



Antenna matching report

Customer: 瑞荣达

Model Name: RRD-8566-Q08-V1.0

Frequency: BT(2402~2480MHz)

Date: 2023.07.11

Number: 20230711001

Producer: FAE



Outline

NO	PROJECT	Pagination
1	Appearance of customer Sample	Page 3
2	Matching parameters	Page 4
3	Antenna S parameters	Page 5
4	Antenna Passive parameter	Page 6
5	Conclusion	Page 7



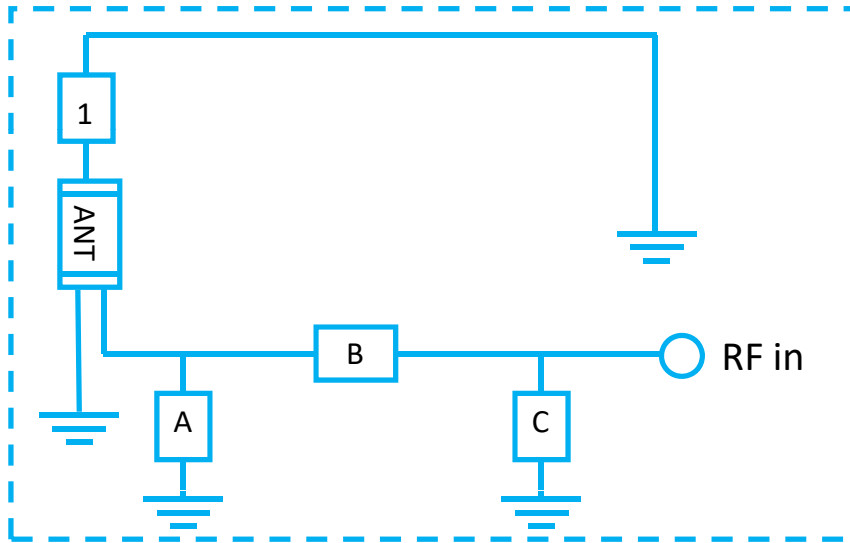


Appearance of customer Sample





Matching parameters



Antenna : ANT3216R24003KL6

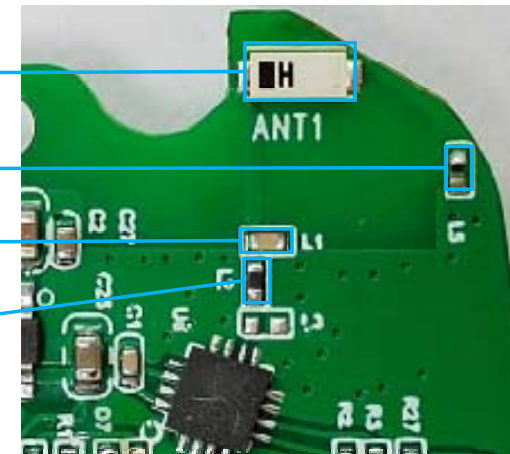
NO	Component	Brand	Description	P/N
1	Inductor	muRata	0402 1.0nH ± 0.1 nH	LQG15HS1N0B02
A	Capacitor	muRata	0402 2.0pF ± 0.1 pF 50V	GRM1555C1H2R0BA01
B	Resistor	Yageo	0402 0R $\pm 5\%$	RC0402JR-070R
C	OPEN	N/A	N/A	N/A

