Specification

Part No.	:	**FXP40.07.0085A**
Product Name	:	Quad-Band GSM850/GSM900/DCS/PCS Flexible PCB Antenna
Features	:	824-960/1710-2170MHz Bands 1.9 dBi Peak Gain Easy peel and stick adhesive Dimension: 42.6*12.1*0.15mm Connector: IPEX MHFI (U.FL Compatible) Cable: 85mm 1.13mm cable REACH & RoHS Compliant

1. Introduction

The Taoglas FXP40 is a super small monopole ultra low profile antenna for GSM850/GSM900/DCS/PCS quad bands between 864 and 2170 MHz. The FXP40 has a peak gain of 1.3dBi and efficiencies of 56% are achievable if integrated correctly. It is manufactured from a poly-flexible material, has a tiny form factor of just 42.6 x 12.1 x 0.15mm and is supplied with a double-sided 3M tape for easy "peel and stick" mounting. It is designed to be mounted directly onto a plastic and is an ideal choice for any device maker that needs to keep manufacturing costs at a minimum over the lifetime of a product.

The cables length can be customizable for customers. Contact your regional customer ssupport team for more information.

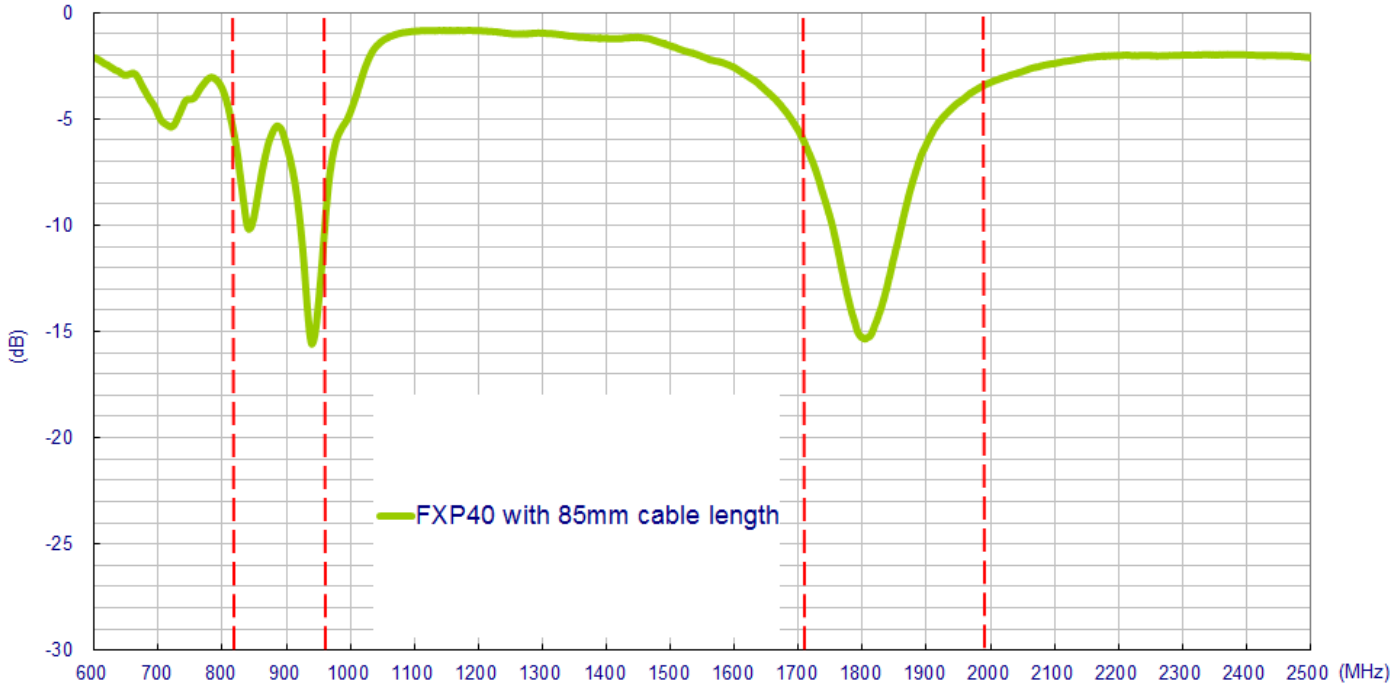
2. Specification

ELECTRICAL					
	GSM850	GSM900	DCS	PCS	UMTS
Frequency (MHz)	824~896	880~960	1710~1880	1850~1990	1920~2170
Max Return Loss (dB)	<-5	<-5	<-5	<-3	<-2
Peak Gain (dBi)	-3.83	-3.25	1.37	1.03	1.9
Efficiency (%)	24	26	51	56	43
Average Gain (dB)	-6.22	-6.57	-2.87	-2.49	-3.93
Radiation Properties	Omni-directional				
Max Input Power (Watts)	5				
Polarization	Linear				
Impedance (Ohms)	50 Ohms				
MECHANICAL					
Dimensions (mm)	46.2*12.1*0.15 mm				
Material	Flexible Polymer				
Connector and Cable	IPEX MHFI (U.FL Compatible) and 1.13 mm mini coax				
Weight	1g				
ENVIRONMENTAL RATINGS					
Operation Temperature	-40°C to 85°C				
Storage Temperature	-40°C to 85°C				
Relative Humidity	40% to 95%				
RoHs Compliant	Yes				

