Q520 Project antenna material requirements specification

Customer name: Guoheng Intelligent Technology (Huizhou) Co., LTD

Customer name: Q520

Product specifications: For details refer to the BOM table

Product name: BT antenna

Supplier model: 107-0700000C2

Change Content CV:

order number	edition	state	availability date	person liable	page number	remarks
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The Supplier acknowledges the signature of the following documents:

Responsible person / date		IQC / Date-	Review / Date	Approval / Date
MD	Feng jiwu	Su Guanfeng	Zeng Xiang hao	
RF	Feng Xixian			

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

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

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1. Overview

1.1 Scope of application

This requirement specifies the antenna technical requirements and material requirements specifications for Q520 products.

This requirement applies to the selection, testing and acceptance of Q520 antenna.

1.2 Project basic information

Antenna name:	**Q520**
Antenna frequency:	BT ： 2400-2500MHZ
Antenna material:	FPC antenna

2. Technical index requirements

2.1 Introduction of test items and equipment

inventory	test item	equipment
Active test	TRP,TIS	Integrated tester, microwave darkroom

2.2 Active Reporting

2.2.1 Test instructions

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

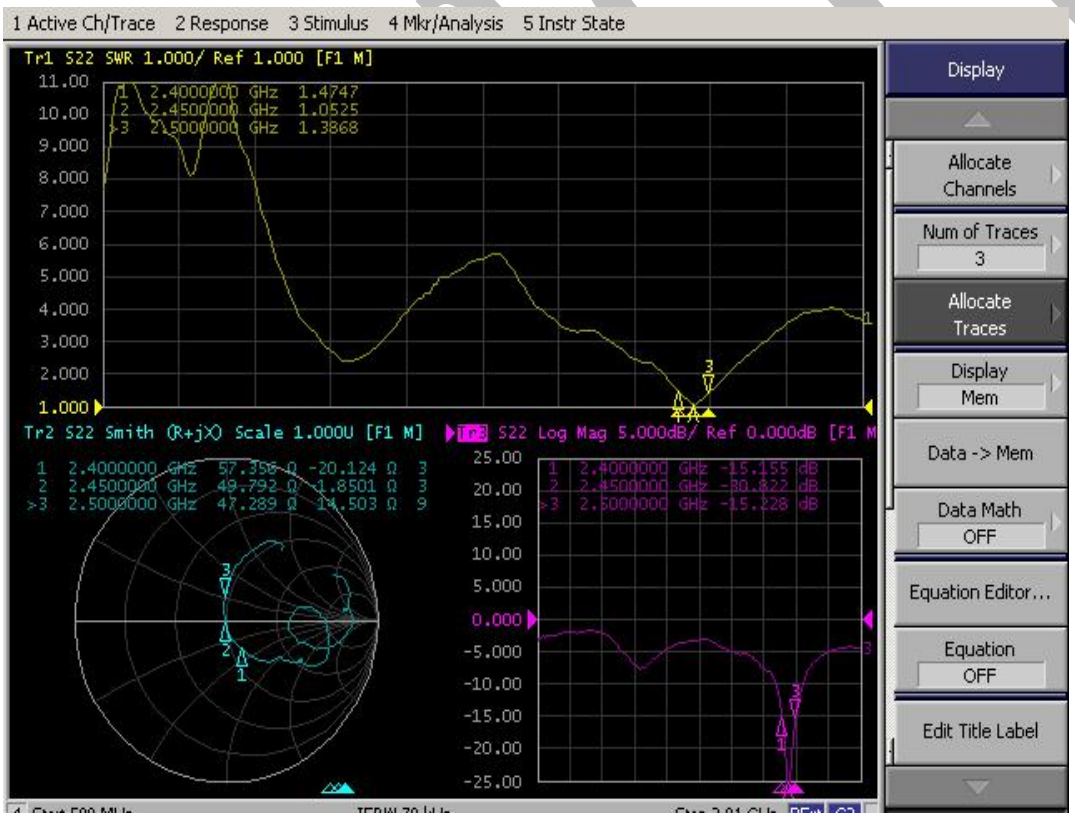
Test environment: temperature 22℃± 3℃, humidity 50% ± 15%

Test method: DUT is fixed in the center of the turntable with H plane, on the same horizontal line as the center of the horn antenna.

