



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: Shenzhen Suichen Technology Co.,Ltd

Product Name: BT Antenna

Antenna type: FPC Antenna

Product Model: P203

Part Number: LJF02-21051908B-R0A

Write By : Limingjin

Issued Date: 2021-05-19

CUSTOMER

ENGINEER R&D DEPT	BUSSINESS DEPT	APPROVAL

LEJIN

R&D DEPT	ENGINEER DEPT	APPROVAL

REV	MODIFIED DESCRIPTION	DATE	REMARK
V1.0	Initial Draft Release	2021/05/19	

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3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz
VSWR	<2.0
Efficiency	≥40%
Antenna type	PIFA
Impedance	50Ohm
Polarization	Linear
Gain	≤2.26dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC,black,,LJWF28BFB
Cable Type	Φ0.81mm,L100mm,Black
Connector Type	IPX3
Dimension	25.0mm*13.0mm
C. Environmental	
Operation Temperature	- 20 °C ~ + 70 °C
Storage Temperature	- 30 °C ~ + 85 °C
Humidity	40%~95%

4.Test Equipment & Conditions

- | | |
|----------------------------------|---------------------|
| 1.Network Analyzers | Agilent 8753D/5071C |
| 2.HSPA and LTE protocol test set | R&S CMW500 -PT |
| 3.Communications Test Set | Agilent 8960 |
| 4.3D Chamber Test System | |