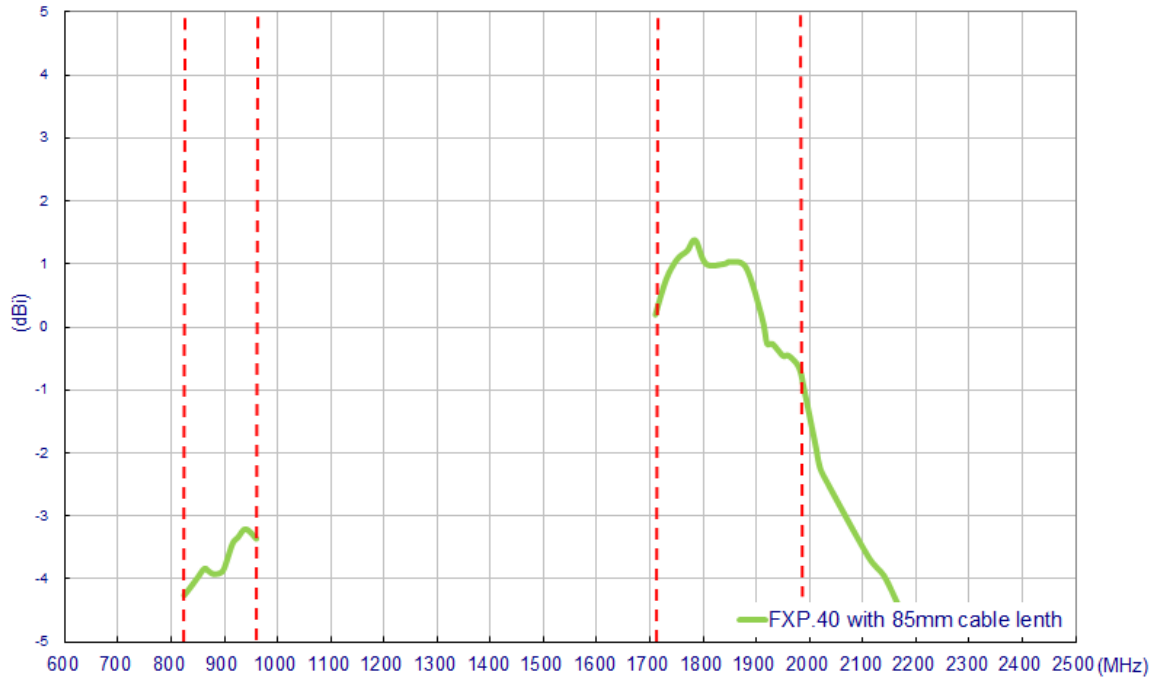
*All results were measured with 85mm length 1.13mm coaxial cable and on 2mm thickness ABS base.

