



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# APPROVAL SHEET

## **PCB ANTENNA**

### **2.4 GHz Band Working Frequency**

### **Halogens Free Product**

### **P/N: RFPCA460611IMAB301**

Customer : \_\_\_\_\_  
Customer 's Part No. : \_\_\_\_\_  
Approval No. : \_\_\_\_\_  
Issue Date : \_\_\_\_\_

\*Contents in this sheet are subject to change without prior notice.

Version	Date	Description	Author
V01	2015 Mar.	New Release	HWCHAN

### ELECTRICAL CHARACTERISTICS

Item	Specification
Frequency Range	2.4 ~ 2.5 GHz
Impedance	50 Ohm Nominal
Return Loss	-10 dB (Max)
Peak Gain	3.85 dBi
VSWR	2.0 (Max)
Radiation	Omni-directional
Polarization	Linear Vertical
Admitted Power	1W

\*note-1: Electrical characteristics will depend on customer's final application.

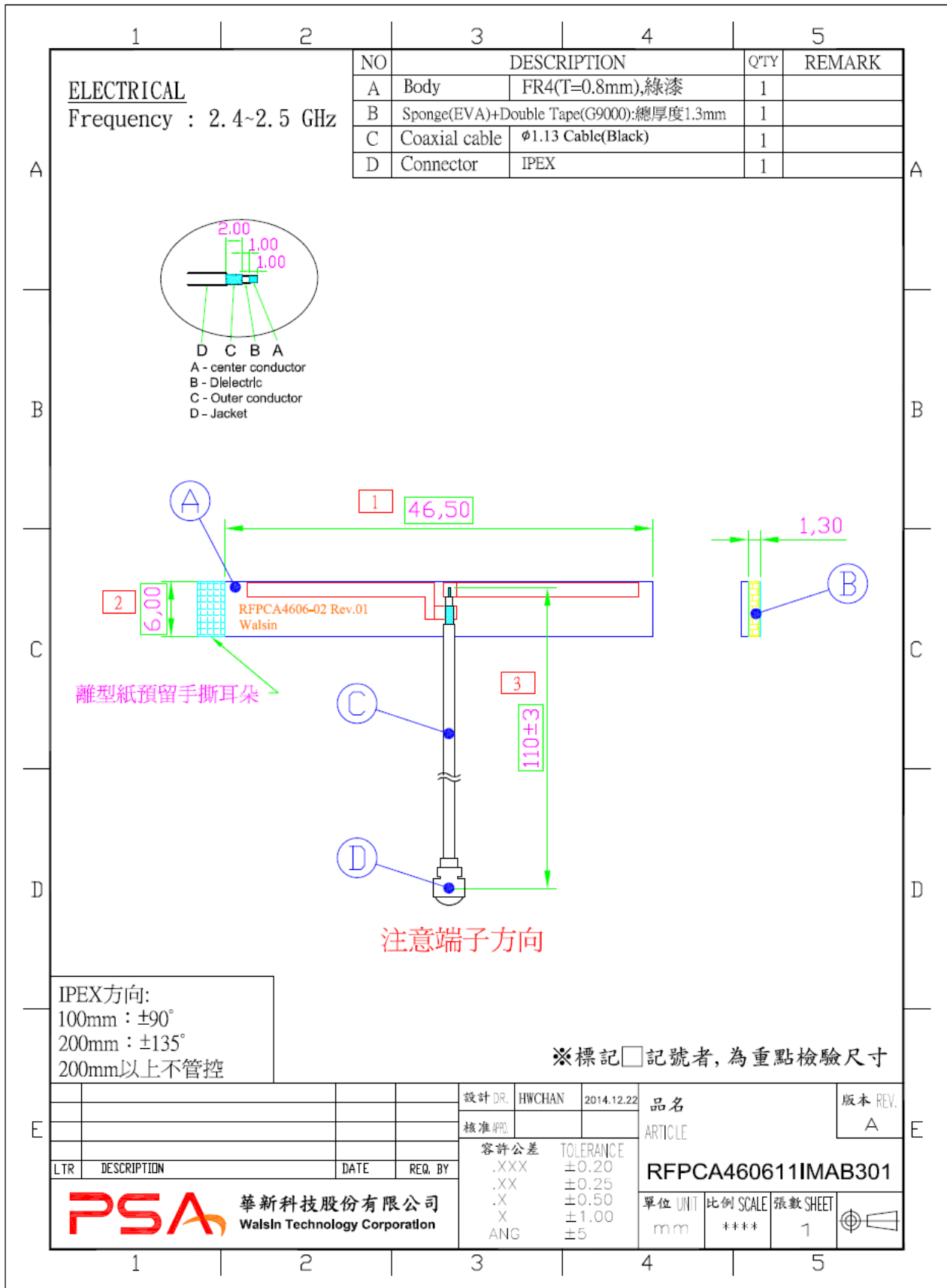
### MATERIAL TABLE

Items	Description
Cable	∅ 1.13(Black)
Connector	IPEX
FPC Antenna	FR4(綠漆板) T=0.8mm
Sponge+Double Tape	EVA+G9000

### ORDERING RULE

RF	PCA	4606	11	I	M	A	B	3	01
Type Code	Product Code	PCB Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	PCA: PCB Antenna	Per 2 digits of length, width  e.g.: 4606 Length 46.5mm, Width 6.0mm	2 digits for cable length  e.g.: 11 Cable Length:11cm	A: N C:MCX D:IPEX III E: IPEX IV F: IPEX A13 H: Hirose I: IPEX M: MMCX S: SMA T: TNC U:MURATA N: None	A: Reverse Female B: Reverse Male F: Female M: Male N: None	0: 0GHz 3: 3GHz 5: 5GHz 6: 6GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.2/5.8 GHz tri-band N: NFC T: LTE band W: WCDMA band	B: MP T:Durin g Test X: Pile Run	0:None 1:∅ 0.81 3:∅ 1.13 6:RG316 7:∅ 1.37 8:RG178	01~99 series number