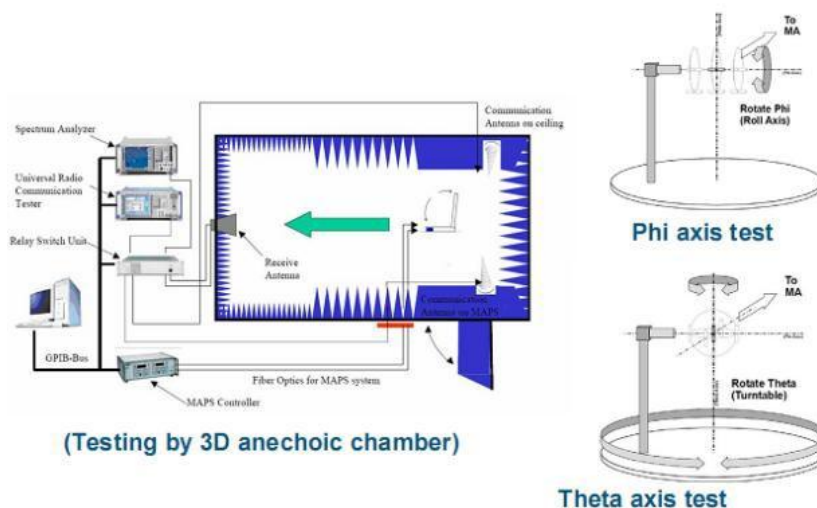


Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

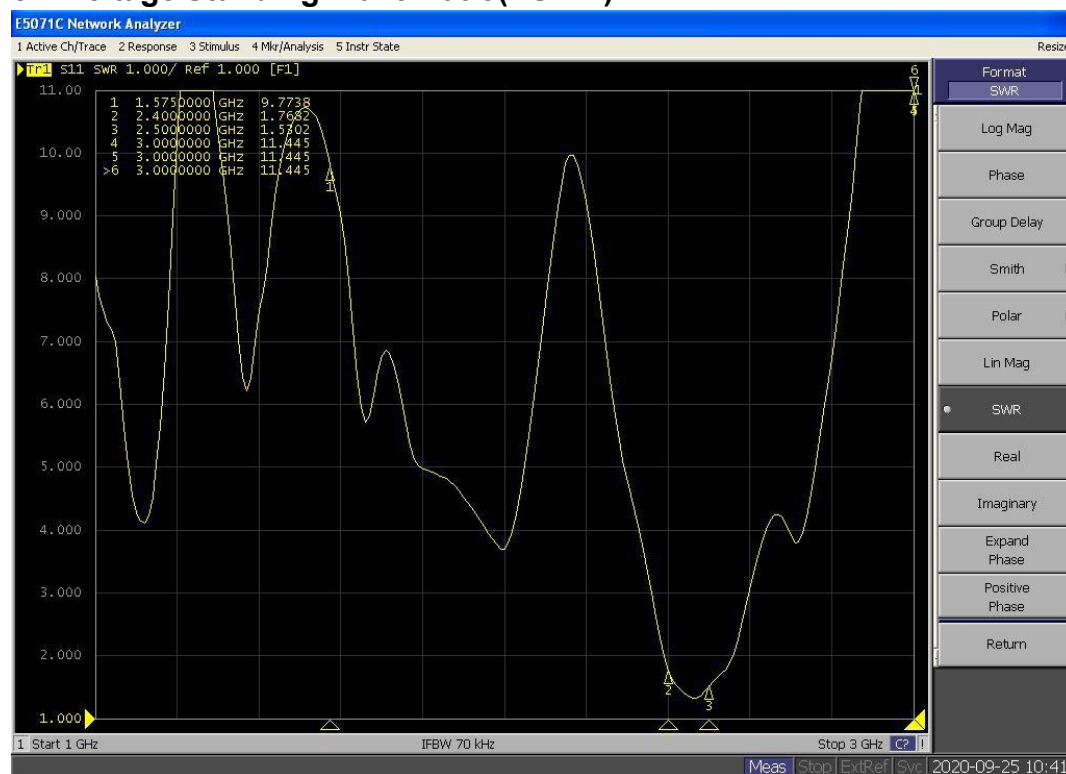
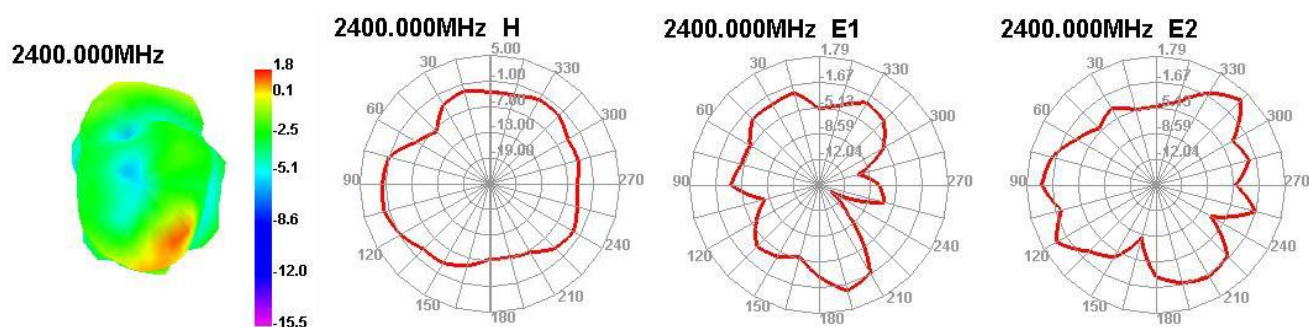


