

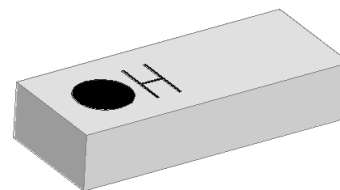
2.4GHz 5020 Chip Antenna: ANT5020R2400A1M1

Application:

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

Features

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



Part number

ANT 5020 R 2400 A1 M1
(1) (2) (3) (4) (5) (6)

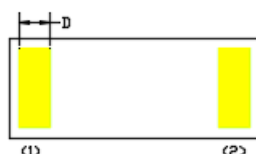
(1) Product Code	Chip Antenna
(2) Size Code	5.0x2.0mm
(3) Packing	Tape and reel
(4) Frequency	2.4GHz
(5) Series	A1
(6) Code	M1

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



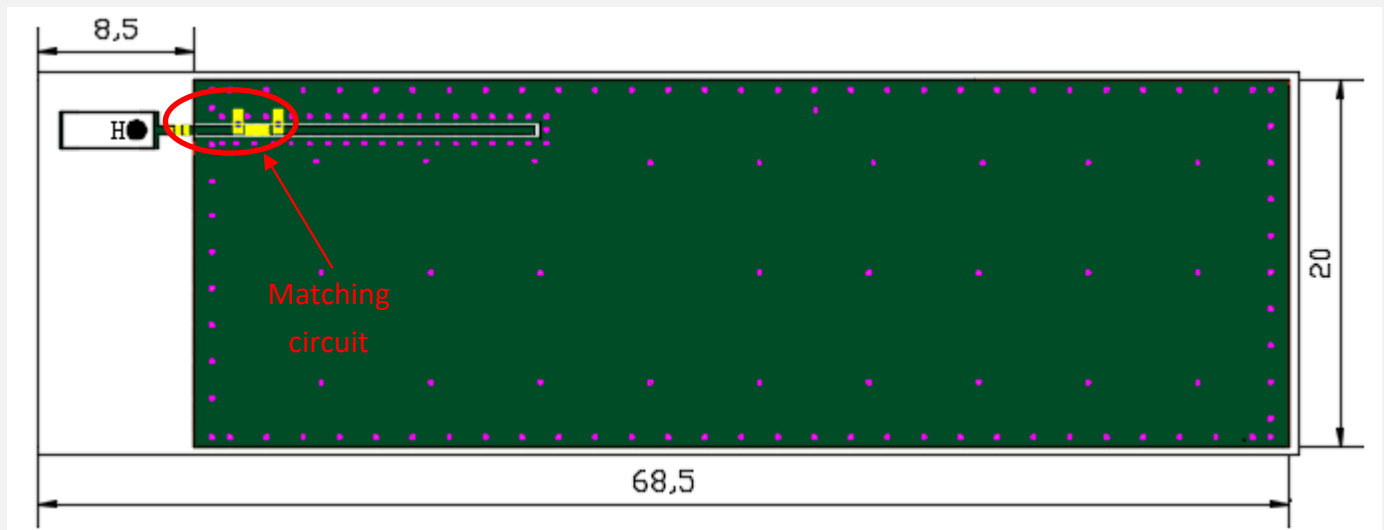
Dimension (mm)	
L	5.0+/-0.15
W	2.0+/-0.15
T	1.0+/-0.10
D	0.6+/-0.15

No.	Terminal Name
1	Feeding
2	Soldering

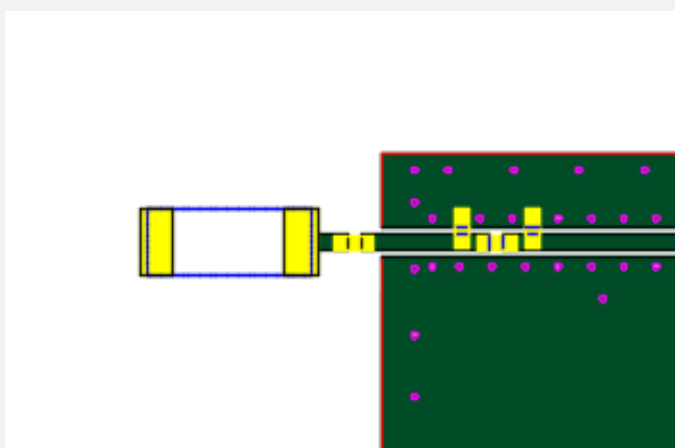
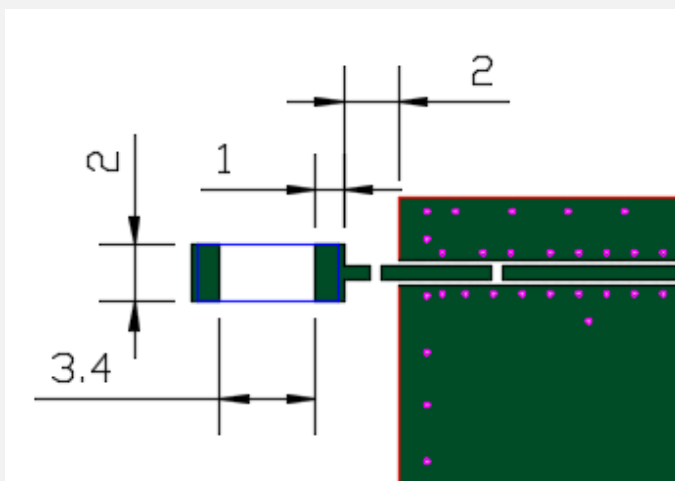
2.4GHz 5020 Chip Antenna: ANT5020R2400A1M1

