



**THE DATASHEET OF  
PC91.07.0100A.DB**



## SPECIFICATION

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



## 1. Introduction

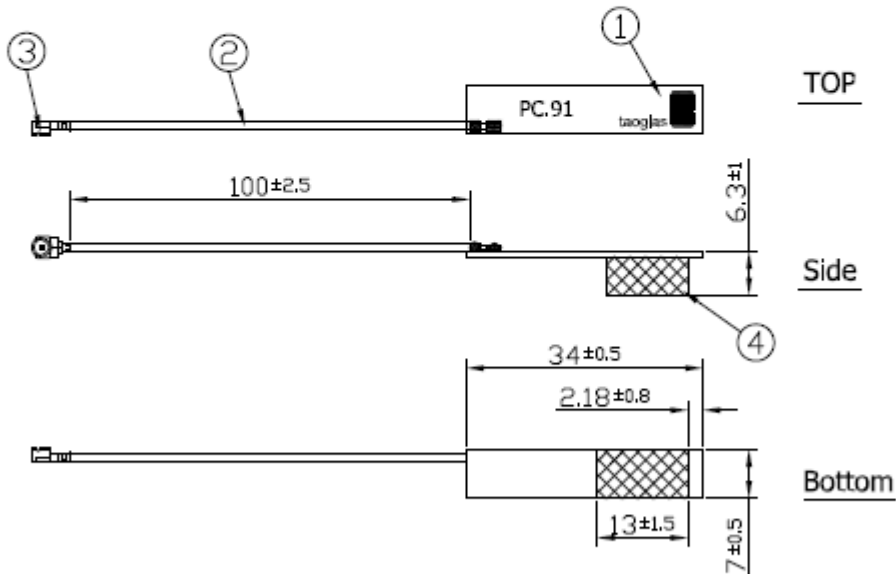
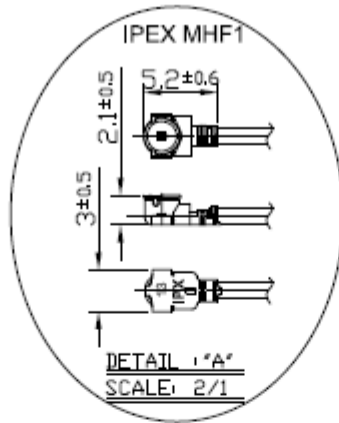
This miniaturized low profile PCB antenna is based on smart TheStripe™ antenna technology. It consists of a PCB antenna and 1.13mm mini coaxial cable with Ipex MHF (Hirose U.FL comp) connector.



## 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	Omnidirectional

### 3. Mechanical Dimensions

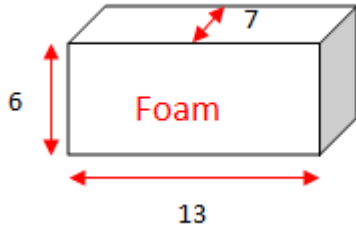
#### 3.1 Dimensions and Drawing(FR4 PCB)



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

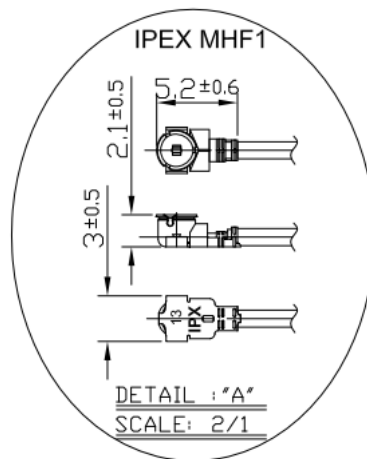
Name	PIN	Material	Finish	QTY
1 PCB1 PCB	100211CD400XXA	FR4 0.8	Black	1
2 1,13 Coaxial Cable	00,113,J	FEP	Black	1
3 IPEX MHF1	IPEX.MHF1.113	Brass	Gold	1
4 Double Sided Adhesive + Closed Cell Foam	0010C000000A	CR4305-3M 9472	Black	1

