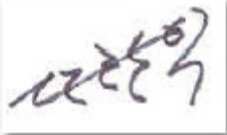


To : Sensys



Approval Sheet

Products	RFID PATCH ANTENNA ELEMENTS		
Customer	Sensys		
Customer CODE	-		
Supplier	PARTRON		
Supplier CODE	ANPS2450D5ZLB		
Sensys	By designed	By checked	By approved
PARTRON	By designed	By checked	By approved
	이 두 연	김 홍 기	
	D. Y. LEE	H. K. Kim	C. I. Jeon

2016. 06.18
PARTRON CO.,LTD.

To : Sensys



SPECIFICATION
MODEL: ANPS2450D5ZLB

RFID PATCH ANTENNA



2. Application

This specification covers the RFID patch antenna element used in RFID band system.

3. Part No

A N P S 2450 D 5 Z L B

AN : Antenna Group
P : Antenna type [**P** : Patch]
S : Antenna Mode [**S** : Single, **D**: Dual , **L**: Linear]
2450 : Center frequency [Unit : MHz]
D : Size (W x L) [**B** : 20x20, **A**:18x18, **C**:25x25, **D**:35x35,]
5 : Patch Thickness [**4** : 4mm, **3** : 3mm, **2** : 2mm]
Z : Patch Thickness [**Z** : .0mm, **A** : .1mm, **B** : .2mm, ... , **I** : .9mm]
ex) **4Z** : 4.0mm, **4A** : 4.1mm, **2C** : 2.3mm, **3Z** : 3.0mm
L : Supervisor Code.
B : Serial No.

4. Lot numbering

P G M

P : Partron co., Ltd.
G : Year [**A**:2010, **B**:2011,]
M :Month [**1** :JAN **9**:SEP, **O**:OCT, **N**:NOV, **D**:DEC]

