

# ***PROFESSOR TECHNOLOGY CO.,LTD.***

## **INTRODUCTION Copper Tube 915MHz(29.5mm) Antenna**

### **INTRODUCTION**

#### **1. GENERAL DESCRIPTION**

<b>P/N</b>	
915Mhz-29.5mm-EA-272I-V5	(Nov-11-2021)

Below is a table summarizing the antenna design specification

#### **1.1 Electrical Properties**

<b>Parameter</b>	<b>Description</b>
Frequency Band	905/915/925 MHz
Nominal Impedance	50 ohm
Polarization	Vertical
Return loss (Check test data )	905MHz (-16.116dB),915MHz(-14.404dB),925MHz(-13.239dB)
V.S.W.R	905MHz(1.371:1),915MHz(1.471:1),925MHz(1.557:1)
Reflection coefficient	905MHz(0.156),915MHz(0.190),925MHz(0.218)

#### **1.2 Mechanical Properties**

<b>Parameter</b>	<b>Description</b>
Antenna Type	Internal Antenna
Antenna Material	Copper tube and Spring
Touch Type	1.13mm cable
Connector Type	Open 2-1-2
Antenna Length	157.5mm
Antenna Dimensions	5.2 mm
Antenna Color	Black
Operating Temperature Range	-30°C~+70°C
Storage Temperature Range	-35°C~+75°C

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## 2. Appearance

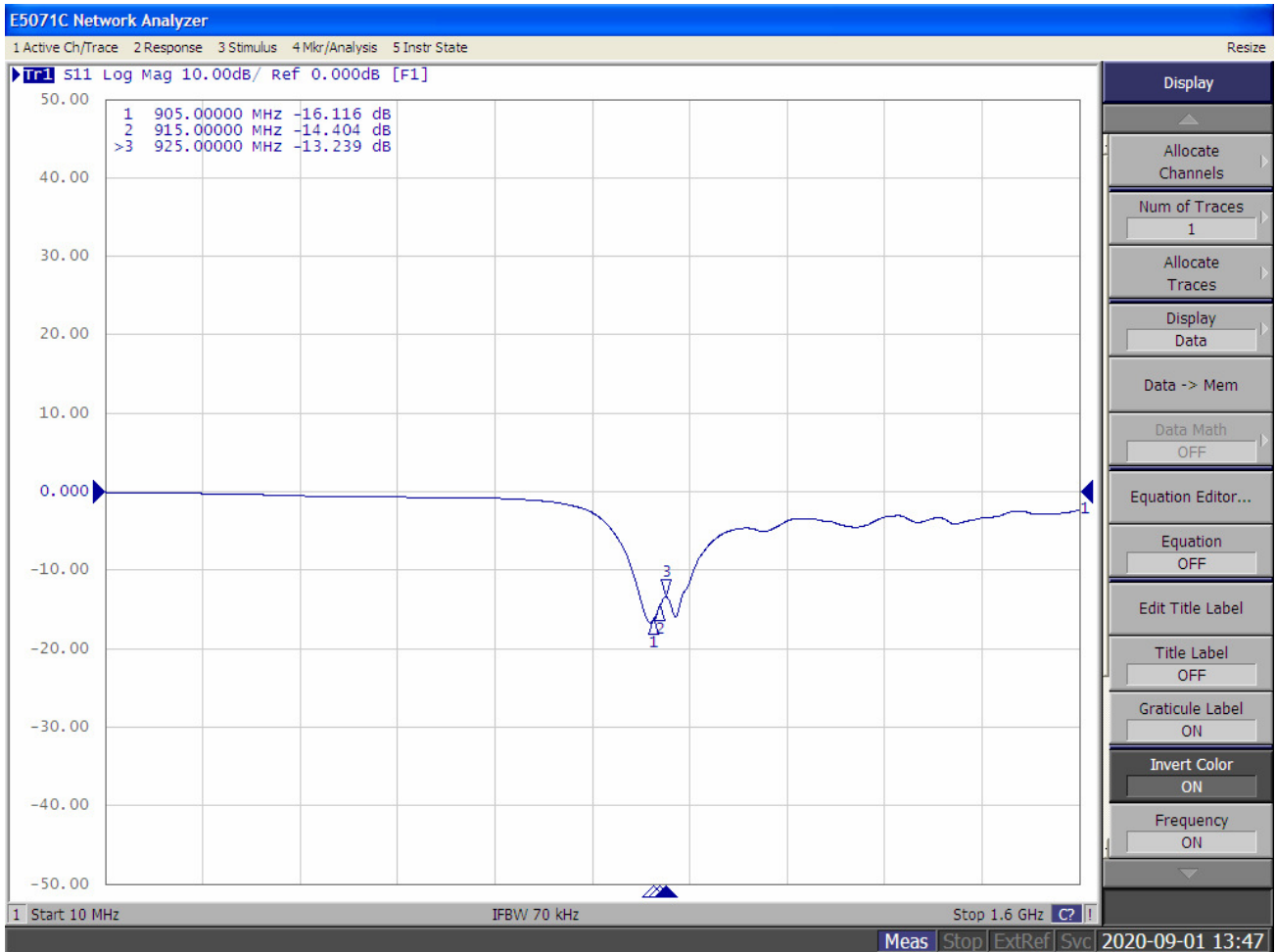
NO.	NAME	FINISH	Q, TY
01	Coil		01
02	Copper tube	Black	01
02	Ø1.13 Cable		01

