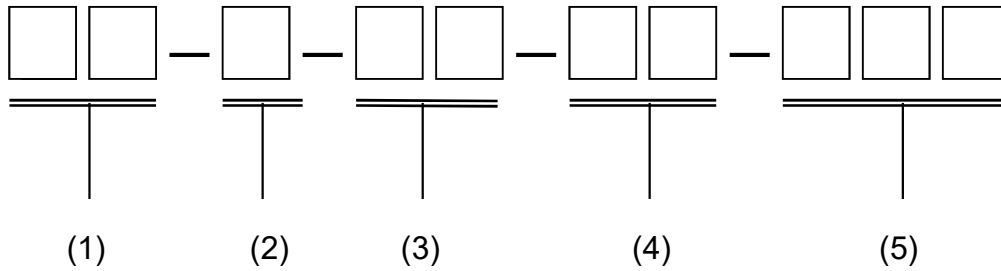


1. Explanation of part number :



- (1) Product type : Monopole
- (2) Material : PC
- (3) Frequency : 2.4GHz-2.5GHz/4.8GHz-6.0GHz
- (4) Model name : 7B0911V00-G1J-G

2. Electrical Specification :

Those specifications were specially defined for **USB Dongle** model, and all characteristics were measured under the model's handset testing.

2-1. Frequency Band:

Band	Frequency (GHz)
Dual Band	2.4GHz-2.5GHz/4.8GHz-6.0GHz

2-2. Impedance

50 ohm nominal

2-3. Measurement method and description :

UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/A X.X=N/A X.XX=N/A
 ANGLES=N/A HOLEDIA=N/A



SCALE : N/A	UNIT : mm
DRAWN BY :	CHECKED BY:
DESIGNED BY:	APPROVED BY:

TITLE : Embedded Dual-Band Antenna for USB Dongle

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2-3.1 Test Instruments

Device & Model No.	Device Picture	Manufacturer
GTS1800		GTS
CMW500		ROHDE&S CHWARZ

2-3.2 Test Setup

1) . Test connection diagram

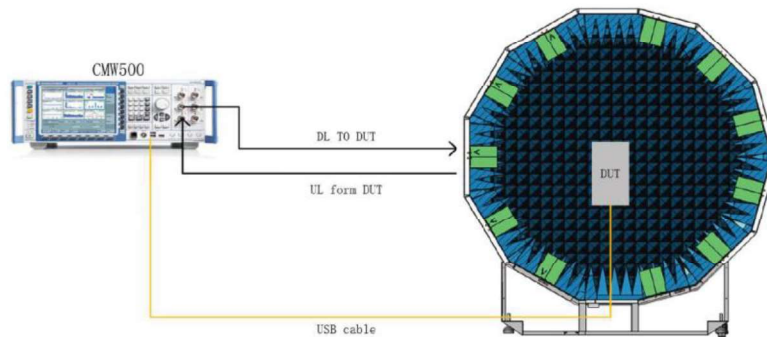


Figure 1 BLE DTM test connection diagram

During the test, the DUT should be connected to CMW500 using USB line. And USB driver should be installed in the CMW500. The DUT will rotated 360 degree with usb line during the test.

UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/A X.X=N/A X.XX=N/A
 ANGLES=N/A HOLEDIA=N/A



SCALE : N/A	UNIT : mm
DRAWN BY :	CHECKED BY:
DESIGNED BY:	APPROVED BY:

TITLE : Embedded Dual-Band Antenna for USB Dongle

DOCUMENT NO.	SPEC REV.
	P0

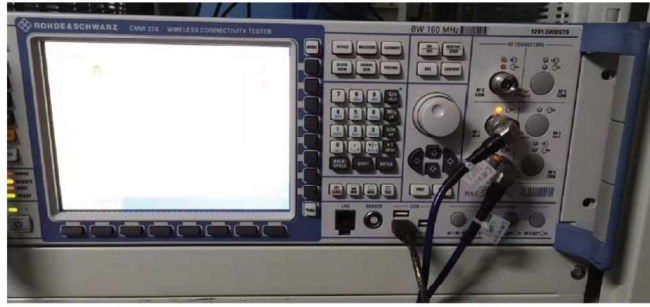


Figure 2 CMW500 USB and RF port connection

2) . Test template Setting

CMW500 setting, choose EUT Comm Protocol, HCI or two(2 wire) according DUT setting, and baud rate generally set with 115200. COM4 will be displayed when BT LE signal is on.If not, check if the driver is installed successfully(check unrecognized device in the device manager).