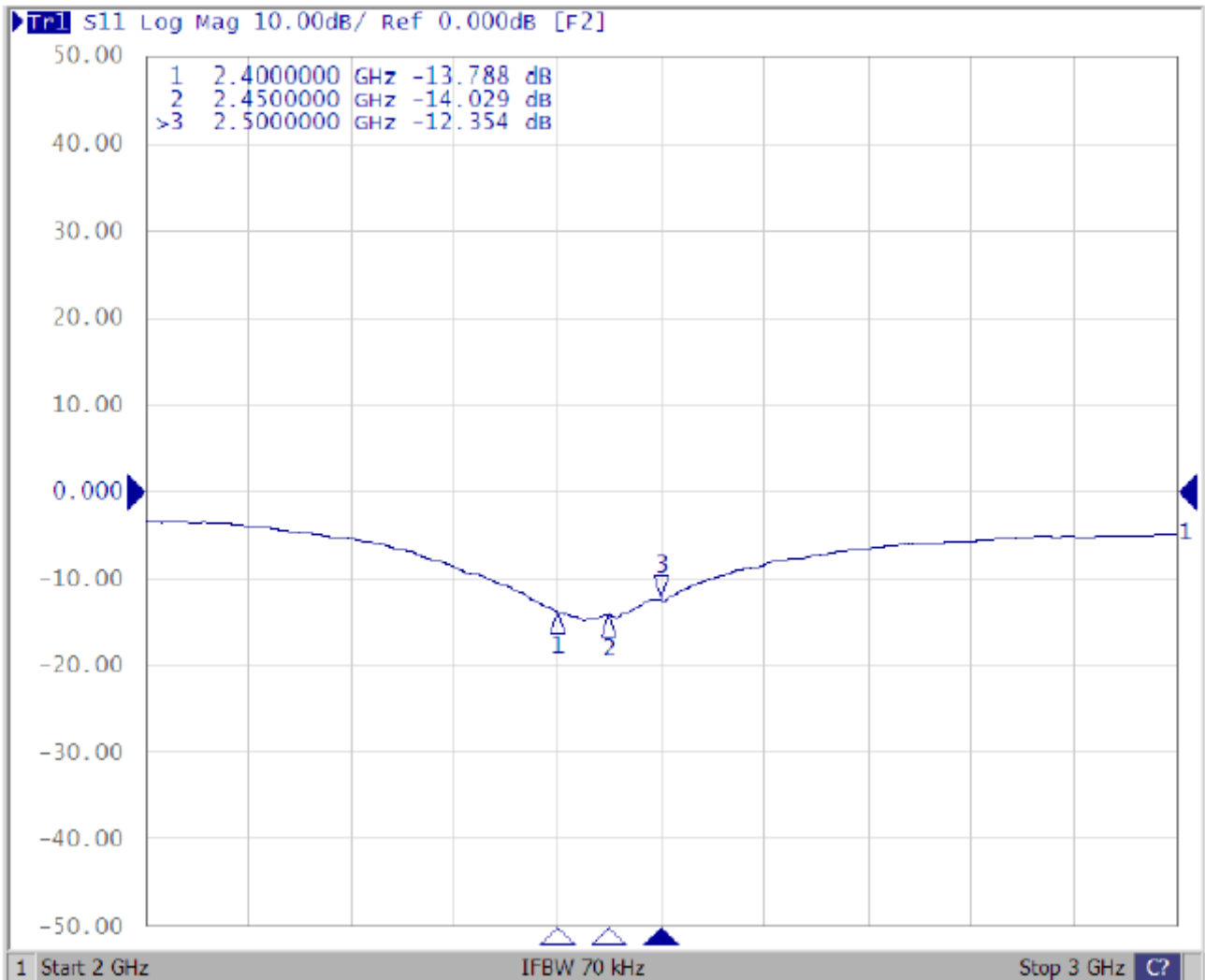
Appendix A: Dimensions