3. Antenna Characteristics

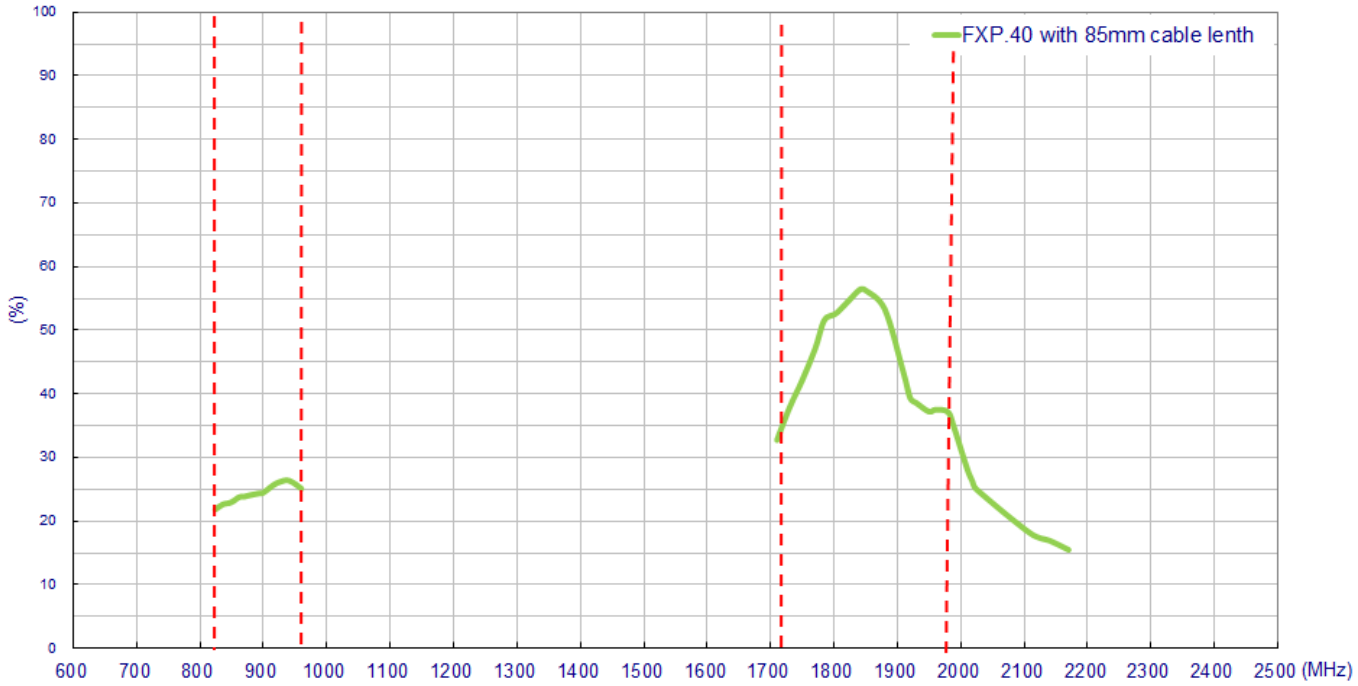
3.1. Return Loss



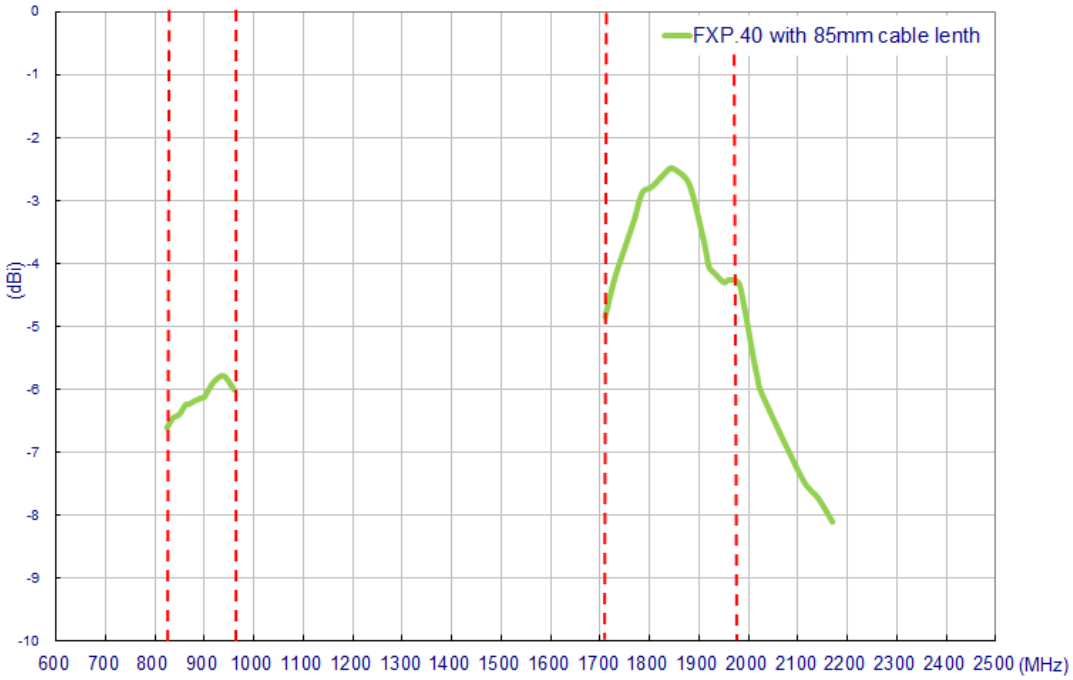
3.2. Peak Gain



3.3. Efficiency



3.4. Average Gain



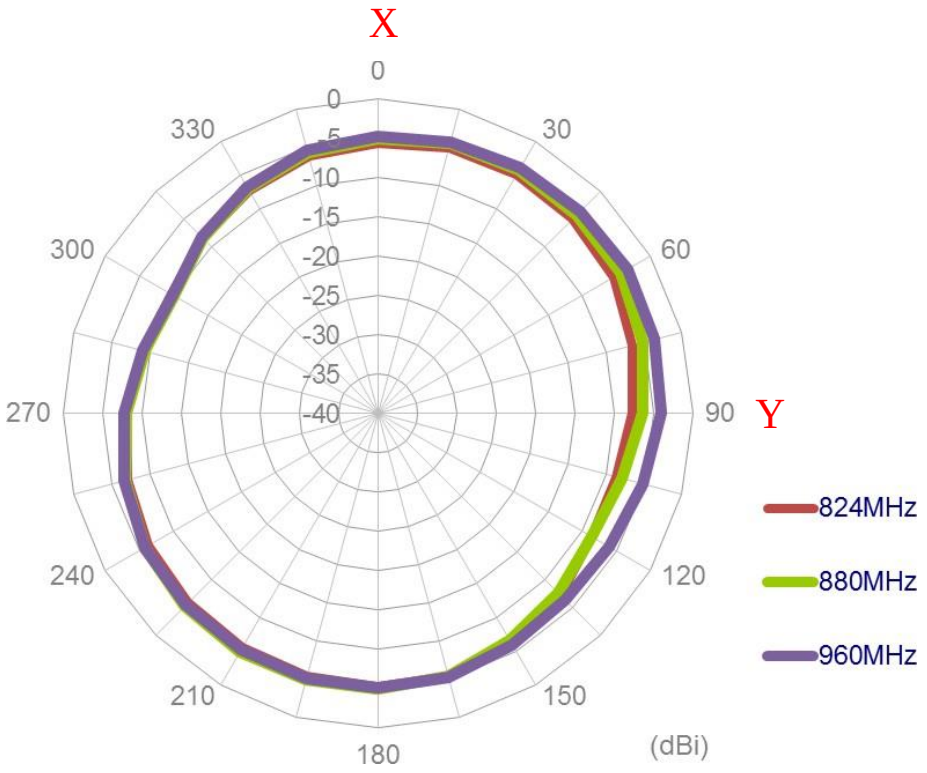
4. Antenna Radiation Patterns

