

Innovation

Expert

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Angeei

DATA SHEET

Customer Name:

Product Model: SC50

Customer P/N:

Specifications: 2.4G & 5G 内置 FPC 天线
RF1.13 红色双锡线, 总线长 L=48mm

Angeei P/N: FD243025-001

Date Prepared: 2024.11.26

Revision: A3

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Version Information

Version	Date	Author	Note
A0	July 1, 2024	Shirley	Initial Draft
A1	August 8, 2024	Shirley	Update Drawing
A2	August 12, 2024	Shirley	Update Drawing
A3	November 26, 2024	Shirley	Update Drawing

1. Product Description

Model FD243025-001 is a dual band antenna which has features of easy integration, can be directly connected to the product. The connector can be customized according to customer's request.

2. Features

The model FD243025-001 antenna is defined by following features:

- IEEE 802.11 a/b/g/n/ac/ax/be standards
- 0.5dBi peak gain@2.412GHz, 0.8dBi peak gain@2.437GHz, 0.8dBi peak gain@2.462GHz, 3.6dBi peak gain@5.18GHz, 4.2dBi peak gain@5.32GHz, 4.1dBi peak gain@5.5GHz, 3.4dBi peak gain@5.6GHz, 3.2dBi peak gain@5.7GHz, 3.2dBi peak gain@5.785GHz
- High Efficiency
- Quick Integration

3. Overall Performance

CHARACTERISTICS	SPEC
Standard	IEEE 802.11 a/b/g/n/ac/ax/be
Frequency Range	2.4-2.49GHz & 5.15-5.85GHz
Peak Gain	0.5dBi@2.412GHz, 0.8dBi@2.437GHz, 0.8dBi@2.462GHz, 3.6dBi@5.18GHz, 4.2dBi@5.32GHz, 4.1dBi@5.5GHz, 3.4dBi@5.6GHz, 3.2dBi@5.7GHz, 3.2dBi@5.785GHz
VSWR	<2
Efficiency	44.8%@2.412GHz, 45.6%@2.437GHz, 40.6%@2.462GHz, 50.4%@5.18GHz, 54.0%@5.32GHz, 56.4%@5.5GHz, 52.2%@5.6GHz, 51.1%@5.7GHz, 52.5%@5.785GHz
Power Handling	30 dBm
Feed Impedance	50 ohms
Antenna Dimensions	32.3*11.3*0.105mm
Interface	U.FL compatible connector
Operating Temperature	-30 ° C to +75° C
Humidity Range	5% to 95% non-condensing
RF Cable	RF1.13

4. Product Characteristics

VSWR & radiation pattern of FD243025-001 were measured with the antenna mounted in customer's equipment.

4.1 VSWR & Smith Chart

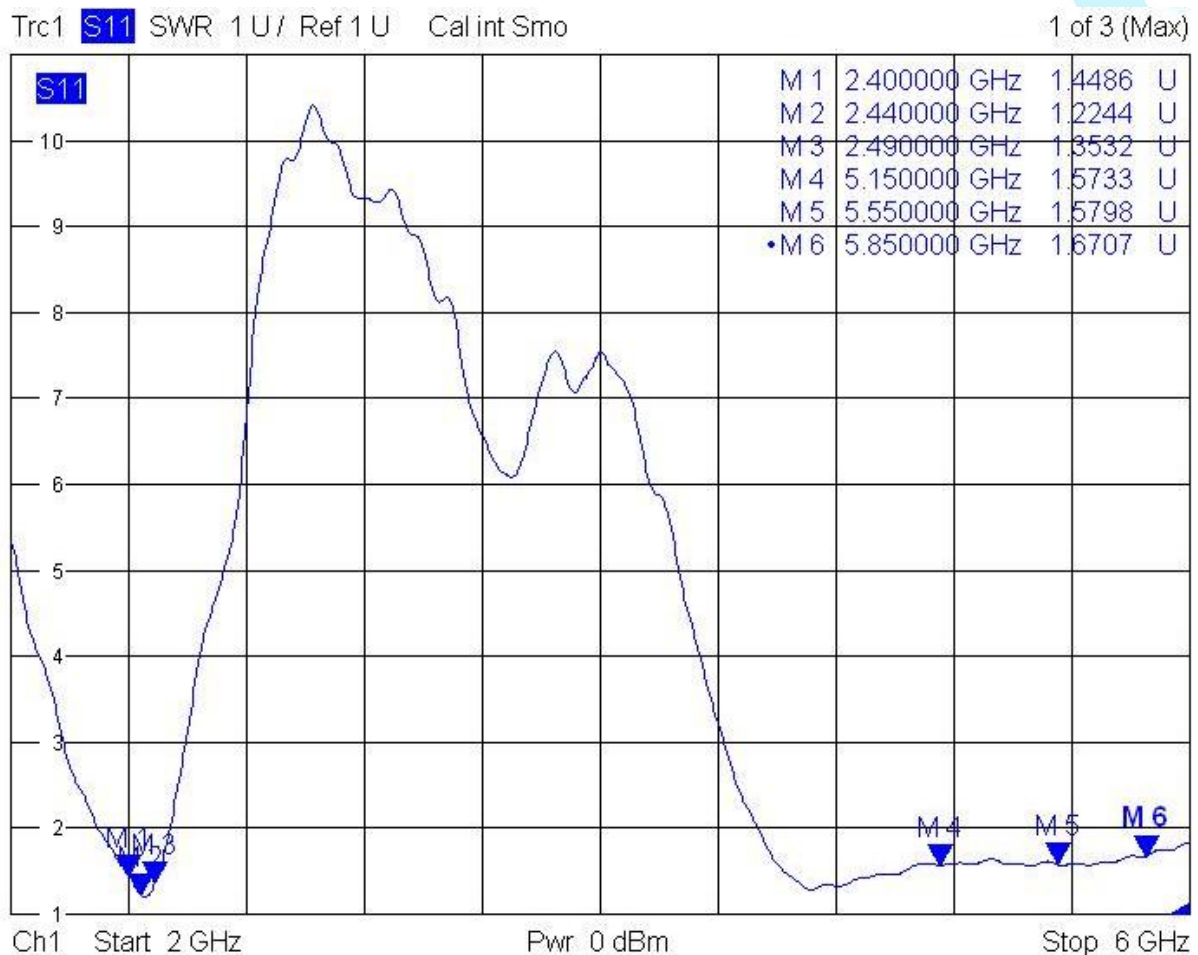


Figure 1: Model FD243025-001 VSWR & Smith Chart

4.2 Radiation Pattern

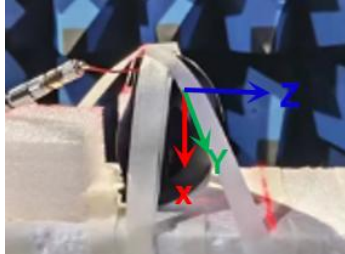


Figure 2: Model FD243025-001 Measurement Axes

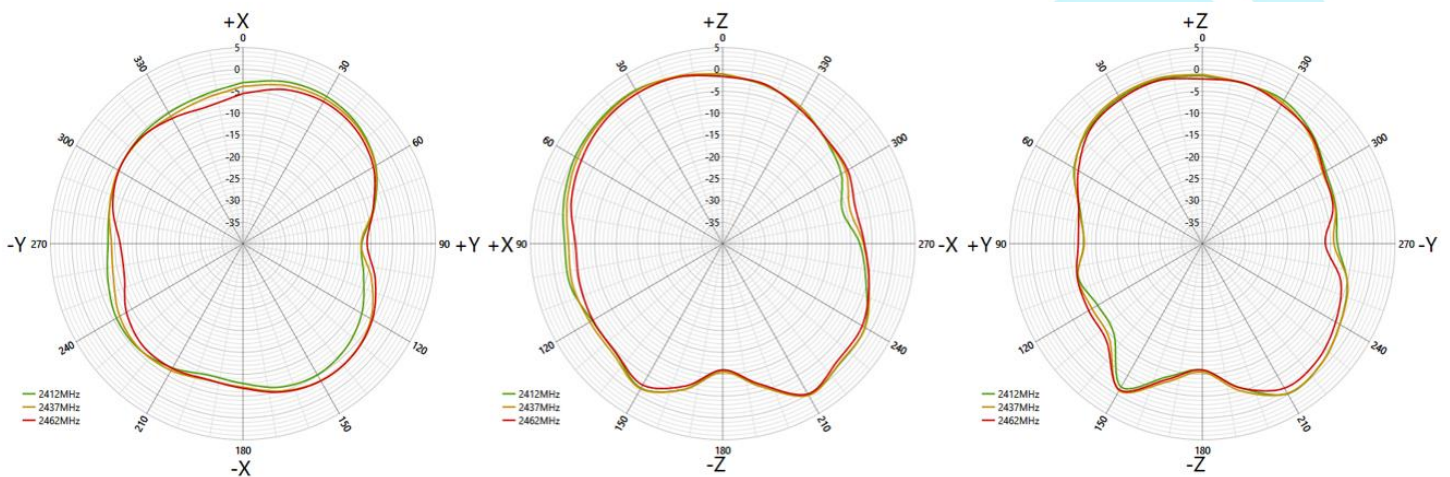


Figure 3: Model FD243025-001 Radiation Patterns at 2.4GHz

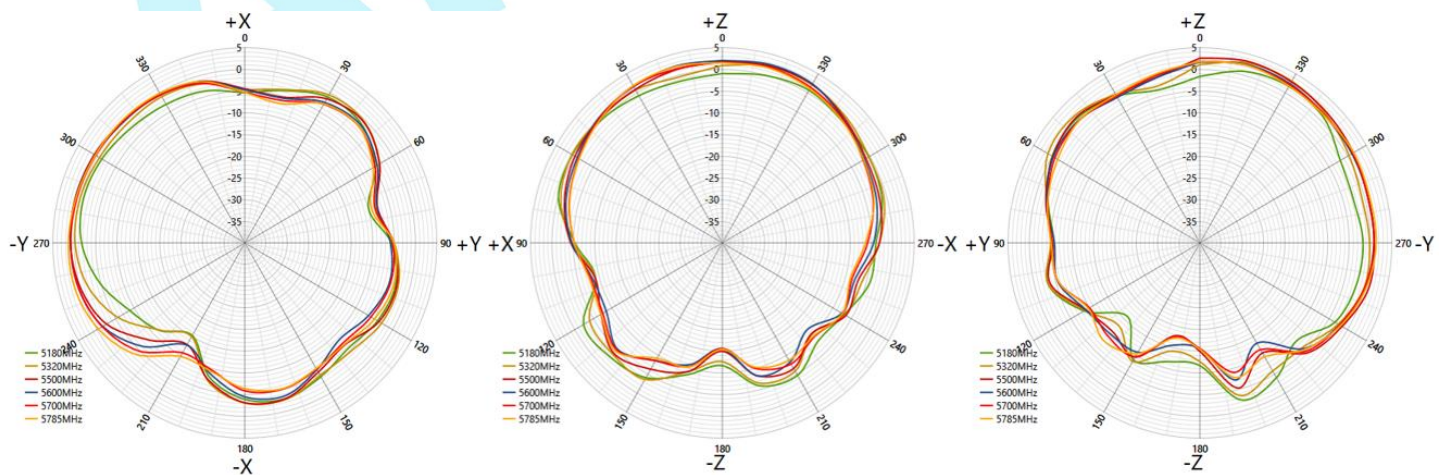


Figure 4: Model FD243025-001 Radiation Patterns at 5GHz