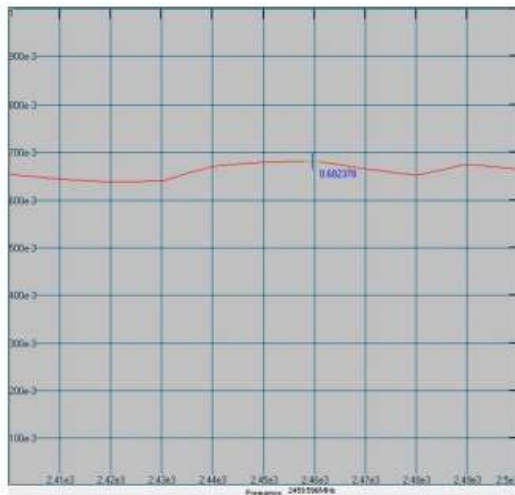
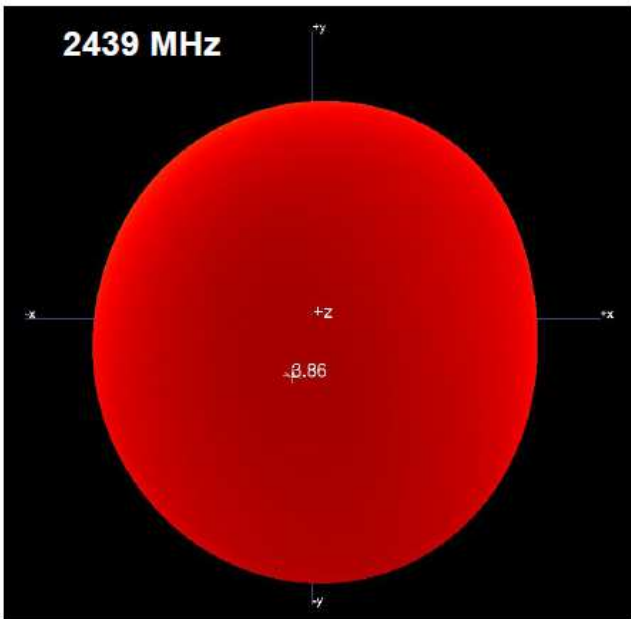
# Test Report

