

RF Exposure Evaluation Report

Product : motorola smart stylus
Trade mark : Motorola
Model/Type reference : XT2201-S
Serial Number : N/A
Report Number : EED32N81246303
FCC ID : IHDT6AA1
Date of Issue : Feb. 15,2022
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF
Exposure Guidance v06
Test result : PASS

Prepared for:

Motorola Mobility LLC
222 W Merchandise Mart Plaza Chicago, IL 60654 USA

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Compiled by:

Martin Lee

Martin Lee

Reviewed by:

Aaron Ma

Aaron Ma

Approved by:

David Wang

David Wang

Date:

Feb. 15,2022

Check No.: 2202231121



1 Version

Version No.	Date	Description
00	Feb. 15,2022	Original

2 Contents

	Page
1 VERSION.....	2
2 CONTENTS.....	3
3 GENERAL INFORMATION.....	4
3.1 CLIENT INFORMATION.....	4
3.2 GENERAL DESCRIPTION OF EUT.....	4
3.3 TEST LOCATION.....	5
3.4 DEVIATION FROM STANDARDS.....	5
3.5 ABNORMALITIES FROM STANDARD CONDITIONS.....	5
3.6 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	5
4 SAR EVALUATION.....	6
4.1 RF EXPOSURE COMPLIANCE REQUIREMENT.....	6
4.1.1 Standard Requirement.....	6
4.1.2 EUT RF Exposure.....	7
PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS.....	8

3 General Information

3.1 Client Information

Applicant:	Motorola Mobility LLC
Address of Applicant:	222 W Merchandise Mart Plaza Chicago, IL 60654 USA
Manufacturer:	Motorola Mobility LLC
Address of Manufacturer:	222 W Merchandise Mart Plaza Chicago, IL 60654 USA
Factory:	Shenzhen Sunwinon Electronics Co., Ltd.
Address of Factory:	Floor 1-6 of 4#Building of 101, No. 6-6, Yanshan avenue, Yanchuan community, Yanluo street, Bao'an district, Shenzhen, 518108, China

3.2 General Description of EUT

Product Name:	motorola smart stylus
Model No.:	XT2201-S
Trade mark:	Motorola
Bluetooth Version:	V5.2
Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK
Transfer Rate:	☒ 1Mbps ☒ 2Mbps
Number of Channel:	40
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Antenna Type:	Ceramic antenna
Antenna Gain:	-3.0dBi
Power Supply:	Lithium battery: DC 3.85V
Test Voltage:	DC 3.85V
Sample Received Date:	Dec. 02, 2021
Sample tested Date:	Dec. 02, 2021 to Jan. 10, 2022
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.	

3.3 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.4 Deviation from Standards

None.

3.5 Abnormalities from Standard Conditions

None.

3.6 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06
Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

4.1.2 EUT RF Exposure

1) For BLE

Measurement Data

GFSK mode(1Mbps)				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	1.04	0.5±1	1.5	1.413
Middle(2440MHz)	0.65	0±1	1.0	1.259
Highest(2480MHz)	0.7	0±1	1.0	1.259
GFSK mode(2Mbps)				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	1.1	0.5±1	1.5	1.413
Middle(2440MHz)	0.75	0±1	1.0	1.259
Highest(2480MHz)	0.76	0±1	1.0	1.259

Worst case: GFSK mode(2Mbps)						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	1.1	0.5±1	1.5	1.413	0.44	3.0
Middle (2440MHz)	0.75	0±1	1.0	1.259	0.39	
Highest (2480MHz)	0.76	0±1	1.0	1.259	0.40	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: EED32N81246301.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32N81246301 for EUT external and internal photos.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***