

# Specification For Approval

Date: 2013 / 08 / 28

File No.: 130828001


Version: 1.0

Customer : 盛達電業股份有限公司

Customer P/N : /

INVAX P/N : AN2600-6007WSM

Description : Antenna

Cortec Checked By:	
Customer Approved By:	



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Product Number: AN2600-6007WSM

Product Name: Antenna



## 1. Revision History


Revision	Date	Change Notification	Description
1.0	2013.08.28		

Product Number: AN2600-6007WSM

Product Name: Antenna



## 2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2500 ~ 2700 MHz
S.W.R.	$\leq 2.5$
Antenna Gain	6 dBi
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Material of Plastic	Body: ABS Holder: PA+ABS
Cable Type	RG178
Connector Type	SMA Male
Connector Pull Test	$\geq 5$ Kg
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C
Antenna Color Storage life	< 1 year

Product Number: AN2600-6007WSM

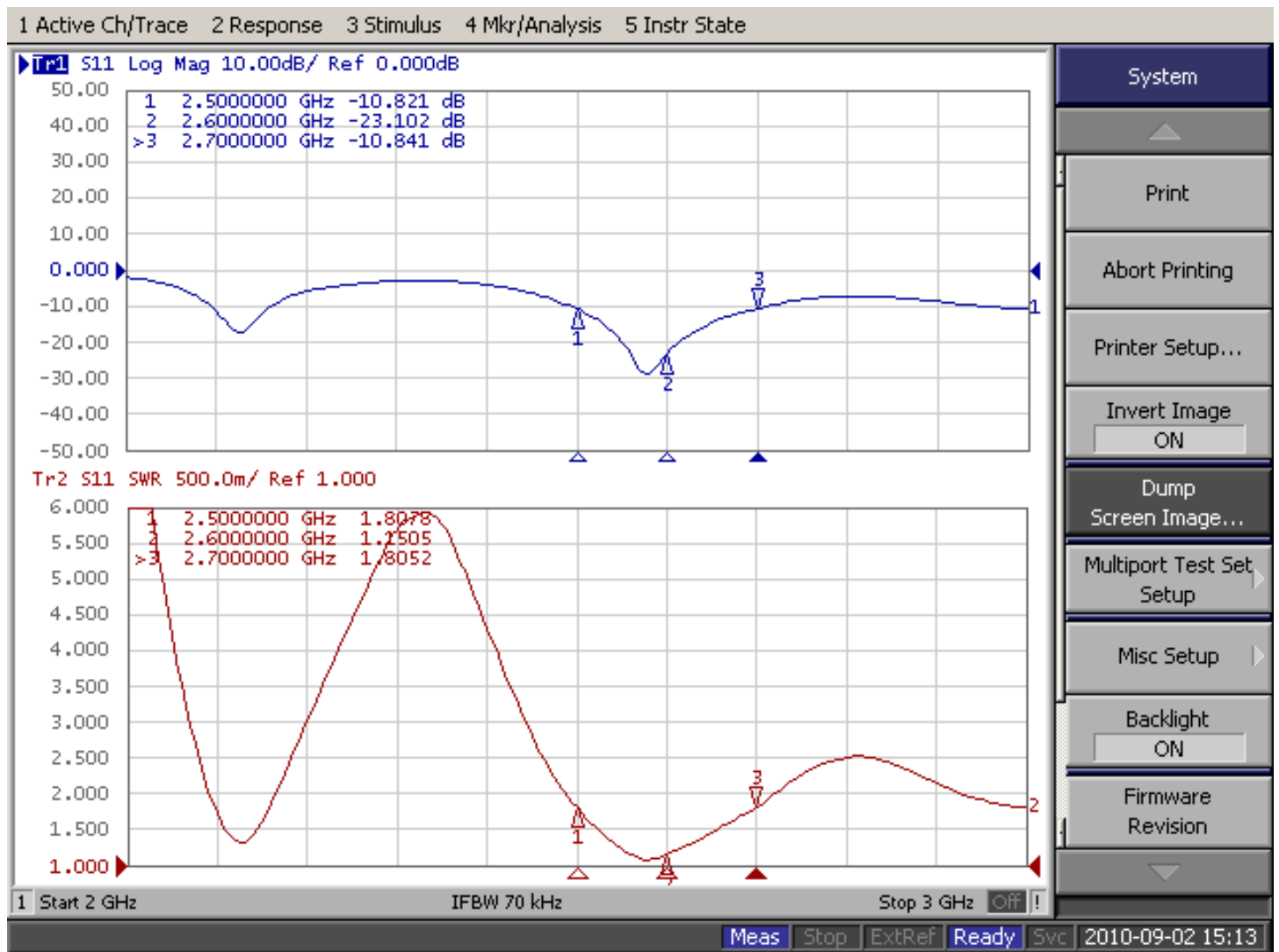
Product Name: Antenna



### 3. 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 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

#### 4. Antenna - S Parameter Test Data



Product Number: AN2600-6007WSM

Product Name: Antenna



## 5. Antenna - Radiation Pattern Test Data

### Testing Equipment Specification:

Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m

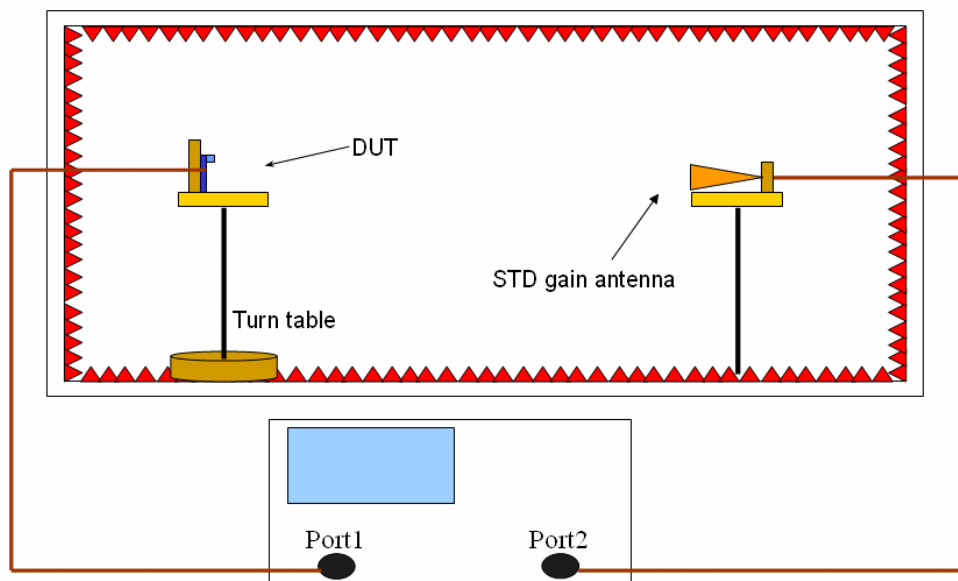
Quiet Zone: 600mm @1 GHz

Isolation: >100dB @ 1 MHz ~ 10 GHz

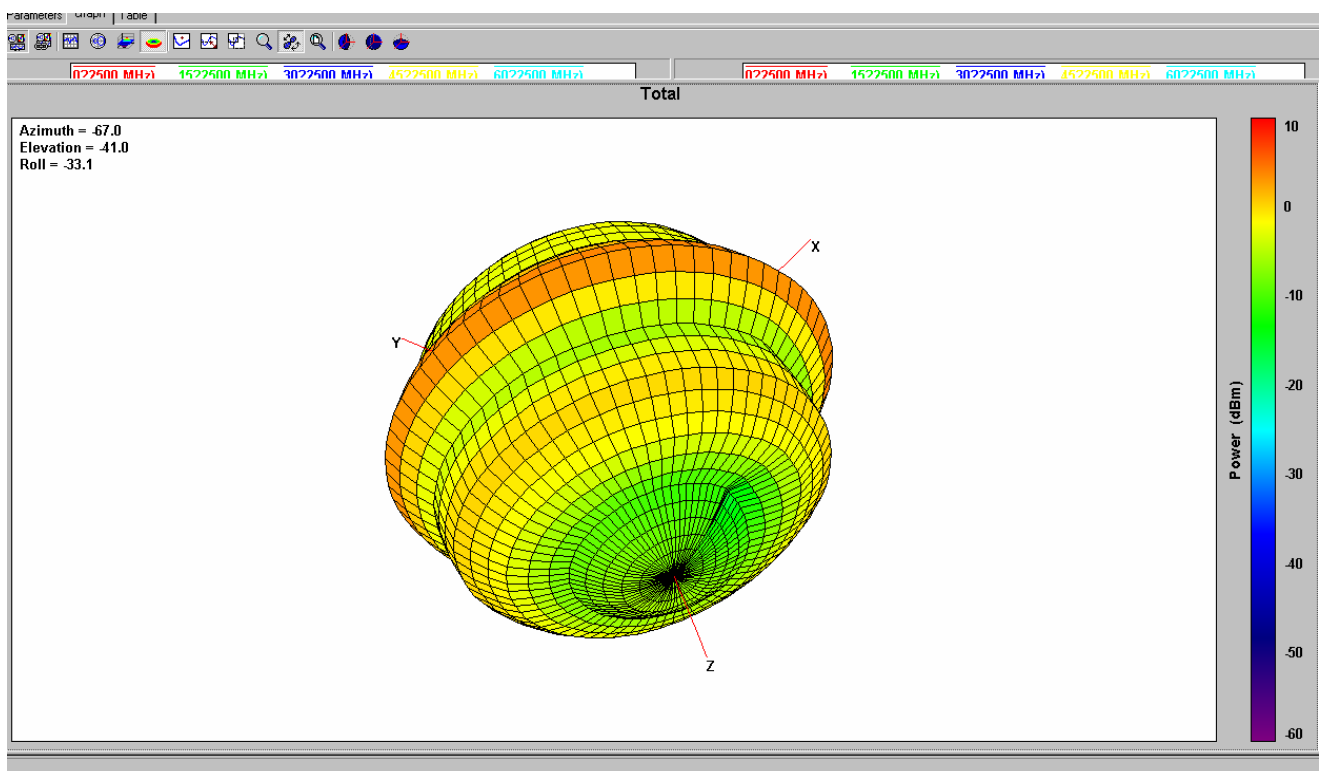
Testing Equipment: Agilent 5071B

Received Antenna: 0.7 ~ 6.0 GHz for Gain Calibration

Double Ridged Horn Antenna



Total	Point Values	Ant. Port Input Pwr. (dBm)	Tot. Rad. Pwr. (dBm)	Peak EIRP (dBm)	Directivity (dBi)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
	Frequency (MHz)							
	2500	0	-0.364575	6.70015	7.06472	-0.364575	91.948	6.70015
	2520	0	-0.217678	6.89132	7.109	-0.217678	95.1113	6.89132
	2540	0	-0.114379	6.97968	7.09406	-0.114379	97.4007	6.97968
	2560	0	-0.0305543	7.05889	7.08944	-0.0305543	99.2989	7.05889
	2580	0	0.0757443	7.14095	7.0652	0.0757443	101.759	7.14095
	2600	0	-0.139428	6.91158	7.05101	-0.139428	96.8405	6.91158
	2620	0	-0.136858	6.91607	7.05293	-0.136858	96.8979	6.91607
	2640	0	-0.0852772	6.951	7.03628	-0.0852772	98.0556	6.951
	2660	0	-0.249648	6.79668	7.04633	-0.249648	94.4137	6.79668
	2680	0	-0.386712	6.65605	7.04276	-0.386712	91.4806	6.65605
	2700	0	-0.448956	6.55324	7.00219	-0.448956	90.1788	6.55324



