Wistron NeWeb Corp.

APPROVAL SHEET

Customer Name: Quanta Computer lnc.

Date: 2023/01/13 **Doc. Version:** 1

OEM P/N	**DQ6P15G3500**
WNC P/N	**81EABP15.G35**
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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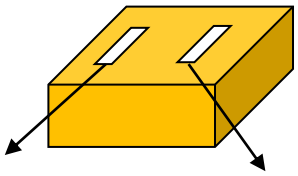
1. Introduction

Antenna for WLAN system

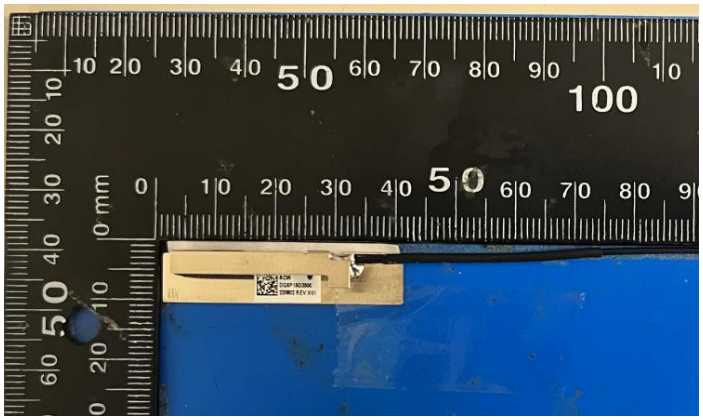
WLAN antenna (PIFA)

1. Location: Bottom Right of the LCD panel for Main antenna
2. Cable Length: Main antenna: 108 mm, Black
   (connector withΦ1.13mm Low Loss cable)



WLAN Main Antenna
(Left side)

WLAN Aux Antenna
(Right side)

	Main Antenna
Position	Left side
Antenna Type	PIFA
Cable	Cable Color: Black 1.13 (dia) x 108 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

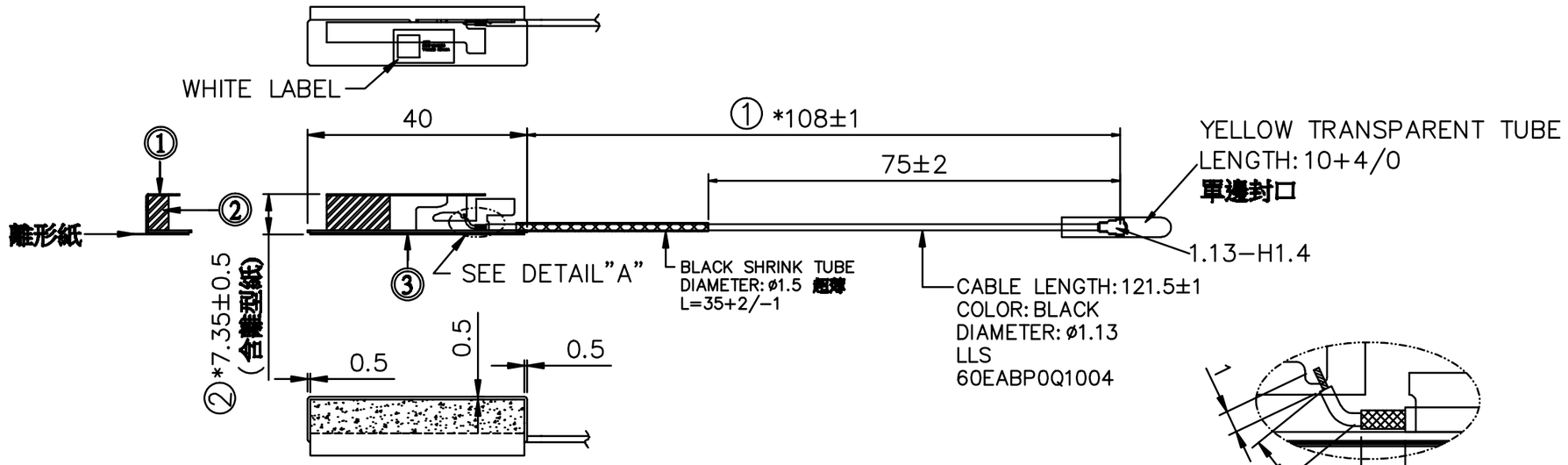
See the attached drawing.