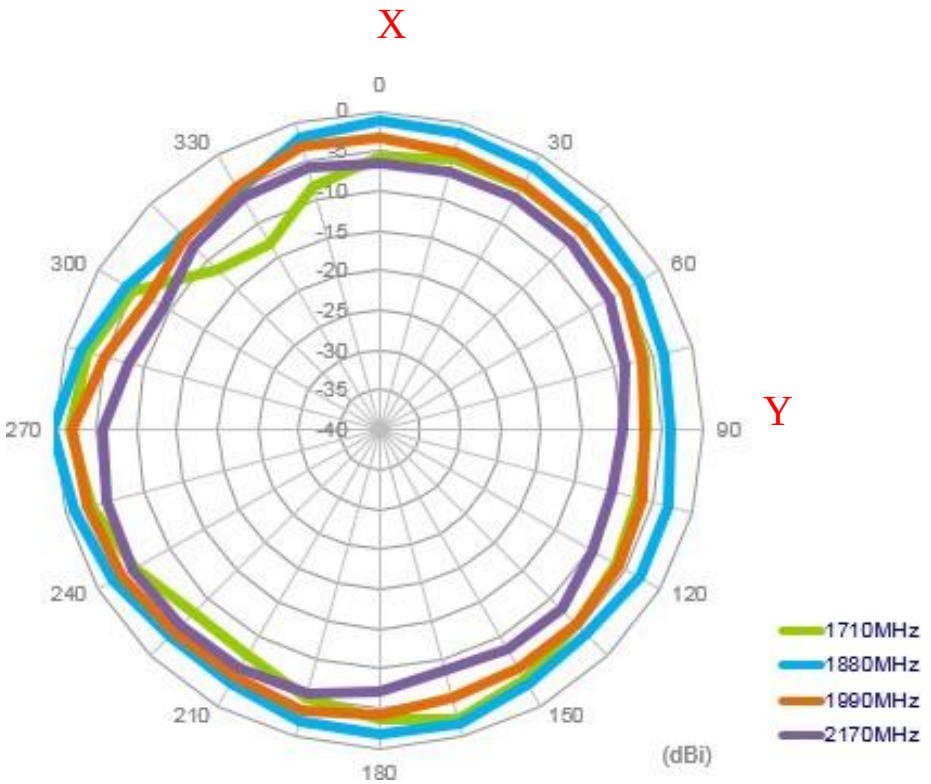
4.1. Antenna setup

The antenna radiation pattern measured setup as shown the below,

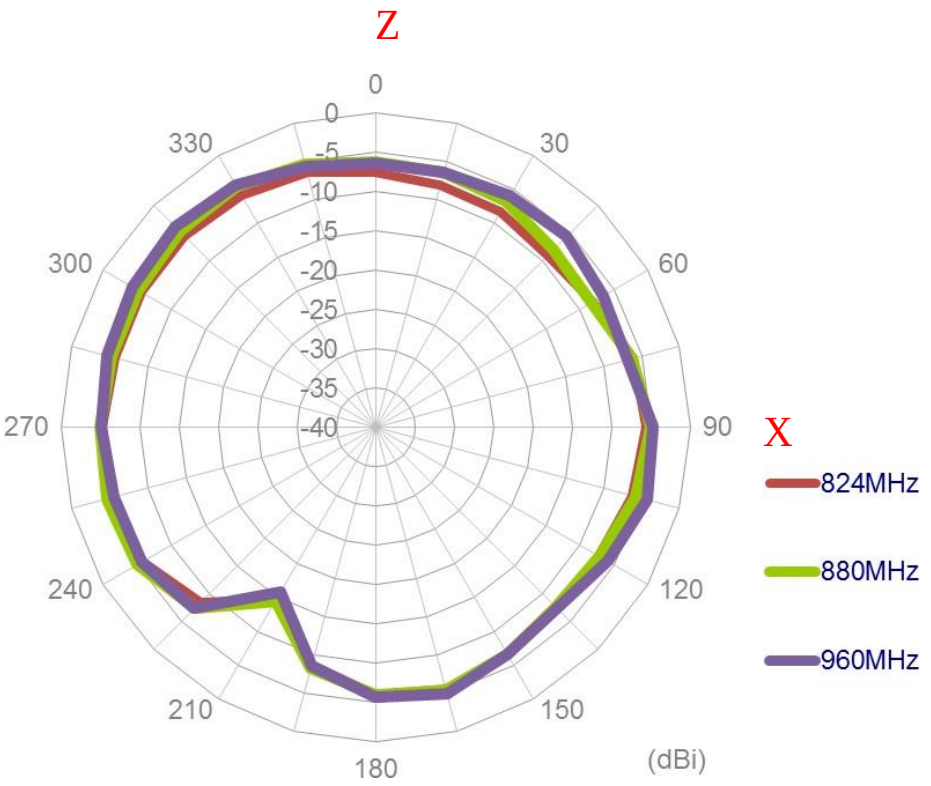
4.2. Antenna radiation patterns

XY-Plane





XZ-Plane


Z