5. Test condition

5-1 Typical condition

Temperature : 20 ℃

Humidity : 65 %RH

5-2 Standard condition

Temperature : 5 ~ 35 ℃

Humidity : 20 ~ 85 %RH

6. Temperature range

6-1 Operating : -40 ~ +90 ℃



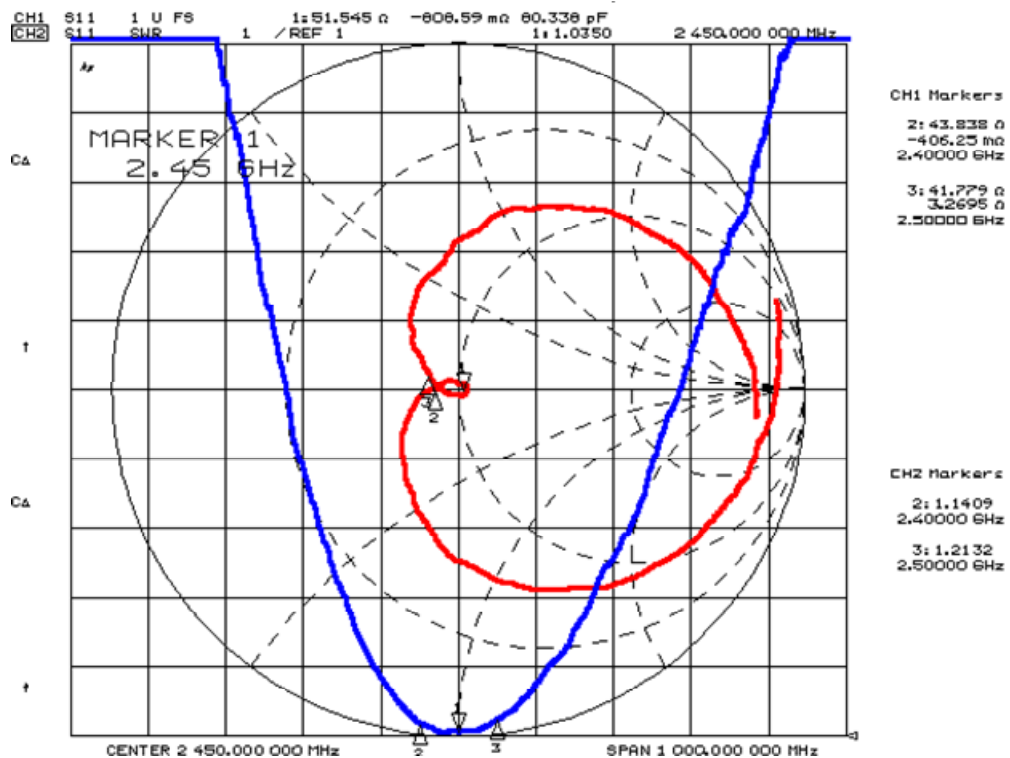
7. Electrical characteristics

Item	Unit	User's Spec	Remarks
Dimension [LxWxT]	mm	34x34x5.0	Tolerance L,W : ±0.5 / T : ±0.3
Operating Frequency	MHz	2400 ~2500	@Partron 49x49mm JIG @VSWR<2.0:1
Impedance	Ω	50	-
Polarization	-	RHCP	-
Gain @Zenith	dBic typ.	5.5	@Partron 49x49mm JIG
Freq. temperature coefficient	ppm/°C	20 max.	-40°C to +90°C

8. Measurement plot graph

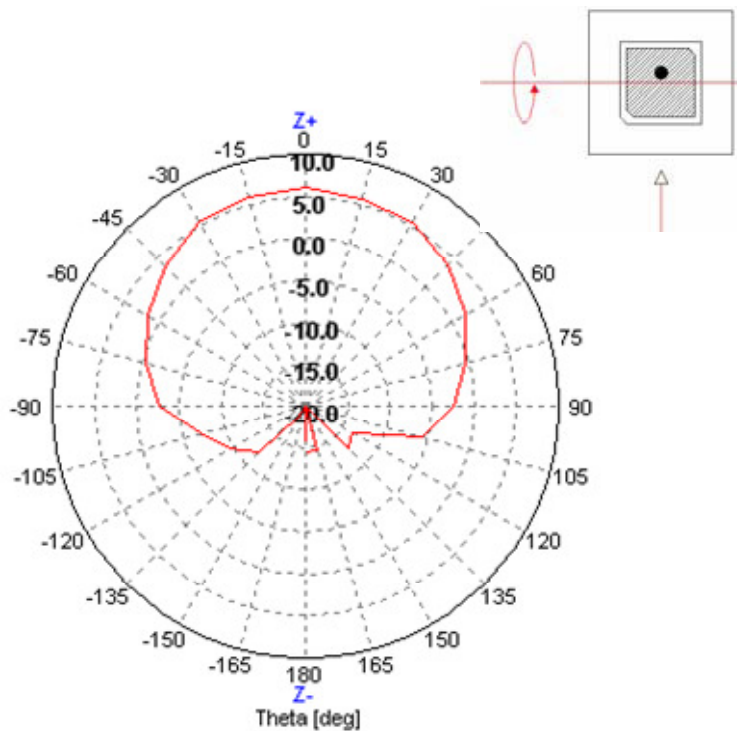
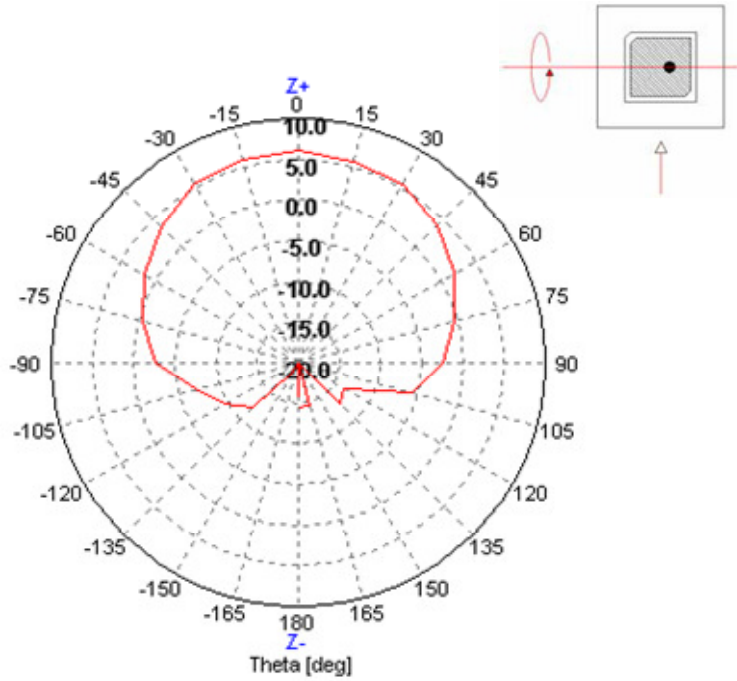
8-1. Smith Chart & V.S.W.R.(Return Loss) plot graph