6. Mechanical Drawing  
 See attached files

7. Material Description and RoHS Test Report  
 See attached files

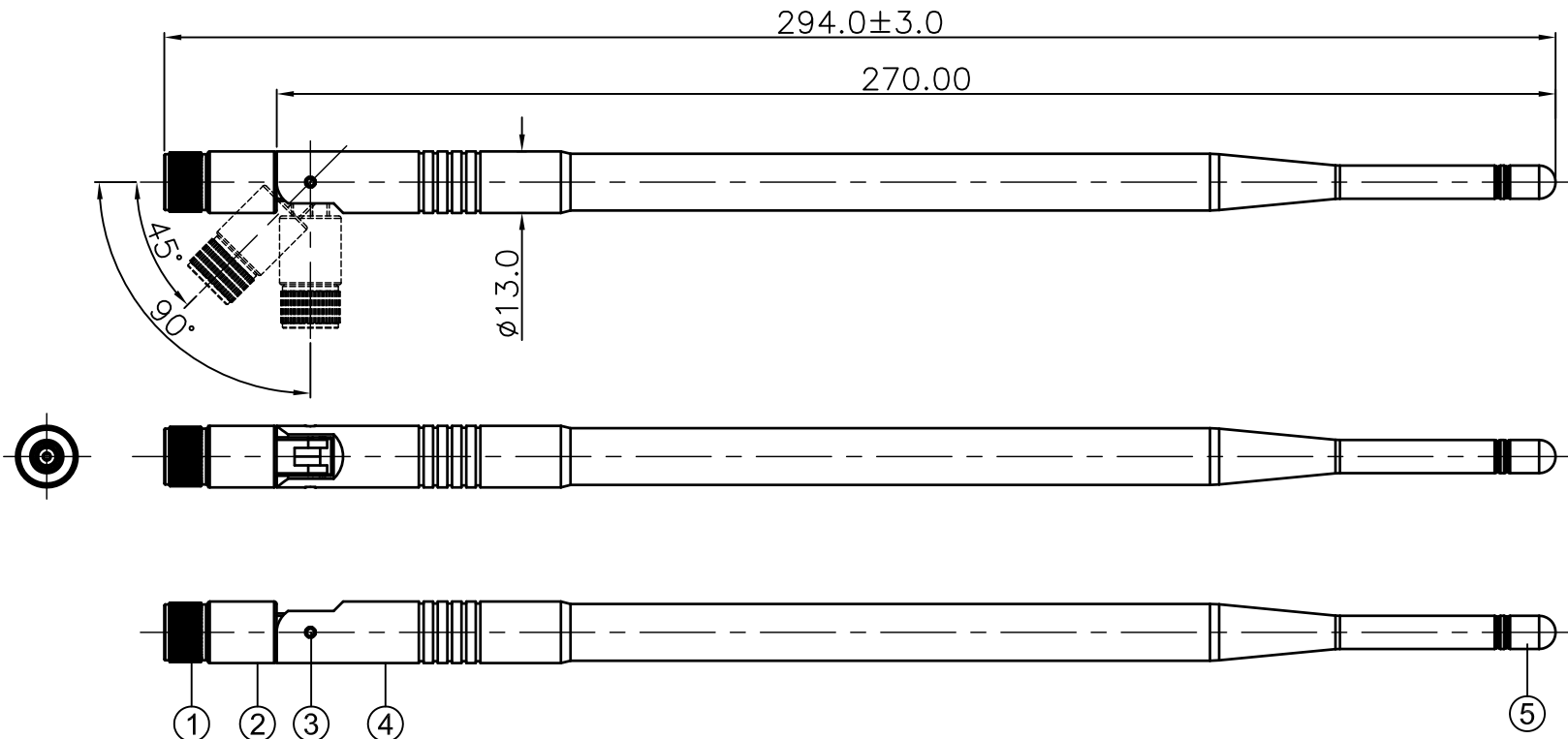


# RoHS

## Compatible



SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



5	R-AN60-01W	Aerial cap	PVC	White	1
4	AN6003-01W	Body	ABS	White	1
3	AN03-515CN	Pin	Metal	Nickel plated	2
2	AN0303-T01W	Body2	PA+ABS	White	1
1	SMA336-CN8MNANT	SMA Male	Metal	Nickel plated	1
No.	Part Number	Description	Material	Finish	Q'ty

*Invax System Group.*  
