Specification For Approval

Date: 2019 / 12 / 19

File No.: 1912190011

Version: 1.0

Customer： J00176

Customer P/N： /

INVAX P/N： NB1363-B310BX

Description： Antenna

Cortec Checked By:	R/D 2019.12.19 Kenny
Customer Approved By:	

INVAX System Technology Corp.
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Taipei, TAIWAN

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Province, China
TEL:86-769-85388261 FAX:86-769-85317869
http://www.cortec.com.cn

Index:

1. Revision History

Revision	Date	Change Notification	Description
1.0	2019.12.19	初版	

2. Specification

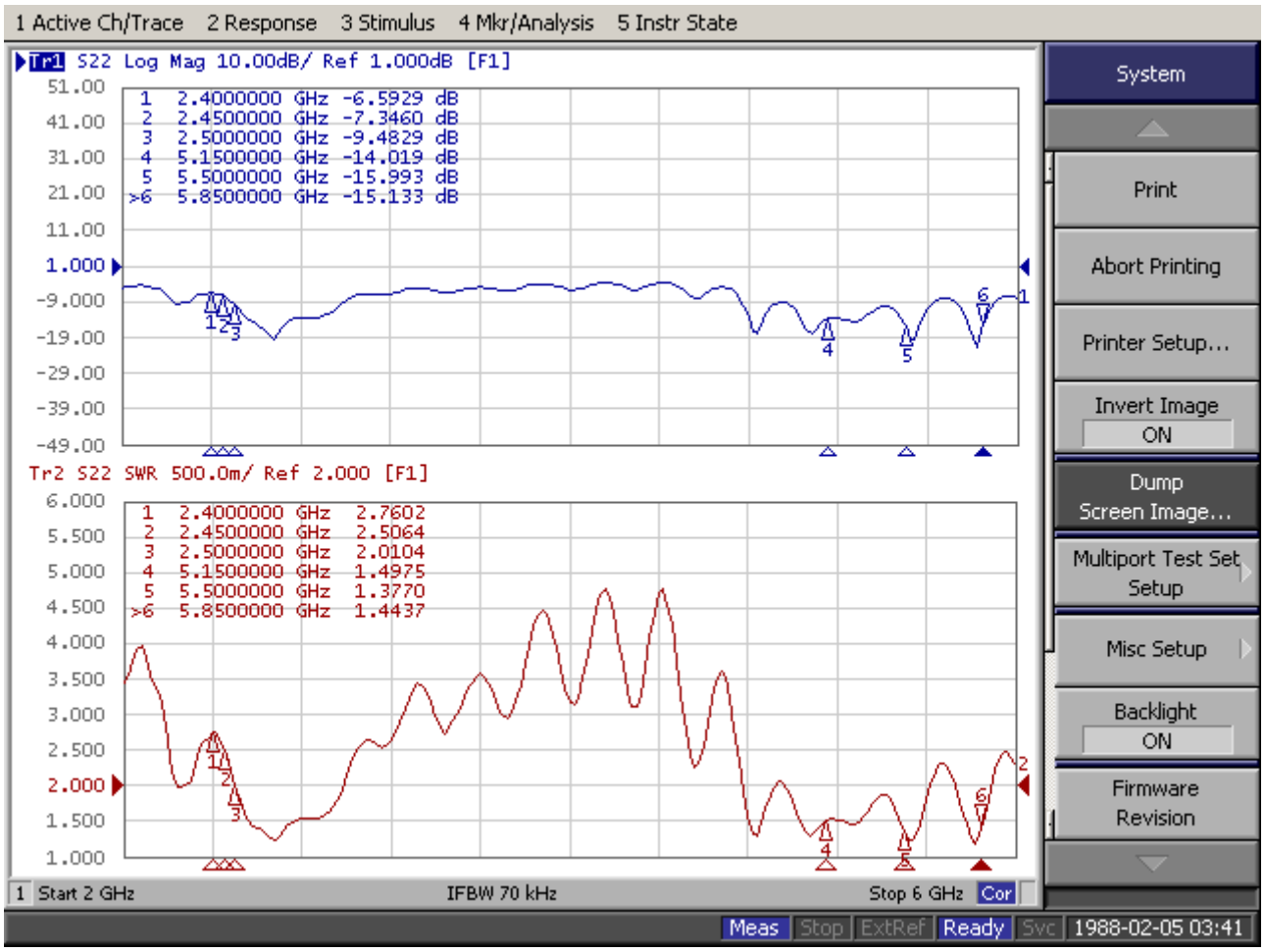
Sample Photo	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz 5150 ~ 5850 MHz
V.S.W.R.	<= 3.0 @ 2400 ~ 2500 MHz <= 3.0 @ 5150 ~ 5850 MHz
Peak Gain	3.62 dBi @ 2400 ~ 2500 MHz 1.69 dBi @ 5150 ~ 5850 MHz
Efficiency	46 % @ 2400 ~ 2500 MHz 40 % @ 5150 ~ 5850 MHz
Antenna Type	Dipole
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	PCB
Cable Type	O.D. 1.13 mm
Connector Type	Mini Connector
C. Environmental	
Operation Temperature	- 40 ˚C ~ + 65 ˚C
Storage Temperature	- 40 ˚C ~ + 80 ˚C