Partron Test Jig (49x49mm)



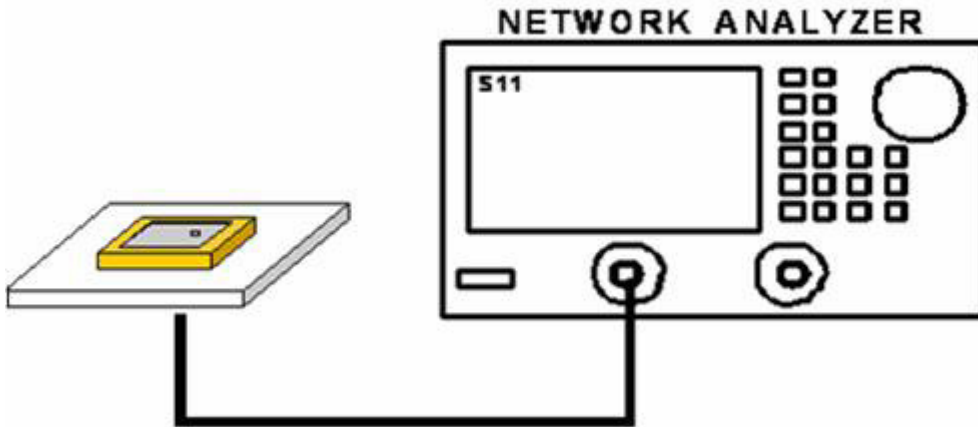
8-2. Radiation pattern

Partron 49x49mm JIG.

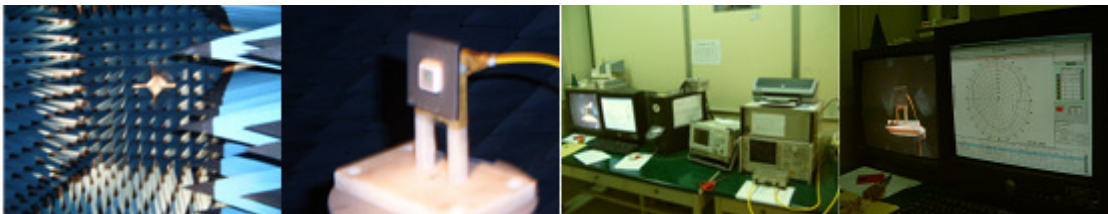
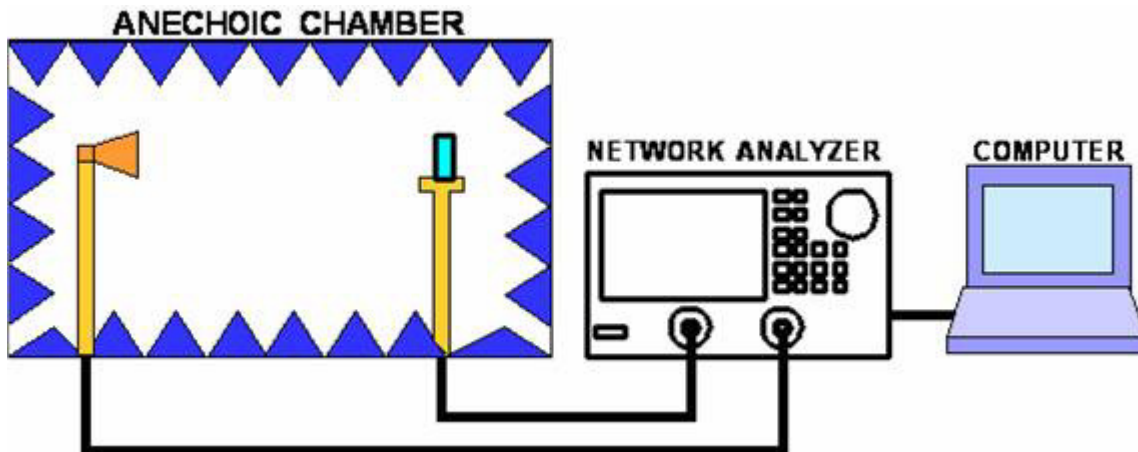


