

MTP3550/MTP3500 BT ANTENNA GAIN MEASUREMENT REPORT

REPORT NO.: 2024-AG-PEN001

MODEL NO.: MTP3550/MTP3500

TESTED DATE: 2024.01.16

ISSUED: 2024.01.30

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-PEN001	Original release	2024.01.30

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1 General Information

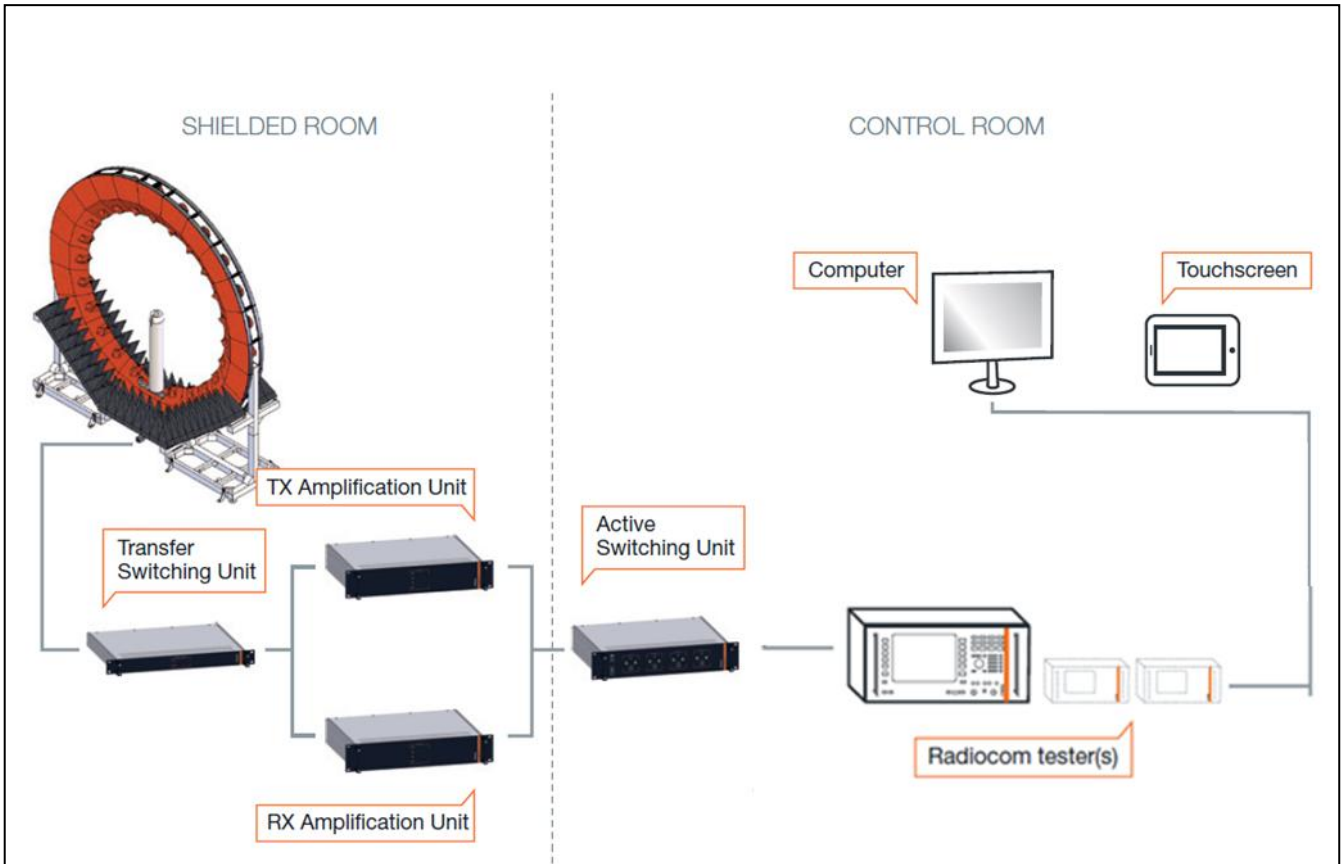
APPLICANT:	Motorola Solutions, Inc
MANUFACTURER:	Motorola Solutions, Inc
MODEL NO:	MTP3550/MTP3500
SERIAL NUMBER/ESN/IMEI:	121TZX0159
HARDWARE VERSION:	RevAA
SOFTWARE VERSION:	9952
PRODUCT TYPE:	Portable Radio
BLUETOOTH ANTENNA:	0104042J37, Embedded.