3. Characteristics and Reliability Test

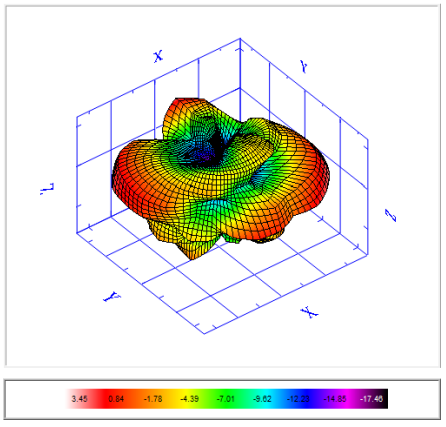
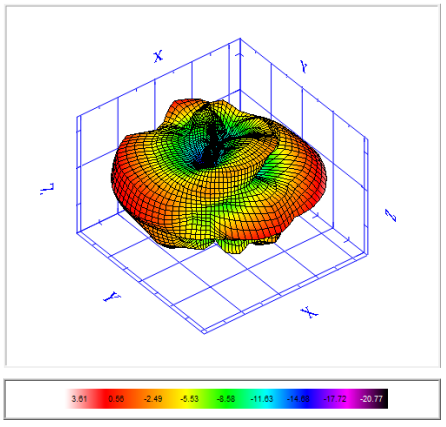
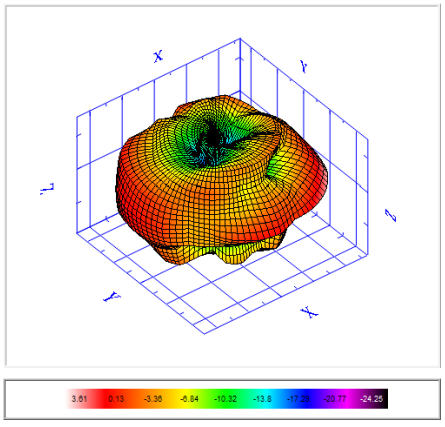
Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: 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 2423 . 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
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

4. Antenna - S Parameter Test Data

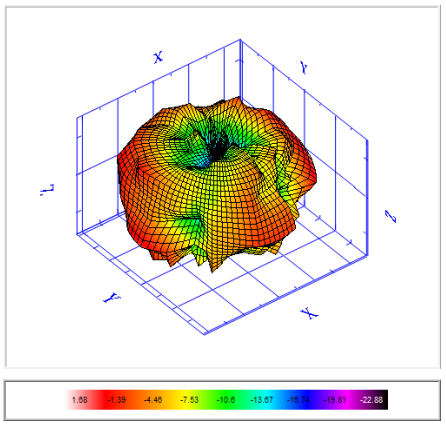
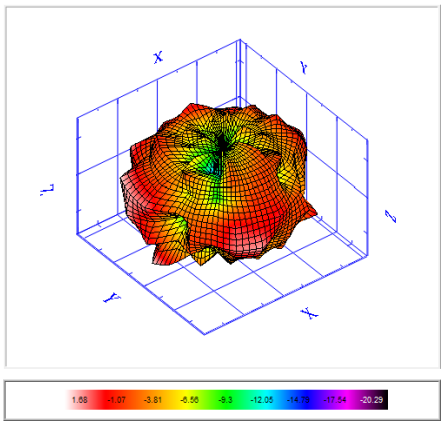
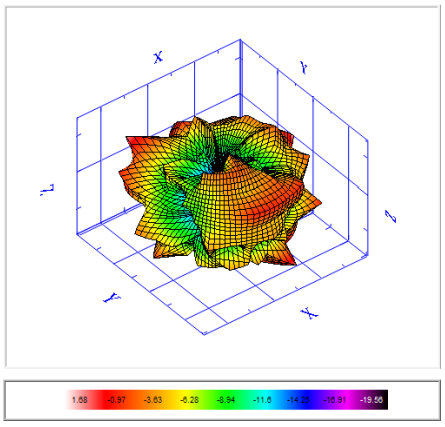
裸測



