

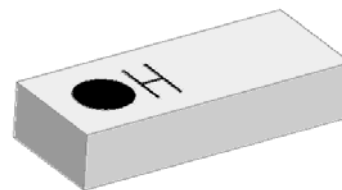
## 2.4GHz 5020 Chip Antenna: ANT5020R24001KM1

### Application:

WLAN, 802.11b/g, Bluetooth, etc...

### Features

SMD, high reliability, ultra compact, Omni-directional...



### Part number

ANT 5020 R 2400 1K M1  
 (1) (2) (3) (4) (5)

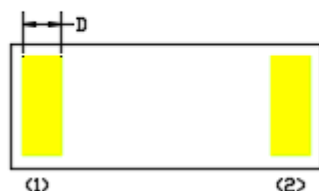
(1) Size Code	5.0x2.0mm
(2) Packing	Tape and reel
(3) Frequency	2400MHz
(4) Packing Number	1K
(5) Code	M1

### Electrical Specification

Working Frequency Range	2400~2484 MHz
Peak Gain	0.9 dBi (Typ.)
Impedance	50 Ohm
VSWR	2.5 ( Max)
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Operation Temperature(°C)	-40 ~85°C

The specification is defined on HEK EVB.

### Dimension and Terminal Configuration



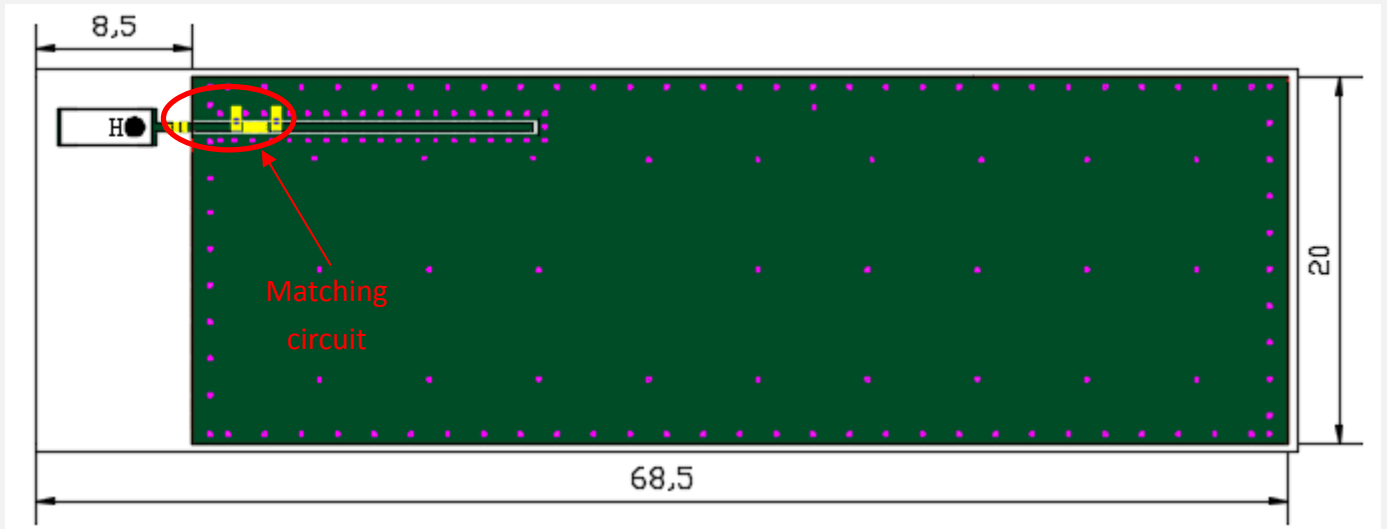
Dimension (mm)	
L	5.0±0.15
W	2.0±0.15
T	1.0±0.10
D	1.0±0.15

