

APPROVAL SHEET

Customer Name: Quanta Computer Inc.**Date: 2023/01/13****Doc. Version: 1**

OEM P/N	DQ6P15G3600
WNC P/N	81EABP15.G36
Description	OWV, ANTENNA, WLAN MAIN, EABP-Q03 ANTENNA 81EABP15.G35 (WLAN MAIN, NGFF)
Version	3A

Provided By Wistron NeWeb Corp	Reviewed By Wistron NeWeb Corp	Approved By Customer
Ben Shih	Mac Hong	

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Index

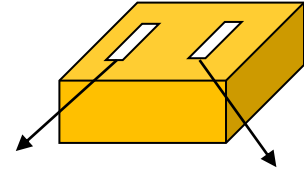
- 1. Introduction**
- 2. Revision History**
- 3. Product Specifications**
- 4. Antenna Performance**
- 5. FAI & CPK**

1. Introduction

Antenna for WLAN system

WLAN antenna (PIFA)

1. Location: Bottom Right of the LCD panel for Main antenna
2. Cable Length: Main antenna: 259 mm, Black
(connector with $\Phi 1.13$ mm Low Loss cable)



WLAN Main Antenna
(Left side)

WLAN Aux Antenna
(Right side)

	Main Antenna
Position	Right side
Antenna Type	PIFA
Cable	Cable Color: White 1.13 (dia) x 259 mm, RF connector
Photos	

2. Revision History

Date	Version	Revision History
01/13/2023	1	New Release

3. Product Specifications

3.1 Specifications of Antenna Design

Measurement condition: LCD angle 110 degree

3.1.1 VSWR

Main	IEEE 802.11 b/g			IEEE 802.11a			IEEE 802.11ax		
	2400MHz	2450MHz	2483MHz	5150MHz	5470MHz	5850MHz	5925MHz	6525MHz	7125MHz
VSWR	< 3			< 3			< 3		

3.1.2 Peak gain

Main	IEEE 802.11 b/g			IEEE 802.11a			IEEE 802.11ax		
	2400MHz	2450MHz	2483MHz	5150MHz	5470MHz	5850MHz	5925MHz	6525MHz	7125MHz
Peak dBi	< 3			< 5			< 5		
Avg. dBi	> -5			> -5			> -5		

3.2 Mechanical Specifications

See the attached drawing.

1

2

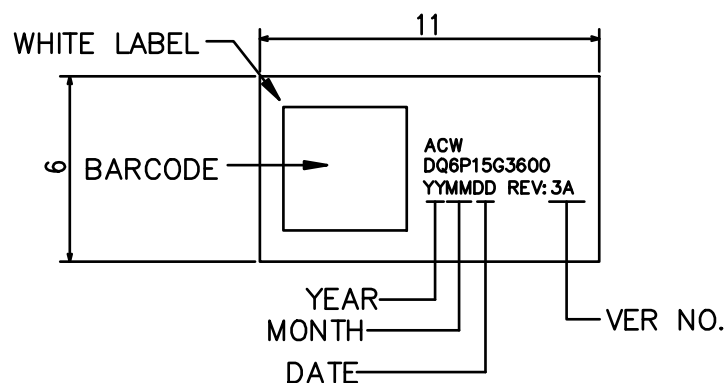
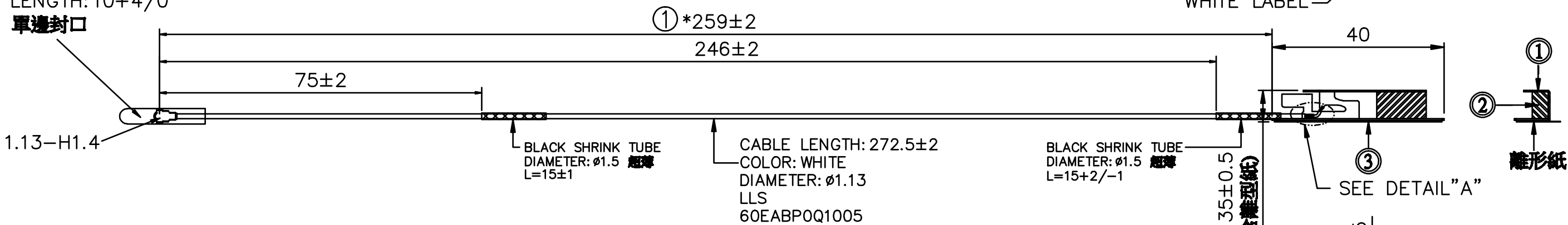
WNC PROPRIETARY

PART NUMBER BLOCK		CUSTOMER P/N BLOCK		CONFIRM ANTENNA SPEC.	
PART NUMBER	REV	PART NUMBER	REV	APPROVED	DATE
57EABP15.036	1	DQ6P15G3600	3A	BEN SHIH	12/30/22

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	RELEASE TO FILE	12/30/22	VINCENT PU

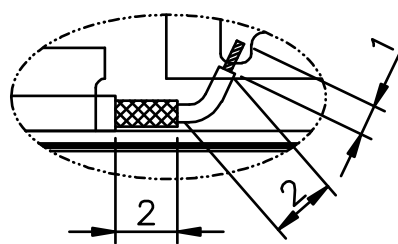
WNC PART NUMBER: 81EABP15.G36

YELLOW TRANSPARENT TUBE
 LENGTH: 10+4/0
 單邊封口



DETAIL OF LABEL

SCALE : 4/1



DETAIL A
SCALE : 4/1

NOTES: " * " ARE THE CRITICAL DIMENSIONS.
 ALL SUB-MATERIAL CAN NOT BE ATTACHED OVER THE EDGE OF ANTENNA BODY.

3	3T.0068F.111	PLATE,AL FOIL,EABP_Q03	EA	1
2	3T.0068E.111	BUFFER,ANTENNA,EABP-Q03	EA	1
1	3S.004AP.111	BRACKET,ANTENNA,WLAN AUX,EABP-Q03	EA	1
ITEM	PART NO.	DESCRIPTION	UNIT	QTY

ONLY ME PARTS REFERENCE

		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN mm AND TOLERANCES ARE: INTEGER DIMENSIONS ± 0.2 1 PLACE DECIMAL ± 0.1 2 PLACE DECIMALS ± 0.05 ANGULAR DIMENSIONS ± 1' HOLES UNDER Ø5.00 ± 0.05			WNC 啟基科技股份有限公司 Wistron NetWeb Corp. 20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan, R.O.C. Tel: 886-3-6667799 Fax: 886-3-5788726	
MATERIAL: NA		DWG TITLE			OWV, ANTENNA, WLAN AUX, EABP-Q03	
FINISH: NA		DRAWN			ANTENNA 81EABP15.G36 (WLAN AUX, NGFF)	
81EABP15.G36	EABP-Q03	ETHAN HU	12/30/22	SIZE	DWG NO.	REV
NEXT ASSY	USED ON	BEN SHIH	12/30/22	A3	57EABP15.036	1
APPLICATION		APVD	VINCENT PU	12/30/22	SCALE	1/1
					SHEET	1 OF 1

1

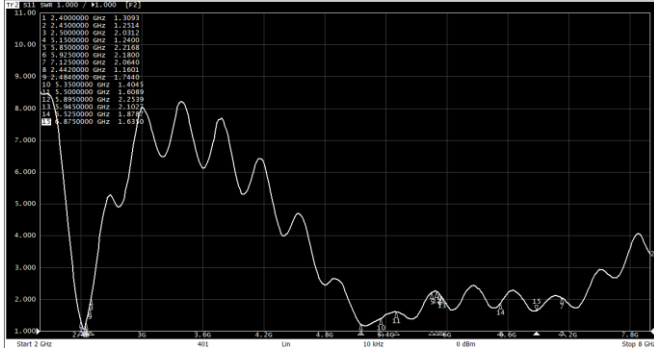
2

3.3 Antenna Material List

Main antenna
1. Coaxial cable and RF connector
2. FR4 PCB
3. Plate, Copper Foil
4. Tape, Double Adhesive

4. Antenna Performance

4.1 VSWR



4.2 Efficiency data

Main Antenna	
Frequency (MHz)	Efficiency (dB)
2400	-3.58
2450	-3.17
2500	-3.77
5150	-3.59
5250	-3.08
5350	-3.76
5470	-3.17
5600	-3.31
5725	-3.78
5785	-3.77
5850	-3.75
5925	-4.29
6000	-3.81
6125	-3.96
6225	-3.23
6325	-4.06
6425	-4.81
6525	-4.45
6625	-4.55
6725	-4.32
6875	-4.39
6925	-4.29
7000	-3.40
7125	-4.47

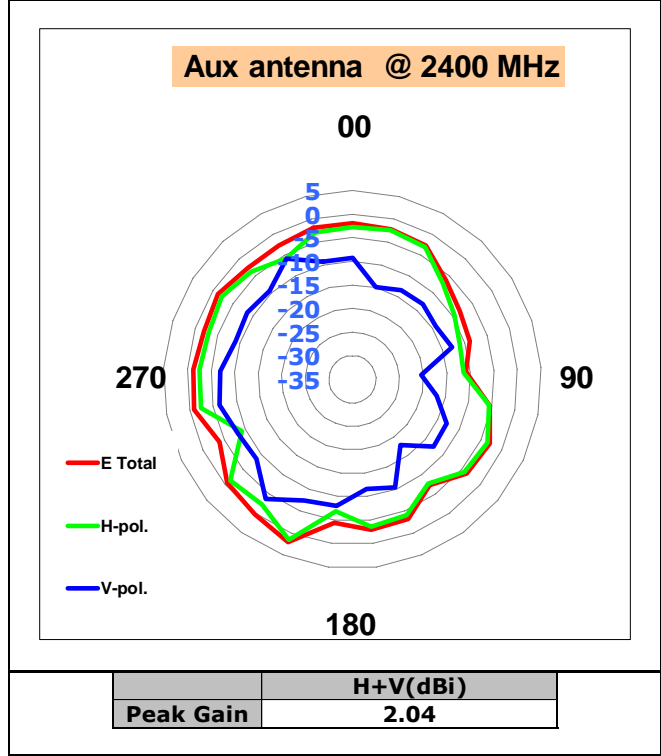
4.3 Peak Gain

Main Antenna	
Frequency (MHz)	(H+V)
2400	2.04
2450	1.53
2500	0.15
5150	-1.35
5250	-1.04
5350	-1.69
5470	-1.89
5600	-1.53
5725	-1.61
5785	-1.78
5850	-1.94
5925	-1.90
6000	-1.22
6125	-1.64
6225	-1.19
6325	-1.75
6425	-1.32
6525	-1.95
6625	-1.18
6725	-1.44
6875	-1.24
6925	-1.21
7000	-0.28
7125	-1.24

4.4 Antenna Pattern

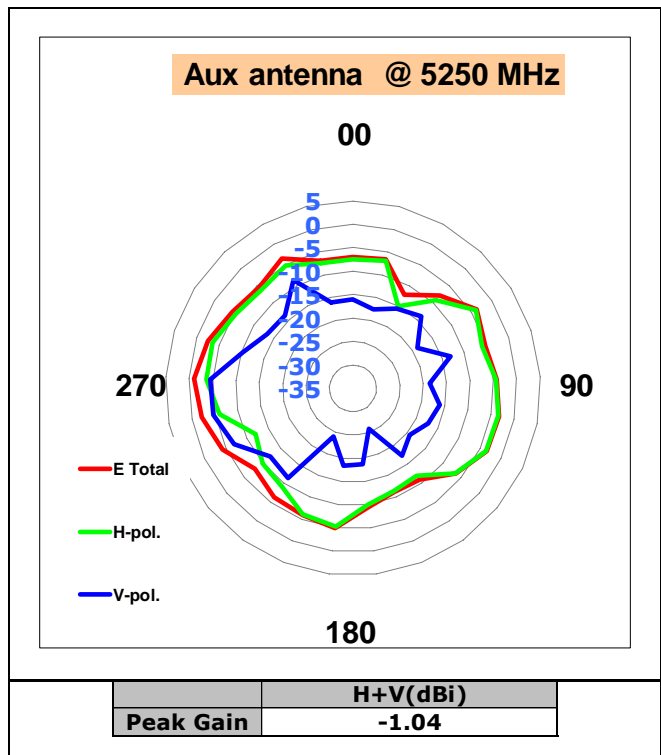
2400-2500MHz radiation characteristic (1E Peak Gain W/ Cable loss (dBi))

