





FCC TEST REPORT

FCC ID	:	IHDT56YJ1
Equipment	:	Mobile Cellular Phone
Brand Name	:	Motorola
Model Name	:	XT2061-1
Applicant	:	Motorola Mobility, LLC
		222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States
Manufacturer	:	Motorola Mobility, LLC
		222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States
Standard	:	FCC 47 CFR FCC Part 15 Subpart B Class B

The product was received on Dec. 06, 2019 and testing was started from Jan. 06, 2020 and completed on Jan. 07, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Lunis Wu

Approved by: Louis Wu SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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Appendix B. Radiated Emission Test Result



History of this test report

Report No.	Version	Description	Issued Date
FC9D0635	01	Initial issue of report	Feb. 04, 2020



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.107	AC Conducted Emission	Pass	Under limit 8.23 dB at 13.560 MHz
3.2	15.109	Radiated Emission	Pass	Under limit 3.23 dB at 38.730 MHz for Quasi-Peak

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Dara Chiu

Report Producer: Jessie Ho



1. General Description

1.1. Product Feature of Equipment Under Test

	Product Feature
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2061-1
FCC ID	IHDT56YJ1
IMEI Code	Conduction : IMEI: 359120100016479
	Radiation : IMEI: 359120100016412
	CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/5G NR/
	GNSS/NFC/WPC
FUT comparts Dadias annihistian	WLAN 11b/g/n HT20
EUT supports Radios application	WLAN 11a/n HT20/HT40
	WLAN 11ac VHT20/VHT40/VHT80
	Bluetooth BR/EDR/LE
HW Version	DVT2
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer.

Accessory List		
	Brand Name : Motorola	
AC Adapter 1	Model Name : SC-51 (SA18C30116)	
	Manufacturer : Chenyang	
	Brand Name : Motorola	
AC Adapter 2	Model Name : SC-51 (SA18C62985)	
	Manufacturer : Acbel	
Pottony	Brand Name : ATL	
Battery	Model Name : LW50	
	Brand Name : Motorola	
USB Cable 1	Model Name : SC18C24367	
	Manufacturer : Saibao	
	Brand Name : Motorola	
USB Cable 2	Model Name : SC18C24368	
	Manufacturer : Luxshare	



1.2. Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 12: 699.7 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13 : 779.5 MHz ~ 784.5 MHz LTE Band 13 : 779.5 MHz ~ 784.5 MHz LTE Band 13: 3552.5 MHz ~ 784.5 MHz LTE Band 66: 1710.7 MHz ~ 7179.3 MHz SG NR Band n260: 37025 MHz ~ 28325 MHz SG NR Band n261: 27525 MHz ~ 28325 MHz CDMA2000 BC0: 824.70 MHz ~ 848.31 MHz CDMA2000 BC1: 1851.25 MHz ~ 1908.75 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n/ac: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz; 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz



Standards-related Product Specification		
	GSM850: 869.2 MHz ~ 893.8 MHz	
	GSM1900: 1930.2 MHz ~ 1989.8 MHz	
	WCDMA Band V: 871.4 MHz ~ 891.6 MHz	
	WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz	
	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz	
	LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz	
	LTE Band 5 : 869.7 MHz ~ 893.3 MHz	
	LTE Band 7 : 2622.5 MHz ~ 2687.5 MHz	
	LTE Band 12 : 729.7 MHz ~ 745.3 MHz	
	LTE Band 13 : 748.5 MHz ~ 753.5 MHz	
	LTE Band 17 : 736.5 MHz ~ 743.5 MHz	
	LTE Band 48: 3552.5 MHz ~ 3697.5 MHz	
	LTE Band 66: 2110.7 MHz ~ 2199.3 MHz	
	5G NR Band n260: 37025 MHz ~ 39975 MHz	
Rx Frequency	5G NR Band n261: 27525 MHz ~ 28325 MHz	
	CDMA 2000 BC0: 869.70 MHz ~ 893.31 MHz	
	CDMA 2000 BC1: 1931.25 MHz ~ 1988.75 MHz	
	802.11b/g/n: 2412 MHz ~ 2462 MHz	
	802.11a/n/ac:	
	5180 MHz ~ 5240 MHz;	
	5260 MHz ~ 5320 MHz;	
	5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz;	
	5745 MHz ~ 5825 MHz	
	Bluetooth: 2402 MHz ~ 2480 MHz	
	GNSS : 1559 ~ 1610 MHz	
	(GPS/Glonass/Galileo/BDS)	
	NFC : 13.56 MHz	
	WPC: 80 kHz ~ 300 kHz	
	WWAN: Fixed Internal Antenna	
	mmW: Patch Antenna	
	WLAN:	
	<ant. 1="">: ILA Antenna</ant.>	
Antenna Type	<ant. 2="">: ILA Antenna</ant.>	
	Bluetooth: ILA Antenna	
	GPS/Glonass/Galileo/BDS: ILA Antenna	
	NFC: Ferrite + FPC Antenna	
	WPC: Flex Pattern Antenna	



