HANK Electronics Co., Ltd .

Material acknowledgement

Approval P/N			
Item Description			
Version	V1.0		
Supplier	THOT	**Supplier P/N**	**361006**
Manufacturer	HANK	**Manufacturer P/N**	HANK
Approval approval	Check examine and verify	Prepare RD affirm	Date date

Shenzhen Hanke Electronics Co., LTD
HANK Electronics Co., Ltd .
Factory address: 2-7 floor, Building A8, Hongye Industrial Park, West Town, Bao'an District, Shenzhen
Company address: 16th floor, Building 11, District 2, Tian'an Yungu Industrial Park, Bantian Street, Longgang District, Shenzhen City

S02-1 Project antenna Material Requirements Specification

Customer name: Shenzhen Hanke Electronics Co., LTD

Customer name: S02-1

Product name: FPC

Change Content CV:

order number	edition	state	Start and end date	person liable	page number	remarks
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2						

The Supplier acknowledges the signature:

Responsible person / date		IQC/ date	Review / Date	Approval / Date
MD				
RF				

The Demander acknowledges the signature (please send it back after confirmation):

The demander the result: □ qualified □ unqualified			
Development & Design Engineer / Date	SQE Engineer / Date	Purchasing Leader / Date	Development Manager approval / date

1. Overview

1.1 Scope of application

This requirement, provided_Antenna technical requirements and material requirements specifications for the S02-1 products.

This requirement applies to S02-1 Antenna selection, testing and acceptance of the product.

1.2 Project basic information

Antenna name:	**S02-1**
Antenna band:	BT
Antenna material:	FPC

2. Technical index requirements

2.1 Introduction of test items and equipment

inventory	test item	equipment
S11 parameter	Standing wave ratio, echo loss	network analyzer
Active test	TRP,TIS	Integrated tester, microwave darkroom
Passive test	Gain, efficiency	network analyzer

2.2 Test instructions

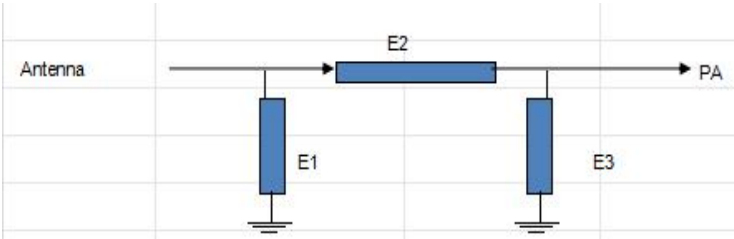
Test tools: Agilent8960 instrument, R & S CMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

Test environment: temperature 22℃± 3℃, humidity 50% ± 15%

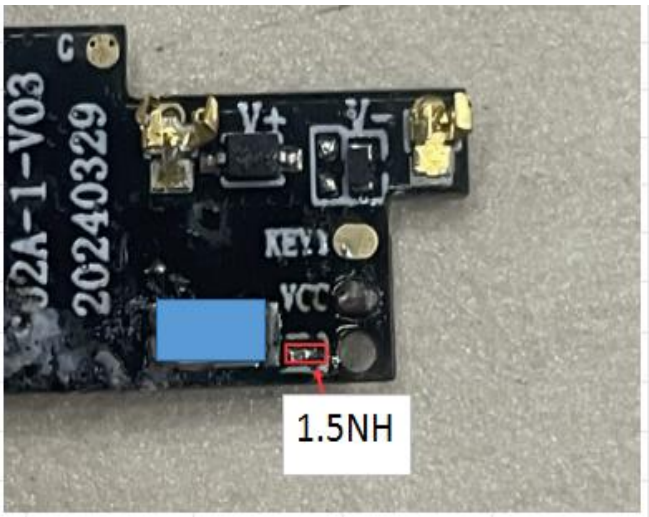
Test method: DUT is fixed in the center of the turntable with H plane, on the same horizon tal line as the center of the horn antenna. The positioning system enables the DUT to rota te in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument a nd turntable controller communicate with the PC with automatic test software through the G PIB interface

