

Dongguan ZhongChi Electronic Technology Co.,Ltd Specification Acknowledgement

Customer: _____

Customer P/N: _____

Zhong Chi P/N: _____ ZCA2400-017W100-00X

Description _____ 2. 4G Antenna

ZhongchiChecked By:	Customer Approved By:

Product Number:ZCA2400-017W100-00X

Product Name: 2.4G Antenna

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Product Number:ZCA2400-017W100-00X
Product Name: 2.4G Antenna

1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400-2500 MHz
V.S.W.R.	<= 1.92
ReTurnLoss(dB)	-10 dB Max
Antenna Gain	3.27dBi
Polarization	Linear, Vertical
Impedance	50 ohm Nominal
Admitted Power	2 W
Radiation	Omni-directional
B. Material & Mechanical Characteristics	
Material of Plastic	ABS / PC
Cable Type	O.D. 1.13 MM
Connector Type	Mini Connector Au Plated 1代
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

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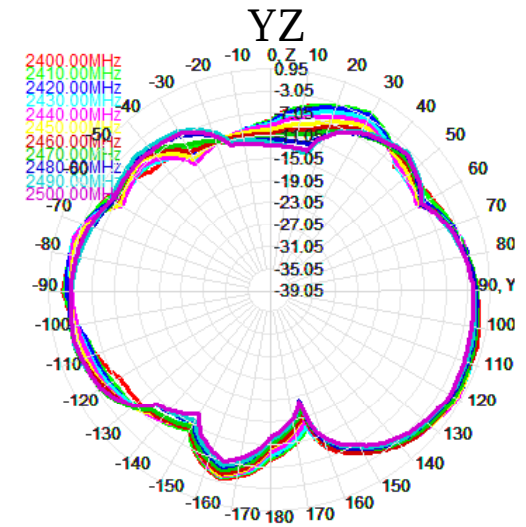
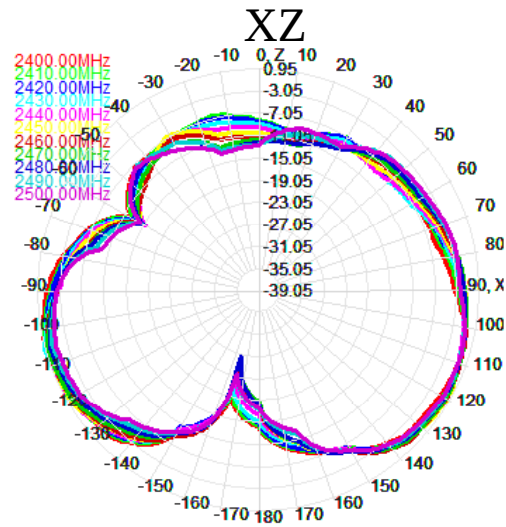
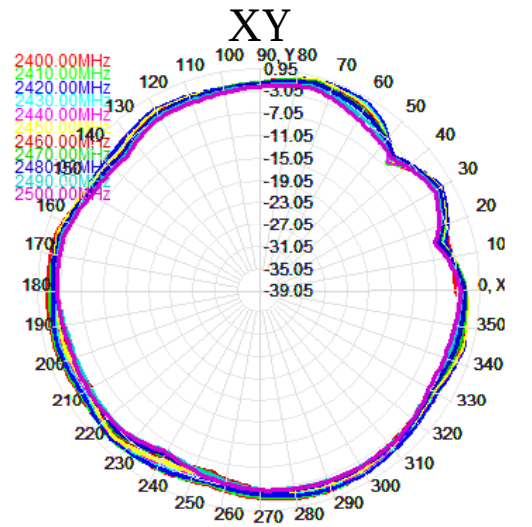
Product Name: 2.4G Antenna

M1	Vibration	MIL-STD-202G, 201A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.<= 5%
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: 80°C; Time: 48hours	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)



2D Radiation Pattern

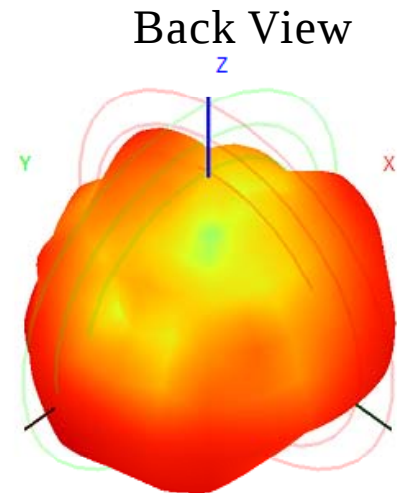
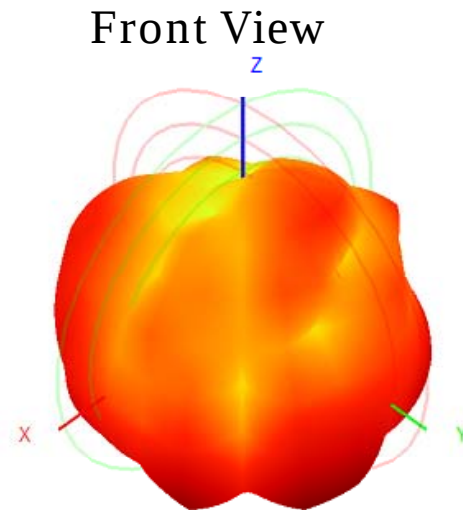
2G



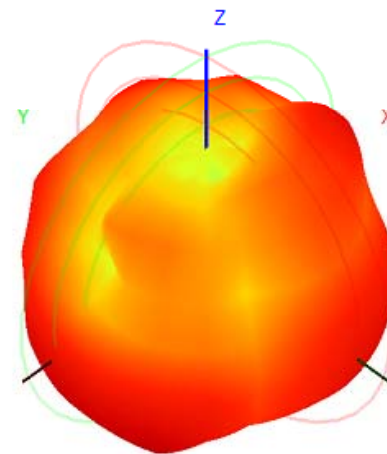
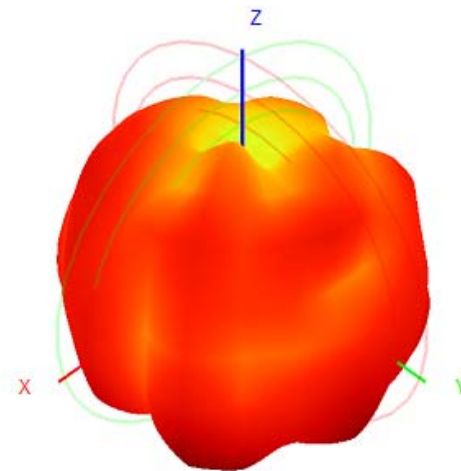
3D Radiation Pattern

2G

2400 MHz



2500 MHz



Results Summary

VSWR

Frequency (MHz)	2G
2400	1.8
2450	1.2
2500	1.1

Results Summary

2G Antennas

Frequency (MHz)	Peak gain(dBi)	Efficiency (%)
2400	3.27	48.54
2410	3.02	48.46
2420	2.84	47.58
2430	2.86	45.75
2440	2.88	44.86
2450	2.93	44.71
2460	2.61	43.39
2470	2.40	42.42
2480	2.06	39.98
2490	1.75	38.13
2500	1.40	36.13