### 3.2 Dimensions and Drawing(foam)



### 3.3 Cable & Connector

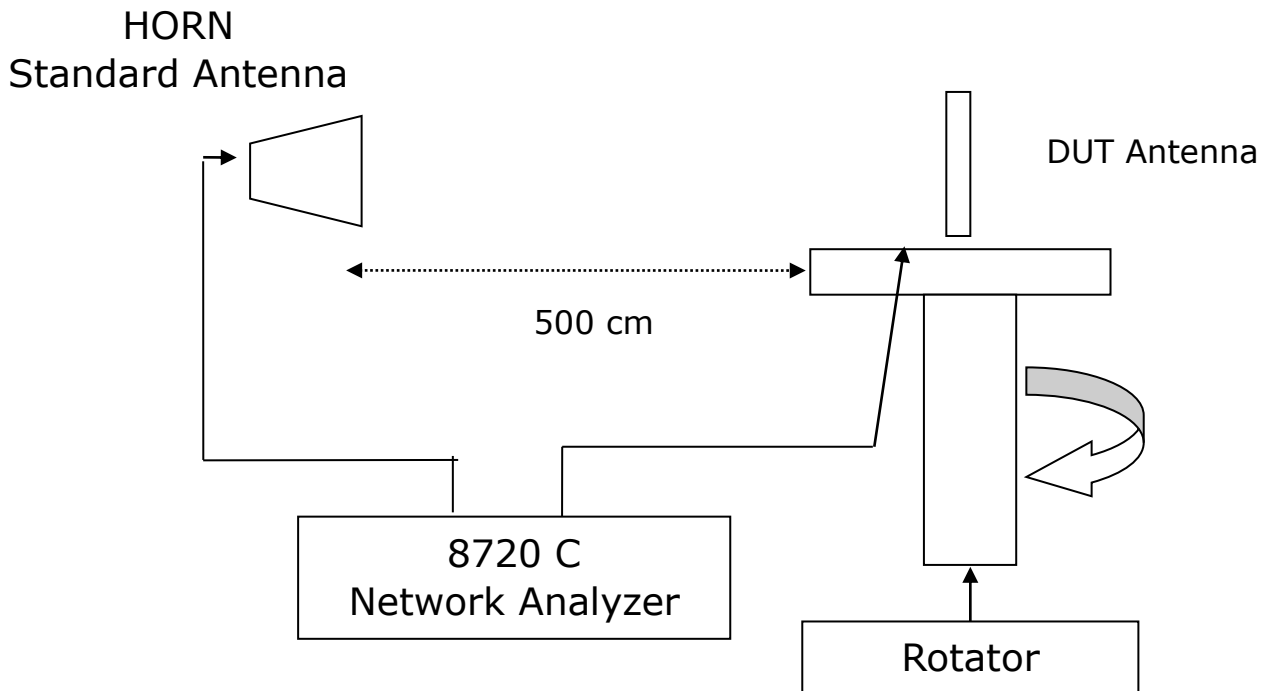
3.2.1	RF Cable	Ø1.13 Coaxial Cable L = 100 +/- 3 mm
3.2.2	RF Connector	IPEX MHF (U.FL compatible)