3. Test report

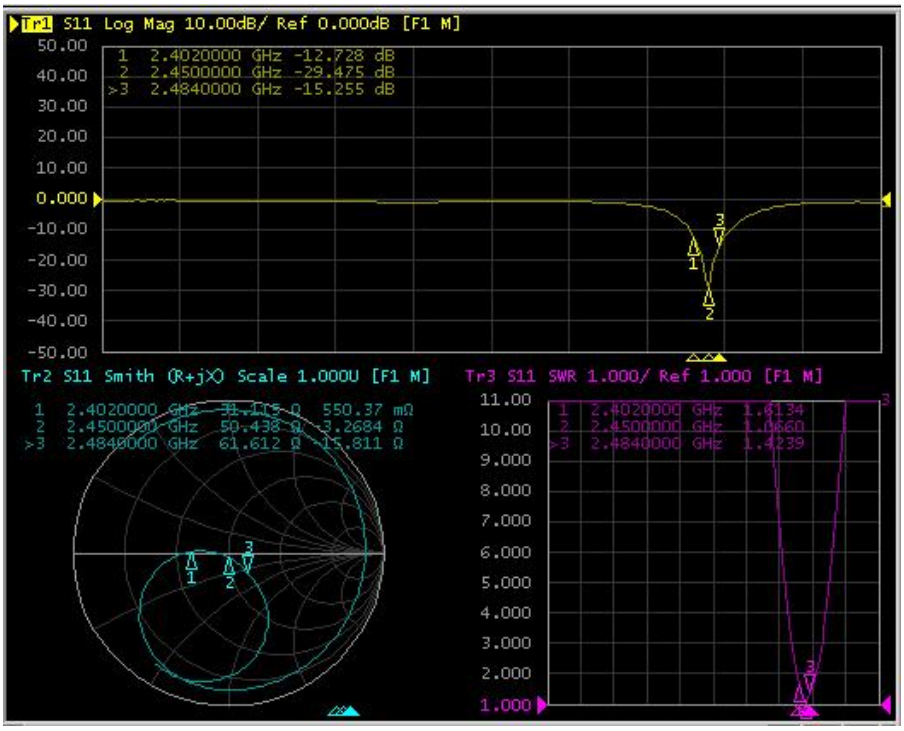
3.1: The matching circuit is shown below



Element	Value
E1(0201)	1.5PF
E2(0201)	0欧姆
E3(0201)	N/A



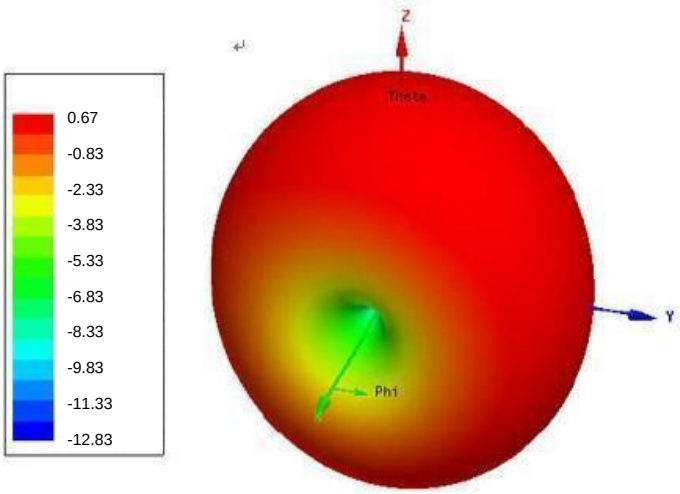
3.2:S11



3.3: passive efficiency

Freq (MHz)	Effi (%)	Gain (dBi)
2400	24	0.45
2410	25	0.52
2420	28	0.49
2430	31	0.55
2440	32	0.67
2450	33	0.47
2460	29	0.58
2470	28	0.62
2480	27	0.57
2490	25	0.47
2500	23	0.58

3.4: Direction diagram



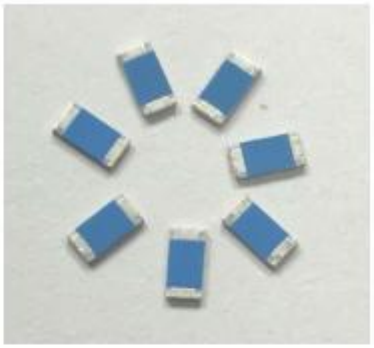
4. Structural size diagram

Application:

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

Features

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



Part number

AAN	3216	-	F0	P	2G45
(1)	(2)		(3)	(4)	(5)

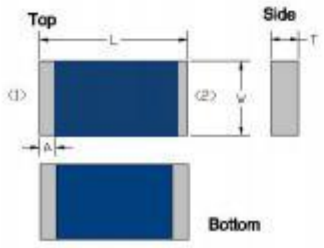
(1)Product Type	Chip Antenna
(2)Size Code	3.2x1.6mm
(3)Type Code	F0
(4)Packing	Paper Tape
(5)Frequency	2.45GHz

Electrical Specification

Working Frequency Range	2400 ~2484 MHz
Peak Gain	0.67dBi (Typ.)
Impedance	50 Ohm
Return loss	10 dB (Min)
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Operation Temperature(℃)	-40 ~85℃

The specification is defined on EVB.

Dimension and Terminal Configuration



Dimension (mm)	
L	3.15+-0.15
W	1.55+-0.15
T	0.50+-0.10
A	0.35+-0.10

No.	Terminal Name
1	Feeding point
2	GND