

TEST REPORT

Report Number: 104818967MPK-001 Project Number: G104818967 October 27, 2021

Testing performed on the Rechargeable Electric Toothbrush Handle Model Numbers: HX681Y x, HX686Y x HX684Y x, HX685Y x

> FCC ID: 2ADZNHX68X IC: 20109-HX68X

> > to

FCC Part 15 Subpart C (15.225) ISED RSS-210 Issue 10

for

Philips Oral Healthcare LLC

Test Performed by:

Intertek 1365 Adams Court Menlo Park, CA 94025 USA **Test Authorized by:**

Philips Oral Healthcare LLC 22100 Bothell Everett Highway Bothell, WA 98021 USA

Prepared by:	Find	Date:	October 27, 2021
	Amar Kacel		
Reviewed by:	(Histore	Date:	October 27, 2021
	Krishna Vemuri		

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	Report No. 104818967MPK-001		
Equipment Under Test: Rechargeable Electric Toothbrush Handle			
Model Number:	HX681Y x, HX686Y x, HX684Y x, HX685Y x		
Applicant:	Philips Oral Healthcare LLC		
Contact:	Brian Clarke		
Address:	Philips Oral Healthcare LLC 22100 Bothell Everett Highway Bothell, WA 98021		
Country:	USA		
Tel. Number:	(425) 487-7000		
Email:	brian.clarke@philips.com		
Applicable Regulation:	FCC Part 15 Subpart C (15.225) ISED RSS-210 Issue 10		
Date of Test:	October 05, 2021, to October 19, 2021		

We attest to the accuracy of this re	report:
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Amar Kacel	Krishna K Vemuri
Staff Engineer	EMC Manager



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1.0 Summary of Tests

TEST	REFERENCE FCC 15.225	REFERENCE RSS-210	RESULTS
Field Strength of Fundamental	15.225(a)	B.6	Complies
Radiated Emissions Outside the band	15.225(b), 15.225(c), 15.225(d), 15.209	B.6	Complies
Frequency Tolerance of the Carrier	15.225(e)	B.6	Complies
Line Conducted Emissions	15.207	RSS-GEN	Not Applicable – RFID is disabled while charging
Occupied Bandwidth	15.215	RSS-GEN	Complies
Antenna requirement	15.203	RSS-GEN	Complies ¹

¹ The EUT utilizes an internal Antenna.

EUT receive date: October 05, 2021

EUT receive condition: The pre-production version of the EUT was received in good condition with

no apparent damage. As declared by the Applicant, it is identical to the

production units.

Test start date:October 05, 2021Test completion date:October 19, 2021



2.0 General Description

2.1 Product Description

Philips Oral Healthcare LLC supplied the following description of the EUT:

The Philips HX681Y x, HX686Y x, HX684Y x, and HX685Y x are rechargeable electric toothbrushes that are inductively charged. These toothbrushes also track the brush head usage through RFID to alert the user when the heads need to be replaced.

Per manufacturer the above listed models are identical in construction except for some features and cover coloring. HX68XY x; where second X = 0 - 9 indicating features. Y = A - Z indicating color. Lowercase "x" indicating that the model contains this revised PCBA instead of the original PCBA.

For more information, refer to the following product specification, declared by the manufacturer.

Overview of the EUT

Applicant name & address	Philips Oral Healthcare LLC 22100 Bothell Everett Highway Bothell, WA 98021 USA
Contact info / Email	Brian Clarke / brian.clarke@philips.com
Model	HX681Y x, HX686Y x, HX684Y x, HX685Y x
FCC Identifier	2ADZNHX68X
IC Identifier	20109-HX68X
Operating Frequency	13.56 MHz
Number of Channels	1
Type of Modulation	ASK Modulation
Antenna Type	Internal Antenna

EMC Report for Philips Oral Healthcare LLC on Rechargeable Electric Toothbrush Handle File: 104818967MPK-001



2.2 Related Submittal(s) Grants

None

2.3 Test Methodology

Radiated tests were performed at an antenna to EUT distance of 10 meters, unless stated otherwise in this test report. All other measurements were made in accordance with the procedures in part 2 of CFR 47 7, ANSI C63.10: 2013, RSS-210 Issue 10 & RSS-GEN Issue 5.

2.4 Test Facility

The radiated emission test site and conducted measurement facility used to collect the data is 10m semi-anechoic chamber located in Menlo Park, California. This test facility and site measurement data have been fully placed on file with the FCC and Industry Canada (Site # 2042L-1).

2.5 Measurement Uncertainty

Compliance with the limits was based on the results of the measurements and doesn't take into account the measurement uncertainty.