3216 Chip
Antenna

1

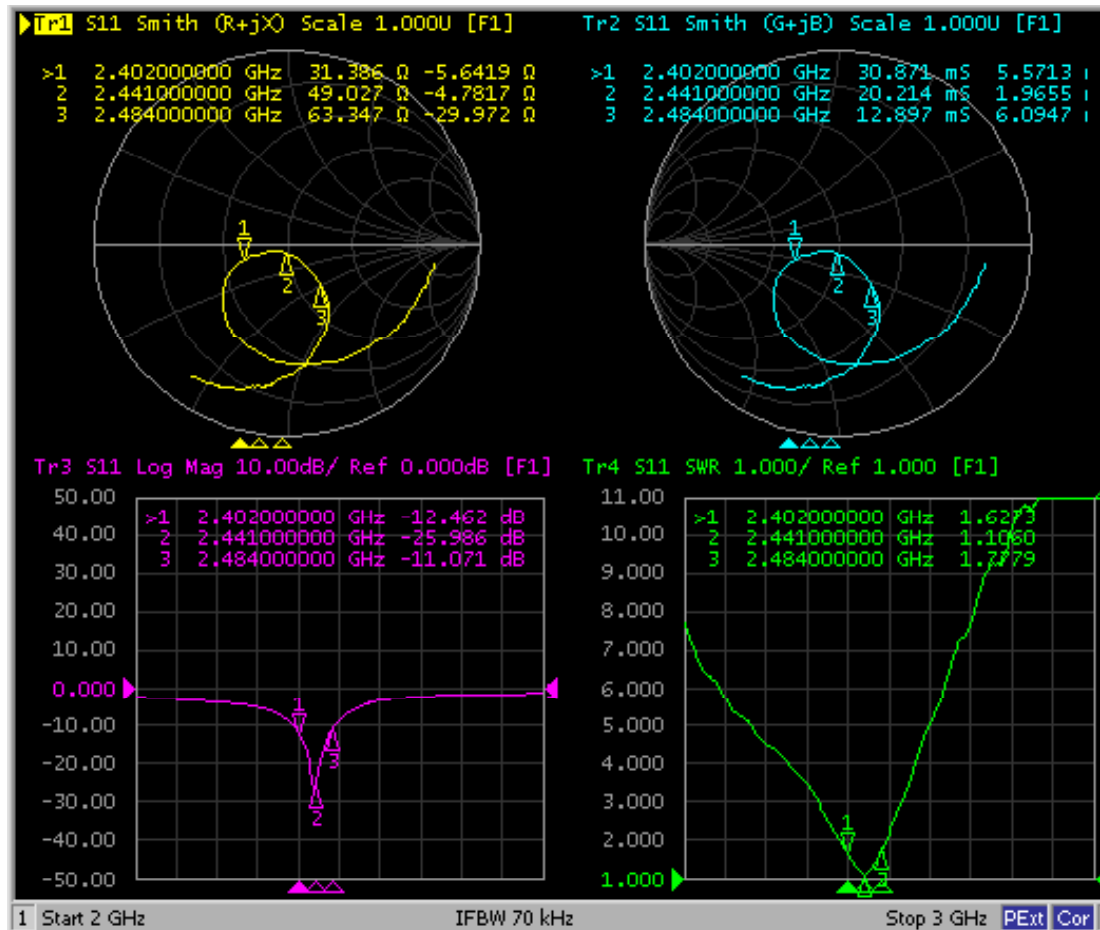
A

B





Antenna S parameters



Item	Value		
	2402 (MHz)	2441(MHz)	2480(MHz)
Smith(Ω)	31.38	49.02	63.34
Return loss(dB)	-12.46	-25.98	-11.07
VSWR	1.62	1.10	1.77





Antenna Passive parameter

Frequency	Efficiency (%)	Mean (dBi)	Peak Gain (dBi)
2400 (MHz)	28.44	-5.46	-0.68
2410 (MHz)	35.2	-4.53	0.08
2420 (MHz)	32.06	-4.94	-0.52
2430 (MHz)	32.99	-4.82	-0.56
2440 (MHz)	36.48	-4.38	-0.22
2450 (MHz)	34.49	-4.62	-0.68
2460 (MHz)	32.49	-4.88	-1.22
2470 (MHz)	32.04	-4.94	-1.03
2470 (MHz)	30.34	-5.18	-1.29
Average value	36.48	-4.38	0.08





Bluetooth distance measurement

测试报告			Distance test
客户：瑞荣达 机型：RRD-8566-Q08-V1.0 方案：			测试时间: 2023.07.11
测试方法： 1，将两个待测物连接后测试对讲距离； 2，测试时两个测试员通过不断交流听对方的声音是否有卡顿； 3、若无卡顿则继续背对向前移动，未卡顿的距离为有效距离			
测试类型	蓝牙拉距测试		
测试地点	合康园区门口草地		
测试距离	188M		
测试结果	测试距离符合蓝牙标准		
测试人员	谭邓波，彭军		





Conclusion

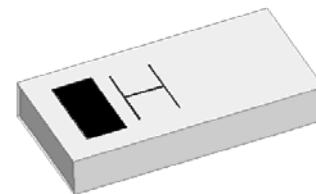
- 1、 The antenna's return loss is greater than 10 dB;
- 2、 The average antenna efficiency is greater than 25%, and the 2440MHz efficiency is greater than 30%;
- 3、 Bluetooth test distance is greater than 180M.



2.4GHz 3216 Chip Antenna: ANT3216R2400A1L6

Application:

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



Features

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

Part number

ANT 3216 R 2400 A1 L6
(1) (2) (3) (4) (5) (6)

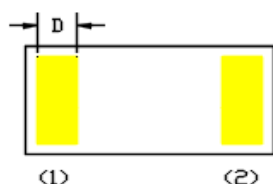
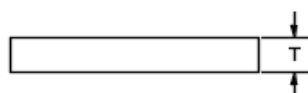
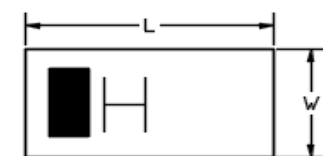
(1)Product Code	Chip Antenna
(2) Size Code	3.2x1.6mm
(3) Packing	Tape and reel
(4) Frequency	2.4GHz
(5) Series	A1
(6) Type	L6

Electrical Specification

Working Frequency Range	2400 ~2484 MHz
Peak Gain	1.1 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	3.20±0.15
W	1.60±0.15
T	0.50±0.10
D	0.50±0.15

No.	Terminal Name
1	Feeding
2	Soldering

Thanks

