

3TN 00065 ABAA (5dBi External Dual Band Antenna) SPECIFICATION

Version, status	1.0
Date	30-01-2024
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Reviewer	Yin Xiaolin/Xia Qing
Approver	Sun Ronghai

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1 General

The product PTXX will have two dual band antennas.All are 2.4G/5G antennas.The working frequency of 2.4G is 2400MHz-2500MHz,the working frequency of 5G is 5150MHz-5850MHz. All the two antennas will be arranged external.Vertical and horizontal polarization or some other polarization will not be restricted. For 2.4G/5G antenna, they will receive the signal from the free space and transmit them to the diplexer,at the same time,they receive the signal from the diplexer and transmit them to free space.The structure is strengthened for drop test without package.

2 Explanation of part number

Nokia EMA number:	3TN00065ABAA
Cable length	black 224, white 64mm
PRODUCT TYPE:	2.4/5.8GHz
REVISION:	V1.0
DATE:	2024-01-30

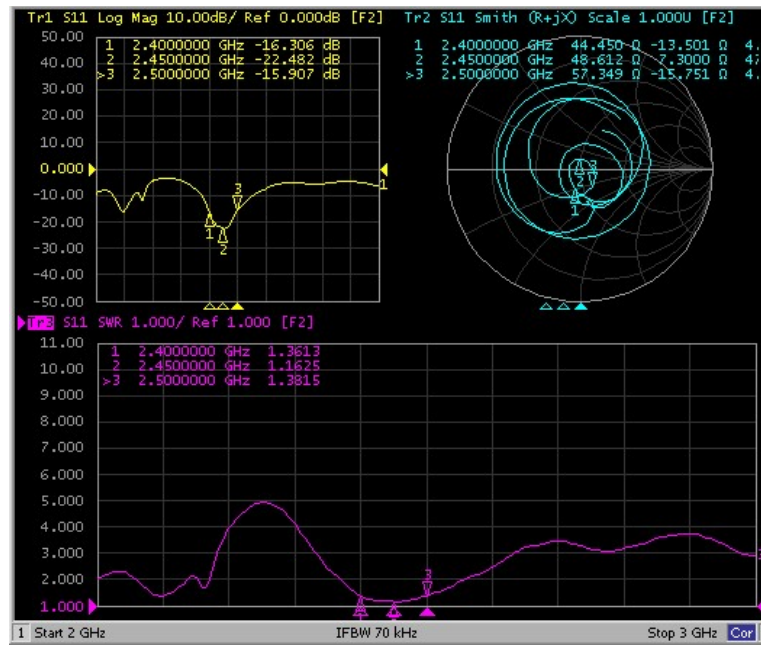
3 Electrical performance specification

Items	Specification
Frequency Range	2.4-2.5GHz
	5.15-5.85 GHz
Feed Impedance	50 Ω
Gain	5 \pm 0.5 dBi@2.4-2.5GHz
	5 \pm 0.5 dBi@5.15-5.85 GHz
VSWR	\leq 2.0
Admitted Power	10W
Polarization	Linear, Vertical
Connector Type	IPEX/Cable
Antenna Base	FR4
Operating Temp	-20 $^{\circ}$ C~+65 $^{\circ}$ C
Operating Relative Humidity	5%RH~95%RH
Storage Temp	-30 $^{\circ}$ C~+75 $^{\circ}$ C
Storage Relative Humidity	5%RH~95%RH

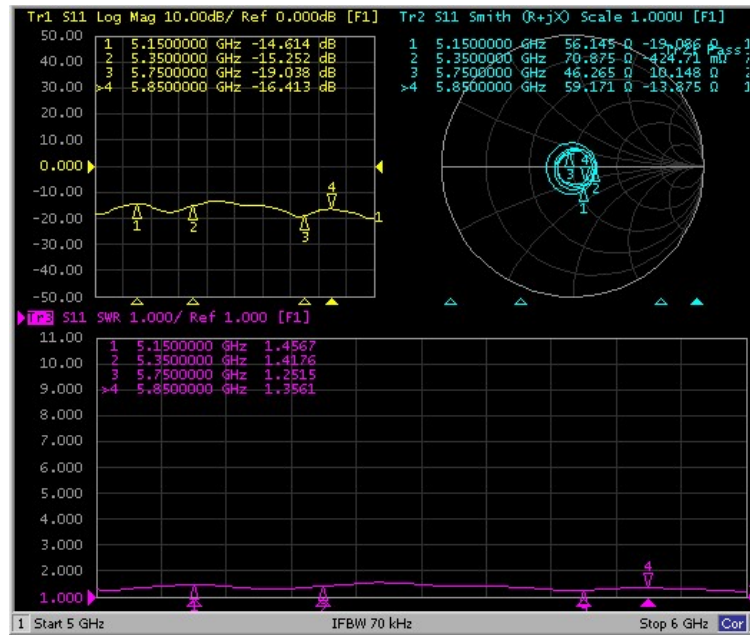
4 Product Characteristics

4.1 Return Loss

2.4-2.5GHz

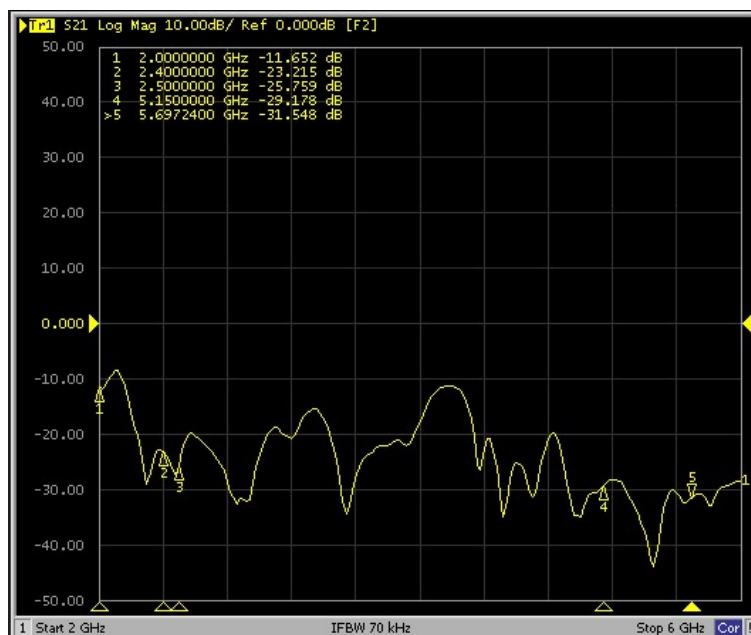


5.15-5.85GHz



4.2 Isolation

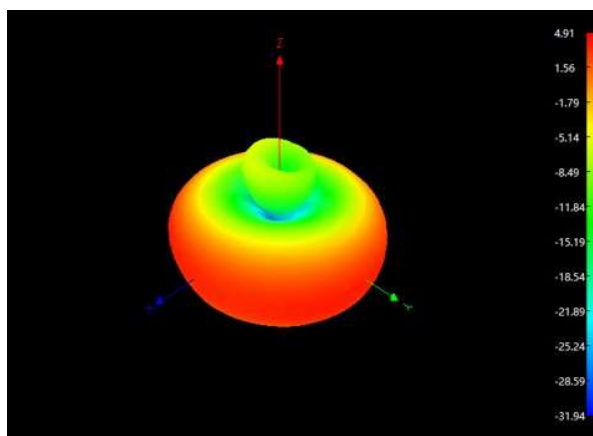
2.4-2.5GHz&5.15-5.85GHz



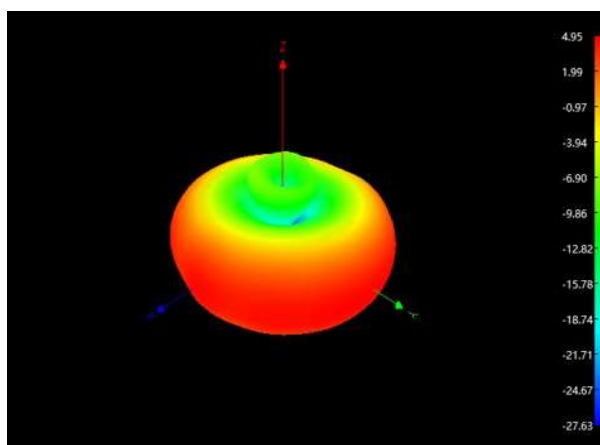
4.3 3D&2D Radiation Pattern

Frequency	Gain/dBi	Effectiveness/%
low(2.4GHz)	4.91	75.44
In(2.45GHz)	4.95	76.38
High(2.5GHz)	4.83	74.31

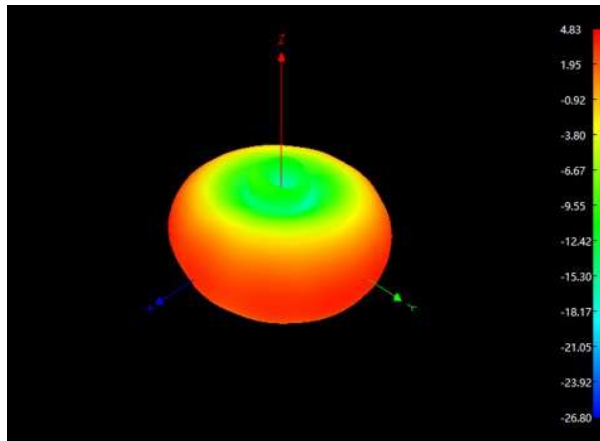
Frequency	Gain/dBi	Effectiveness/%
5.15 GHz	5.30	69.98
5.35 GHz	5.25	68.81
5.55 GHz	5.45	70.11
5.75 GHz	5.28	68.78
5.85 GHz	5.51	72.70



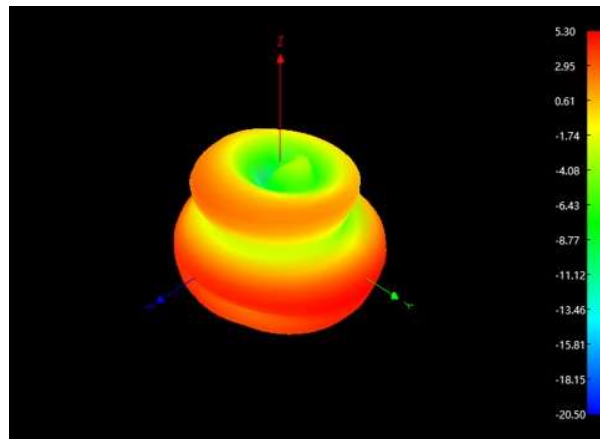
2.4GHz 3D Pattern and max Gain



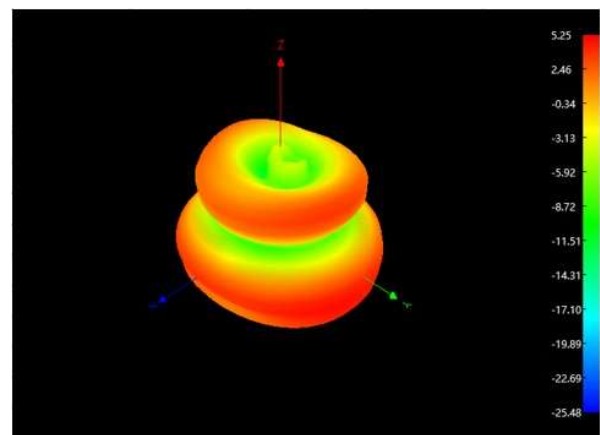
2.45GHz 3D Pattern and max Gain



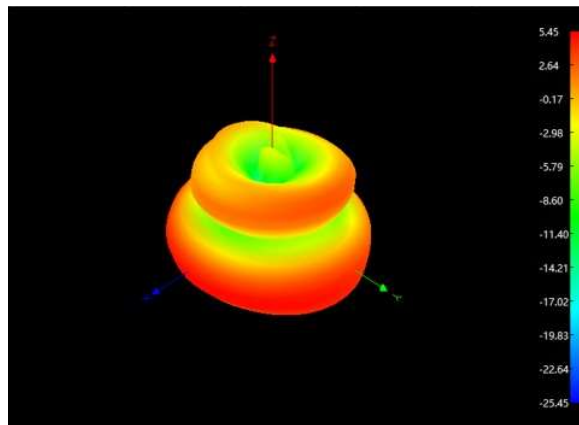
2.5GHz 3D Pattern and max Gain



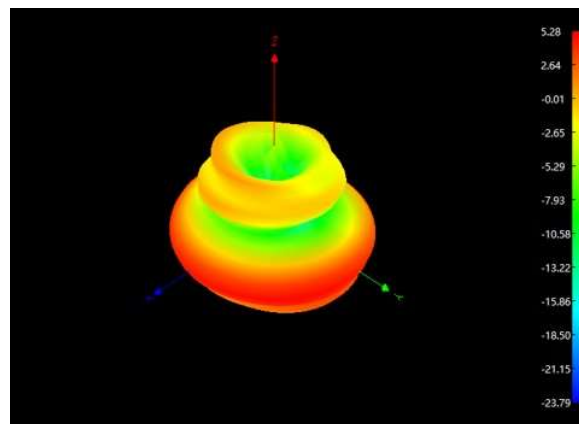
5.15GHz 3D Pattern and max Gain