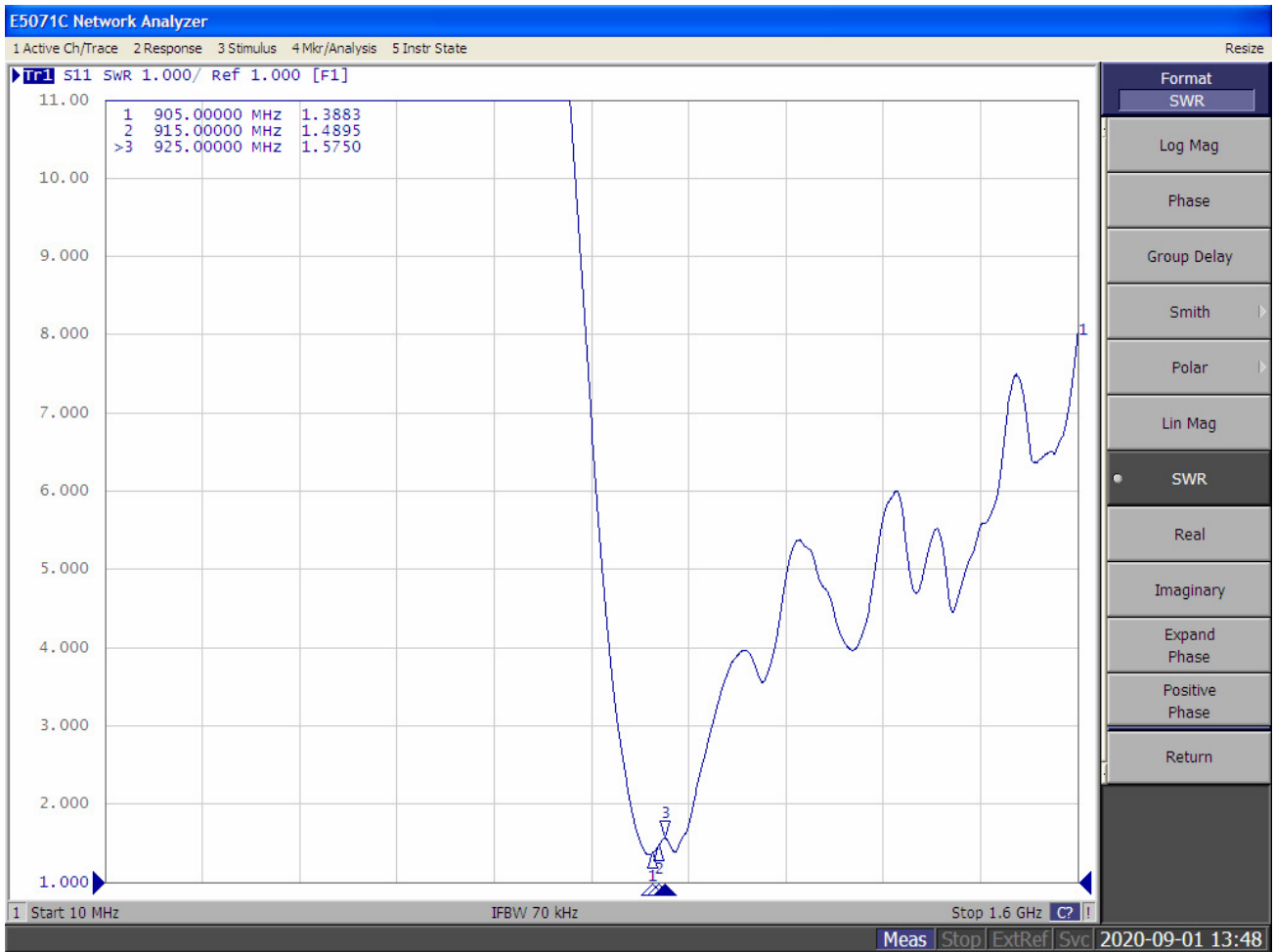
 Third angle projection	CUSTOMER'S	MODEL	PARTS NUMBER	FREQUENCY	UNIT	SCALE	DATE	VERSION
				905/915/925MHz	M/M		20211111	2
<b>PROFESSOR</b> 普傑國際股份有限公司	TOLERANCE	X. XX±0.15	NAME	PARTS NUMBER	APPROVED	CHECKED	DRAWING	DESIGNER
	SURFACE ROUGHNESS	$\frac{S}{\nabla}$	APPEARANCE	EA-272I-2				

