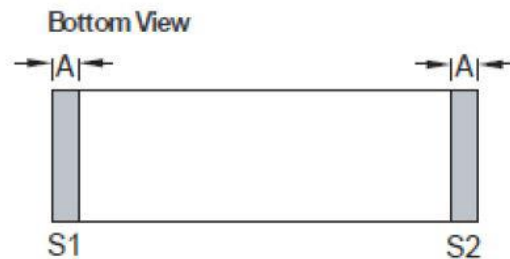
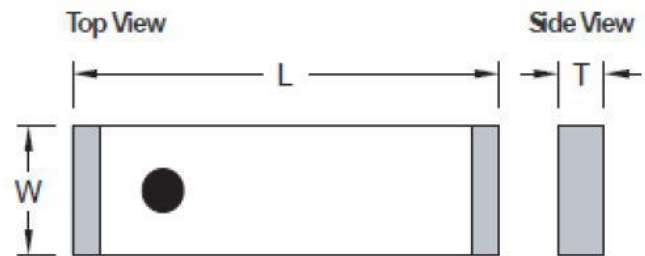




#### ELECTRICAL SPECIFICATION

SPECIFICATIONS	VALUE	UNIT
Frequency Range	2450	MHz
Bandwidth, typ	500	MHz
Return Loss, min	10	dB
Polarization	Linear	-
Antenna Directivity	Omni-Directional	-
Peak Gain, typ	2.62	dBi
Impedance	50	$\Omega$
Power, max	1	W
Operating Temperature Range	-40 ~ +105	$^{\circ}\text{C}$

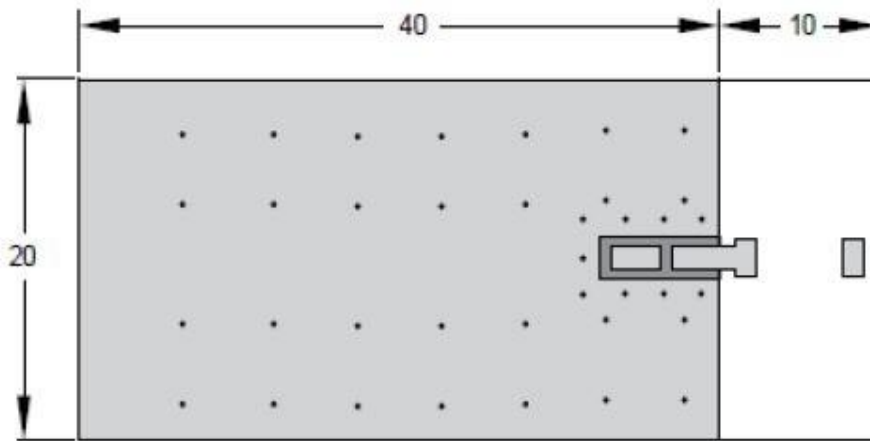
#### MECHANICAL SPECIFICATION



	Dimension
L (mm)	$7.00 \pm 0.20$
W (mm)	$2.00 \pm 0.20$
T (mm)	$0.75 \pm 0.20$
A (mm)	$0.45 \pm 0.20$

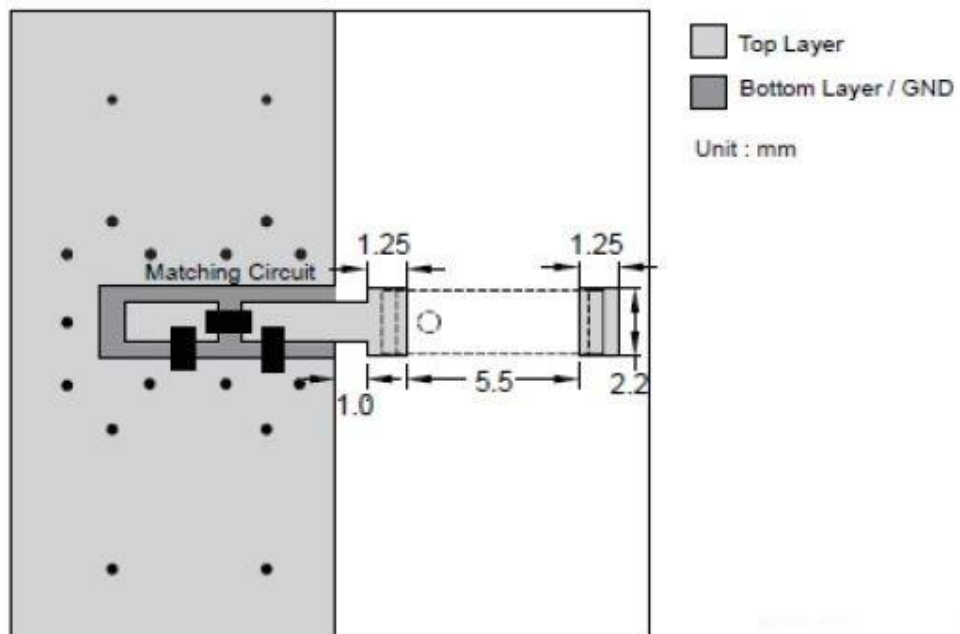
Terminal name	Function
S1	Feeding Point
S2	Soldering Point

