



腾祥电子
TENGXIANG ELECTRONIC

Tengxiang Technology.Inc

Product Number: TX-AN2400-0301SM-B

Product Name: Antenna

Specification For Approval

Customer : MS _____

Customer P/N : / _____

Tengxiang P/N : TX-AN2400-0301SM-B _____

Description : Antenna _____

| Tengxiang Checked By: | Customer Approved By: |
|-----------------------|-----------------------|
| | |



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Tengxiang Technology.Inc

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<http://www.tenxiang.cn>



Product Number: TX-AN2400-0301SM-B

Product Name: Antenna

1. Specification

| Sample Photo | |
|--|--|
|  | |
| A. Electrical Characteristics | |
| Frequency | 2400 ~ 2500 MHz |
| S.W.R. | <= 2.0 |
| Antenna Gain | 3.0dBi |
| Polarization | Linear |
| Impedance | 50 Ohm |
| B. Material & Mechanical Characteristics | |
| Material of Radiator | CU |
| Material of Plastic | Body: TPE Hinge: ABS Holder: ABS |
| Cable Type | RG-178 |
| Connector Type | RP-SMA |
| Connector Pull Test | >= 5 Kg |
| Connector Torque Test | 300 ~ 1000 g.cm |
| C. Environmental | |
| Operation Temperature | - 40 °C ~ + 65 °C |
| Storage Temperature | - 40 °C ~ + 80 °C |



2. Characteristics and Reliability Test

| Test Items | | Test Condition and Procedure | Requirements |
|------------|----------------------|--|---|
| C1 | 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 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: 48 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: 48 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: 96 hours | After 2 Hours Recovery 1. No Visual Damage |