Standards-related Product Specification	
Type of Modulation	$ \begin{array}{l} GSM/GPRS:\;GMSK \\ EGPRS:\;GMSK\;for\;MCS\;0\sim4\;\&\;8PSK\;for\;MCS5\sim9 \\ WCDMA:\;QPSK\;(Uplink) \\ HSDPA:\;64QAM\;(Downlink)/HSUPA:\;QPSK\;(Uplink) \\ CDMA2000:\;QPSK \\ LTE:\;QPSK/16QAM/64QAM \\ 5G\;NR:\;QPSK/16QAM/64QAM \\ 802.11b:\;DSSS\;(DBPSK/DQPSK/CCK) \\ 802.11a/g/n/ac:\;\;OFDM\;\;(BPSK/QPSK/16QAM/64QAM/ \\ 256QAM) \\ Bluetooth\;LE:\;GFSK \\ Bluetooth\;\;(1Mbps):\;GFSK \\ Bluetooth\;\;(2Mbps):\;\pi/4-DQPSK \\ Bluetooth\;\;(3Mbps):\;8-DPSK \\ GPS/Glonass/Galileo/BDS:\;BPSK \\ NFC:\;\;ASK \\ WPC:\;load \\ \end{array} $

1.3. Modification of EUT

No modifications are made to the EUT during all test items.



1.4. Test Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
Test Sile NO.	CO05-HY
Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site	
	Laboratory No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868

FCC designation No.: TW1093 and TW1098

1.5. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC 47 CFR FCC Part 15 Subpart B Class B
- + ANSI C63.4-2014

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.



2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (30MHz

to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
	Mode 1: GSM850 (Middle Channel) Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + Camera (Front) + Earphone + Battery + USB Cable 1 (Charging from Adapter 1)
	Mode 2: CDMA2000 BC0 (Middle Channel) Idle + Bluetooth Idle + WLAN (5GHz) Idle + Camera (Rear) + Earphone + Battery + USB Cable 2 (Charging from Adapter 2)
AC Conducted	Mode 3: WCDMA Band V (Middle Channel) Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + MPEG 4 + Earphone + Battery + USB Cable 2 (Charging from Adapter 1)
Emission	Mode 4: LTE Band 5 (Middle Channel) Idle + Bluetooth Idle + WLAN (5GHz) Idle + NFC On + Earphone + Battery + USB Cable 1 (Charging from Adapter 2)
	Mode 5: LTE Band 12 (Middle Channel) Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery + USB Cable 1 (Charging from Adapter 1)
	Mode 6: LTE Band 13 (Middle Channel) Idle + Bluetooth Idle + WLAN (5GHz) Idle + MPEG 4 + Earphone + Battery + WPC Charging pad + USB Cable (Charging from Adapter)
	Mode 7: LTE Band 17 (Middle Channel) Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + MPEG 4 + Earphone + Battery + USB Cable 2 (Data Link with Notebook)



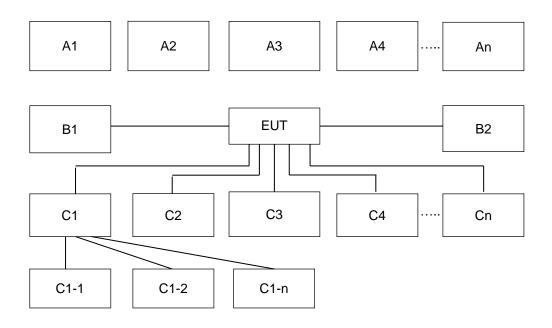
Test Items	Function Type	
	Mode 1 : GSM850 (High Channel) Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + Camera (Front) + Earphone + Battery + USB Cable 1 (Charging from Adapter 1)	
	Mode 2: CDMA2000 BC0 (Low Channel) Idle + Bluetooth Idle + WLAN (5GHz) Idle + Camera (Rear) + Earphone + Battery + USB Cable 2 (Charging from Adapter 2)	
Radiated	Mode 3: WCDMA Band V (High Channel) Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + MPEG 4 + Earphone + Battery + USB Cable 2 (Charging from Adapter 1)	
Emissions	Mode 4: LTE Band 5 (Middle Channel) Idle + Bluetooth Idle + WLAN (5GHz) Idle + NFC On + Earphone + Battery + USB Cable 1 (Charging from Adapter 2)	
	Mode 5: LTE Band 12 (High Channel) Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS + Earphone + Battery + USB Cable 1 (Charging from Adapter 1)	
	Mode 6: LTE Band 13 (Middle Channel) Idle + Bluetooth Idle + WLAN (5GHz) Idle + MPEG 4 + Earphone + Battery +WPC Charging pad + USB Cable (Charging from Adapter)	
	Mode 7: LTE Band 17 (High Channel) Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + MPEG 4 + Earphone + Battery + USB Cable 2 (Data Link with Notebook)	
Remark:		
1. The worst ca	ase of AC is mode 4; only the test data of this mode was reported.	
2. The worst ca	The worst case of RE is mode 6; only the test data of this mode was reported.	
3. For radiation	For radiation emission after pre-scanned the cellular band between 30MHz ~ 960MHz	