PART NUMBER BLOCK		CUSTOMER P/N BLOCK		CONFIRM ANTENNA SPEC.	
PART NUMBER	REV	PART NUMBER	REV	APPROVED	DATE
57EABP15.035	1	DQ6P15G3500	3A	BEN SHIH	12/30/22

WNC PROPRIETARY

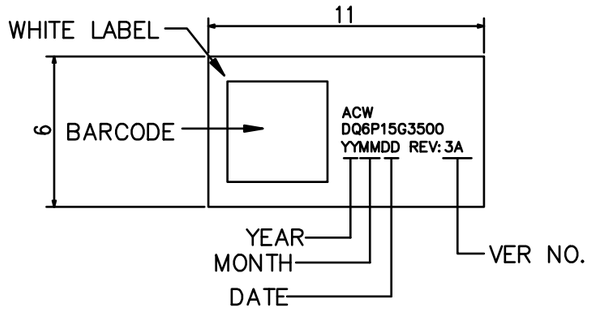
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	RELEASE TO FILE	12/30/22	VINCENT PU

WNC PART NUMBER: 81EABP15.G35



DETAIL A

SCALE : 4/1



DETAIL OF LABEL

SCALE : 4/1

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

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

ONLY ME PARTS REFERENCE

81EABP15.G35	EABP-Q03
NEXT ASSY	USED ON
APPLICATION	

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

MATERIAL: NA

FINISH: NA

THIRD ANGLE PROJECTION

DRAWN	ETHAN HU	12/30/22
ENGR	BEN SHIH	12/30/22
APVD	VINCENT PU	12/30/22

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DWG TITLE
OWV, ANTENNA, WLAN MAIN, EABP-Q03
ANTENNA 81EABP15.G35 (WLAN MAIN, NGFF)

SIZE	DWG NO.	REV
A3	57EABP15.035	1

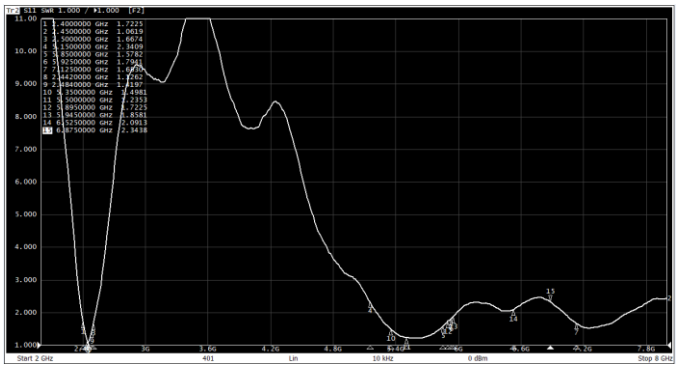
SCALE 1/1 SHEET 1 OF 1

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	-3.70
2450	-3.73
2500	-3.80
5150	-3.28
5250	-3.59
5350	-3.51
5470	-4.12
5600	-3.85
5725	-3.15
5785	-3.25
5850	-3.36
5925	-3.16
6000	-4.59
6125	-4.73
6225	-4.08
6325	-4.37
6425	-4.65
6525	-4.22
6625	-4.41
6725	-4.68
6875	-4.38
6925	-4.98
7000	-3.95
7125	-4.16

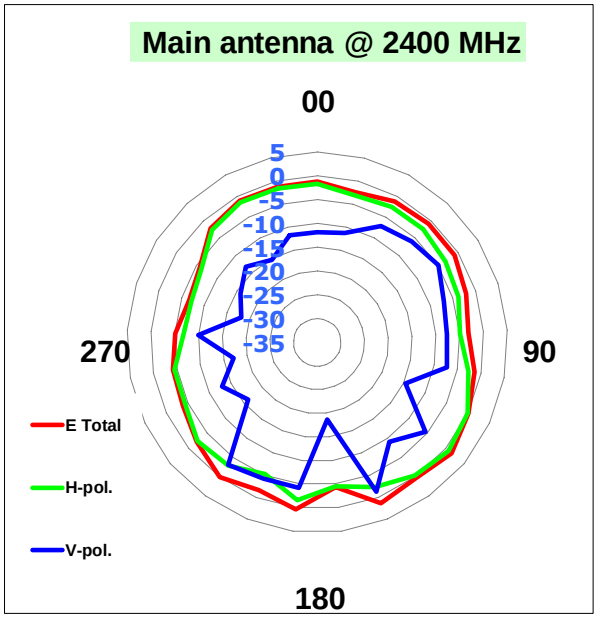
4.3 Peak Gain

Main Antenna	
Frequency (MHz)	(H+V)
2400	1.73
2450	1.14
2500	1.16
5150	-1.10
5250	-0.69
5350	-1.33
5470	-1.85
5600	-1.86
5725	-0.88
5785	-1.12
5850	-0.98
5925	-0.74
6000	-1.24
6125	-1.87
6225	-0.67
6325	-1.26
6425	-1.43
6525	-1.04
6625	-0.18
6725	0.05
6875	-0.70
6925	-0.32
7000	0.79
7125	-0.13

4.4 Antenna Pattern

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

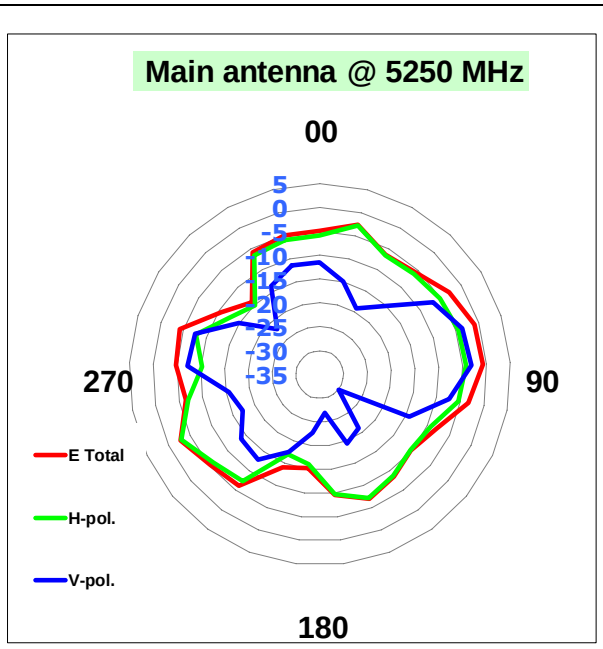
Main antenna:



	H+V(dBi)
Peak Gain	1.73

5150-5250MHz radiation characteristic

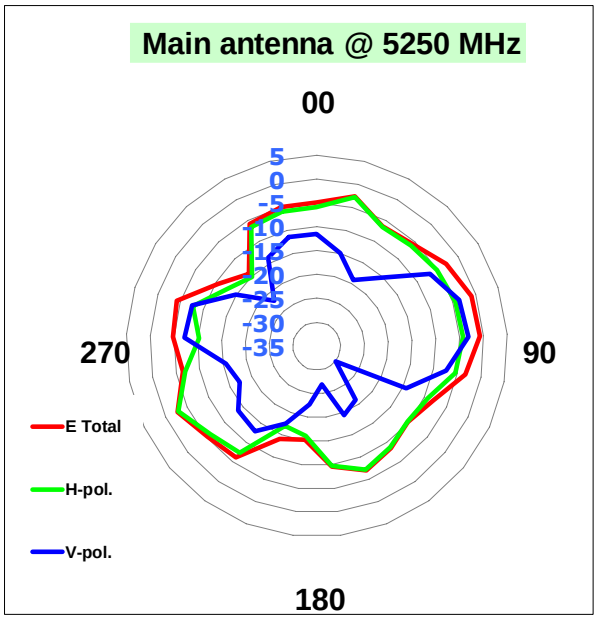
Main antenna:



	H+V(dBi)
Peak Gain	-0.69

5250-5350MHz radiation characteristic

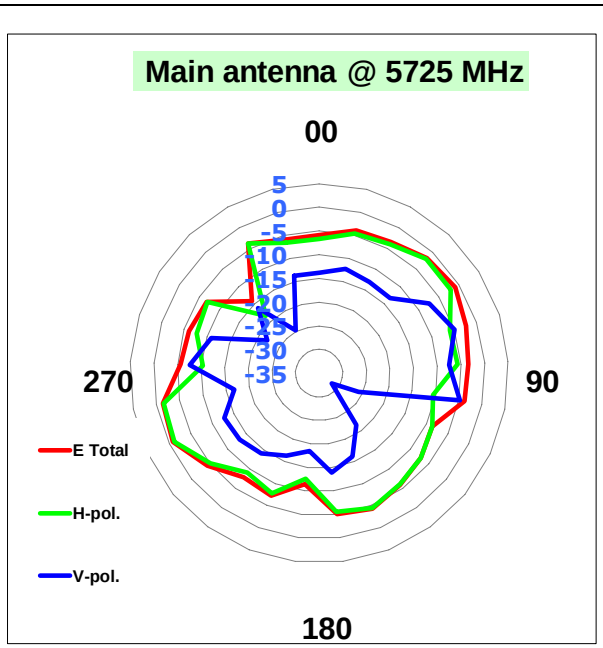
Main antenna:



	H+V(dBi)
Peak Gain	-0.69

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

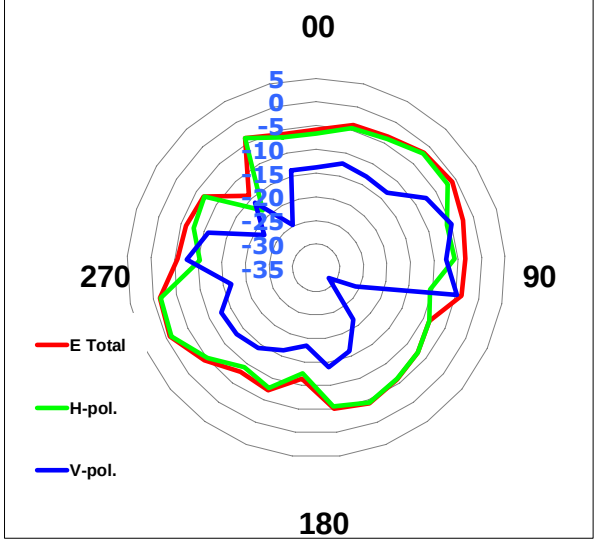
Main antenna:



	H+V(dBi)
Peak Gain	-0.88

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

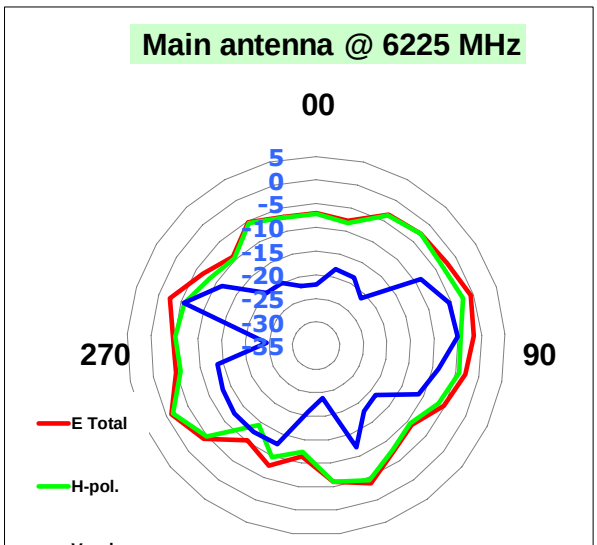
Main antenna:



	H+V(dBi)
Peak Gain	-0.88

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

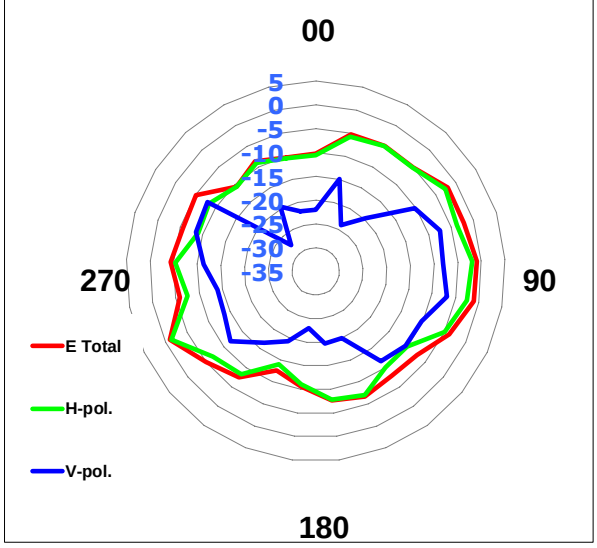
Main antenna:



	H+V(dBi)
Peak Gain	-0.67

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

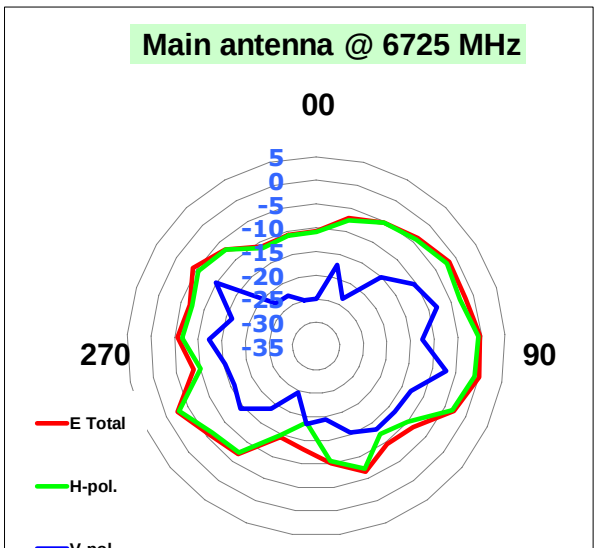
Main antenna:



	H+V(dBi)
Peak Gain	-1.04

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

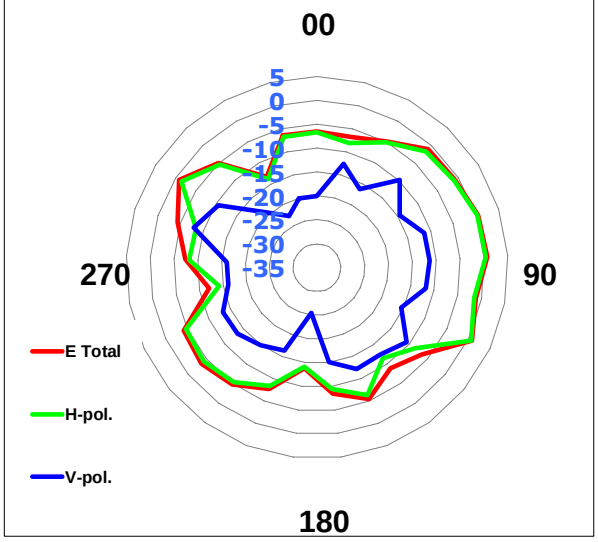
Main antenna:



	H+V(dBi)
Peak Gain	0.05

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

Main antenna:



	H+V(dBi)
Peak Gain	0.79

5. FAI & CPK

5.1 FAI

First Article Inspection Report

Document NO.:

Part Number:	DQ6P15G3500	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:	祝雪艳
Submission Reason:	FOR APPROVAL				

DRAWING SPECIFICATIONS					INSPECTION RESULTS							INSPECTION ANALYSIS					COMMENTS	
					Sample Number			Deviation from Nominal				% Tolerance		Acc/Rej				
ITEM	LOCATION	NOMINAL	+TOL	-TOL	1	2	3	1	2	3	Mean	UPPER	LOWER	HIGH	LOW	Inspection Method	Supplier Remarks	DELL Engineering Disposition
1	A2	108	1	1	109	108	108	1	0	0	108.3333	100%	0%	Alert		RULE	OK	
2	A2	75	2	2	75	76	75	0	1	0	75.33333	50%	0%			RULE	OK	
3	A1	7.35	0.2	0.2	7.35	7.36	7.35	0	0.01	0	7.353333	5%	0%			CAP	OK	
4																		
5																		
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		2.000																

Note #	Note Description	1	2	3	Statement of Conformance		
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15							

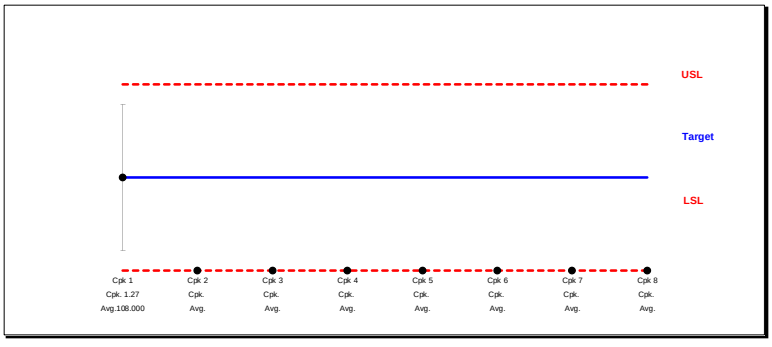
5.2 CPK

Process Capability Calculation Worksheet

Part Number:	DQ6P15G3500	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:	祝雪艳
Submission Reason:	FOR APPROVAL				

Data

	DRAWING SPECIFICATIONS							
	Cpk 1	Cpk 2	Cpk 3	Cpk 4	Cpk 5	Cpk 6	Cpk 7	Cpk 8
Nominal	108							
Upper Tol.	1							
Lower Tol.	1							
USL	109	0	0	0	0	0	0	0
LSL	107	0	0	0	0	0	0	0
Total Tol	2.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Xbar	108.000							
Stdv	0.263							
Zu	1.269							
Zl	1.269							
Cp	1.269							
Cpk	1.269							
Max	109.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Min	107.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



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