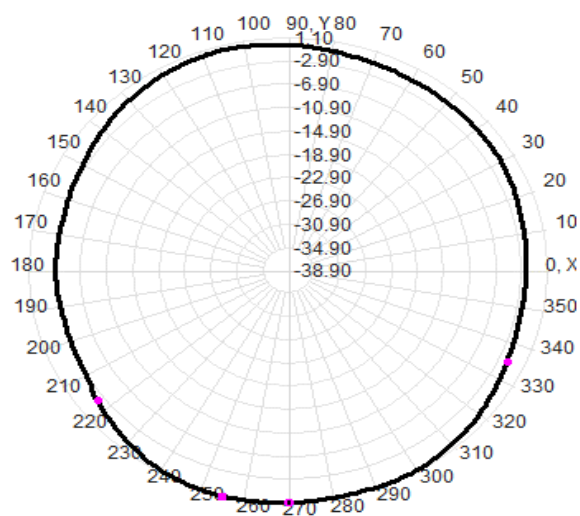
2400.0MHz Total(E1-XZ), Max= 1.10dBi



2400.0MHz Total(E2-YZ), Max= 0.78dBi

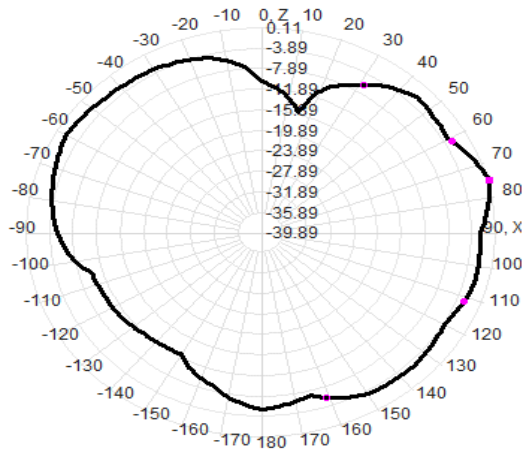


Total(H-XY), Max= 1.06dBi, CirD=4.46

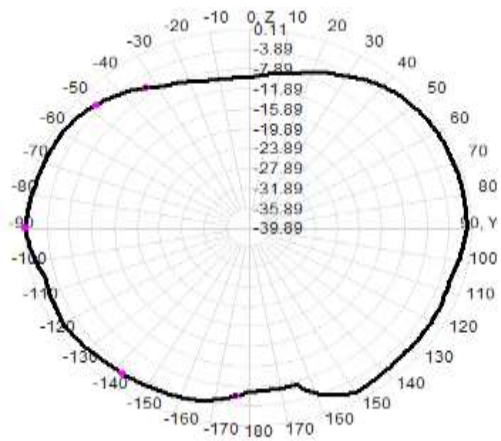


2.2 2.46GHz Test result

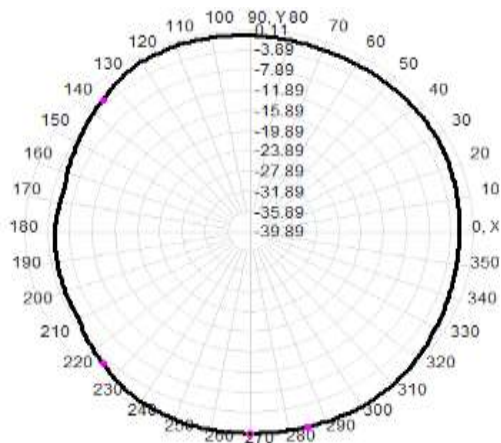
2460.0MHz Total(E1-XZ), Max= 0.11dBi



2460.0MHz Total(E2-YZ), Max= -0.05dBi

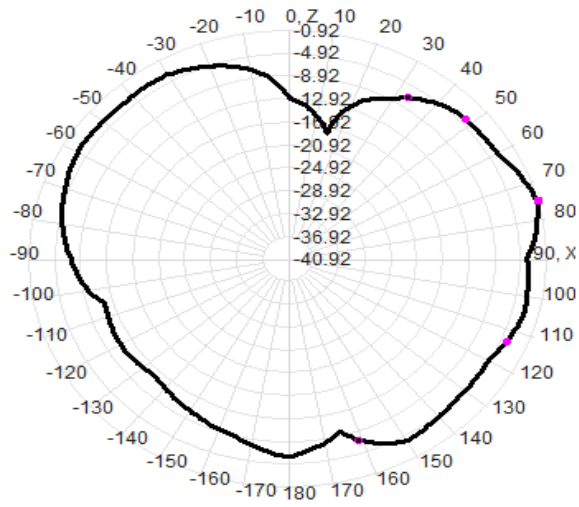


Total(H-XY), Max= 0.06dBi, CirD=5.96

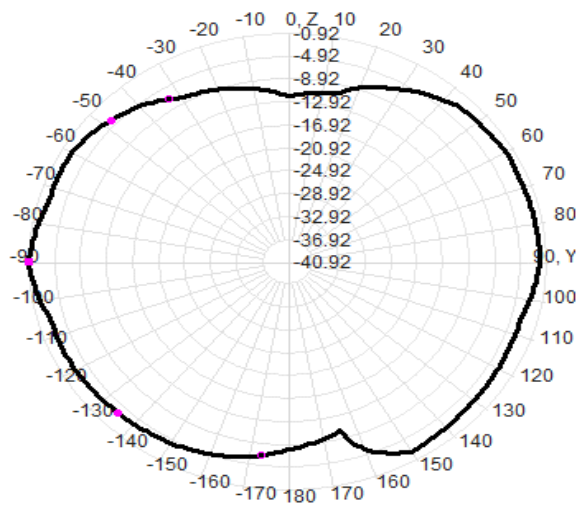


2.3 2.5GHz Test result

2500.0MHz Total(E1-XZ), Max= -1.26dBi



2500.0MHz Total(E2-YZ), Max= -0.95dBi



Total(H-XY), Max= -0.92dBi, CirD=7.68

