

## SPECIFICATION

Part No. : **PC91.07.0100A.db**

Product Name : **TheStripe™** 915Mhz PCB Antenna  
w/100mm IPEX 1.13mm diameter MHF connector  
w/ foam attachment for assembly

Features : 34mm\*7mm\*0.8mm(PCB)  
13mm\*6mm\*7mm(foam)  
Compatible with Hirose U.FL

Photo:



### REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Dec 09 <sup>th</sup> 2009	All	New Product	TW Product Centre	Ronan Quinlan

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## 1.0 Introduction

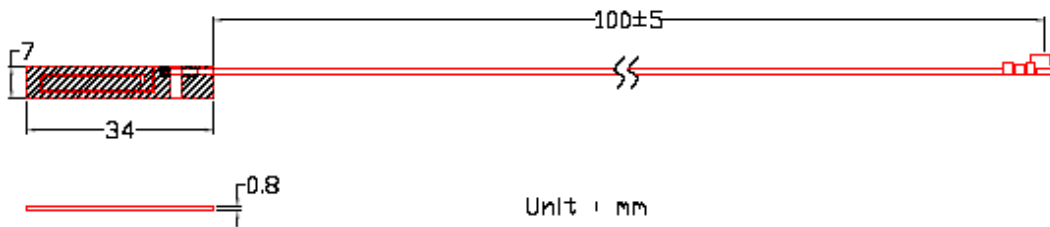
This miniaturized low profile PCB antenna is based on smart TheStripe™ antenna technology. It consists of a PCB antenna and 1.13mm mini coaxial cable with Ipex MHF (Hirose U.FL comp) connector.

## 2.0 Typical Antenna Performance in free space

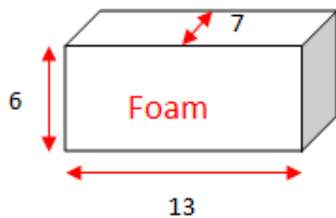
Parameter	Specification
Applications	915MHz ISM Band
Frequency Band	902-928MHz
Efficiency	52%
Return Loss	<-10dB
VSWR	<2.0:1
Impedance	50 Ohm
Polarization	Horizontal
Radiation Pattern	Omni-Directional

