

Specification

Date : 2025-03-04

Controlled number : DZ-QF-RD004

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Material Name	DU1H_WIFI-0Antenna		
Material Code	01.1W07-DU1TX0-0000	Supplier Code	
Specification and model	DU1_WIFI-0Antenna, 2.4G/5G/6GAntenna,black line length 330MM±2MM,FPC black	Applicable models	DU1H
Manufacturer	Shenzhen nanoant Communication Technology Co.,Ltd.	Agent	
Supplier : Jiangxixi Check : Liguodong Approver : Qizhonglin			
Supplier Address/Contact information : Shenzhen Baoan District Xixiang Street Chentian Industrial Zone Chentian 4th ,Building 34,Room 2001 , 0755-82928581			
Reason for approval	1、 New material : New model 2、 New Supplier : Improve quality ☐ Cut down the cost ☐ Improve delivery ☐ Supplier Resource Reserve ☐		
Material confirm ation	Material Status	☐ Approve ☐ Disagree ☐ Limited approval Limited quantity : Reason for limit :	
	Submission of date	☐ Specification/Drawing Confirmation ☐ Relevant test reports have been submitted and qualified ☐ Device design problems and quality problems are solved	
	Buyer :	Date :	Supervisor review : Date :
	Structure/ID :	Date :	Supervisor review : Date :
	Hardware :	Date :	Supervisor review : Date :
	Quality :	Date :	Supervisor review : Date :
	PM :	Date :	Supervisor review : Date :
Judgment result of product department : ☐Approve ☐Disapprove Product Validation : Date :			

1.0 DESCRIPTIONS AND PART NUMBER:

1.1 DESCRIPTION;

The antenna mounts to the housing of the projector, And after that, the feed point on the prolongation of metal plate should firmly touch the contact provided on the PCB in the respective area.

1.2 PART NUMBER

Part number	Frequency Band	HH Part Number
	2.4G /5G/6G	

2.0 ELECTRICAL SPECIFICATIONS:

2.1 FREQUENCY BAND

WIFI 2.4G /5G /6G

2.2 IMPEDANCE - Nominal impedance: 50

2.3 ACTIVE TEST REPORT

Test equipment:

E5071C Network analyzer



SG24 Microwave anechoic chamber



1) Antenna position



2) Antenna Efdiciency

WIFI 0-2. 4G/5G

Gain&Efficiency 增益和效率			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
2400M	2.99	-2.69	53.8%
2410M	3.07	-2.82	52.22%
2420M	3.17	-2.94	50.86%
2430M	3.29	-2.98	50.37%
2440M	3.52	-2.94	50.82%
2450M	3.75	-2.85	51.88%
2460M	3.91	-2.68	53.94%
2470M	3.93	-2.52	55.95%
2480M	3.66	-2.61	54.77%
2490M	3.39	-2.74	53.21%
2500M	3.46	-2.88	51.51%

Gain&Efficiency 增益和效率			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
5150M	4.24	-4.59	34.75%
5175M	4.61	-4.53	35.25%
5200M	4.35	-4.49	35.57%
5225M	3.95	-4.64	34.38%
5250M	4.28	-4.25	37.61%
5275M	4.53	-4.22	37.88%
5300M	4.13	-4.64	34.38%
5325M	3.91	-4.71	33.82%
5350M	4.55	-4.16	38.35%
5375M	4.49	-4.19	38.09%
5400M	4.23	-4.4	36.31%
5425M	4.77	-4.14	38.52%
5450M	4.68	-4.49	35.59%

