

APPROVAL SHEET

Approval No. : RD1202403NB87-1

Part Number:630810000109

Part Name:Lumi-NFC

Spec. :ANT-FPC, Lumi, FPC:L55.9MM*W30,NFC-ANT,with Ferrite Material and tapes

Ver.:V1.0

Vendor Approval:		
Issued by	Confirmed by	Approved by

TC Approval:		
Issued by	Confirmed by	Approved by

Issued Date:

Catalogue

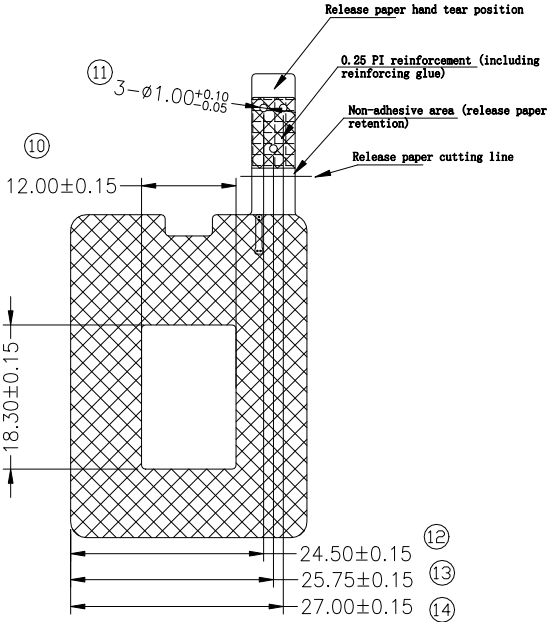
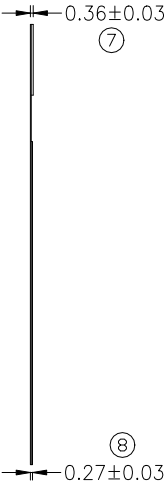
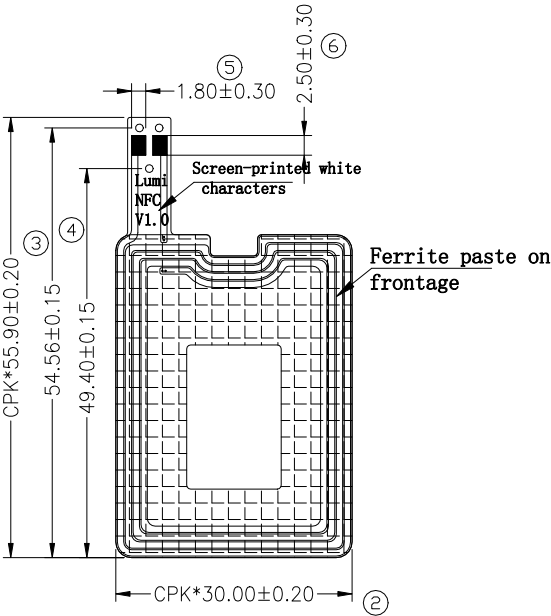
—、 I. Engineering drawings

II. Full-scale measurement report

III. SGS Report, Bill of Materials and Material
Composition Questionnaire

IV. Electrical Performance Test Report

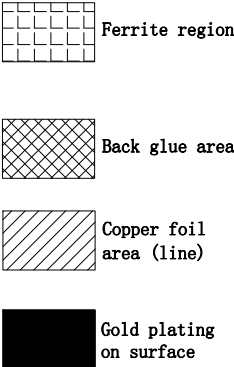
Version	Modifications	Modifier	Date
TA	First trial production	Liu Qifu	24.08.05
TB	Character upgrade V1.0	Liu Qifu	25.01.20
RA	Mass production distribution	Liu Qifu	25.03.08



technical requirement

- Double panels;
- Print black ink (10-15um) on the front.
- Dimensions marked with "*" are key dimensions;
- T=0.05mm, MTM6050; for adhesive backing;
- PI is used as the substrate, T=0.5Mil, and the substrate is semi-adhesive and semi-adhesive;
- Electrolytic copper, with a copper foil thickness of 0.5oz; ;
- The gold plating thickness of the gold plating area is above 0.03UM, and the nickel plating thickness is 2-6UM.
- All unfilled round corners are 0.2, and the process edge is 0.2mm;
- If the tolerance is not indicated, it shall be according to the general tolerance table.
- The material shall meet the requirements of ROHS2.0+ halogen-free +REACH, and there shall be no oxidation in the salt spray test for 48H.
- packing method: single PCS packaging for shipment.

Reverse adhesive



2	ferrite	41.00*30.00*0.14	1
1	NFC-FPC	55.90*30.00*0.13	1
No	Name	Specifications	dosage

Etheta Communication Technology (shenzhen) co.,Ltd			
	PART NAME: Lumi-NFC	DATE:	25.03.08
TOLERANCE X.X ±0.20 .XX ±0.10 .XXX±0.05 ANGULAR <±0.5°	PART NO: RD1202403NB87-1	DRAWN:	Liu Qifu
	MATERIAL: FPC+ ferrite	CHECKED:	Su Zhixiang
	FINISHING: NI/AU	APPROVED:	Ma Chao
UNIT:mm	COLOUR:black	SCALE: 1:1	TER: R:A

[illegible]

