

## SPECIFICATION

- Part No. : **PC91.07.0100A.db**
- Product Name : **TheStripe™** 915Mhz PCB Antenna  
100mm IPEX 1.13mm diameter MHF connector  
with foam attachment for assembly
- Features : 34mm\*7mm\*0.8mm(PCB)  
13mm\*6mm\*7mm(foam)  
Compatible with Hirose U.FL
- Photo:



# 1. Introduction

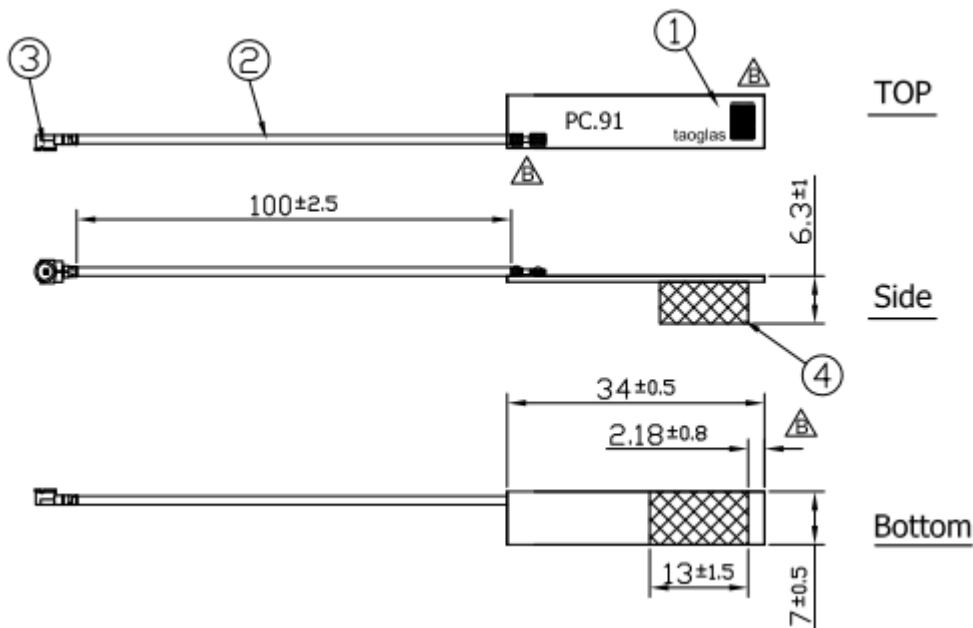
This miniaturized low profile PCB antenna is based on smart TheStripe™ antenna technology. It consists of a PCB antenna and 1.13mm mini coaxial cable with Ipex MHF (Hirose U.FL comp) connector.

# 2. 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. Mechanical Dimensions

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

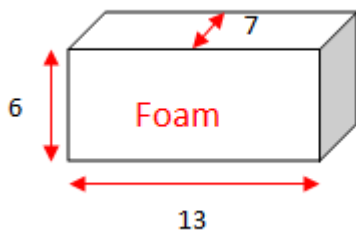


NOTES:

- NO DREGS OR INSUFFICIENT SOLDERING. SOLDER THICKNESS 0.3-1.7mm
- THE SOLDER MUST BE SMOOTH AND FULL TO THE EDGES OF THE PAD. THE SOLDER MUST NOT EXTEND OUTSIDE OF THE PAD AREA.
- THE CONNECTOR POSITION HAS SPECIAL ORIENTATION TO THE PCB AS PER DRAWING.
- SOLDERED AREA.  
- FOAM  
- ALL MATERIAL MUST BE RoHS COMPLIANT. 
- OPEN/SHORT, INSERTION LOSS QC, VSWR REQUIRED. 