■ REFERENCE DESIGN OF EVALUATION BOARD



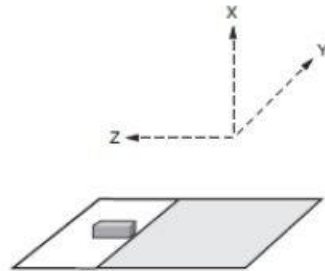
Outlook and dimension of evaluation board

Unit : mm

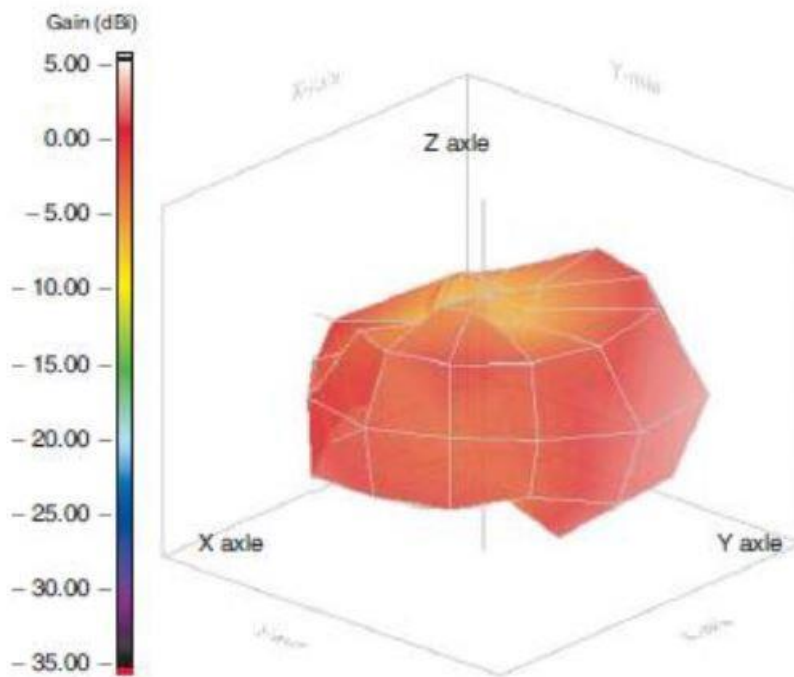


■ Top Layer  
■ Bottom Layer / GND

Unit : mm

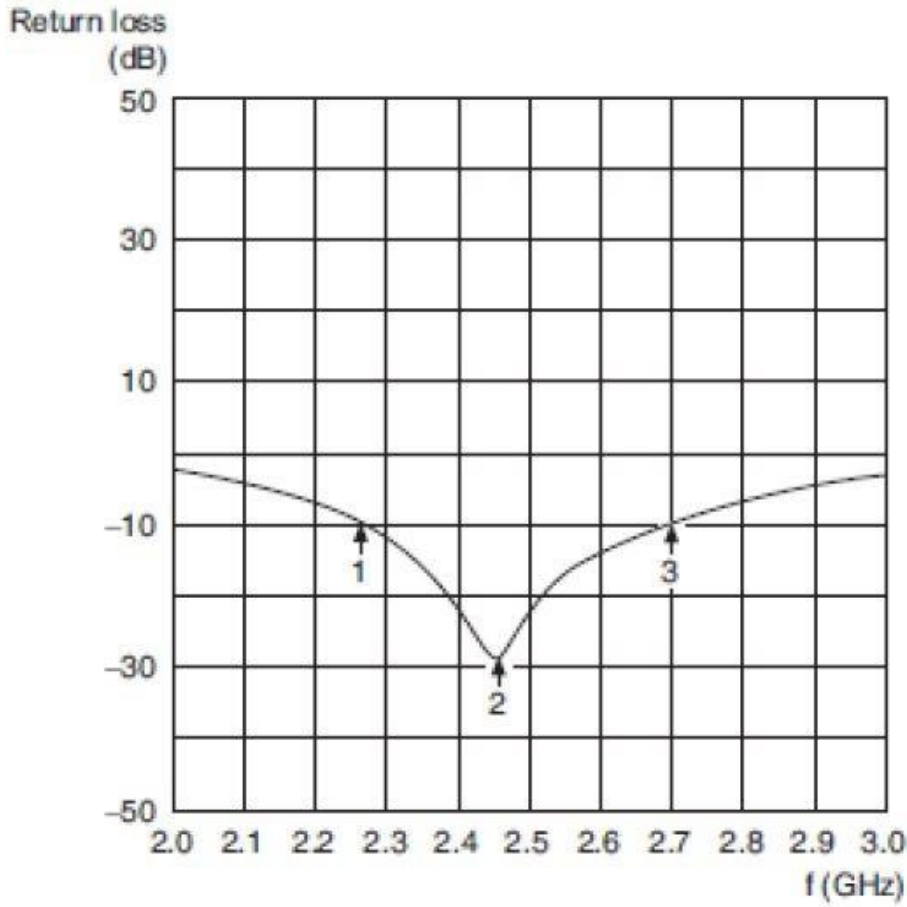


Evaluation board and XYZ direction



Frequency= 2.45 GHz  
Max gain = 2.62 dBi, at  
(90,120)  
MEG (mean effective gain)= -  
2.28 dBi  