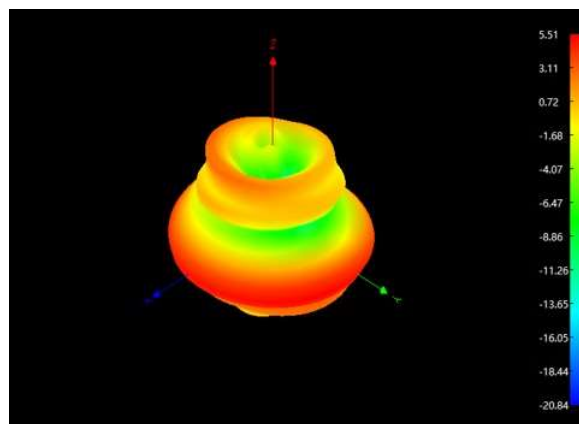
5.35GHz 3D Pattern and max Gain



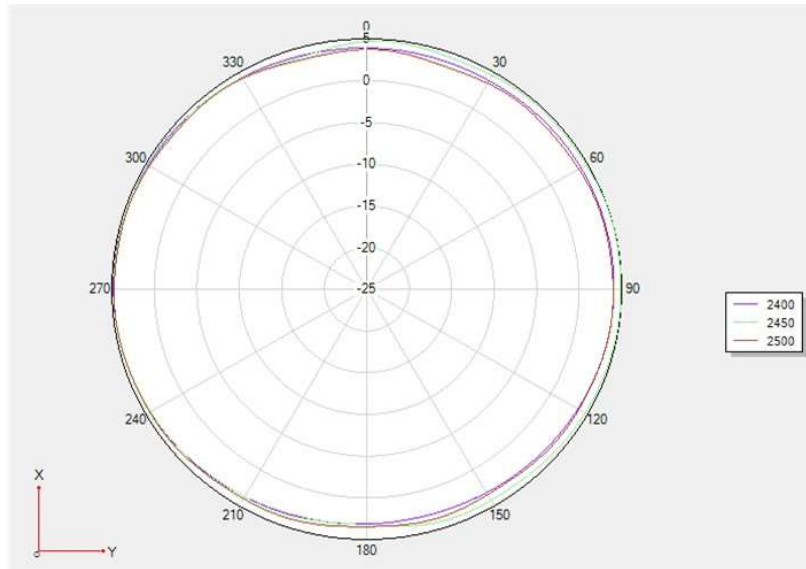
5.55GHz 3D Pattern and max Gain



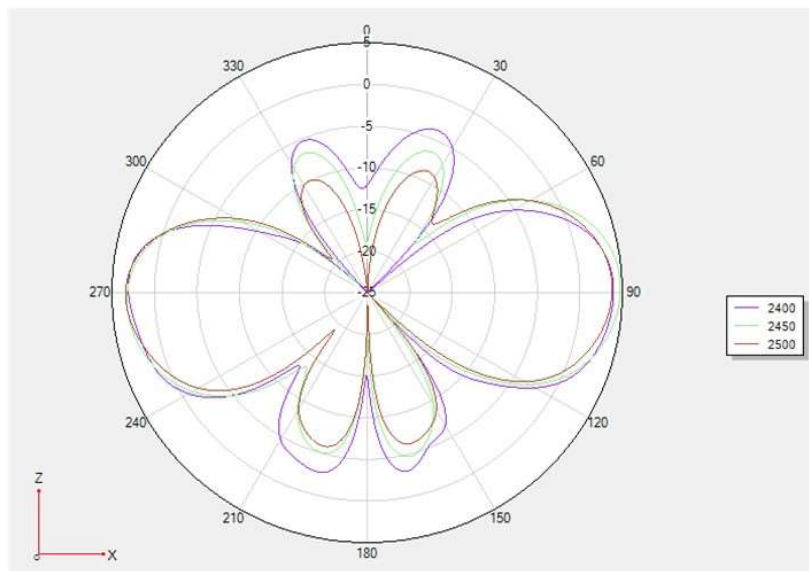
5.75GHz 3D Pattern and max Gain



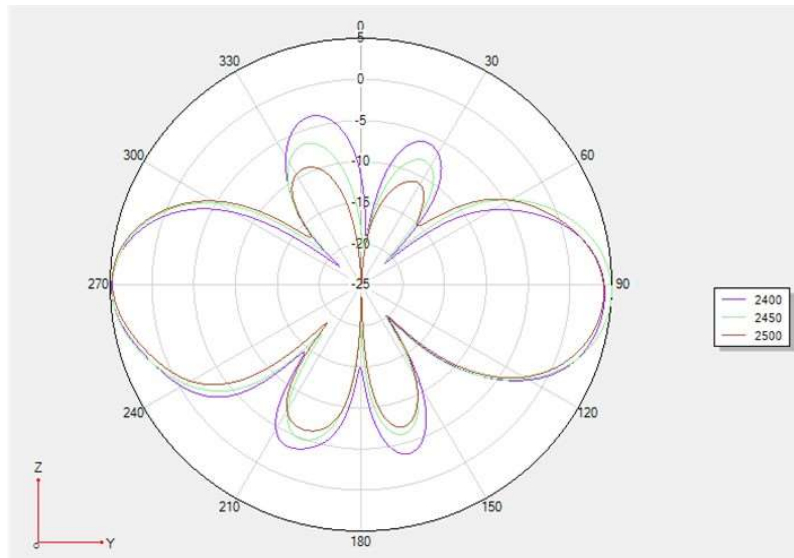
