

Sample Specification

Project model: K6

Sample name: BT antenna

Specification/color: black

Customer number: 3.01.K6F1010000

Material Code: 759-047-01A01

Date of signature:

Sample attributes:

Standard Sample; Limited Sample; Other Samples; Number of samples submitted
Supplier fill in:

business	project	quality

Customer fill in:

department	Confirm content	Confirmation result	Confirmation /Date
Design Department:	☐ Customer Requirement ID ☐ Color validation ☐ Surface Technology Confirmation ☐ Shell, Hardware, Key Material		
Structural/Electronic Engineer:	☐ Dimension Confirmation of 2D Drawing Files ☐ Key Control Dimension Marking ☐ Adaptation verification ☐ Shell, Hardware, Key Material ☐ Specification and Technical Requirements ☐ Electrical performance parameters ☐ function ☐ Effect		
Quality department:	☐ Test Standard Confirmation ☐ Adaptation verification ☐ Reliability Verification ☐ function ☐ Effect ☐ Appearance ☐ Standardization of Dimension Standards (Key dimensions)		
project manager:	☐ Information Integrity of Recognition Letter ☐ Specification and Technical Requirements ☐ Electrical performance parameters ☐ function ☐ Effect ☐ Appearance ☐ Standardization of Dimension Standards (Key Dimensions)		
Development Director	Approval		
Sampling order (procurement given, implementation by project manager, follow-up by engineers)			
Structural Classes (Shell, Keyboard, Hardware and TP, LCD, etc.):	project manager→ID/MD→DQA	Remarks: Please sign the samples in strict accordance with the order and confirmation of the content of recognition!	
Electronic Devices:	project manager→MD→Electronic Engineer→DQA		
Auxiliary materials:	project manager→MD→DQA		
Antenna Type 天线类型	☐ Integral ☐ PIFA ☒ Monopole ☐ Lop Antenna ☐ Chip antenna ☐ Coupling antenna ☐ other(其它) :		

Catalog

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Change of resume

Serial number	Date of change	entry name	Edition	Change content	Remarks
1	April 22, 2021	K6 BT antenna	V1.0	nothing	New issue

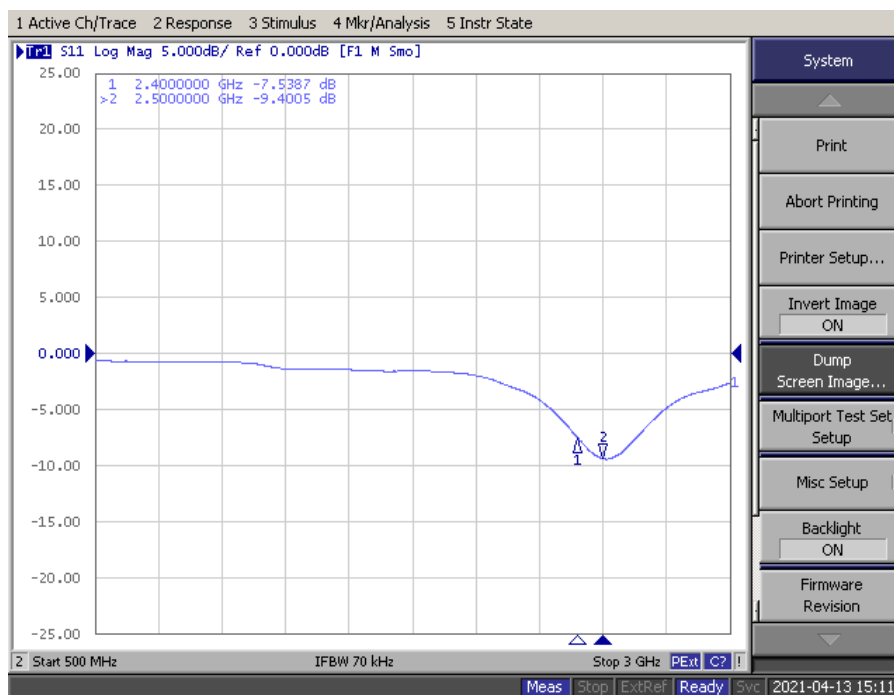
四. Electrical characteristics:

1. Antenna Structure



Figure antenna structure

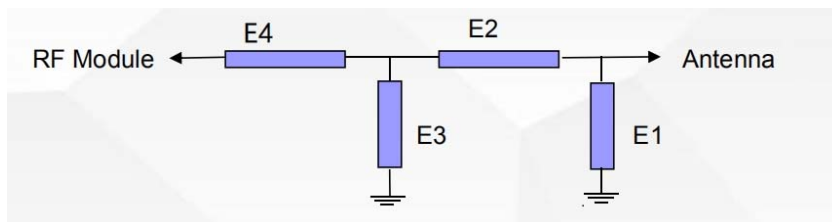
2. Test Results



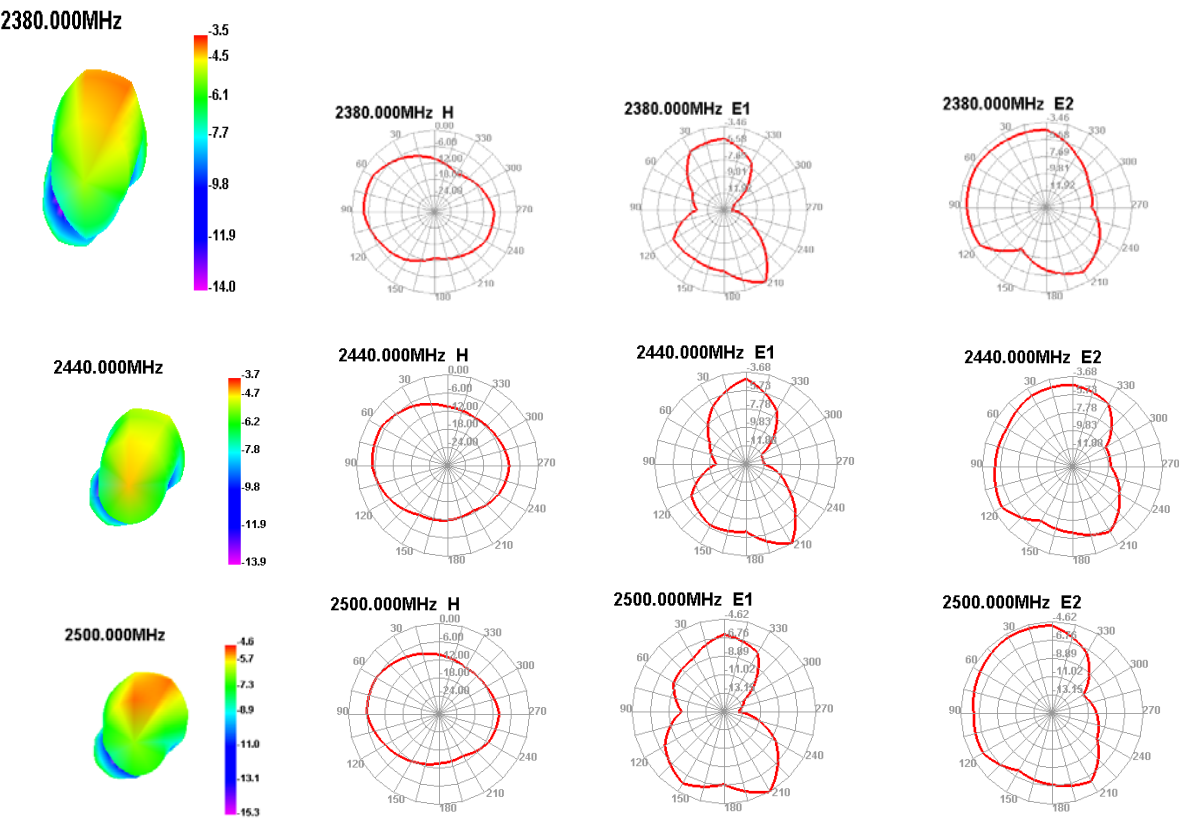
BT-Return Loss/VSWR

3. Test Repor 无源自由空间测试效率/方向图

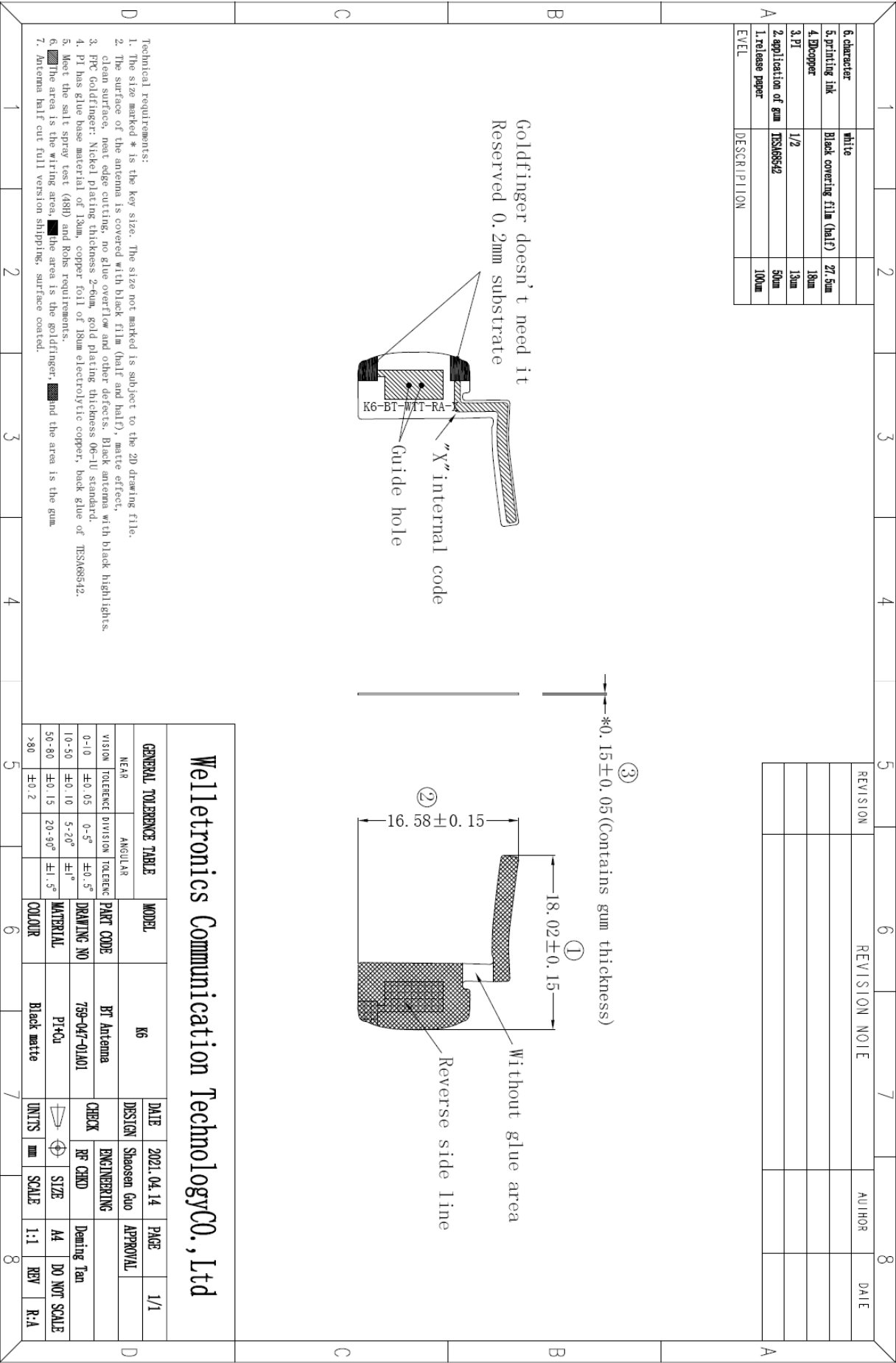
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2380	20.07	-6.97	-3.46
2392	20.34	-6.92	-3.31
2404	20.22	-6.94	-3.23
2416	20	-6.99	-3.27
2428	19.03	-7.21	-3.32
2440	18.35	-7.36	-3.68
2452	18.05	-7.44	-3.81
2464	18.98	-7.22	-3.82
2476	20.62	-6.86	-3.23
2488	20.87	-6.8	-3.14
2500	20.58	-6.87	-3.32



4. 方向图



五.2D drawings



Full-scale measurement report

[illegible]