### 3.0 Mechanical Dimensions

#### 3.1 Dimensions and Drawing(FR4 PCB)



#### 3.2 Dimensions and Drawing(foam)



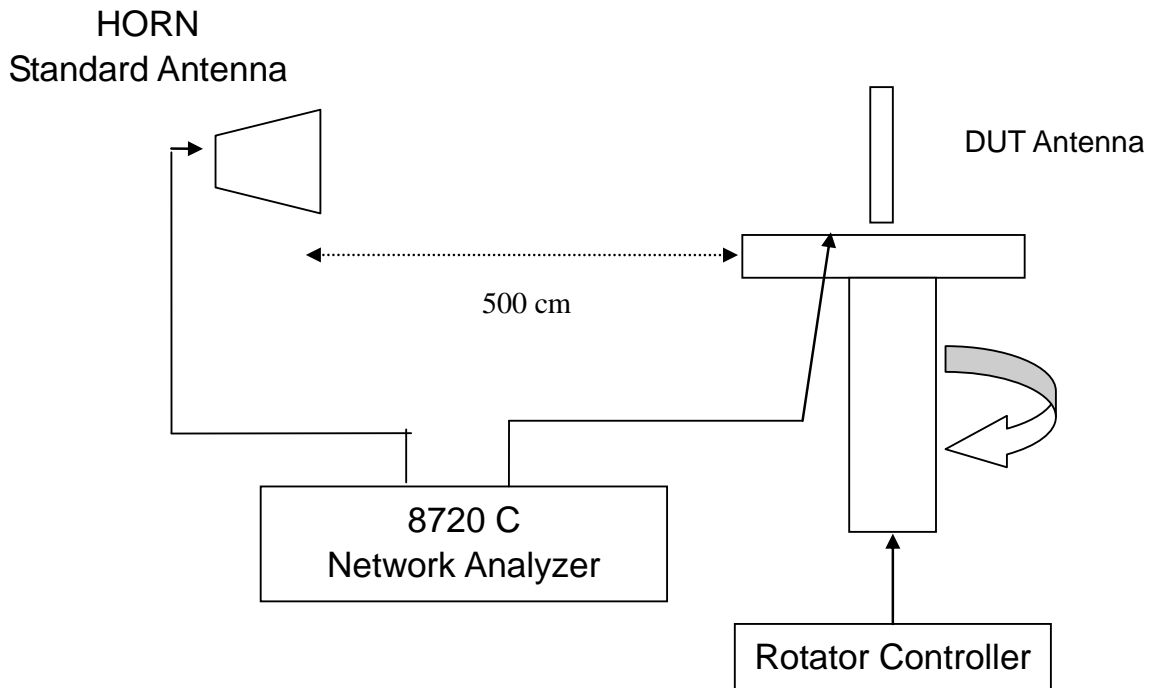
#### 3.3 Cable & Connector

3.2.1	RF Cable	Ø1.13 Coaxial Cable L = 100 +/- 3 mm
3.2.2	RF Connector	IPEX MHF (U.FL compatible)

## 4.0 Antenna Test Setup and Results

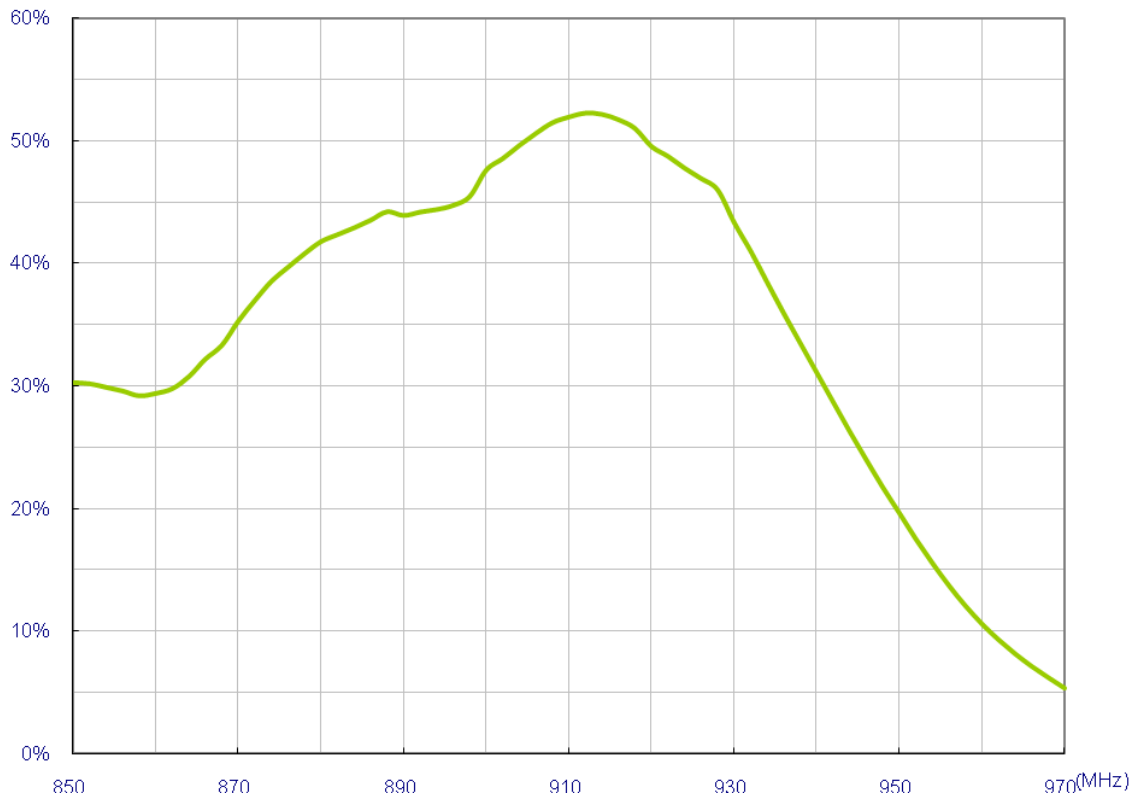
### 4.1 Equipment

#### Radiation Pattern Testing - Anechoic Chamber



## 4.2 Efficiency

Efficiency of PC.91 with 100mm coaxial in free space



