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Product Number: DF2400-1701GNF

Product Name: Antenna



## 1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
S.W.R.	$\leq 1.5$
Antenna Gain	17 dBi
Isolation	45 dB
Polarization	Linear / +45 deg and -45 deg
Front-to-Back Ratio	25 dB
Vertical HPBW	9 deg
Horizontal HPBW	90 deg
Electrical Down-tilt	$< 10$ deg
Impedance	50 Ohm
Maximum Input Power	500 ~1000 Watt
B. Material & Mechanical Characteristics	
Material of Radiator	Copper or TBD
Material of Plastic	PC or TBD
Connector Type	N type- Female
Connector Pull Test	$\geq 20$ Kg
Weight	20 Kg or TBD
Dimension	TBD
Waterproof	IPx6 or TBD
Wind Load	At 93 Miles / Hour (or 150KM / Hours) Front/side/rear: 850N / 350N / 900N
Wind Survival Rating	120 Miles / Hour (or 200 KM / Hour)
C. Environmental	
Operation Temperature	- 30 °C ~ + 85 °C
Storage Temperature	- 30 °C ~ + 85 °C
Antenna Color Storage life	$< 2$ Year

Product Number: DF2400-1701GNF

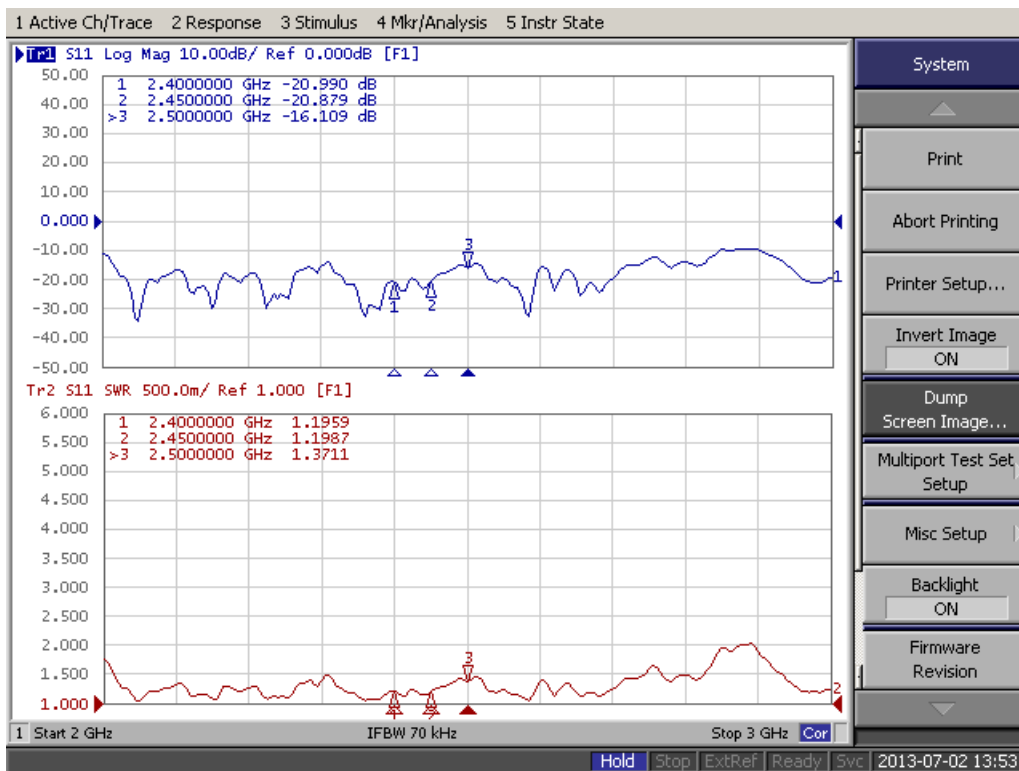