Bill of Materials and Material Composition Questionnaire

Vender: Etheta Communication Technology (shenzhen) co.,Ltd

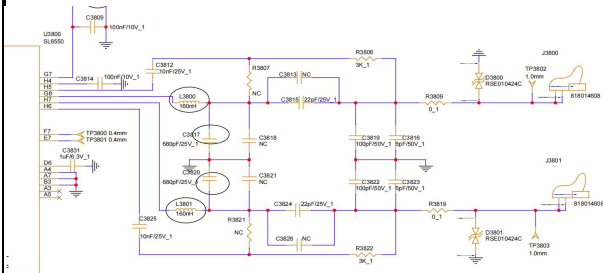
No	material code	Material type	Material description	Part weight (mg)	supplier	Component name	Component weight (mg)	major constituent	Component weight (mg)	Component content (Percentage%)	CAS NO	(MSDS)
1	630810000109	NFC_FPC_Lumi	FPC+ ferrite	819	Fubang	Double-sided electrolytic substrate	243	Polyimide film	41.553	38.00%	25038-81-7	
2								Copper foil	55.7685	51.00%	7440-50-8	
3								Epoxy resin	1.979235	1.81%	25085-99-8	
4								rubber	8.63865	7.90%	9003-18-3	
5								rubber	1.410615	1.29%	80-08-0	
7					Youli	Solder resist ink		Epoxy acrylate oligomer	10.0602	46%	28064-14-4	
8								Silicon dioxide	2.95245	13.50%	112-15-2	
9								Aromatic solvent	1.0935	5%	64742-94-5	
10								Dipropylene glycol methyl ether	1.0935	5%	34590-94-8	
11								carbon black	0.8748	4%	1333-86-4	
12								barium sulfate	5.4675	25%	13462-86-7	
13								Photosensitizers and others	0.32805	1.5	5495-84-1	
14					Chuanyu	Text ink		Epoxy Resin	0.2187	45%	25085-99-8	
15								Barium Sulfate	0.0729	15%	7727-43-7	
								Titanium Dioxide	0.1701	35%	13463-67-7	
								DiethyleneglycolMonoethyl Ether Acetate	0.0243	5%	112-15-2	
17					Jinghua	MTM3010		PET	32.805	90%	25038-59-9	
18								Acrylate Copolymer Adhesive	3.645	10%	Trade Secret	
19					Yaoyu	YY-8025		aluminum hydroxide	10.935	15.00%	25038-81-7	
								epoxy	36.45	50.00%	61788-97-4	
								Buna-N rubber	14.58	20.00%	9003-18-3	
20								dicyandiamide	5.832	8.00%	461-58-5	
21								Diaminodiphenyl sulfone	5.103	7.00%	80-08-0	
30					Jinyuan Xinhui	NI/AU		NICKELL	1.90512	98%	7440-02-0	
31								Gold	0.03888	2%	7440-57-5	

42					Don gci	ferrite	576	Ni-Zn ferrite	460.8	100%	12645-50-0	
45					Mo Tian	Dumb black single- sided adhesive		Acrylate Copolymer	4.608	8%	25085-41-0	
46								PET	46.656	81%	25038-59-9	
47								carbon black	4.608	8%	1333-86-4	
48								silicon oil	1.728	3%	63148-62-9	
49					Mo Tian	double faced adhesive tape		Acrylate copolymer	8.64	15%	25085-41-0	
50								PET	3.456	6%	25038-59-9	
51								Release film	45.504	79%	25038-59-9	

Electrical performance test report

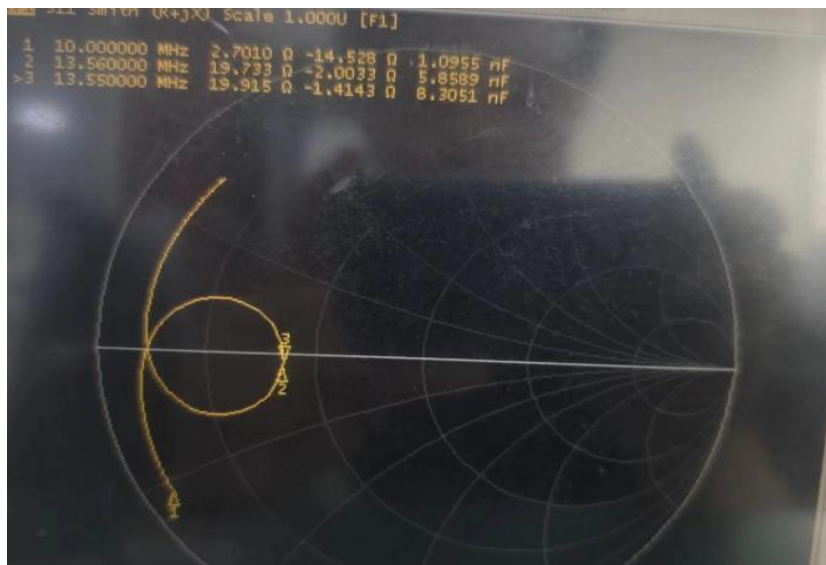
Customer	Thundercomm	Written By	Liu Qifu	Orig. Date	2025.03.05
Part Number	630810000109	Revised By	Su Zhixiang	Revised Date	2025.03.05
Description1	Lumi-NFC	Approved By	Ma Chao	Approved Date	2025.03.05

1. Matching modification



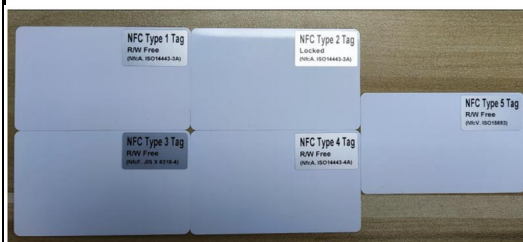
bit number	Material value
C3812/C3825	1NF
C3813/CC3826	47pF
C3815/C3824	6.8pF
C3816/CC3823	39pF
D3800/D3801	NC

2.Passive situation



impedance 19.7Ω , frequency 13.55Mhz

3.Card reading distance



type	Distance mm
Tag 1	45
Tag 2	45
Tag 3	40
Tag 4	22
Tag 5	65