 For radiation emission after pre-scanned the cellular band between 30MHz ~ 960MHz (GSM850/WCDMA Band V/CDMA BC0/LTE Band 5/12/13/17); only the worst case for cellular band test data of this mode was reported.

4. Data Link with Notebook means data application transferred mode between EUT and Notebook.



2.2. Connection Diagram of Test System



	Test Setup									
No.	Wireless Station	Connection Type	Test Mode							
NO.	Wireless Station	connection type	1	2	3	4	5	6	7	
A1	BT Earphone	Bluetooth	Х	Х	Х	Х	Х	Х	Х	
A2	System Simulator	GSM/UMTS/CDMA/ WCDMA/LTE	х	х	х	х	х	х	х	
A3	GPS Station	GPS	-	-	-	-	Х	-	-	
A4	AP router	WiFi	Х	Х	Х	Х	Х	Х	Х	
A5	WPC pad	WPC	-	-	-	-	-	Х	-	
No.	Power Source	Connection Type	1	2	3	4	5	6	7	
B1	AC : 120V/60Hz	AC Power Cable	Х	Х	Х	Х	Х	Х	-	
B2	Power from system	AC Power Cable	-	-	-	-	-	-	Х	
No.	Setup Peripherals	Connection Type	1	2	3	4	5	6	7	
C1	Notebook	USB Cable	-	-	-	-	-	-	Х	
C1-1	IPod	USB Cable to C1	-	-	-	-	-	-	Х	
C1-2	AP router	RJ-45 Cable to C1	-	-	-	-	-	-	Х	
C2	Earphone	Earphone jack	Х	Х	Х	Х	Х	Х	Х	

2.3. Support Unit used in test configuration and system

ltem	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMW 500	N/A	N/A	Unshielded, 1.8 m
3.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
4.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
5.	Wireless Charger Stand	Samsung	EP-N5200	N/A	N/A	N/A
6.	Adapter	N/A	N/A	N/A	N/A	N/A
7.	USB Cable	N/A	N/A	N/A	N/A	N/A
8.	Earphone	Moto	SH38C48284	N/A	N/A	N/A
9.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
10.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
11.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
12.	Notebook	DELL	Latitude E3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
13.	Notebook	DELL	Latitude 5480	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
14.	LG Charging pad	LG	WCD-110	FCC DoC	Shielded, 0.5 m	N/A

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA or EDGE or HSDPA or LTE or CDMA2000 idle mode during the testing. The EUT was synchronized with the BCCH, and had been continuous receiving mode by setting paging reorganization of the system simulator.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test:

- 1. Data application is transferred between Laptop and EUT via USB cable.
- 2. Execute "GPS Test" to make the EUT receive continuous signals from GPS station.
- 3. Execute "Video player" to play MPEG4 files.
- 4. Turn on camera to capture images.

3. Test Result

3.1. Test of AC Conducted Emission Measurement

3.1.1. Limits of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission	Conducted limit (dBuV)				
(MHz)	Quasi-peak	Average			
0.15-0.5	66 to 56*	56 to 46*			
0.5-5	56	46			
5-30	60	50			

*Decreases with the logarithm of the frequency.