CPK Report

CPK Report					
Part Number	759-048-01A01		Vendor	WTT	
Description	ID206mini BT antenna		Inspected		
Tool Number			Inches/MM	mm	
Cavity			Material Name	FPC	
			Material Code		
Revision	R:A		Date	28-Apr-21	
Dim. Designator	1	2	3	4	5
Nominal	18.02	16.58			
+ Tolerance(All	0.15	0.15			
- Tolerance	-0.15	-0.15			
Upper Limit	18.17	16.73			
Lower Limit	17.87	16.43			
1	18.043	16.594			
2	18.039	16.537			
3	18.017	16.529			
4	18.021	16.612			
5	18.024	16.634			
6	18.034	16.641			
7	18.025	16.570			
8	18.034	16.592			
9	18.020	16.594			
10	18.019	16.532			
11	18.043	16.582			
12	18.039	16.594			
13	18.017	16.537			
14	18.021	16.529			
15	18.024	16.612			
16	18.034	16.634			
17	18.055	16.641			
18	18.044	16.570			
19	18.011	16.592			
20	18.019	16.594			
21	18.083	16.532			
22	18.116	16.582			
23	18.134	16.573			
24	18.025	16.594			
25	18.034	16.537			
26	18.019	16.529			
27	18.043	16.641			
28	18.017	16.570			
29	18.021	16.537			
30	18.011	16.529			
MAX.	18.13	16.64			
MIN.	18.01	16.53			
AVERAGE	18.04	16.58			
STDEV	0.03	0.04			
CP	1.76	1.30			
Cpk	1.57	1.28			
TOOLING	CMM	CMM	CMM	CMM	CMM

By: Haibing Xiao

Written By: Hong Liu



Environment-Concerned Stbstance report

supplier' s Name : Welletronics Communication Technology CO.,Lt. (Raw material Manufacturer) : Welletronics Communication Technology CO.,Ltd

Names of material and type : K6 BT antenna

RoHS test report NO.

Name of hazardous substance	Threshold value ppm (mg/Kg)	If yes, which products/part numbers	Do you products contain this substance (Yes or No)	How much ppm (mg/kg)	Implement schedule
Cadminim and its compounds	100	759-047-01A01	NO	/	2021-4-14
Lead and its compounds	1000		NO	/	2021-4-14
Chromium VI and its compounds	1000		NO	/	2021-4-14
Mercury and its compounds	1000		NO	/	2021-4-14
Poly bramjnated Biphenyls (PBBS)	1000		NO	/	2021-4-14
Poly bramjnated Diphenyl ethers(PBDES)	1000		NO	/	2021-4-14

(Contact Person) : Tianhua Liu

(Position) : Quality Manager

(TEL): 0755-33870801-617

e-Mail: qc1@wt-china.com

(Date) : 2021-04-14

Salt spray test

Salt spray test								
Customer		Written By	Hong Liu	Orig. Date	14-Apr-21			
Part Number	759-047-01A01	Revised By	Haibing Xiao	Revised Date	14-Apr-21			
Description1	ID206mini BT antenna	Approved By	Tianhua Liu	Approved Date	14-Apr-21			
Date of trial	It will start at 0900 hours on April 21th 2021							
	End at 0900 HOURS on April 23th 2021							
	A total of 48 hours of continuous spray							
Experimental operation	1、Test operation status							OK
	2、Test box temperature							35°C
	3、Saturated Air Bucket Temperature							47°C
	4、Specific gravity of salt spray test							5%
	5、Specimen supported angle							30°
	6、Compressed air pressure							1kg/cm2
	Time	Testing time	Laboratory thermometer (°C)	Saturated Air Barrel Temperature (°C)	compressed air pressure (kg/cm2)	Machine running condition	Remarks	
	On April 10th, 17:00 P.M	8	35	47	1kg/cm ²	OK		
	On April 11th, 1:00 A.M	16	35	47	1kg/cm ²	OK		
	On April 11th, 9:00 P.M	24	35	47	1kg/cm ²	OK		
On April 11th, 17:00 P.M	32	35	47	1kg/cm ²	OK			
On April 12th, 1:00 A.M	40	35	47	1kg/cm ²	OK			
On April 12th, 9:00 P.M	48	35	47	1kg/cm ²	OK			
NO	Post-test status						Determine	Remarks
1	No oxidation on coating surface and no foammg and falling off of ink						OK	
2								
3								
4								
Remarks:								