Evaluation Board Reference

PCB Dimension



Antenna Layout Reference



Unit : mm

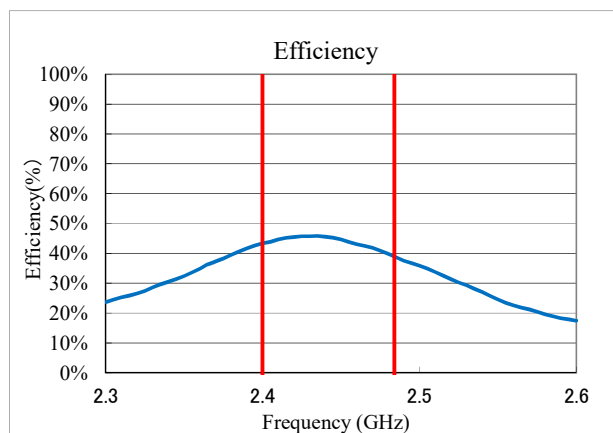
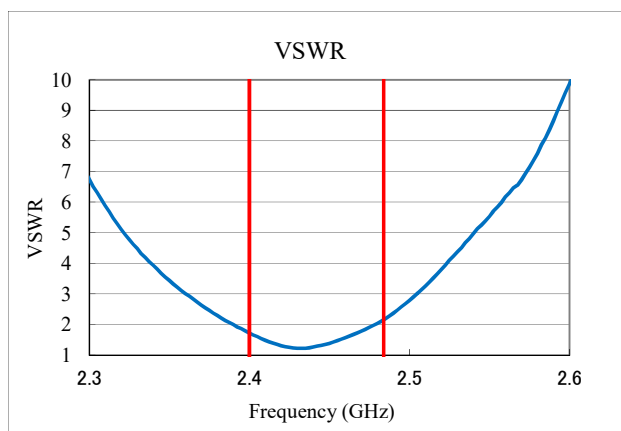
 : Chip Antenna

 : Land Pattern

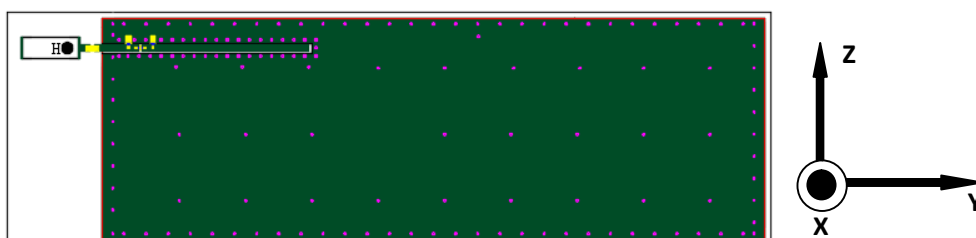
Electrical Characteristics

VSWR & Radiation

VSWR&Efficiency

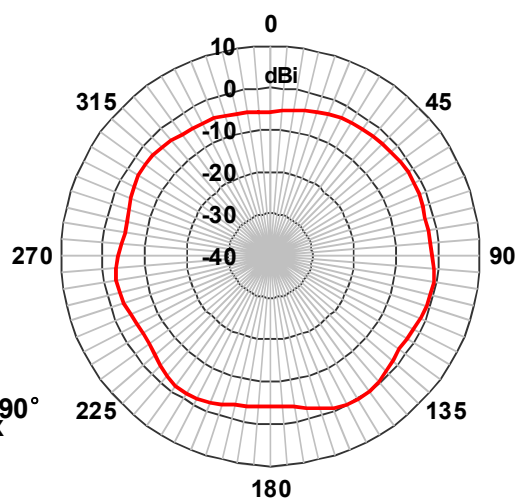
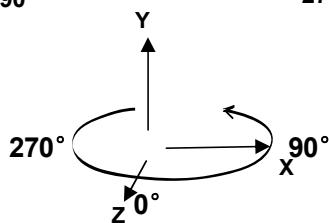
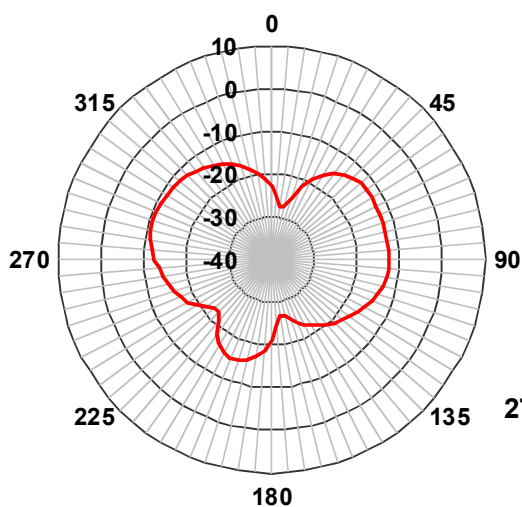


Radiation Pattern

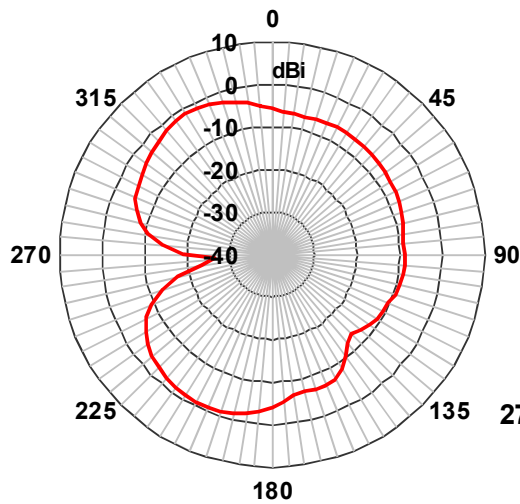


Frequency=2440MHz

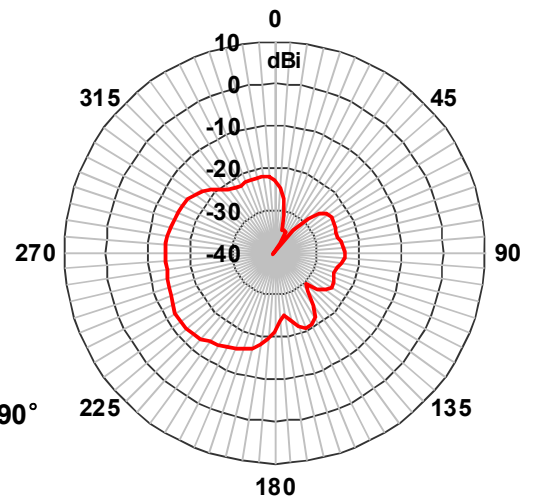
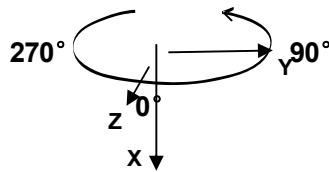
ZX-Plane



ZY-Plane

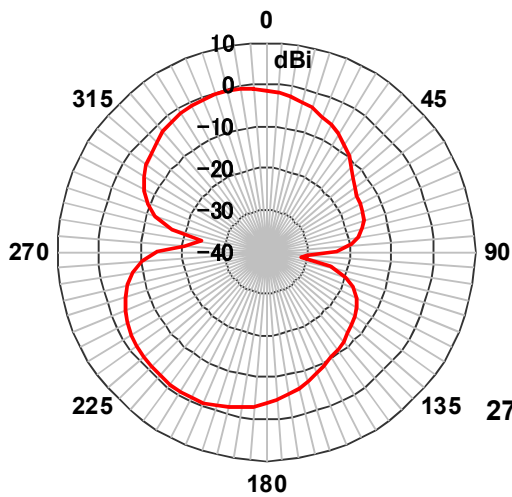


Horizontal Polarization

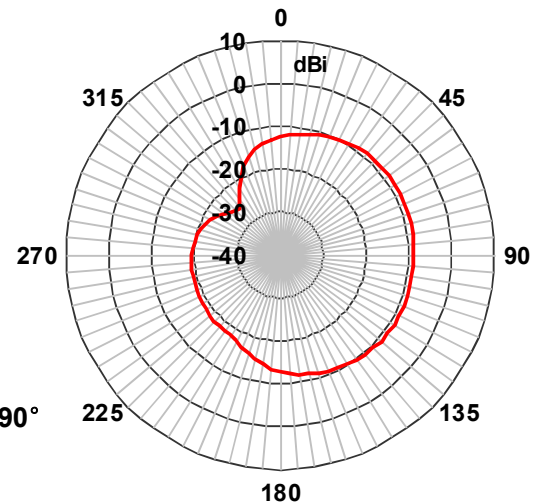
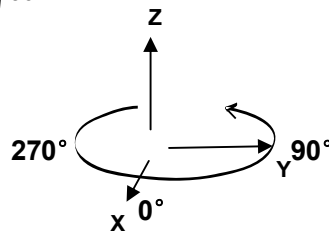