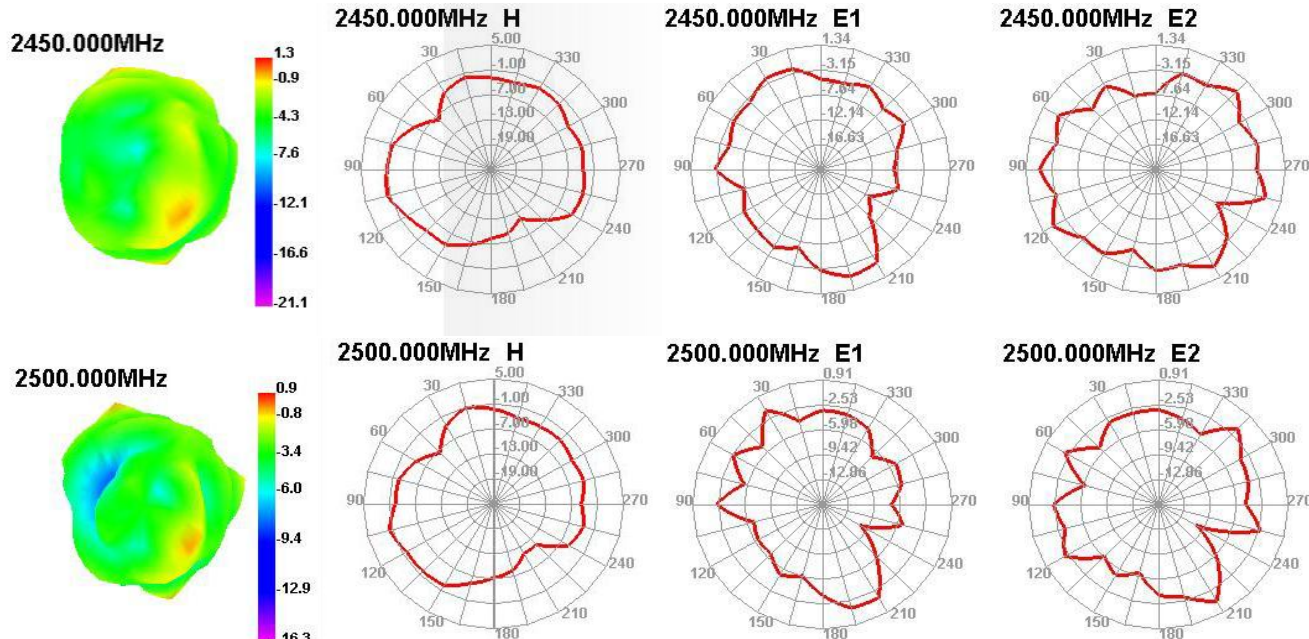
Chart 2 VSWR

5.2 Efficient and gain.

Passive	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Test For	Effi(%)	43.47	46.94	44.9	45.87	45.96	50.61	46.42	44.79	45.88	40.79	38.68
BT	Gain(dBi)	1.98	2.26	1.99	2.1	1.93	2.13	1.97	1.89	1.83	1.79	1.64

5.3 Radiation pattern.





6. Reliability Test

Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃, Time: 48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃, test antenna after 2 hours.	Temp. & Humi. Tester	No material deformation is allowed. Electronic Performance is ok.	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time: 48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃, test antenna after 2 hours.	Temp. & Humi. Tester	No material deformation is allowed. Electronic Performance is ok.	PASS
3	Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester, set the test condition, Temp: 35±2℃ Humidity: 85% NaCl salt spray: 5±1%. PH value: 6.5~7.2 Testtime: 24hours	Salt-Spray Tester	No color change No appear rusting	PASS