5. Antenna - Radiation Pattern Test Data

2400 MHz	2450 MHz	2500 MHz
		

Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
E-Total Peak Gain (dBi)	3.45	3.39	3.55	3.58	3.59	3.61	3.62	3.58	3.61	3.6	3.61
Efficiency (%)	49.61	48.87	51.65	48.84	48.78	44.17	44.99	43.34	43.89	45.16	46.5
Average Gain (dB)	-3.04	-3.11	-2.87	-3.11	-3.12	-3.55	-3.47	-3.63	-3.58	-3.45	-3.33

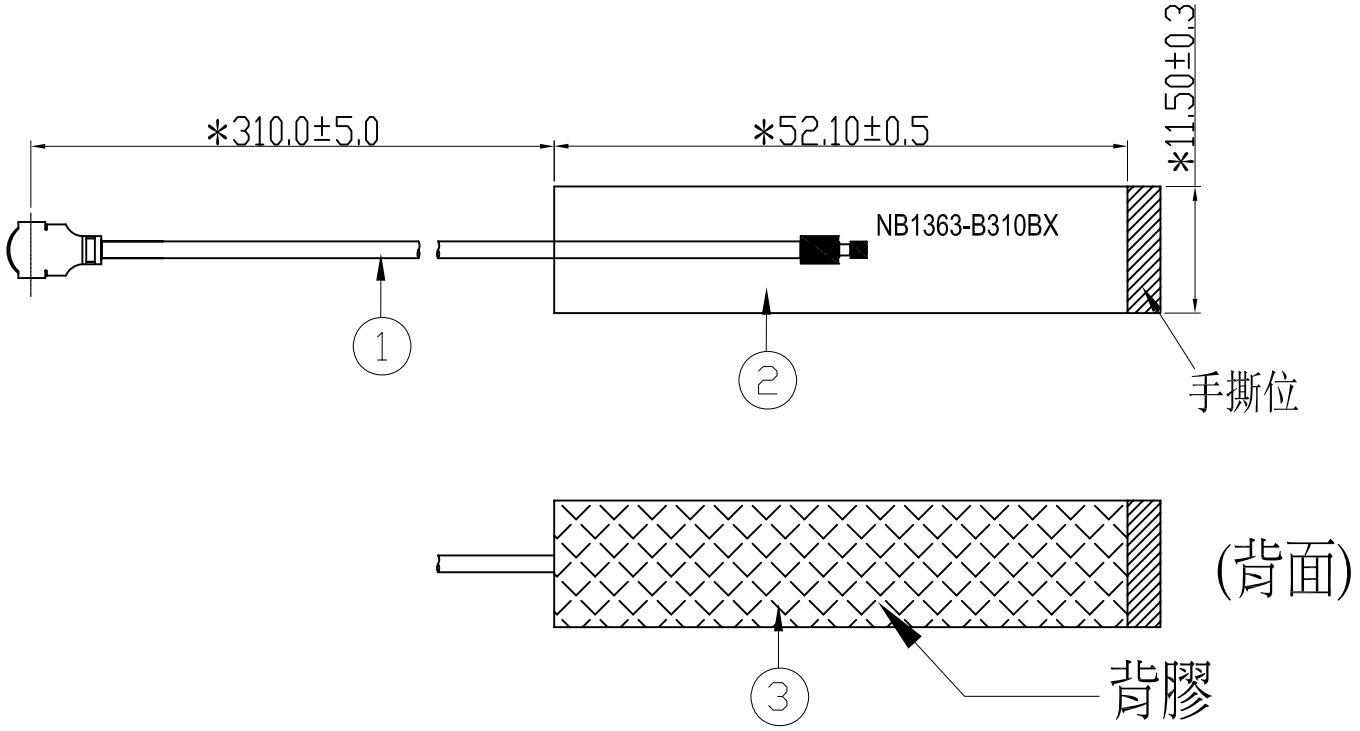
5150 MHz	5500 MHz	5850 MHz
		

Frequency	5150	5250	5350	5400	5500	5550	5650	5700	5800	5850
E-Total Peak Gain (dBi)	1.68	1.69	1.66	1.6	1.68	1.67	1.66	1.59	1.68	1.68
Efficiency (%)	31.55	42.55	45.57	39.09	49.73	44.6	37.41	42.16	37.71	32.17
Average Gain (dB)	-5.01	-3.71	-3.41	-4.08	-3.03	-3.51	-4.27	-3.75	-4.24	-4.93

RoHS Compatible

★★★★☆

SIGN	DATE	DESCRIPTION	APPROVER
B			
A			
D			



Note:
1.Take" * "is the important dimension.
2.Tolerance:Unmarked tolerance refer to the standard tolerance please.

No.	Part Number	Name	Material	Finish	Q'ty
3	GS-NB1363-01A	背膠	SONY-G9000		1
2	PB-NB1363-04FB	PCB	FR4	BALCK T=0.4MM	1
1	ASM-113B-339-CI4	OD1.13 Cable+MHF4			1

Invax System Group.
Cortec
Cortec Technology Inc.
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E-mail:Info@Invax.com.tw Fax:886-2-27831658

TITLE: 2.4/5.8G Embedded Antenna

PART NO.: NB1363-B310BX CUSTOMER P/N: F40010564

APP BY	CHK BY	RF BY	DES BY	Tolerance
Grant 2019/12/18	Kenny 2019/12/18		任玉浩 2019/12/18	UNITS: mm SCALE: 1/1 REVISION: A

Tolerance: X.X ±0.3, X.XX ±0.2, X° ±1

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Cortec

產品包裝規範

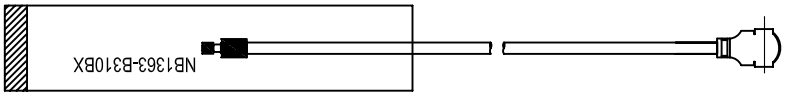
PACKING CRITERION

★★★★☆

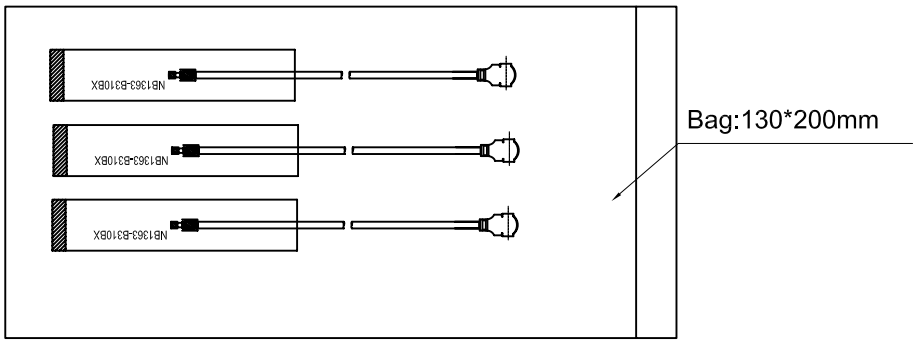
Date: 2019/12/18

Part Number : NB1363-B310BX	Revision : A
Name: Embedded Antenna	Customer :

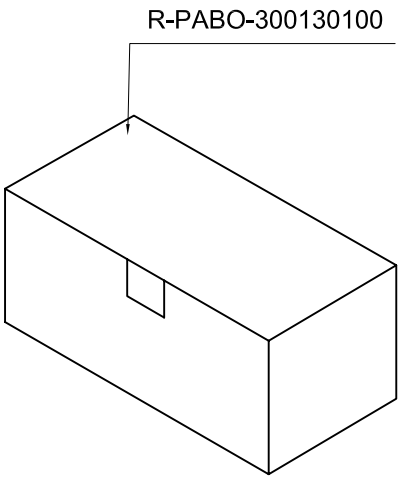
1. The Product



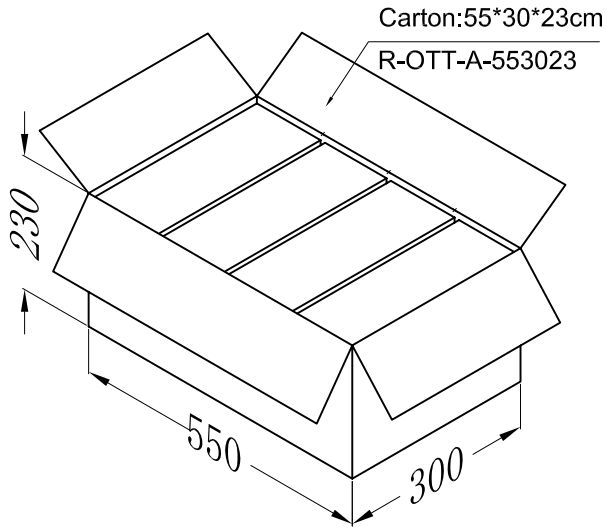
2. 50 PCS/per Bag

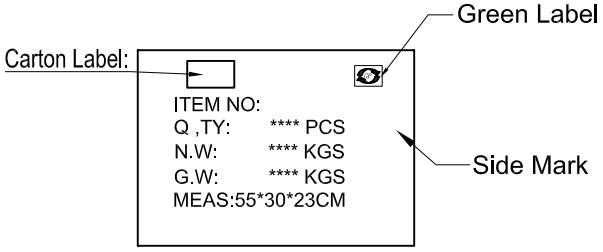


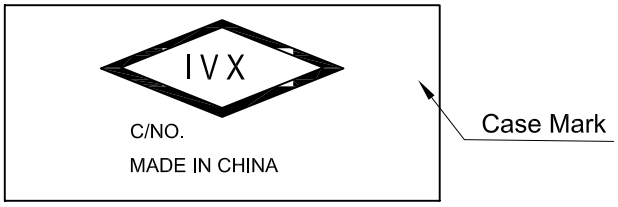
3. 500 PCS/per Box



4. 4000 PCS/per Carton







APPROVED BY : _____ CHECKED BY : _____ DESIGNED BY : 任玉浩

SGS TaiBei Network---http://twap.sgs.com/sgsrsts/chn/cheres_tw.asp

SGS Mainland Network---http://rsts.cn.sgs.com/zh-cn/cheres_cn.asp

SGS Korea S. Network---http://rohs.kr.sgs.com/sgsrsts/en/cheres_en.asp

PLS fill out the correct data for search

1.Report Number

2.Report Date(YYYY/MM/DD)
3.Product Name(Input the first 10 figures. Do not include the blank ）
4.The graphic presentation checking yard

COR/F-G-47a

Cortec®

Cortec Technology Inc.	
Writer：	Shi li
Dept：	R&D
Job：	Assistant

HSF Datasheet

Part Number：NB1363-B310BX

Number	Detali Part Number	Detail Name	Material	RoHS2.0 Test Results										Report Number	Test Date	Test Name	Test Locale
				Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs	DBP	BBP	DIBP	DEHP				
1	PB-NB1363-04FB	PCB	FR4	N.D.	12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC1923913001	2019.11.02	DVD-66-(FR-4)	SGS
2	GS-NB1363-01A	Paster	G9000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CE201912563 CE201921057	2019.01.17 2019.02.19	ADHESIVE	SGS
3	ASM-113B-339-CI4	Cable	黑色色母	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC1904071101	2019.03.13	FEP Colormasterbatch	SGS
4			FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBML1900152502	2019.01.16	聚全氟乙丙烯树脂	SGS
5			鍍錫銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2190070837101001C	2019.04.08	镀锡圆铜线	CTI
6			镀银铜	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC1901381806	2019.01.29	镀银圆铜线.	SGS
7		Mini Connector	PBT	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	KA201950554	2019.05.17	PBT	SGS
8			銅	N.D.	18	N.D.	N.D.	N.D.	N.D.					SHAEC1912211513	2019.06.19	C5210,Cu,Sn,P	SGS
9			鍍金層	N.D	18	N.D	N.D	N.D	N.D					SHAMLP1921181501	2019.09.26	plating film	SGS

PLS refer the SGS report, fill out the content of Pb, Cd, Hg, Cr6+, PBBs, PBDEs

The content of Pb, Cd, Hg, Cr6+, PBBs, PBDEs is less than 100 ppm in the package. The content of Cd is less than 5 ppm.

According to the EU ROHS directive exemption clause 2011/65/EU Lead as an alloying element in steel containing up to 0,35 % aluminium containing up to 0,4% copper alloy containing up to 4%