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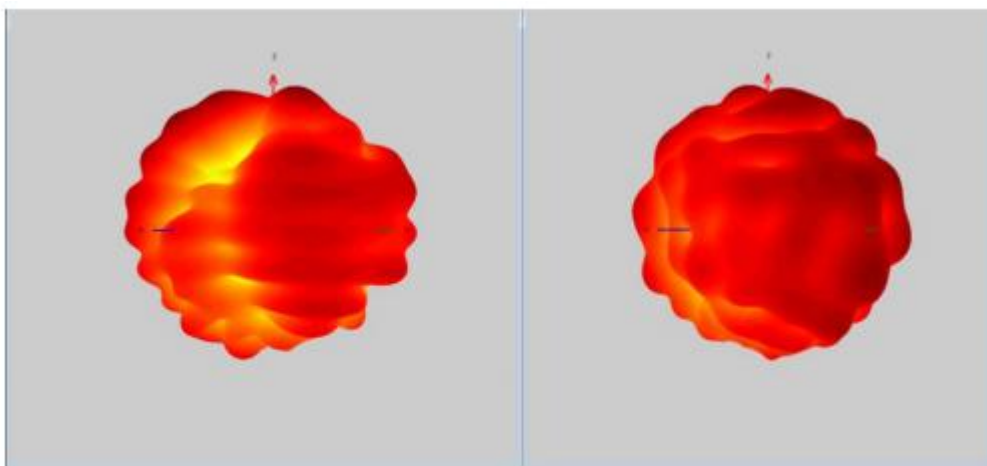
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5575M	5.31	-4.11	38.85%
5600M	5.19	-4.14	38.58%
5625M	5.01	-4.29	37.22%
5650M	5.17	-4.13	38.6%
5675M	5.33	-3.71	42.59%
5700M	5.34	-3.69	42.71%
5725M	5.1	-3.6	43.63%
5750M	5.07	-3.89	40.84%
5775M	4.29	-4.29	37.22%
5800M	5.1	-3.57	43.94%
5825M	5.02	-3.67	42.92%
5850M	5.86	-3.73	42.33%

Gain&Efficiency增益和效率			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
6000M	3.85	-3.3	46.77%
6025M	4.33	-3.3	46.72%
6050M	4.67	-3.23	47.50%
6075M	4.62	-3.34	46.32%
6100M	4.74	-3.39	45.85%
6125M	4.9	-3.42	45.53%
6150M	5.16	-3.35	46.29%
6175M	5.13	-3.39	45.77%
6200M	5.22	-3.2	47.83%
6225M	5	-3.2	47.86%
6250M	4.9	-3.17	48.20%
6275M	5.09	-3.1	49.03%
6300M	4.91	-3.15	48.43%
6325M	4.98	-3.04	49.63%
6350M	4.93	-2.97	50.51%
6375M	4.59	-3.14	48.55%
6400M	4.53	-3.22	47.69%
6425M	4.78	-3.23	47.52%
6450M	5.01	-3.25	47.35%
6475M	5.1	-3.33	46.47%
6500M	4.94	-3.33	46.41%
6525M	4.51	-3.49	44.75%
6550M	4.49	-3.32	46.51%

6575M	4.68	-3.3	46.81%
6600M	4.67	-3.41	45.61%
6625M	4.62	-3.47	44.99%
6650M	4.54	-3.49	44.77%
6675M	4.34	-3.65	43.11%
6700M	4.23	-3.69	42.72%
6725M	3.89	-3.81	41.58%
6750M	3.89	-3.88	40.88%
6775M	3.82	-3.98	40.02%
6800M	3.74	-3.94	40.33%
6825M	3.45	-4.01	39.73%
6850M	3.34	-3.86	41.11%
6875M	2.72	-3.91	40.68%
6900M	2.61	-3.96	40.20%
6925M	2.77	-4.03	39.58%
6950M	2.85	-4.18	38.20%
6975M	2.57	-4.36	36.60%
7000M	2.08	-4.6	34.65%
7025M	1.62	-4.64	34.32%
7050M	1.79	-4.81	33.03%
7075M	2.05	-4.81	33.04%
7100M	1.99	-4.88	32.51%
7125M	2.21	-4.74	33.57%
7150M	2.52	-4.64	34.32%

3) Pattern



WiFi0 2.4G 5G :