Estimated Measurement Uncertainty

Measurement	Expanded Uncertainty (k=2)			
	0.15 MHz – 1 GHz	1 GHz – 2.5 GHz	> 2.5 GHz	
RF Power and Power Density – antenna conducted	-	0.7 dB	-	
Unwanted emissions - antenna conducted	1.1 dB	1.3 dB	1.9 dB	
Bandwidth – antenna conducted	-	30 Hz	-	

Measurement	Expanded Uncertainty (k=2)			
	0.15 MHz – 30MHz	30 MHz – 1 GHz	1 GHz – 18 GHz	
Radiated emissions	-	4.7	5.1 dB	
AC mains conducted emissions	2.1 dB	-	-	

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3.0 System Test Configuration

3.1 Support Equipment

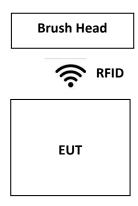
Support Equipment			
Description	Manufacturer	Model	
Brush Head	Philips Oral Healthcare LLC	C3	

Equipment Under Test					
Description	Manufacturer	Model	Туре		
Rechargeable Electric Toothbrush Handle	Philips Oral Healthcare LLC	HX681Y x	1B-1M		
Rechargeable Electric Toothbrush Handle	Philips Oral Healthcare LLC	HX684Y x	2B-3M		
Rechargeable Electric Toothbrush Handle	Philips Oral Healthcare LLC	HX685Y x	2B-3M-I		
Rechargeable Electric Toothbrush Handle	Philips Oral Healthcare LLC	HX686Y x	2B-2M-I		

The EUT is powered by 3.8 VDC (internal battery).

3.2 Block Diagram of Test Setup

The diagram shown below details the interconnection of the EUT and support equipment. For specific layout, refer to the test configuration photograph in the relevant section of this report.



S = Shielded	F = With Ferrite
U = Unshielded	m = Length in Meters

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EUT Photo



HX681Y x



HX684Y x



HX685Y x



HX686Y x



3.3 Justification

For radiated emission measurements the EUT is placed on a non-conductive table. The highest clock frequency used is 48MHz, so radiated emissions were performed up to 1GHz for FCC and ISED.

Models: HX681Y x, HX686Y x, HX684Y x, HX685Y x uses identical PCB with different plastic handle tubes to create different configurations.

3.4 Software Exercise Program

None

3.5 Mode of Operation during test

The Rechargeable Electric Toothbrush Handles were set up to continuously transmitting at 13.56MHz.

3.6 Modifications required for Compliance

No modifications were made by the manufacturer to bring the EUT into compliance.

3.7 Additions, deviations and exclusions from standards

No additions, deviations or exclusion have been made from standard.



4.0 Measurement Results

4.1 Field Strength of Fundamental and Radiated Emissions Outside the band

4.1.1 Requirements

FCC Rules 15.225

- a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter (84 dBuV) at 30 meters.
- b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.
- c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.
- d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

§15.209 Radiated emission limits; general requirements.

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	
0.009-0.490	2400/F(kHz)	300	
0.490-1.705	24000/F(kHz)	30	
1.705-30.0	30	30	
30-88	100	3	
88-216	150	3	
216-960	200	3	
Above 960	500	3	



4.1.2 Procedure

Radiated Measurements Below 30 MHz

During the test the EUT is rotated and the measuring antenna angles are varied during the search for maximum signal level.

Radiated emissions are taken at ten meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance. Measurements for below 30 MHz were made at 10 meters. Data results below are corrected for distance back to 30 meters.

Radiated Measurements Above 30 MHz

During the test the EUT is rotated and the measuring antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Radiated emissions are taken at ten meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance. Measurements for above 30 MHz were made at 10 meters.

Radiated emission measurements were performed from 9kHz to 1 GHz. Analyzer resolution is:

200Hz or greater for 9kHz to 150kHz 9 kHz or greater for 150kHz to 30 MHz 120 kHz or greater for 30MHz to 1000 MHz For those frequencies quasi-peak detector applies

Data includes of the worst-case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation is as follows:

FS = RA + AF + CF - AG - DCF

Where FS = Field Strength in dB (μ V/m)

RA = Receiver Amplitude (including preamplifier) in dB (μ V)

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB (1/m)