The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

2.2.2 The matching circuit is shown below – headphones

2.2.3 Antenna passive S11



2.2.4 Antenna Performance and Gain

Freq(MHz)	Effi(%)	Gain(dBi)
2400	60.06	2.12
2410	60.14	2.15
2420	61.43	2.18
2430	62.27	2.22
2440	63.02	2.28
2450	63.11	2.31
2460	62.61	2.61
2470	62.69	2.55
2480	62.52	2.35
2490	62.21	2.14
2500	61.19	2.06

2.2.5 Antenna OTA

Q520 1#

Channel No.	free	
	TRP (dBm)	TIS (dBm)
0	7.64	-90.6
39	8.13	-90.7
78	8.35	-90.9

Q520 2#

Channel No.	free	
	TRP (dBm)	TIS (dBm)
0	7.53	-90.6
39	7.81	-90.9
78	8.27	-90.9

Q520 3#

Channel No.	free	
	TRP (dBm)	TIS (dBm)
0	7.13	-90.68
39	7.96	-90.89
78	8.38	-90.97

Q520 1#

Channel No.	headform	
	TRP (dBm)	TIS (dBm)
0	6.79	-89.4
39	7.34	-89.5
78	7.53	-89.7

Q520 2#

Channel No.	headform	
	TRP (dBm)	TIS (dBm)
0	6.41	-89.2
39	7.37	-89.4
78	7.68	-89.9

Q520 3#

Channel No.	headform	
	TRP (dBm)	TIS (dBm)
0	6.58	-89.32
39	7.22	-89.28
78	7.59	-89.67

Q520 4#

Channel No.	free	
	TRP (dBm)	TIS (dBm)
0	7.23	-90.8
39	8.02	-90.8
78	8.56	-90.9

Q520 5#

Channel No.	free	
	TRP (dBm)	TIS (dBm)
0	7.67	-90.7
39	8.29	-91
78	8.64	-91.1

Q520 6#

Channel No.	free	
	TRP (dBm)	TIS (dBm)
0	7.84	-90.88
39	8.11	-90.94
78	8.57	-91.01

Q520 4#

Channel No.	headform	
	TRP (dBm)	TIS (dBm)
0	6.53	-89.4
39	7.46	-89.5
78	7.83	-89.9

Q520 5#

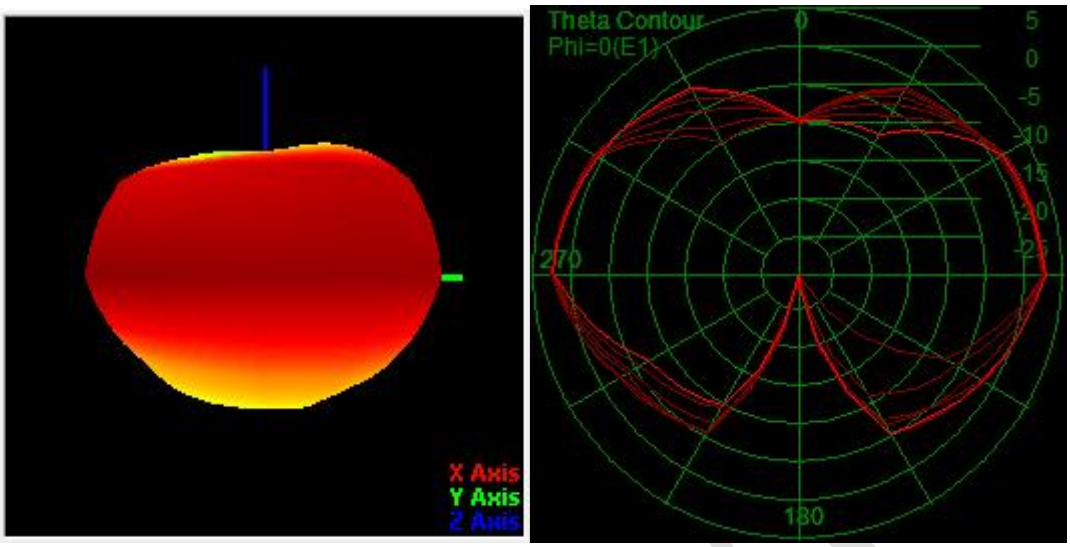
Channel No.	headform	
	TRP (dBm)	TIS (dBm)
0	6.71	-89.5
39	7.33	-89.7
78	7.79	-89.9

Q520 6#

Channel No.	headform	
	TRP (dBm)	TIS (dBm)
0	6.81	-89.53
39	7.46	-89.84
78	7.89	-89.95