3.1.2. Measuring Instruments

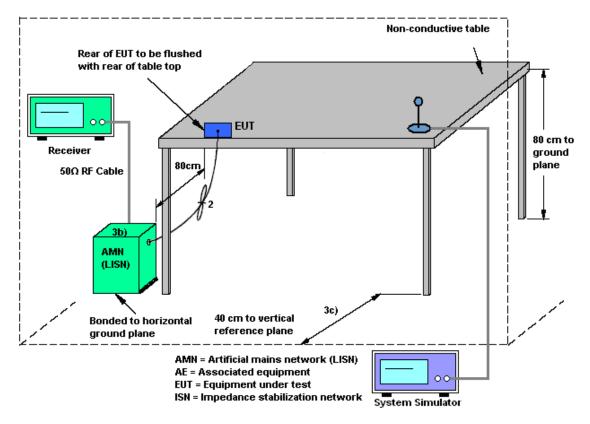
Refer a test equipment and calibration data table in this test report.

3.1.3. Test Procedure

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other LISN.
- 4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.



3.1.4. Test Setup



3.1.5. Test Result of AC Conducted Emission

Please refer to Appendix A.



3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

<Class B>

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.2.2. Measuring Instruments

Refer a test equipment and calibration data table in this test report.

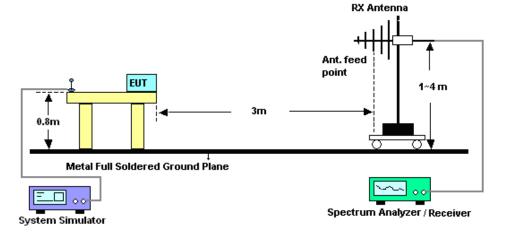
3.2.3. Test Procedures

- 1. The EUT was placed on a turntable with 0.8 meter above ground.
- 2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
- 5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
- 7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
- 8. Emission level (dB μ V/m) = 20 log Emission level (μ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

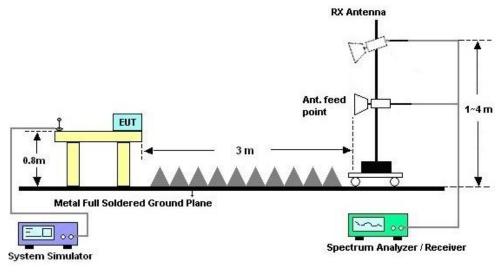


3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.2.5. Test Result of Radiated Emission

Please refer to Appendix B.



4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jan. 06, 2020	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 15, 2019	Jan. 06, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Mar. 19, 2019	Jan. 06, 2020	Mar. 18, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 20, 2019	Jan. 06, 2020	Nov. 19, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 15, 2019	Jan. 06, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jan. 06, 2020	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2020	Jan. 06, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 02, 2020	Jan. 06, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Amplifier	SONOMA	310N	187311	9kHz~1GHz	Oct. 22, 2019	Jan. 06, 2020~ Jan. 07, 2020	Oct. 21, 2020	Radiation (03CH10-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	35413 & 02	30MHz~1GHz	Feb. 12, 2019	Jan. 06, 2020~ Jan. 07, 2020	Feb. 11, 2020	Radiation (03CH10-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1325	1GHz~18GHz	Oct. 09, 2019	Jan. 06, 2020~ Jan. 07, 2020	Oct. 08, 2020	Radiation (03CH10-HY)
Preamplifier	Jet-Power	JAP00101800- 30-10P	160118550004	1GHz~18GHz	Sep. 27, 2019	Jan. 06, 2020~ Jan. 07, 2020	Sep. 26, 2020	Radiation (03CH10-HY)
Signal Analyzer	R&S	FSV3044	101010	10Hz~44GHz	Nov. 11, 2019	Jan. 06, 2020~ Jan. 07, 2020	Nov. 10, 2020	Radiation (03CH10-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Jan. 06, 2020~ Jan. 07, 2020	N/A	Radiation (03CH10-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jan. 06, 2020~ Jan. 07, 2020	N/A	Radiation (03CH10-HY)
Turn Table	EMEC	TT 2200	N/A	0~360 Degree	N/A	Jan. 06, 2020~ Jan. 07, 2020	N/A	Radiation (03CH10-HY)
Software	Audix	E3 6.2009-8-24	RK-001042	N/A	N/A	Jan. 06, 2020~ Jan. 07, 2020	N/A	Radiation (03CH10-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290045	20MHz~8.4GHz	Jan. 19, 2019	Jan. 06, 2020~ Jan. 07, 2020	Jan. 18, 2020	Radiation (03CH10-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104 / 102	MY11692/4PE, MY11693/4PE, MY2855/2	30MHz~1GHz	Nov. 07, 2019	Jan. 06, 2020~ Jan. 07, 2020	Nov. 06, 2020	Radiation (03CH10-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104 / 102	MY11692/4PE, MY11693/4PE, MY2855/2	1GHz~18GHz	Nov. 07, 2019	Jan. 06, 2020~ Jan. 07, 2020	Nov. 06, 2020	Radiation (03CH10-HY)



5. Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence	2.2
of 95% (U = 2Uc(y))	2.2

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence	4.9
of 95% (U = 2Uc(y))	4.0

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence	5.2
of 95% (U = 2Uc(y))	5.3



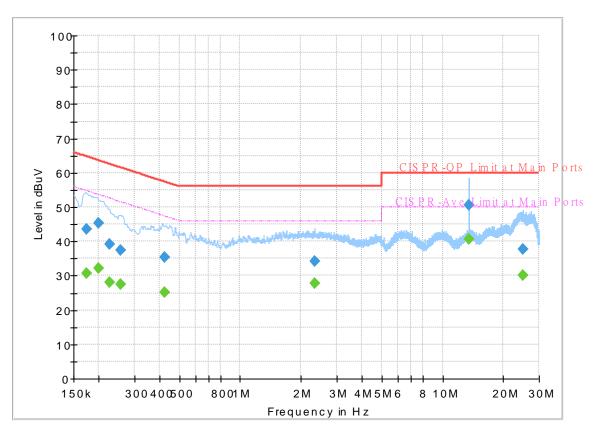
Appendix A. AC Conducted Emission Test Results

Test Engineer :	Howard Huppa	Temperature :	22~25 ℃
Test Engineer .	noward nuang	Relative Humidity :	45~53%

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EUT Information

Report NO : Test Mode : Test Voltage : Phase : 9D0635 Mode 4 120Vac/60Hz Line



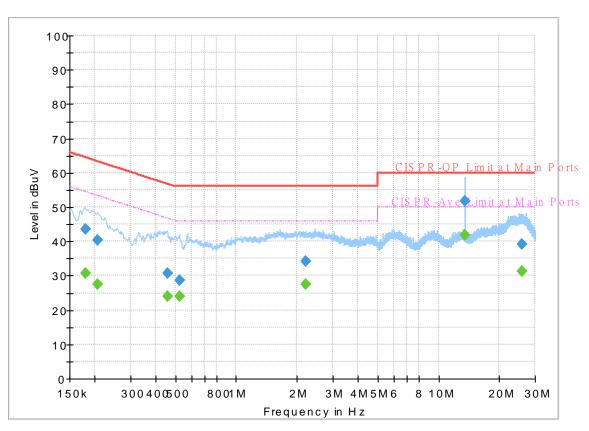
FullSpectrum

Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.173490		30.84	54.79	23.95	L1	OFF	19.5
0.173490	43.65		64.79	21.14	L1	OFF	19.5
0.198960		32.07	53.65	21.58	L1	OFF	19.5
0.198960	45.46		63.65	18.19	L1	OFF	19.5
0.226500		28.12	52.58	24.46	L1	OFF	19.5
0.226500	39.19		62.58	23.39	L1	OFF	19.5
0.255750		27.41	51.57	24.16	L1	OFF	19.5
0.255750	37.43		61.57	24.14	L1	OFF	19.5
0.423420		25.11	47.38	22.27	L1	OFF	19.5
0.423420	35.45		57.38	21.93	L1	OFF	19.5
2.332860		27.74	46.00	18.26	L1	OFF	19.7
2.332860	34.08		56.00	21.92	L1	OFF	19.7
13.560000		40.76	50.00	9.24	L1	OFF	20.1
13.560000	50.64		60.00	9.36	L1	OFF	20.1
24.864000		30.24	50.00	19.76	L1	OFF	20.3
24.864000	37.82		60.00	22.18	L1	OFF	20.3

EUT Information

Report NO : Test Mode : Test Voltage : Phase : 9D0635 Mode 4 120Vac/60Hz Neutral



FullSpectrum

Final_Result

Frequency	QuasiPeak	CAverage	Limit	Margin	Line	Filter	Corr.
(MHz)	(dBuV)	(dBuV)	(dBuV)	(dB)			(dB)
0.180330		30.76	54.47	23.71	Ν	OFF	19.6
0.180330	43.63		64.47	20.84	Ν	OFF	19.6
0.205440		27.49	53.39	25.90	Ν	OFF	19.6
0.205440	40.24		63.39	23.15	Ν	OFF	19.6
0.458250		23.99	46.72	22.73	Ν	OFF	19.6
0.458250	30.62		56.72	26.10	Ν	OFF	19.6
0.524940		23.99	46.00	22.01	Ν	OFF	19.6
0.524940	28.68		56.00	27.32	Ν	OFF	19.6
2.220000		27.60	46.00	18.40	Ν	OFF	19.6
2.220000	34.11		56.00	21.89	Ν	OFF	19.6
13.560000		41.75	50.00	8.25	Ν	OFF	20.1
13.560000	51.77		60.00	8.23	Ν	OFF	20.1
25.978110		31.31	50.00	18.69	Ν	OFF	20.5
25.978110	39.32		60.00	20.68	Ν	OFF	20.5