## 3. Return Loss, V.S.W.R. and Smith Chart

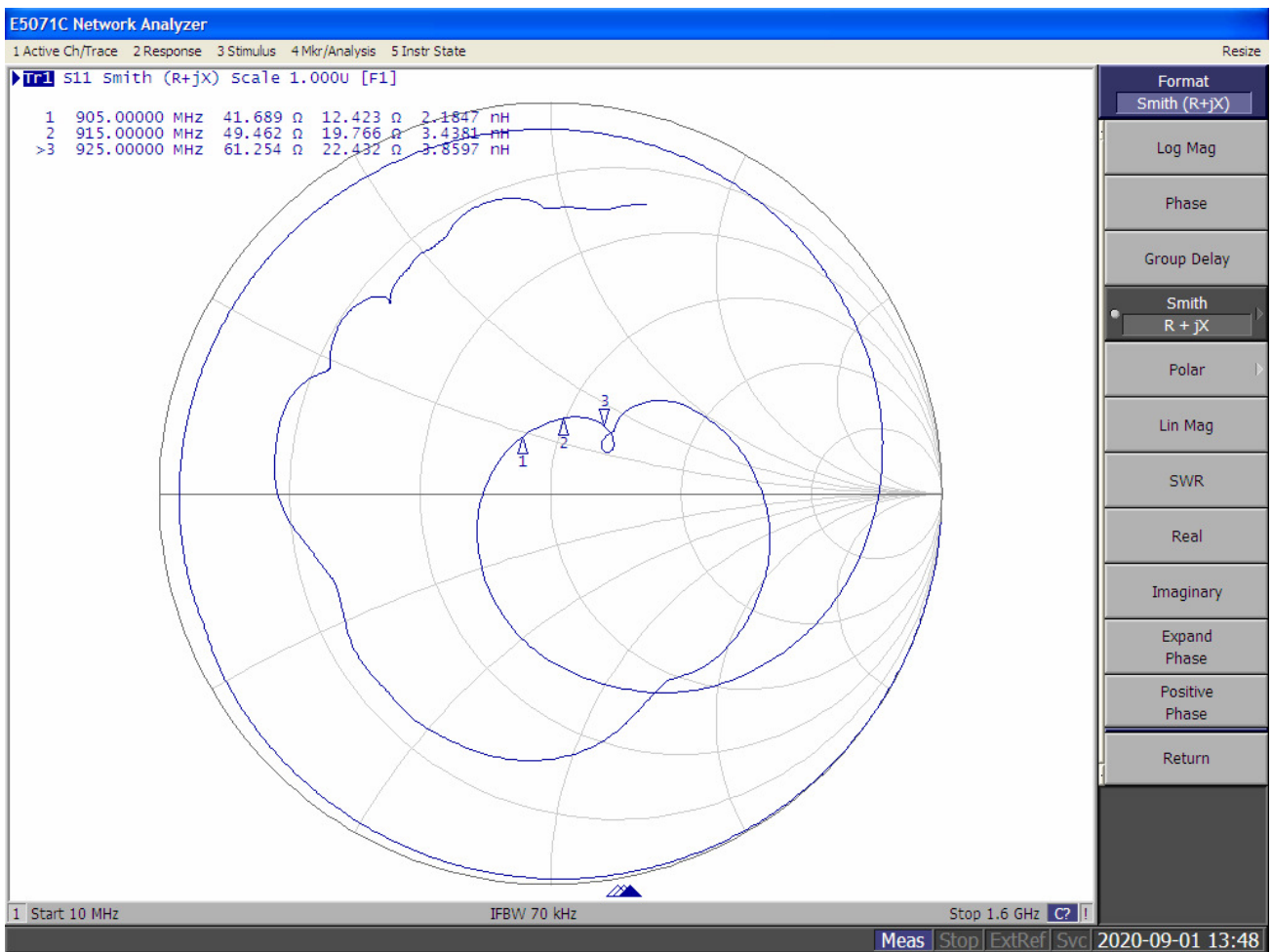
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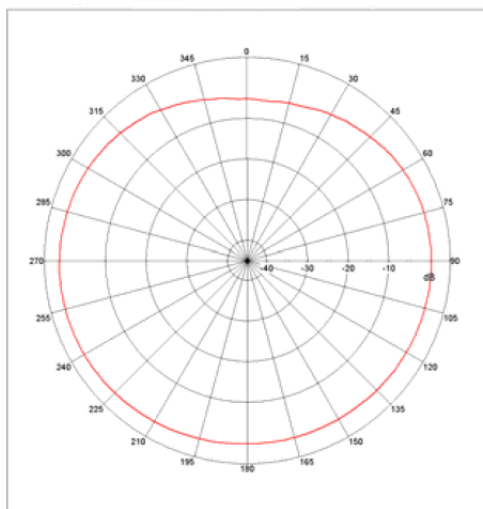
## Antenna Gain

Gain Table

Unit in dBi	XY-plane		XZ-plane		YZ-plane		Efficiency
	Peak	Avg.	Peak	Avg.	Peak	Avg.	
Module Board	-0.2	-0.5	0	-3.6	-1.1	-3.0	60.2%

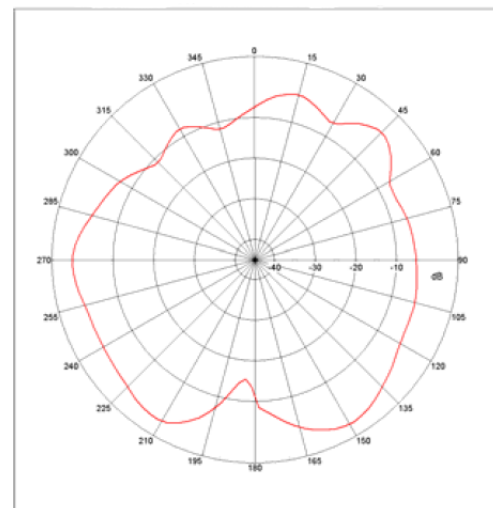
### XY-plane

Far-field Power Distribution(H+V) on X-Y Plane



### XZ-plane

Far-field Power Distribution(H+V) on X-Z Plane



### YZ-plane

Far-field Power Distribution(H+V) on Y-Z Plane