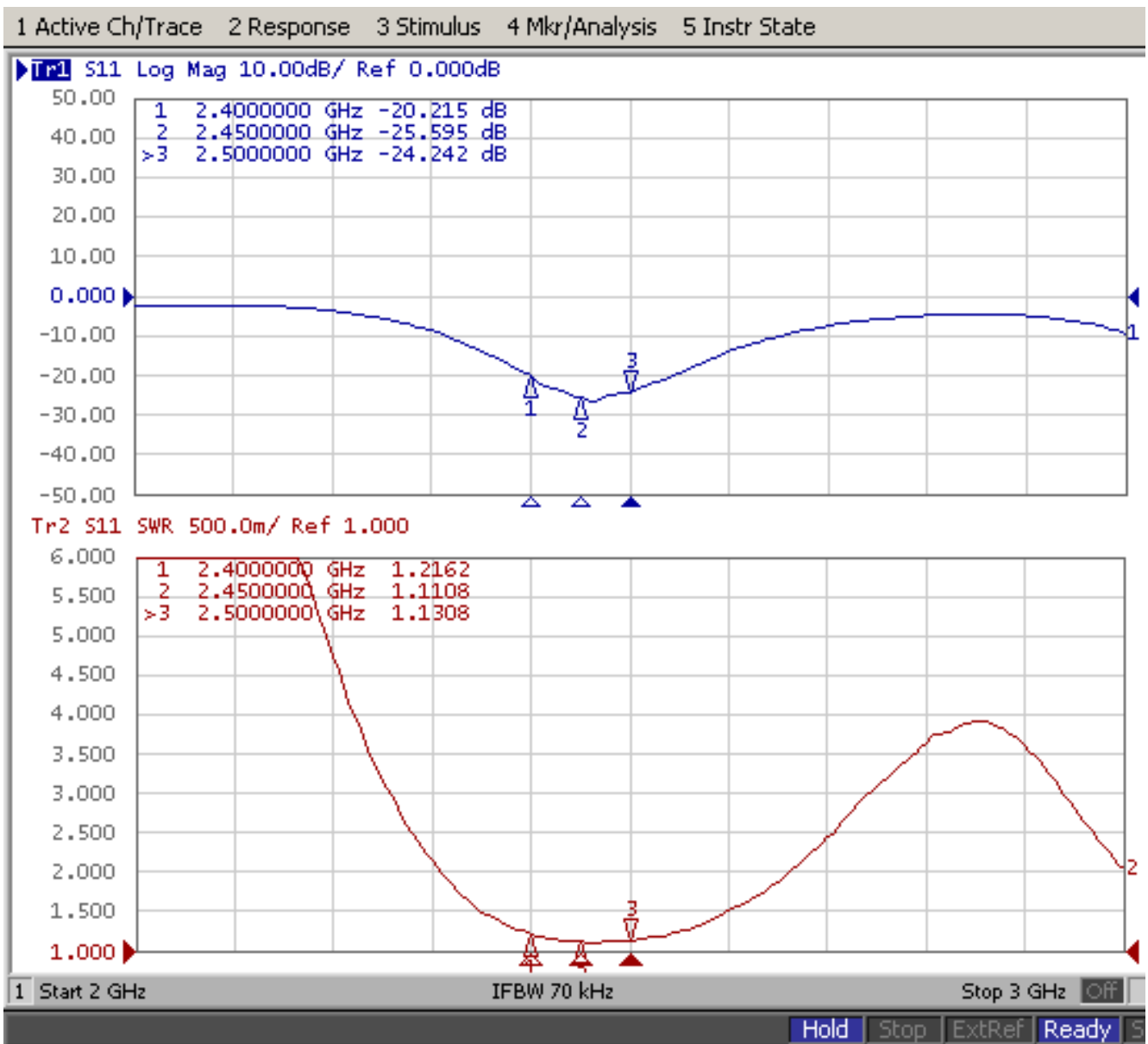


Product Number: TX-AN2400-0301SM-B

Product Name: Antenna

| | | | |
|----|------|--|----------------------------|
| | | | 2. Frequency Tol.<= 5% |
| R1 | RoHS | With Reference to IEC 62321:2008 with flow chart | Directive RoHS 2002/95/EC |
| R2 | PFOS | With Reference to USA EPA 3540C:1996 by LC/MS | Directive RoHS 2006/122/EC |
| R3 | PFOA | With Reference to USA EPA 3540C:1996 by LC/MS | Directive RoHS 2006/122/EC |