AG = Amplifier Gain in dB

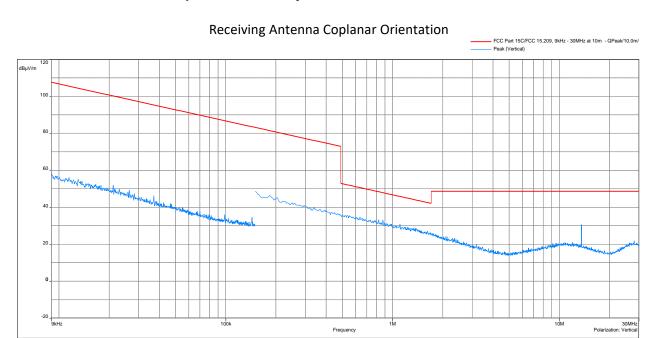
DCF = Distance Correction Factor

Note: FS was measured with loop antenna below 30MHz



4.1.3 Test Result 15.225 (a) (b) (c) (d) and 15.209

Radiated Spurious Emissions from 9 kHz to 30MHz, Model: HX681Y x

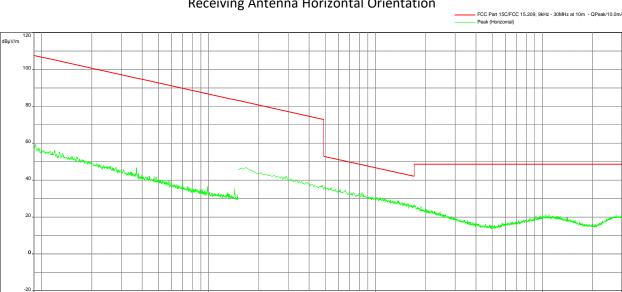


Receiving Antenna Coaxial Orientation PCC Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Peak (Hotecontal) Receiving Antenna Coaxial Orientation PCC Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Peak (Hotecontal) Receiving Antenna Coaxial Orientation PCC Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Peak (Hotecontal) Receiving Antenna Coaxial Orientation PCC Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Peak (Hotecontal) Receiving Antenna Coaxial Orientation PCC Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Peak (Hotecontal) Receiving Antenna Coaxial Orientation PCC Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Peak (Hotecontal) Receiving Antenna Coaxial Orientation PCC Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Peak (Hotecontal) Receiving Antenna Coaxial Orientation PCC Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Peak (Hotecontal) Receiving Antenna Coaxial Orientation PCC Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Peak (Hotecontal) Receiving Antenna Coaxial Orientation PCC Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OPeaN-10.0m/ Pant ISOFICE 15.200, 984z - 300Me at 10m - OP

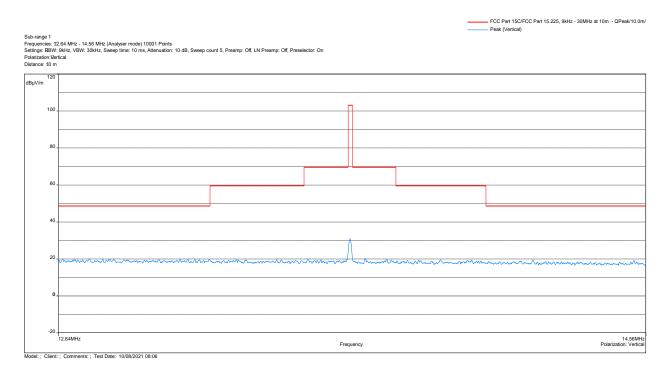


Model: : Client: : Comments: : Test Date: 10/08/2021 10:12





Test Result 15.225 (a)(b)(c) Radiated Spurious Emissions Mask



Frequency	Peak FS@10m	Limit@10m	Margin	Comment	Correction
(MHz)	dB(uV/m)	dB(uV/m)	dB		dB
13.56	30.49	103.1	-72.61	Coplanar	2.72

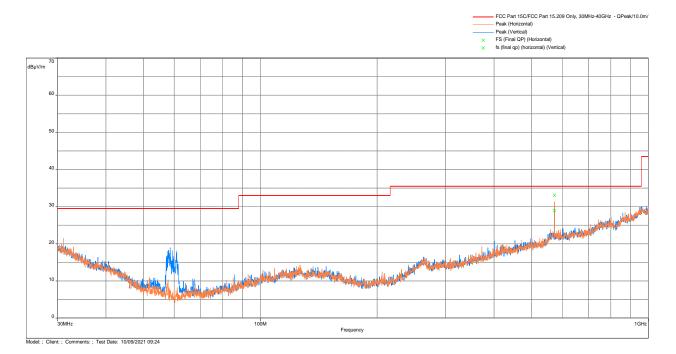
Note: Correction = AF+CF-AG- distance correction factor

Distance correction factor=40*log10(limit distance/measured distance)

EMC Report for Philips Oral Healthcare LLC on Rechargeable Electric Toothbrush Handle File: 104818967MPK-001



Radiated Spurious Emissions from 30 to 1000 MHz



Freq	Peak FS @10m	Limit @10m	Margin	Height	Azimuth	Polarity	Correction
(MHz)	dB(uV/m)	dB(uV/m)	(dB)	(m)	(Deg)		(dB)
572.726	33.07	35.5	-2.43	1.51	63	Horizontal	-4.05
572.725	28.9	35.5	-6.6	2	20.25	Vertical	-4.05
956.706	29.46	35.5	-6.04	2.98	16	Horizontal	3.83
31.132	21.5	29.5	-8.0	1	58.75	Horizontal	-8.86
46.037	11.46	29.5	-18.04	1.99	241.5	Horizontal	-16.59
51.793	10.93	29.5	-18.57	1	224.25	Horizontal	-19.49
85.096	10.93	29.5	-18.57	2.98	0	Horizontal	-18.54
57.839	10.36	29.5	-19.14	1	118.5	Horizontal	-21.11