Directivity (dB) = 3.67  
Efficiency = -1.05 dB, 78.49%

#### ■ FREQUENCY CHARACTERISTIC

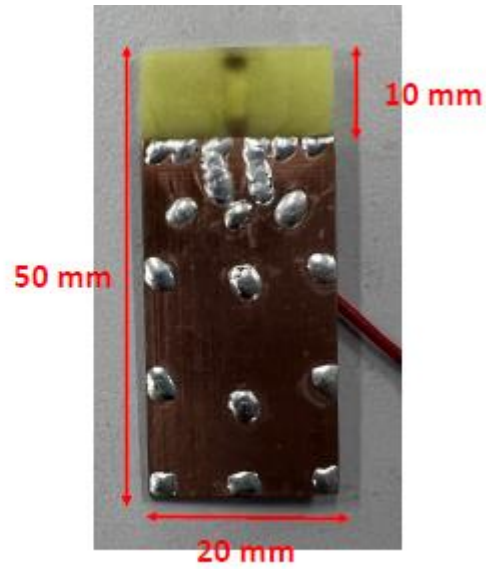


Maker data  
2.27GHz, -10dB  
2.45GHz, -28.3dB  
2.69GHz, -10dB

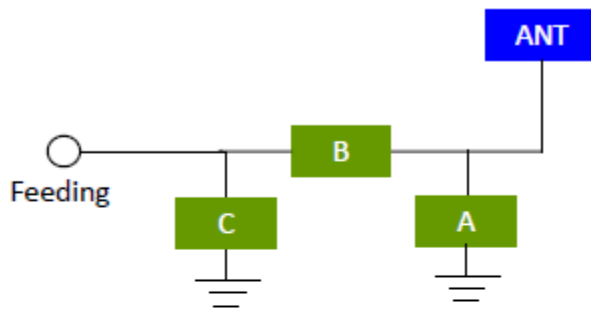
#### ■ EVB MEASURING TEST REPORT

EVB\_ 50x20mm

RCA-W2A0-7020-ZP-001



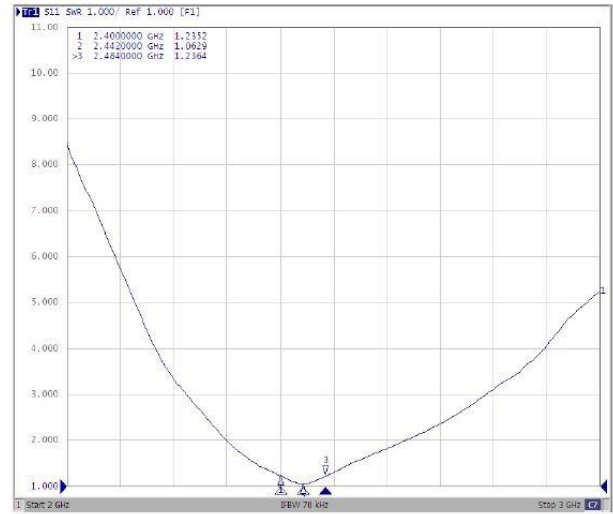
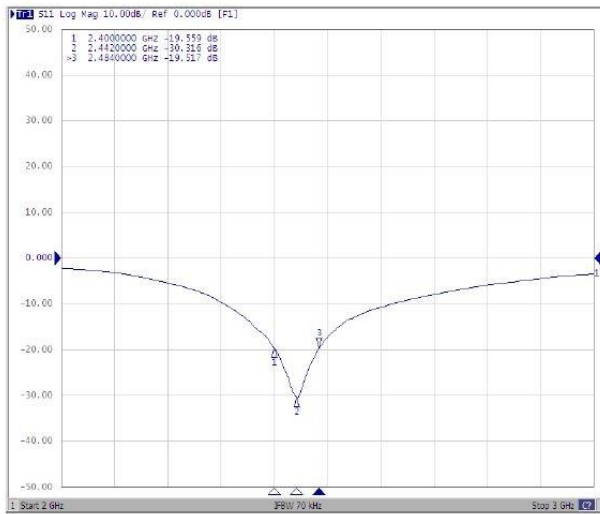
#### ■ MATCHING CIRCUIT



