納 入 仕 様 書

iAN1398-200

IDY Copyright © IDY Corporation, All Rights Reserved

改版履歴

版数	日付	承認者	改版者	改版内容
1.0	2017.12.08	H.Nakajima	T.Masaki	First edition issued
1.1	2017.12.19	H.Nakajima	T.Masaki	1)Added the Specification for Band 3/9/11 2)Added the Specification for Maximum Peak Gain 3)Added the Radiation Pattern Test Data for several frequencies
1.2	2018.02.26	H.Nakajima	T.Masaki	1)Added the Specification for Band 39
1.3	2022.09.16	H.Nakajima	T.Masaki	1)Added “Chamber Setup and Angle Definition” 2)Updated format
1.4	2024.02.07	H.Nakajima	T.Masaki	Changed IDY address

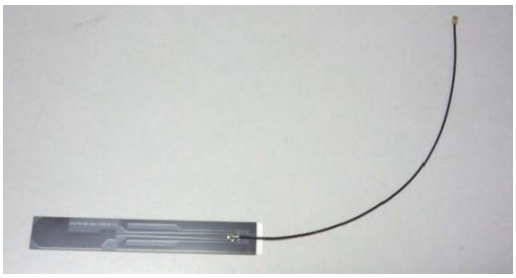
IDY Copyright © IDY Corporation, All Rights Reserved

■ 適用

本仕様書は、株式会社IDY（以下、「IDY」という）が供給する 3G/LTE/WiMAX および WiMAX2+向けアンテナ iAN1398-200 の納入仕様書である。

■ 仕様

1. 型名　　iAN1398-200 ： アンテナ本体のみ
2. 用途　　3G/LTE/WiMAX および WiMAX2+通信モジュールに接続し使用される。
3. 電気特性

Sample Photo	
	
Frequency	**815 ~ 960 MHz** **1880~2170 MHz** **1427.9~1510.9 MHz** **1710~1784.9 MHz**
V.S.W.R.	**<= 3.0 @ 815~960 MHz** **<= 3.0 @ 1880~2170 MHz** **<= 2.0 @ 1427.9~1510.9 MHz** **<= 2.0 @ 1710~1784.9 MHz** **Test data from the model test**
PeakGain	**-0.6 dBi @ 815~960 MHz (≦+3.0)** **2.3 dBi @ 1880~2170 MHz (≦+3.0)** **2.0 dBi @ 1427.9~1510.9 MHz (≦+3.0)** **2.4 dBi @ 1710~1784.9 MHz (≦+3.0)**
Efficiency (%)	**36% @ 815~960 MHz** **47% @ 1880~2170 MHz** **42% @ 1427.9~1510.9 MHz** **40% @ 1710~1784.9 MHz**
Polarization	**Linear**
Impedance	**50 Ohm**

IDY Copyright © IDY Corporation, All Rights Reserved

4. 使用部材

Material of Radiator	PCB
Cable Type	O.D. 1.13 mm
Connector Type	Mini Connector

5. 環境性能

Operation Temperature	- 40 ˚C ~ + 65 ˚C
Storage Temperature	- 40 ˚C ~ + 80 ˚C

6. 信頼性試験

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
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	Random Drop	GB / T2423.8-1995 Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.≤5%
M3	Solderability	GB / T2423.28-82 Solder iron: 260±5°C;Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Terminal-Torque Test	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

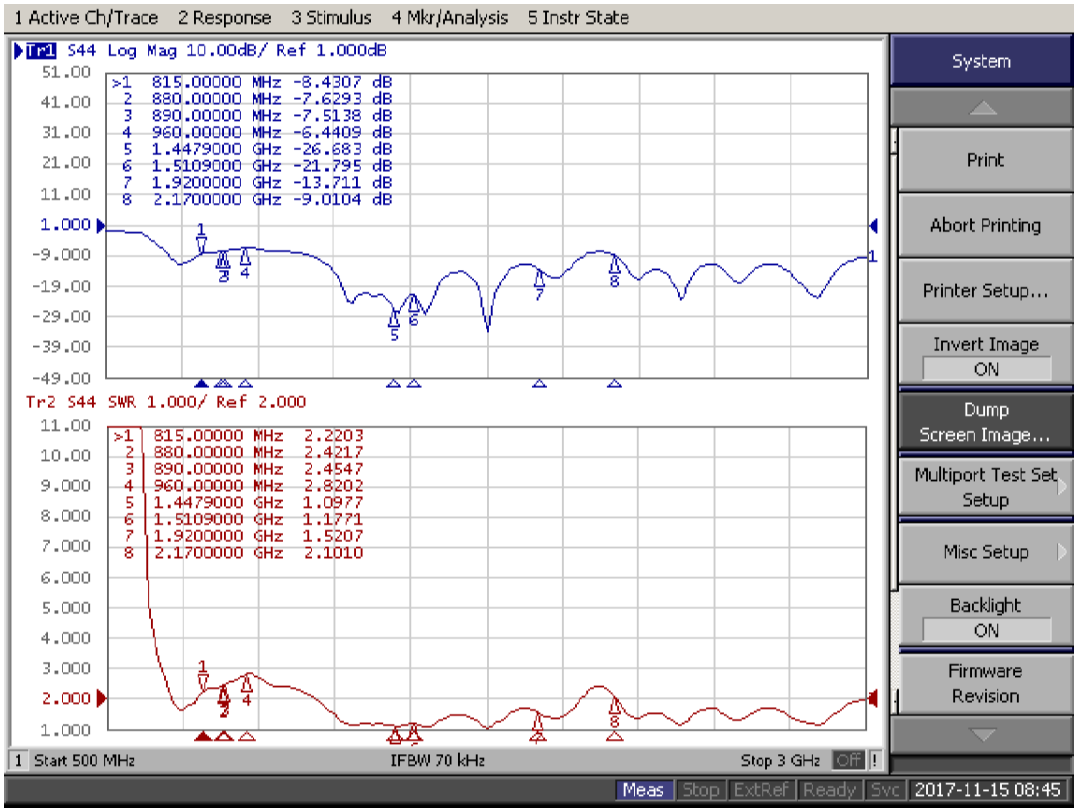
IDY Copyright © IDY Corporation, All Rights Reserved