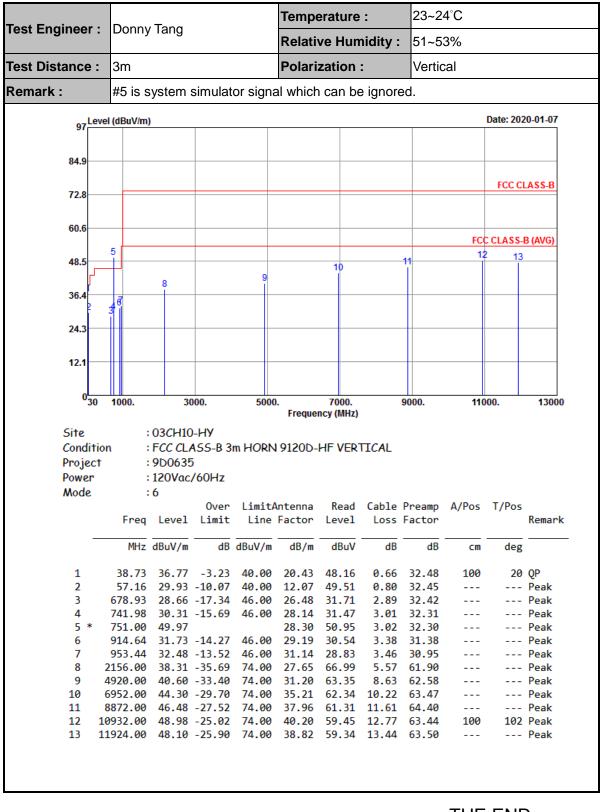


Appendix B. Radiated Emission Test Result

Foot Engineers	Donny Tang 3m				Temperature : Relative Humidity : Polarization :			23~2	23~24°C			
rest Engineer :								51~5	51~53%			
Fest Distance :								Horiz	Horizontal			
Remark :	#5 is system simulator signal which can be ignored.											
ozLev	el (dBuV/m))								Date: 202	20-01-07	
97												
84.9												
72.8										FCC CI	LASS-B	
60.6												
	_									CLASS-	B (AVG)	
48.5	5					10 11			12	2 13		
l l l l l l l l l l l l l l l l l l l		8		9		1						
36.4	7	Ť										
3	4											
24.3												
12.1												
0												
030	1000.	30)00.	5000		7000. ncy (MHz)		9000.	110	00.	13000	
				5000		7000. ncy (MHz)		9000.	110	00.	13000	
Site	:	03CH10)-HY		Freque	ncy (MHz)			110	00.	13000	
Site Conditio	: on :	03CH10)-HY 155-B 3	5000 m HORN	Freque	ncy (MHz)			110	00.	13000	
Site	: on :	03CH10 FCC CL/)-HY 455-B 3		Freque	ncy (MHz)			110	00.	13000	
Site Conditio Project	: on : :	03CH10 FCC CL/ 9D0635)-HY 455-B 3		Freque	ncy (MHz)			110	100.	13000	
Site Conditio Project Power	: on : :	03CH10 FCC CL/ 9D0635 120Vac, 6	0-HY 455-B3 5 /60Hz 0ver	m HORN LimitA	Freque 9120D-	ncy (MHz) HF HOR Read	RIZONT Cable	AL				
Site Conditio Project Power	: on : :	03CH10 FCC CL/ 9D0635 120Vac, 6	0-HY 455-B3 5 /60Hz 0ver	m HORN	Freque 9120D-	ncy (MHz) HF HOR Read	RIZONT Cable	AL			13000 Remark	
Site Conditio Project Power	on : : : Freq	03CH10 FCC CL/ 9D0635 120Vac, 6)-HY ASS-B3 5 /60Hz Over Limit	m HORN LimitA	Freque 9120D-	ncy (MHz) HF HOR Read	RIZONT Cable	AL				
Site Conditio Project Power Mode	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac, 6 Level dBuV/m)-HY ASS-B3 5 /60Hz Over Limit dB	m HORN LimitA Line dBuV/m	Freque 9120D- Antenna Factor dB/m	NCY (MHZ) HF HOR Read Level dBuV	Cable Loss dB	Preamp Factor dB	A/Pos	T/Pos 	Remark	
Site Conditio Project Power	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac, 6 Level dBuV/m 25.59)-HY 455-B 3 5 /60Hz Uver Limit dB -14.41	m HORN LimitA Line	Freque 9120D- Antenna Factor dB/m 20.43	NCY (MHZ) HF HOR Read Level dBuV 36.98	Cable Loss dB 0.66	Preamp Factor dB 32.48	A/Pos cm	T/Pos deg		
Site Conditio Project Power Mode 	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac, 6 Level dBuV/m 25.59 24.76 29.54	0-HY 455-B 3 5 /60Hz Uver Limit -14.41 -15.24 -13.96	m HORN LimitA Line dBuV/m 40.00 40.00 43.50	Freque 9120D- Antenna Factor dB/m 20.43 13.58 17.50	NCY (MHZ) HF HOR Read Level dBuV 36.98 42.63 43.01	Cable Loss dB 0.66 0.95 1.33	Preamp Factor dB 32.48 32.40 32.30	A/Pos 	T/Pos 	Remark Peak	
