

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



1. Introduction

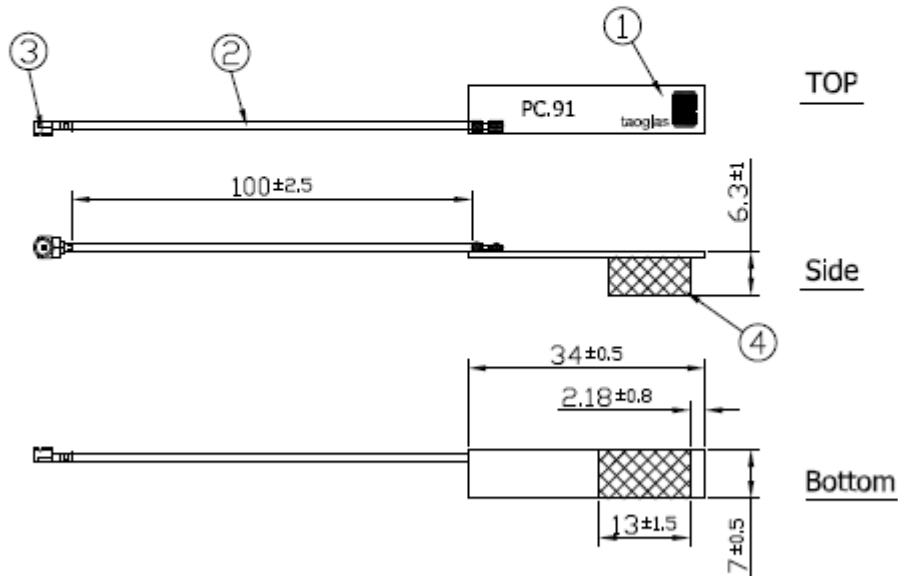
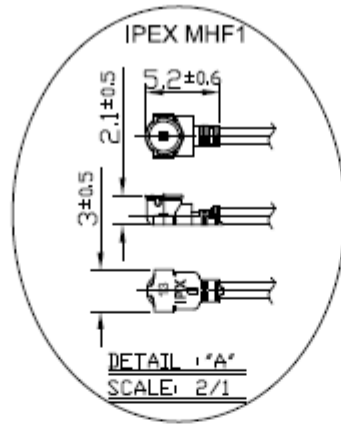
This miniaturized low profile PCB antenna is based on smart TheStripe™ antenna technology. It consists of a PCB antenna and 1.13mm mini coaxial cable with Ipex MHF (Hirose U.FL comp) connector.


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

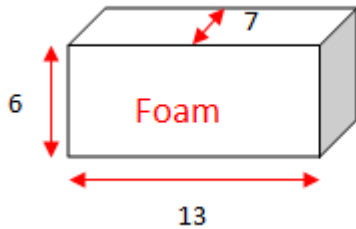
3.1 Dimensions and Drawing(FR4 PCB)



- 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.

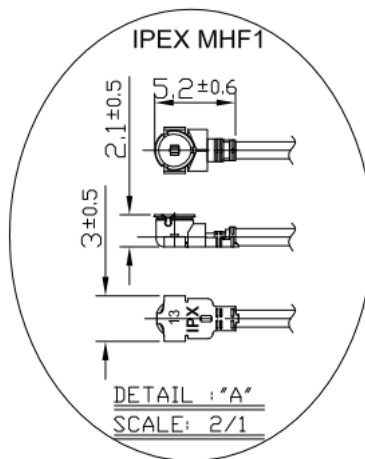
Name	PIN	Material	Finish	QTY
1 PCB1 PCB	100211CD400XXA	FR4 0.8	Black	1
2 1,13 Coaxial Cable	00,113,J	FEP	Black	1
3 IPEX MHF1	IPEX.MHF1.113	Brass	Gold	1
4 Double Sided Adhesive + Closed Cell Foam	0010C000000A	CR4305-3M 9472	Black	1