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/12H; -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/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

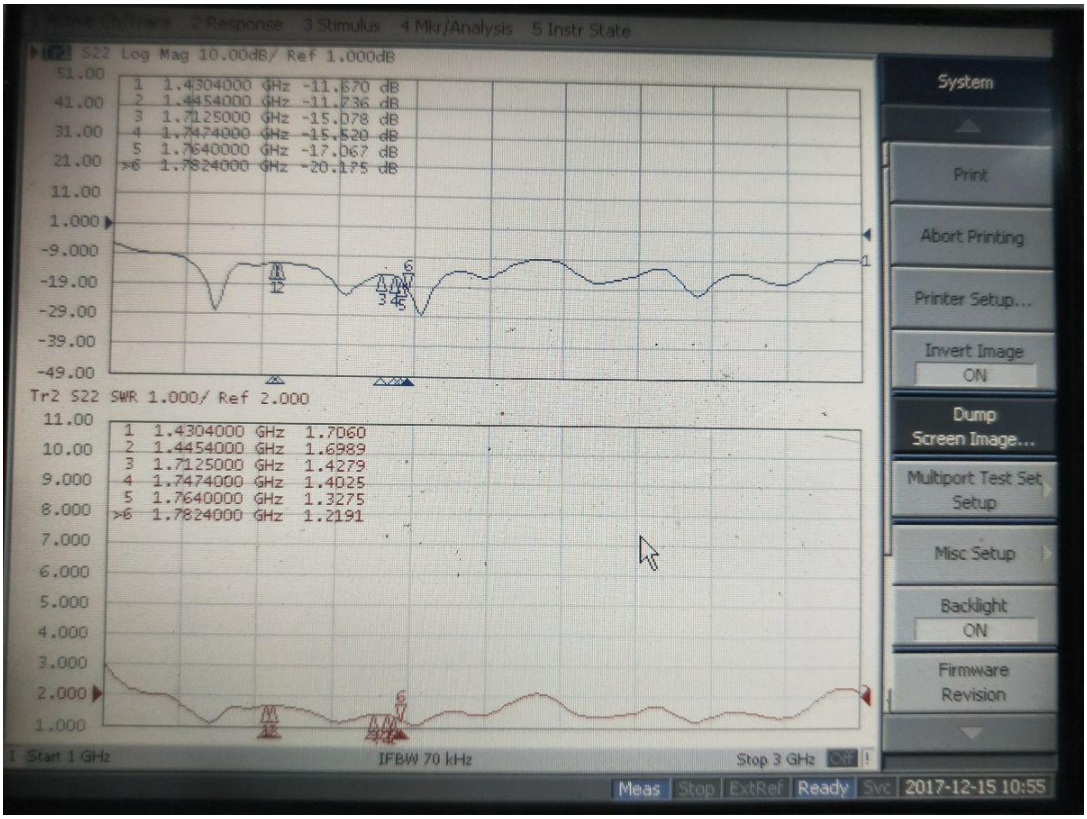
IDY Copyright © IDY Corporation, All Rights Reserved