3) . Test template Setting

Test Procedure

- 1) Double click the icon to open the software.
- 2) Click “Set up” to open set up page, choose R8S CMW500 under menu of Equipment>instrument.
- 3) Click “templates” to enter the testing interface, select WIFI test template.

- WIFI.bch
 - TP_R8SCMW500_WiFi_TRP_a L.xml
 - TP_R8SCMW500_WiFi_TRP_a M.xml
 - TP_R8SCMW500_WiFi_TRP_a H.xml
 - TP_R8SCMW500_WiFi_TRP_b L.xml
 - TP_R8SCMW500_WiFi_TRP_b M.xml
 - TP_R8SCMW500_WiFi_TRP_b H.xml
 - TP_R8SCMW500_WiFi_TRP_an L.xml
 - TP_R8SCMW500_WiFi_TRP_an M.xml
 - TP_R8SCMW500_WiFi_TRP_an H.xml
 - TP_R8SCMW500_WiFi_TRP_g L.xml
 - TP_R8SCMW500_WiFi_TRP_g M.xml
 - TP_R8SCMW500_WiFi_TRP_g H.xml
 - TP_R8SCMW500_WiFi_TRP_gn L.xml

UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/A X.X=N/A X.XX=N/A
 ANGLES=N/A HOLEDIA=N/A



SCALE : N/A	UNIT : mm
DRAWN BY :	CHECKED BY:
DESIGNED BY:	APPROVED BY:

TITLE : Embedded Dual-Band Antenna for USB Dongle

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4) . Enter the parameter setting interface and click start.

Parameters (R8S_CMW500/WIFI/TRP)

Link Setup

Auto Answer :
 Operation Mode :
 Output Attenuation : dB
 Input Attenuation : dB
 TX Burst Power : dBm
 Expected Nominal Power : dBm
 Rate Automatic :
 TRP Data Rate : Mbps
 Packet Generator Protocol :
 SSID :
 StandAlone Enable :
 Dual Channel Amplifier :
 RF Input(RX) :
 RF Output(TX) :

Station Test Setting

MAC Address : hex
 IP Address Stack :
 IP Address Destination :
 Subnet Mask :
 Default Gateway :
 DNS Server :
 DHCP :
 Security Mode :
 Pass LastDigit : 1234567*

Test Setup

Alternate File :
 Alternate Point(s) Count(0 meas no alternate) :
 Alternate Switch Delay : s
 BasicRate Enable :
 Free Run Mode :
 MFR Ctrl Enable :
 DFR Ctrl Enable :
 Ack Eirp :

UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/A X.X=N/A X.XX=N/A
 ANGLES=N/A HOLEDIA=N/A




SCALE : N/A UNIT : mm
 DRAWN BY : CHECKED BY :
 DESIGNED BY : APPROVED BY :

TITLE : Embedded Dual-Band Antenna for USB Dongle

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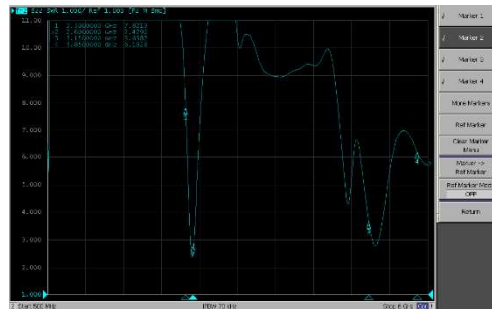
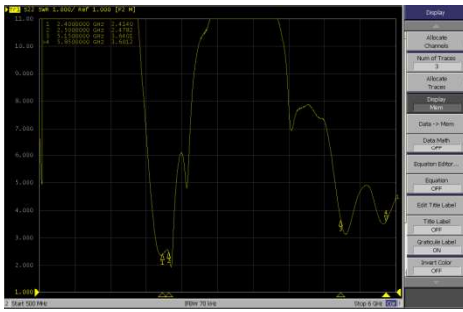
- 5) The DUT placed in the center of the chamber, connect the computer to WIFI signal named "GTSWIFI" of the chamber and no password is needed. Noted that the WIFI signal will be fined until test is started on step 4).
- 6) Closed the door of chamber and click "OK" .
- 7) Test result listed on the DUT interface, left click the mouse to copy