3.2 Dimensions and Drawing(foam)



3.3 Cable & Connector

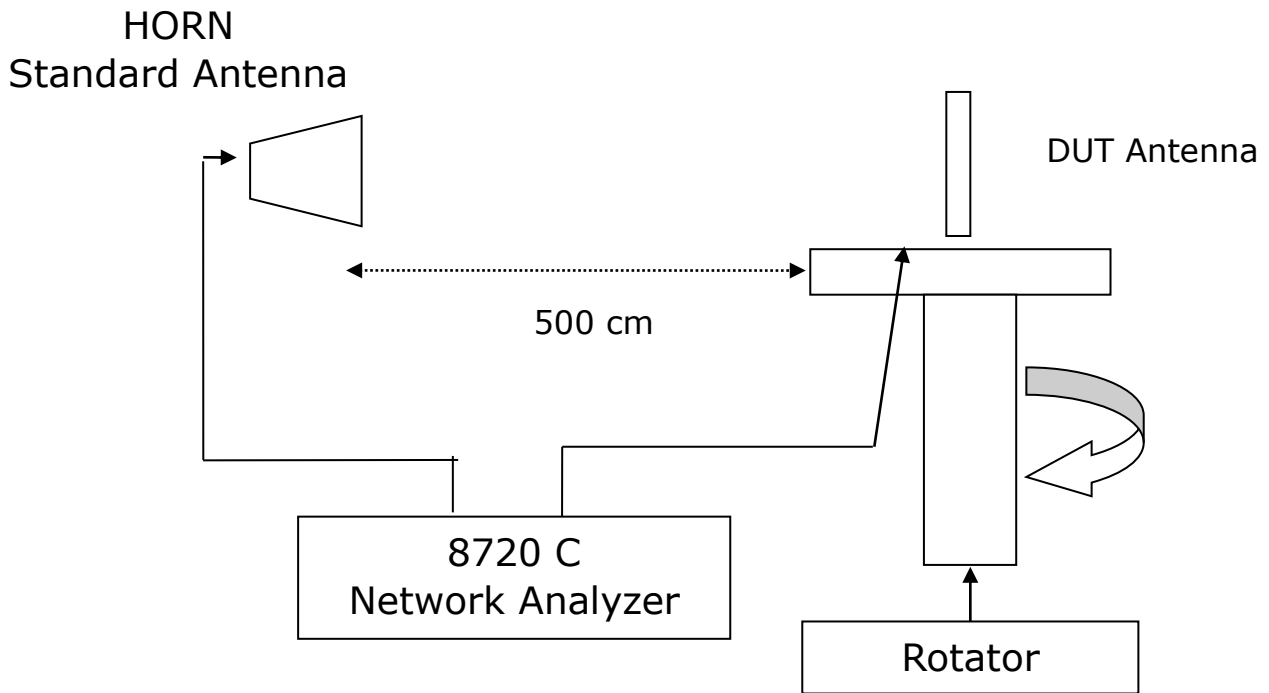
3.2.1	RF Cable	Ø1.13 Coaxial Cable L = 100 +/- 3 mm
3.2.2	RF Connector	IPEX MHF (U.FL compatible)