Note: Correction = AF + CF -AG

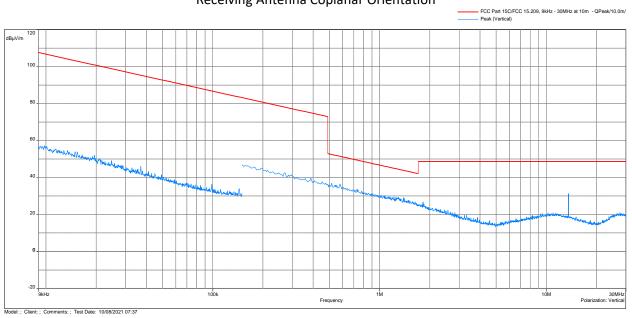
Result	Complies by	2.43dB	

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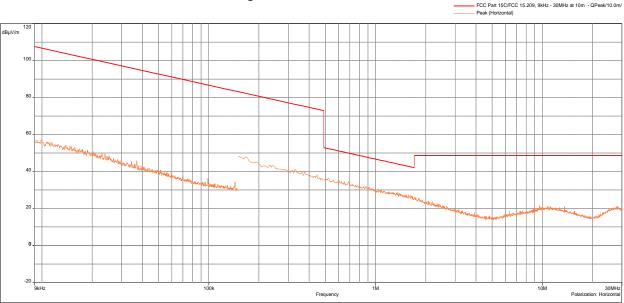


Radiated Spurious Emissions from 9 kHz to 30MHz, Model: HX684Y x

Receiving Antenna Coplanar Orientation



Receiving Antenna Coaxial Orientation

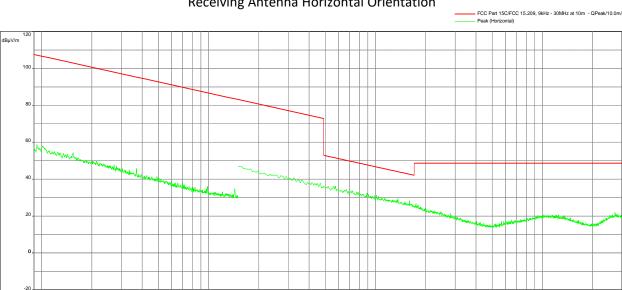


Model: ; Client: ; Comments: ; Test Date: 10/08/2021 07:37

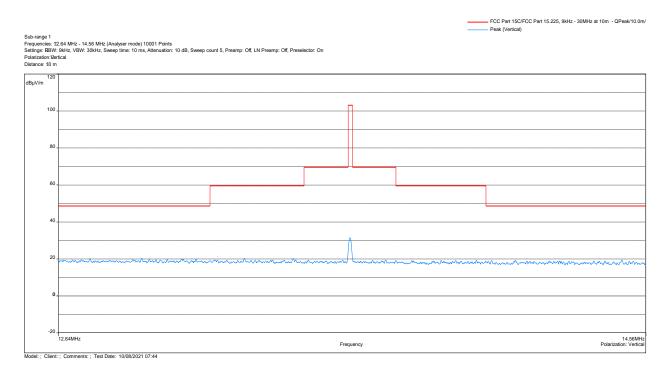


Model: : Client: : Comments: : Test Date: 10/08/2021 09:48





Test Result 15.225 (a)(b)(c) Radiated Spurious Emissions Mask



Frequency	Peak FS@10m	Limit@10m	Margin	Comment	Correction
(MHz)	dB(uV/m)	dB(uV/m)	dB		dB
13.56	31.19	103.1	-71.91	Coplanar	2.72

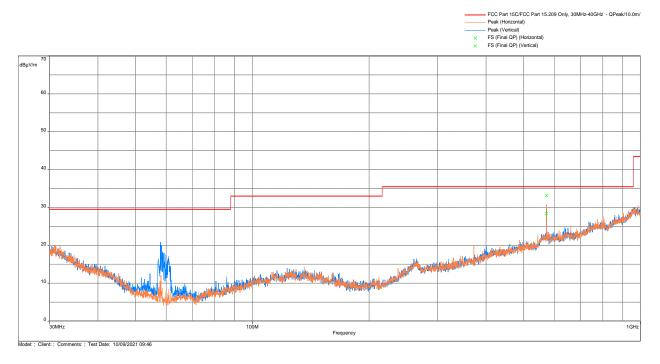
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Note: Correction = AF+CF-AG- distance correction factor Distance correction factor=40*log10(limit distance/measured distance)