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

PREPARED BY: Mohamad Jamadi Mohamad Sukeri

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	141537	16 Aug 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

7 Evaluation Summary

7.1 Conducted Power, TRP, EIRP

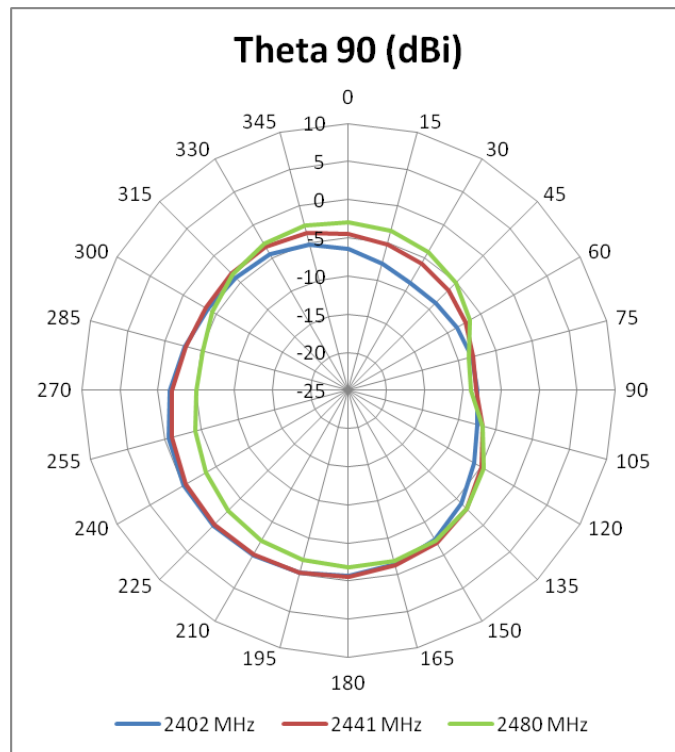
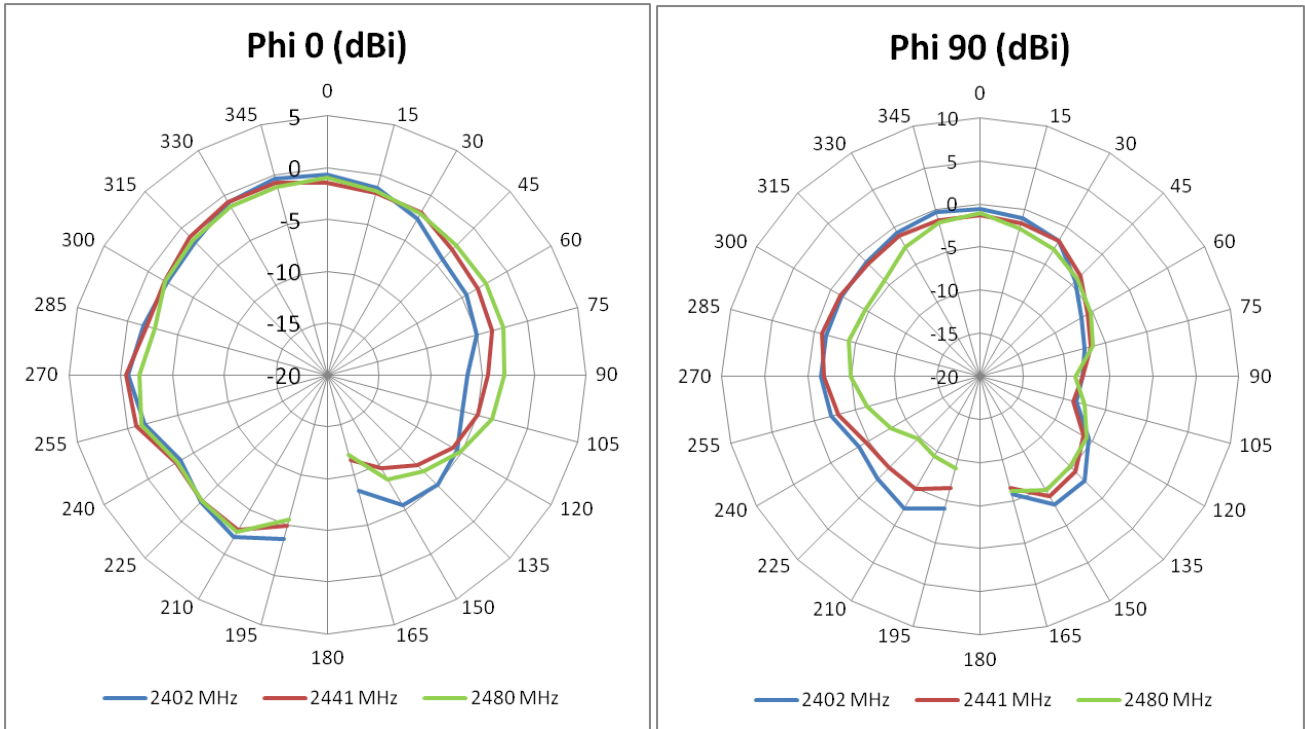
Protocol	Frequency (MHz)	Conducted Power	TRP	EIRP	Peak Gain = EIRP – Conducted Power
BT, DH5	2402	2.89	-0.3	2.99	0.1
	2441	3.16	0.01	3.04	-0.1
	2480	3.03	-0.8	2.13	-0.9