4. Antenna Test Setup and Results

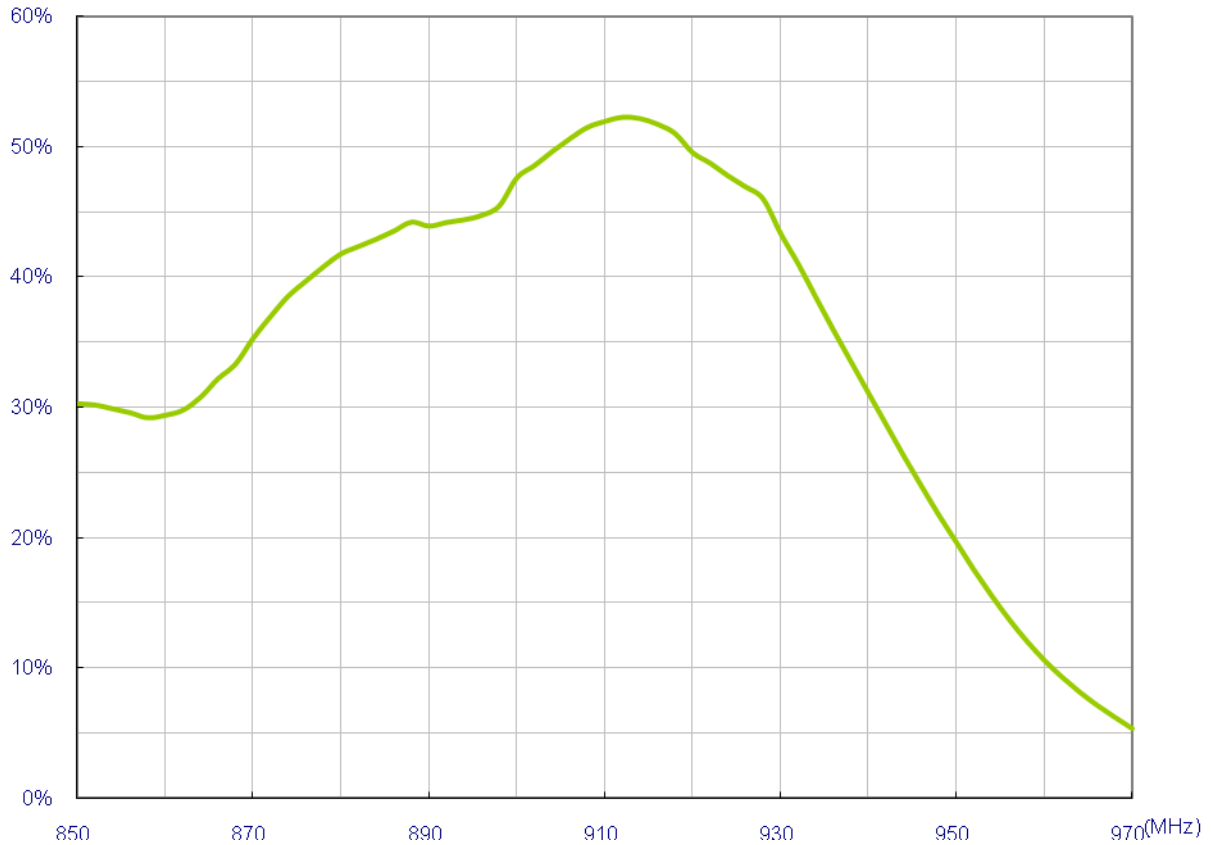
4.1 Equipment

Radiation Pattern Testing - Anechoic Chamber



4.2 Efficiency

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

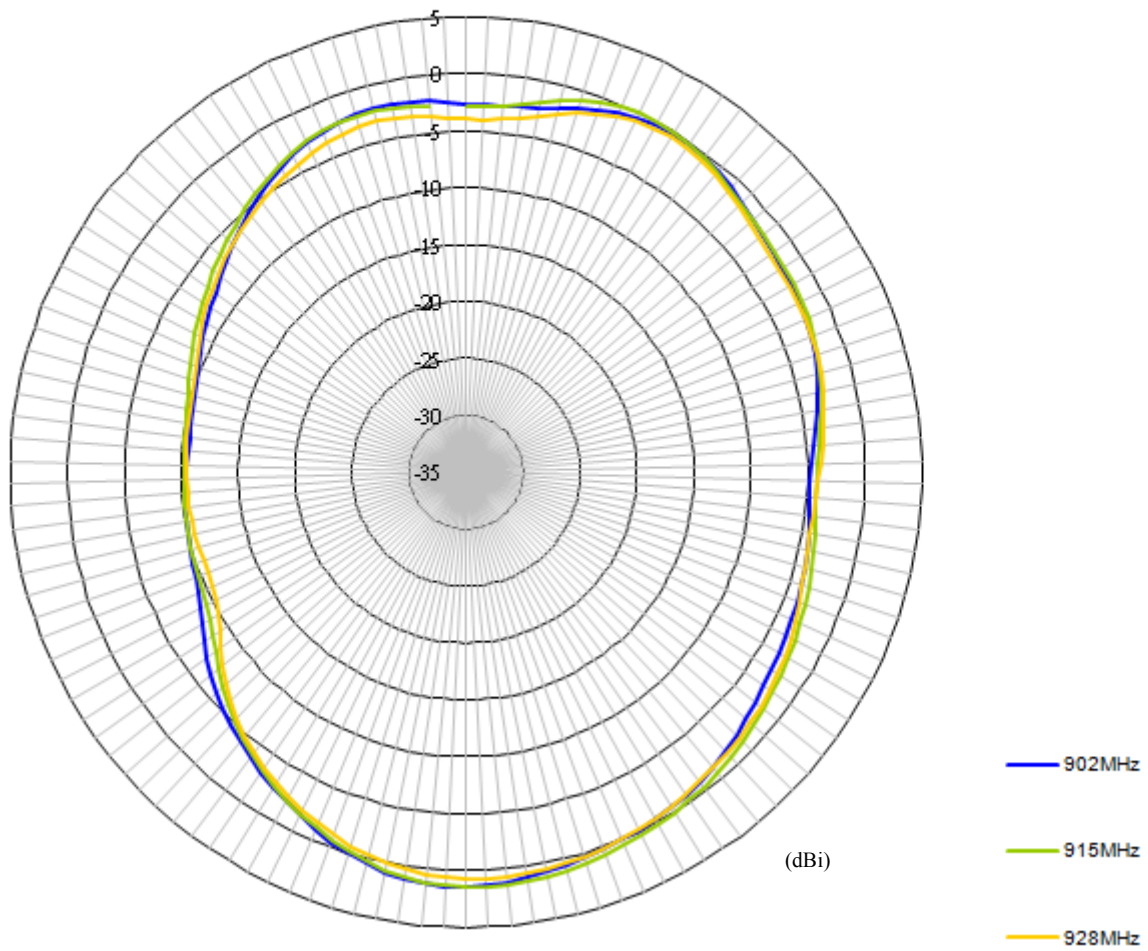


PC.91 Efficiency Data													
Band (MHz)	850	860	870	880	890	900	910	920	930	940	950	960	970
Gain (dBi)	-0.13	-0.23	0.85	1.72	1.89	2.26	2.67	2.42	1.74	0.14	-1.94	-4.74	-7.54
Efficiency (%)	30.26	29.37	35.3	41.74	43.87	47.57	51.89	49.49	43.29	31.06	19.61	10.6	5.35
Efficiency (dB)	-5.19	-5.32	-4.53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

4.3 Radiation Patterns

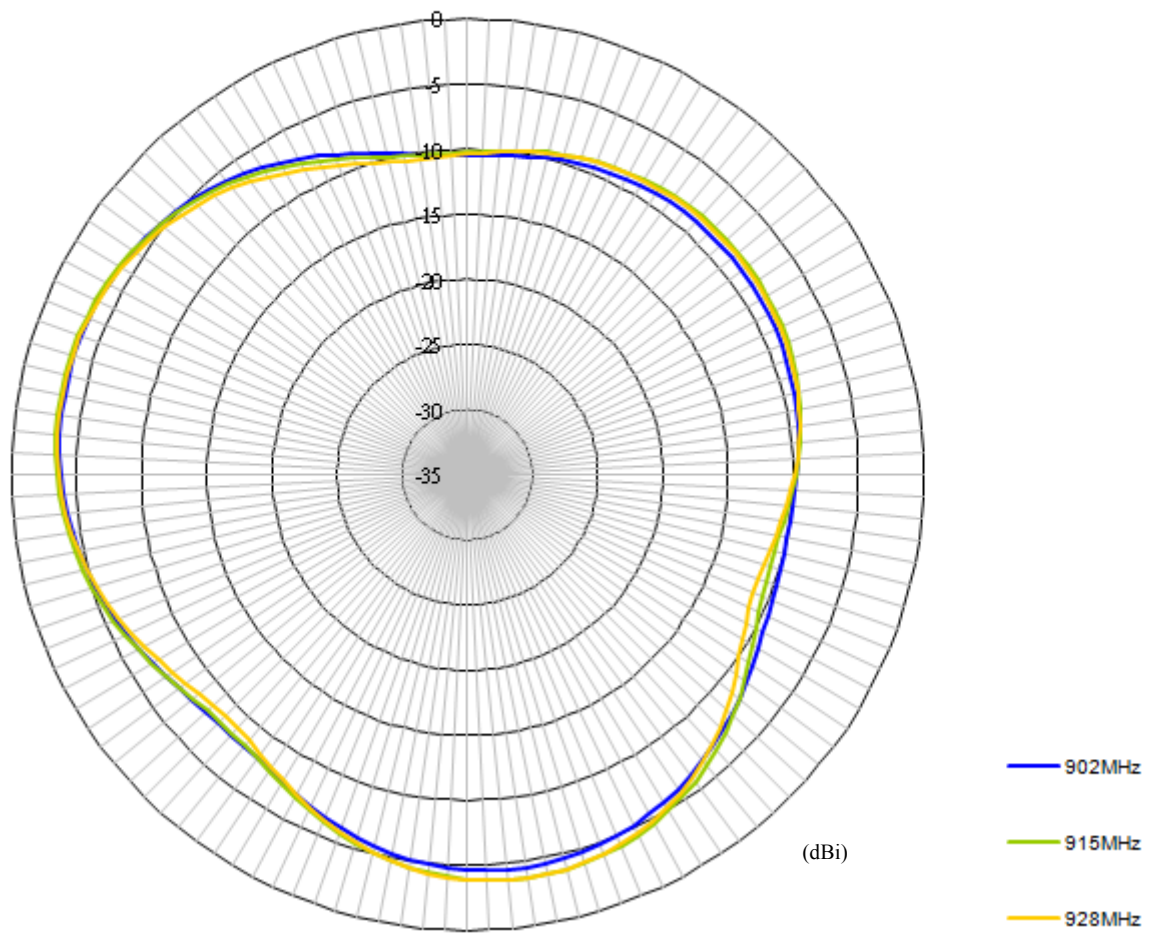
4.3.1 E-Plane (Horizontal/Azimuth Plane)