## 4. Antenna Test Setup and Results

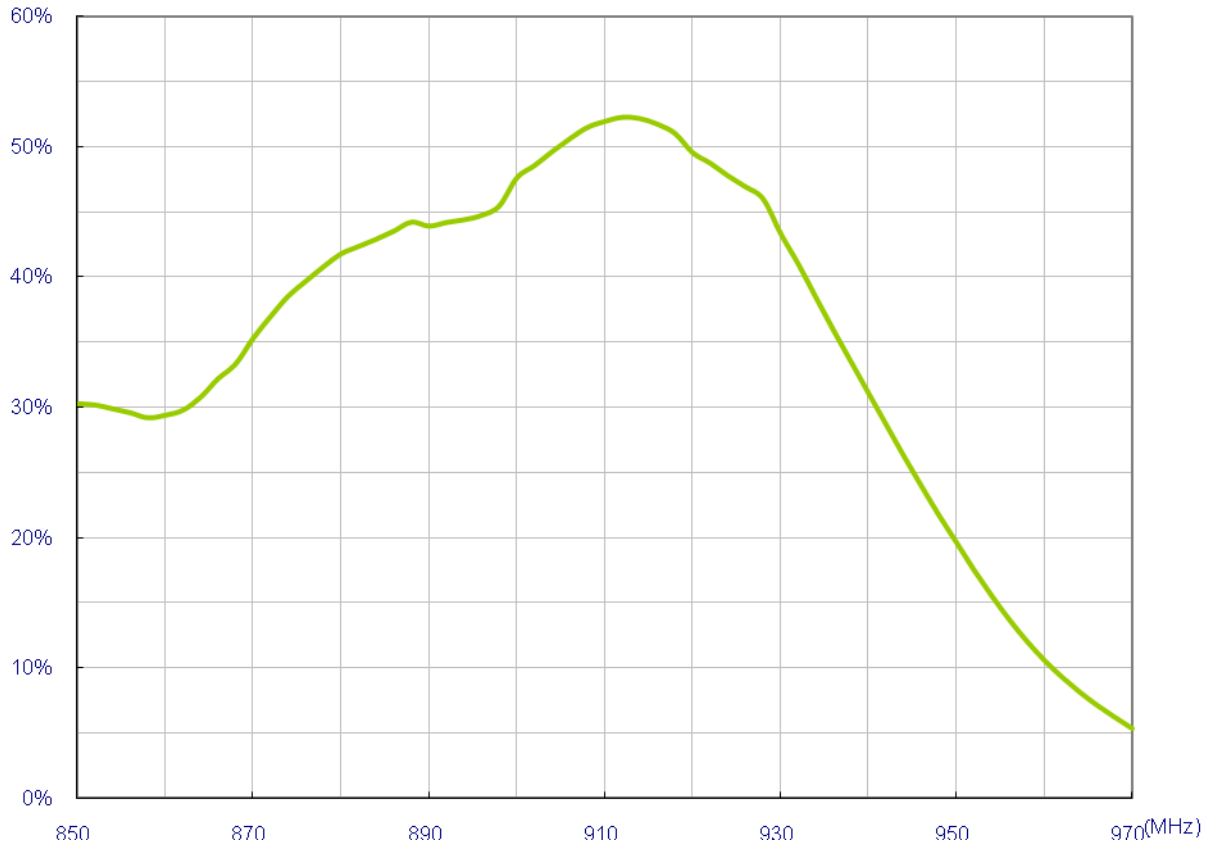
### 4.1 Equipment

Radiation Pattern Testing - Anechoic Chamber



## 4.2 Efficiency

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

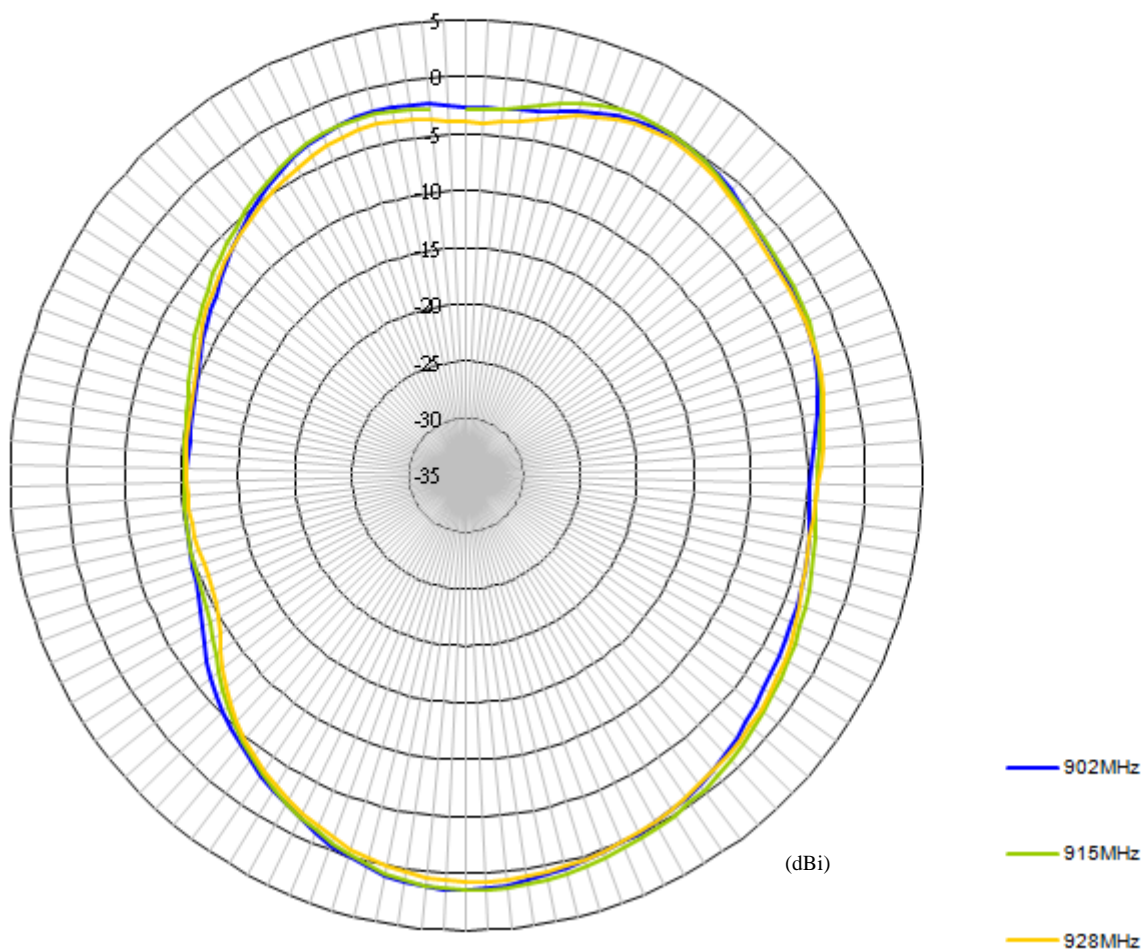


PC.91 Efficiency Data													
Band (MHz)	850	860	870	880	890	900	910	920	930	940	950	960	970
