Kinghelm®

Chip Antenna

For UWB

KH-8060-C86

8x6x1.2mm

深圳市金航标电子有限公司

Applications

1. 3-8 GHz device
2. Ch5&CH9 gadget
3. ISM band equipment
4. Small size

Features

1. Compact size
2. Omni-directional radiation
3. Tape & reel automatic mounting
4. Reflow process compatible
5. RoHS compliance (Pb-Free)

Description

The antenna is designed for superior performance, and can be widely used for wireless applications. We provide comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs.

Electrical Specification

Table 1. Electrical Specification

Item	Min.	Type	Max.	Unit
Frequency Range	3000		8500	MHz
Efficiency	43		80	%
Peak Gain		2.82		dBi
Polarization		Linear		
Nominal Impedance		50		Ω

• Ta: +25±5°C

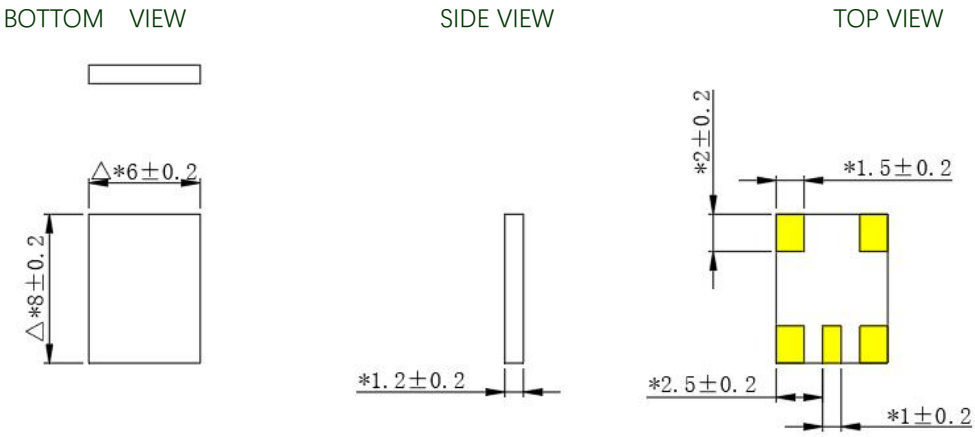
Mechanical Specification

Table 2. Mechanical Specification

Item	Min.	Type	Max.	Unit
Antenna Size		8.0*6.0*1.2		Mm
Temperature	-40		+85	°C
Operating temperature	-40		+85	°C

Outline Drawing

Figure 1. View (Unit: mm)



Recommend PCB Layout

Figure 2. PCB Layout (Unit: mm)

TOP&BOTTOM VIEW:

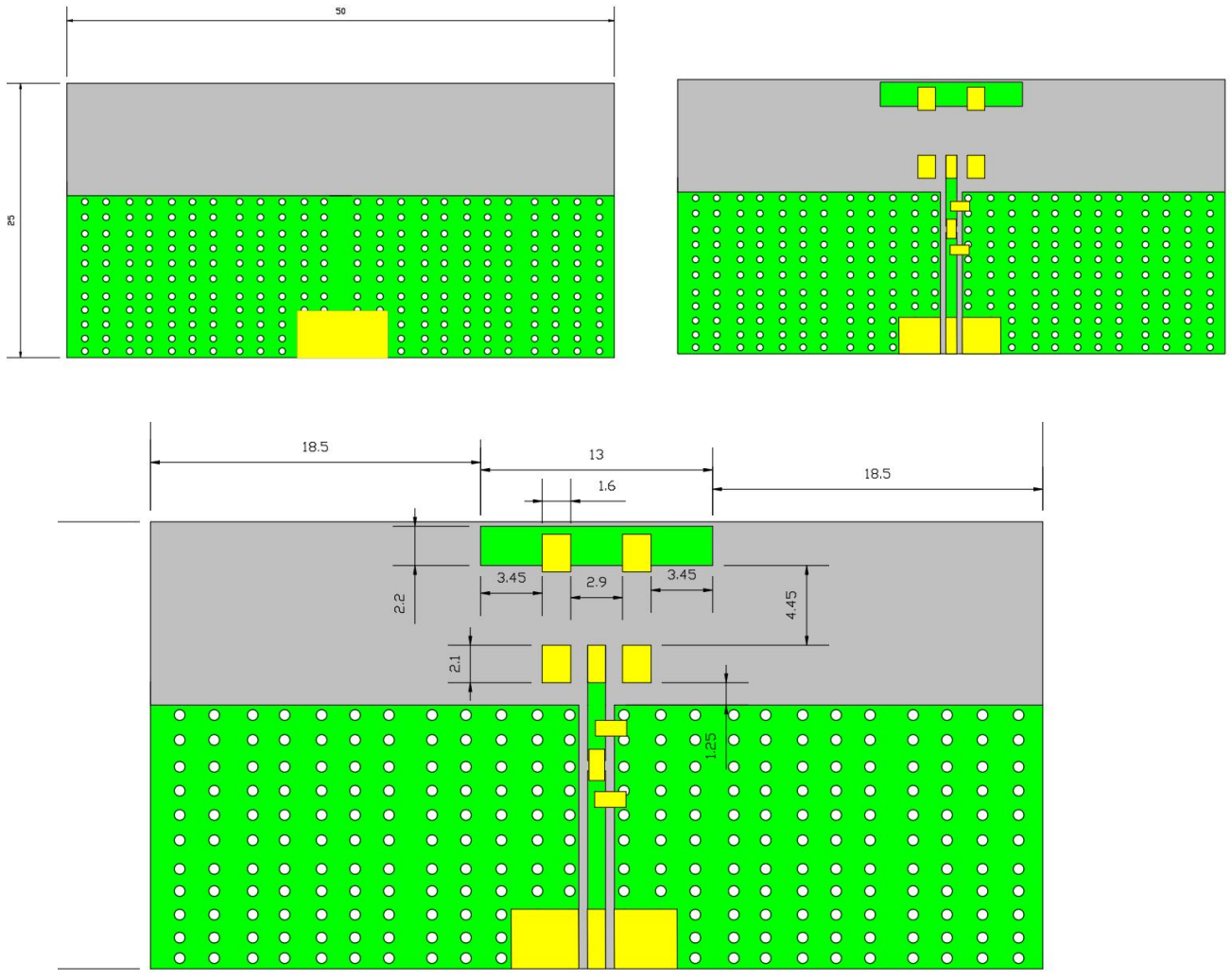
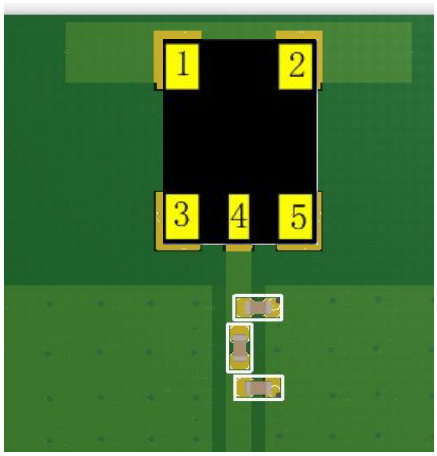
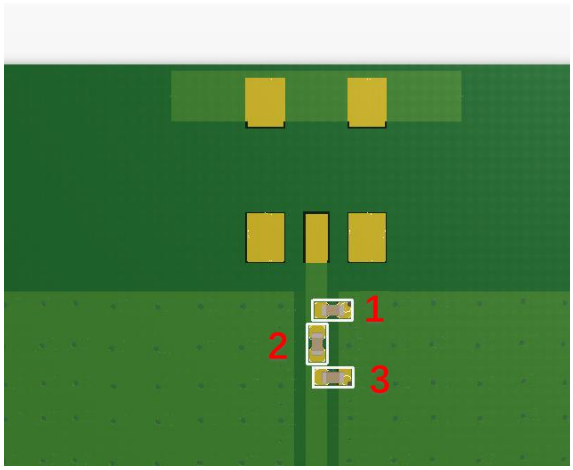


Figure 3. Antenna Layout (Unit: mm)



1	Pad
2	Pad
3	Pad
4	Feed
5	Pad

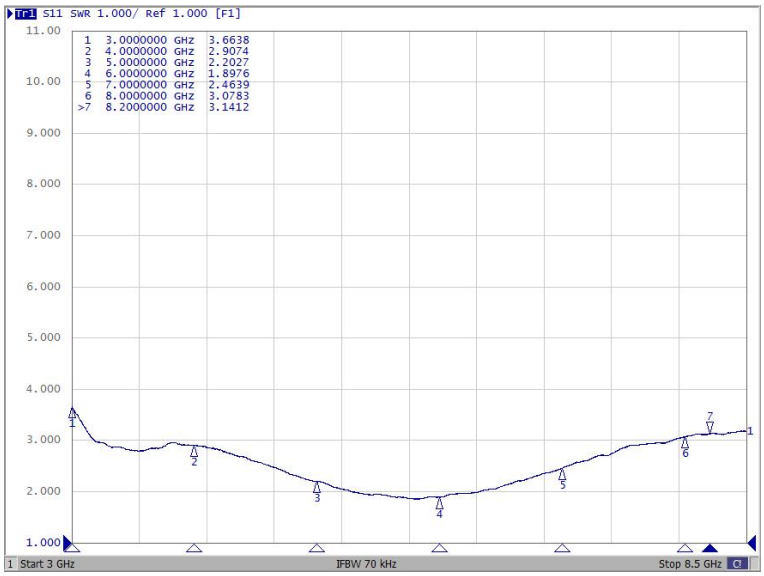
Figure 4. Matching Circuit (Unit: mm)