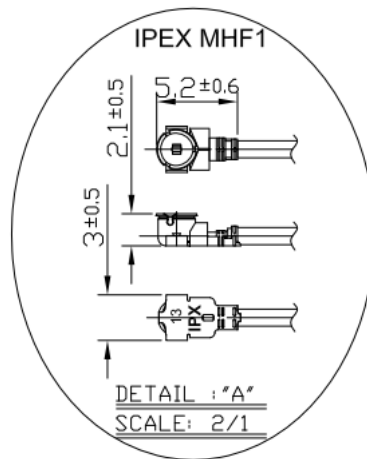
	Name	P/N	Material	Finish	QTY
1	PC91 PCB	100211C0400XXA	FR4 0.8t	Black	1
2	1.13 Coaxial Cable	OD.113.J	FEP	Black	1
3	IPEX MHFI	IPEX.MHF1.113	Brass	Gold	1
4	Double Sided Adhesive + Closed Cell Foam	0010C0000XXA	CR4305+3M 9472	Black	1

#### 3.2 Dimensions and Drawing(foam)



### 3.3 Cable & Connector

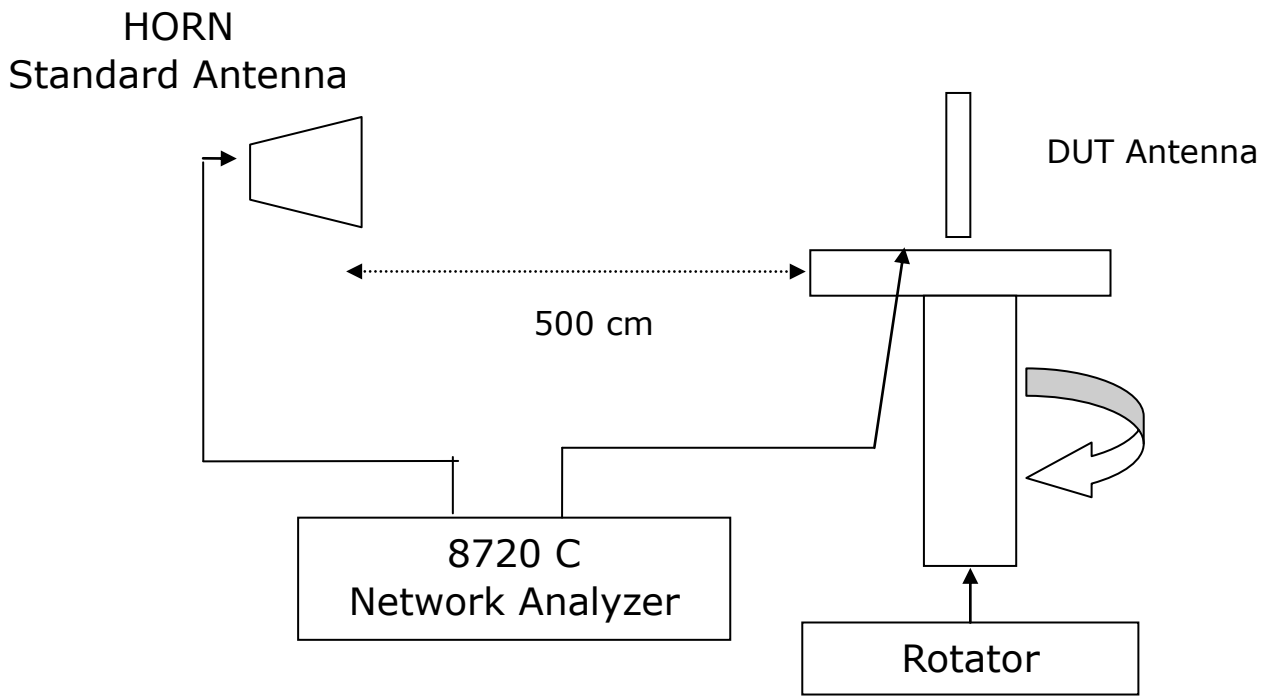
3.2.1	RF Cable	Ø1.13 Coaxial Cable L = 100 +/- 3 mm
3.2.2	RF Connector	IPEX MHF (U.FL compatible)