Product Name: Antenna



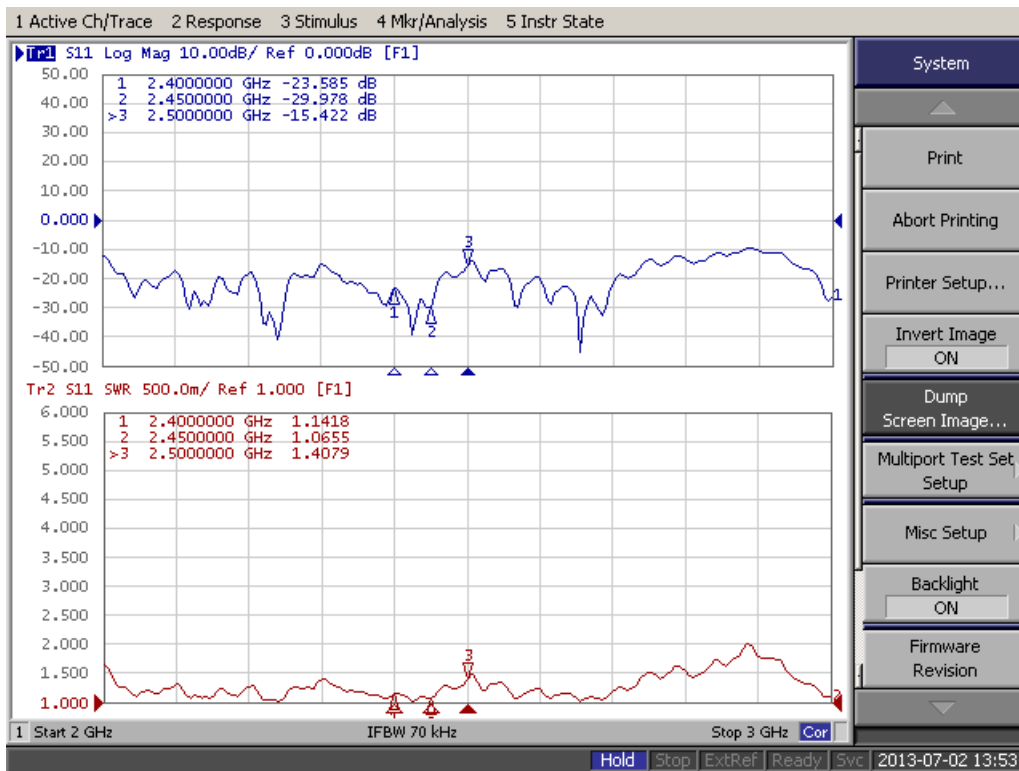
## 2. Characteristics and Reliability Test

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	GB / T2423 . 48-1997 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.<= 5%
M2	Terminal-Pull Test	Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M3	Terminal-Torque Test	Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M4	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	GB / T 2423 . 17- 93 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	GB / T 2423 . 4 - 93 Temp: 80°C / 12 H; -40°C / 12H RH: >= 90%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	GB / T 2423 . 22 - 87 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.)	GB /T 2423 . 2 - 89 Temp: 80°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 2011/65/EU
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



Port-Horizontal



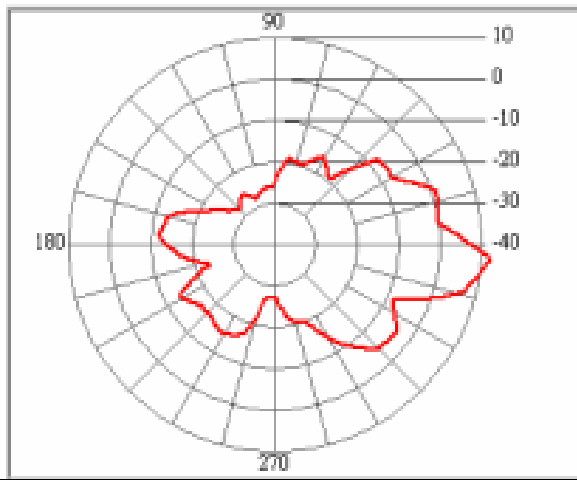
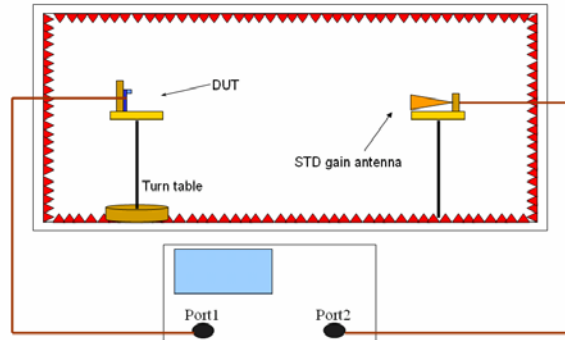
Port-Vertical