Component	Supplier	Value	PN
A	open		
B	Ind._0402	TDK	3.9 nH MLK1005S3N9ST000
C	Cap._0402	YAGEO	1 pF CC0402BRNPO9BN1R0

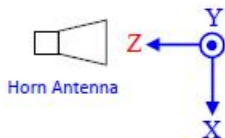
■ RETURN LOSS & VSWR

Antenna	7020 BT Chip Antenna		
Frequency (MHz)	2400	2442	2484
R.L. (dB)	-19.6	-30.3	-19.5
VSWR	1.2	1.1	1.2

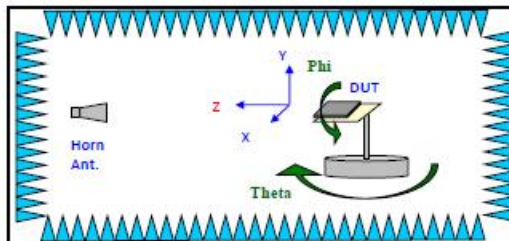


■ MEASUREMENT CONFIGURATION

[ Direction Definition ]



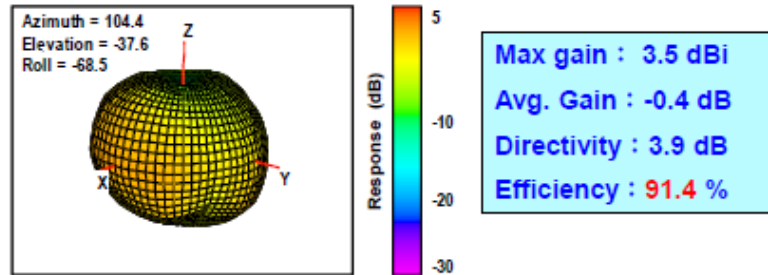
[ Anechoic Chamber ]