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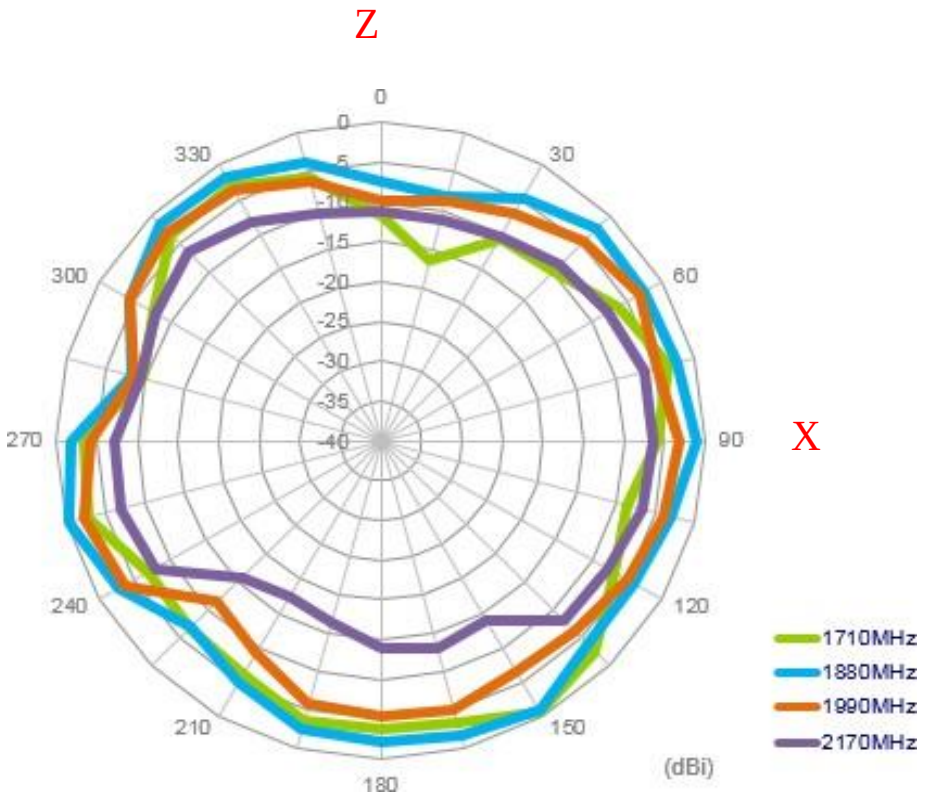
-25
-30
-35
-40
X
824MHz
880MHz
960MHz
(dBi)


Z
0
30
60
90
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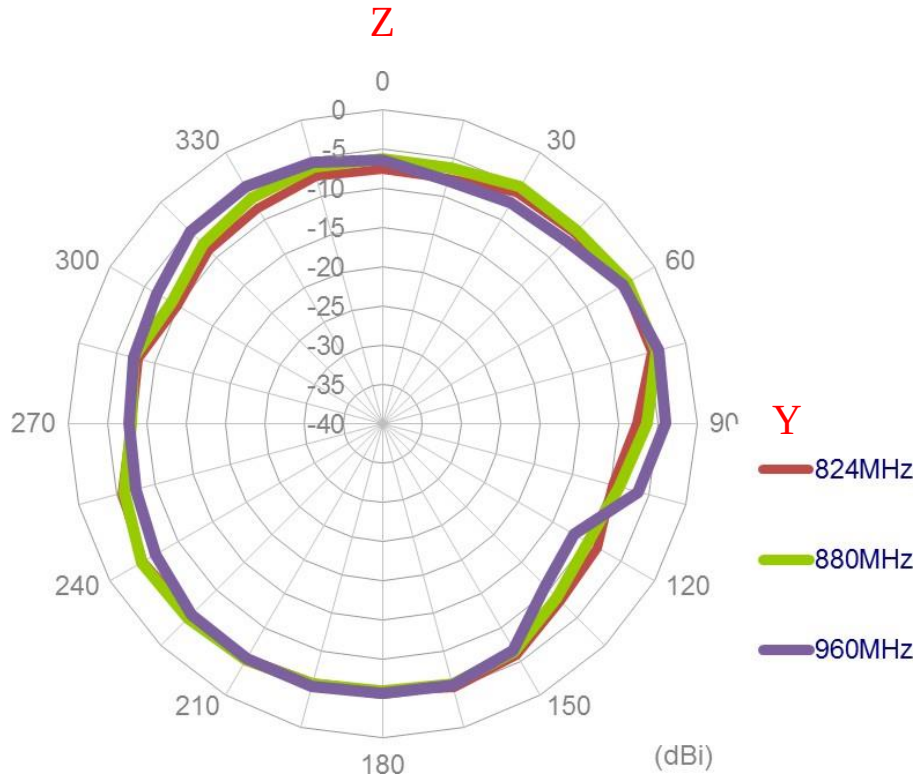
330
X
1710MHz
1880MHz
1990MHz
2170MHz
(dBi)

