

TO: CNSBG
SPECIFICATION FOR APPROVAL

CUSTOMER DWG. NO./PART NO.: N/A REV.:

DESCRIPTION: 802.11b/g NONDETACHABLE BLACK ANTENNA WITHOUT MHF CONN

FOXCONN PART. NO.: FX01K81-0G-1F REV.: X1

ATTACHMENTS:

- 1. CUSTOMER DRAWING 2
- 2. FIRST ARTICLE INSPECTION REPORT 3
- 3. ANTENNA SPEC 4
- 4. ANTENNA TEST REPORT 5~7
- 5. COAXIAL CABLE SPEC 8~12
- 6. PACKAGE 13~16

PLEASE RETURN TO FOXCONN ONE COPY OF
COVER PAGE WITH YOUR APPROVED SIGNATURES.

APPROVED SIGNATURES		
APPROVED BY	CHECKED BY	IN CHARGE



Hon Hai Precision Industry Co., Ltd.

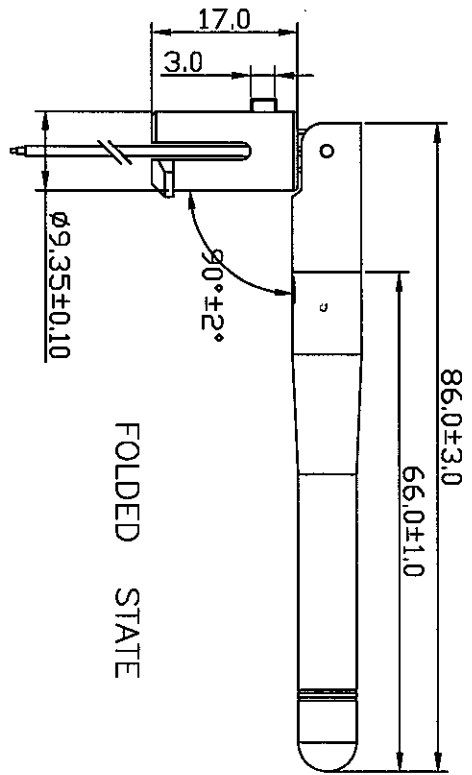
2. TZU YU ST., TU-CHEN, TAIPEI HSIEN, 23606,
TAIWAN, R.O.C
TEL: (02) 22683466
TAIWAN, R.O.C
FAX: (02) 22686272 (02) 22686205
TLX: 32349 FOXCONNHH
UNIFORM INVOICE NUMBER: 04541302

Approved by: Sam Chen Checked by: C.C. Wang Prepared by: Y.T.He

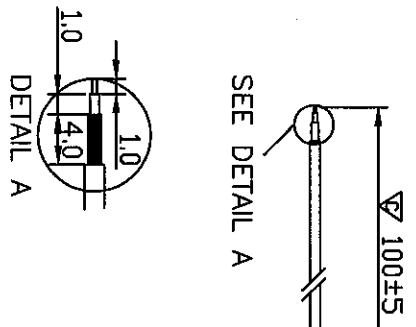
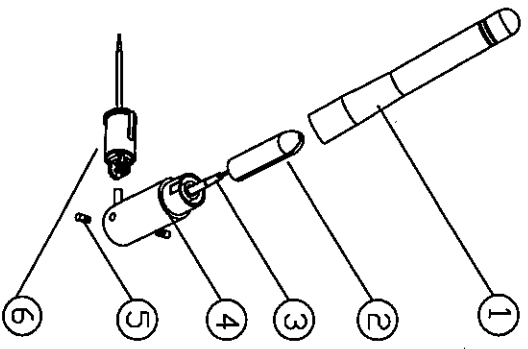
File NO.: TBD Revision NO.: X1 Date: 7/5'05

REV.	ECN. NO.	APPD.
X1		

- NOTES:
1. ALL DIMENSIONS SHALL BE INTERPRETED PER ANSI Y14.5M-1982.
 2. DIMENSIONS MARKED ∇ SHALL BE CHECKED.
 3. COLOR: BLACK COLOR TYPE: Janton M2014 COLOR TOLERANCE ΔE VALUE: 2.0 MAX.
 4. TEST SPEC:
 - 4.1 ANTENNA TEST: OPEN/SHORT.
 5. HARMFUL MATERIAL CONTROL PLEASE FOLLOW DDC, ND, EPII2,
 6. THE PROCESS MUST BE LEAD FREE



FOLDED STATE



STRAIGHT STATE

ITEM	DESCRIPTION	VENDOR	QTY	DESCRIPTION
⑥	Base HSG	FOXCONN	1PCS	PC/ABS(FOXCONN, P/N: 901-0701-022) BLACK
⑤	SPRING	FOXCONN	2PCS	BLACK NI (FOXCONN, P/N: 023-1001-1098)
④	LINK HSG	FOXCONN	1PCS	POM(FOXCONN, P/N: 901-0101-027) BLACK
③	COAXIAL CABLE	FOXCONN	A/R	32AWG, GRAY(FOXCONN, P/N: 703-3208-211)
②	SHELL	FOXCONN	1PCS	MATERIAL: SPCC-SD(FOXCONN, P/N: 023-0001-803)
①	COVER	FOXCONN	1PCS	TPEE(FOXCONN, P/N: 901-0109-030) BLACK

X±	X±
.X±	.X±
.XX±	.XX±
.XXX±	.XXX±

UNITS	mm
MATL.	
FINISH	

NAME (INTENDED USE)	CNSBG
PART NO. (INTENDED USE)	FX01K81-0G-1F
APPR:	Chen 7/5/2005
CHKD:	C.C. Wang 7/5/2005
DR:	Y.T.H. 7/5/2005

TITLE:	BLACK DIPOLE ANTENNA
DWG NO.:	TBD
SCALE	N/A
SHEET	1/1
REV.	X1

FOXCONN
HON HAI PRECISION IND. CO., LTD.
TAIPEI, TAIWAN, R.O.C.

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SPECIFICATION

1. Description:

The antenna is a swivel and $1/4 \lambda$ dipole antenna, use for the ISM Band Of 2.4~2.5GHz .

2. Electrical properties:

- 2-1. Frequency Range.....2.4~2.5GHz
- 2-2. Impedance.....50 ohms nominal
- 2-3. SWR.....<2.0
- 2-4. Return Loss..... <-10 dBi
- 2-5. Peak Gain.....2.0 dBi
- 2-6. Polarization.....Vertical
- 2-7. Electrical Wavelength..... $1/4 \lambda$ Dipole
- 2-8. Maximum Input Power.....1 W
- 2-9. Internal Coax. Cable Length And Max Attenuation.....183mm and 0.6dB@2.4~2.5GHz

3. Mechanical Properties:

- 3-1. Color Type..... Janton M2014 Black
- 3-2. Maximum Color Tolerance Delta E.....2.0
- 3-3. Cable.....32AWG Coaxial Cable
- 3-4. Antenna Cover Material.....TPEE
- 3-5. Mechanical Action.....Swivel 0—90 degrees
- 3-6. Operation Temperature.....-20°C~+65°C
- 3-7. Storage Temperature.....-30°C~+75°C
- 3-8. Weight.....6g



HONG HAI PRECISION INDUSTRY CO.,LTD.
TAIPEI TAIWAN R.O.C.

APPD.: Sam Chen 7/5/2005

TITLE: DIPOLE ANTENNA

CHKD.: Darid 7/5/2005

PROD. SERIS.: FX01K81-0G-1F

DWG. NO.: TBD

PREP.: Y.T.He 7/5/2005

REV.:X1

SHEET: 1 OF 1

X1		
REV.	ECN.NO.	APPD

● Revision History

Rev.	Revision Description	Prepare By	Date
X01	Antenna initial design	Sam Huang	2005/2/2

● Antenna Description

Description
1. External dipole antenna

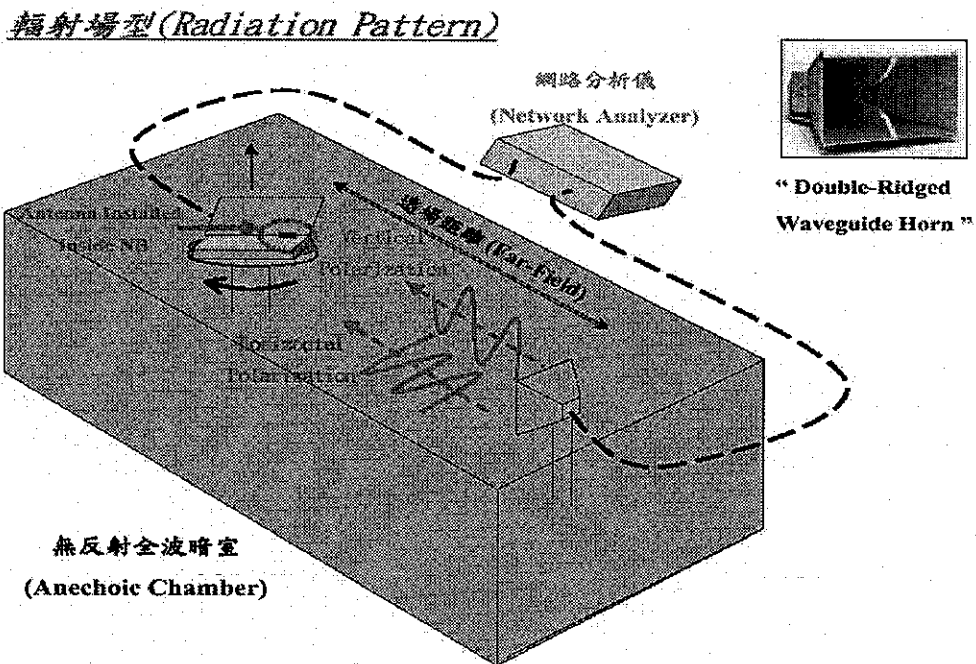
Test Item:

1. VSWR (2~3 GHz)
2. Gain (2.40 ~ 2.50 GHz)

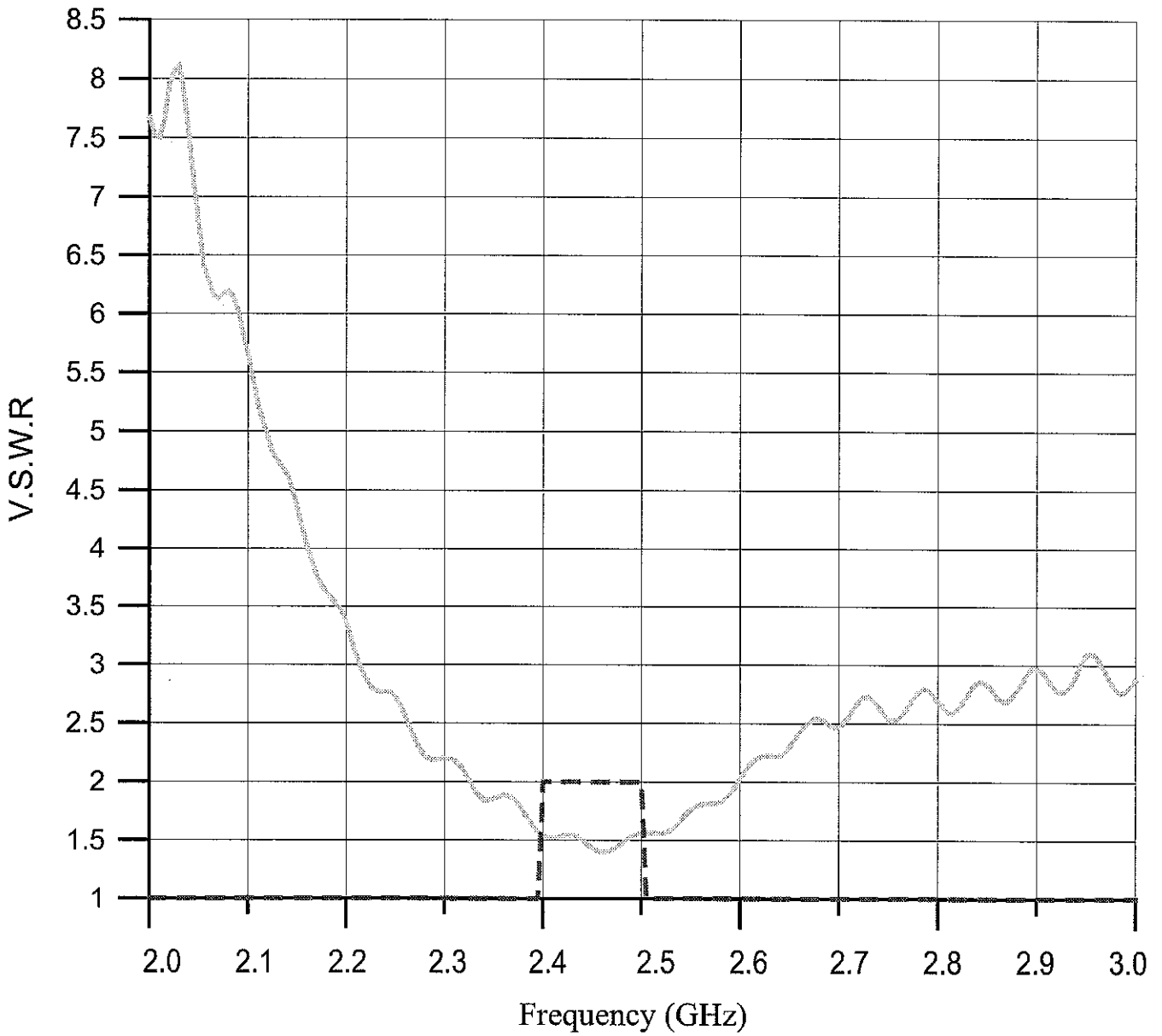
Equipment:

1. RF Network Analyzer, HP8720D
2. Anechoic Chamber
3. Double-Ridged Waveguide Horn
4. Rotational Platform with step motor

Antenna Gain and Radiation Pattern Measuring Structure Diagram

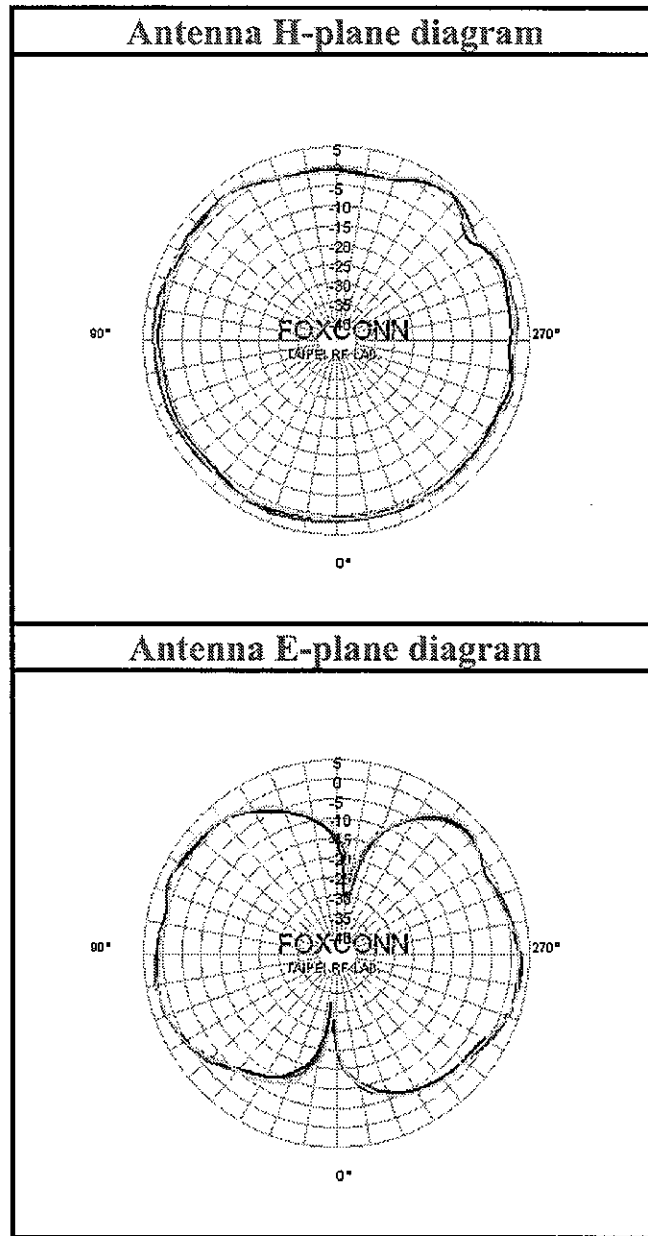


1.1 Antenna VSWR @ 2.0 ~ 3.0 GHz



Marker Point (GHz)	2.40~2.50
Antenna VSWR Value	<2

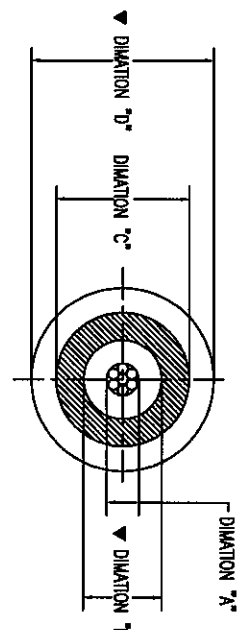
2.1 Antenna Radiation Pattern Diagram @ 2.40 ~ 2.50GHz



Antenna Gain

Freq (GHz)	2.40~2.50
Gain(dBi)	2

AWG	DC RESISTANCE (ohms/km)	COMPOSITION (STRANDS/MM)	DIM "A" (REF.)	DIM "B"	DIM "C" (REF.)	DIM "D"	PATER NO.
30	MAX. 320	7/0.10	0.305	0.826±0.025	1.358	1.816±0.038	703-30NN-211
32	MAX. 584	7/0.08	0.24	0.68 ^{+0.04} _{-0.02}	0.93	1.13 ^{+0.06} _{-0.05}	703-32NN-211
36	MAX. 1217	7/0.05	0.15	0.44±0.05	0.65	0.84±0.05	703-36NN-211



REV.	EQN. NO.	APPD.
A	IC016491	Allen Cheng 12/11/01
B	IC023064	Allen Cheng 4/23/02
C	IC024343	Allen Cheng 6/9/02
D	IC029148	Allen Cheng 10/24/02
E	BC0350986	Allen Cheng 07/07/03
F	BC0362256	Allen Cheng 6/8/03
G	BC0370184	Allen Cheng

ELECTRICAL		50±5		ohms	
IMPEDANCE		30.5		NOM. pf/ft	
CAPACITANCE		<1.5		AT 0.5GHZ~6GHZ	
VSWR(NOM.)		0.5		1 2 3 4 5 6	
FREQUENCY (GHZ)		3.1		4.6 6.8 8.6 10.5 12 13.5	
ATTENUATION (dB/10ft)/NOM.		3.8		5.5 8.2 10.3 12 13.6 15.2	
ATTENUATION (dB/10ft)/NOM.		6.1		8.4 12.5 15.8 18 20 22.3	
				703-30NN-211	
				703-32NN-211	
				703-36NN-211	

MECHANICAL	
ELONGATION:	MIN 200%
ELON. RETEN.:	MIN 75% 232C/168H
TENSILE STRENGTH:	MIN 2500PSI
T.E. RETENTION:	MIN 75%
HEAT SHOCK:	232C NO CRACK
COLD BEND:	-20C NO CRACK
DEFORMATION:	232C 50%
FLAME TEST:	VM-1
RATINGS	
TEMPERATURE:	200C/105C
VOLTAGE:	30V
UL STYLE:	1894/1943

NOTES
 1.MATERIAL
 CONDUCTOR:SILVER PLATED STRANDED COPPER
 PRIMARY INSULATION:FEP
 SHIELD: SILVER PLATED BRAID (SEE SOP)
 JACKET:FEP
 2.PRIMARY INSULATION CONCENTRICITY >= 90%
 3.BRAIDING COVERAGE TO BE 90% MIN.

- 4.NN: JACKET COLOR CODE
 00--BLACK 01--BROWN 02--RED 03--ORANGE 04--YELLOW
 05--GREEN 06--BLUE 07--PURPLE 08--GRAY 09--WHITE
 10--CLEAR 18--LIGHT-GRAY 99--NATURAL
 5.DIMENSIONS WITH ▲ ARE TO BE INSPECTED
 6.SPARK TEST AT 0.5 KVAC
 7.DIELECTRIC STRENGTH: 0.5 KVAC/MIN.
 8.JACKET CONCENTRICITY >=80%.
 10.PART NO.:703-AA NN-211
 AA---CONDUCTION AWG
 FOR EXAMPLE:
 703-3010-211
 30 AWG SILVER PLATED STRANDED COPPER
 CLEAR COLOR FEP FOR TEFLON

備註:
 本產品制程之原物料零件必須符合IPL2環境管理物質規定
 Harmful material control please follow Doc. No. "EP112"

X.±	X.±	UNITS	MM	NAME(INTENDED USE)	TITLE:
.X±	.X±	MATL	SEE BOM	COAXIAL CABLE	RF CABLE
.XX±	.XX±	FINISH		703-AA NN-211	
.XXX±	.XXX±				
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				SCALE	SHEET 1/1
				REV.	G