Site Conditio Project Power Mode 1 2 3 4	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac, 6 Level dBuV/m 25.59 24.76 29.54 29.54	0-HY 455-B 3 5 /60Hz Uver Limit -14.41 -15.24 -13.96 -16.46	m HORN LimitA Line dBuV/m 40.00 40.00	Freque 9120D- Antenna Factor 0B/m 20.43 13.58 17.50 26.97	Read Level dBuV 36.98 42.63 43.01 31.96	Cable Loss dB 0.66 0.95 1.33 2.97	Preamp Factor dB 32.48 32.40 32.30 32.36	A/Pos 	T/Pos deg 	Remark Peak Peak Peak Peak Peak	
Site Conditio Project Power Mode 1 2 3 4 5 *	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac, 6 Level dBuV/m 25.59 24.76 29.54 29.54 49.58	-HY 455-B 3 5 /60Hz Uver Limit -14.41 -15.24 -13.96 -16.46	m HORN LimitA Line dBuV/m 40.00 40.00 43.50 46.00	Freque 9120D- Antenna Factor 0B/m 20.43 13.58 17.50 26.97 28.30	Read Level dBuV 36.98 42.63 43.01 31.96 50.56	Cable Loss dB 0.66 0.95 1.33 2.97 3.02	Preamp Factor dB 32.48 32.40 32.30 32.36 32.30	A/Pos 	T/Pos deg 	Remark Peak Peak Peak Peak Peak Peak	
Site Conditio Project Power Mode 1 2 3 4 5 * 6	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac, 6 Level dBuV/m 25.59 24.76 29.54 29.54 49.58 31.04	-HY 455-B 3 5 /60Hz Uver Limit -14.41 -15.24 -13.96 -16.46 -14.96	m HORN LimitA Line dBuV/m 40.00 40.00 43.50 46.00	Freque 9120D- Antenna Factor 0B/m 20.43 13.58 17.50 26.97 28.30 29.27	Read Level dBuV 36.98 42.63 43.01 31.96 50.56 30.33	Cable Loss dB 0.66 0.95 1.33 2.97 3.02 3.27	Preamp Factor dB 32.48 32.40 32.30 32.36 32.30 31.83	A/Pos 	T/Pos deg 	Remark Peak Peak Peak Peak Peak Peak Peak	
Site Conditio Project Power Mode 1 2 3 4 5 * 6 7	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac, 6 Level dBuV/m 25.59 24.76 29.54 29.54 49.58 31.04 32.27	-HY 455-B 3 5 /60Hz Uver Limit -14.41 -15.24 -13.96 -16.46 -14.96 -13.73	m HORN LimitA Line dBuV/m 40.00 40.00 43.50 46.00 46.00	Freque 9120D- Antenna Factor 0B/m 20.43 13.58 17.50 26.97 28.30 29.27 31.14	Read Level dBuV 36.98 42.63 43.01 31.96 50.56 30.33 28.62	Cable Loss dB 0.66 0.95 1.33 2.97 3.02 3.27 3.46	Preamp Factor dB 32.48 32.40 32.30 32.36 32.30 31.83 30.95	A/Pos 	T/Pos deg 173	Remark Peak Peak Peak Peak Peak Peak Peak	
Site Conditio Project Power Mode 1 2 3 4 5 * 6	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac, 6 Level dBuV/m 25.59 24.76 29.54 29.54 29.54 49.58 31.04 32.27 38.02	-HY 455-B 3 5 /60Hz Uver Limit -14.41 -15.24 -13.96 -16.46 -13.73 -35.98	m HORN LimitA Line dBuV/m 40.00 40.00 43.50 46.00 46.00 74.00	Freque 9120D- Antenna Factor 0B/m 20.43 13.58 17.50 26.97 28.30 29.27 31.14 27.73	Read Level dBuV 36.98 42.63 43.01 31.96 50.56 30.33 28.62 65.98	Cable Loss dB 0.66 0.95 1.33 2.97 3.02 3.27 3.46 6.28	Preamp Factor dB 32.48 32.40 32.30 32.36 32.30 31.83	A/Pos 	T/Pos deg 173 	Remark Peak Peak Peak Peak Peak Peak Peak	