## ELECTRICAL CHARACTERISTICS

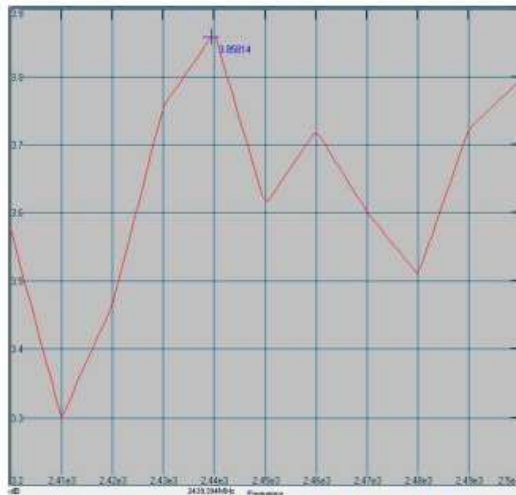
### Return Loss



**Antenna Efficiency & Peak Gain**  
2400~2500 MHz



**Maximum Efficiency at 2459 MHz : 68.2 %**



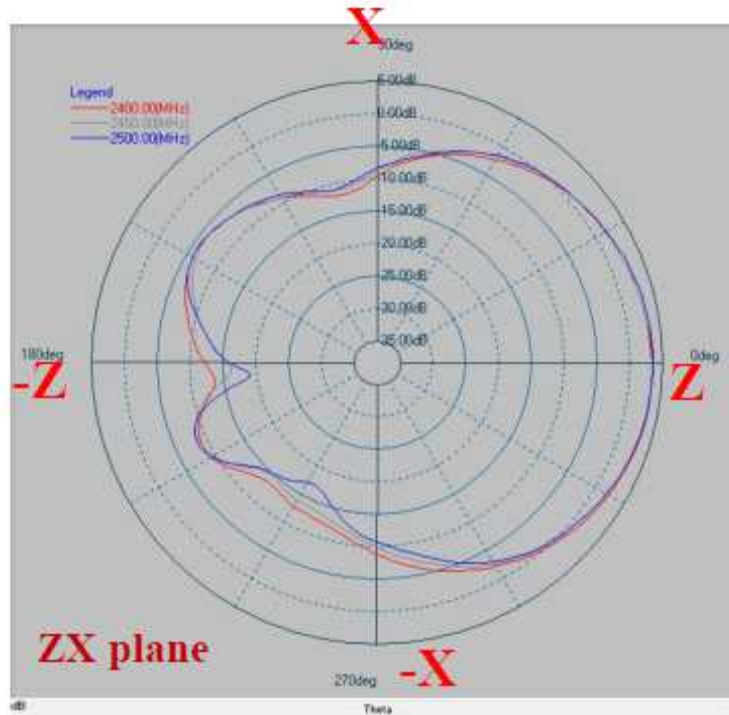
**Maximum Peak Gain at 2439 MHz : 3.85dBi**

## RADIATION PATTERN

2400~2500 MHz

Phi=0.00deg

Gain . dB



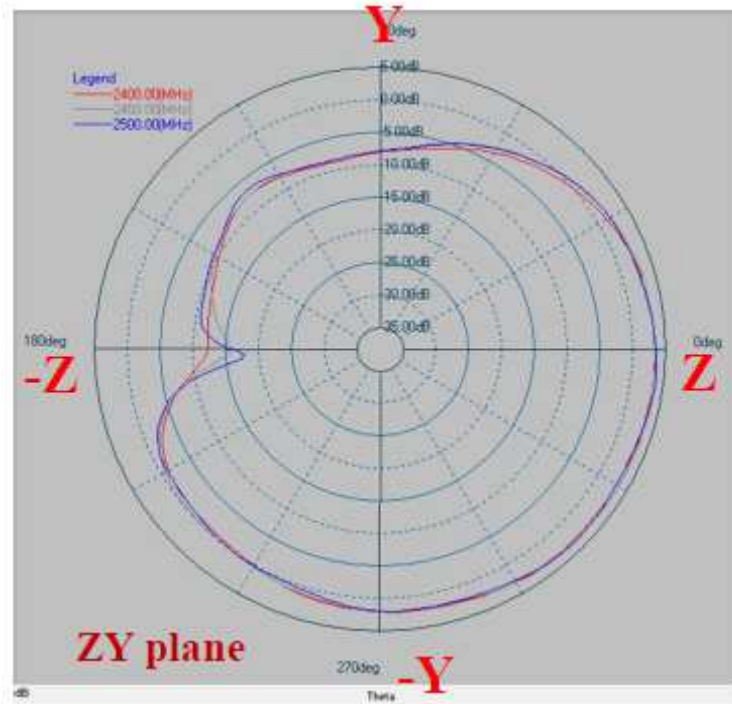
	ZX plane	
Frequency [MHz]	Max Value [dB]	Average [dB]
2400	3.52	-2.13
2450	3.42	-2.24
2500	3.62	-2.18