Aux antenna:



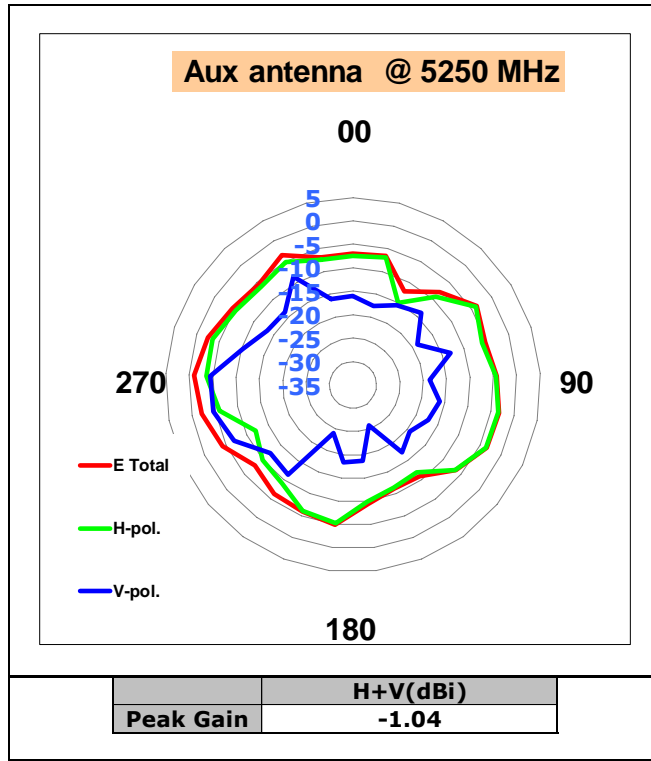
5150-5250MHz radiation characteristic

Aux antenna:



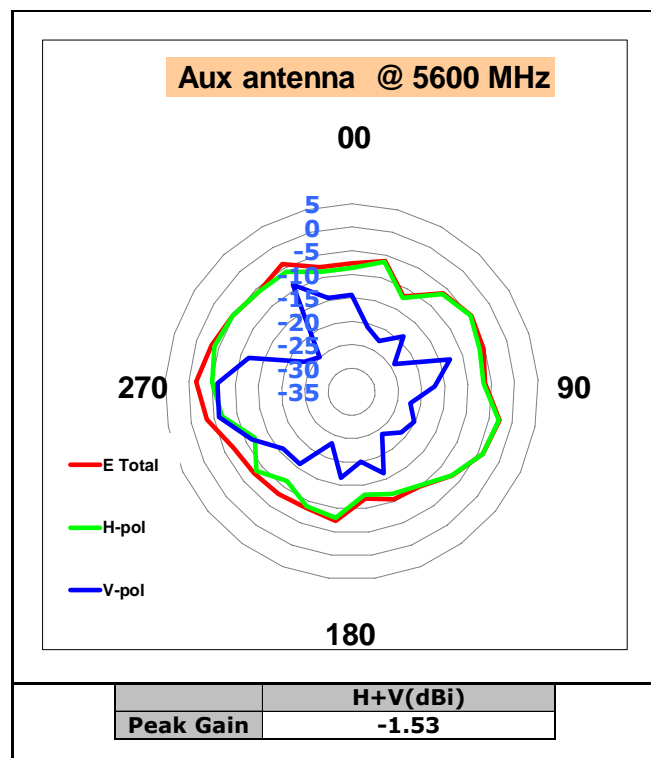
5250-5350MHz radiation characteristic

Aux antenna:



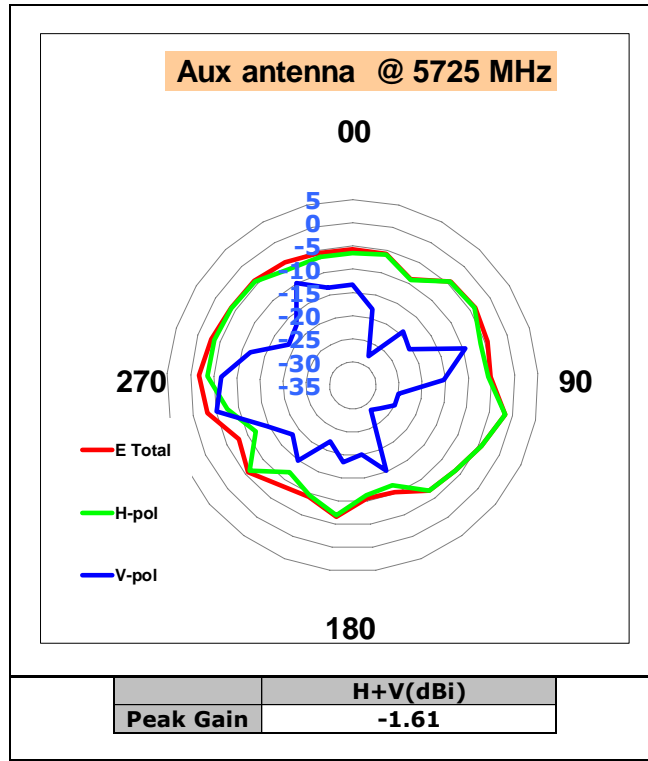
5470-5725MHz radiation characteristic(1E Peak Gain W/ Cable loss (dBi))

Aux antenna:



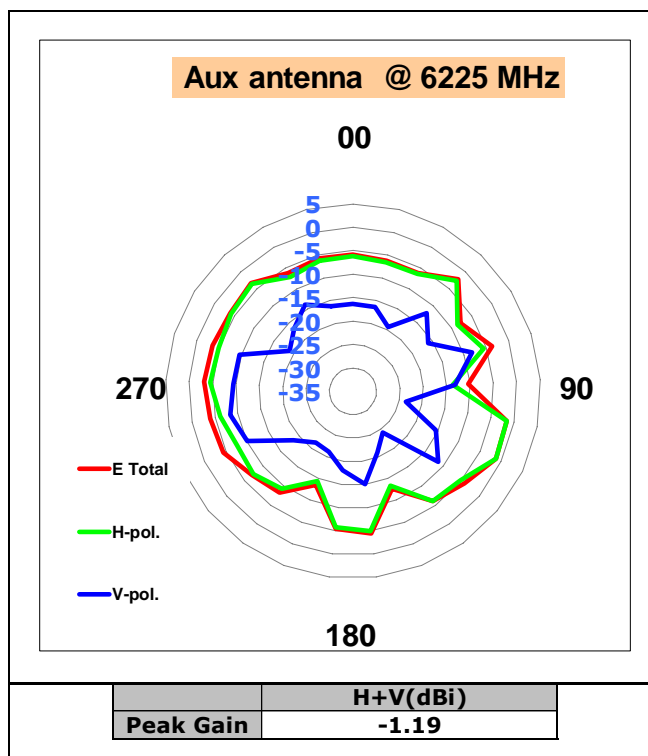
5725-5850MHz radiation characteristic(1E Peak Gain W/ Cable loss (dBi))

Aux antenna:



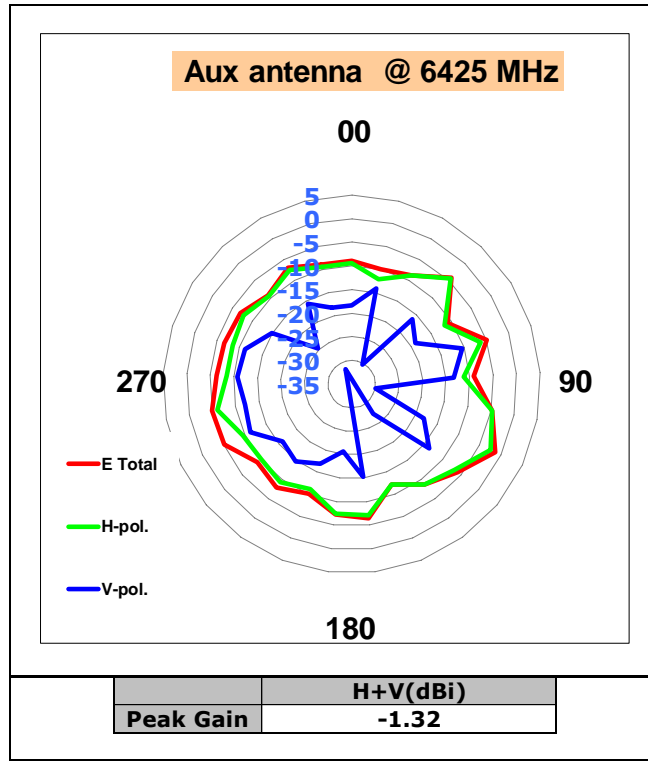
5925-6425MHz radiation characteristic(1E Peak Gain W/ Cable loss (dBi))

Aux antenna:



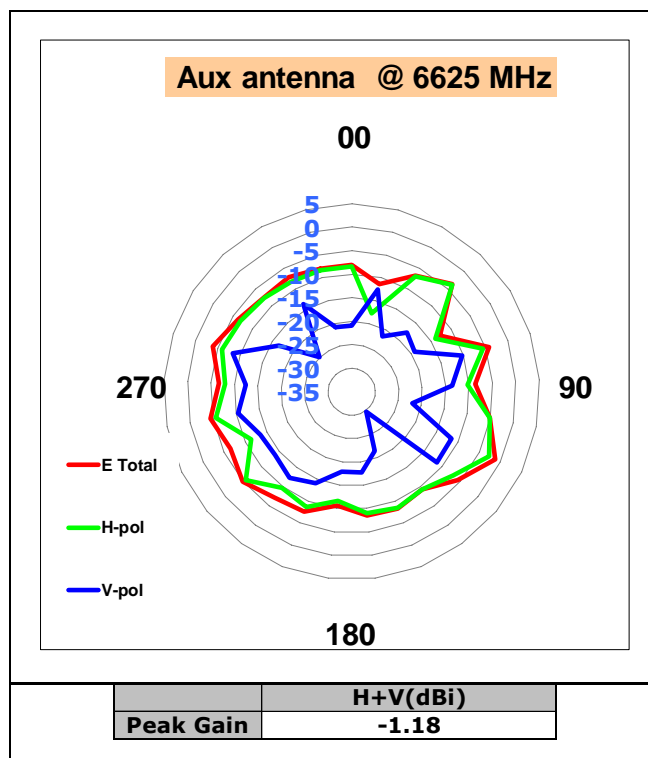
6425-6525MHz radiation characteristic (1E Peak Gain W/ Cable loss (dBi))

Aux antenna:



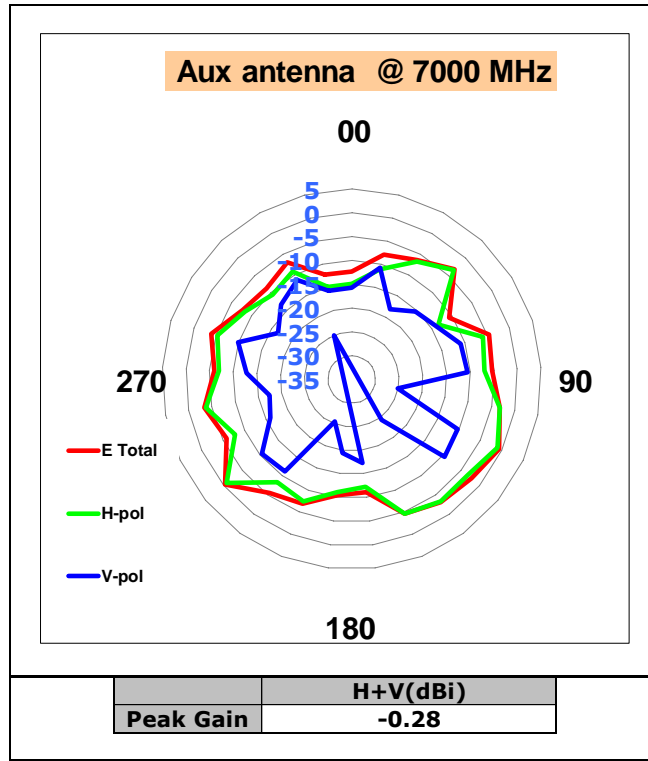
6525-6875MHz radiation characteristic (1E Peak Gain W/ Cable loss (dBi))

Aux antenna:



6875-7125MHz radiation characteristic(1E Peak Gain W/ Cable loss (dBi))

Aux antenna:



5. FAI & CPK

5.1 FAI

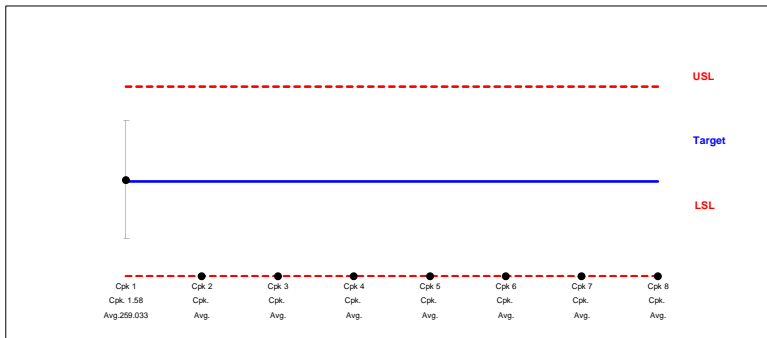
First Article Inspection Report																			
Part Number: DO6P15G3600				Supplier: wnc				Document NO.:											
Part Description: ANTENNA				Submission No: N/A				Submission Date: 2022/10/22											
Part Revision: X01				Material Spec: N/A				Cavity / Tool #: N/A											
Submission Reason: FOR APPROVAL								Inspector: 贺雪艳											
DRAWING SPECIFICATIONS				INSPECTION RESULTS						INSPECTION ANALYSIS				COMMENTS					
ITEM	LOCATION	NOMINAL	+TOL	-TOL	Sample Number			Deviation from Nominal			Mean	% Tolerance		Acc/Rej		Inspection Method	Supplier Remarks	DELL Engineering Disposition	
					1	2	3	1	2	3		UPPER	LOWER	HIGH	LOW				
1	A1	259	2	2	259	260	259	0	1	0	259.3333	50%	0%			RULE	OK		
2	A1	75	2	2	75	76	75	0	1	0	75.33333	50%	0%			RULE	OK		
3	A2	7.35	0.2	0.2	7.34	7.35	7.35	-0.01	0	0	7.346667	0%	5%			CAP	OK		
4																			
5																			
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Note # 2.000																			
Note Description				1			2			3			Statement of Conformance						
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15																			

5.2 CPK

Process Capability Calculation Worksheet									
Part Number: DO6P15G3600				Supplier: wnc				Submission Date: 2022/10/22	
Part Description: ANTENNA				Submission No: N/A				Cavity / Tool #: N/A	
Part Revision: X01				Material Spec: N/A				Inspector: 贺雪艳	
Submission Reason: FOR APPROVAL									

DRAWING SPECIFICATIONS								
	Cpk 1	Cpk 2	Cpk 3	Cpk 4	Cpk 5	Cpk 6	Cpk 7	Cpk 8
Nominal	259							
Upper Tol.	2							
Lower Tol.	2							
USL	261	0	0	0	0	0	0	0
LSL	257	0	0	0	0	0	0	0
Total Tol	4.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Xbar	259.033							
Stdv	0.414							
Zu	1.584							
Zl	1.638							
Cp	1.611							
Cpk	1.584							
Max	260.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Min	258.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Data



Top