

V200 WIFI ANTENNA GAIN MEASUREMENT REPORT

REPORT NO.: 2024-AG-PEN009

MODEL NO.: B20CJMBE2AN

TESTED DATE: 2024.09.23

ISSUED: 2024.09.23

MANUFACTURER: Motorola Solutions Inc.

ADDRESS : 2000 Progress Parkway, SCHAUMBURG IL 60196, UNITED STATES

ISSUED BY: Motorola Solutions Malaysia Sdn Bhd.

ADDRESS : Motorola Solutions, 11900 Bayan Lepas, Penang, Malaysia

TEST LOCATION : Motorola Solutions, 11900 Bayan Lepas, Penang, Malaysia

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RELEASE CONTROL RECORD

REPORT NO.	REASON FOR CHANGE	DATE ISSUED
2024-AG-PEN009	Original release	2024.09.23

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1 General Information

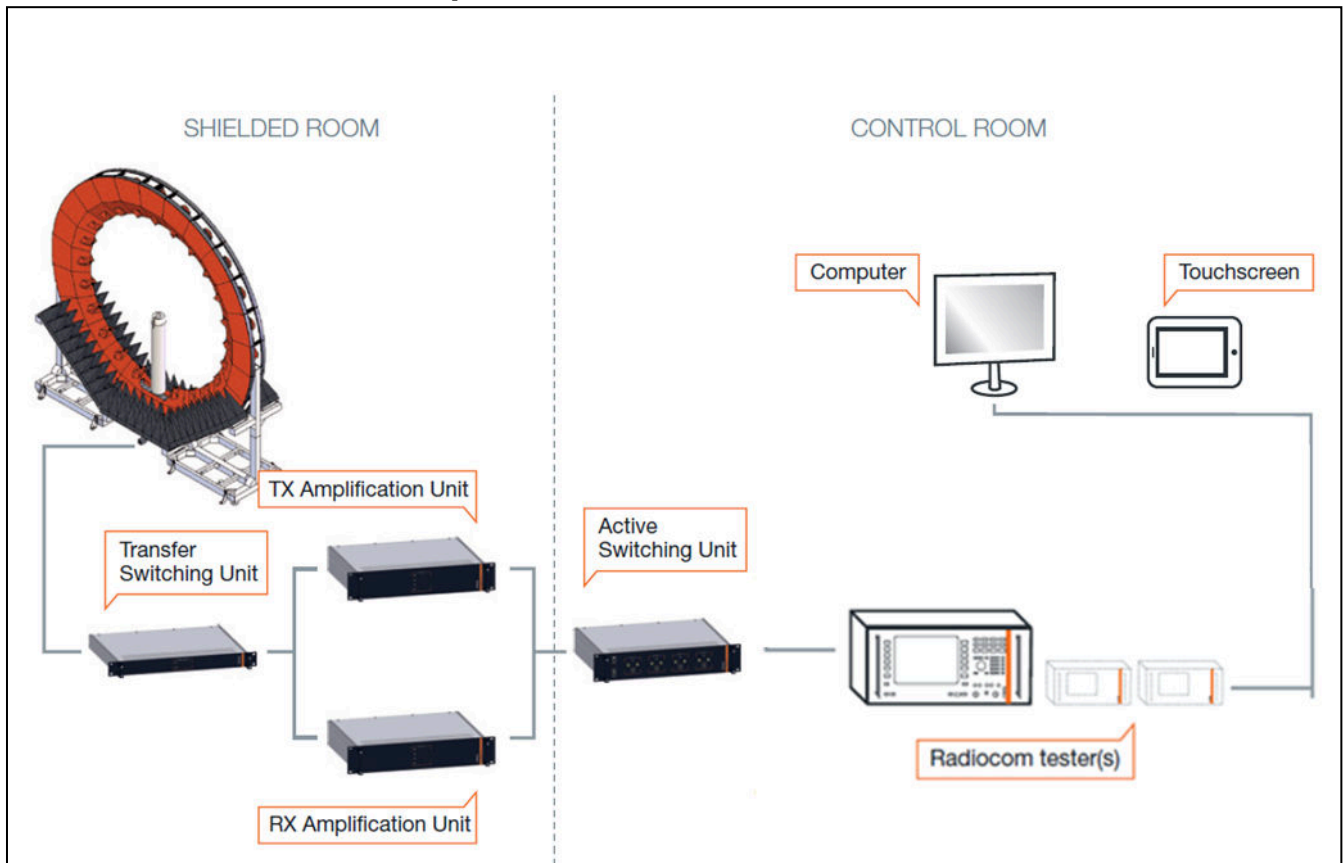
APPLICANT:	Motorola Solutions, Inc
MANUFACTURER:	Motorola Solutions, Inc
MODEL NO:	B20CJMBE2AN
SERIAL NUMBER/ESN/IMEI:	663EAS0050
HARDWARE VERSION:	P1B
SOFTWARE VERSION:	PSS fs2-ARMV7A_PTF V24.4-ptf-V200-1.8-1- g501bb5026c
PRODUCT TYPE:	Body Worn Camera
BLUETOOTH/WIFI ANTENNA:	AN000474A03, CHIP ANTENNA

The above equipment has been tested by **Motorola Solutions Malaysia Sdn Bhd**

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APPROVED BY: Teik Yang Goh

2 Measurement Setup



Overview of the SG24 multi-probe antenna measurement system from Microwave Vision Group.