No.	Terminal Name
1	Feeding
2	Soldering

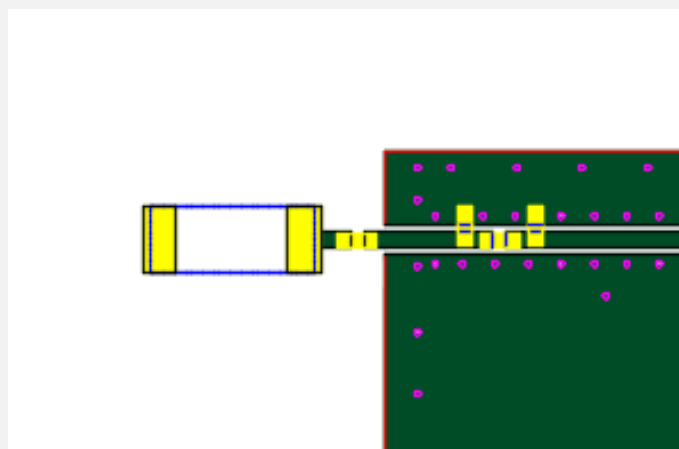
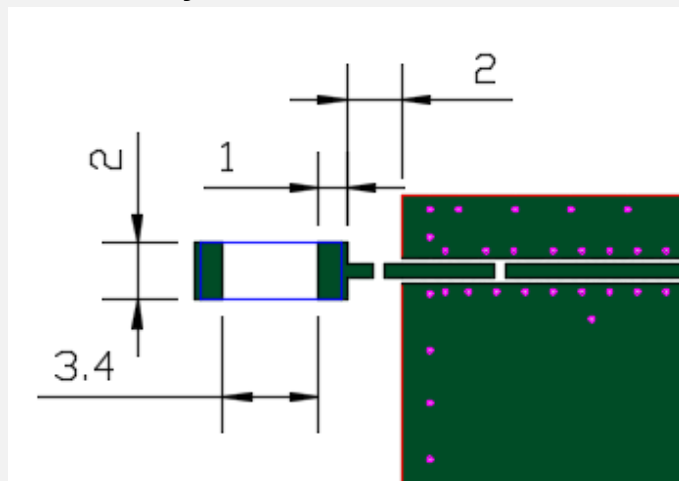
# 2.4GHz 5020 Chip Antenna: ANT5020R24001KM1

## Evaluation Board Reference


### PCB Dimension




### Antenna Layout Reference



Unit : mm

 : Chip Antenna

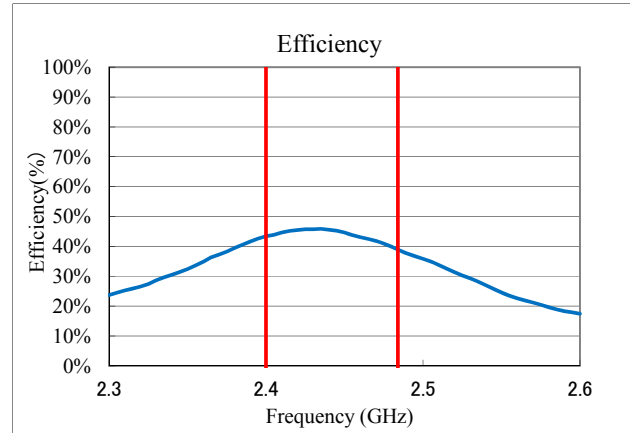
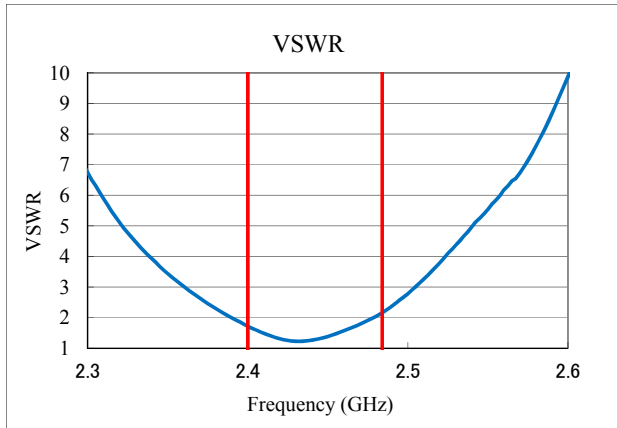
 : Land Pattern

# 2.4GHz 5020 Chip Antenna: ANT5020R24001KM1

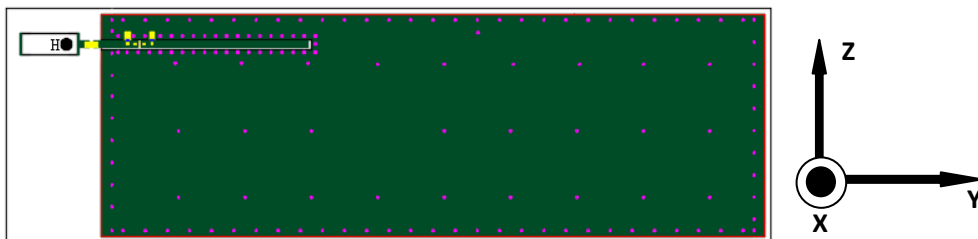
## Electrical Characteristics

### Return Loss & Radiation

#### VSWR&Efficiency

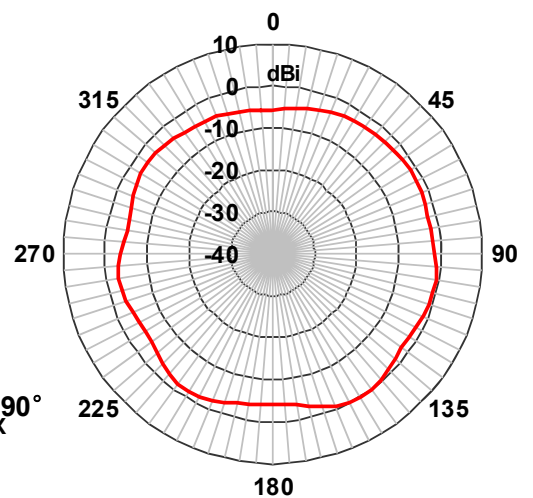
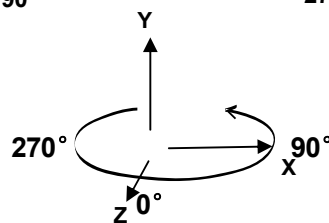
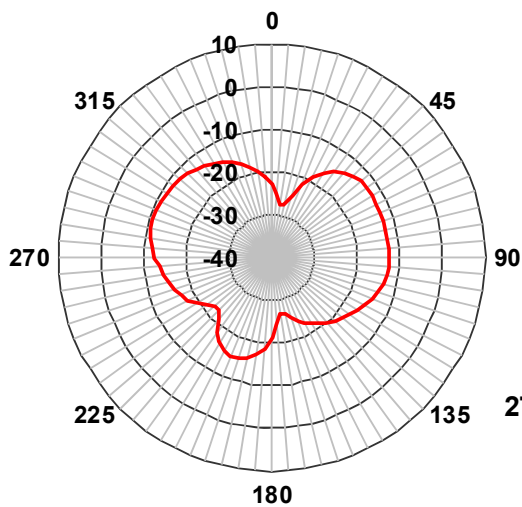


#### Radiation Pattern



#### Frequency=2440MHz

#### ZX-Plane

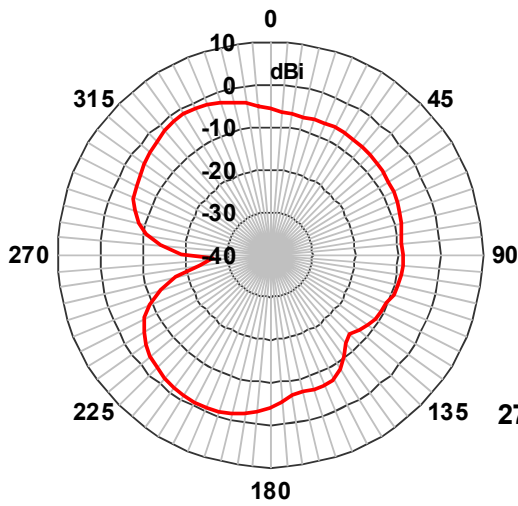


Horizontal Polarization

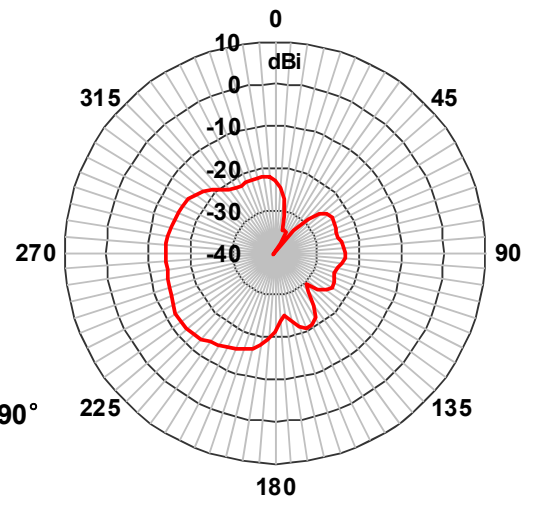
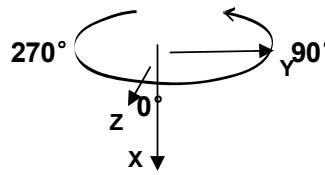
Vertical Polarization

# 2.4GHz 5020 Chip Antenna: ANT5020R24001KM1

## ZY-Plane

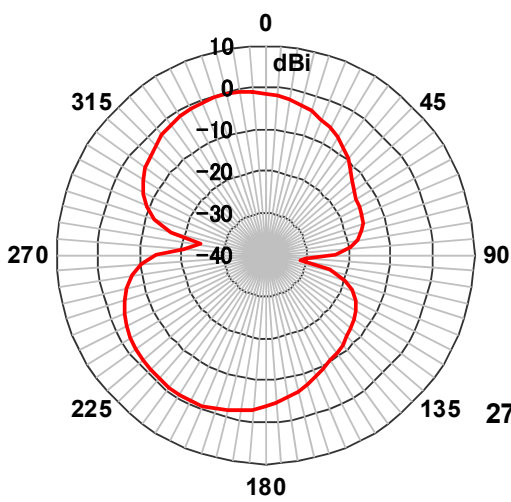


Horizontal Polarization

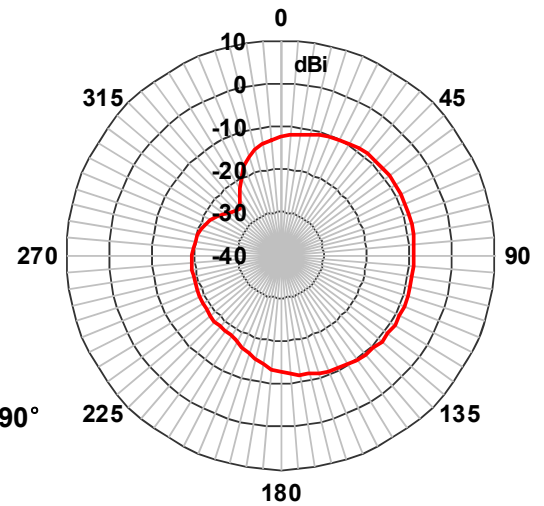
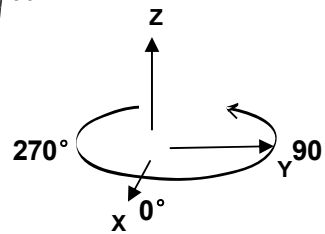


Vertical Polarization

## XY-Plane



Horizontal Polarization



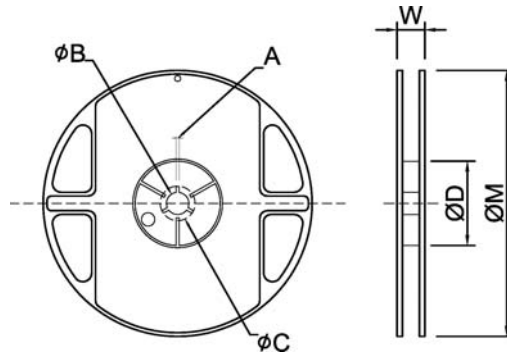
Vertical Polarization

# 2.4GHz 5020 Chip Antenna: ANT5020R24001KM1

## Taping Specifications

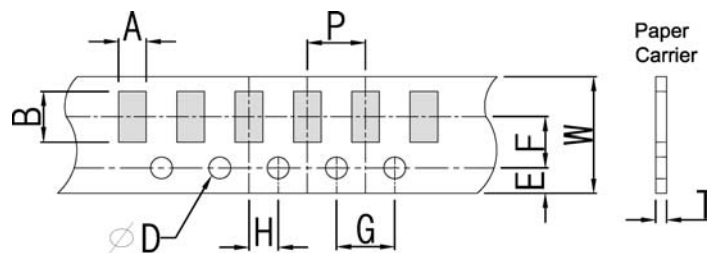
### Reel and Taping Specification

#### Reel Specification



TYPE	SIZE	A	$\phi B$	$\phi C$	$\phi D$	W	$\phi M$	
5020	7"	1K/Reel	2.0±0.5	13.0±1.0	21±1.0	60±1.0	16.5±2.0	178±2.0

#### Taping Specification

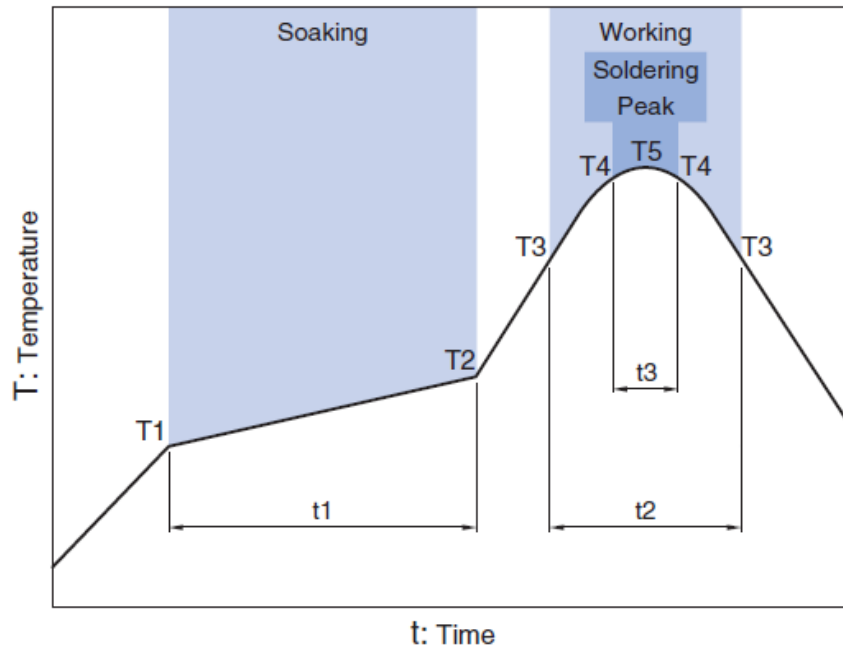


Packaging	Type	A	B	W	E	F	G	H	T	$\phi D$	P
Paper Type	5020	2.30±0.20	5.30±0.20	12.0±0.20	1.75±0.10	5.5±0.05	4.0±0.10	2.0±0.05	0.30±0.10	1.50 <sup>+0.10</sup> <sub>-0</sub>	10±0.1

## 2.4GHz 5020 Chip Antenna: ANT5020R24001KM1

### Recommended Reflow Profile

Pb free solder



Soaking		Working		Soldering		Peak	
Temp.	Time	Temp.	Time	Temp.	Time	Temp.	
T1	T2	t1	T3	t2	T4	t3	T5
150°C	180°C	60 to 120sec	230°C	more than 30sec	247 to 253°C	within 10sec	260°C Max.