7. アンテナ測定データ

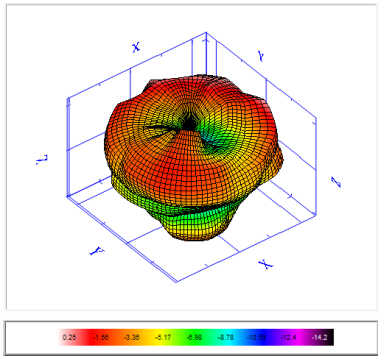
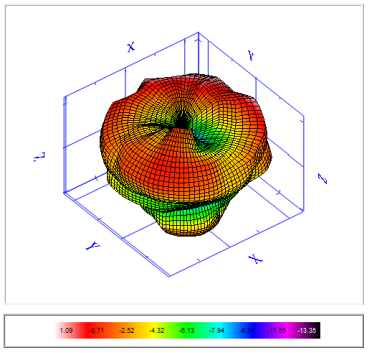
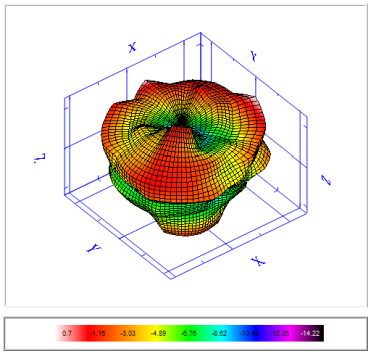
S パラメータ

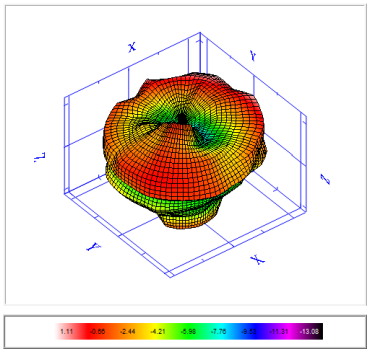
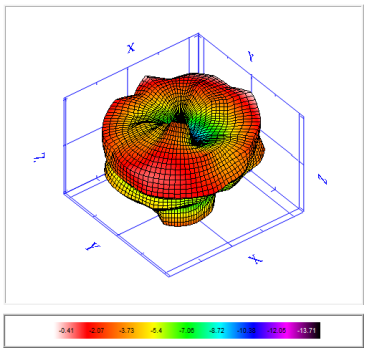
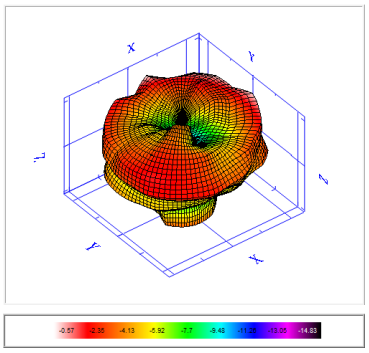


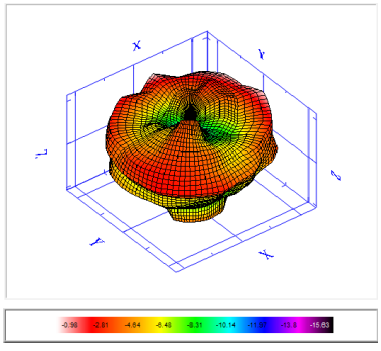
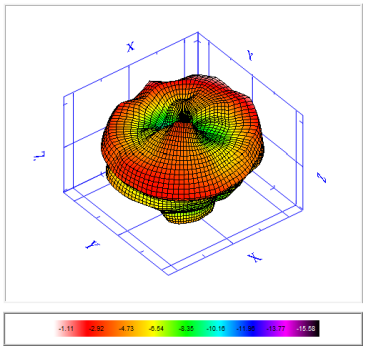
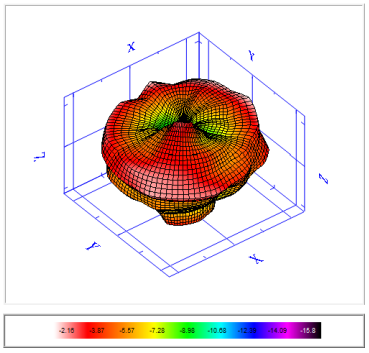
8



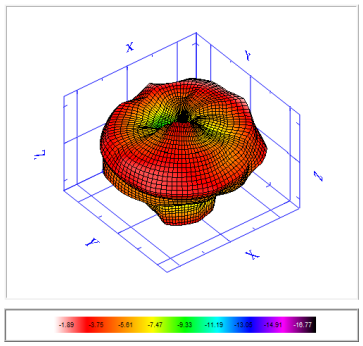
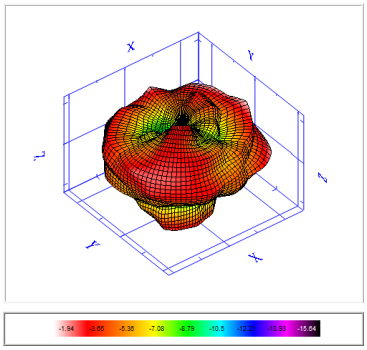
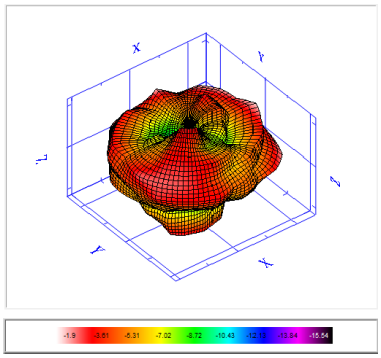
IDY Copyright © IDY Corporation, All Rights Reserved