Approved By: Haibing Xiao

Written By: Hong Liu

High and Low Temperature Testing

High and Low Temperature Testing

Customer			Written By	Hong Liu	Orig. Date	14-Apr-21	
Part Number	759-047-01A01		Revised By	Haibing Xiao	Revised Date	14-Apr-21	
Description1	ID206mini antenna		Approved By	Tianhua Liu	Approved Date	14-Apr-21	
Test time	On April 2th, 2021, 8; 30 began					Hot test (80℃)	
	On April 4th 2021 08:30 end						
	On April 4th 2020 08:30 begin					Room temperature test (20℃)	
	Until 10:35 On April 4th, 2020						
	On April 4th, 2020 10:40: begin					low temperature test (-40℃)	
	On April 6th, 2020 10:40: when finished						
	End of On April 6th, 2020 at 10:45					Room temperature test (20℃)	
	Until 12:45 On April 6th 2020						
	Start at 14:50 On April 6th, 2020					High Temperature and Humidity Test (80℃)	
	End at 14:50 On April 8th, 2020						
	Start at 14:55 On April 8th, 2020					Room temperature test (20℃)	
	End at 16:55 On April 8th, 2020						
	Total 150H Test						
	Experimental operation	Time		Test time(h/m)	Test box temperature (℃)	Air humidity intest box (℃)	Machine running condition
02-Apr-21		08 :30 A.M	24	79.91℃		OK	High temperature section
04-Apr-21		08:30 A.M	48	80.01℃		OK	
04-Apr-21		10 :35 A.M	2	20.07℃		OK	normal temperature section
04-Apr-21		10:40 A.M	24	-19.91		OK	low temperature section
06-Apr-21		10 :40 A.M	48	-20.02		OK	
06-Apr-21		12 :45 P.M	2	19.97		OK	normal temperature section
06-Apr-21		12 :50 P.M	24	79.92		OK	High temperature and high humidity section
08-Apr-21		12 :50 P.M	48	80.04	0.95	OK	
08-Apr-21	14 :55 P.M	2	20.01	0.9507	OK	normal temperature section	
NO	Post-test status				Determine	Remarks	
1	No Foaming Abnormality On Ink Surface				OK		
2							
3							
4							

Revised By: Haibing Xiao

Written By: Hong Liu

Adhesion Tester

Peeling strength test report						
Lamination model	3M467		Number of parking		5pcs	
The test environment	23±1℃		relative humidity		50±5% RH	
Back glue specification	100mm*20mm		Copper foil specifications		150mm*25MM	
The test conditions	1、Stripping Angle90° 2、Peeling speed: 50mm/ min					
Decision criteria	Pressure sensitive adhesive≥0.5kgf/cm					
Testing equipment	Peel strength testing machine					
The test results	The serial	Actual test conditions and phenomena			(OK/NG)	note
		Angle	speed	release force		
	1	90°	50mm/分	0. 71kgf	OK	
	2	90°	50mm/分	0. 67kgf	OK	
	3	90°	50mm/分	0. 70kgf	OK	
	4	90°	50mm/分	0. 68kgf	OK	
	5	90°	50mm/分	0. 70kgf	OK	

note :

Material quality proves

材质证明(Material quality proves)

Customer				Written By		hong liu						Orig. Date		14-Apr-21		
Part Number		759-047-01A01		Revised By		haibing hai						Revised Date		14-Apr-21		
Description1		ID206mini BT antenna		Approved By		tianhua liu						Approved Date		14-Apr-21		
序号	部件名称	材料名称	制造商	检测报告编号	有害物质含量										检测日期	备注
					Cd	Pb	Hg	Cr+6	PBB	PBDE	DIBP	DEHP	DBP	BBP		
1	FPC主天线	Copper foil substrate	CAI lun getty	SHAEC2001939103	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2021. 3. 3	
		Black ink	youli	CE/2020/93185	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2021. 3. 28	
		Transparent ink	GuangXin	SHAEC2006218211	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2021. 03. 27	
		gold	YiHai	WTH20H03007501C-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2021. 1. 4	
		gum	3M	CE/2020/10420	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2021. 1. 10	

Shipment of packaging

Packing

General requirements:

- 1.State customer name, project name, model number,
- 2.The pictures show the inner and outer cases, the packing method when shipping, the number of layers, the quantity of single layer, etc
- 3.Fill in the name and quantity of packing materials in the remarks column
- 4.Signature of quality supervisor, date

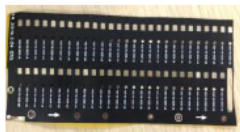


Figure 1: single
layer blister tray
or other forms



Figure 2:
basic packing
method of
inner box



Figure 3:
packing
case



Figure 4:
outer packing
label



Figure 5: stacking
of packing cases.

Product material
no:

759-047-01A01

The product
name:

K6 BT antenna

Product version:

R:A

The packing way:

Full page half cut package shipping

Blister tray

very dish:

1000pcs/bag

carton

Each box
number:

20000pcs/bag

note:

Put each 1000pcs into PE bag with protective film
protection;20 bags in one case, 20000pcs.

Signature: