

Supplier Name: Shenzhen Kangyuanxin Communication Technology Co.,Ltd

SPECIFICATION APPROVAL SHEET

Product Name: Antenna

Model: FPC Antenna

Specifications / materials: AMP 6500-LTE-ANT-V01-SC20-A

Brand: KYX

Package: Sealed plastic bag packaging, 200PCS per package, cartons

Product category: FPC

Material Code: 200207015310106

Product Description: AMP 6500_LTE_FPC ANT -3 mode 13 frequency -V01-No wires -SC20_A-DIV-KYX

Supplier signature	Customer signature
	


Supplier contact address: 6Th floor, 21 Guangqian Industrial Zone, Longzhu 3rd Road, Xili Town, Nanshan District, Shenzhen

Supplier business liaison / TEL / FAX: Liyucheng /075586238626/075586238957

Supplier Technical Support Contact /TEL: Qin Xinjian /075586238967

File Version Information

Category	Date	Version Number	Describe	Recognition	Remarks
Electronic	2018/12/6	V1.0	First Edition	Zhao xiaobo	

NEW POS TECHNOLOGY CO. LIMITED		Product Inspection Specification					Number: 2018120601	Edition: B							
							Date:	2018/12/6							
Material number		200207015310106	Process name	Incoming inspection	Standard	MIL-STD-105E appearance: II; function: S-2			Acceptance: CR: 0、MAJ: 0.25、MIN: 1.0						
Describe		AMP 6500_LTE_FPC ANT -3 mode 13 frequency -V01-No wires -SC20_A-DIV-KYX					Supplier		KYX						
Inspection items and standards						Graphic: 									
Inspection items	Verify Contents		Test criteria		Tool						Frequency	Department	Judging		
	CR	MA	MI												
Size	1	41.50	±0.2mm		CCD callipers visual						Submitted/approved	IQC	V		
	2	30.70	±0.2mm												
	3	18.40	±0.2mm												
	4	9.20	±0.2mm												
structure appearance	Structure		According to the structure; Back glue, off-type paper, line part, hole position and drawing are the same.		visual						Submitted/approved	IQC	V		
	Appearance		No damage, no dirt on the surface, no burrs on the edges												
	Welding disk		Gold plating, no damage, no oxidation.												
	Silk Seal		Clear and clear(no fall to see bottom bad)												
Function / Performance	Stand Bobby		≤3.0		View Recognition	Submitted/approved	IQC	V							
	Efficiency		/												
	Open and short circuit test		No open circuit between the two plates		multimeter										
Packaging / marking	Blending, mixing, short-fitting		Not allow		visual	Submitted/approved	IQC			V					
	Moisture-Proof grade		/												
	Indicate		According to NEWPOS label requirements												
material quality	According to the material requirements of the "Product Recognition"														
Packaging specifications	According to the packing specifications of the Product Recognition Book														
RoHS&HF	Decision Standard Reference & Lt; Specification for Management of Hazardous Substances & amp; Gt; execution														
Store	-40℃~+85℃														
Remarks						Approve		Countersign		Formulate					
						/		Fang zhaoyu		Zhao xiaobo					

Matters needing attention

- 1: Unrevised matters are subject to specification requirements or product drawings(including preparation documents);
- 2: The transparent parts are executed according to the transparent parts test standard, and the flame retardant is based on ANSI/UL -94 V-0;
- 3: This specification is based on NEW POS sampling level: normal appearance test using MIL-STD-105E II, function and size using MIL-STD-105E S-2
- 4: The sample of the reference must be a qualified model, pay attention to the effective preservation period of the material;
- 5: The material meets the requirements for the control of hazardous substances.

Accessories:

number	Specification Name	Version	Date	Publish unit	Remarks
1	Antenna test report	/	2018/8/3	KYX	
2	Antenna Size Report	/	2018/8/3	KYX	
3	Drawing	RB	2018/10/10	KYX	
4	Packaging specifications	RA	2018/10/10	KYX	
5	Installation Operations Guide	/	2018/10/10	KYX	
6	Salt fog test, constant temperature humidity, cold and hot impact test report	/	2018/12/5	KYX	
7	RoHS certificate	/	/	SGS/CTI	

4G antenna test report

Company Number: HZR040-B/C

Customer Number: AMP 6500-LTE-SC20-A

Test date: 2018.8.3

Reasons for testing: New projects Specification change Process change First confirmation

Test data

Test tool:
SATIMO-SL16-OTA. 8960/E5515C. CMW500

Test method: 1. Assembly the antenna to be tested on the prototype
2. Start the prototype on the test fixture in the dark room and establish a connection with the measuring instrument.
3. Test TRP and TIS with test software.

Unit: dBm		Channel	TRP	TIS
4G	FDD_B2	18650/650	18.95	-92.81
		18900/900	18.86	-92.66
		19150/1150	18.75	-92.71
	FDD_B4	20000/2000	19.21	-92.69
		20175/2175	19.33	-92.58
		20350/2350	19.67	-93.21
	FDD_B5	20450/2450	14.11	-84.31
		20525/2525	14.31	-84.44
		20600/2600	14.59	-83.69
	FDD_B7	20800/2800	18.25	-91.88
		21100/3100	18.11	-91.87
		21400/3400	17.88	-92.11
	FDD_B25	26090/8090	18.55	-92.89
		26365/8365	18.66	-92.18
		26640/8640	18.29	-91.59
FDD_B26	26740/8740	13.41	-84.54	
	26865/8865	14.33	-84.87	
	26990/8990	14.29	-84.67	
3G	B2(W1900)	9262/9662	19.28	-105.73
		9400/9800	19.32	-106.81
		9538/9938	19.27	-106.85
2G	PCS1900	512	25.69	-104.27
		661	25.66	-105.57
		810	25.42	-105.06

Electrical test findings

Meeting customer needs

R&D Engineer: Qin Xinjian

Antenna Size Report

File Number: GC-ESET-001

Company Number: HZR040-C Customer Number: AMP 6500-LTE-SC20-A-DIV Test date: 2018-8-3

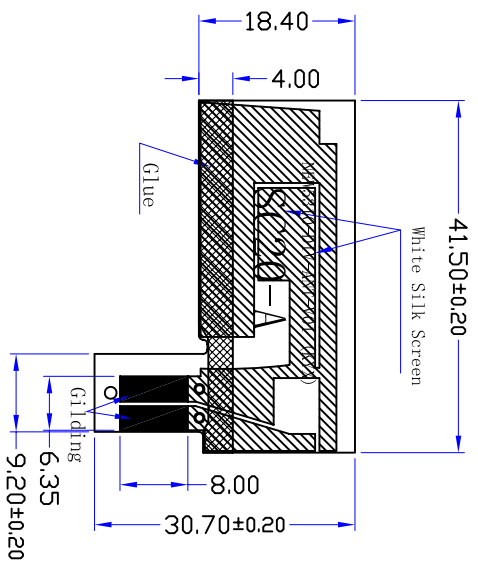
Reasons for testing: New projects Specification change Process change First confirmation

Divide antenna	specification	Test items		Sample 1	Sample 2	Sample 3	
	0.42±0.05	Circuit board	thickness	0.424	0.427	0.425	
	FPC (0.2FR4)		material	Electrolytic copper	Electrolytic copper	Electrolytic copper	
	Appearance standard		appearance	No leakage of copper, shearing, oil, etc..	No leakage of copper, shearing, oil, etc..	No leakage of copper, shearing, oil, etc..	
	Overall assembly						
	41.5±0.2	other	FPC length	41.46	41.48	41.52	
	30.7±0.2		FPC width	30.72	30.74	30.73	
			Line length				

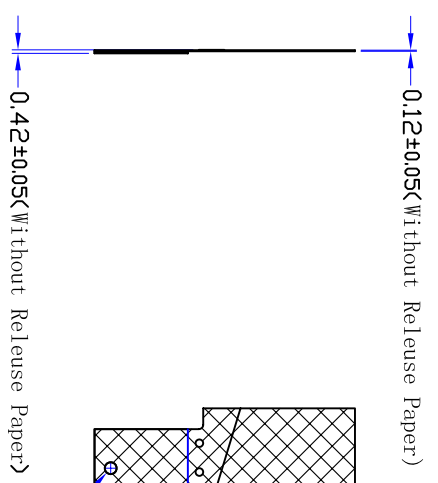
Test conclusion	Structural assembly meets customer requirements	Structural confirmer: Yao changqing
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Final decision	instructions				
	conclusion	<input checked="" type="checkbox"/> accept	<input type="checkbox"/> reject	<input type="checkbox"/> Conditional acceptance	Confirmation: Yao changqing

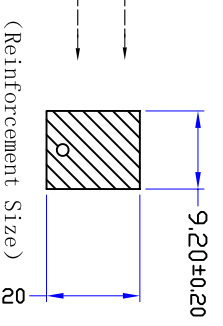
Version	Modifications	Modifier	Date
RA	First issue	Yao	18. 06. 21
RB	Alteration of antenna profile (2MM substrate at top)	Yao	18. 10. 10



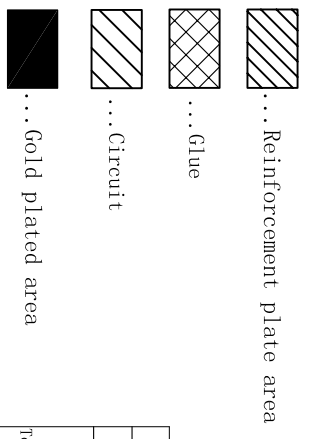
Front



Back



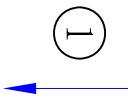
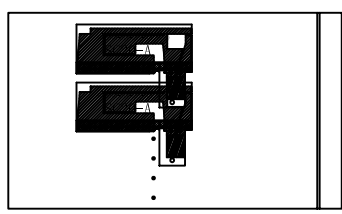
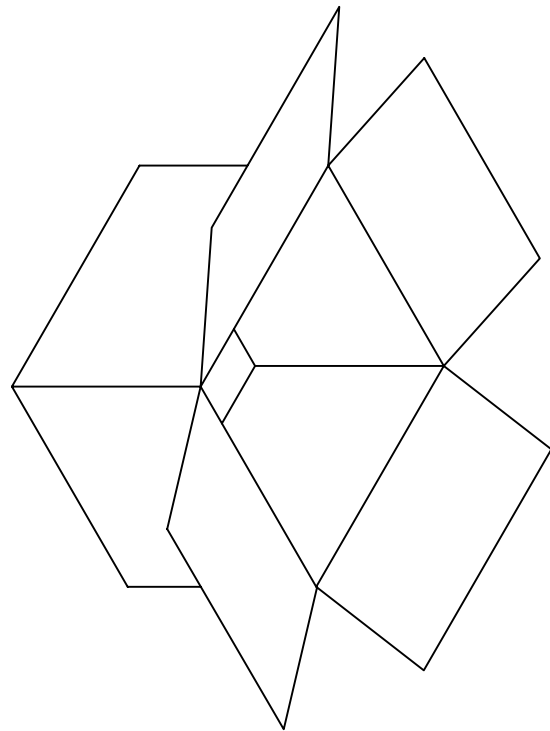
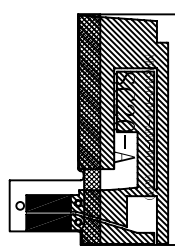
- technical requirements
1. The substrate uses PI T = 1 MIL, copper foil thickness 0.5 oz (electrolytic copper);
 2. The surface of the copper berth is covered with black oil, and the oil must be uniform;
 3. Reinforcement board: FR4T = 0.2 MM
 4. Back glue 3M9471LE(3M300LSE);
 5. Gold plated area: Gold plated thickness of 0.03 UM or more, nickel plated thickness 3-8UM;
 6. Bring ": * ": ": ": Symbol size is the key size;
 7. Unspecified tolerances according to the general tolerances table;
 8. The material must meet the ROHS requirements.
 9. PE bag packaging shipped, a bag 200PCS.



KROYOX				Kangyuan Organism Magnet Industry Co.,Ltd			
Product No.		HZR040-C		Material		PPC	
Customer No.		HZR040-C-01A		Version		RB	
Part Name		AMP 6500 DIV (SC20-A)		PN		HZR040	
Date		2018-10-10		Unit:		mm page1/1	
Design		Yao		Approval			
Destign		Qin		Approval			
Tolerance Range		±0.1		Approval			
10-20		±0.12					
20-40		±0.15					
40以上		±0.2					

Version	Modifications	Modifier	Date
RA	First issue	Yao	18.10.10

Packaging instructions:
 1. Each 200 antenna components are zipped into a bag and then packaged.



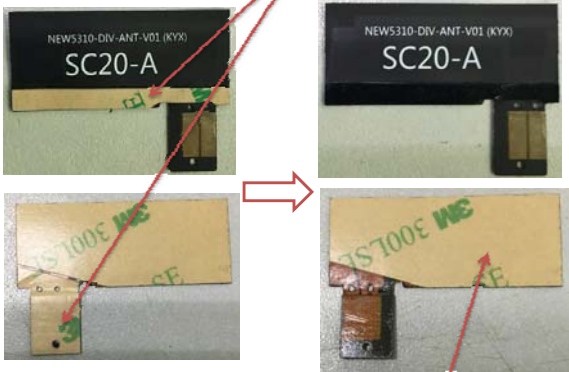
- Cardboard physical properties parameters:
1. Material: <UNK> type(BCB) K = K
 2. Break resistance: 11 ± 1 kgf/cm
 3. Side pressure: 5500 (N/m) ± 500
 4. Water content: 8 ± 2 %

				KOYOX		Kangyuan Organism Magnet Industry Co.,Ltd			
		Product No.	HZR040-C	Material	/				
		Customer No.	Yao	Version	PN				
		Part Name	Qin	Packaging diagram	PN				
		Date		2018-10-10					
		Approval							
		Design Audit							
		±0.1	±0.12	±0.15	±0.2				
		0-10	10-20	20-40	40以上				
		Tolerance Range							

Guidelines for antenna installation operations

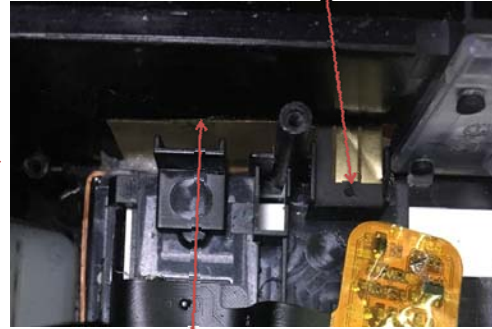
Company Number: HZR040-C Customer Number: AMP 6500 DIV (SC20-A) Date: 2018-10-10

Step 1: Tear off the front and back of the FPC(as shown below).



Special Note: Arrow Indicates Area Offform Paper Do not Tear Out.

Step 2: Paste the antenna FPC positioning hole with the shell positioning column.



The antenna FPC is inserted along the inside of the shell and then pressed the antenna with tweezers to make the antenna glue better to the shell.

Icon after antenna assembly

Antenna installation steps:
Step 1: Tear off the front and back of the FPC(pictured above).
Step 2: The antenna FPC positioning hole is pasted with the shell positioning column. (FPC inserts the inside of the shell and then presses the antenna with tweezers to make the antenna glue better to the shell.)
(Note: FPC is to be flat close to the surface of the shell, and there must be no undesirable phenomena such as edges or middle bulges)



Shenzhen Kangyuanxin Communication Technology Co., Ltd

Test Report on Constant Temperature, Cold and Hot Impact

Customer	HZR	Date	2018/12/5	Number	HZR040-C
Trade name	AMP 6500 DIV_SC20-A	Number	15PCS	Test time	24H
Material	FPC	Supplier	BYK	Standard	MIL-SDT-202Method017IEC60749-25 JEDEC JESD22-A104-B IEC68-2-1MIL-STD-2168-85

Objective: To test the reliability of the product and the binding force, anti-oxidation and anti-corrosion ability of the coating.

Equipment Name: High and Low Temperature Test Box

Laboratory environment:

Temperature	45°C	Humidity	85%	Atmosphere	1Mpa
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Test parameters

Temperature	High temperature	70°C	Low temperature	Negative 40°C	Tolerance	1°C		
Time	constant temperature	High	60min	Warming	5min	Remarks		
		Low	60min	Cooling	5min			
Circulate	12 times	Other	Humidity	85%				
Check	separation	No	oxide	No	blistering	No	Ink shedding	No
Test	stripping	≥1.0kgf/cm ²	Wweld	ACC	Baige.	ACC	wear-resisting	ACC

The ACC was passed and NG was unqualified.

Test record:

Product Number	Product Test Results	Judging
1		Qualified
2		Qualified
3		Qualified
4		Qualified
5		Qualified
6		Qualified
7		Qualified
8	Non-stratification, foaming, discoloration, degumming, upping, oxidation and appearance damage	Qualified
9		Qualified
10		Qualified
11		Qualified
12		Qualified
13		Qualified
14		Qualified
15		Qualified

Tester.: Zhong haiping

Audit: Deng faying

Approve: Zhang yanmin