

1. Description

BDE-FPC25-4017-120F1 is a 2.4G & 5G dual band FPC dipole antenna.

The antenna is designed with an FPC (Flexible Printed Circuit) board and 3M adhesive, along with a 120mm long coaxial cable with an IPEX MHF I female connector. It can be easily attached to flat or curved enclosures with flexibility, ensuring maximum antenna radiation performance

Typical applications include:

- Bluetooth/ZigBee/2.4G ISM
- Wi-Fi
- Gateways/Routers
- IoT Solutions

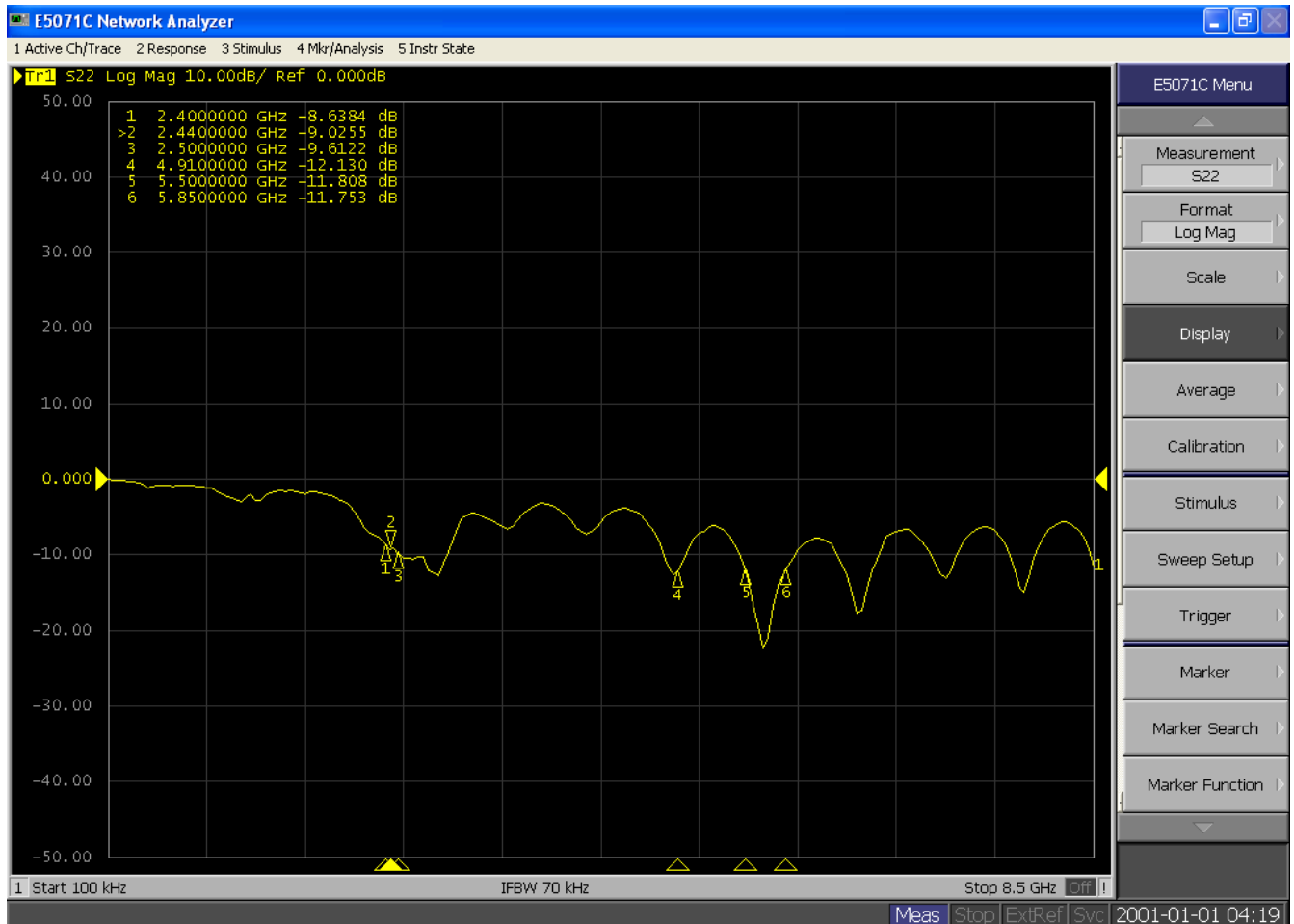


2. Specifications

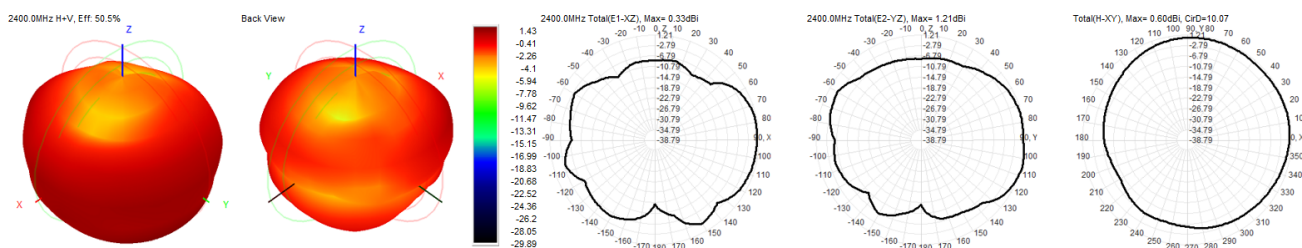
Electrical	
Frequency (MHz)	2400 - 2500, 4190 - 5850
Efficiency	52% @ 2.4G band
	40% @5G band
Peak Gain	1.5dBi @ 2.4G band
	2.9dBi @ 5G band
Impedance	50 ohm
Polarization	Linear
Radiation	Omni-directional
Mechanical	
Dimension	40mm x 17mm
Adhesive	3M 300 LSE
Color	Black
Connector	120mm coaxial cable with IPEX MHF I (U.FL) female connector
Weight	0.7g
Environmental	
Temperature Range	-40°C to 85°C

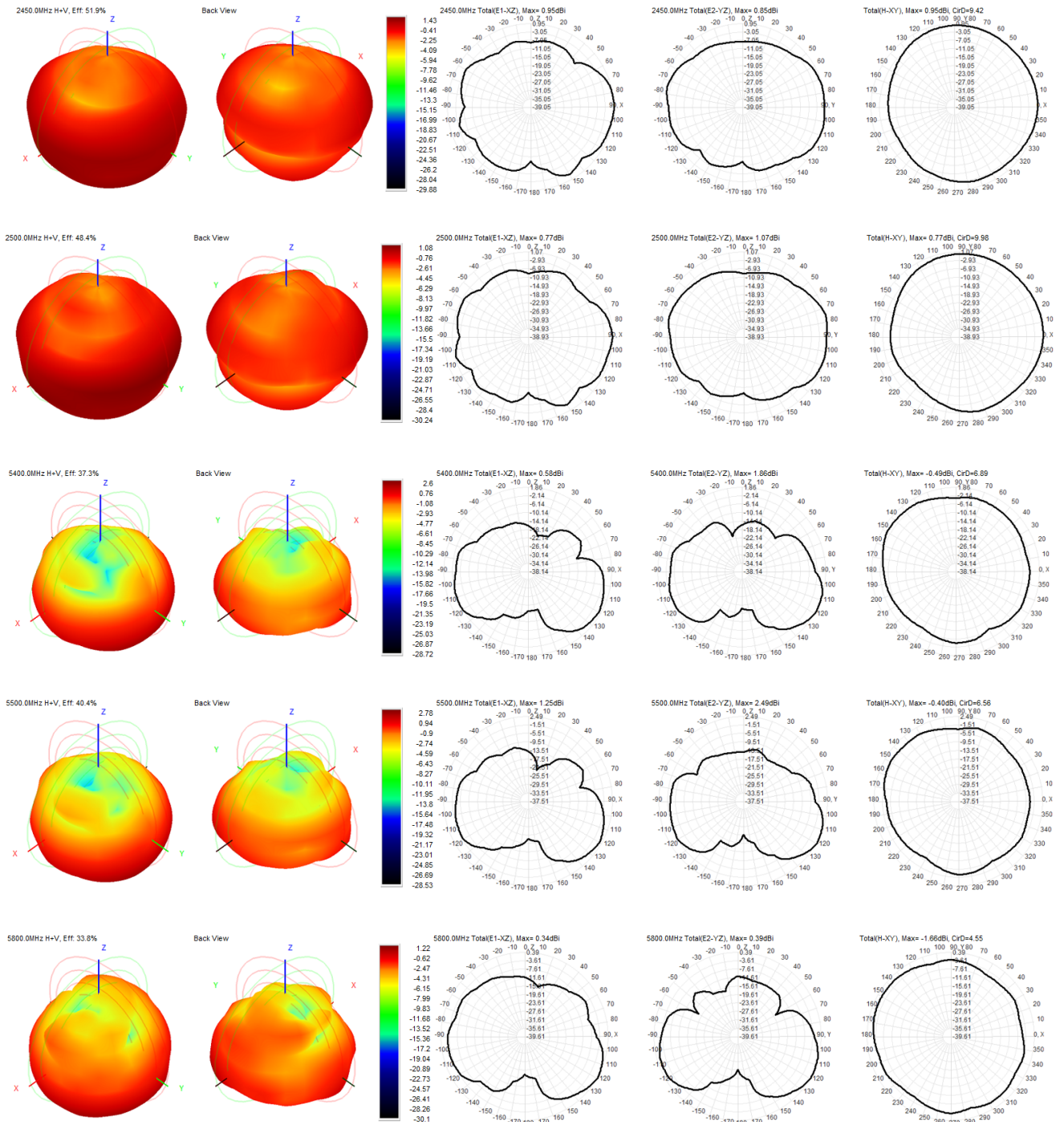
3. Antenna Characteristics

3.1 Return Loss



3.2 Radiation Pattern



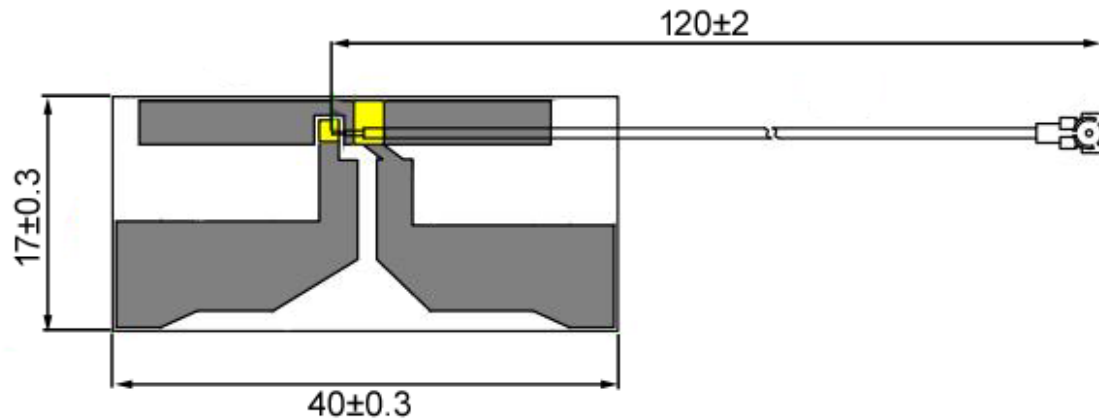


3.3 Efficiency and Gain

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2.4G Band		
2400	51	1.4
2410	51	1.4
2420	51	1.4
2430	50	1.5

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2440	50	1.4
2450	52	1.4
2460	51	1.2
2470	50	1.0
2480	49	0.9
2490	49	1.1
2500	48	1.1
5G Band		
5450	40	2.9
5550	40	2.7
5650	37	2.1
5750	35	1.1
5850	33	0.8

4. Mechanical Drawing



All dimensions are in millimeter.

5. Ordering Information

Orderable Part Number	Description
BDE-FPC25-4017-120F1	2.4G & 5G dual band FPC dipole antenna with 120 mm U.FL cable

6. Revision History

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

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