9. Measurement condition

9-1. Smith Chart & V.S.W.R.(Return Loss) measurement

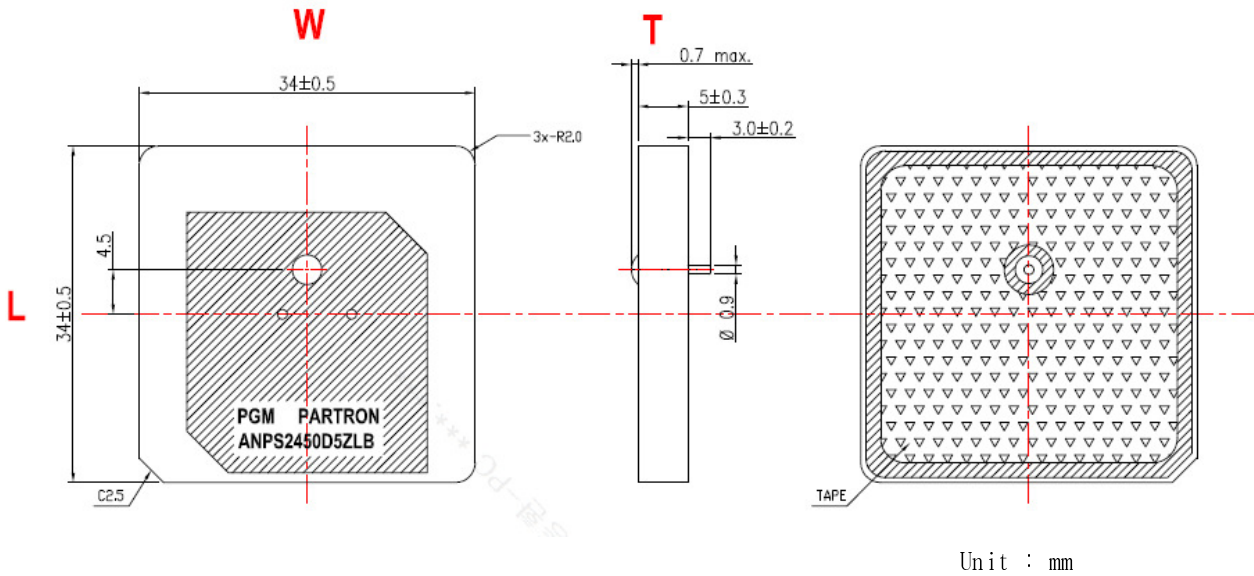


9-2. Gain measurement





10. Mechanical drawing



11. Reliability Specification

11-1. Environment Test

Item	Test Condition	Limit
High Temperature Resistance	+90 °C ± 3 °C, 120hr	*After the test, specimen would be kept at 25 °C ± 5 °C for 1 hours *specimen shall meet the electrical specification
Low Temperature Resistance	-40 °C ± 3 °C, 120hr	
Humidity Resistance	+60 °C ± 3 °C, RH90~95 %, 120hr ± 2hr	

11-2. Thermal Shock Test , Reflow Test

Item	Test Condition	Limit
Thermal Shock	-40 °C ± 3 °C (1Hr) ↔ +90 °C ± 3 °C (1Hr), 15 cycle	SAME as 11-1

11-3. Mechanical Test

Item	Test Condition	Limit
Random Vibration	Frequency 10~500Hz , 4×9.8ms ² (G), Sweep time 15min , X.Y.Z each 5times	*After the test, specimen shall meet the electrical specification

To : Sensys

12. Soldering condition

Manual soldering (by soldering iron)

Soldering Temperature : $340\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$, 5sec max.