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Radiated Spurious Emissions from 30 to 1000 MHz



Freq	Peak FS @10m	Limit @10m	Margin	Height	Azimuth	Polarity	Correction
(MHz)	dB(uV/m)	dB(uV/m)	(dB)	(m)	(Deg)		(dB)
572.725	33.17	35.5	-2.33	1.51	61	Horizontal	-4.05
956.706	29.73	35.5	-5.77	4	252	Horizontal	3.83
572.728	28.38	35.5	-7.12	1.86	94	Vertical	-4.06
954.119	29.59	35.5	-5.91	0.99	180	Vertical	3.64
956.609	28.91	35.5	-6.59	0.99	189.25	Vertical	3.82
957.740	28.9	35.5	-6.6	2	5.5	Vertical	3.87
953.278	28.86	35.5	-6.64	0.99	127.75	Vertical	3.62
58.001	20.9	29.5	-8.6	4	241.75	Vertical	-21.12
30.420	19.77	29.5	-9.73	2	337.5	Vertical	-8.51
31.94	19.75	29.5	-9.75	4	348	Horizontal	-9.25

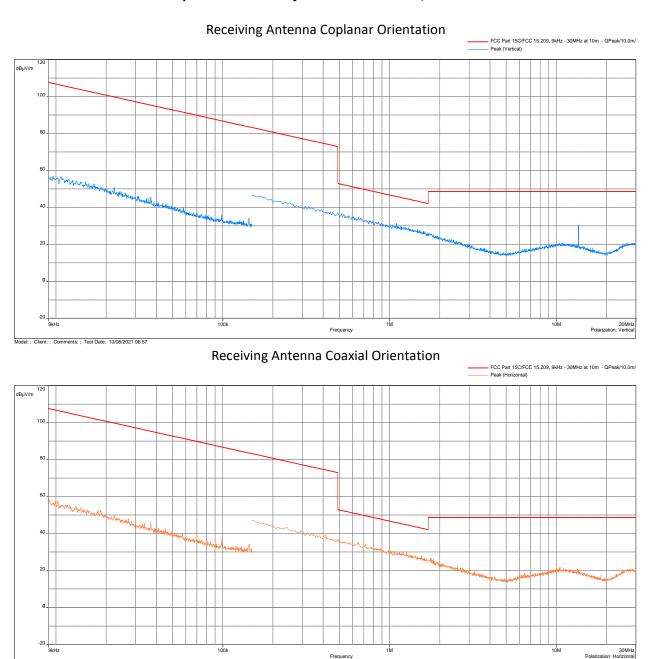
Note: Correction = AF + CF -AG

Result Complies by 2.33dB



Model: ; Client: ; Comments: ; Test Date: 10/08/2021 06:57

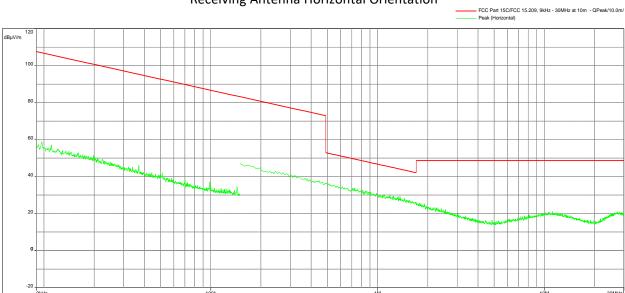
Radiated Spurious Emissions from 9 kHz to 30MHz, Model: HX685Y x



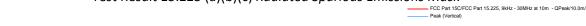
Frequency



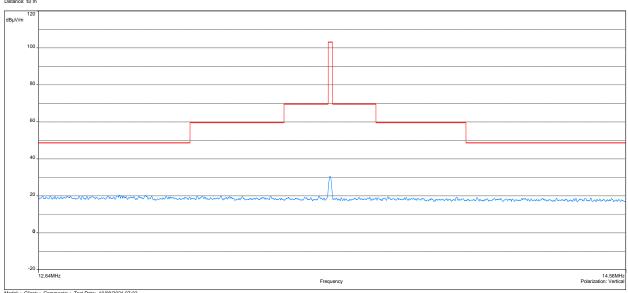




Test Result 15.225 (a)(b)(c) Radiated Spurious Emissions Mask







Model: ; Client: ;	Comments:;	Test Date:	10/08/2021 07:32	

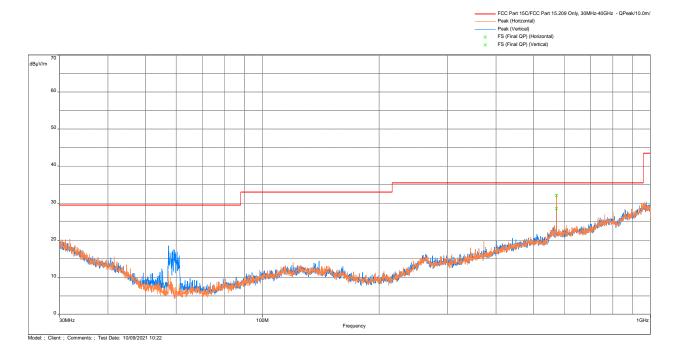
Frequency	Peak FS@10m	Limit@10m	Margin	Comment	Correction
(MHz)	dB(uV/m)	dB(uV/m)	dB		dB
13.56	30.61	103.1	-72.49	Coaxial	2.72

Note: Correction = AF+CF-AG- distance correction factor

Distance correction factor=40*log10(limit distance/measured distance)



Radiated Spurious Emissions from 30 to 1000 MHz



Freq (MHz)	Peak FS @10m dB(uV/m)	Limit @10m dB(uV/m)	Margin (dB)	Height (m)	Azimuth (Deg)	Polarity	Correction (dB)
572.728	32.07	35.5	-3.43	1.26	8	Horizontal	36.12
572.726	28.54	35.5	-6.96	2.02	52.25	Vertical	32.6
753.361	28.30	35.5	-7.20	1.98	0	Vertical	-2.81
949.237	30	35.5	-5.5	1.99	355	Horizontal	3.37
936.530	29.35	35.5	-6.15	4	0	Vertical	2.62
31.908	20.39	29.5	-9.11	4	339	Horizontal	-9.23
31.099	20.25	29.5	-9.25	1.99	312	Horizontal	-8.85
30.129	19.64	29.5	-9.86	3	2	Vertical	-8.37
32.910	18.74	29.5	-10.76	4	93.25	Horizontal	-9.63
57.322	18.55	29.5	-10.95	4	126.5	Vertical	-21.07

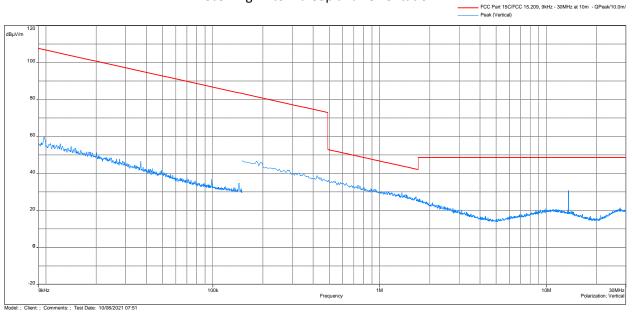
Note: Correction = AF + CF -AG

Result	Complies by 3.43dB
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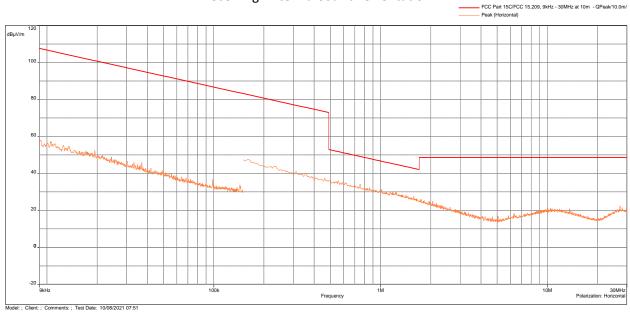


Radiated Spurious Emissions from 9 kHz to 30MHz, Model: HX686Y x



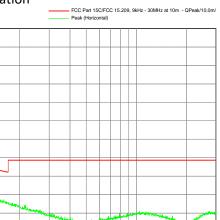


Receiving Antenna Coaxial Orientation



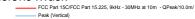




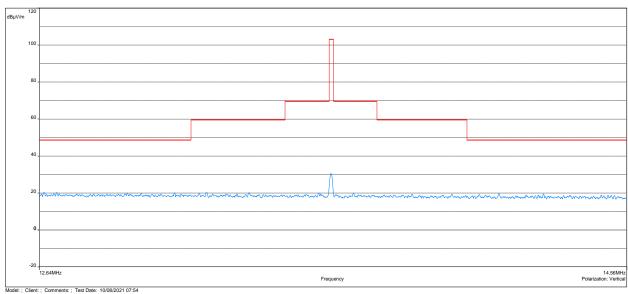


Model: ; Client: ; Comments: ; Test Date: 10/08/2021 10:01

Test Result 15.225 (a)(b)(c) Radiated Spurious Emissions Mask







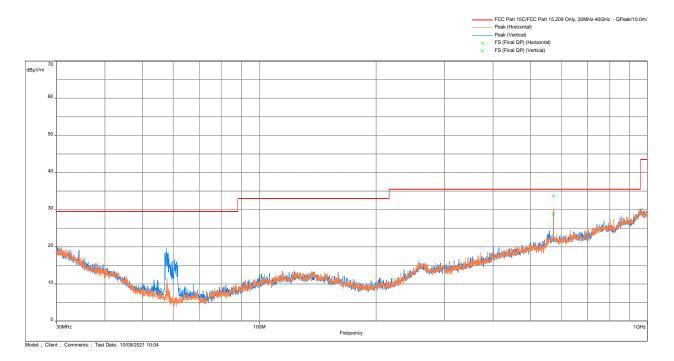
Frequency	Peak FS@10m	Limit@10m	Margin	Comment	Correction
(MHz)	dB(uV/m)	dB(uV/m)	dB		dB
13.56	30.64	103.1	-72.46	Coaxial	2.72

Note: Correction = AF+CF-AG- distance correction factor

Distance correction factor=40*log10(limit distance/measured distance)



Radiated Spurious Emissions from 30 to 1000 MHz



Freq	Peak FS @10m	Limit @10m	Margin	Height	Azimuth	Polarity	Correction
(MHz)	dB(uV/m)	dB(uV/m)	(dB)	(m)	(Deg)	· ·	(dB)
572.7249	33.73	35.5	-1.77	1.21	138.25	Horizontal	-4.05
572.7278	28.81	35.5	-6.69	3.28	254.75	Vertical	-4.06
957.288	30.26	35.5	-5.24	4	48.5	Vertical	3.87
951.338	29.49	35.5	-6.01	2.01	65.75	Horizontal	3.43
30.873	20.4	29.5	-9.1	2.98	311.75	Horizontal	-8.74
30.097	20.25	29.5	-9.25	4	285.5	Vertical	-8.36
57.580	19.65	29.5	-9.85	4	163.25	Vertical	-21.09
34.300	19.12	29.5	-10.38	1	2.25	Vertical	-10.39

Note: Correction = AF + CF -AG

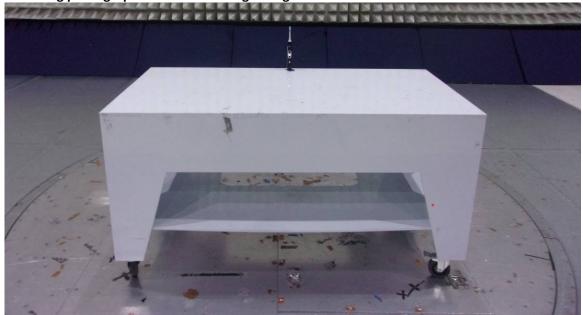
Result	Complies by 1.77dB
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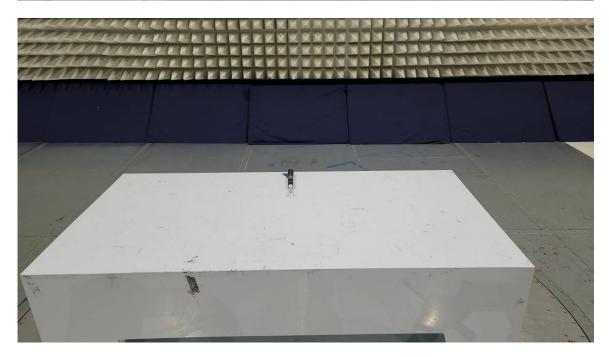
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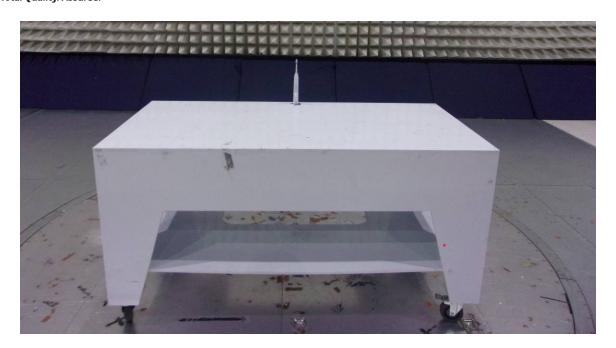
4.1.4 Test Configuration Photographs

The following photographs show the testing configurations used.