THOT

2.2.7 Apple Image



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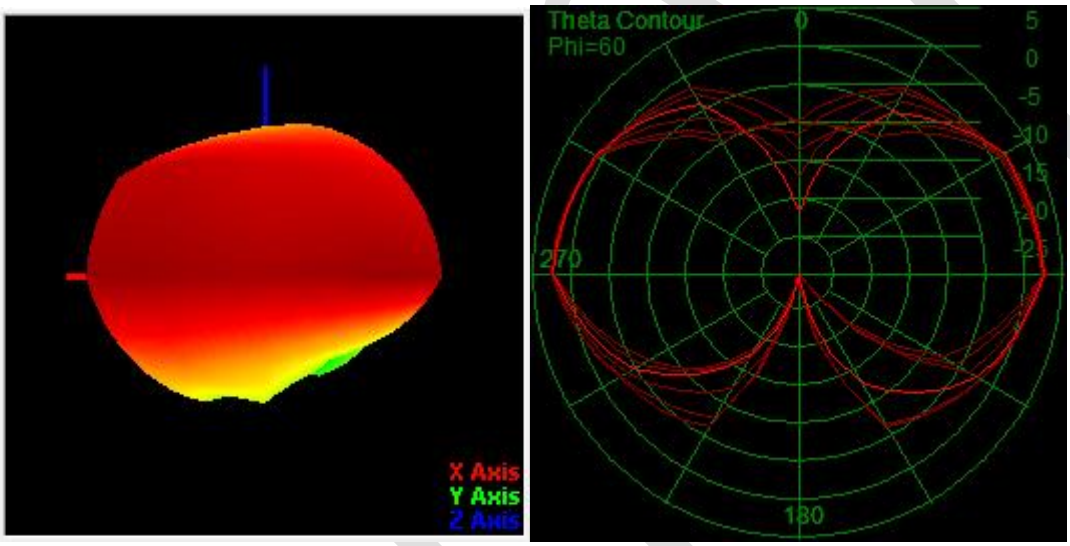

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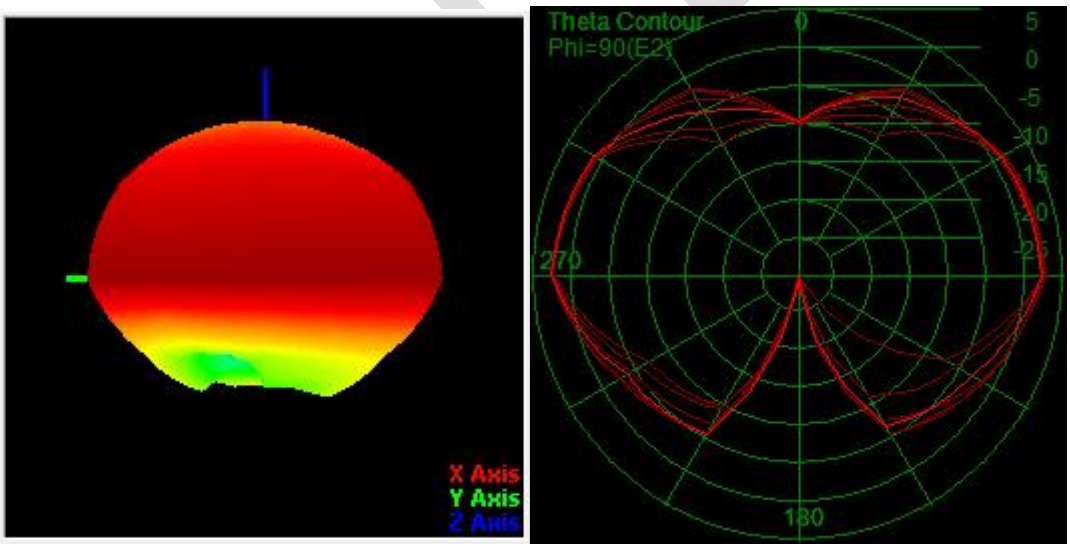


