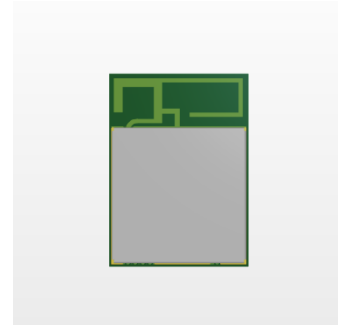


1. Description

BDE-ANT-BW33PA is an integrated PCB trace antenna designed for BDE-BW33PA module series, including but not limited to the below part numbers:

- BDE-BW3301AP1
- BDE-BW3300AP1
- BDE-BW3351AP1
- BDE-BW3350AP1

The dimension of the antenna area is 13.3mm x 5mm.



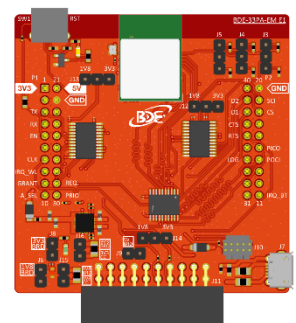
2. Specifications

Electrical	
Frequency (MHz)	2400 - 2500, 4190 - 5850
Efficiency	28% @ 2.4G band
	44% @ 5G band
Peak Gain	-2.2dBi @ 2.4G band
	0.7dBi @ 5G band
Impedance	50 ohm
Polarization	Linear
Radiation	Omni-directional
Mechanical	
Dimension	13.3mm x 5mm x 0.6mm
PCB Substrate	FR4
Environmental	
Temperature Range	-40°C to 85°C

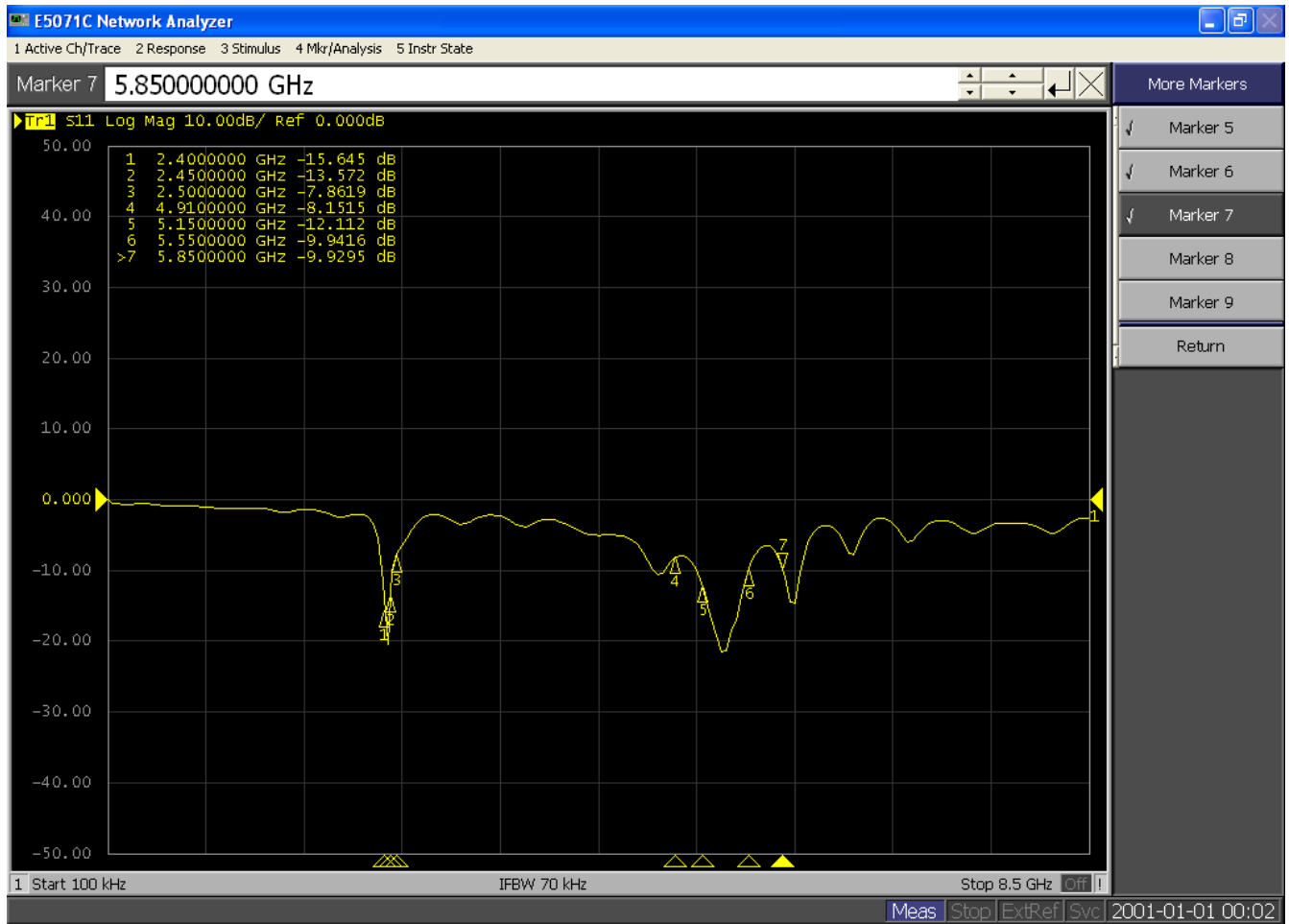
3. Antenna Characteristics

The antenna characteristics data are measured with the module sitting on the evaluation board as the picture on the right shows.

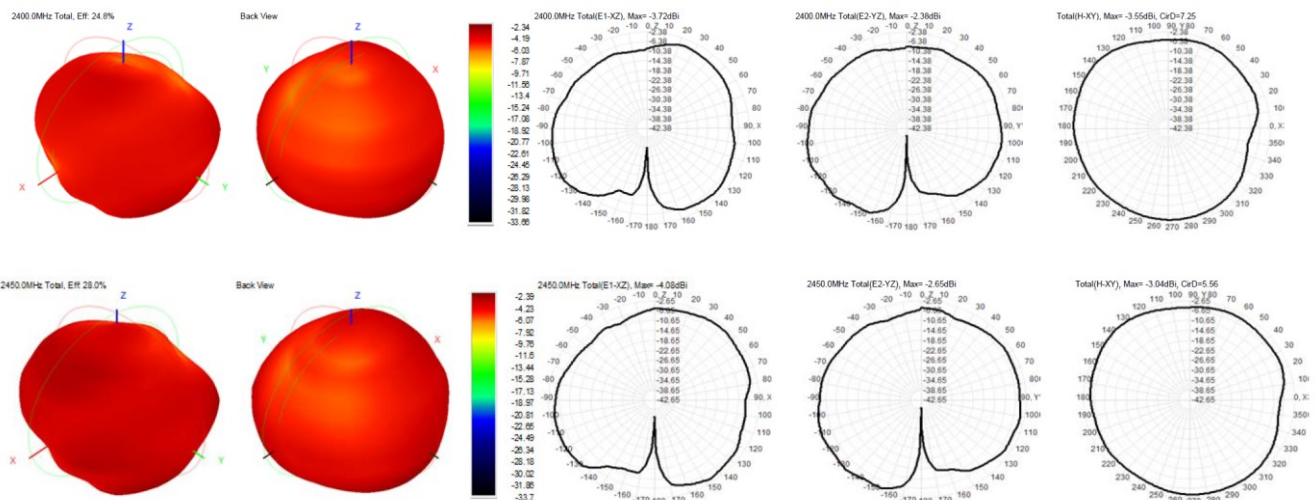
The dimension of the evaluation board is 59mm x 59mm x 1.6mm.

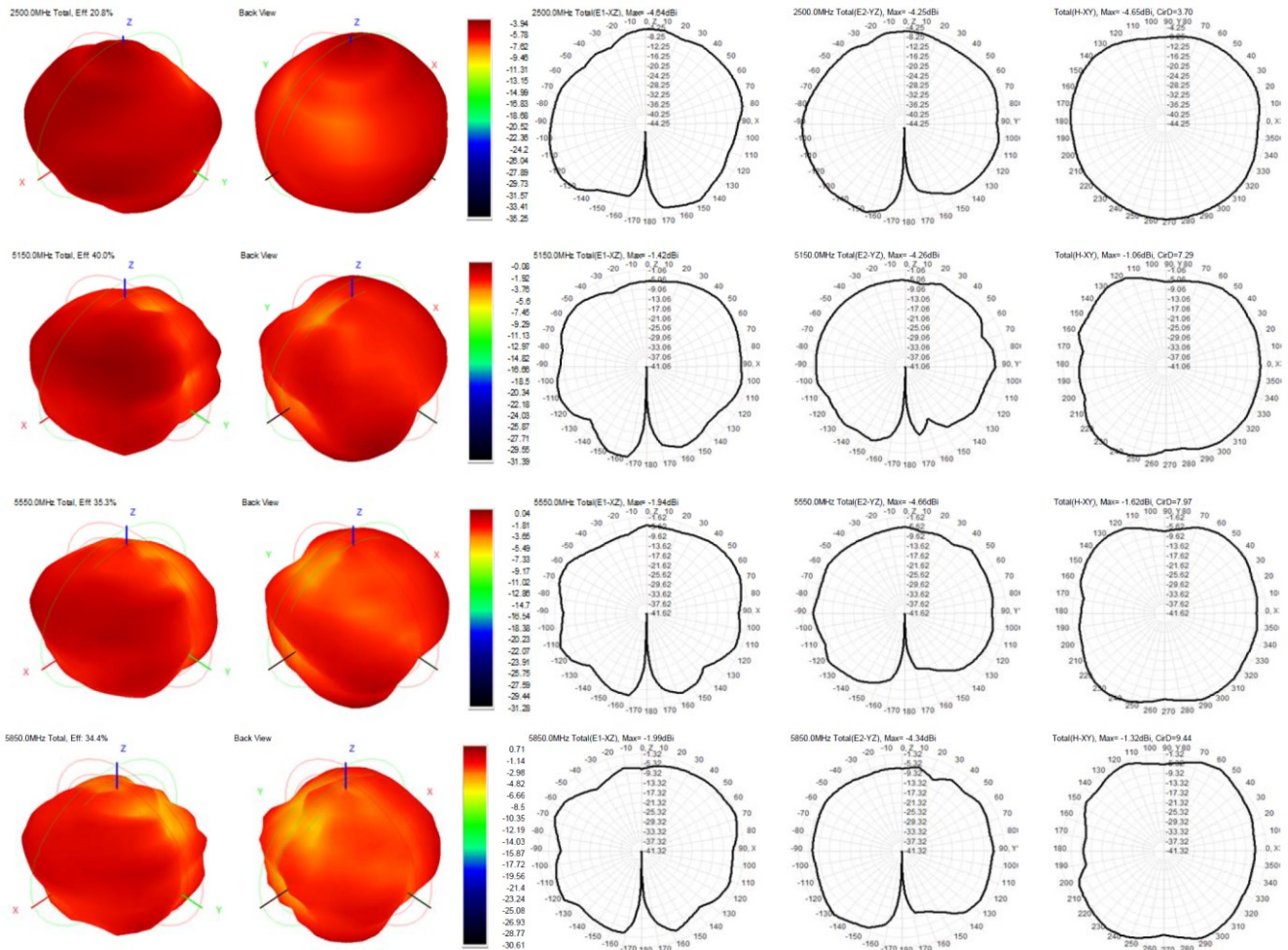


3.1 Return Loss



3.2 Radiation Pattern





3.3 Efficiency and Gain

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2.4G Band		
2400	25	-2.3
2410	26	-2.1
2420	27	-2.4
2430	28	-2.4
2440	28	-2.2
2450	28	-2.4
2460	28	-2.6
2470	26	-2.9
2480	23	-3.3
2490	22	-3.3
2500	21	-3.9
5G Band		
5150	40	-0.1

Frequency (MHz)	Efficiency (%)	Gain (dBi)
5250	44	0.5
5350	43	0.7
5450	40	0.5
5550	35	0
5650	30	-0.7
5750	32	0.4
5850	34	0.7

4. Revision History

Revision	Remark	Date
V1.0	Initial release	2024/6/3

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Contact

BDE Technology Inc.

USA: 67 E Madison St, # 1603A, Chicago, IL 60603, US

Tel: +1-312-379-9589

China: B2-403, 162 Science Avenue, Huangpu District, Guangzhou 510663, China

Tel: +86-20-28065335

Website: www.bdecomm.com

Email: info@bdecomm.com