PC.91 Efficiency Data													
Band(MHz)	850	860	870	880	890	900	910	920	930	940	950	960	970
Gain	-0.13	-0.23	0.85	1.72	1.89	2.26	2.67	2.42	1.74	0.14	-1.94	-4.74	-7.54
Efficiency (%)	30.26	29.37	35.3	41.74	43.87	47.57	51.89	49.49	43.29	31.06	19.61	10.6	5.35
Efficiency dB	-5.19	-5.32	-4.53	-3.79	-3.58	-3.23	-2.85	-3.06	-3.64	-5.08	-7.07	-9.75	-12.72

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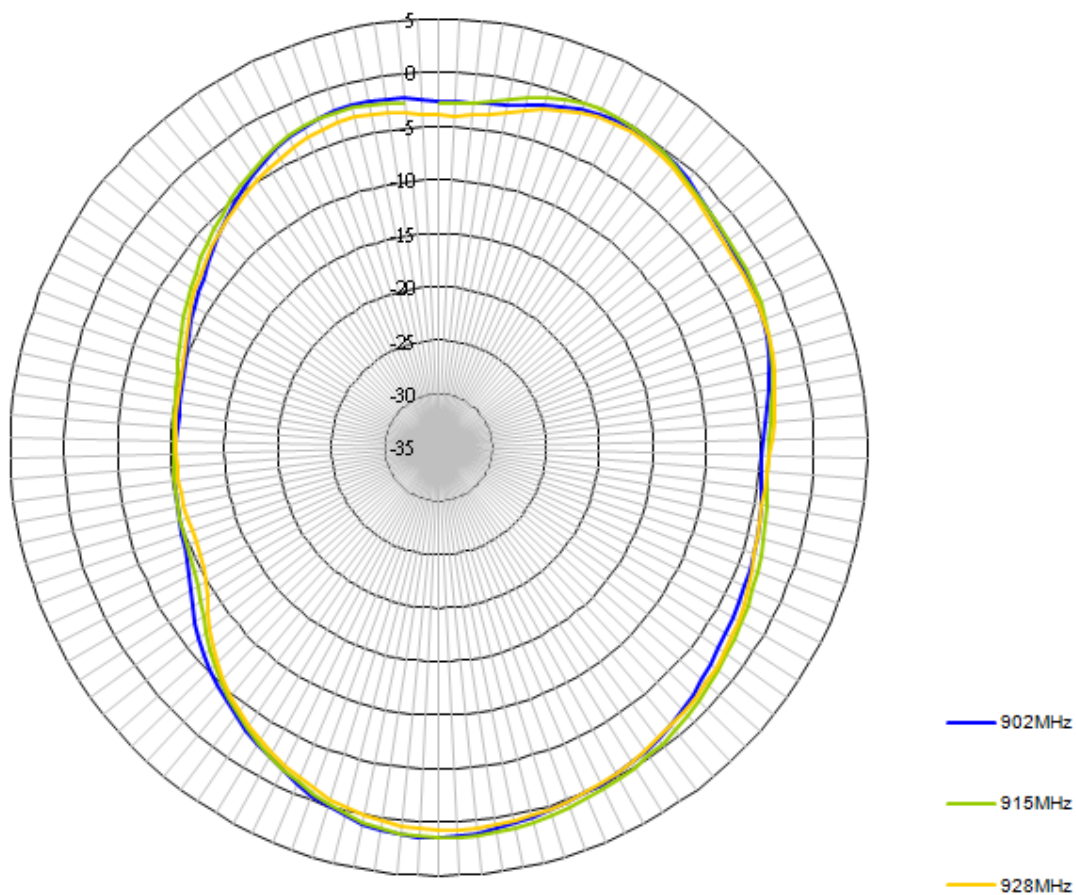
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## 4.3 Radiation Patterns