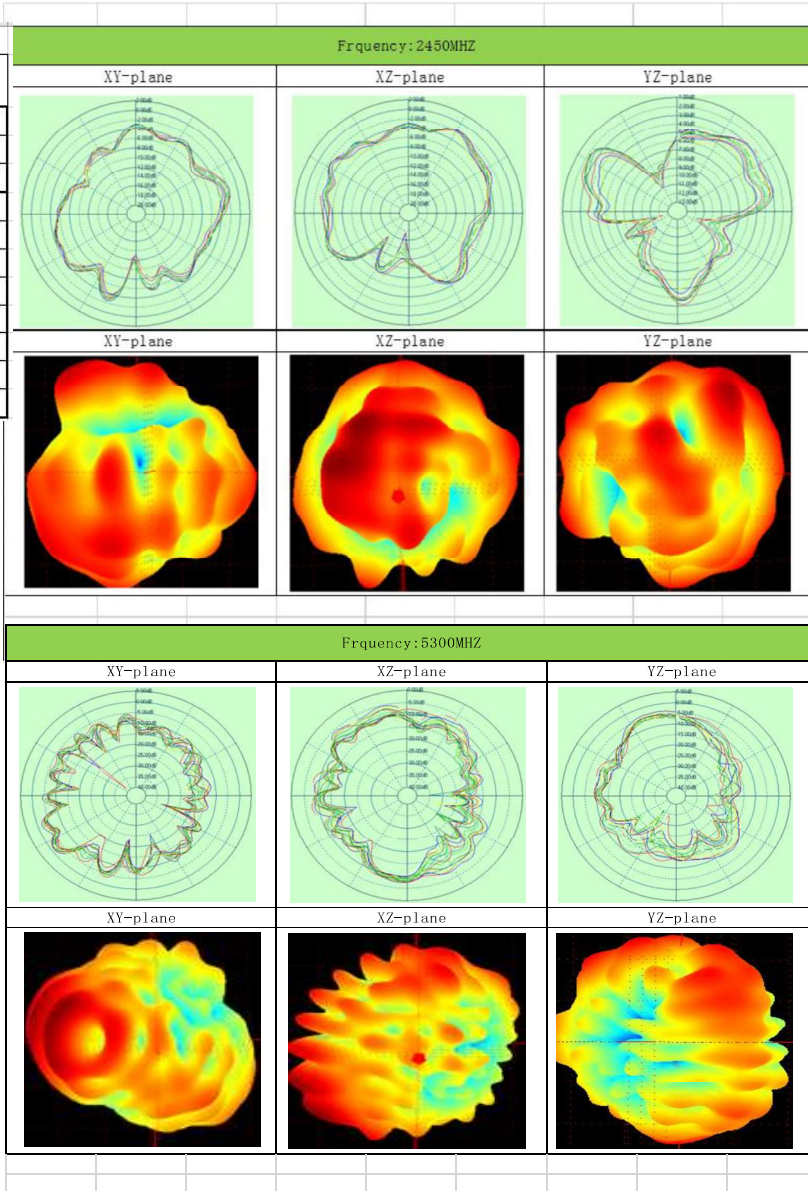
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SCALE : N/A	UNIT : mm		
DRAWN BY :	CHECKED BY:		
DESIGNED BY:	APPROVED BY:		
TITLE : Embedded Dual-Band Antenna for USB Dongle		DOCUMENT NO.	SPEC REV. P0
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2-4. VSWR DATA:

VSWR (驻波比) (max)	Frequency	ANT1	ANT1
	2.4GHZ-2.5GZH	2.6	7.8
	4.8GHZ-6.0GHZ	4.8	7



ANT1:			
Frquency(M Hz)	3D Gain(dBi)	Efficiency	Peak Gain(dBi)
2400	-5.5	28	-1.2
2450	-4.1	39	1.1
2500	-5.7	27	1.2
5150	-6.3	23	-1.1
5250	-4.6	35	-0.8
5350	-4.4	36	-0.1
5470	-5.5	28	-0.6
5600	-5.6	28	1.0
5725	-4.8	33	0.9
5785	-4.3	37	1.1
5850	-4.1	39	1.2



UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/A X.X=N/A X.XX=N/A
 ANGLES=N/A HOLEDIA=N/A

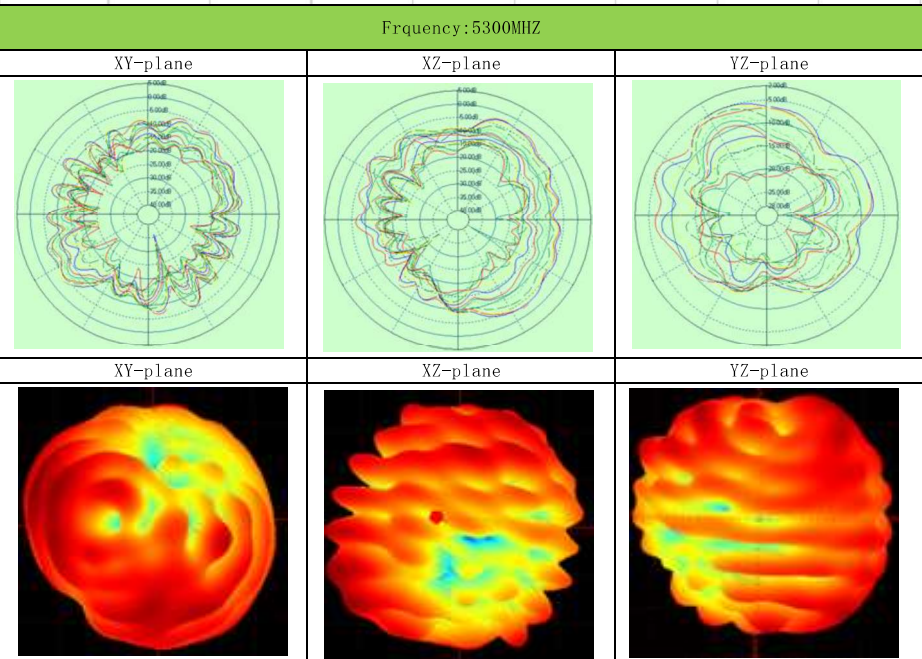
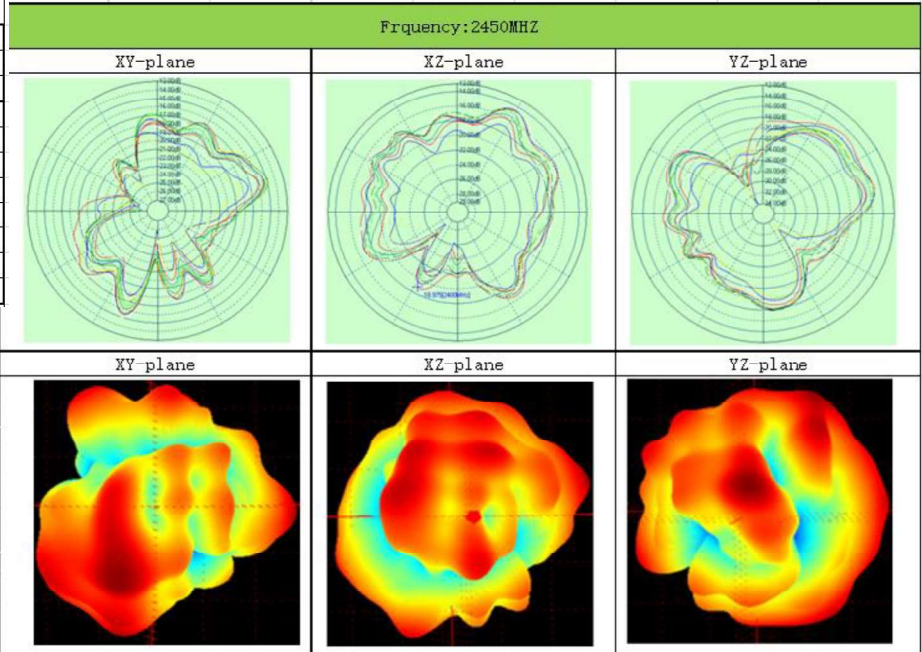