YZ-Plane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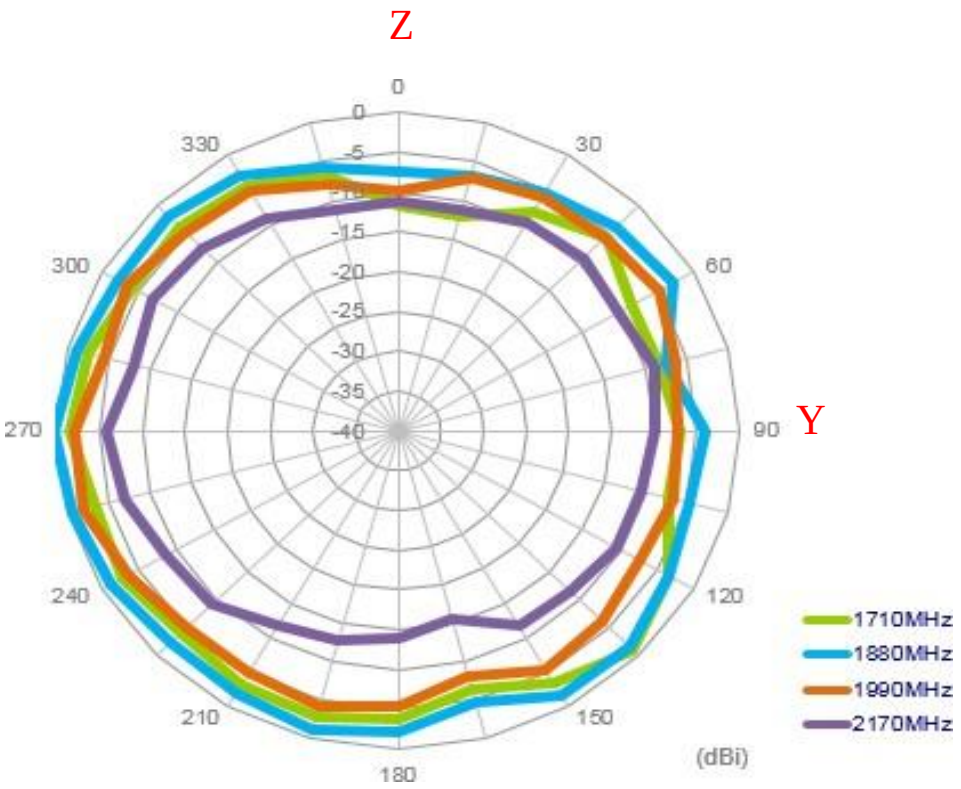
Y
824MHz
880MHz
960MHz
(dBi)


Z
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-5
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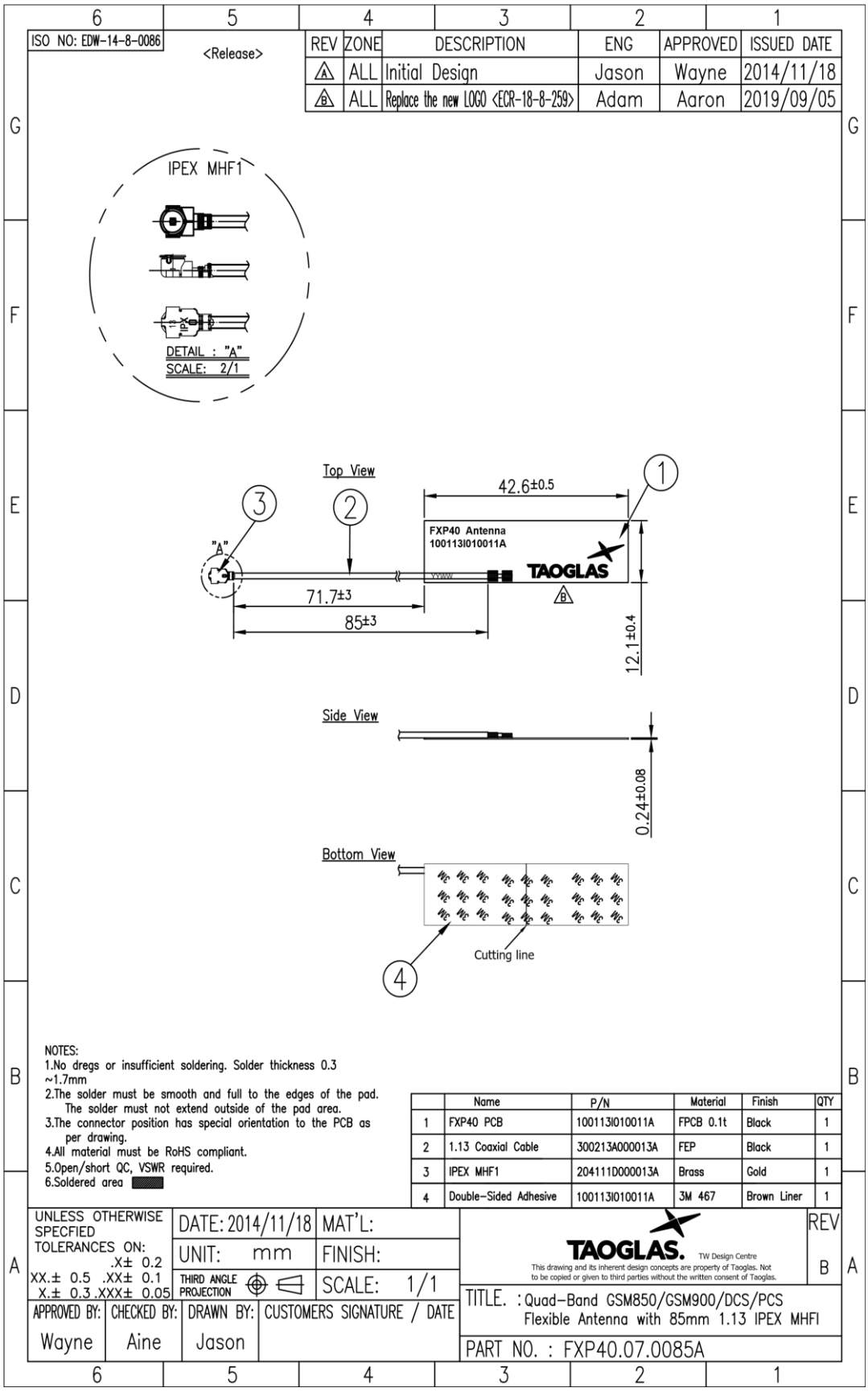
-25
-30
-35
-40
Y
1710MHz
1880MHz
1990MHz
2170MHz
(dBi)