Gain (dBi)	-0.13	-0.23	0.85	1.72	1.89	2.26	2.67	2.42	1.74	0.14	-1.94	-4.74	-7.54
Efficiency (%)	30.26	29.37	35.3	41.74	43.87	47.57	51.89	49.49	43.29	31.06	19.61	10.6	5.35
Efficiency (dB)	-5.19	-5.32	-4.53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

## 4.3 Radiation Patterns

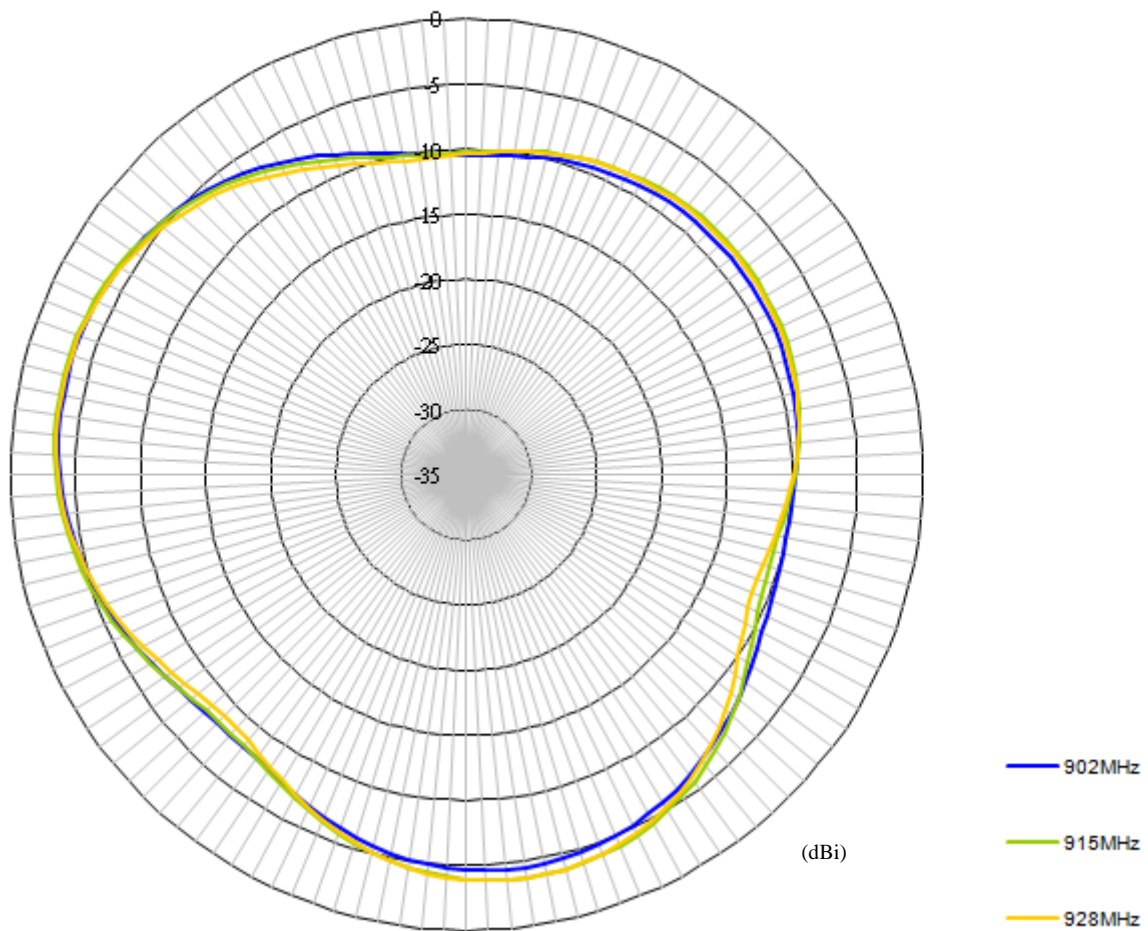
### 4.3.1 E-Plane (Horizontal/Azimuth Plane)