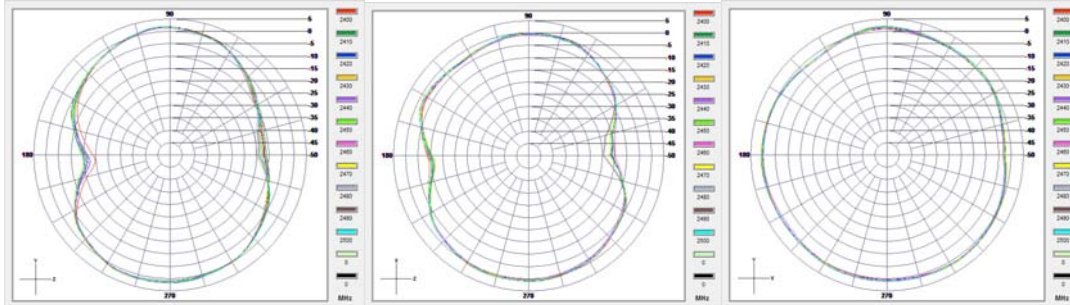
3. Antenna - S Parameter Test Data



Product Number: TX-AN2400-0301SM-B

Product Name: Antenna

4. Testing Equipment Specification

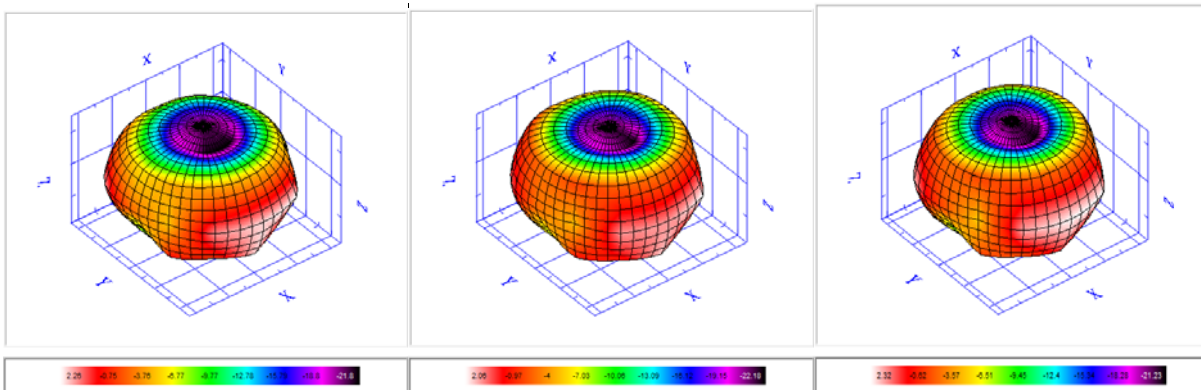


| | | | |
|-------------------------|--------|--------|--------|
| Frequency | 2400 | 2450 | 2500 |
| TRP (dBm) | -0.71 | -0.83 | -0.7 |
| Peak EIRP (dBm) | 2.32 | 2.06 | 2.26 |
| NHPRP +/- 45 (degree) | -0.86 | -0.93 | -0.81 |
| NHPRP +/- 30 (degree) | -1.11 | -1.27 | -1.19 |
| E-Theta Peak Gain (dBi) | -12.34 | -14.91 | -14.07 |
| E-Phi Peak Gain (dBi) | 2.31 | 2.03 | 2.25 |
| E-Total Peak Gain (dBi) | 2.32 | 2.06 | 2.26 |
| Directivity (dBi) | 3.03 | 2.89 | 2.95 |
| Efficiency (%) | 84.92 | 82.69 | 85.15 |

2500MHZ

2450MHZ

2400MHZ



4. Mechanical Drawing

See attached files

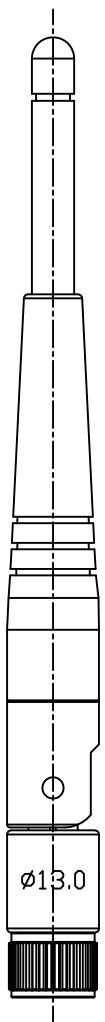
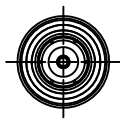
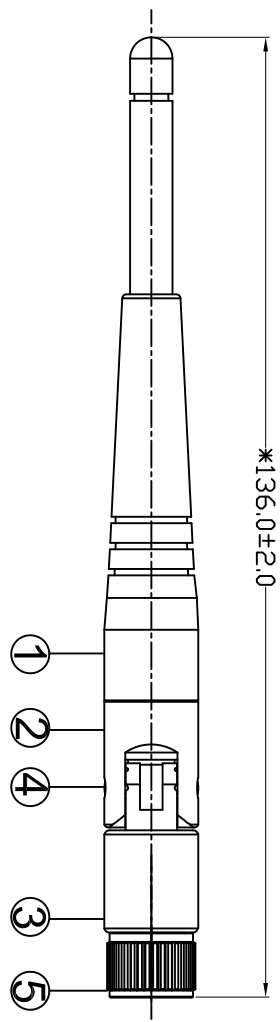
5. Material Description and RoHS Test Report

See attached files

RoHS

Compatible

| SIGN | DATE | DESCRIPTION | APPROVER |
|------|------|-------------|----------|
| △ | | | |
| △ | | | |
| △ | | | |



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

| | | | | | |
|-----|------------------|-------------|----------|-----------------|-----|
| 5 | SMAM194-CCT5AN19 | SMA Male | Cu | Zn Plated 120u" | 1 |
| 4 | AN03-514PB | Pin | POM | Black | 2 |
| 3 | AN03-T06B | Body-3 | ABS | Black | 1 |
| 2 | AN9201-02B | Body-2 | ABS | Black | 1 |
| 1 | AN03-03B | Body-1 | TPE | Black | 1 |
| NO. | Part Number | Description | Material | Finished | Qty |



dg tengxiang Technology Inc.