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 BT



8 Antenna Photographs / drawings

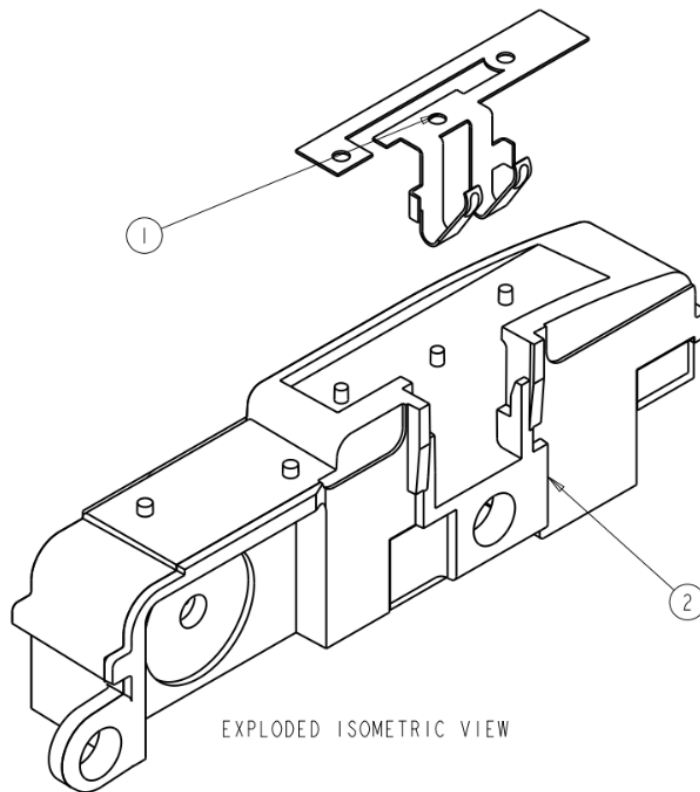
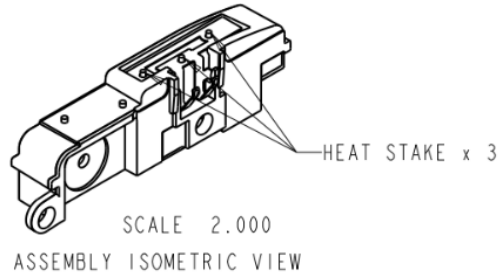


TABLE 2: BILL OF MATERIAL

ITEM	DESCRIPTION	PART NUMBER	QUANTITY
1	ANTENNA, BLUETOOTH	N/A	1
2	CARRIER, BT ANTENNA	55012012001	1

0104042J37	BLUETOOTH ANTENNA ASSEMBLY	RELEASED	0409
MOTOROLA P/N	DESCRIPTION	P/N STATUS	PRODUCT ID
TABLE 1: MODEL INFORMATION			