**Cortec** Cortec Technology Inc.  
 Http://www.invaxsystem.com Tel:886-2-27885218  
 E-mail:info@invax.com.tw Fax:886-2-27831658

TITLE: 2.5~2.7GHz 6dBi Antenna

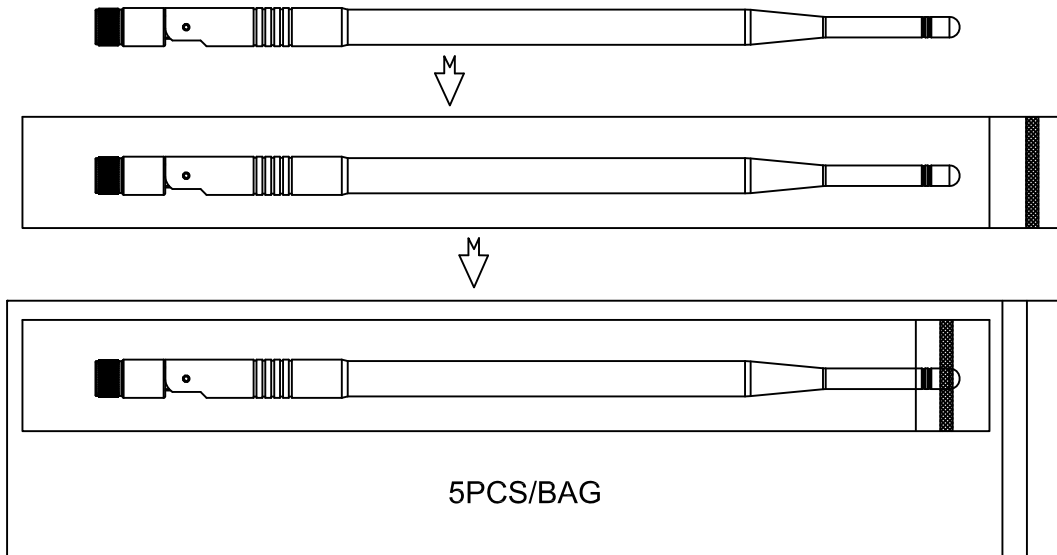
PART NO.: AN2600-6007WSM DWG NAME:

APPROVED BY	CHECKED BY	DESIGNED BY	Tolerance
Grant	Jack	王福彬	X.X ±0.2
2013.08.27	2013.08.27	2013.08.27	X.XX ±0.05
			X° ±1°

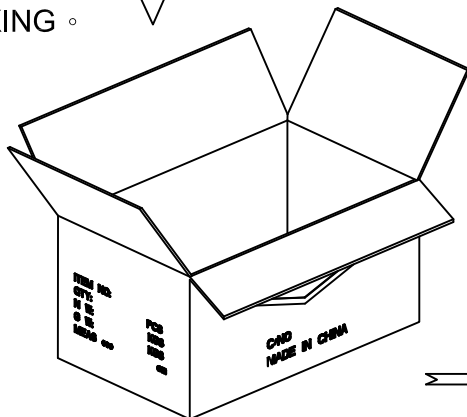
UNITS: mm  
 SCALE: 1/1  
 REVISION: A

Part Number : AN2600-6007WSM	Revision : A
Name: 2.5~2.7GHz 6dBi Antenna	Customer : ALL

1 . Enter PE bag .