| | | | |
|-----------------------------|--------------------|--------------------------------------|--------------------|
| TITLE: 2.4GHz 3dBi Antenna | | CUSTOMER/P/N: TX-AN2400-0301SM-B.dwg | |
| PARTNO.: TX-AN2400-0301SM-B | | | |
| APP BY | CHK BY | RF BY | DES BY |
| HDP 2015.09.15 | TDNY 2015.09.15 | | HJHJ 2015.09.15 |
| UNITS: mm | | Tolerance | |
| SCALE: 1/1 | | X.X ±0.5 | |
| REVISION: A | | X.XX ±0.2 | |
| | | X ±1 | |

產品包裝規範

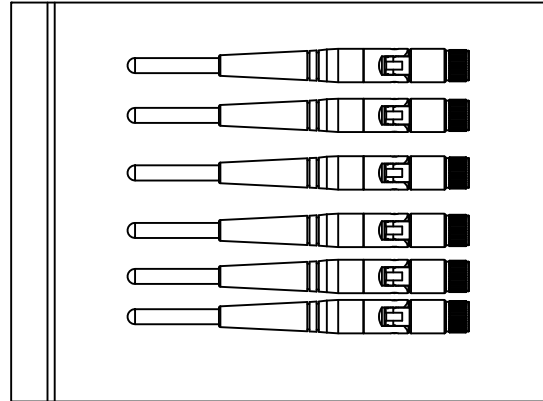
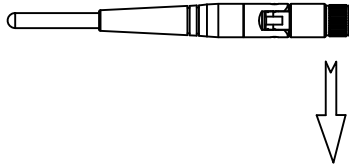
PACKING CRITERION

Date: 2015.9.15

Page: 1 of 1

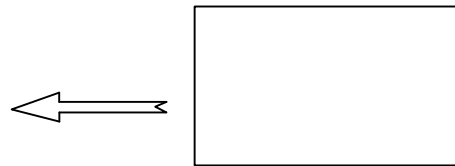
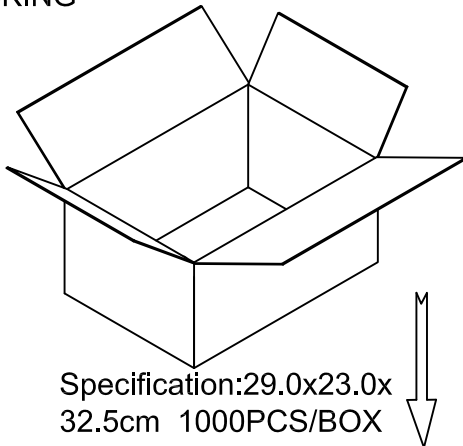
| | |
|---------------------------------|----------------|
| Part Number :TX-AN2400-0301SM-B | Revision : B |
| Name: 2.4G 3dBi Antenna | Customer : ALL |

1. Enter the bag ◦



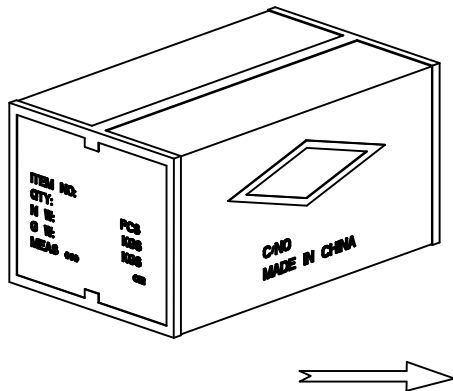
20PCS/ bag

2. PACKING ◦



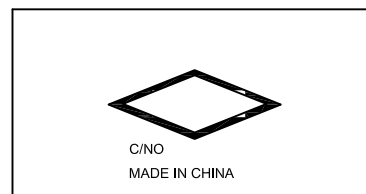
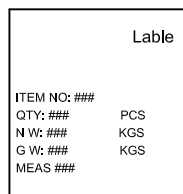
Cardboard :50pcs/BOX

3. SEALING ◦



SIDE

FRONT



APPROVED BY : _____ CHECKED BY : _____ DESIGNED BY : DCH