13. Guaranty

Products having trouble or failure under normal use within one year of delivery shall be repaired or exchanged at no charge.

14. Packing

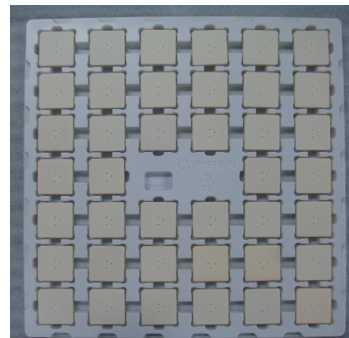
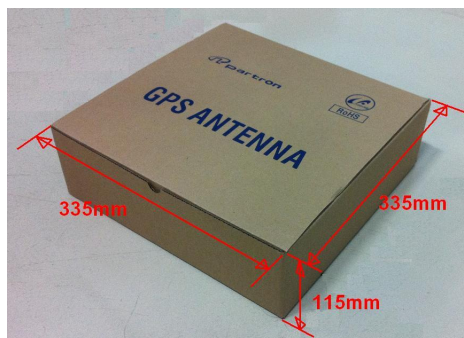
14-1. Packing tray

a. package quantity : 40pcs / tray

14-2. Packing box

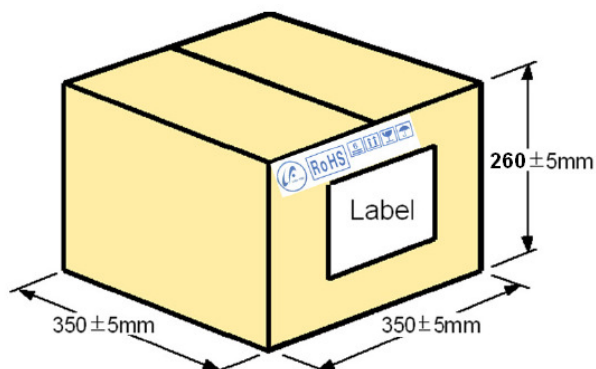
a. inner box

; put 5 tray which contains 200 patch antennas into inner box



b. out box

; put 2 inner boxes(400 pcs) which contains every 5 tray into out box



To : Sensys



15. Inspection Sheet

P A R T R O N	Plan	Judging	Decision	<h1 style="margin: 0;">Inspection Sheet</h1>				솔리테크	Plan	Judging	Decision		
Name		Partron		Partname		RFID ANTENNA		Test Lot		Out Lot			
Model Name		ANPS2450D5ZLB		CODE NO				LOT- No.					
Test Date		Partron 2016. 05. 30		Tester		Partron		Decision		Partron			
		GSI				GSI				GSI			
Test Item		Test Method				Test Condition				Set Lot		Lot	
		Partron								Partron		GSI	
Out View		KS A ISO 2859-1 G-II				0.65(c=0)				n=		Pn=0	
Size		Check Test				c=0				n= 20		Pn=0	
Electric		KS A ISO 2859-1 S-3				0.65(c=0)				n=		Pn=0	
Item	Electric Specific							size					
Spec	V. S. W. R (2.0MAX) 2400MHz		V. S. W. R (2.0MAX) 2450MHz		V. S. W. R (2.0MAX) 2500MHz			L 34±0.5mm		W 34±0.5mm		T 5.7mm max	
section	Partron		Partron		Partron			Partron		Partron		Partron	
1													
2													
3													
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6													
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x													
σ													
Cpk													
DECISION													
P A R T R O N													