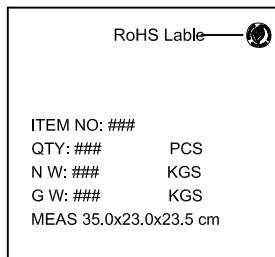
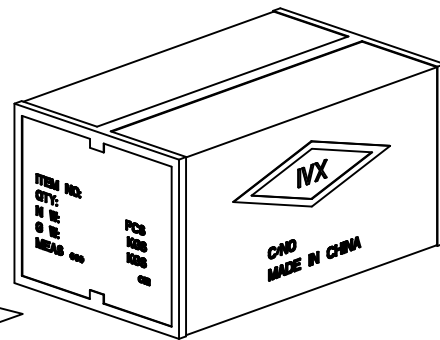


2.PACKING .



Size:35.0x23.0x23.5cm  
250PCS/BOX

3. SEALING



SGS 台灣網站 → [http://twap.sgs.com/sgsrsts/chn/cheres\\_tw.asp](http://twap.sgs.com/sgsrsts/chn/cheres_tw.asp)  
 SGS 大陸網站 → [http://rsts.cn.sgs.com/chn/cheres\\_cn.asp](http://rsts.cn.sgs.com/chn/cheres_cn.asp)  
 SGS 韓國網站 → [http://rohs.kr.sgs.com/sgsrsts/en/cheres\\_en.asp](http://rohs.kr.sgs.com/sgsrsts/en/cheres_en.asp)

COR/F-G-47a

請輸入以下報告正確資料及檢查碼以便查核

1. 報告編號
2. 報告日期 (YYYY/MM/DD)
3. 產品名稱 (輸入前 10 個字不含空白)
4. 圖示檢查碼 (依指示畫面)



### 物料中HSF對象物質含量調查表

康捷電子有限公司	
填表：	時麗
部門：	研發部
職務：	文員

物料名稱： AN2600-6007WSM

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	AN0303-T01W	Body2	PA+ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC1304205854	2013.04.12	ABS/PA NC	SGS
2	AN6003-01W	Body	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	KA/2012/C1575	2013.01.02	ACRYLONITRILE	SGS
4	R-AN60-01W	Hat	PVC	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC1304137804	2013.04.03	PVC GRAIN.	SGS
5	R-AN1901-05 R-AN527515	Tube	銅	N.D.	14	N.D.	Negative	N.D.	N.D.	CANML1216541101	2012.12.05	C2700	SGS
6	R-AN60-03 R-AN60-04	Spring	銅	66	31000	N.D.	Negative			CE201314616	2013.01.28	REECUTTINGBRASSBAI	SGS
3	AN03-514CN	Pin	銅	66	31000	N.D.	Negative			CE201314616	2013.01.28	REECUTTINGBRASSBAI	SGS
8	SMA336-CN8MNANT	SMA Male	銅	66	31000	N.D.	Negative			CE201314616	2013.01.28	REECUTTINGBRASSBAI	SGS
9			鍍鎳	N.D.	10	N.D.	Negative			CANML1307214802	2013.05.22	Ni terminal	SGS
7	R-GS-SP1005001	EVA	EVA	N.D.	62	N.D.	N.D.	N.D.	N.D.	CANEC1303102105	2013.03.19	EVA+gum.	SGS
10	R-RG-178U	Cable	FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RHS05F011891001E	2013.08.26	电线电缆料	CTI
11			PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RHS05F011891002E	2013.08.26	电线电缆料	CTI
12			鍍銀銅	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	RHS05F011891004E	2013.08.26	电线电缆料	CTI

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/BC、鋼中合金元素中的鉛含量達0.35%、鋁含量達0.4%、銅合金中的鉛含量達4%