Vertical Polarization

XY-Plane



Horizontal Polarization



Vertical Polarization

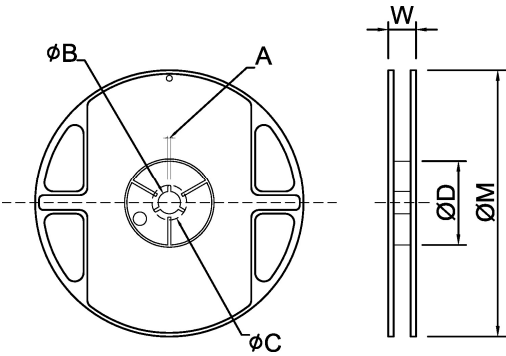
2.4GHz 5020 Chip Antenna: ANT5020R2400A1M1

Taping Specifications



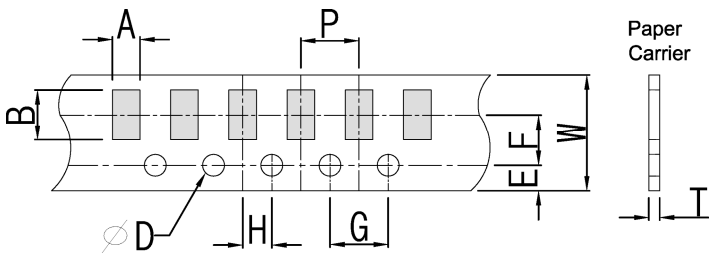
Reel and Taping Specification

Reel Specification



TYPE	SIZE		A	ψB	ψC	ψD	W	ψM
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

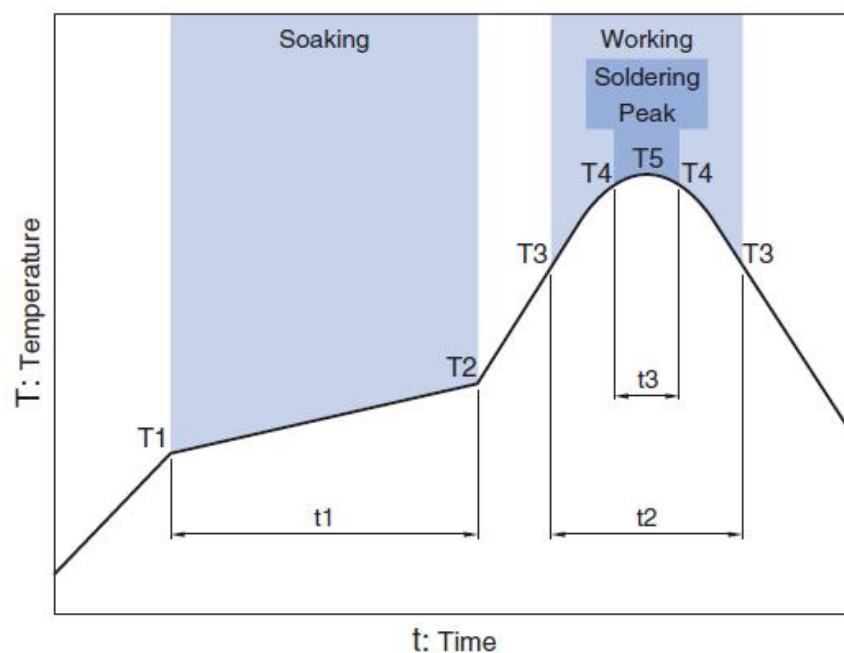


Packaging	Type	A	B	W	E	F	G	H	T	ψD	P
Paper Type	5020	2.30±0.20	5.30±0.20	12.0±0.20	1.75±0.10	5.5±0.05	4.0±0.10	2.0±0.05	0.30±0.10	1.50±0.10	10±0.1

2.4GHz 5020 Chip Antenna: ANT5020R2400A1M1

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.

APR 2023 Ver.01

Manufacturer: Dongguan Hekang Electronics Co., LTD.

Address: 1st floor, building C, yuanchuang power industrial park, no.24 tangjiao road, changping town, dongguan city, guangdong province, China