

Product Number: AN2400-TUB33BO
Antenna Type: dipole

Specification For Approval

Date: 2022.10.22

Version: 1.0

Customer: _____

Customer
P/N: 3.75.00347

WINWAVE P/N: AN2400-TUB33BO


Description: OD3.5*29.0mm Copper tube antenna
OD1.37mm The black outlet is 95mm
long, and the end is stripped with tin

WINWAVE Checked By:		Customer Approved By:	
DRAWN	HuChao	TESTED BY	
CHECKED BY	Hou	CHECKED BY	
Q.C.DEPT.	Liang	Q.C.DEPT.	
APPROVED BY	WeiJia	APPROVEDBY	

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1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400~2500 MHz
V.S.W.R	≤ 1.5
Antenna Gain	2 dBi
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Material of Plastic	/
Cable Type	OD1.37 black cable
Connector Type	/
C. Environmental	
Operation Temperature	- 40 °C ~ + 80 °C
Storage Temperature	- 40 °C ~ + 80 °C

2. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements
C1	V.S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	MIL-STD-202G, 201A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz	1. No Visual Damage 2. Frequency Tol. $\leq 5\%$

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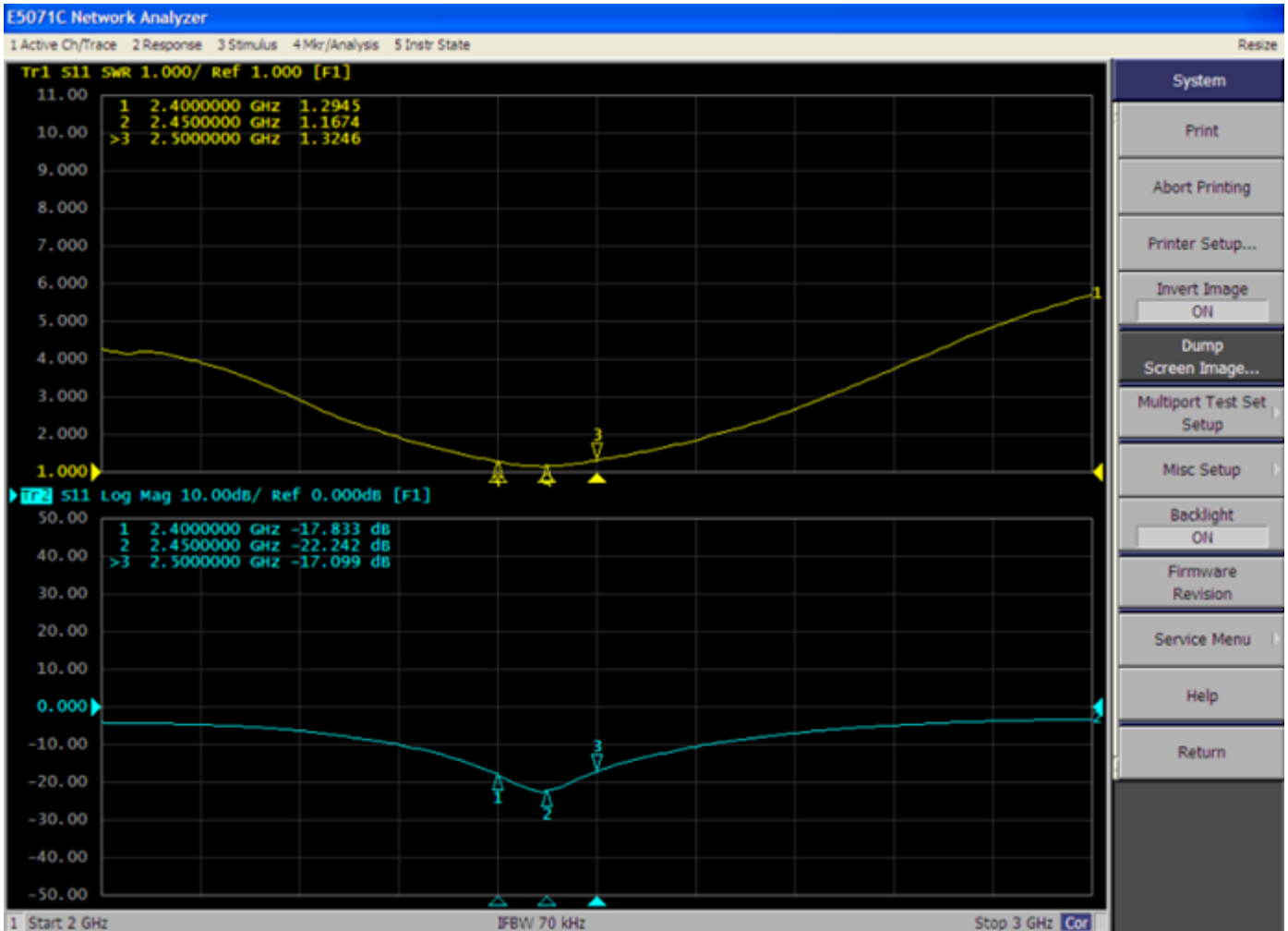
Antenna Type: dipole

		3 directions; 2 hours for each direction	
M2	Random Drop	Height: 1.5 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
M3	Solderability	MIL-STD-202G, 210F, cond. A Solder iron: 350±10°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Terminal-Torque Test	MIL-STD-202G, 211A, cond. E Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M6	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	MIL-STD-202G, 101E, cond. B Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E2	Humidity	MIL-STD-202G, 103B, cond. B Temp: 40°C; RH: >= 95%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	1 Cycle: - 40°C (30 minutes) to + 80°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E4	Life (High Temp.)	MIL-STD-202G, 108A, cond. A Temp: 85°C; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2015/863/EU

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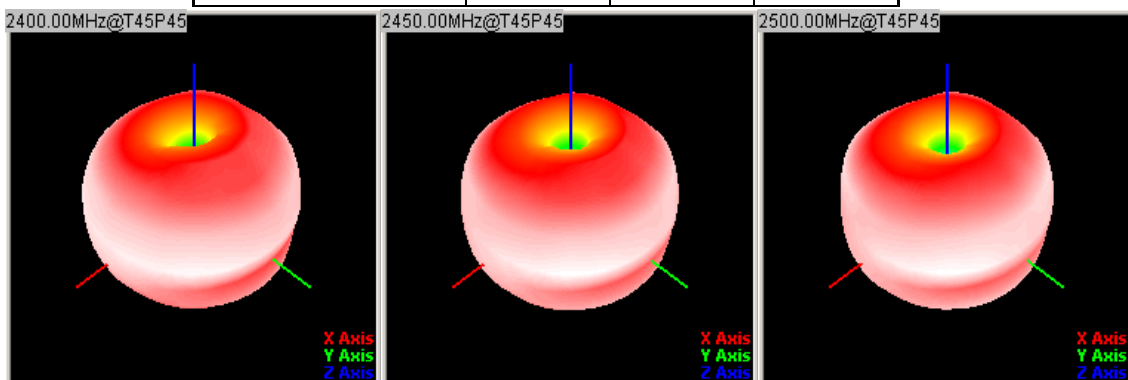
Antenna Type: dipole

3. Antenna - S Parameter Test Data



4. Antenna - Radiation Pattern Test Data

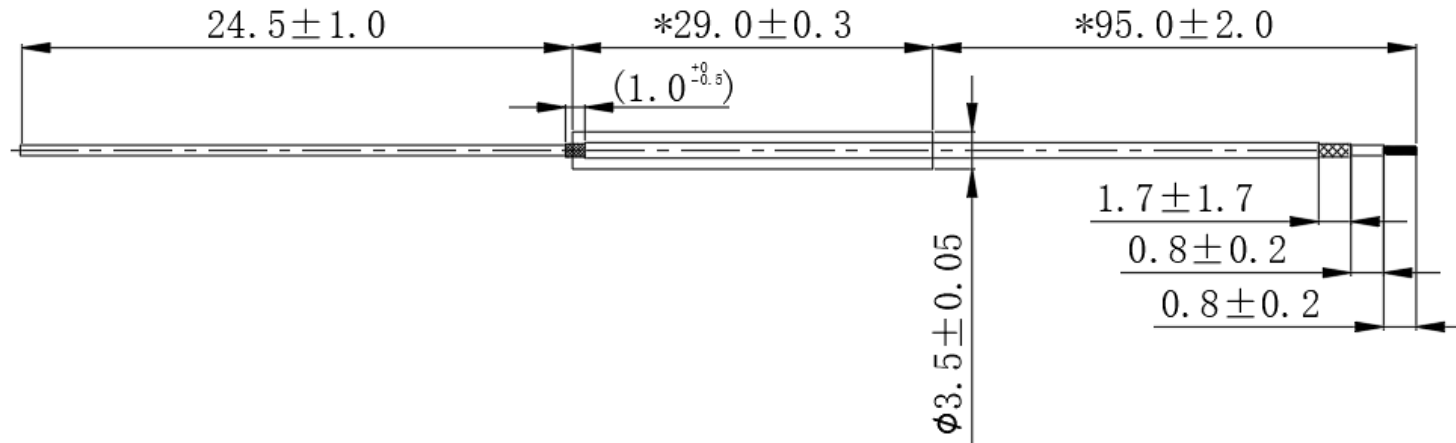
Frequency (MHz)	2400.0	2450.0	2500.0
Efficiency (%)	74.60	77.10	73.00
Gain (dBi)	1.90	2.0	1.87



5. Mechanical Drawing See attached files

HF
 RoHS
 REACH
 CONFIDENTIAL

SIGN	DATE	DESCRIPTION	APPROVER



Electrical Characteristics	
Frequency Range	2400~2500MHz
V.S.W.R.	≤ 1.5

Note:
 1. Dimension: Take * is the important dimension
 2. Tolerance: Unmarked tolerance refer to the standard tolerance please

2	CB-137BS	Cable	OD1.37	BLACK	1
1	TUBE-350290	Tube	Cu	$\phi 3.5 * 29.0$ mm	1
No.	Part Number	Description	Material	Finished	Q'ty

TITLE: 2.4G Antenna					
PART NO.: AN2400-TUB33BO				DWG NAME:	
APP BY	CHK BY	RF BY	DES BY		Tolerance
YTX	YCX	WJ	HC	UNITS: mm	X.X ±0.2
2022.10.22	2022.10.22	2022.10.22	2022.10.22	SCALE: 1/1	X.XX ±0.10
REVISION:A					X° ±1°

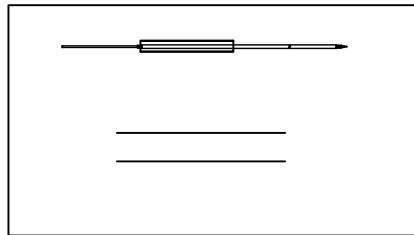
PACKING CRITERION

Date: 2022.10.22

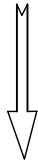
Page: 1 of 1

Part Number : 2.4GHz Antenna	Revision : A
Name: AN2400-TUB33BO	Customer : ALL

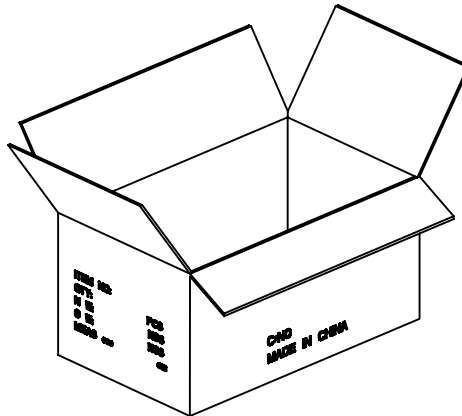
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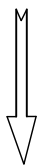
100pcs/ PE bag



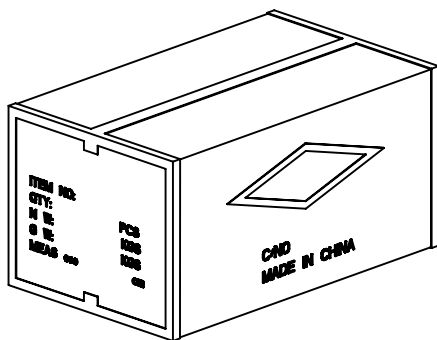
2.PACKING.



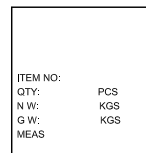
3000pcs/Carton



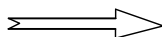
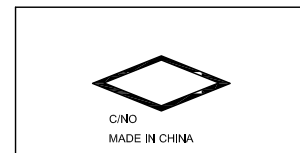
3. SEALING.



SIDE



FRONT



APPROVED BY: YCX

CHECKED BY: HC

DESIGNED BY: DWF