5. Product Drawing

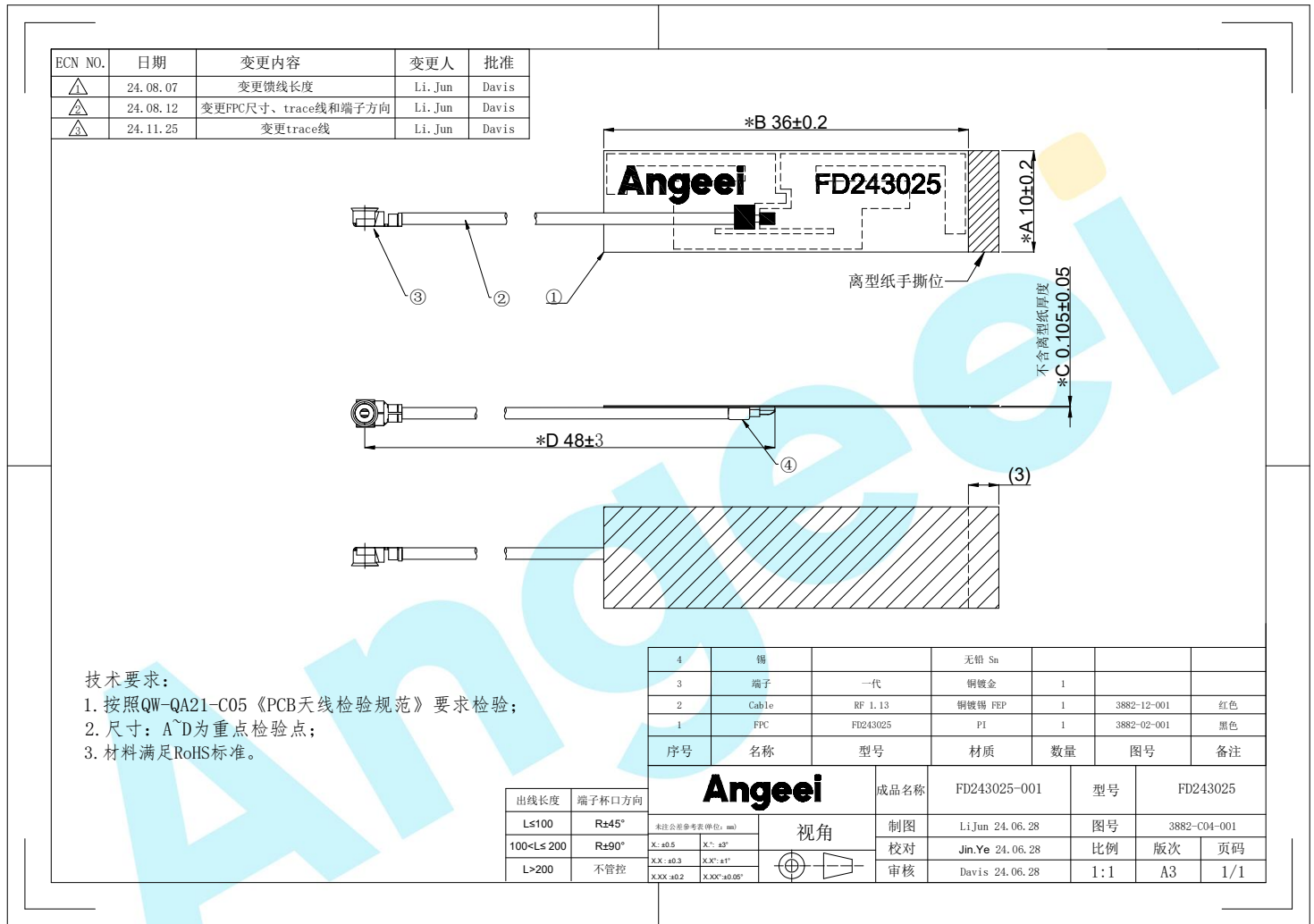


Figure 5: Model FD243025-001 Dimensions

6. RoHS

Model FD243025-001 antenna is RoHS compliant.

7. Cable Datasheet

Item	Specification	
Cable type	RF1.13	
Impedance	50 ± 3 ohms	
Inner conductor	Material	Tin-coated copper
	Conductor numbers	7
	Conductor size	0.08 mm
	Outer diameter	0.24 ± 0.03 mm
Dielectric layer	Material	FEP
	Color	Clear
	Average thickness	0.23 mm
	Diameter	0.7 ± 0.03 mm
Braid (shielding)	Material	Tin-coated copper
	Conductor size :total / O.D. Of every wire(mm)	16*4/0.05 mm
	Coverage	90%± 5%
	Diameter	0.92 ± 0.05 mm
Outer cover	Material	FEP
	Color	Red
	Diameter	1.13 ± 0.05 mm
VSWR testing	< 1.3@0~6GHz	
Cable loss (dB/1meter)	1GHz	≤2.32
	2GHz	≤3.27
	3GHz	≤4.01
	4GHz	≤4.64
	5GHz	≤5.17
	6GHz	≤5.69
Operating temperature	-55℃~+125℃	

Note:

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