3 Test Procedure

Device Under Test mounted on Antenna Chamber turntable. Measurements, including conducted power, TRP, and Peak EIRP and obtained by the MVG SG24 test system across low, mid and hi portions of the frequency band and across a 360 degree sphere. Peak antenna gain is determined from the maximum EIRP measured across the sphere with respect to the conducted power.

4 Test Lab Environment Conditions

Temperature	20°C to 30°C
Humidity	30% to 70%

5 Test Equipment List

Type of Equipment	Model Number	Serial Number	Calibration Due Date
Antenna Chamber	MVG SG24		N/A
Call Box	R&S CMW500	166207	15 Nov 2024

6 Device Configuration

6.1 Bands and Protocols Supported by Each Antenna

Antenna Label	Bands and Protocols for Which the Antenna Is Connected to RF front end
A	BT, 2.4GHz WIFI

7 Evaluation Summary

7.1 Conducted Power, TRP, EIRP

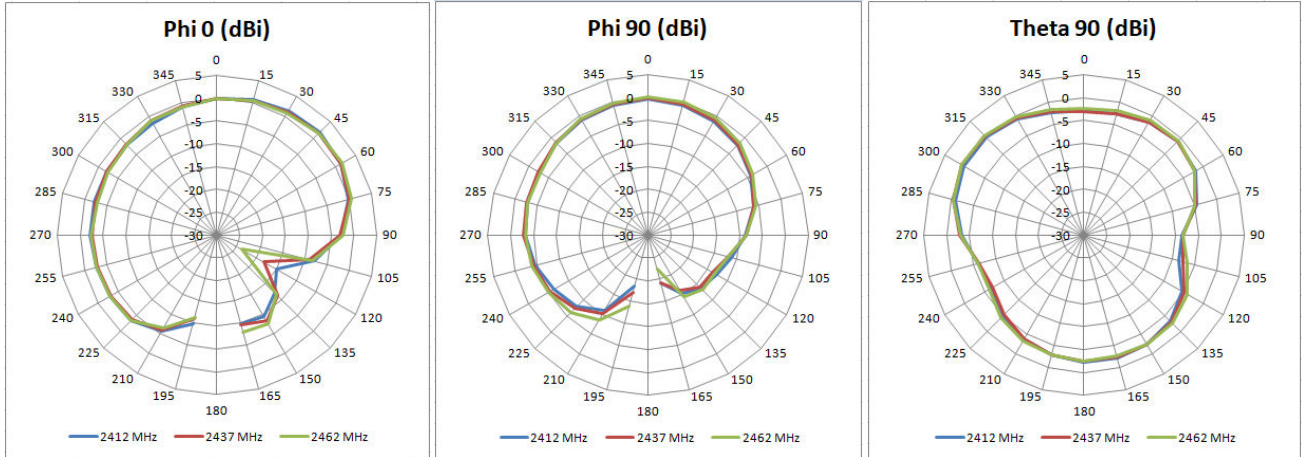
Protocol	Frequency (MHz)	BW (MHz)	Rate (Mbps)	Conducted Power	TRP	EIRP	Peak Gain = EIRP – Conducted Power
802.11g	2412	20	6	12.9	10.1	14.4	1.5
	2437	20	6	12.9	10.2	14.4	1.5
	2462	20	6	12.6	10.1	14.1	1.5

Measurement uncertainty for transmit parameters and antenna gain is as listed below, corresponding to 95% confidence level.

	Measurement Uncertainty (dB)	
Test Configuration	LTE/WLAN 2300-2800 MHz	LTE/WLAN 5150-5925 MHz
Free Space	1.60	1.72

7.2 Antenna patterns

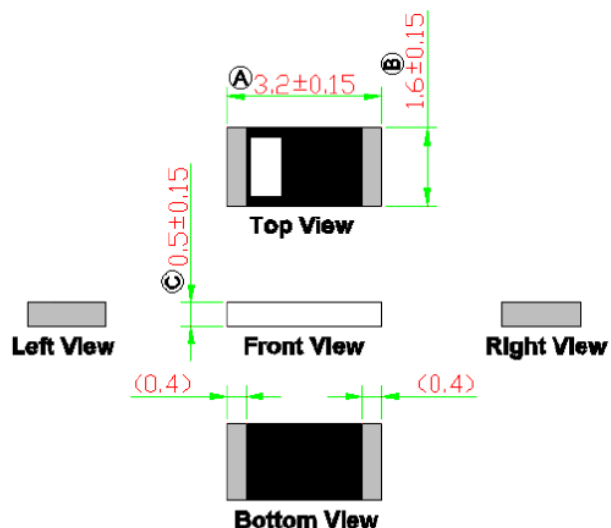
2.4GHz WIFI



8 Antenna Photographs / drawings

Part Number : AN000474A03

Dimension Drawing



NOTE:
 1. All materials are RoHS 2.0 compliant.
 2. "A ~ C" Critical Dimensions.
 3. "()" Reference Dimensions.

Unit: mm

Dimensions (mm) & Mechanical

Body Length (A)	3.2 ± 0.15
Width (B)	1.6 ± 0.15
Thickness (C)	0.5 ± 0.15
Connection Type	SMT
Ground Plane	80 mm x 40 mm
Material	Ceramic