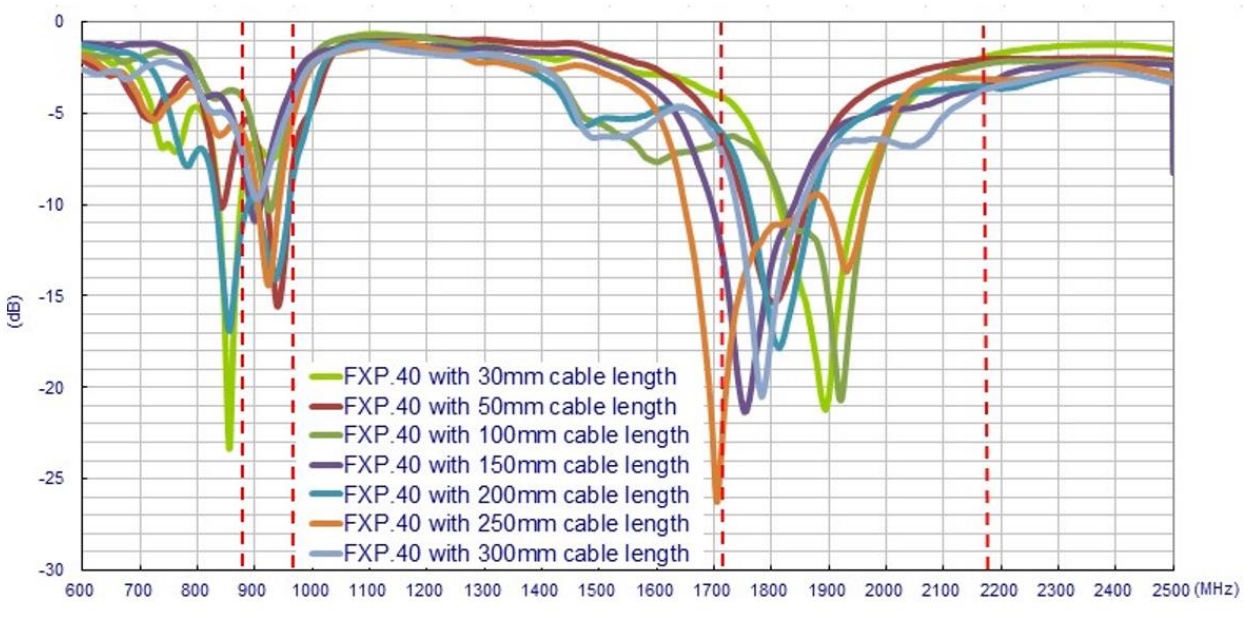
5. Mechanical Drawings (Unit: mm)



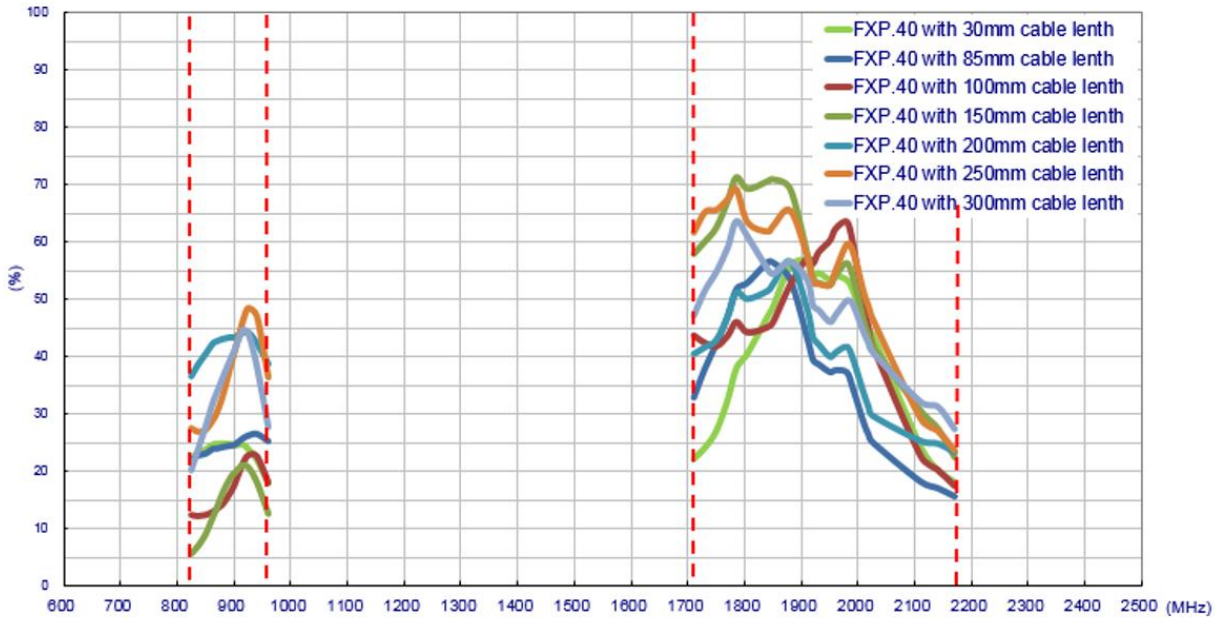
6. Application Note

The FXP40 antenna measurement with difference cable length on plastic plate of 2 mm thickness, the performance is shown as below