SCALE : N/A UNIT : mm
 DRAWN BY : CHECKED BY:
 DESIGNED BY: APPROVED BY:

TITLE : Embedded Dual-Band Antenna for USB Dongle

DOCUMENT NO.		SPEC REV.
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ANT2:			
Frquency(M Hz)	3D Gain(dBi)	Efficiency	Peak Gain(dBi)
2400	-5.4	29	-0.2
2450	-5.6	28	-0.4
2500	-6.1	25	-1.1
5150	-5.7	27	-1.5
5250	-5.3	30	-0.6
5350	-5.4	29	1.2
5470	-8.8	13	-3.8
5600	-9.7	11	-4.6
5725	-10.1	10	-5.7
5785	-10.4	9	-6.2
5850	-10.7	9	-4.5



UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/A X.X=N/A X.XX=N/A
 ANGLES=N/A HOLEDIA=N/A



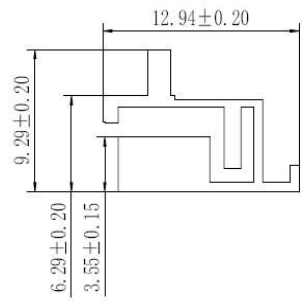
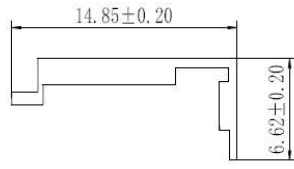
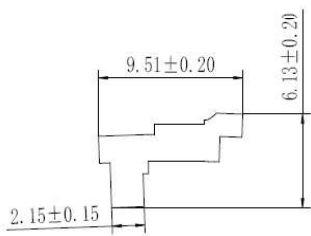
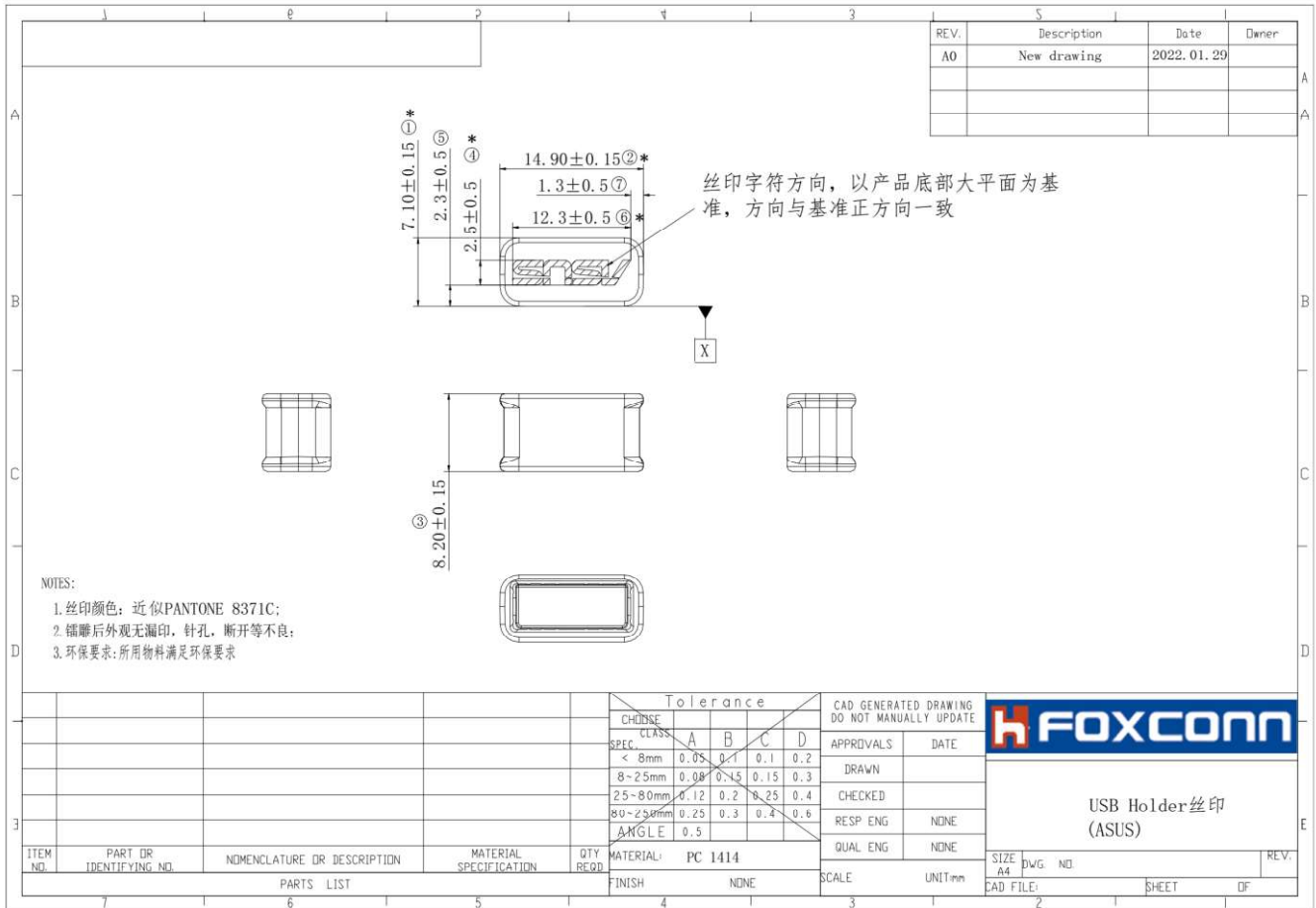
SCALE : N/A	UNIT : mm
DRAWN BY :	CHECKED BY:
DESIGNED BY:	APPROVED BY:

TITLE : Embedded Dual-Band Antenna for USB Dongle

DOCUMENT NO.	SPEC REV. P0
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Mechanical Specification:

3. Mechanical Configuration:



UNLESS OTHER SPECIFIED TOLERANCES ON :

X=N/A X.X=N/A X.XX=N/A

ANGLES=N/A HOLEDIA=N/A

SCALE : N/A UNIT : mm

DRAWN BY : CHECKED BY:

DESIGNED BY: APPROVED BY:

TITLE : Embedded Dual-Band Antenna for USB Dongle



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Figure 3-1-1 The antenna drawing

ITEM	DESCRIPTION	MATERIAL SPECIFICATION	QUANTITY	UNIT
1	USB DONGLE	Sabic 1414 T with Cu,Ni Plating and Silk Print	1	PCS

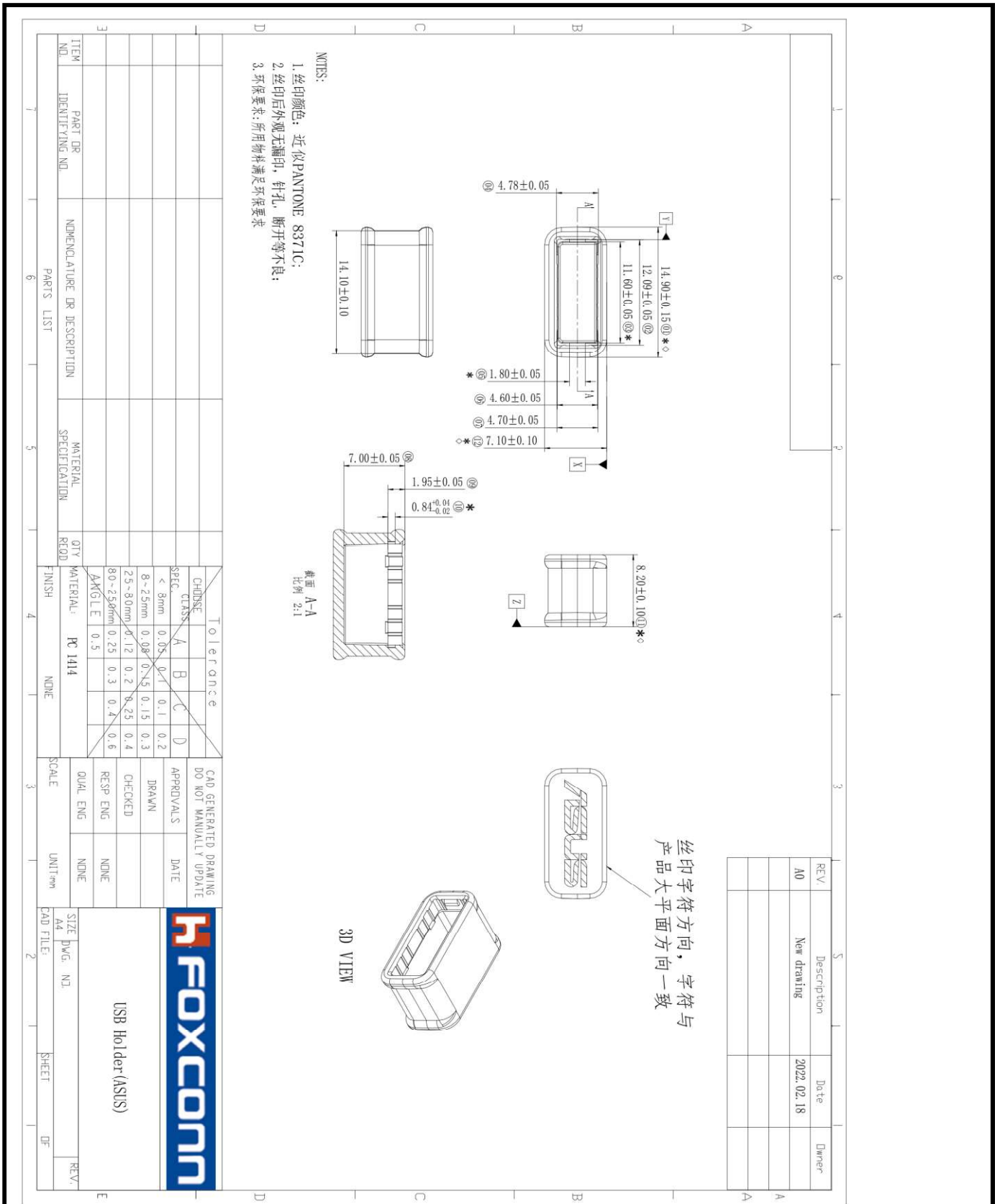
UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/A X.X=N/A X.XX=N/A
 ANGLES=N/A HOLEDIA=N/A



SCALE : N/A	UNIT : mm
DRAWN BY :	CHECKED BY:
DESIGNED BY:	APPROVED BY:

TITLE : Embedded Dual-Band Antenna for USB Dongle

DOCUMENT NO.	SPEC REV.
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ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD.	FINISH	SCALE	UNIT	REV.
PARTS LIST								
MATERIAL SPECIFICATION								
PC 1414								
Tolerance								
CHOOSE CLASS	A	B	C	D	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE			
SPEC.	< 8mm	8 ~ 25mm	25 ~ 80mm	80 ~ 250mm	APPROVALS	DATE		
	0.05	0.1	0.15	0.2	DRAWN			
	0.08	0.12	0.15	0.2	CHECKED			
	0.12	0.2	0.25	0.4	RESP ENG			
	0.25	0.3	0.4	0.6	QUAL ENG			
	0.5							



USB Holder (ASUS)

UNLESS OTHER SPECIFIED TOLERANCES ON :	
X=N/A	X.X=N/A
X.XX=N/A	
ANGLES=N/A	HOLEDIA=N/A
SCALE : N/A	UNIT : mm
DRAWN BY :	CHECKED BY:
DESIGNED BY:	APPROVED BY:
TITLE : Embedded Dual-Band Antenna for USB Dongle	