7. Assemble type

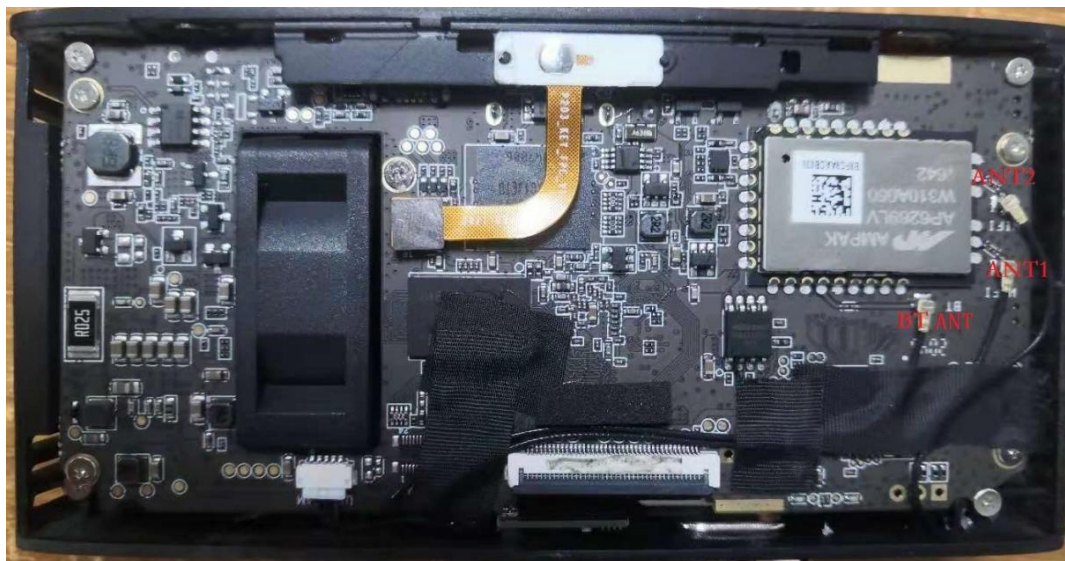
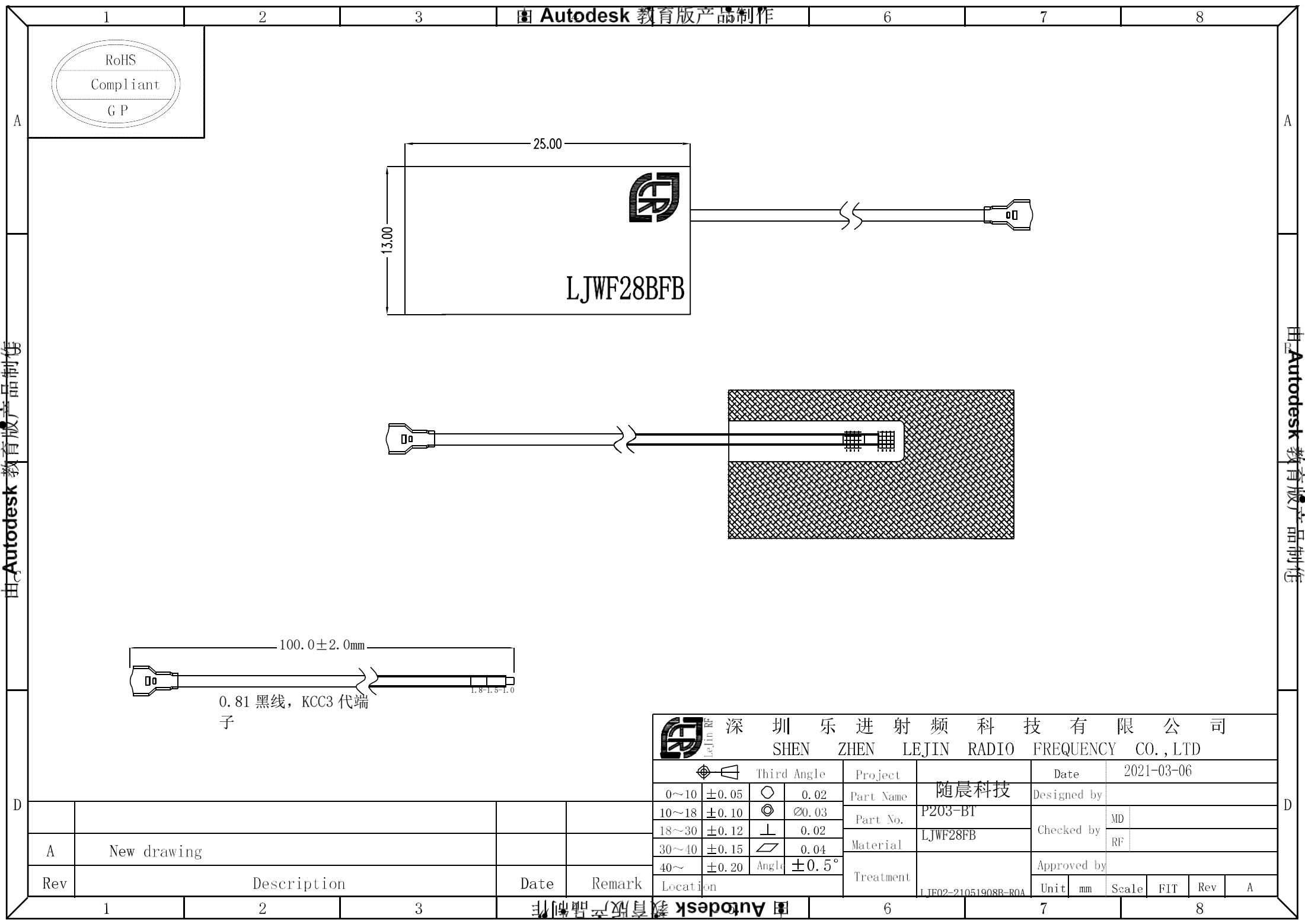


Chart 3 Assemble type(overall)



Chart 4 Assemble type

8.Product Drawing



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				 Third Angle				Project				Date		2021-03-06			
				0~10	±0.05		0.02	Part Name		随晨科技		Designed by					
				10~18	±0.10		Ø0.03	Part No.		P203-BT		Checked by		MD			
				18~30	±0.12		0.02	Material		LJWF28FB				RF			
				30~40	±0.15		0.04										
A	New drawing							Treatment				Approved by					
Rev	Description			Date	Remark		Location							LJE02-21051908B-ROA		Unit	mm