#### 4. Antenna - Radiation Pattern Test Data

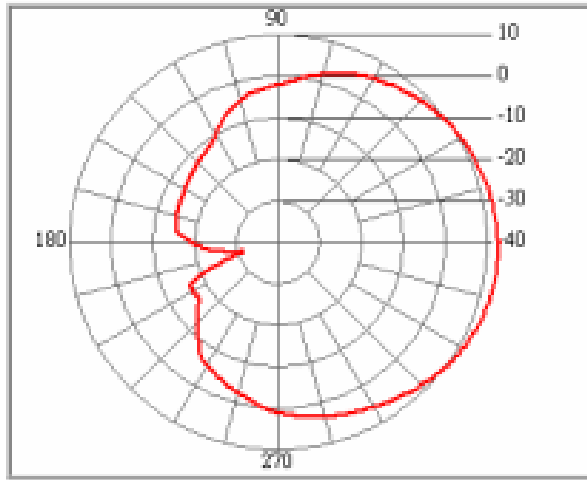
Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m

Quiet Zone: 600mm @ 1 GHz / Isolation: >100dB @ 1 MHz ~ 10 GHz

Testing Equipment: Agilent 5071B / 0.7 ~ 6.0 GHz for Gain Calibration Double Ridged Horn Antenna

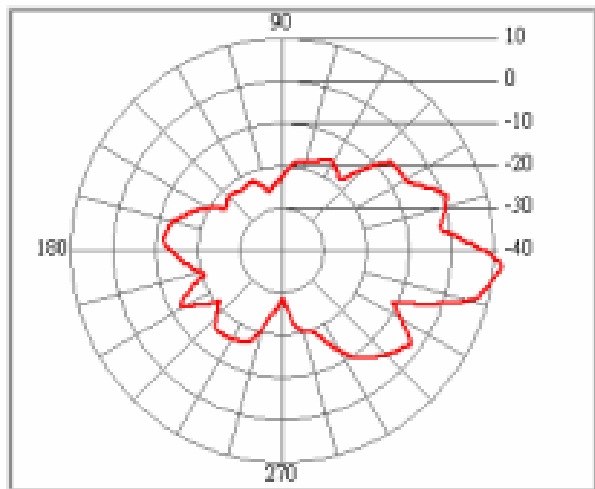


E-Plane @2450MHz

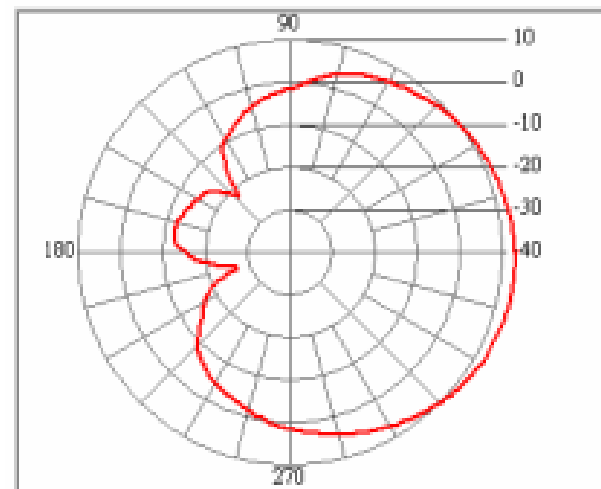


H-Plane @2450MHz

Port- Horizontal



E-Plane @2450MHz



H-Plane @2450MHz

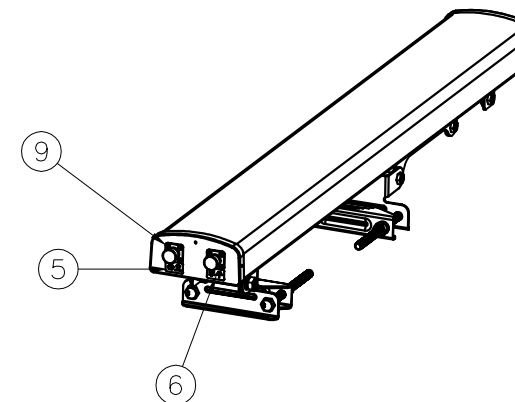
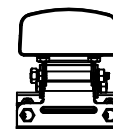
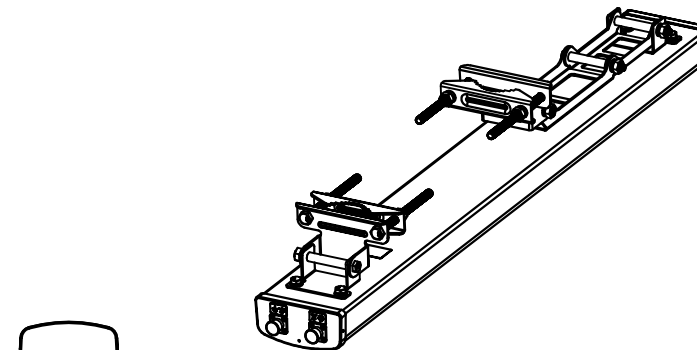
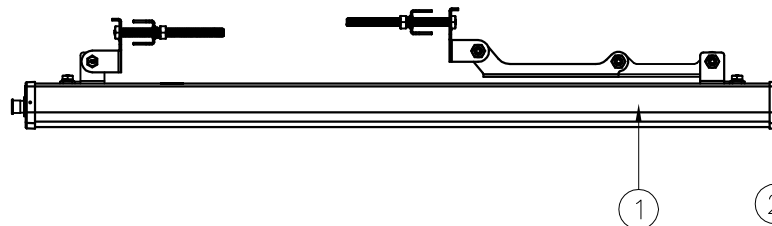
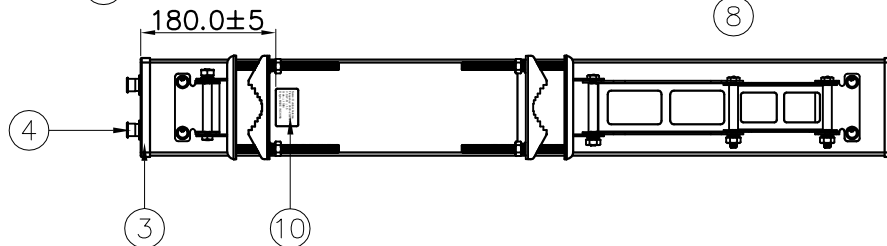
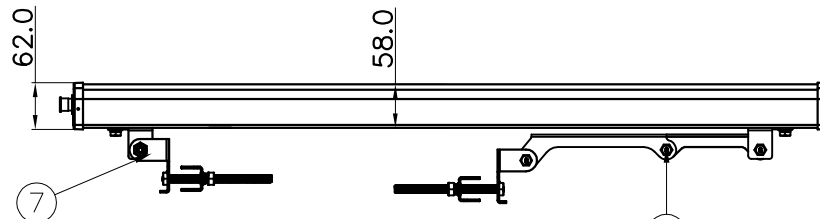
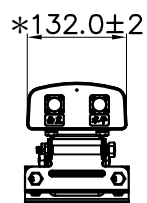
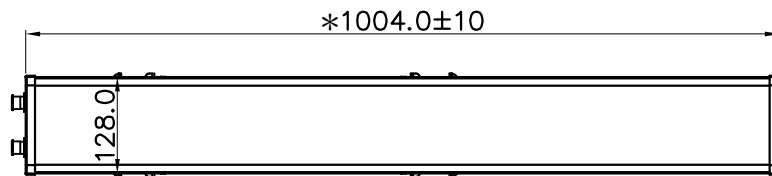
Port- Vertical

# RoHS

## Compatible



SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



Note:

1. Mark \* is important dimension; "CpK "Identify for process control (CpK ≥ 1.33).
2. Tolerance: Unmarked tolerance refer to the standard tolerance please.

No.	Part Number	Name	Material	Finish	Qty
10	LABEL-DF17-N01	Label		50*30mm	
9	CS34-M3-980N	Screw	Fe	M3*0.5mm Ni Plating	16
8	ASM-DF17-T01	Bracket	Q235	Zn Plating	1
7	ASM-DF17-B01	Bracket	Q235	Zn Plating	1
6	LABEL-DF17-H01	Label		30*15mm	1
5	LABEL-DF17-V01	Label		30*15mm	1
4	00207-CN8FNANT	N Female	Cu	Ni Plating	2
3	COV-DF17-02PG	Bottom Cover	ABS	Gray	1
2	COV-DF17-01PG	Top Cover	ABS	Gray	1
1	BODY-DF17-01PG	Body	PVC	Gray	1

Invax System Group.

# Cortec

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TITLE: 2.4GHz-17dBi Outdoor Antenna

PART NO.: DF2400-1701GNF

CUSTOMER P/N: /

APP BY	CHK BY	RF BY	DES BY	UNITS: mm	Tolerance
Grant	Jack	SiFei	Seagold	SCALE: 1/15	X.X ±1.0
2014/01/09	2014/01/09	2014/01/09	2014/01/09	REVISION: A	X.XX ±0.5
					X° ±1