## 4. Antenna Test Setup and Results

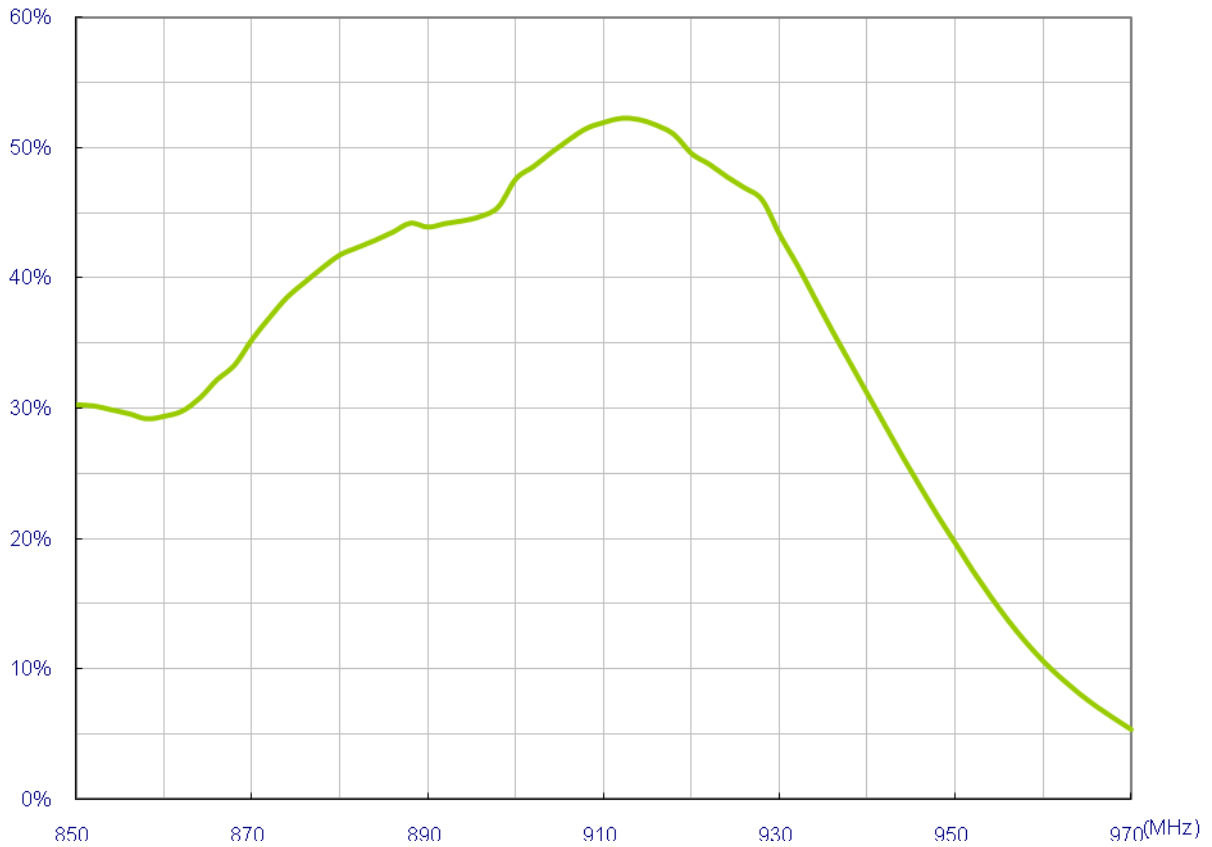
### 4.1 Equipment

Radiation Pattern Testing - Anechoic Chamber



## 4.2 Efficiency

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

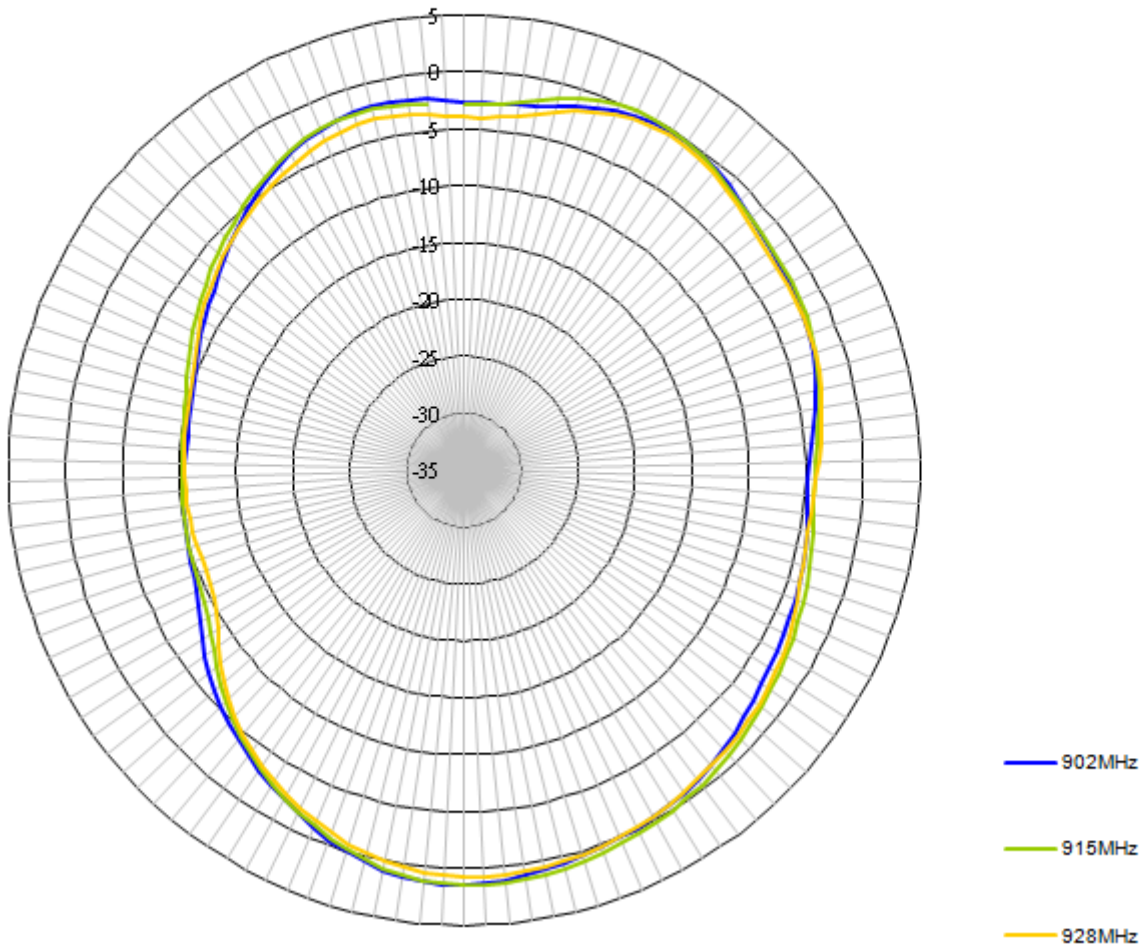


PC.91 Efficiency Data													
Band(MHz)	850	860	870	880	890	900	910	920	930	940	950	960	970
Gain	-0.13	-0.23	0.85	1.72	1.89	2.26	2.67	2.42	1.74	0.14	-1.94	-4.74	-7.54
Efficiency (%)	30.26	29.37	35.3	41.74	43.87	47.57	51.89	49.49	43.29	31.06	19.61	10.6	5.35
Efficiency dB	-5.19	-5.32	-4.53	-3.79	-3.58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

## 4.3 Radiation Patterns

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

FC.91 E-plane Radiation



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

FC.91 H-plane Radiation