Theta=90

2.2.8 Antenna manufacturer

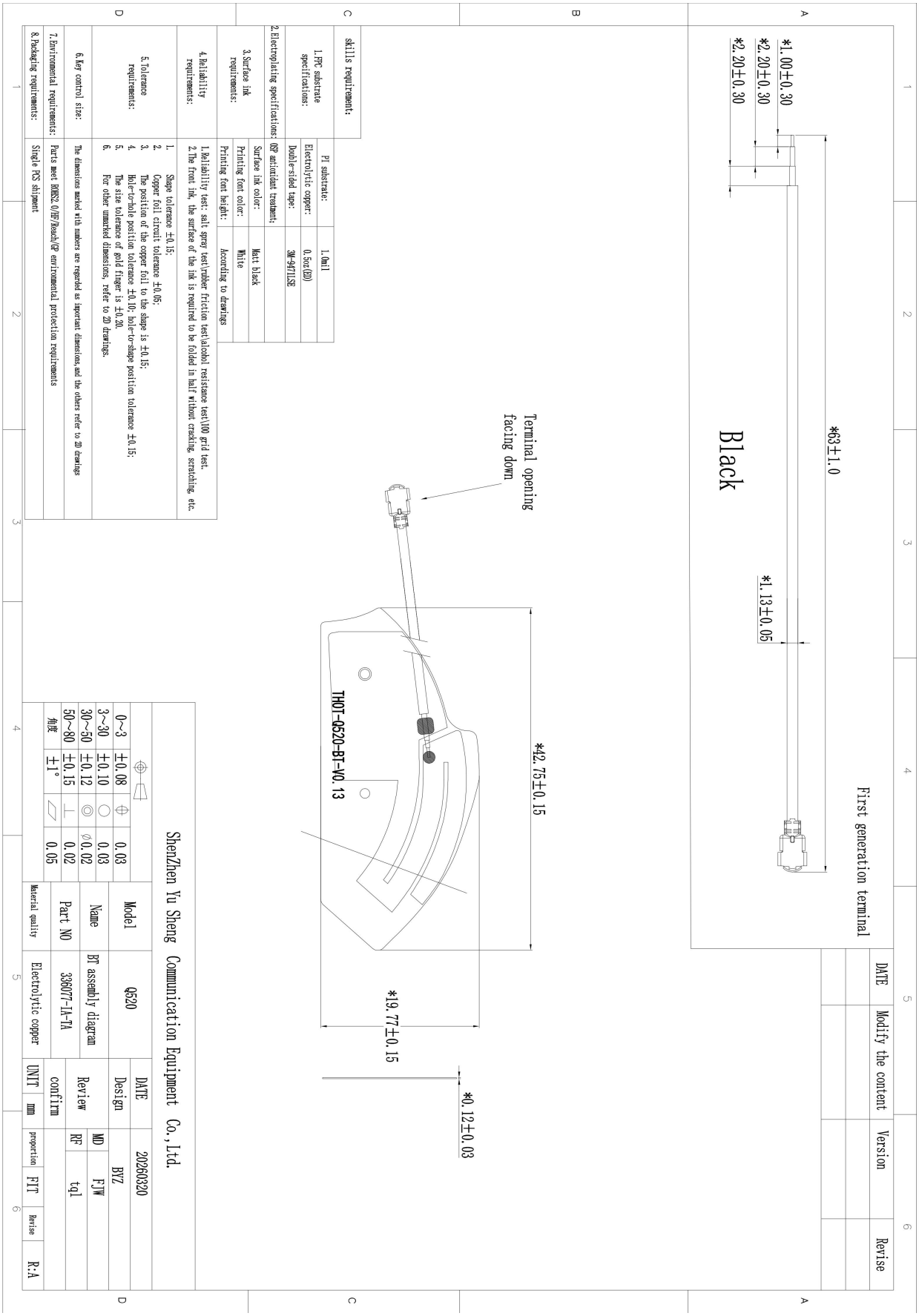
Shenzhen Yusheng Communication Equipment Co., LTD

4th Floor, Building 2, Nantai Yunchuang Valley Park, southeast side of the intersection of Guangming Avenue and Dongchang Road, Guangming District, Shenzhen

THOT

3. structural drawings

3.1 Left headphone antenna drawing



4. Bill Of Material

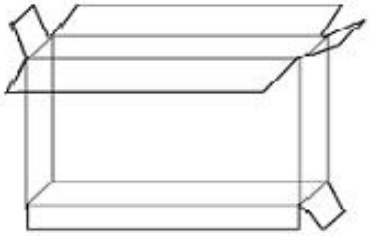
Shenzhen Yusheng Communication Equipment Co.,LTD

336077(Q520)-BOM

Edition : T:A client : 336 Type of aircTCft : 336077 Set a date : 2026/01/05

NO.	*Material code	*Material name	name	*Machine type	Specification and model	colour	*UNIT.	dosage	remark
1	336077-IA-TA	BT antenna		Q520	BT-FPC welding coaxial line	black	PCS	1	
1.1	336077-IA-01-TA	BT-FPC		Q520	BT-FPC electrolytic copper 1 half white character 42.75*19.77*0.12 mm	black	PCS	1	
1.2	336077-IA-02-TA	BT-CABLE		Q520	Single-head first-generation terminal φ 1.13*63 mm	black	PCS	1	
1.3	336077-IA-03-TA	Assemble		Q520	weld	black	PCS	1	
1.4	TY-CSRF	Network Analyzer Measurement		Q520	Network Analyzer Measurement	/	PCS	1	
verify :			examine :			manufacture : BYZ			

5. Packaging diagram

Packaging method diagram		
product name	Antenna components	
P / N	336077	
Project model	Q520	
File details	Carton Size 1: 270*260*200MM Carton Size 2: 260*200*200MM Carton Size 3: Depending on the order quantity / volume	
	Boating method	Packaging by order quantity
	Total number of binning	Packaging by order quantity
labeling requirement	Tag Size 1: Universal use 100 * 100mm Tag Size 2: According to customer requirements	
matters need attention		
1. Due to the limitation of order quantity, the packing method of each material is the size of the box according to the total quantity of the order or the physical volume		
2. Storage temperature: room temperature		
3. Preservation conditions: store them in a cool and dry place		

(This figure is only a packaging diagram, subject to the actual mass production)