5.85GHz 3D Pattern and max Gain



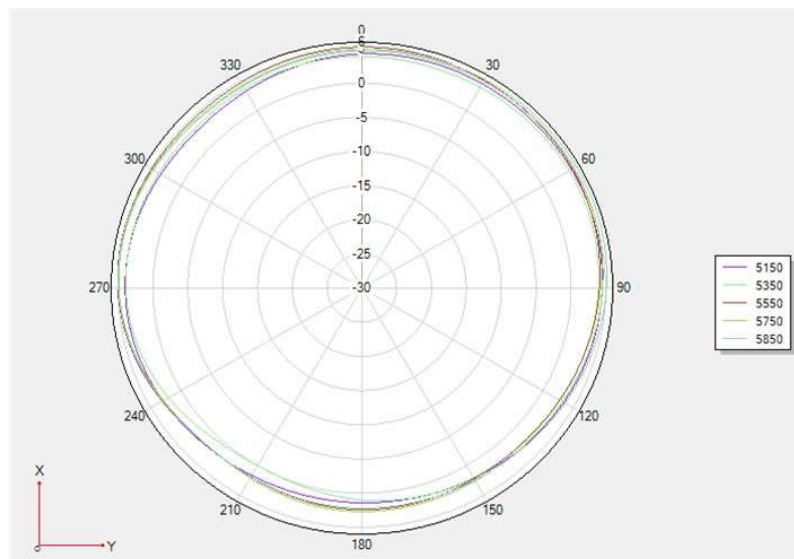
2400MHz\2450MHz\2500MHz XOY(H Face) GainIcon



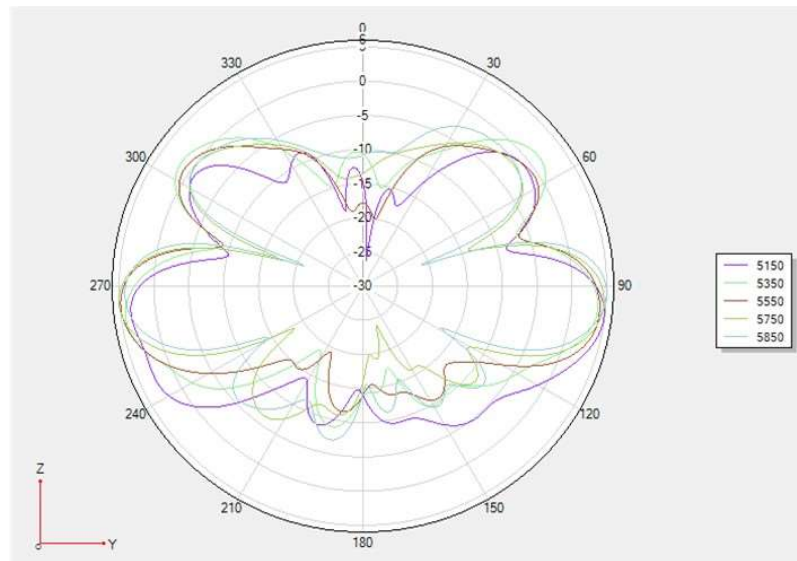
2400MHz\2450MHz\2500MHz XOZ(E1Face) GainIcon



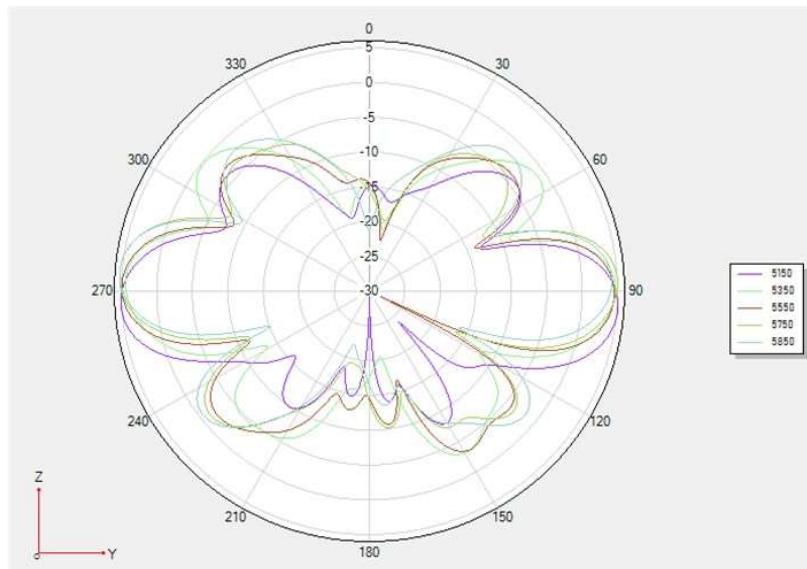
2400MHz\2450MHz\2500MHz YOZ(E2Face) Gain Icon