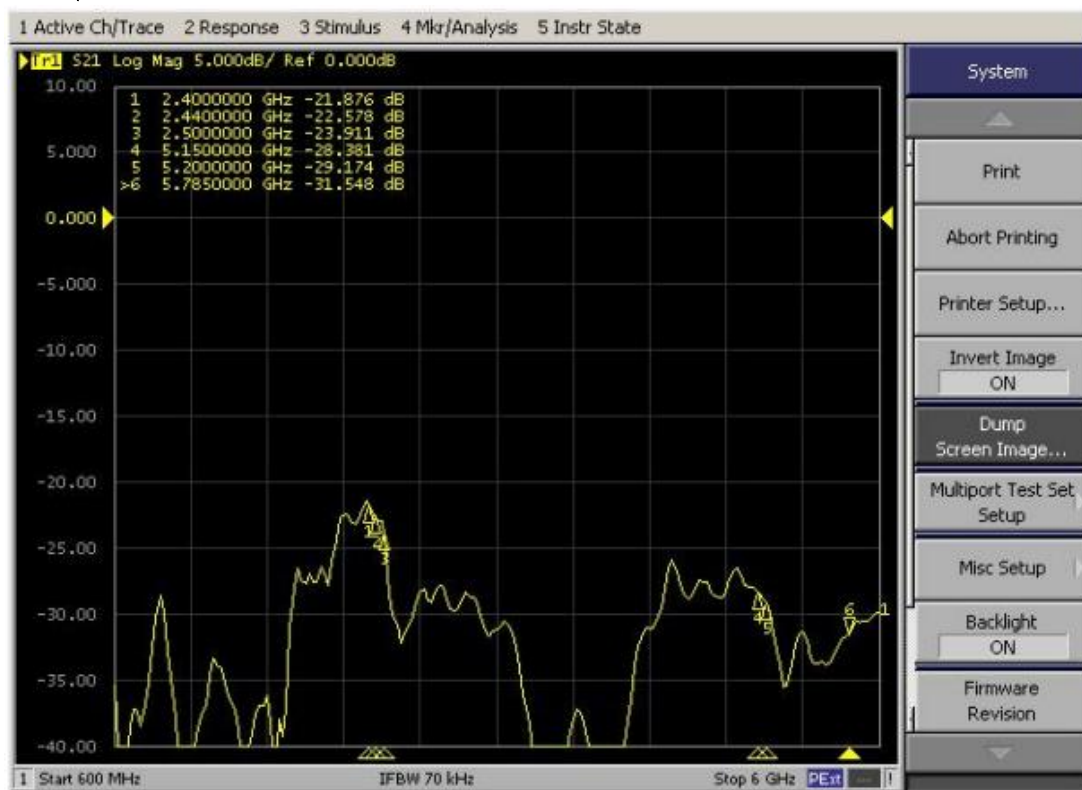
4) Passive result

WIFI					
Band	Channel	Freespace TRP	Channel	Freespace TIS(-)	PASS
WIFI B	1	16.09	2412	-79.43	≤ -78
	6	14.81	2437	-80.88	≤ -78
	13	14.75	2472	-80.47	≤ -78
	AVE	15.22	AVE	-80.26	
WIFI A	36	13.05	5180	-70.78	≤ -68
	100	12.21	5500	-69.29	≤ -68
	165	13.44	5825	-68.18	≤ -68
	AVE	12.90	16.09	-69.42	