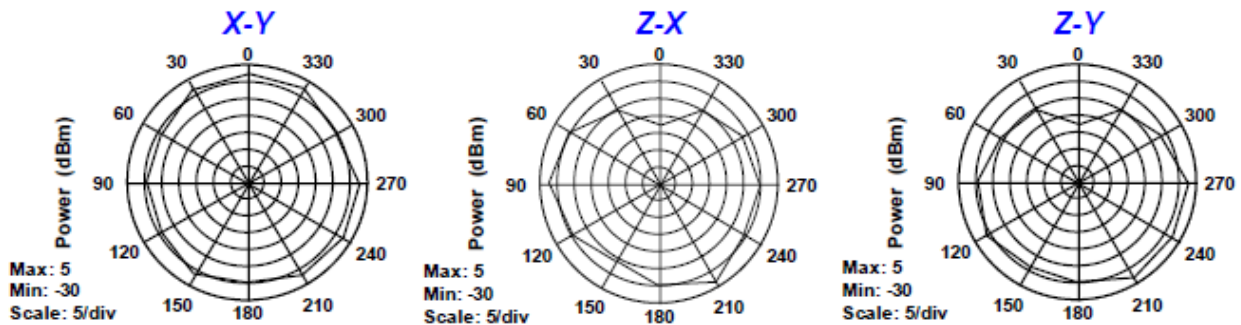
#### ANTENNA PERFORMANCE

#### 2400 MHz

##### 3D Gain

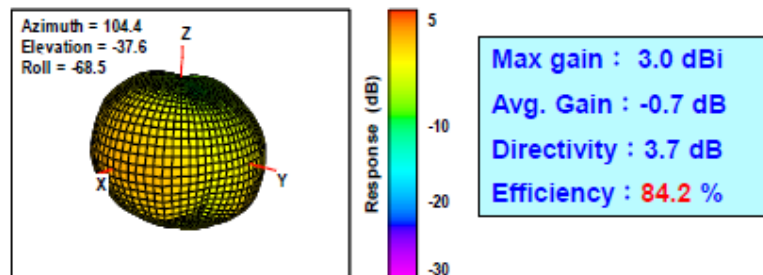


##### 2D Gain

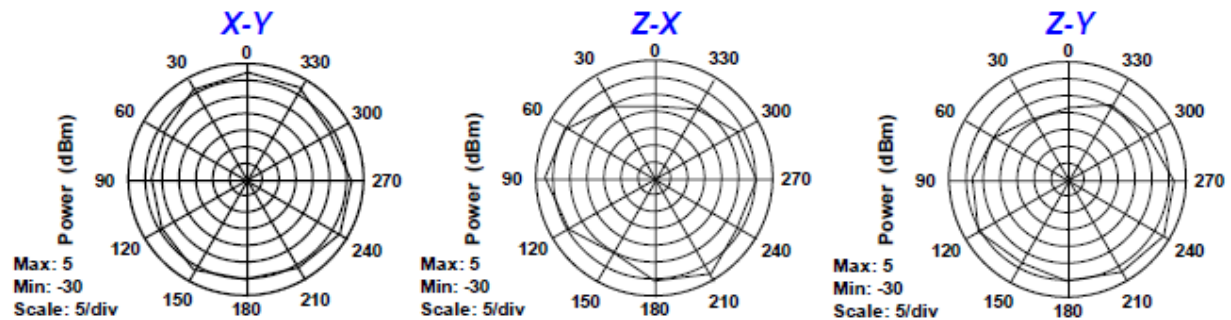


#### 2442 MHz

##### 3D Gain

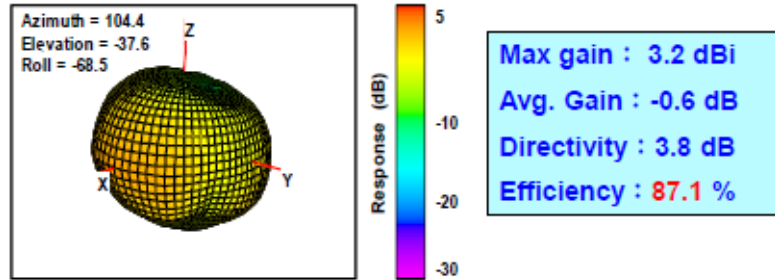


##### 2D Gain

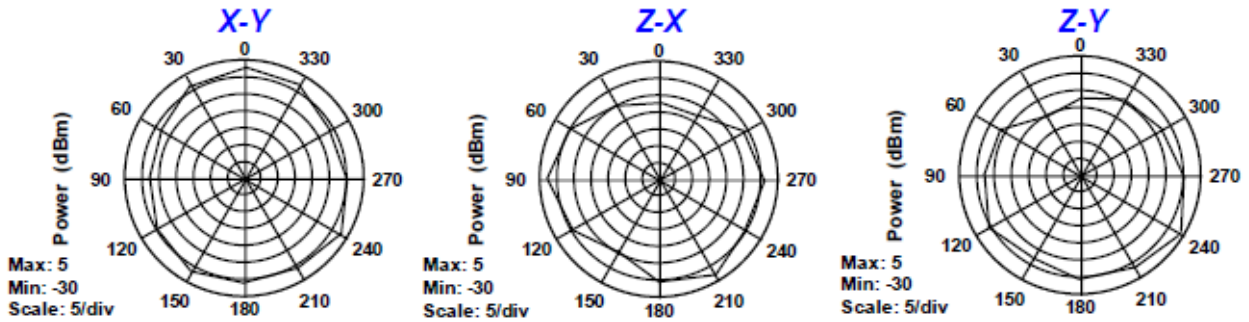


### 2484 MHz

#### 3D Gain



#### 2D Gain



Antenna	RCA-W2A0-7020-ZP-001		
Ground plane (mm)	50x20		
Frequency (MHz)	2400	2442	2484
R.L. (dB)	-19.6	-30.3	-19.5
VSWR	1.2	1.1	1.2
Max. Gain (dBi)	3.5	3.0	3.2
Avg. Gain (dB)	-0.4	-0.7	-0.6
Efficiency (%)	91.4	84.2	87.1



#### ■ ENVIRONMENTAL

PARAMETER	VALUE
RoHS	Compliant
REACH SVHC	Compliant
HALOGEN-FREE	Compliant



#### ■ APPROVAL

RALTRON	
DRAWN BY:	AR, September 12, 2022
APPROVED BY:	CP, September 12, 2022
REVISION:	A, Initial Release
	B, AR, September 21, 2022 Added EVB Measuring Test Report

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