FC.91 E-plane Radiation



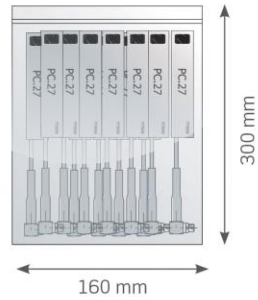
### 4.3.2 H-Plane (Vertical/Elevation Plane)

FC.91 H-plane Radiation

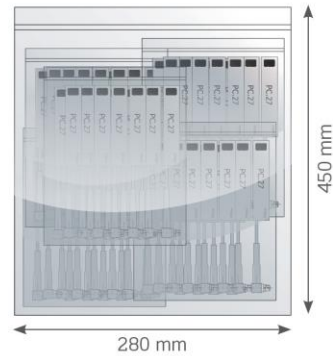


## 5. Packaging (Unit: mm)

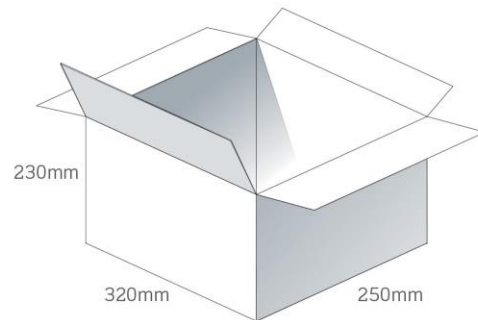
100pc PC91.07.0100A.db per PE Bag  
 Bag Dimensions - 300 x 160mm  
 Weight - 103g



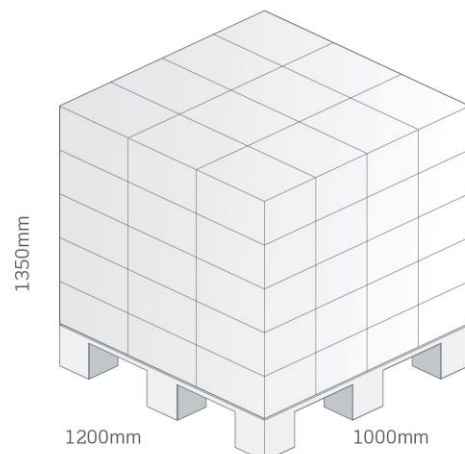
1000pcs PC91.07.0100A.db per PE Large Bag  
 Bag Dimensions - 450 x 280mm  
 Weight - 1.03kg



2000 pcs PC91.07.0100A.db per carton  
 Carton - 320 x 250 x 230mm  
 Weight - 2.08Kg



Pallet Dimensions 1200x 1000 x 1350mm  
 60 Cartons per Pallet  
 12 Cartons per layer  
 5 Layers



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