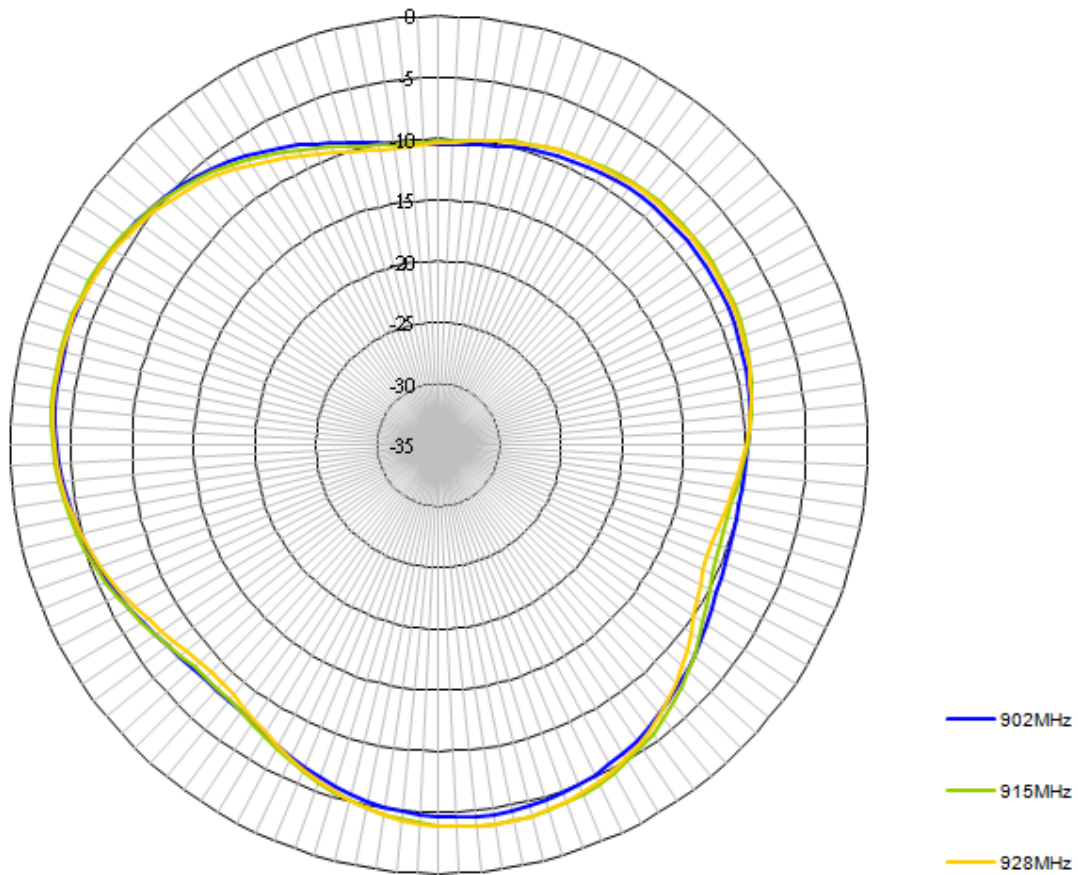
### 4.3.1 E-Plane (Horizontal/Azimuth Plane)

PC.91 E-plane Radiation



### 4.3.2 H-Plane (Vertical/Elevation Plane)

PC.91 H-plane Radiation



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