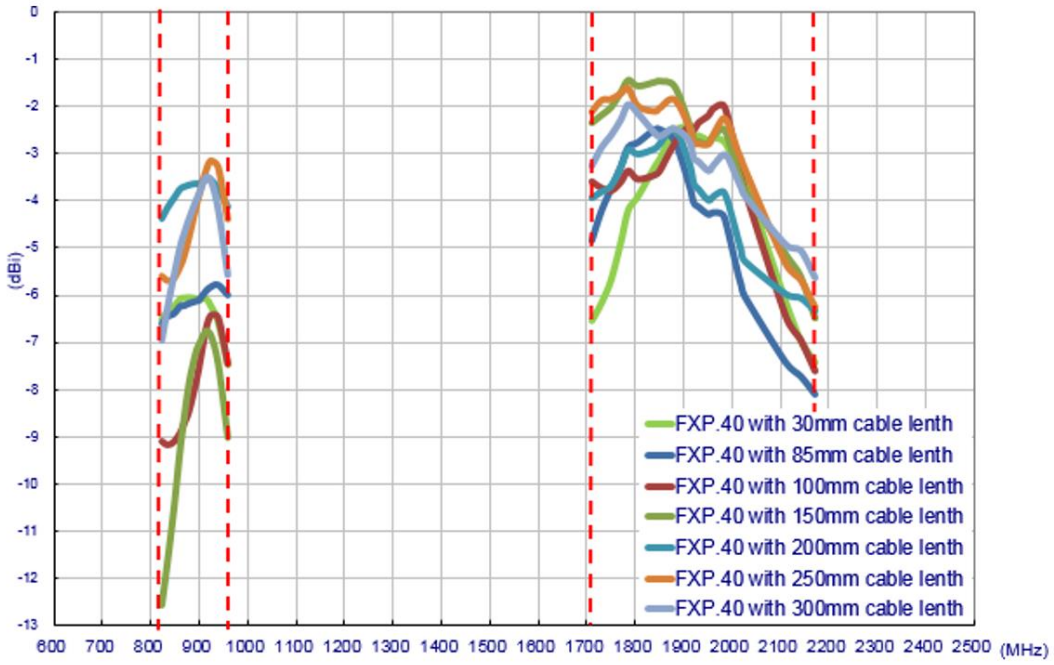
6.1. Return loss



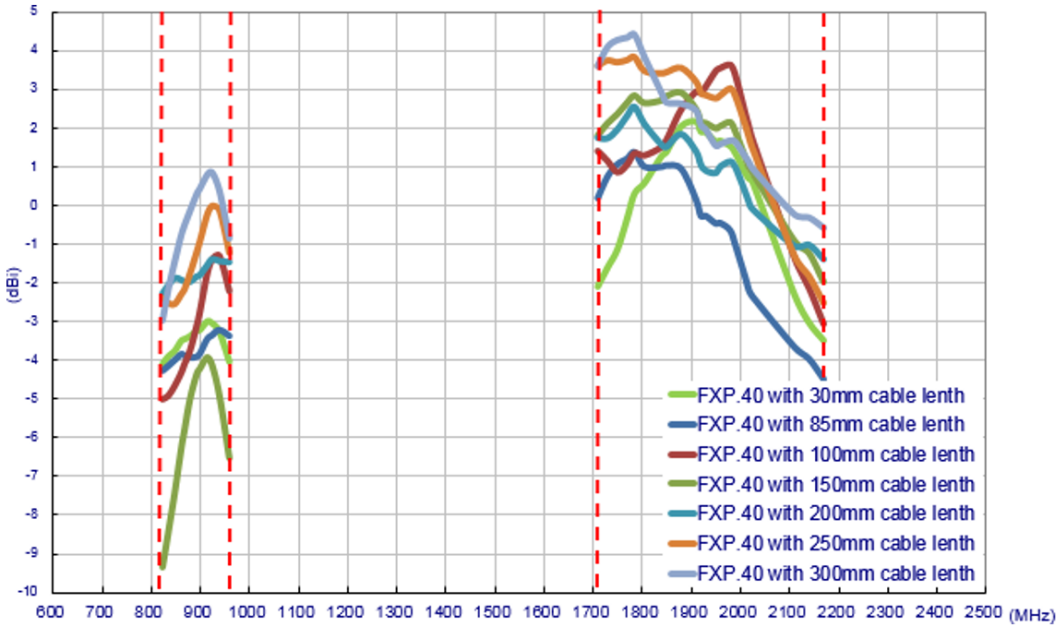
6.2. Efficiency



6.3. Average Gain



6.4. Peak Gain



7. Packaging

Package: