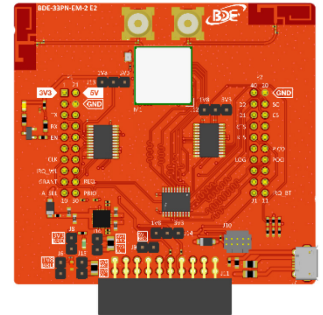


1. Description

BDE-ANT-BW33P2 is an integrated PCB trace antenna designed for BDE-BW330P2 and BDE-BW335P2 module series, including but not limited to the below part numbers:

- BDE-BW3301NP2
- BDE-BW3300NP2
- BDE-BW3351NP2
- BDE-BW3350NP2

The dimension of the antenna area is 15.0mm x 5.0mm.



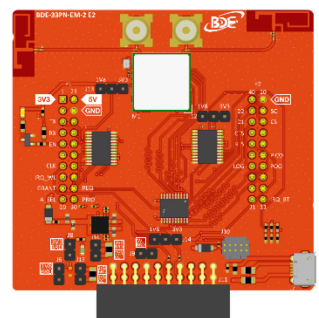
2. Specifications

Electrical	
Frequency (MHz)	2400 – 2500, 4190 – 5850
Efficiency	41.90% @ 2.4G band
	60.42% @ 5G band
Peak Gain	0.78dBi @ 2.4G band
	1.41dBi @ 5G band
Impedance	50 ohm
Polarization	Linear
Radiation	Omni-directional
Mechanical	
Dimension	15.0mm x 5.0mm x 1.6mm
PCB Substrate	FR4
Environmental	
Temperature Range	-40°C to 85°C

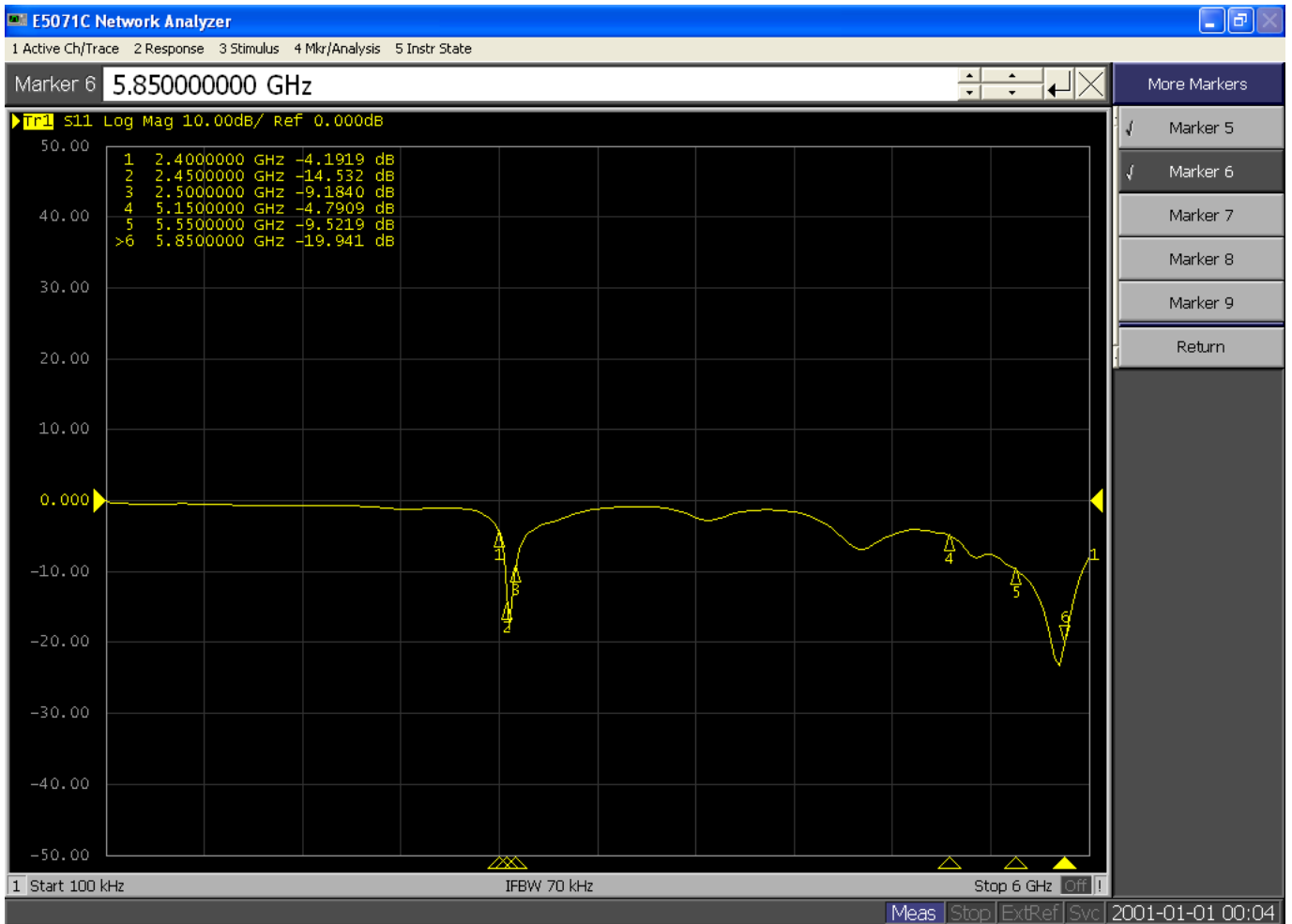
3. Antenna Characteristics

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

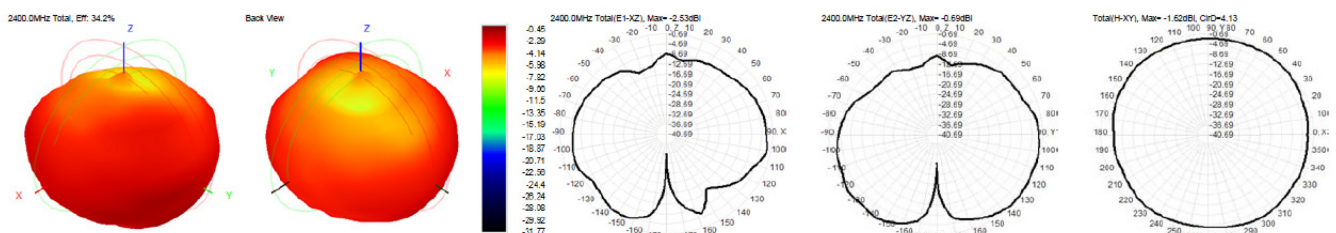
The dimension of the evaluation board is 68.5mm x 64mm x1.6mm.

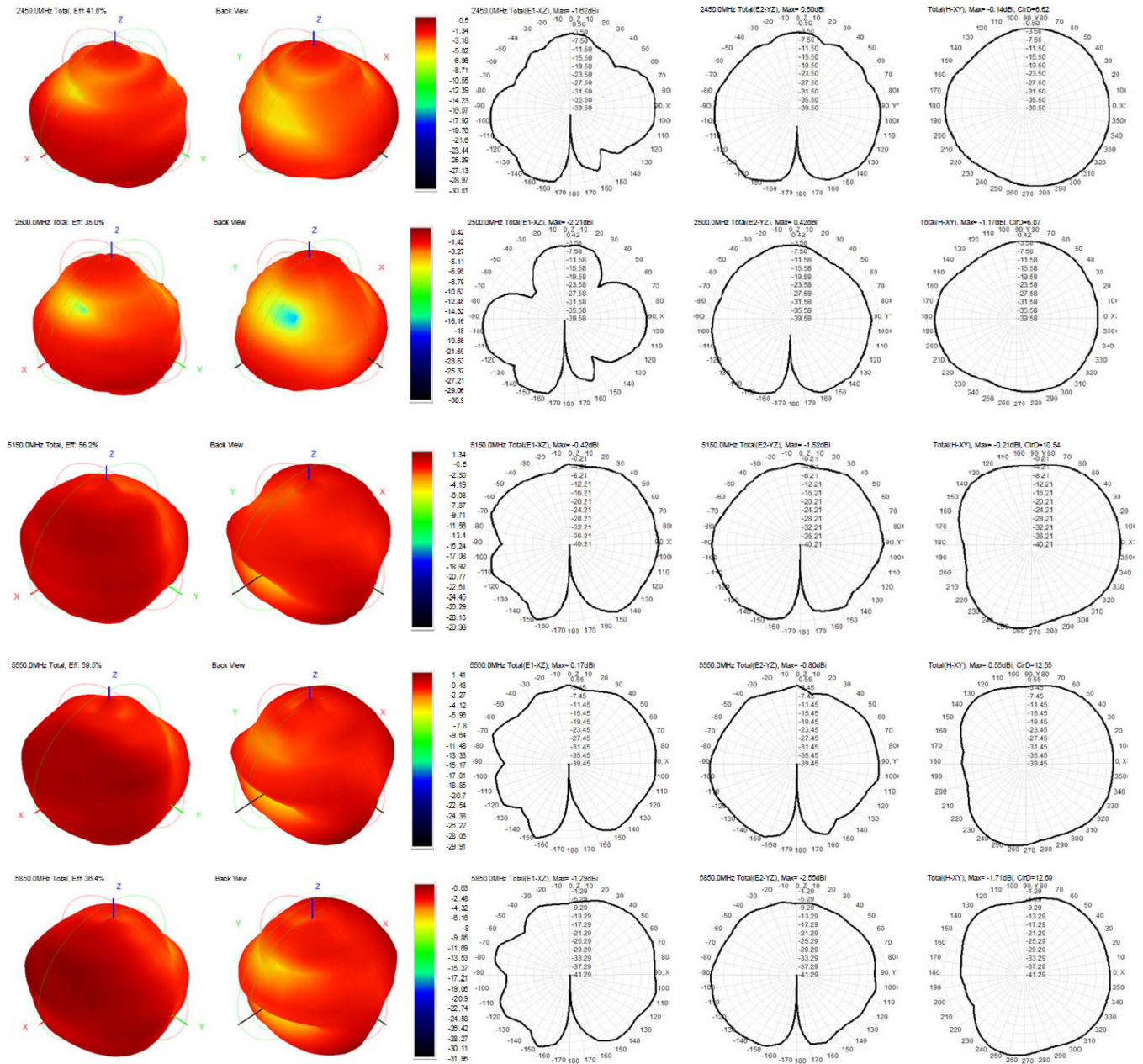


3.1 Return Loss



3.2 Radiation Pattern





3.3 Efficiency and Gain

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2.4G Band		
2400	34.24	-0.45
2410	35.91	0.06
2420	36.69	-0.10
2430	38.53	-0.02
2440	40.93	0.27
2450	41.55	0.50
2460	41.90	0.56
2470	40.29	0.57

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2480	37.25	0.71
2490	37.18	0.78
2500	35.03	0.42
5G Band		
5150	56.19	1.34
5250	48.91	0.45
5350	47.61	0.43
5450	45.70	0.12
5550	59.46	1.41
5650	46.90	0.60
5750	49.85	0.58
5850	36.44	-0.63

4. Revision History

Revision	Remark	Date
V1.0	Initial release	2024/9/24

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