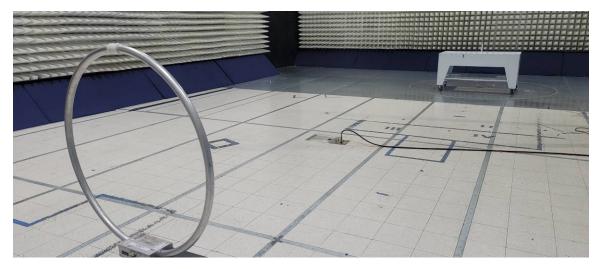








4.1.5 Test Configuration Photographs (Continued)

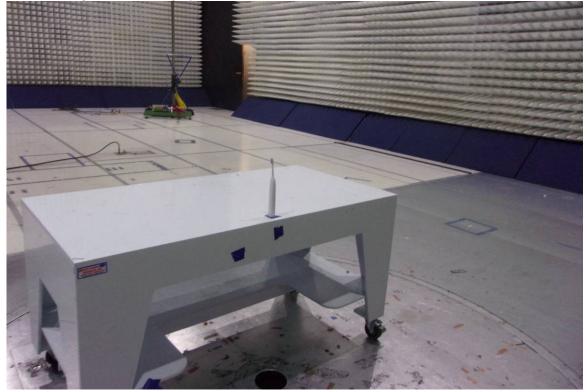








4.1.5 Test Configuration Photographs (Continued)







4.2 Frequency Tolerance

4.2.1 Requirement FCC 15.225 (e)

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency over a temperature variation of –20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

4.2.2 Procedure

The EUT was placed in the temperature chamber. The frequency counter was connected to the transmitter output. For each temperature, the carrier frequency was recorded with the battery fully charged.

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4.2.3 Test Results 15.225 (e)

Model: HX685Y

Nominal Frequency: 13.560192308 MHz

Voltage (DC)	Temperature (°C)	Measured Frequency (MHz)	Deviation from Reference (MHz)	Deviation (%)
Fully charged Battery	-20	13.560221760	0.000029452	0.000217195
Fully charged Battery	-10	13.560212350	0.000020042	0.000147800
Fully charged Battery	0	13.560193500	0.000001192	0.000008790
Fully charged Battery	10	13.560192310	0.000000002	0.00000015
Fully charged Battery	20	13.560192308	0.000000000	0.000000000
Fully charged Battery	30	13.560128210	-0.000064098	-0.000472692
Fully charged Battery	40	13.560117210	-0.000075098	-0.000553812
Fully charged Battery	50	13.560103680	-0.000088628	-0.000653590



4.3 Occupied Bandwidth FCC 15.215

4.3.1 Requirements

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage.

4.3.2 Procedure

The EUT was setup to transmit in normal operating condition.

Measurements were made with the loop antenna in close proximity of the EUT. Following the procedures of ANSI 63.10: 2013, the 20dB bandwidth measurements were taken. The following plots show Occupied Bandwidth.



4.3.3 Test Results

Model: HX685Y

Frequency	-20 dB Channel Bandwidth	99% Channel Bandwidth
(MHz)	(kHz)	(kHz)
13.56	277.7	

-20dB & 99% Channel Bandwidth Plot



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5.0 List of test equipment

Measurement equipment used for emission compliance testing utilized the equipment on the following list:

Equipment	Manufacturer	Model/Type	Asset #	Cal Int	Cal Due
EMI Test Receiver 40GHz	Rohde & Schwarz	ESU40	ITS 00961	12	03/09/2022
9kHz - 30MHz Passive Loop	EMCO	6512	ITS 001598	12	06/21/2022
Antenna					
Bilog Antenna 30MHz - 1GHz	Teseq	CBL 6111D	ITS 01058	12	11/12/2021
9kHz-1GHz Pre-amplifier	Sonoma Instrument	310N	ITS 01714	12	11/13/2021
10kHz - 1GHz 3 meter RF Cable	TRU Corp.	TRU Core 300	ITS 01465	12	09/14/2022
10kHz - 1GHz 15 meter RF Cable	TRU Corp.	TRU Core 300	ITS 01470	12	09/14/2022
Spectrum Analyzer 20hz-26.5ghz	Rohde & Schwarz	FSU	ITS 00913	12	05/24/2022
10kHz-1GHz 2 meter RF Cable	TRU Corp.	TRU Core 300	ITS 01339	12	09/14/2022
10kHz-1GHz 11 meter RF Cable	TRU Corp.	TRU Core 300	ITS 01335	12	09/14/2022
10kHz-1GHz 6 meter RF Cable	TRU Corp.	TRU Core 300	ITS 01333	12	04/28/2022
150kHz to 30MHz LISN	Com-Power	LIN-115A	ITS 01283	12	05/22/2022
Humidity Temperature Test	ESPEC	BTX-475	01436	12	10/20/2021
Chamber					
2Hz-43.5GHz Signal and	Rohde & Schwarz	FSW43	01818	12	07/16/2022
Spectrum Analyzer					

Software used for emission compliance testing utilized the following:

Name	Manufacturer	Version	Template/Profile
BAT-EMC	Nexio	3.20.0.23	Intertek Emissions Template.bpp
RS Commander	Rohde Schwarz	1.6.4	Not Applicable (Screen grabber)



6.0 Document History

Revision/ Job Number	Writer Initials	Reviewer Initials	Date	Change
1.0 / G104818967	AS	KV	October 27, 2021	Original document