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序号 No.	标准值 Std. Dim	正公差 Usl Tol	负公差 Lsl Tol	上限 Upper	下限 Lower	实测值 Measurement value													最大 MAX.	最小 MIN.	平均值 Mean	% Tolerance		Alert/Reject		判定 Judge	量具 Gauge
						1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2	4-3	Upper				Lower	High	Low			
1	14.9	0.15	-0.15	15.05	14.75	14.892	14.904	14.886	14.883	14.888	14.884	14.9	14.898	14.895	14.893	14.897	14.894	14.894	3%	11%			OK	OMM			
2	12.09	0.05	-0.05	12.14	12.04	12.093	12.093	12.09	12.09	12.093	12.092	12.093	12.091	12.094	12.086	12.086	12.095	12.094	10%	12%			OK	OMM			
3	11.6	0.05	-0.05	11.65	11.55	11.571	11.569	11.575	11.572	11.579	11.574	11.576	11.575	11.567	11.568	11.564	11.579	11.564	0%	72%			OK	OMM			
4	4.78	0.05	-0.05	4.83	4.73	4.747	4.748	4.746	4.742	4.747	4.754	4.746	4.755	4.744	4.743	4.751	4.755	4.742	0%	76%			OK	OMM			
5.1	1.8	0.05	-0.05	1.85	1.75	1.772	1.774	1.768	1.778	1.77	1.776	1.776	1.769	1.768	1.772	1.778	1.776	1.772	0%	68%			OK	OMM			
5.2	1.8	0.05	-0.05	1.85	1.75	1.764	1.768	1.769	1.778	1.77	1.764	1.777	1.776	1.778	1.771	1.775	1.778	1.764	0%	72%			OK	OMM			
6	4.6	0.05	-0.05	4.65	4.55	4.564	4.564	4.564	4.565	4.564	4.561	4.562	4.56	4.563	4.558	4.568	4.568	4.558	0%	84%			OK	OMM			
7	4.7	0.05	-0.05	4.75	4.65	4.671	4.67	4.676	4.672	4.67	4.673	4.67	4.672	4.671	4.672	4.674	4.676	4.669	0%	62%			OK	OMM			
12	7.1	0.1	-0.1	7.2	7	7.136	7.132	7.129	7.122	7.125	7.117	7.124	7.125	7.117	7.113	7.116	7.136	7.113	36%	0%			OK	OMM			
8	7	0.08	-0.08	7.08	6.92	6.991	6.997	6.991	6.992	6.991	6.998	6.996	6.993	6.993	6.992	6.993	6.998	6.991	0%	11%			OK	HG			
11	8.2	0.1	-0.1	8.3	8.1	8.208	8.203	8.202	8.216	8.213	8.213	8.214	8.209	8.21	8.207	8.212	8.216	8.202	16%	0%			OK	HG			
9.1	1.95	0.05	-0.05	2	1.9	1.945	1.938	1.94	1.945	1.948	1.947	1.941	1.955	1.935	1.942	1.953	1.955	1.935	10%	30%			OK	OMM			
10.1	0.84	0.04	-0.02	0.88	0.82	0.848	0.855	0.852	0.854	0.85	0.855	0.852	0.854	0.856	0.852	0.858	0.858	0.848	45%	0%			OK	OMM			
9.2	1.95	0.05	-0.05	2	1.9	1.943	1.936	1.946	1.942	1.947	1.94	1.943	1.941	1.93	1.943	1.951	1.951	1.93	2%	40%			OK	OMM			
10.2	0.84	0.04	-0.02	0.88	0.82	0.854	0.851	0.858	0.852	0.854	0.848	0.847	0.844	0.856	0.858	0.859	0.859	0.844	46%	0%			OK	OMM			

UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/A X.X=N/A X.XX=N/A
 ANGLES=N/A HOLEDIA=N/A
 SCALE : N/A UNIT : mm
 DRAWN BY : CHECKED BY:
 DESIGNED BY: APPROVED BY:
 TITLE : Embedded Dual-Band Antenna for USB Dongle



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