| DOC. | C-050501 | A NUTENNA - OPECATION | REV. NO | 0 |
|-------------|------------|-----------------------|------------|------|
| Issued Date | 2005-05-06 | ANTENNA SPECIFICATION | PAGE | 1/10 |

Product Name : 2.4GHz Band 1/2λ Sleeve Dipole Antenna

Model Name: <u>CWP-2400D-SMA(V)</u>

Contents

- 1. Descriptions
- 2. Application
- 3. Antenna Shape
- 4. Electrical Performance
- 5. Mechanical Performance
- 6. Environmental Performance
- 7. Attachment

| Release | | | | |
|---------|------------|---------|---------|----------|
| | Written | Checked | Checked | Approved |
| Sign. | J.R.Park | | | NH |
| Date | 2005-05-06 | | | |

| Model | CWP-2400D- | | | Docu-NO | C-050501 |
|--------------------------------|------------------|-----------------|--|---------------|---------------|
| Code NO | SMA(V) | ANTENNA | SPECIFICATION | Rev-NO | 0 |
| Customer | | | | PAGE | 2/10 |
| This consi condu comn | sting of the 1/2 | wavelength whip | Sleeve Dipole Antenro elements at the front pools on the feed to connected | olane and a 1 | /4 wavelength |
| | | Fixed □ Mob | oile □ Out Door ■ | In Door □ | Others |
| 3. A | ntenna Shape | | | | |
| | See attache | d | | | |
| 4. E | ectrical Perform | ance | | | |
| 4.1 | Frequency l | _ | 00 MHz ~ 2480 MHz | | |
| 4.2 | Impedance | No | ominal Value 50 O | hm | |
| 4.3 | V.S.W.R | I | ess than 1:2.0 | | |
| 4.4 | Antenna Radi | | Omni-Directional | | |
| 4.5 | Antenna Pola | | Vertical | | |

| Model | CWP-2400D- SMA(V) | | Docu-NO | C-050501 |
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| Customer | | | PAGE | 3/10 |

4.6 Antenna Gain (dBi)

2.0 dB

5. Mechanical Performance

5.1 Element

Material Cu

Insulator FR-4 / 0.8T

Electrical Length 1/2 Wavelength

5.2 Connector

Type SMA-male Finish Ni-plating

5.3 Base

Type 90 deg. Angled insert molding

Material ABS

Finish Dark-Blue

5.4 Sleeve

Material ABS

Finish Dark-Blue

5.5 Antenna total length

See Attached

5.6 Antenna Weight

7.5 gram

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6. Environmental Resistance Performance

6.1 Operating Temperature

6.2 Storage Temperature

6.3 Humidity

95% RH / 50°C

6.4 Sleeve Tensile strength

Minimum Value : F = 5 Kgf

Demands : No visual change and the fitting and mold shall be

unchanged mechanically during the test. The antenna shall satisfy the electrical data.

.

6.5 Drop

Height : 0.7 mAngle : 45° Set Weight : 200 g

Demands : No visual change and the fitting and mold shall be

unchanged mechanically during the test.

The antenna shall satisfy the electrical data.

| Model | CWP-2400D- SMA(V) | | | Docu-NO | C-050501 |
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7. Attached

- 1. Antenna Specifications Drawing
- 2. Antenna Performance Data
 - -. V.S.W.R
 - -. Impedance
 - -. Radiation Pattern / Gain

| Model | CWP-2400D- SMA(V) | | | Do | u-N | O | C | C-05050 |
|--------------------|----------------------|--------------------|--------------------|--|------------|-------------------|--|--------------------|
| Code NO | · / | ANTENNA | SPECIFICATION | | Rev-NO | | | 0 |
| Customer | | | | P. | AGE | E. | | 6/10 |
| [Attached] | 1. Antenna Spec | cifications Drawin | ıg | ш | ı | | ш | |
| Check | | | | | | Unit | mm d-date | |
| 8 Sign | | | | Z | | Scale | N/S mm Approved-date | |
| Date | | | | : 2.4~2.482GHz ohm Nominal öl | | nnoted | | |
| 0.0 | | | | 2.4~2 ohm N ⁵F | | Tolerance Unnoted | x=U.Z x.x=U.1 x.xx=0.05 Designed Checked | λ _Γ γ. |
| 7 | | | | ange 50 2.0 01 | ā | - | | _ |
| _ | | | | Frequency Range: 2.4~2.482GF Impedance: 50 ohm Nominal V.S.W.R: 112.0 018h | | | 0001 Date | 051101 |
| 6 Revision note | 6.01 | 191 | | 1. Freq 2. Impe 3. V.S.V | | Rev.No | 0 | , ss , |
| 6 Revis | | | | | • | | DOD—SMA(V) | cwp2400dsmav-ass'y |
| - | | | | [NOTE] | | Title | CWP-2400D-SMA(V) | cwp2400 |
| S 7 | | 81.5 | | _ | | | | Remarks |
| ~ | 9.21 | | 1 | | | 1 | FR-4 | Rem |
| | | | _ 0 | | | Ni-plating | | Finish/Color |
| TECH | | 2.7 2.8 | - G.8 - | | ABS | BSBM | Cu ABS | Material 2 |
| CHINWOOTECH | | | | | Base | Connector | Element Sleeve | Title/Name |
| | | | T. | | 4 | м (| 7 - | <u>o</u> Z |

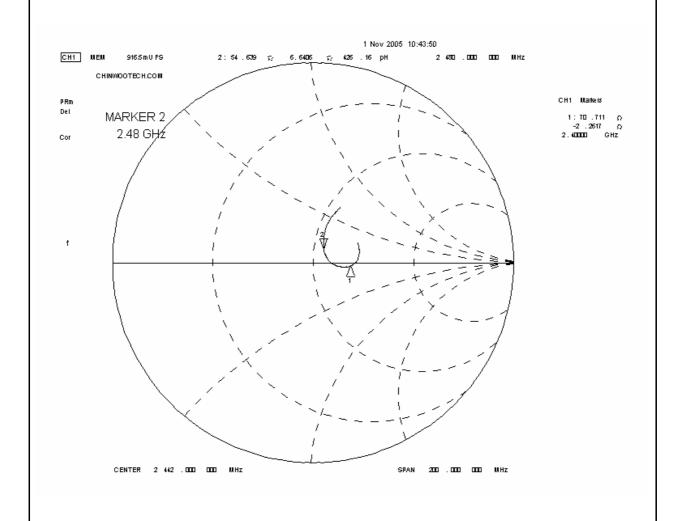
| Model | CWP-2400D- SMA(V) | | Docu-NO | C-050501 |
|----------|----------------------|-----------------------|---------|----------|
| Code NO | | ANTENNA SPECIFICATION | Rev-NO | 0 |
| Customer | | | PAGE | 7/10 |

2. Antenna Performance Data

Test Equipment : HP-8753ES

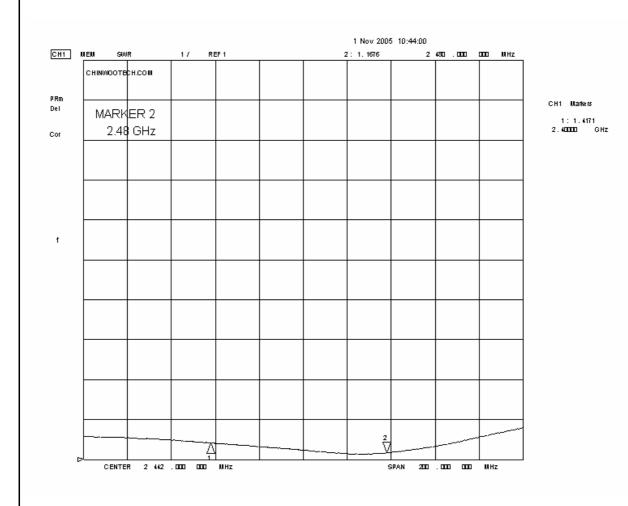
SET (PCB ver.) : BS-T100V v4.D

-. Impedance



| Model | CWP-2400D- SMA(V) | | | Docu-NO | C-050501 |
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| Customer | | | | PAGE | 8/10 |

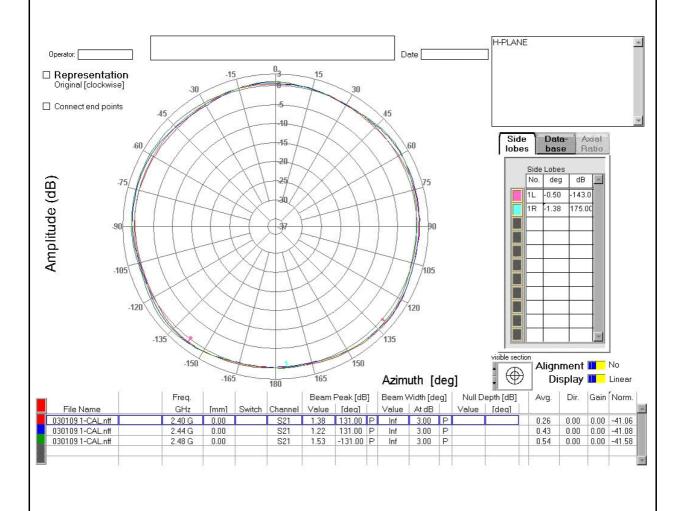
-. V.S.W.R



| Model | CWP-2400D- SMA(V) | | | Docu-NO | C-050501 |
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-. RADIATION PATTERN / GAIN

H-PLANE



| Model | CWP-240 SMA(V | | | | | | | | | Docu-NO | C-05 | 0501 |
|--|------------------|----------------------------|----------------------|-----------------------|----------------------|-----------------|---------|--|--------|----------------------|----------------------|----------------------------|
| Code NO | 21.11.2(| <i></i> | AN | TENN. | A S | PEC | IFICA | ATIO | N | Rev-NO | (|) |
| Customer | | | | | | | | | | PAGE | 10/ | 10 |
| | E | -PLA | NE | | | | | | | | | |
| Operator: Representa Original [clockv | | -30 | -15 | 0 ₃ 8 5 40 | 15 | 30 | 45 |) ate | | | Data Axial | |
| Amplitude (dB) | .105 .120 | | | 30 | | | 135 | 75 105 120 | | Side I | obes Ratio | |
| File Name | | -150 Freq. GHz | -165 | 180 ch Channel | | 150 Peak [dB | | nuth [c Width [de At dB | 7.0 | ull Depth [dB] Av | ignment Display Gain | No Linear Norm. |
| 030109 3-CAL.n 030109 3-CAL.n 030109 3-CAL.n | ff | 2.40 G 2.44 G 2.48 G | 0.00 0.00 0.00 | S21 S21 S21 | 1.15 1.34 1.38 | -93.00 79.00 | P 78.36 | 3.00 3.00 3.00 | P P | -3.4 -3.3 -3.8 | 34 0.00 0.00 | -41.06 -41.08 -41.58 |