Location	Description	Vendor
1	4.3nH	MURATA
2	0Ω	MURATA
3	N/C	N/C

Typical Performance

Figure 5. VSWR



Radiation Pattern & Efficiency & Peak Gain

Figure 6. The Gain pattern is measured in FAR-field chamber

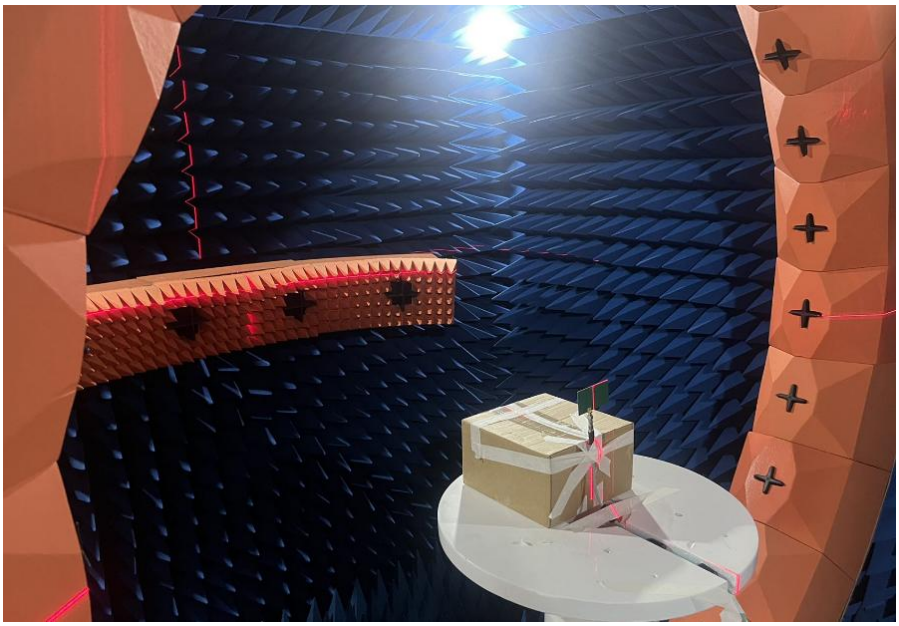


Table 3. Total Efficiency&Peak Gain

Item（MHz）	Efficiency (%)	Peak Gain (dBi)
3000	43.21	0.45
3500	58.87	1.65
4000	53.1	1.82
4500	58.55	2.35
5000	64.13	1.58
5500	71.85	2.49
6000	78.1	2.82
6500	72.04	2.55
7000	64.13	1.81
7500	60.63	0.96
8000	52.81	1.34
8500	45.14	0.73

Figure 7. Total Efficiency

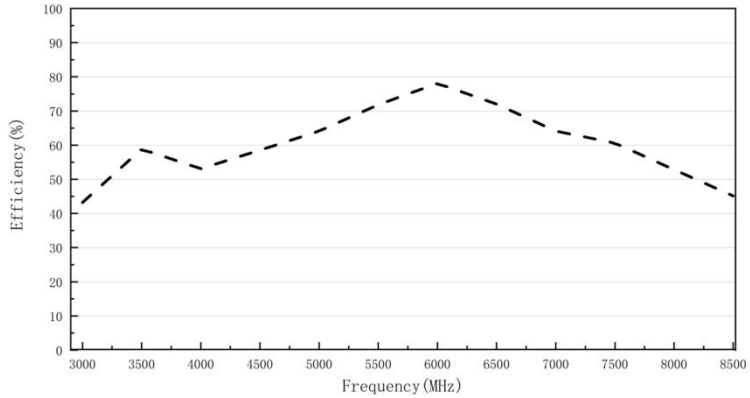
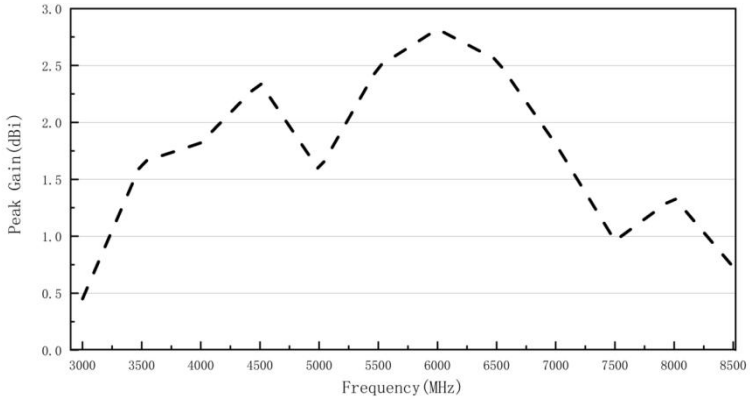
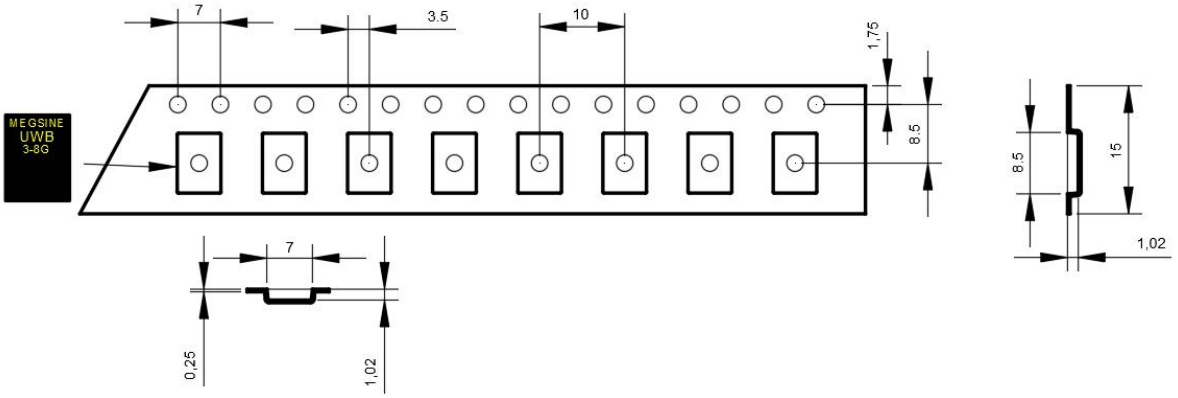