815MHz	824MHz	839MHz
		

854MHz	869MHz	884MHz
		

899MHz	914MHz	929MHz
		

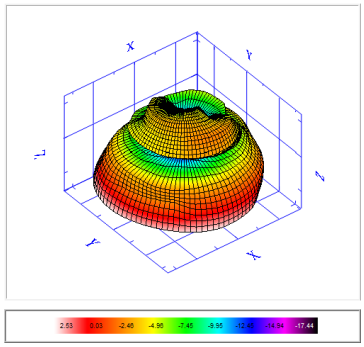
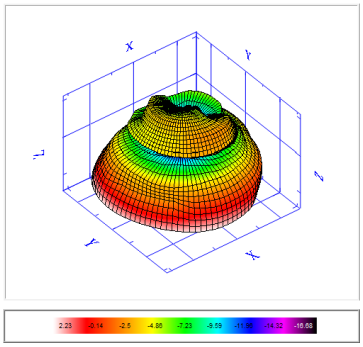
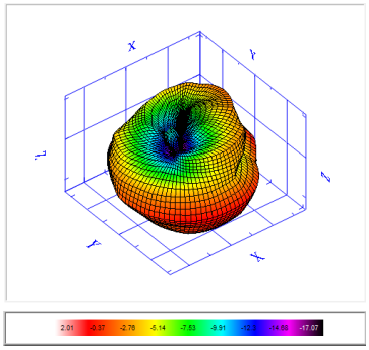
IDY Copyright © IDY Corporation, All Rights Reserved

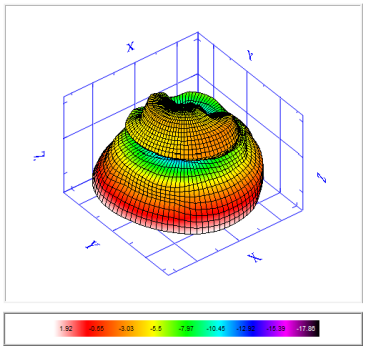
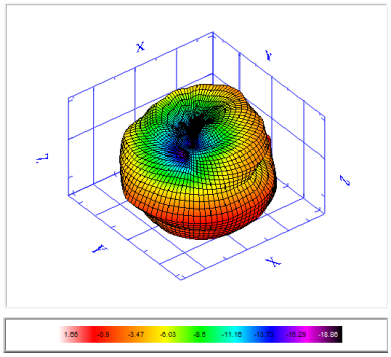
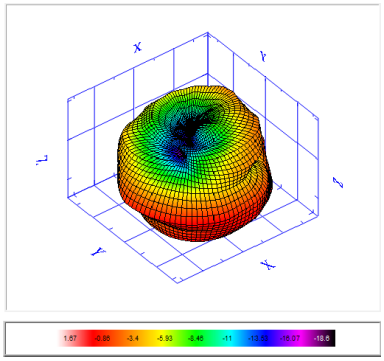
944MHz	959MHz	960MHz
		

Frequency	815	824	839	854	869	884
E-Total Peak Gain (dBi)	0.25	1.09	0.7	1.11	-0.41	-0.57
Efficiency (%)	41.17	50.04	45.43	50.78	37.83	34.05
Average Gain (dB)	-3.85	-3.01	-3.43	-2.94	-4.22	-4.68

Frequency (MHz)	899	914	929	944	959	960
E-Total Peak Gain (dBi)	-0.98	-1.11	-2.16	-1.89	-1.94	-1.9
Efficiency (%)	30.68	3019	28.42	30.19	29.86	29.78
Average Gain (dB)	-5.13	-5.2	-5.46	-5.2	-5.25	-5.26

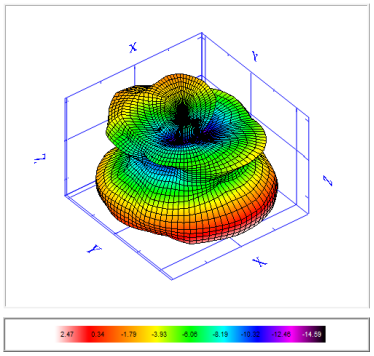
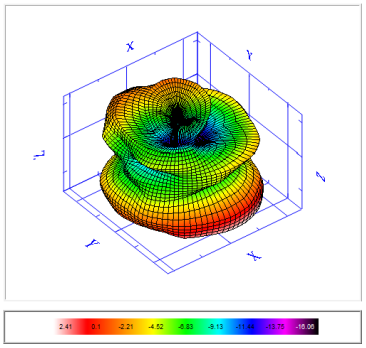
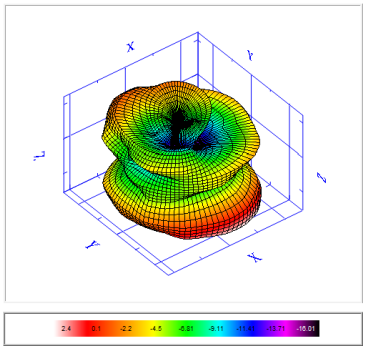
IDY Copyright © IDY Corporation, All Rights Reserved

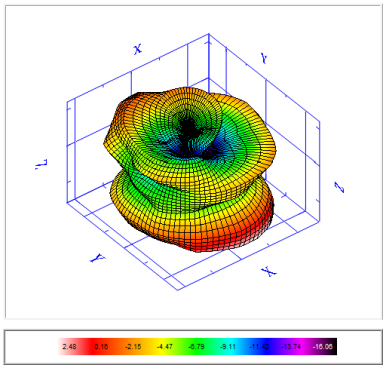
1430.4MHz	1445.4MHz	1447.9MHz
		

1460.4MHz	1495.9MHz	1510.9MHz
		

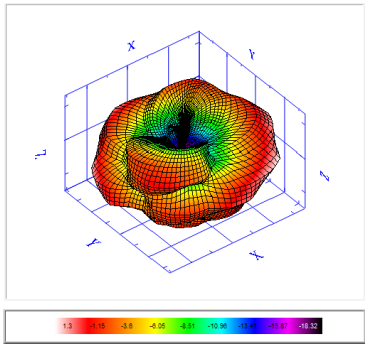
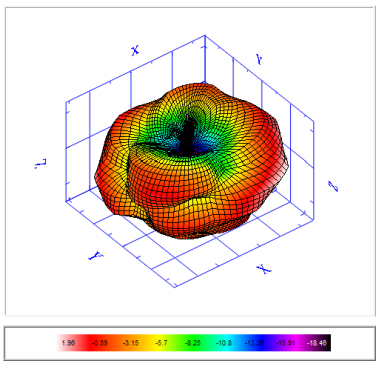
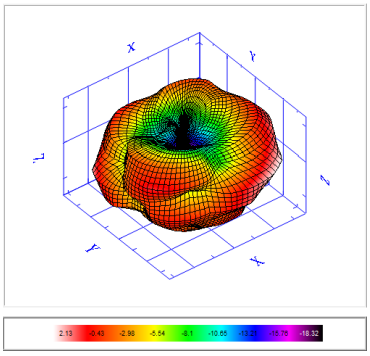
Frequency	1430.4	1445.4	1447.9	1460.4	1495.9	1510.9
E-Total Peak Gain (dBi)	2.53	2.23	2.01	1.92	1.66	1.67
Efficiency (%)	48.22	45.56	42.38	41.81	37.15	39.45
Average Gain (dB)	-3.17	-3.41	-3.73	-3.79	-4.3	-4.04

IDY Copyright © IDY Corporation, All Rights Reserved

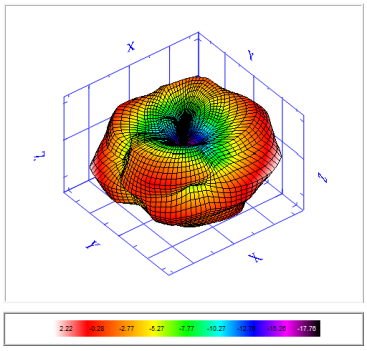
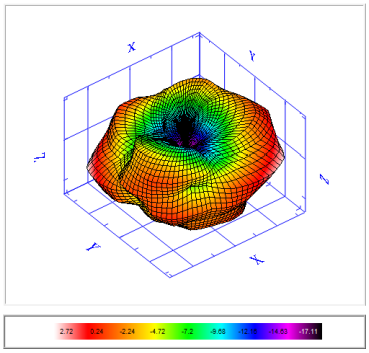
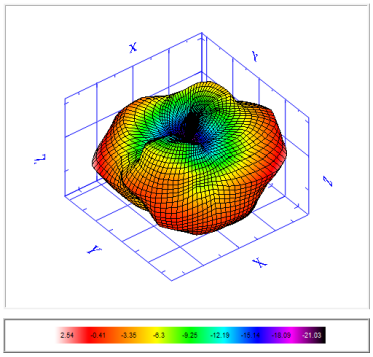
1712.5MHz	1747.4MHz	1764.9MHz
		

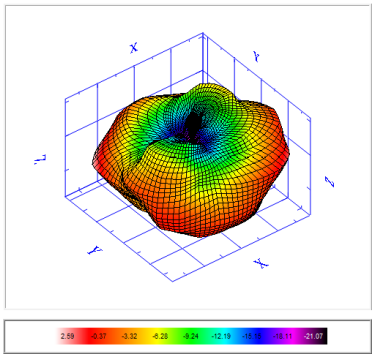
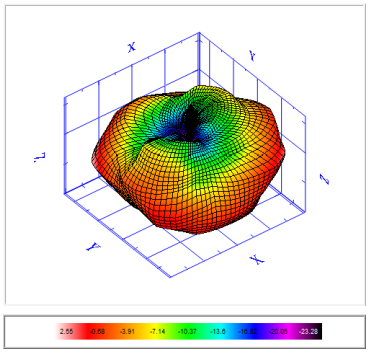
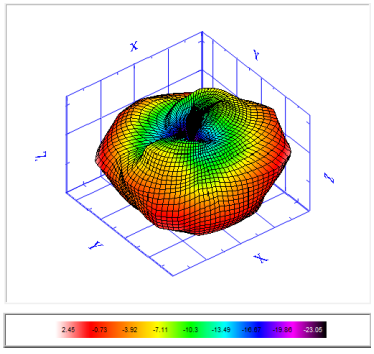
1782.4MHz


Frequency	1712.5	1747.4	1764.9	1782.4
E-Total Peak Gain (dBi)	2.47	2.41	2.4	2.48
Efficiency (%)	38.81	38.79	39.72	41.44
Average Gain (dB)	-4.11	-4.11	-4.01	-3.83

1920MHz	1940MHz	1950MHz
		

IDY Copyright © IDY Corporation, All Rights Reserved

1980MHz	2010MHz	2110MHz
		

2130MHz	2150MHz	2170MHz
		

Frequency	1920	1940	1950	1980	2010
E-Total Peak Gain (dBi)	1.3	1.96	2.13	2.22	3
Efficiency (%)	46.8	50.43	52.03	52.54	50.98
Average Gain (dB)	-3.3	-2.97	-2.84	-2.79	-2.93

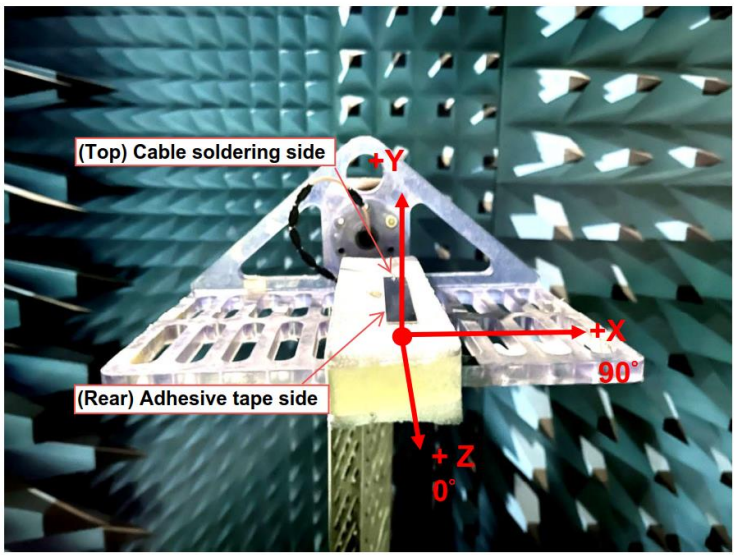
Frequency	2025	2110	2130	2150	2170
E-Total Peak Gain (dBi)	3	2.54	2.59	2.55	2.45
Efficiency (%)	51.61	41.66	41.21	41.28	42.32
Average Gain (dB)	-2.87	-3.8	-3.85	-3.84	-3.73

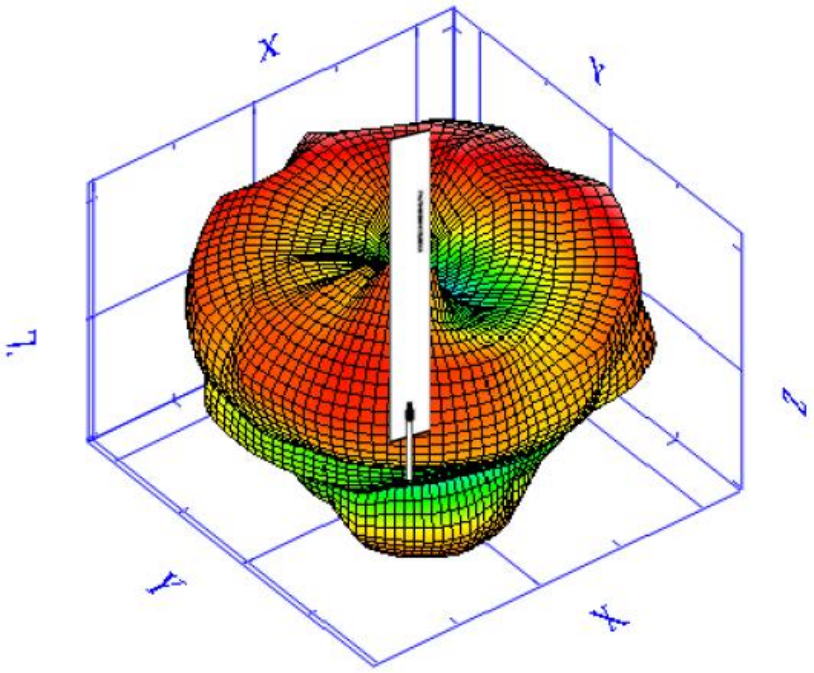
IDY Copyright © IDY Corporation, All Rights Reserved

Antanna Gain Test

Chamber Setup and Angle Definition

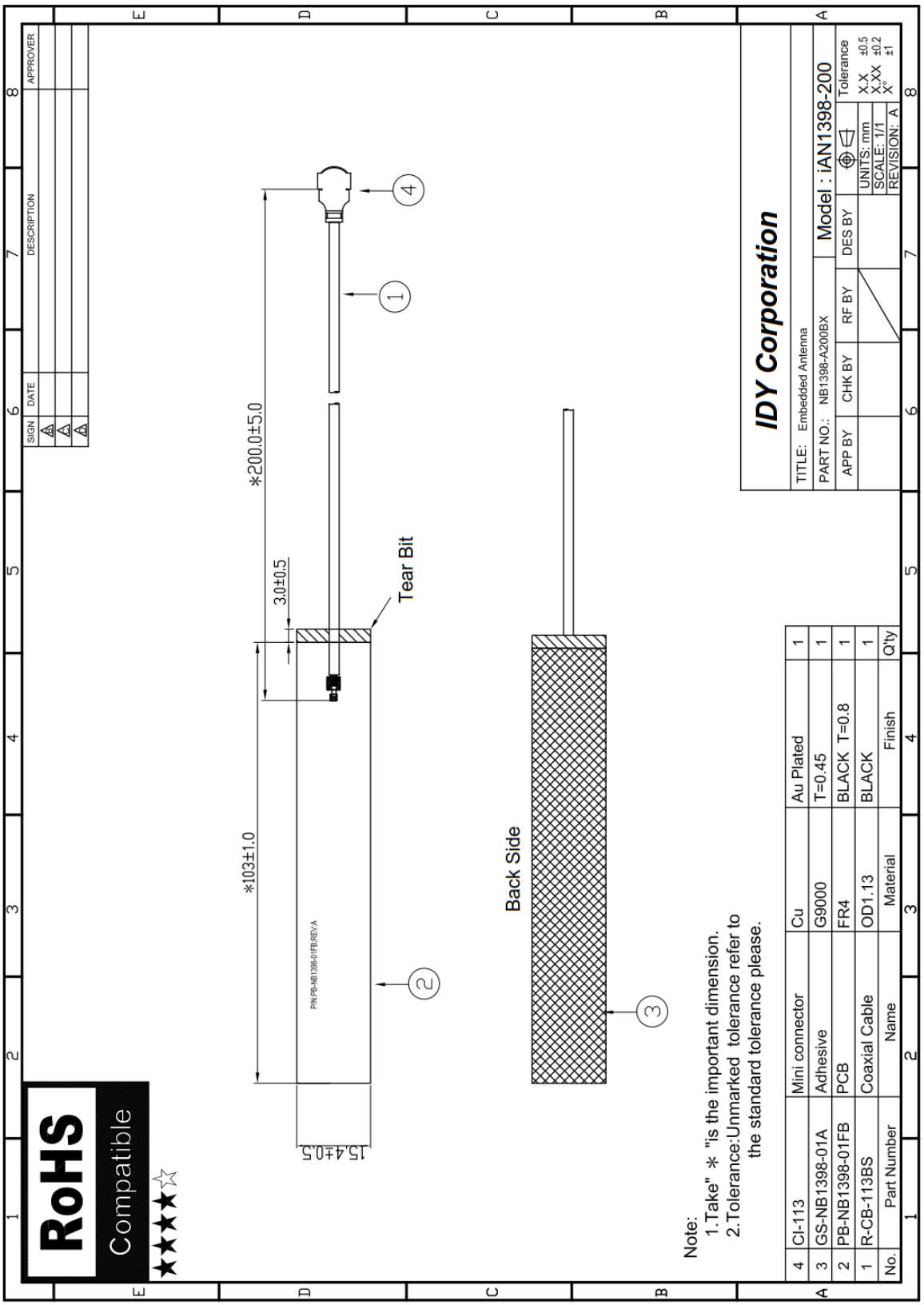
In free space





IDY Copyright © IDY Corporation, All Rights Reserved

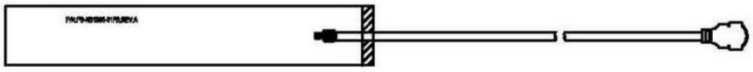
9. アンテナ本体外観仕様



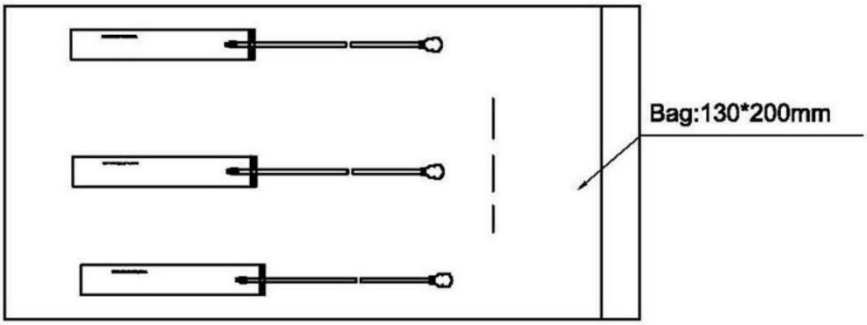
IDY Copyright © IDY Corporation, All Rights Reserved

10. 梱包仕様

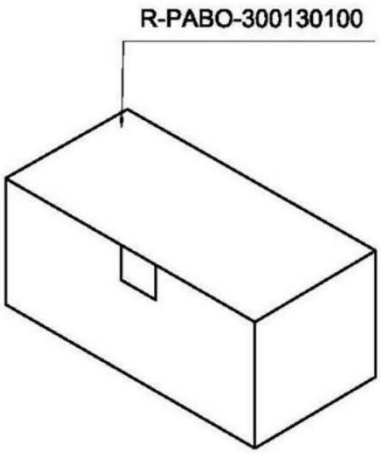
1. The Product



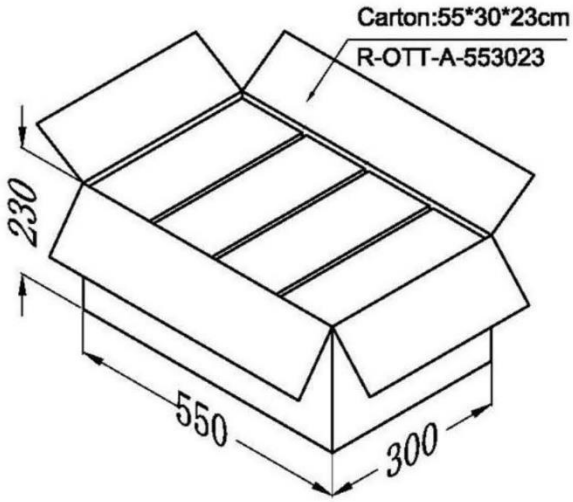
2. 20 PCS/per Bag

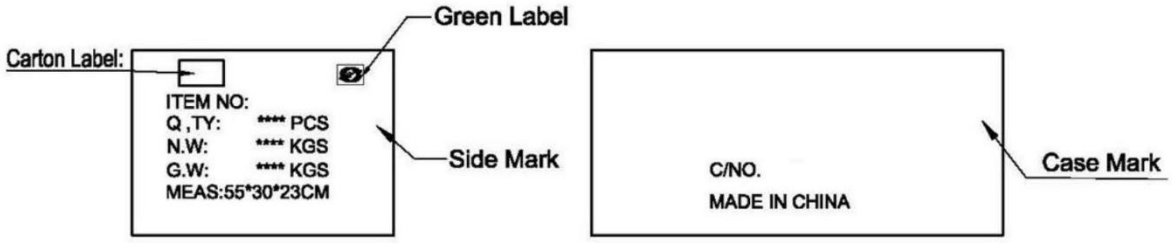


3. 400 PCS/per Box



4. 3200PCS/per Carton





IDY Copyright © IDY Corporation, All Rights Reserved

11. アンテナ本体 RoHS 指令調査結果

康捷電子有限公司	
填表：	李丹
部門：	研發部
職務：	文員

物料中HSF對象物質含量調查表

物料名稱：NB1398-A200BX

序號	物料型號	物料各構成名稱	各構成物料的材質	測試報告裡RoHS對應物質測試結果						檢測報告編號	測試日期	測試名稱	測試機構名稱
				Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs				
1	PB-NB1398-01FB	PCB	FR4	N.D.	9	N.D.	N.D.	N.D.	N.D.	SHAEC1628430701	2017.01.03	Laminate (FR-4.0)	SGS
2	GS-NB1398-01A	Paster	G9000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CE201712892	2017.01.23	G9000SERIES	SGS
4	R-CB-113BS	Cable	黑色色母	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC1704267101	2017.03.16	FEP Colormasterbatch	SGS
5			FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBML1606306302	2017.01.05	聚全氟乙丙烯树脂	SGS
6			鍍錫銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ECL01J018689001C	2017.04.08	镀锡圆铜线	CTI
7	CI-113	Mini Connector	PBT	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CE2016C3736	2016.12.28	DURANEX 310NF	SGS
8			銅	N.D.	18.5	N.D.	N.D.			CE2016C6659	2017.01.06	C5210R	SGS
9			鍍金層	N.D.	N.D.	N.D.	N.D.			CE201722856	2017.02.18	PLATING14（Au/Ni)	SGS

根據測試報告如實填寫鉛、鎘、汞、六價鉻、PBBs和PBDEs六項禁用物質的含量

包裝材料中鉛、鎘、汞、六價鉻總含量不超過100ppm，鎘的允許濃度為5ppm

歐盟ROHS指令豁免條款2009/95/EC、鋼中合金元素中的鉛含量达0.35%、铝含量达0.4%、铜合金中的铅含量达4%

IDY Copyright © IDY Corporation, All Rights Reserved

◯ お問い合わせ

株式会社IDY
〒101－0032
東京都千代田区岩本町3－9－3　フォレスト秋葉原ビル6階
TEL:03－4400－7970　FAX:03－4400－7969

Copyright © IDY Corporation, All Rights Reserved