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DATA SHEET

P/N:MD246001-01

NO.28,Jinxing Rd,Jinfeng Town,
Zhangjiagang City,Jiangsu,China
Tel:+86-512-56990960
Fax:+86-512-56990970
Email: Sales@Angeei.com

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Version Information

Version	Date	Author	Note
A0	July 30, 2024	Shirley	Initial Draft
A1	September 5, 2024	Shirley	Update Drawing
A2	September 23, 2024	Shirley	Update SPEC & Drawing
A3	October 11, 2024	Shirley	Update Drawing
A4	November 15, 2024	Shirley	Update Drawing

1. Product Description

Model MD246001-01 product is designed with patented technology. MD246001-01 is a combined 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 MD246001-01 Antenna is defined by following features:

- Ant 1: IEEE 802.11 a/n/ac/ax/be standards
Ant 2-4: IEEE 802.11 a/b/g/n/ac/ax/be standards
- Ant 1(Yellow): 5.2dBi peak gain@5.1GHz, 5.7dBi peak gain@5.5GHz,
6.4dBi peak gain@5.8GHz
Ant 2(Blue): 4.5dBi peak gain@2.45GHz, 6.1dBi peak gain@5.1GHz,
7.1dBi peak gain@5.5GHz, 7.1dBi peak gain@5.8GHz
Ant 3(Red): 4.1dBi peak gain@2.45GHz, 6.0dBi peak gain@5.1GHz,
7.3dBi peak gain@5.5GHz, 6.4dBi peak gain@5.8GHz
Ant 4(Green): 4.1dBi peak gain@2.45GHz, 6.0dBi peak gain@5.1GHz,
6.5dBi peak gain@5.5GHz, 6.8dBi peak gain@5.8GHz
- High Efficiency
- Quick Integration

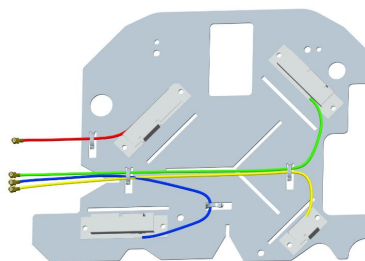


Figure 1: Model MD246001-01 Antenna

3. Overall Performance

CHARACTERISTICS		SPEC
Standard	Ant 1	IEEE 802.11 a/n/ac/ax/be
	Ant 2- 4	IEEE 802.11 a/b/g/n/ac/ax/be
Frequency Range	Ant 1	5.15-5.85GHz
	Ant 2- 4	2.4-2.5GHz & 5.15-5.85GHz
Peak Gain	Ant 1(Yellow)	5.2dBi@5.1GHz, 5.7dBi@5.5GHz, 6.4dBi@5.8GHz
	Ant 2(Blue)	4.5dBi@2.45GHz, 6.1dBi@5.1GHz, 7.1dBi@5.5GHz, 7.1dBi@5.8GHz
	Ant 3(Red)	4.1dBi@2.45GHz, 6.0dBi@5.1GHz, 7.3dBi@5.5GHz, 6.4dBi@5.8GHz
	Ant 4(Green)	4.1dBi@2.45GHz, 6.0dBi@5.1GHz, 6.5dBi@5.5GHz, 6.8dBi@5.8GHz
Return Loss		< -10
Power Handling		30 dBm
Feed Impedance		50 ohms
Antenna Dimensions		135.01*180*7.5mm
Interface		4*U.FL compatible connector
Operating Temperature		-30 ° C to +75 ° C
Humidity Range		5% to 95% non-condensing
RF Cable		RF1.37

4. Product Characteristics

Return Loss & radiation pattern of MD246001-01 were measured with the antenna mounted in customer's equipment.

4.1 Return Loss

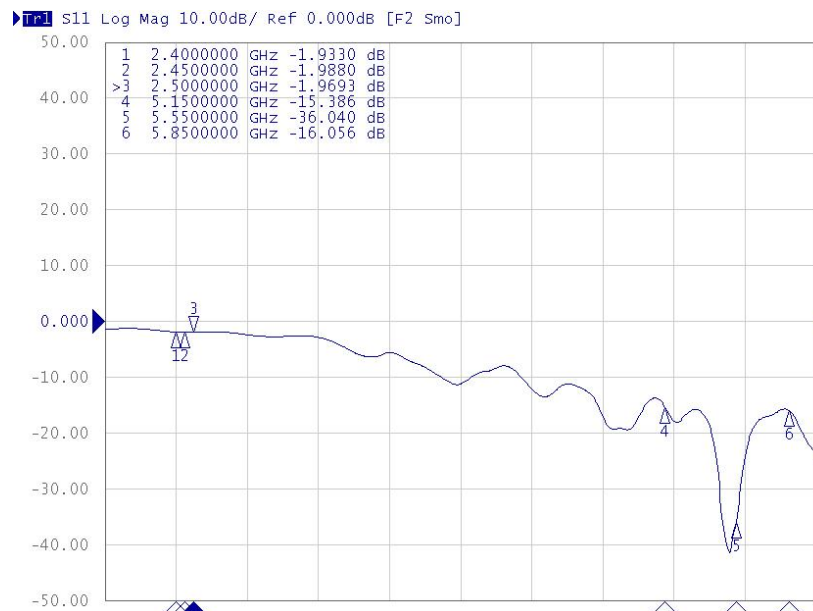


Figure 2: Model MD246001-01 Return Loss of Ant 1



Figure 3: Model MD246001-01 Return Loss of Ant 2

▶ Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F2 Smo]

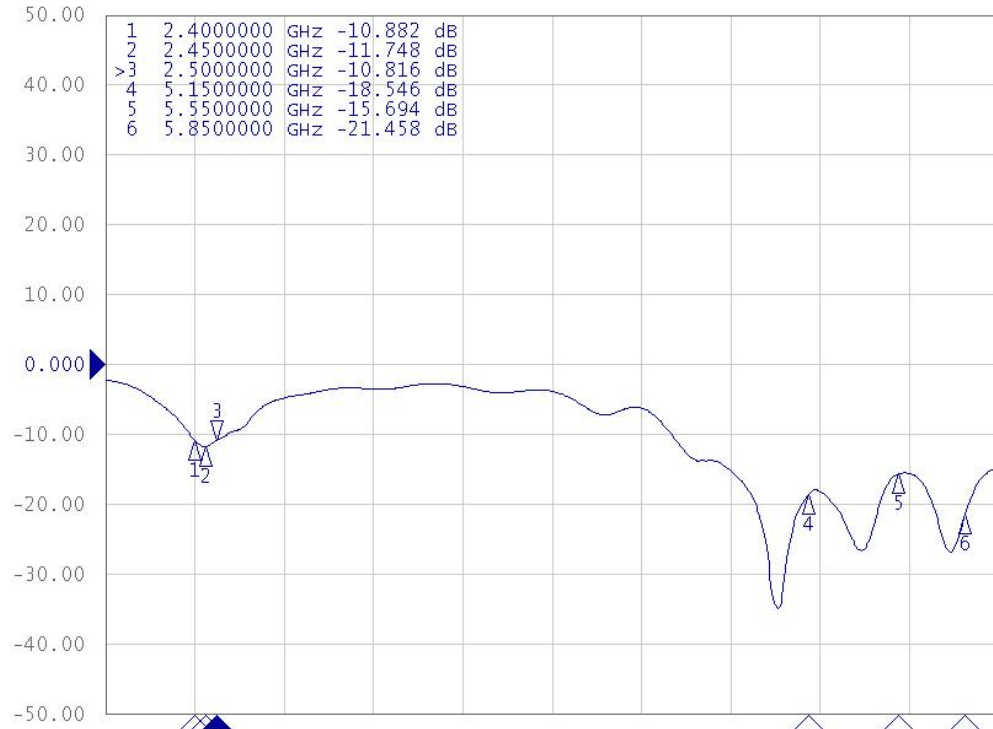


Figure 4: Model MD246001-01 Return Loss of Ant 3

▶ Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F2 Smo]

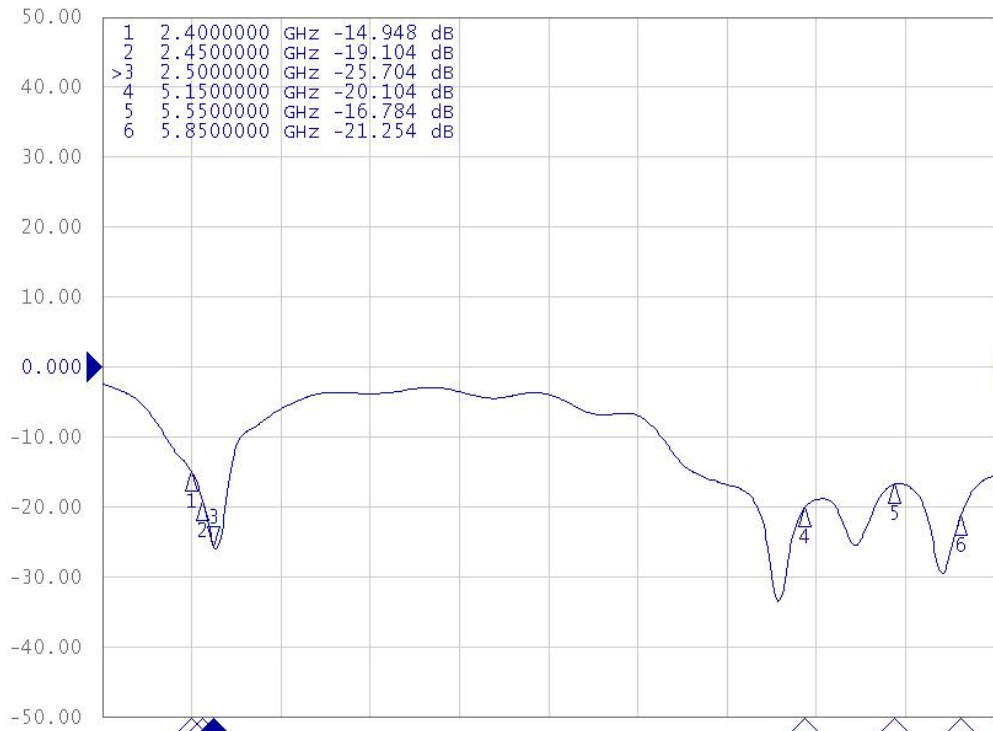


Figure 5: Model MD246001-01 Return Loss of Ant 4

4.2 Radiation Pattern

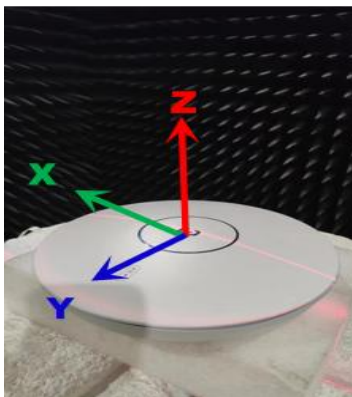


Figure 6: Model MD246001-01 Measurement Axes

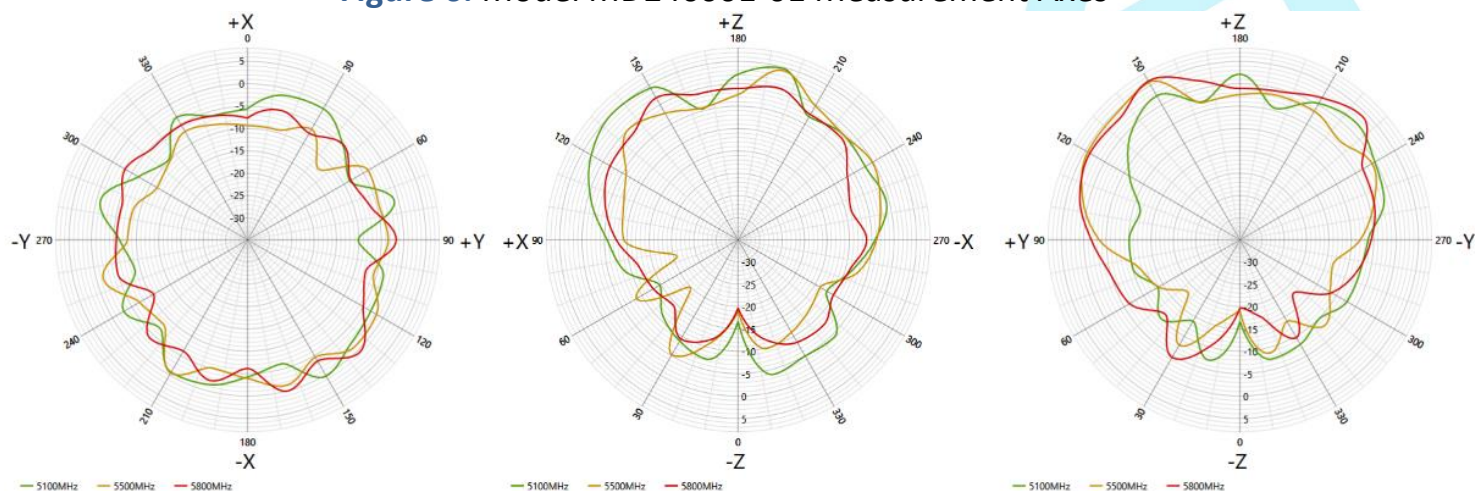


Figure 7: Model MD246001-01 Radiation Patterns of Ant 1 at 5G

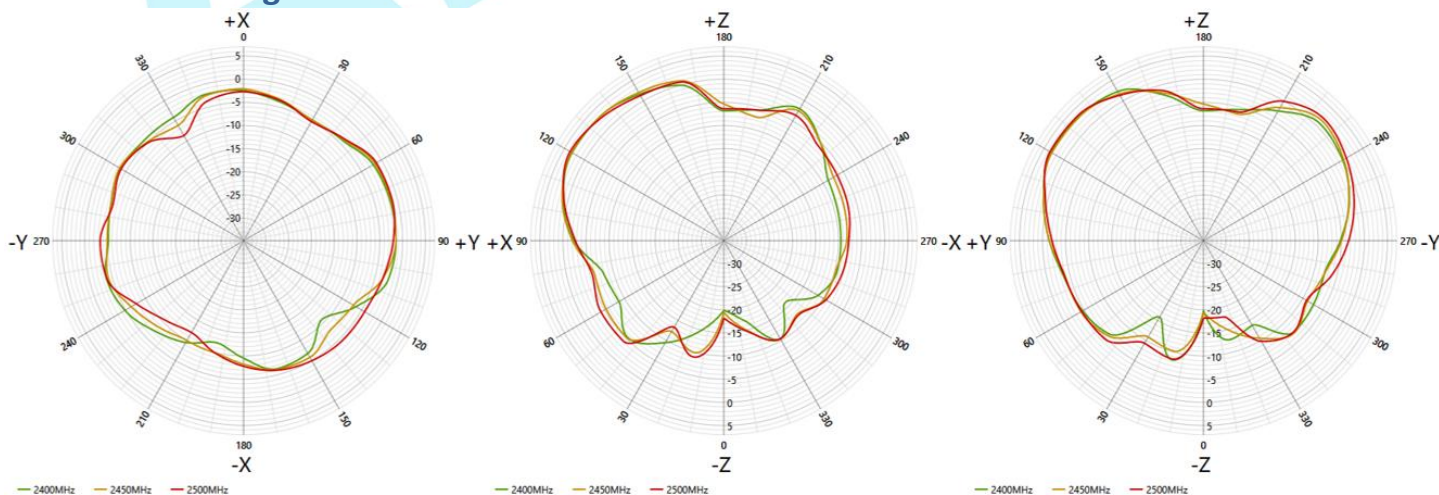


Figure 8: Model MD246001-01 Radiation Patterns of Ant 2 at 2.4G

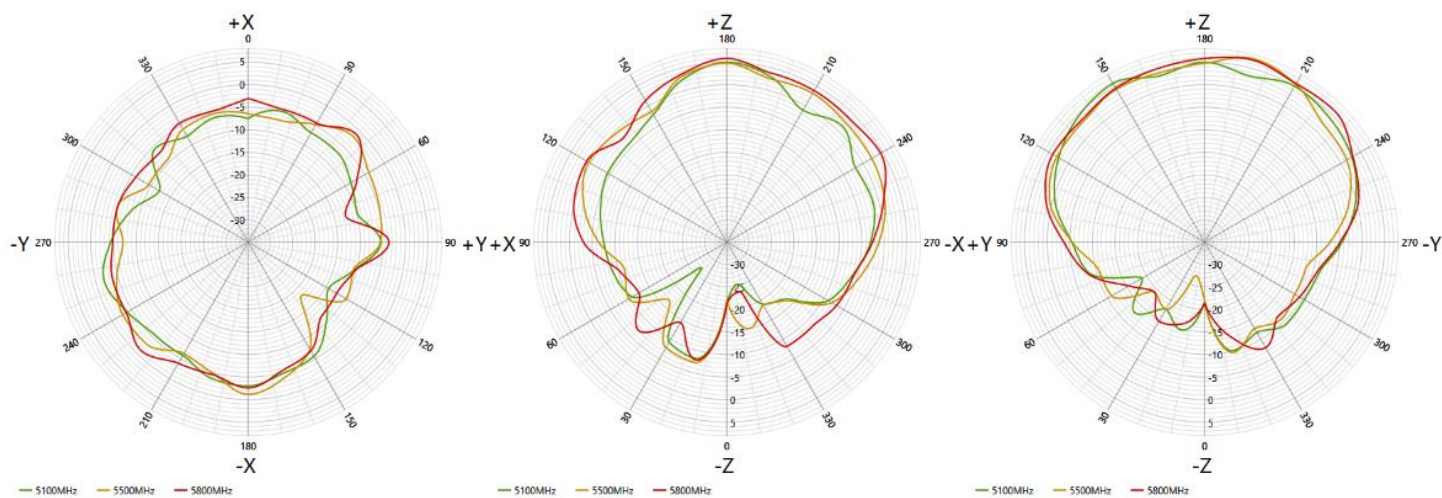


Figure 9: Model MD246001-01 Radiation Patterns of Ant 2 at 5G

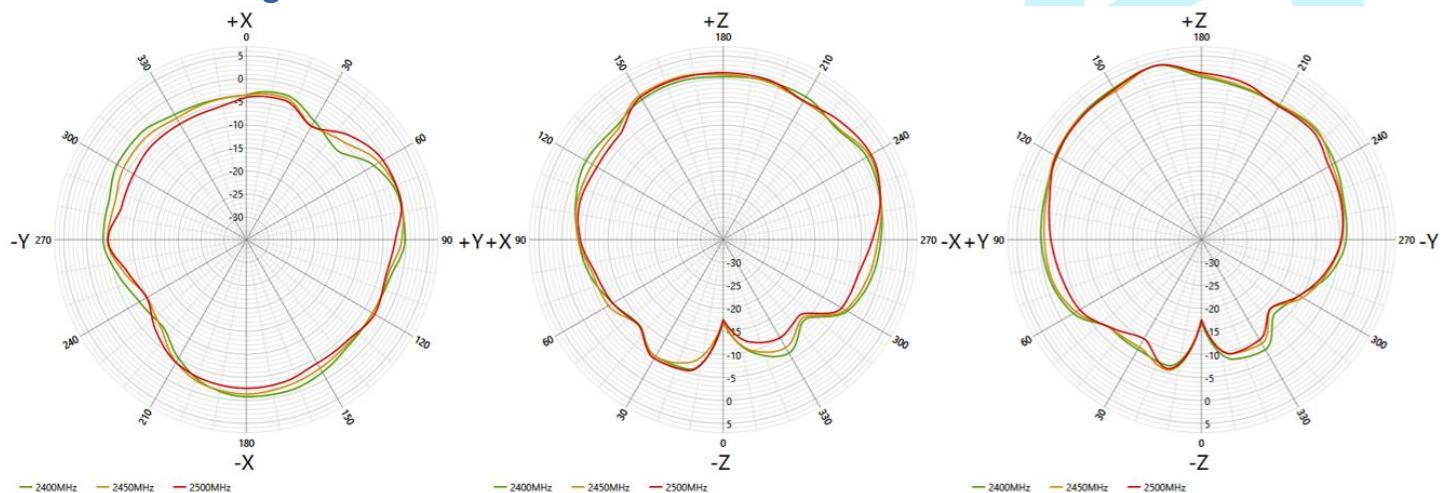


Figure 10: Model MD246001-01 Radiation Patterns of Ant 3 at 2.4G

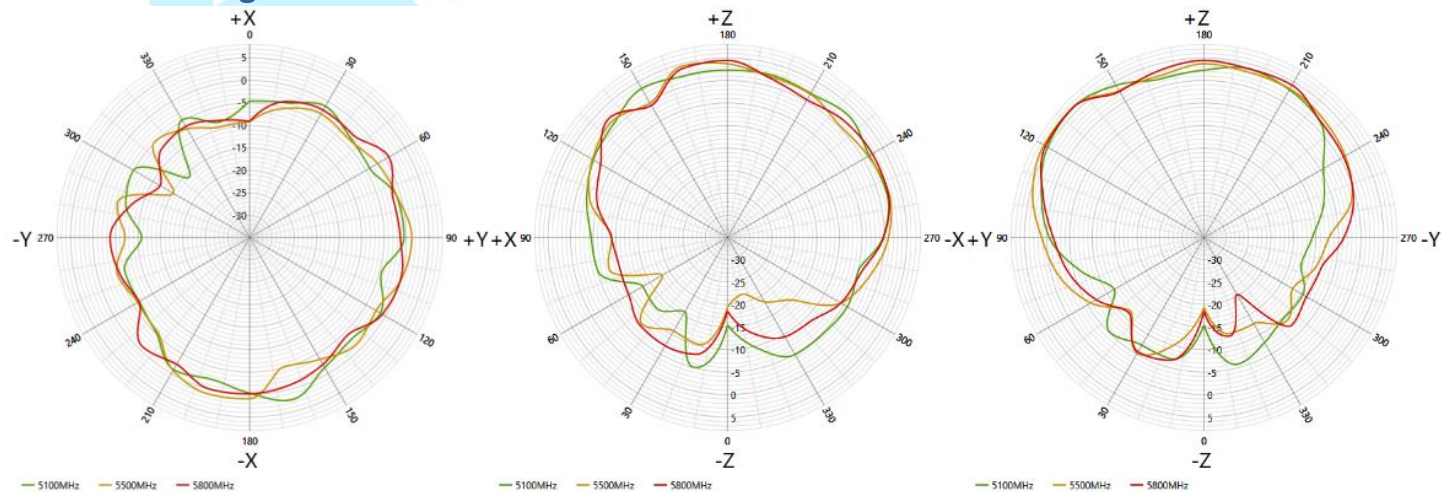


Figure 11: Model MD246001-01 Radiation Patterns of Ant 3 at 5G

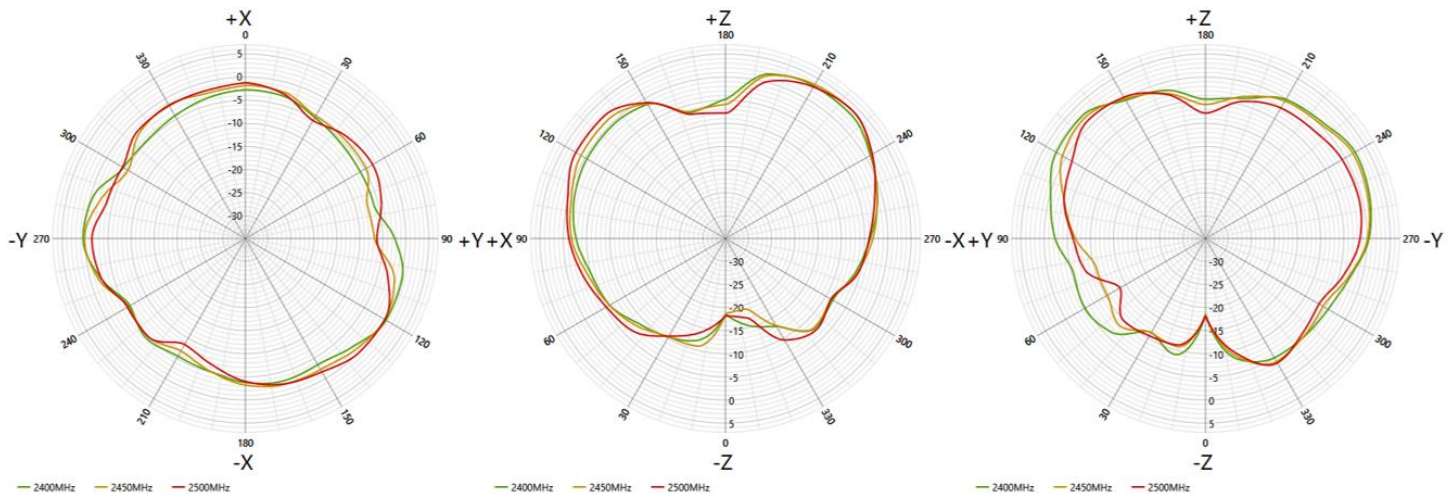


Figure 12: Model MD246001-01 Radiation Patterns of Ant 4 at 2.4G

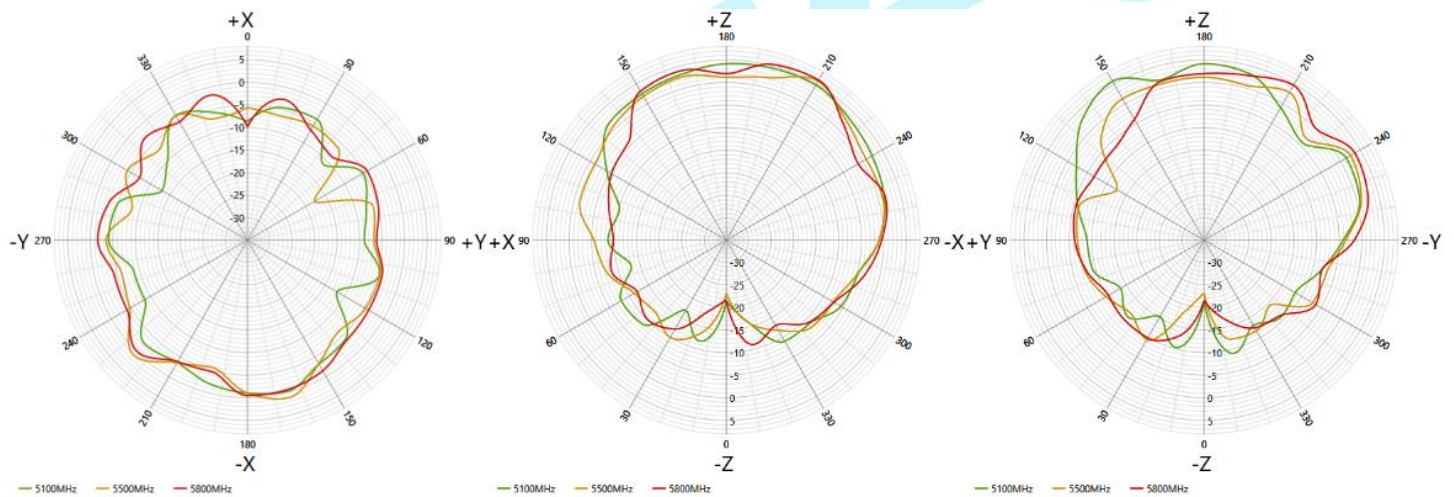


Figure 13: Model MD246001-01 Radiation Patterns of Ant 4 at 5G

5. Product Drawing

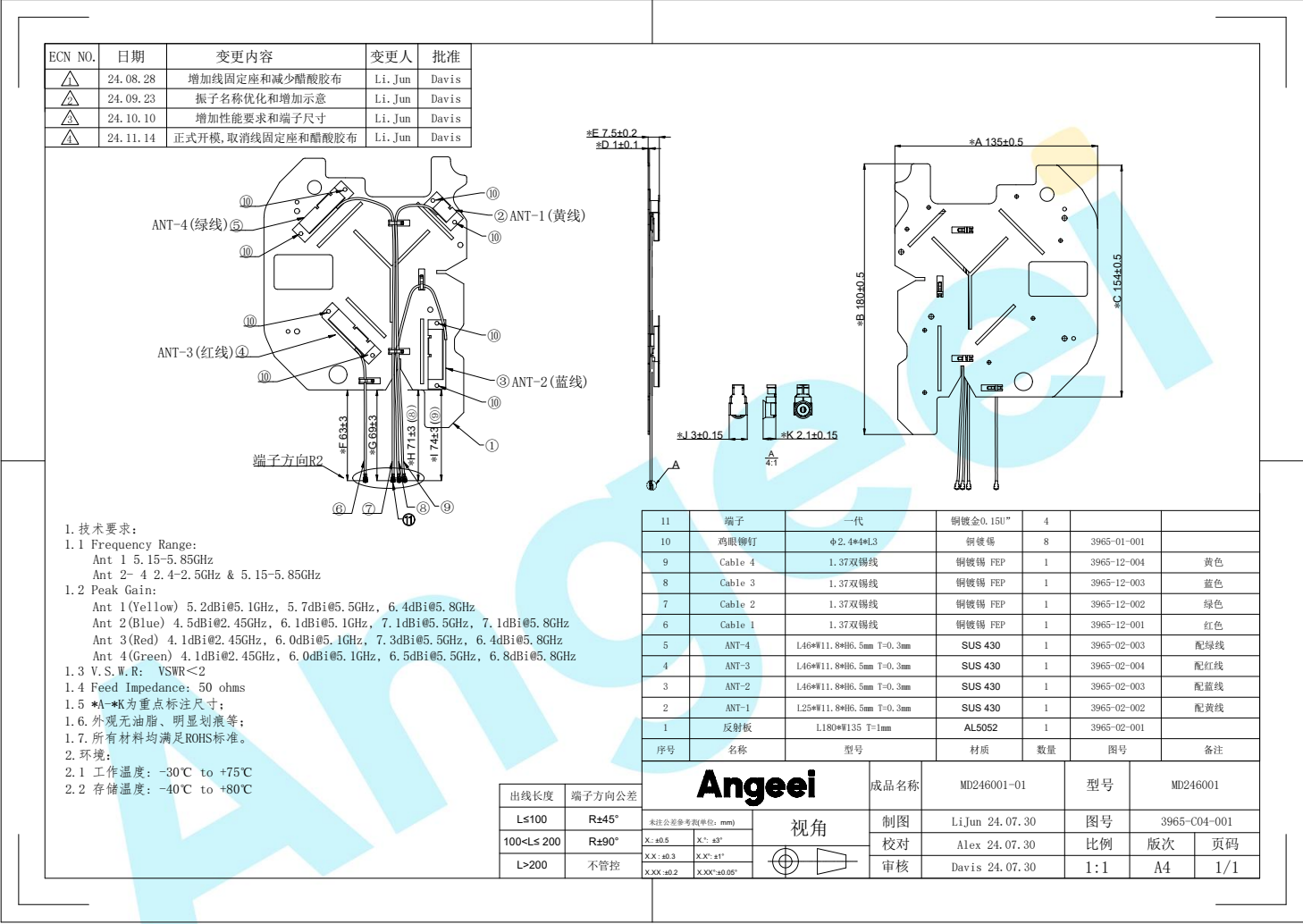


Figure 14: Model MD246001-01 Dimensions

6. RoHS

Model MD246001-01 antenna is RoHS compliant.

Note:

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ADD:NO.28,Jinxing Rd,
Jinfeng Town,Zhangjiagang City,Jiangsu,China
Tel: +86-512-56990960 Fax: +86-512-56990970
Email: Sales@Angeei.com