FC.91 E-plane Radiation

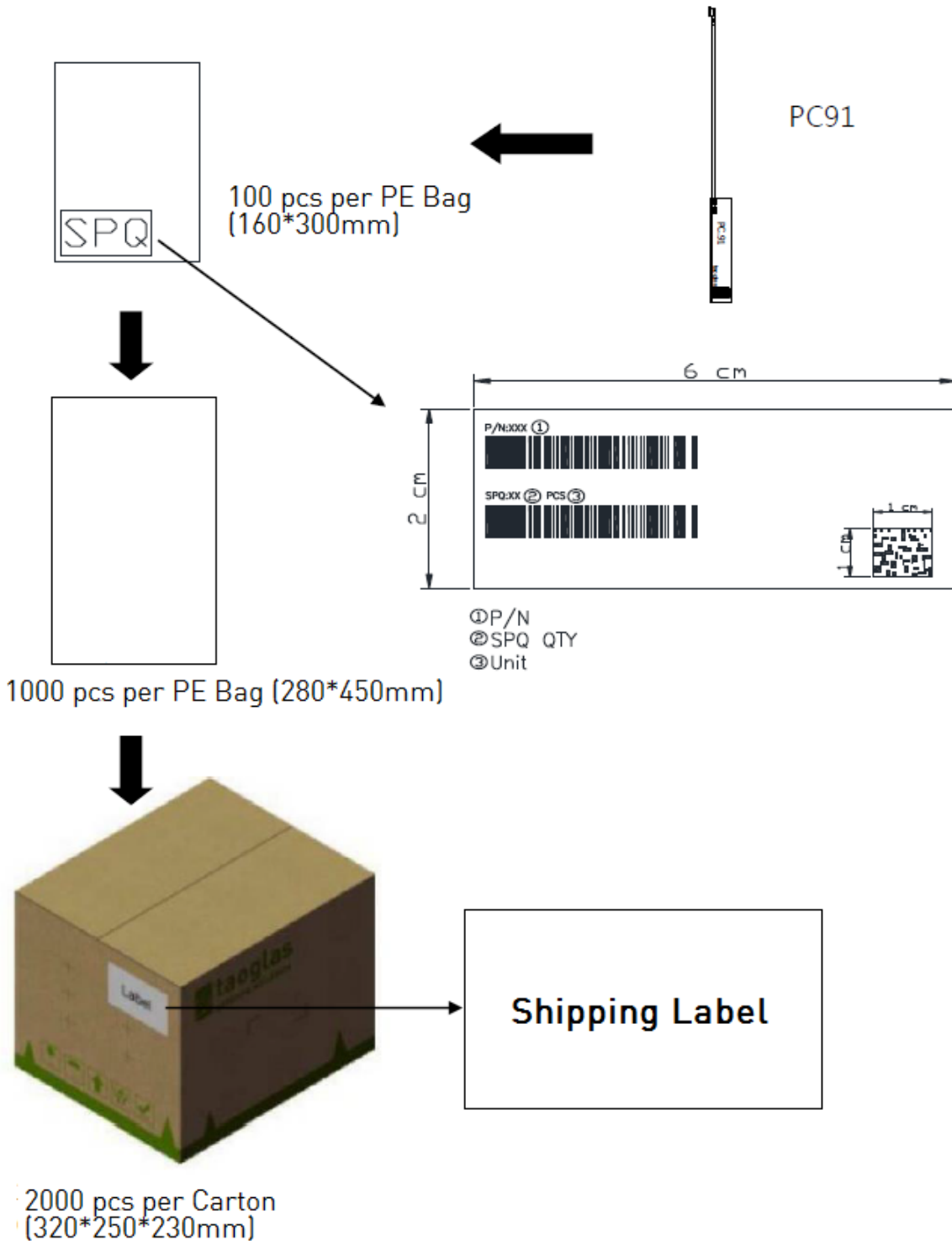


4.3.2 H-Plane (Vertical/Elevation Plane)

FC.91 H-plane Radiation



5. Packaging (Unit: mm)



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