**2400~2500 MHz**

**Phi=90.00deg**

**Gain . dB**

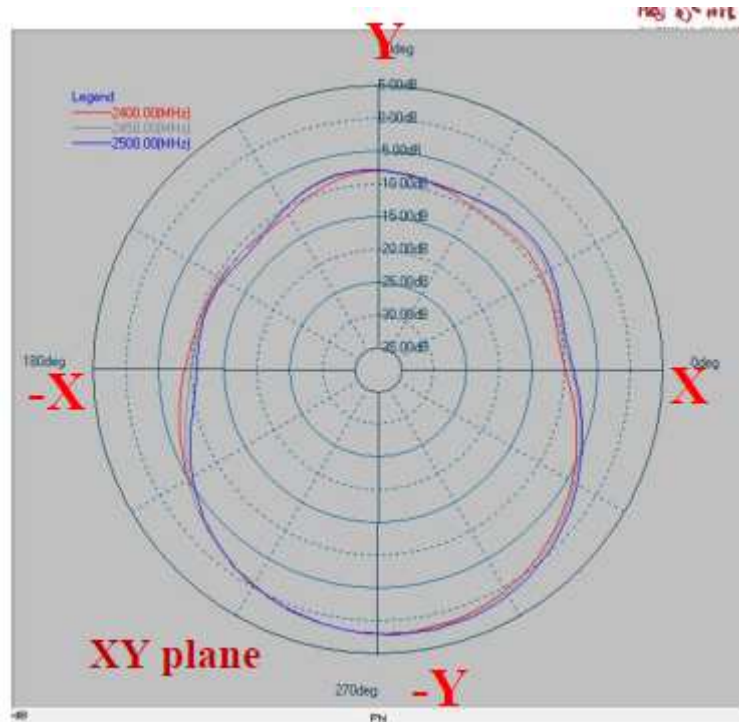


	ZY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]
<b>2400</b>	<b>3.53</b>	<b>-0.10</b>
<b>2450</b>	<b>3.61</b>	<b>0.12</b>
<b>2500</b>	<b>3.79</b>	<b>-0.01</b>

2400~2500 MHz












Theta=90.00deg

Gain . dB



	XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]
2400	1.83	-3.81
2450	1.91	-3.62
2500	2.10	-3.52

# Packaging

華新科技股份有限公司						
RFPCA460611IMAB301製品工程表			頁次： 4 之 3			
			規章編號：	版次：A版		
制修訂日期：2015/1/5						
<b>產品包裝圖示：</b>						
<b>圖一</b>						
	⇒		⇒			
單pcs產品		PE袋		每10pcs一扎，每PE袋放10扎，PE袋需封口		
<b>圖二</b>						
	⇒		⇒			
珍珠棉		外箱		珍珠棉放入外箱		
<b>圖三</b>						
	⇒		⇒		⇒	
<b>產品包裝規範：</b>						
1.將每10pcs產品使用珍珠棉將IPEX端用白色橡皮筋包扎,然後裝入PE袋內，每PE袋裝10扎，每PE袋100pcs，PE袋需封口，如圖示（一）						
2.將珍珠棉放入外箱中（如圖示二）						
3.將裝好的成品(如圖示三)放入外箱中，每箱放2000pcs產品，上下各放1片珍珠棉，將包裝好的外箱貼標籤，標籤需貼到最小包裝。						
<b>製造標籤圖示：</b> 實物標籤內容僅作參考 具體內容以出貨料號為準 (NO 1): Spec desc.						
			(NO 2): 料號 批號 數量(PN & LOT & QTY)			
			(NO 3): 盤點條碼(Inventory check barcode)			
			(NO 4): 列印時間-總張數(print system time-total piece this print)			
			(NO 5): 表示 BULK LOT			
			(NO 6):表示該張標籤流水序號			
核准：	何耀輝	審核：	袁蕊蕊	制定：	印芸	