Site Conditio Project Power Mode 1 2 3 4 5 * 6 7 8 9 10	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac/ 6 Level dBuV/m 25.59 24.76 29.54 29.54 49.58 31.04 32.27 38.02 41.18 44.77	ASS-B 3 /60Hz 0ver Limit -14.41 -15.24 -13.96 -16.46 -13.73 -35.98 -32.82 -29.23	m HORN LimitA Line dBuV/m 40.00 40.00 43.50 46.00 46.00 74.00 74.00 74.00	Freque 9120D- Antenna Factor 0B/m 20.43 13.58 17.50 26.97 28.30 29.27 31.14 27.73 31.22 35.11	Read Level dBuV 36.98 42.63 43.01 31.96 50.56 30.33 28.62 65.98 64.12 62.96	Cable Loss dB 0.66 0.95 1.33 2.97 3.02 3.27 3.46 6.28 8.39 10.14	Preamp Factor dB 32.48 32.40 32.30 32.36 32.30 31.83 30.95 61.97 62.55 63.44	A/Pos cm 100 	T/Pos deg 173 	Remark Peak Peak Peak Peak Peak Peak Peak Pea	
Site Conditio Project Power Mode 	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac, 6 Level dBuV/m 25.59 24.76 29.54 29.54 49.58 31.04 32.27 38.02 41.18 44.77 47.00	ASS-B 3 /60Hz 0ver Limit -14.41 -15.24 -13.96 -16.46 -13.73 -35.98 -32.82 -29.23 -27.00	m HORN LimitA Line dBuV/m 40.00 40.00 43.50 46.00 46.00 74.00 74.00 74.00 74.00	Freque 9120D- Antenna Factor 0B/m 20.43 13.58 17.50 26.97 28.30 29.27 31.14 27.73 31.22 35.11 36.58	Read Level dBuV 36.98 42.63 43.01 31.96 50.56 30.33 28.62 65.98 64.12 62.96 63.16	Cable Loss dB 0.66 0.95 1.33 2.97 3.02 3.27 3.46 6.28 8.39 10.14 10.82	Preamp Factor dB 32.48 32.40 32.30 32.36 32.30 31.83 30.95 61.97 62.55 63.44 63.56	A/Pos cm 100 	T/Pos deg 173 173	Remark Peak Peak Peak Peak Peak Peak Peak Pea	
Site Conditio Project Power Mode 	on : : : : : : : : : : : : : : : : : : :	03CH10 FCC CL/ 9D0635 120Vac, 6 Level dBuV/m 25.59 24.76 29.54 29.54 29.54 49.58 31.04 32.27 38.02 41.18 44.77 47.00 49.45	ASS-B 3 /60Hz 0ver Limit -14.41 -15.24 -13.96 -16.46 -14.96 -13.73 -35.98 -32.82 -29.23 -27.00 -24.55	m HORN LimitA Line dBuV/m 40.00 40.00 43.50 46.00 46.00 74.00 74.00 74.00 74.00 74.00	Freque 9120D- Antenna Factor 0B/m 20.43 13.58 17.50 26.97 28.30 29.27 31.14 27.73 31.22 35.11 36.58 40.20	Read Level dBuV 36.98 42.63 43.01 31.96 50.56 30.33 28.62 65.98 64.12 62.96 63.16 59.89	Cable Loss dB 0.66 0.95 1.33 2.97 3.02 3.27 3.46 6.28 8.39 10.14 10.82 12.79	Preamp Factor dB 32.48 32.40 32.30 32.36 32.30 31.83 30.95 61.97 62.55 63.44 63.56 63.43	A/Pos cm 100 	T/Pos deg 173 175	Remark Peak Peak Peak Peak Peak Peak Peak Pea	

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