Figure 8. Peak Gain



*Antenna performance will also change in different environments, it is recommended to consult the relevant technical personnel before use to confirm the layout to ensure good performance.

Packaging and Ordering Information



Reel Specifications

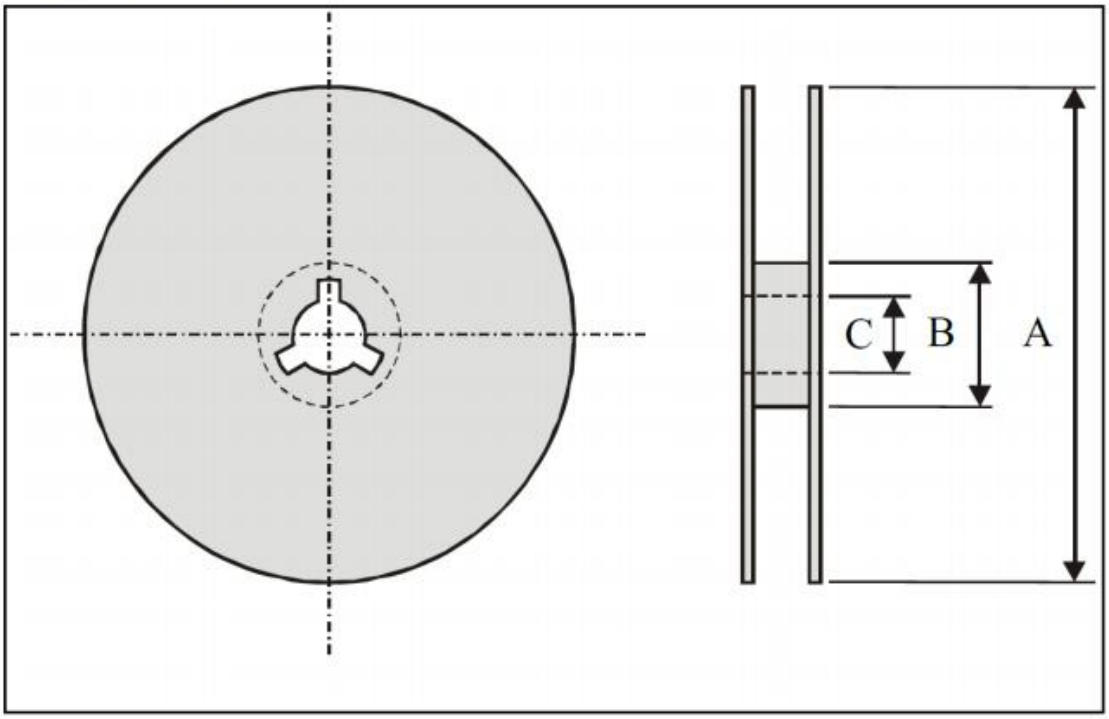


Table 5. Packaging and Shipping

Device	Packaging	Reel	Shipping
	SMD	7"	1000/Reel

Revision	Description	Date
Rev0	Preliminary	2023/11/8
Rev1	Preliminary	2025/4/11
Rev2	Supplementary test data	2025/9/23