5150MHz~5850MHz XOY(H Face) Gain Icon



5150MHz~5850MHz XOZ(E1 Face) Gain Icon



5150MHz~5850MHz YOZ(E2 Face) Gain Icon

XOY(H Face)Gain

Frequency / MHz	MaxGain(dBi)	MinGain(dBi)	AverageGain(dB)	Pattern Ripple
2400	4.90	3.01	3.99	1.89
2450	4.91	3.19	4.02	1.72
2500	4.82	3.20	3.87	1.62
5150	4.68	1.39	3.35	3.29
5350	4.29	0.45	3.02	3.84
5550	5.30	1.90	3.76	3.40
5750	5.11	2.00	3.68	3.11
5850	5.51	1.89	3.88	3.62

4.4 Reliability

Reliability item	result	notes
endurance test	pass	Please check 3HH-16349-2003-DFZZA_External Antenna Reliability Test Specification_V3
Rotary force test	pass	Please check 3HH-16349-2003-DFZZA_External Antenna Reliability Test Specification_V3
The antenna lateral compression test	pass	Please check 3HH-16349-2003-DFZZA_External Antenna Reliability Test Specification_V3
Product free drop test	pass	Please check 3HH-16349-2003-DFZZA_External Antenna Reliability Test Specification_V3
Antenna tensile test	pass	Please check 3HH-16349-2003-DFZZA_External Antenna Reliability Test Specification_V3
Antenna mounting force	pass	Please check 3HH-16349-2003-DFZZA_External Antenna Reliability Test Specification_V3
Abnormal antenna sound test	pass	Please check 3HH-16349-2003-DFZZA_External Antenna Reliability Test Specification_V3
Low temperature storage	pass	Please check 3HH-16349-2003-DFZZA_External Antenna Reliability Test Specification_V3
High temperature storage	pass	Please check 3HH-16349-2003-DFZZA_External Antenna Reliability Test Specification_V3
Temperature cycling	pass	Please check 3HH-16349-2003-DFZZA_External Antenna Reliability Test Specification_V3

5 Product Drawing

Specification:
 Frequency Range : 2.4~2.5GHz
 5.18~5.85GHz

PEARL, COTTON & RUBBER BAND

1. Packing Quantity : 80pcs/PE Bag.
2. A label must be attached in the middle of the plastic bag.

1. The outer box must be affixed with 1 pearl cotton label to the outer box label;
2. The outer box must be labeled with type label to the upper left corner of the outer box.

Rev	ECN NO.	Description	Design
A			20240130

07	3FE 00208 ABAA	1	WIRE	Ø1.37,WHITE	
06	3FE 00209 ABAA	1	WIRE	Ø1.37,BLACK	
05	3FE 78883 AAAA	1	LOWER MONUT	PC+PBT-WHITE	
04	3FE 78884 AAAA	2	RIVET	POM-WHITE	
03	3FE 78882 ABAA	1	STOPPER	PC+PBT-WHITE	
02	3FE 00067 AAAA	1	PCB	FRA, GREEN, T=0.4mm	
01	3FE 78881 AAAA	1	COVER	ABS-WHITE	

Index	Part name	Qty	Description	Material	Remark
33M	TDL#				
	RANGE	M	S	P	C
	0~6	0.05	0.1	0.1	0.5
	6~30	0.1	0.25	0.1	1
	30~60	0.25	0.2	0.25	2
	60~120	0.25	0.25	0.2	2.5
	120~315	0.2	0.3	0.25	3
	315~800	0.3	0.4	0.25	3.5
	ANG, TDL#	0~90°	0~90°	0~90°	

ELI DATE	20240130
CHANGE NOTE	
REPAIR AUTHORITY	LI YanTao
DESIGNATOR	

Scale	1:1	CODE	3TN0065ABAA
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