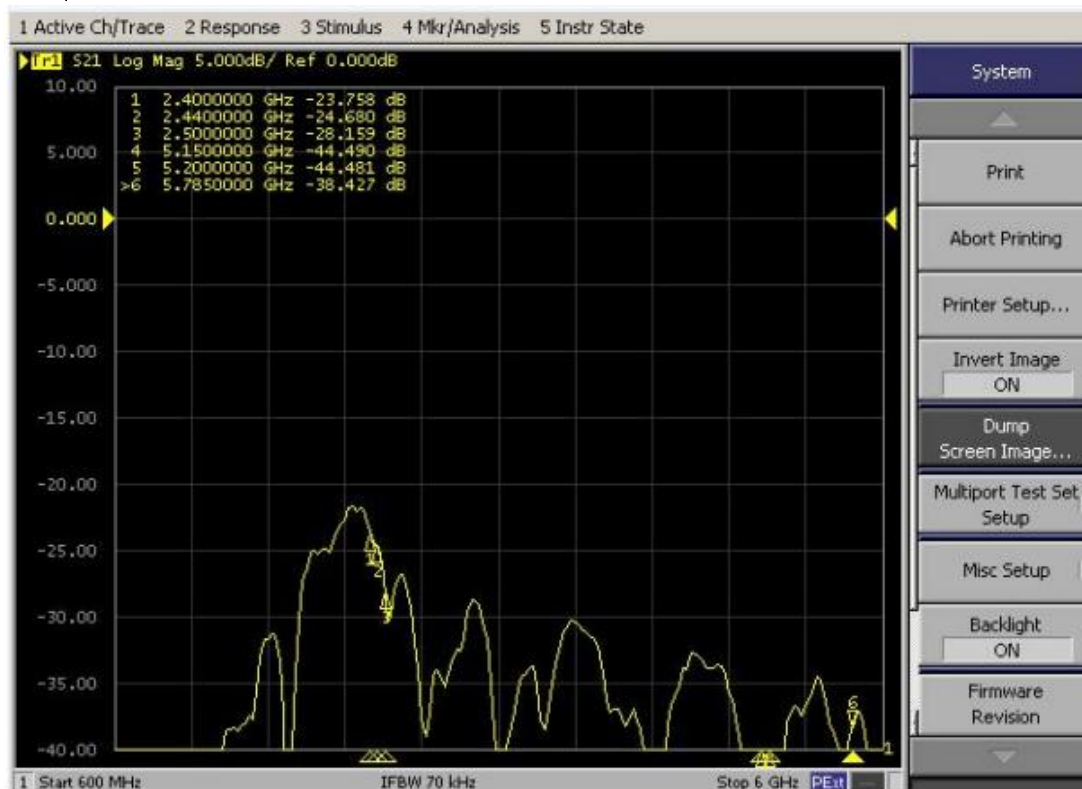
5) Antenna S11



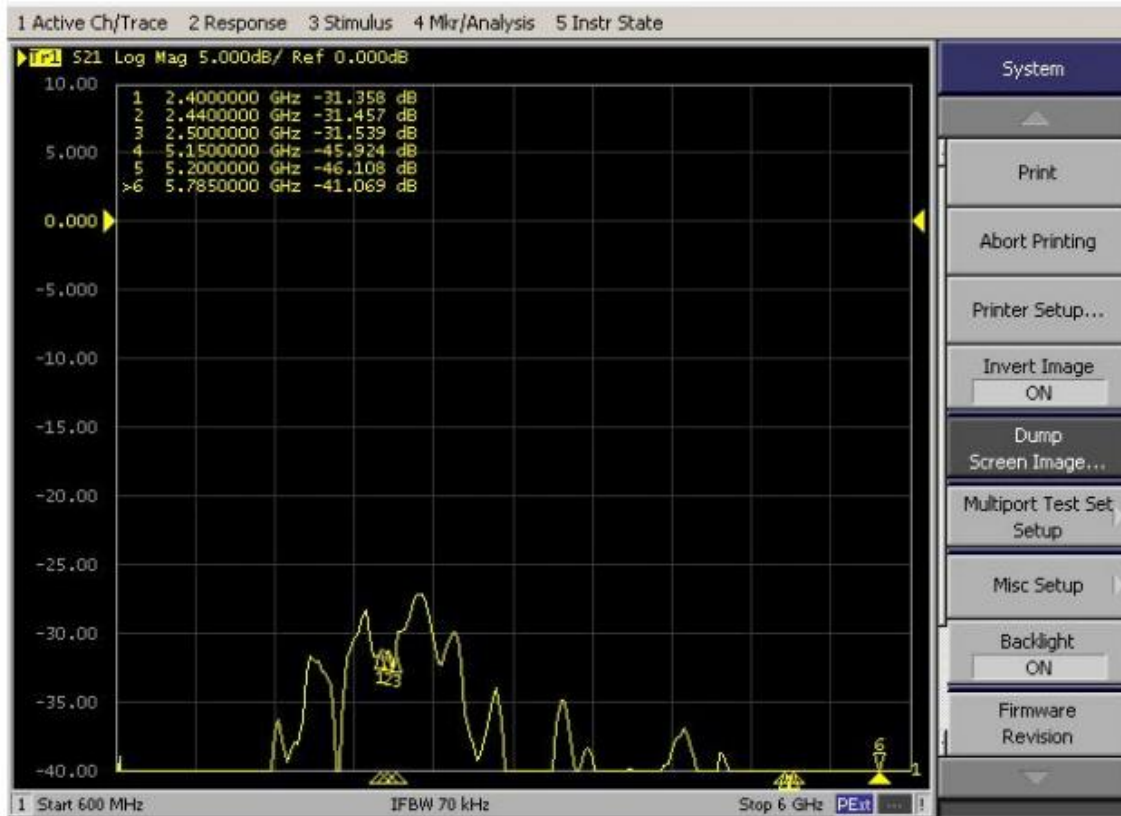
6) Isolation WIFI0 /WIFI1



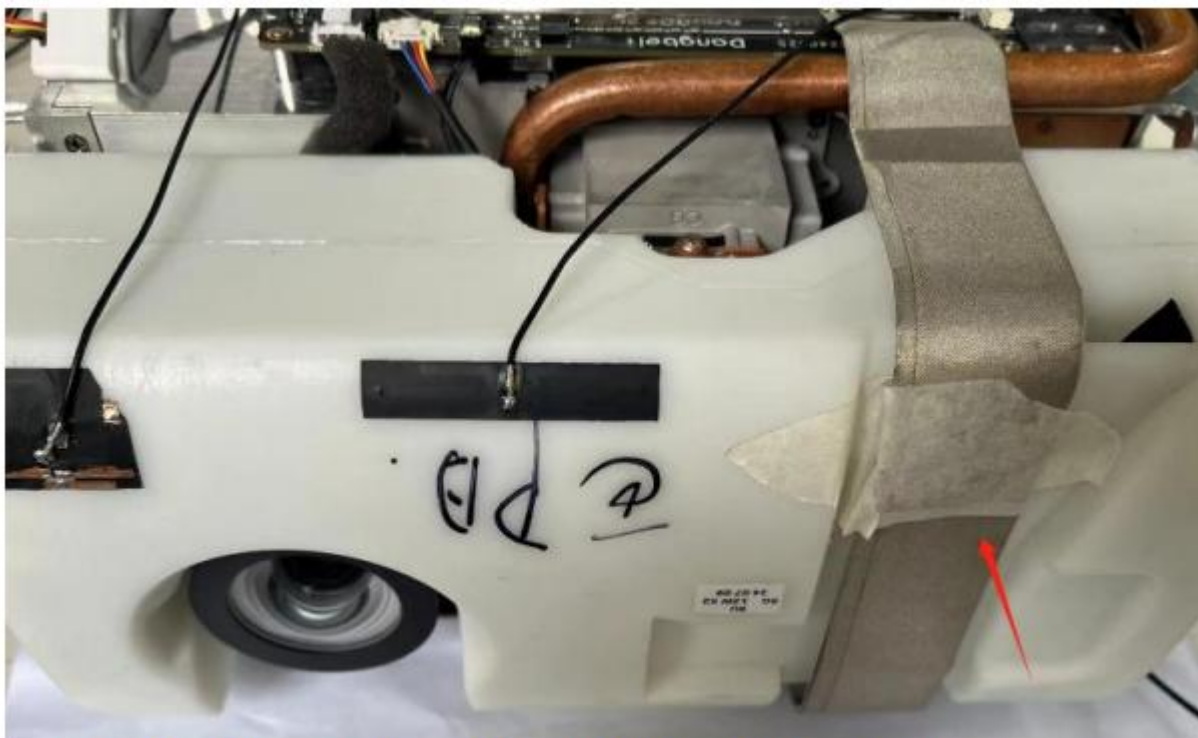
WIFI0/BT



WIFI1/BT



7) Treatment and suggestions

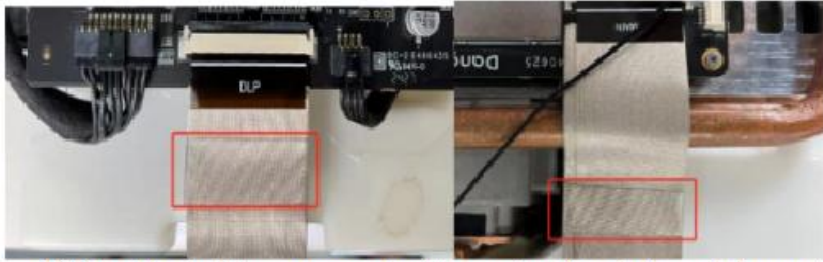


DLP cable shall be covered with conductive cloth for shielding

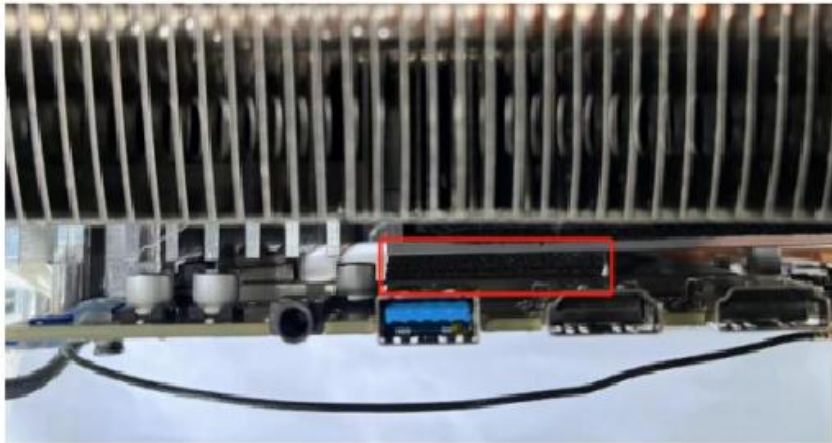
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DLP cable shall be wrapped with conductive cloth and the meta frame shall be well grounded



The main chip needs to be pasted with conductive wool to ensure good shielding

3.0 MECHANICAL SPECIFICATIONS:

3.1 MECHANICAL CONFIGURATION

The appearance of the antenna is in accordance with drawing

3.2 CONNECTOR TYPE

The connector type is an embedded type

4.0 ENVIRONMENTAL SPECIFICATIONS

4.1 TEMPERATURE

Operating Temperature Range: -40 C~ +85 C

Storage Temperature Range: -40 C~ +120 C

4.2 SALT SPRAY TEST

Antenna be exposed in a 35°C, 5% salt fog chamber for 24 hours then check the appearance and performance against the specifications in normal temperature.

4.3 STATIC HUMIDITY TEST

The antenna is subjected to the following test:

Temperatures: +70°C and 90%--95%RH

Test Duration: 24 Hours

The antenna should not undergo any structural or functional change and remain within the electrical/mechanical specification.

5.0 PACKAGING

The antennas will be packed in bags, There are 100 or 200 /300antennas per bag. The bags are packed in corrugated fibreboard over box

Drawing :

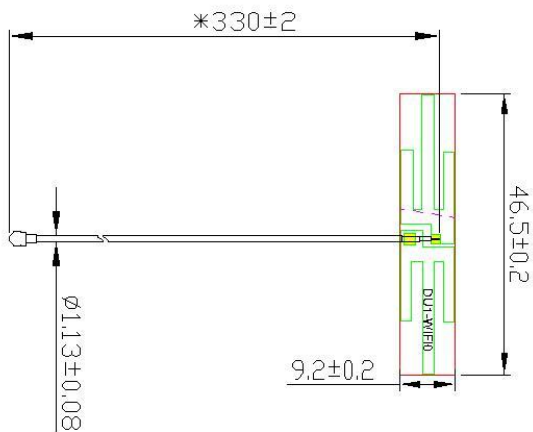
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NOTES:

1. Materials: Fifty fifty
2. Electroplating Process: OSP
3. Printing ink: Black ink Black Character
4. Adhesive tape: 3M300LE
5. Shipping method: single
6. "▲" for key dimensions.
7. The surface shall be free form such defects as crush, scratch, oilstain, etc.
8. The drawing size is used to check the appearance, function and assembly, and the dimensions not marked shall be subject to the electronic file.
9. The drawing is an internal controlled document, and strictly prohibited to be transmitted in any form without our permission.

DT1-WIFI-0 Antenna, 21.13mm RF generation terminal
black coaxial line



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	Modify content	Modifier
1		

Shenzhen Nantao Communication Technology Co., Ltd			
 Unit: mm	NGK: MJ-KIT-0	Date: 2024/08/31	
General tolerances:		Design: KF	
χ_1	± 0.5		
χ	± 0.25		
XX	± 0.10		
XXX	± 0.05		
ANGULAR	$\leq \pm 0.5^\circ$	Scale: 1:1	

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