

金航标电子有限公司

# **SPECIFICATION**

## **Dielectric Resonator Antenna**

**2400-2500 MHz**

**P/N: KH-2012-D002CS**

## DR Antenna 2012 Size

### 1. Features

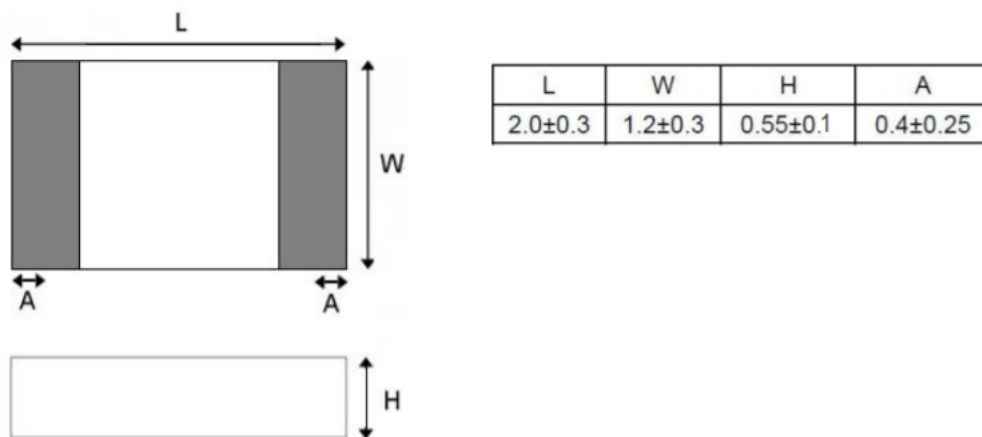
Antenna Frequency for 2400-2500 MHz

### 2. Applications

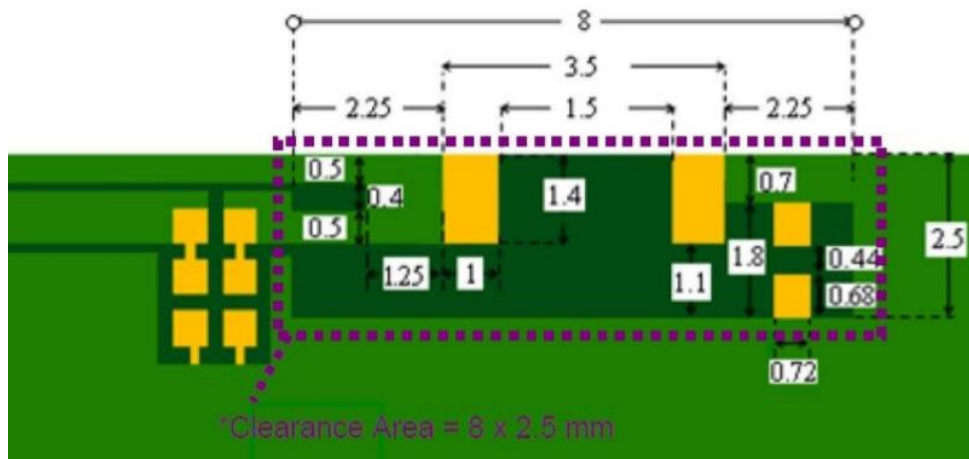
For Miniaturized Bluetooth System

### 3. Shapes & Dimensions(Unit : mm)

Component :



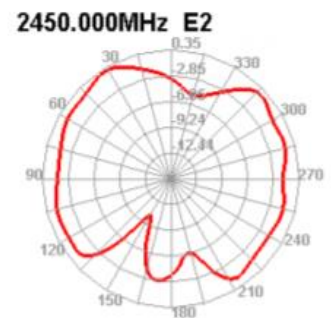
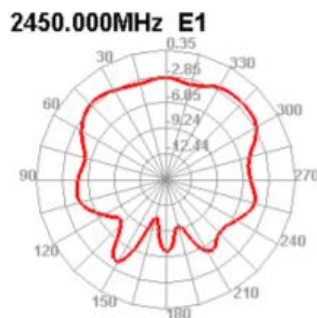
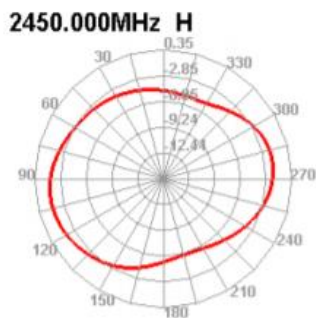
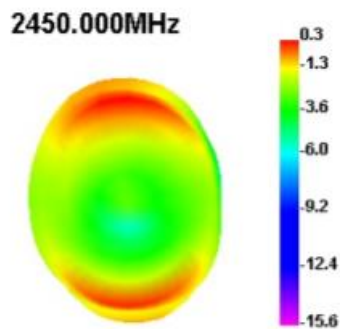
### 4. Evaluation Board and Matching Circuits



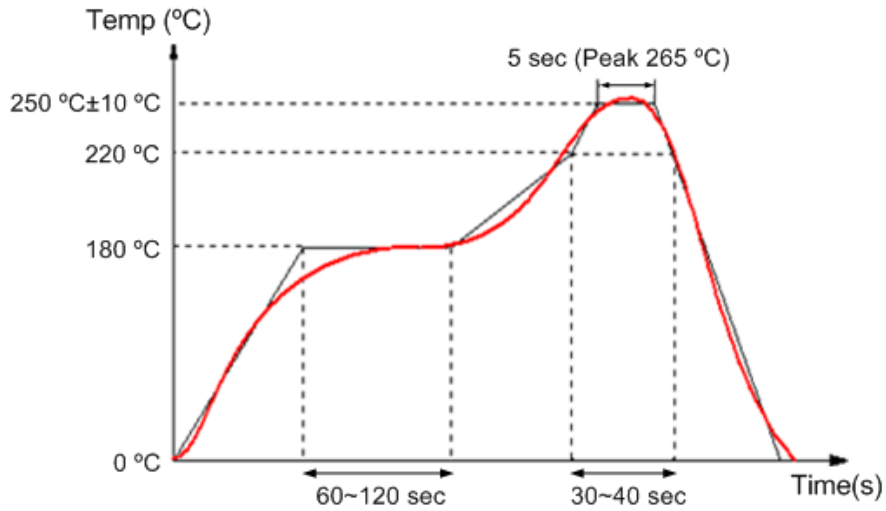
**5. Electrical Characteristics**

Part Number	HMAN20L2450-D002CS	
Central Frequency	2450	MHz
Bandwidth	100(typ.)	MHz
Efficiency	72.6	%
Peak Gain	2.48	dBi
Impedance	50	Ohm
Polarization	Linear	
Azimuth Beamwidth	Omni-directional	

**6. Radiation Pattern (2450MHz)**

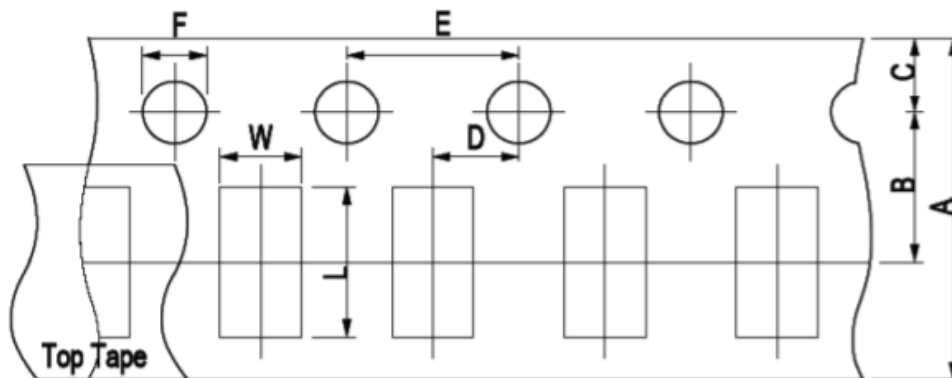


**7. Reflow Soldering Standard Condition**



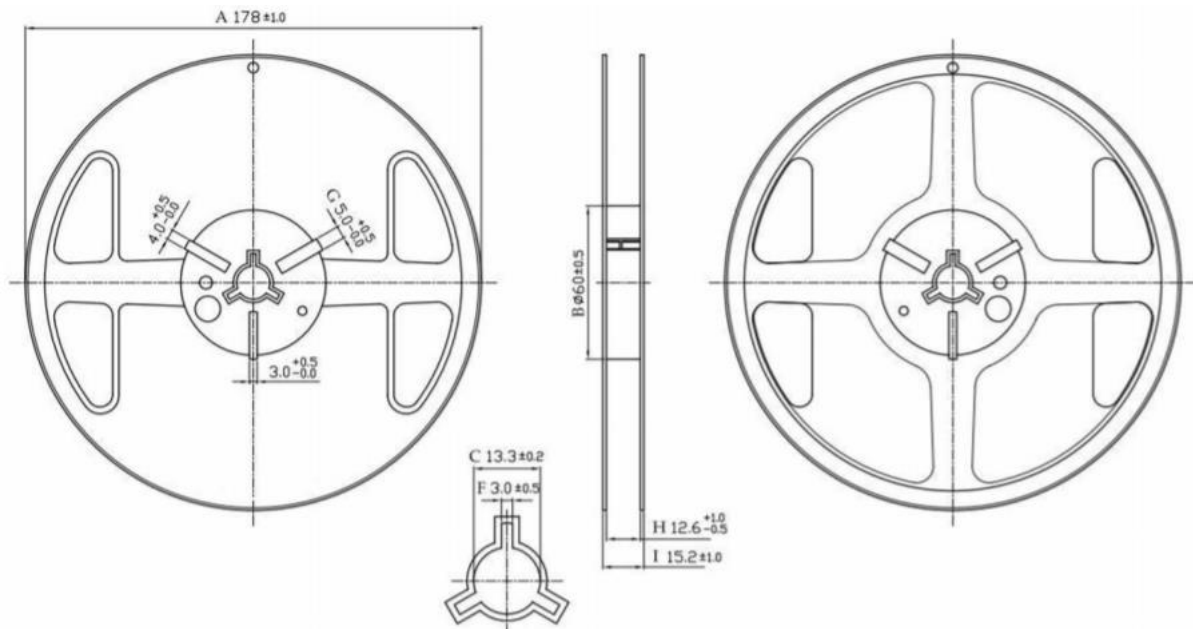
**8. Packaging and Dimensions 2012 (2.0\*1.2mm)**

◆ Plastic Tape



A	B	C	D	E	F	L	W
8.00±0.3	3.50± 0.05	1.75±0.1	2.00±0.05	4.00±0.1	1.50±0.1	2.30± 0.1	1.55± 0.1

◆ Reel (5000 pcs / 7 Reel)



◆ Storage Period

Oxidizable Material, 12 months in vacuum sealed bag, please repack within 168 hours by re-seal the package treatment after using.

Storage Temperature Range : <30 degree C, Humidity : <60%RH

**9. Dependability Test**

Test item	Test condition / Test method	Specification
Solderability IEC 60068-2-58 GB/T2423.28	*Solder bath temperature: 240±5°C *Immersion time: 2±0.5 sec Solder: Sn96.5Ag3.0Gu0.5 for lead-free.	At least 95% of a surface of each terminal electrode must be covered by fresh solder.
Leaching (Resistance to dissolution of metallization) JIS C5101	*Solder bath temperature: 260±5°C *Leaching immersion time: 10±1 sec Solder : Sn96.5 Ag3.0 Gu0.5 for lead-free.	Loss of metallization on the edges of each electrode shall not exceed 25%.
Resistance to soldering heat IEC 60068-2-58 GB/T2423.28	*Preheating temperature: 120~150°C, 1 minute. *Solder temperature: 260±5°C *Immersion time: 10±1 sec Solder: Sn96.5Ag3.0Gu0.5 for lead-free Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature. Loss of metallization on the edges of each electrode shall not exceed 25%.
Drop Test IEC 60068-2-32 GB/T2423.8 Customer's specification.	*Height : 50 cm *Test Surface: Rigid surface of concrete or steel. *Times : 6 surfaces for each units : 2 times for each side.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Vibration IEC 60068-2-6 GB/T 2423.10	*Frequency : 10Hz~55Hz~10Hz(1min) *Total amplitude : 1.5mm *Test times: 6hrs.(Two hrs each in three mutually perpendicular directions)	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Adhesive Strength of Termination IEC60068-2-21 GB/T 2423.6	*Pressurizing force : 5N(≤0603) ; 10N(>0603) *Test time:10±1 sec	No remarkable damage or removal of the termination.

<p>Bending test IEC 60068-2-21 GB/T 2423.29</p>	<p>The middle part of substrate shall be pressurized by means of the pressurizing rod at a rate of about 1 mm/s per second until the deflection becomes 2mm and then pressure shall be maintained for 10±1 sec. Measurement to be made after keeping at room temperature for 24±2 hours.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>
<p>Temperature cycle IEC60068-2-14 GB/T 2423.22</p>	<p>30 minutes at -40°C±2°C. 10~15 minutes at room temperature. 30minutes at +85°C±2°C. 10~15 minutes at room temperature. Total 100 continuous cycles Measurement to be made after keeping at room temperature for 24±2 hrs.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>
<p>High temperature IEC 60068-2-2 GB/T2423.2</p>	<p>*Temperature: 85±2°C. *Test duration: 500+24/-0 hours. Measurement to be made after keeping at room temperature for 24±2 hrs.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics.</p>
<p>Humidity (steady conditions) IEC60068-2-3 GB/T 2423.3</p>	<p>*Humidity : 85±5%R.H. *Temperature: 85±2°C. *Time : 500+24/-0 hrs. Measurement to be made after keeping at room temperature for 24±2 hrs ※ 200hrs measuring the first data then 300hrs data.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>
<p>Low temperature IEC 60068-2-1 GB/T2423.1</p>	<p>*Temperature: -40±2°C. *Test duration: 500+24/-0 hours Measurement to be made after keeping at room temperature for 24±2 hrs.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>