



# FCC RADIO TEST REPORT

**FCC ID** : PY7-502520  
**Equipment** : GSM/WCDMA/LTE Phone with BT, DTS/UNII  
a/b/g/n/ac, GPS and NFC  
**Brand Name** : Sony  
**Applicant** : Sony Mobile Communications Inc.  
4-12-3 Higashi-Shinagawa, Shinagawa-ku,  
Tokyo, 140-0002, Japan  
**Manufacturer** : Sony Mobile Communications Inc.  
4-12-3 Higashi-Shinagawa, Shinagawa-ku,  
Tokyo, 140-0002, Japan  
**Standard** : FCC 47 CFR Part 2, and 90(S)

The product was received on Jun. 10, 2019 and testing was started from Jul. 17, 2019 and completed on Jul. 23, 2019. 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 / TIA-603-E 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 spot check data 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.

Approved by: Jones Tsai

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**

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



## Table of Contents

History of this test report .....	3
Summary of Test Result .....	4
<b>1 General Description.....</b>	<b>5</b>
1.1 Feature of Equipment Under Test.....	5
1.2 Emission Designator .....	5
1.3 Modification of EUT .....	6
1.4 Testing Site .....	6
1.5 Applied Standards.....	7
<b>2 Test Configuration of Equipment Under Test.....</b>	<b>8</b>
2.1 Test Mode .....	8
2.2 Connection Diagram of Test System .....	8
2.3 Support Unit used in test configuration and system .....	9
2.4 Frequency List of Low/Middle/High Channels .....	9
<b>3 Conducted Test Items .....</b>	<b>10</b>
3.1 Measuring Instruments .....	10
3.2 Conducted Output Power Measurement and ERP Measurement.....	11
3.3 Field Strength of Spurious Radiation Measurement .....	12
<b>4 List of Measuring Equipment .....</b>	<b>14</b>
<b>5 Uncertainty of Evaluation.....</b>	<b>16</b>
<b>Appendix A. Test Results of Conducted Test</b>	
<b>Appendix B. Test Results of ERP and Radiated Test</b>	



### History of this test report

Report No.	Version	Description	Issued Date
FG971021-01C	01	Initial issue of report	Aug. 12, 2019



### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046 §90.635	Conducted Output Power and Effective Radiated Power	Pass	-
-	-	Peak-to-Average Ratio	Not Required	-
-	§2.1049 §90.209	Occupied Bandwidth and 26dB Bandwidth	Not Required	-
-	§2.1051 §90.691	Emission masks – In-band emissions	Not Required	-
-	§2.1051 §90.691	Emission masks – Out of band emissions	Not Required	-
-	§2.1055 §90.213	Frequency Stability for Temperature & Voltage	Not Required	-
3.3	§2.1053 §90.691	Field Strength of Spurious Radiation	Pass	Under limit 45.96 dB at 3259.000 MHz

**Remark:**

1. Not required means after assessing, test items are not necessary to carry out.
2. This is a spot check data report and data performed in appendix of this report are chosen from the worst case of the original FCC ID report. All the test cases were performed on original report which can be referred to Sporton Report Number FG940901-03C.

**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: Wii Chang**

**Report Producer: Yimin Ho**



# 1 General Description

## 1.1 Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, DTS/UNII a/b/g/n/ac, NFC, and GNSS.

Product Specification subjective to this standard	
Antenna Type	Loop Antenna

EUT Information List			
HW Version	SW Version	IMEI	Performed Test Item
A	3.122	004402459556654	Conducted Measurement
		004402459554220	Radiated Spurious Emission ERP/EIRP Test

Accessory List	
AC Adapter	Model Name : UCH32
	S/N: 6218W30200140
Earphone	Model Name.: MH750
	S/N : N/A
USB Cable	Model Name.: UCB24
	S/N : N/A
2 in 1 USB Audio Cable	Model Name.: EC270
	S/N : N/A

**Note:**

1. Above EUT list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test, and the serial number of each type of accessories is listed in each section of this report. .
3. For other wireless features of this EUT, test report will be issued separately.

## 1.2 Emission Designator

LTE Band 26		QPSK			16QAM			64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
1.4	814.7 ~ 823.3	-	-	0.0585	-	-	0.0454	-	-	0.0357
3	815.5 ~ 822.5	-	-	0.0586	-	-	0.0445	-	-	0.0377
5	816.5 ~ 821.5	-	-	0.0581	-	-	0.0441	-	-	0.0367
10	819.0	-	-	0.0582	-	-	0.0447	-	-	0.0352
15	821.5	-	-	0.0622	-	-	0.0485	-	-	0.0372



### 1.3 Modification of EUT

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

### 1.4 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
<b>Test Site Location</b>	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
<b>Test Site No.</b>	<b>Sporton Site No.</b> TH05-HY
<b>Test Engineer</b>	Jacky Wang
<b>Temperature</b>	24~27 °C
<b>Relative Humidity</b>	55~57 %

**Note:** The test site complies with ANSI C63.4 2014 requirement.

<b>Test Site</b>	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
<b>Test Site Location</b>	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
<b>Test Site No.</b>	<b>Sporton Site No.</b> 03CH13-HY
<b>Test Engineer</b>	Ryan Lin, JC Linag, and Wilson Wu
<b>Temperature</b>	21.5~23.5 °C
<b>Relative Humidity</b>	46.5~49.5 %

**Note:** The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW0007



## 1.5 Applied Standards

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

- ♦ FCC 47 CFR Part 2, 90
- ♦ ANSI / TIA-603-E
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ Interim Guidance for Equipment Authorization of Devices with Channel Bandwidths Combined Across Two Contiguous Service Rule Allocations OET/Lab/EACB, June 6, 2013

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level.

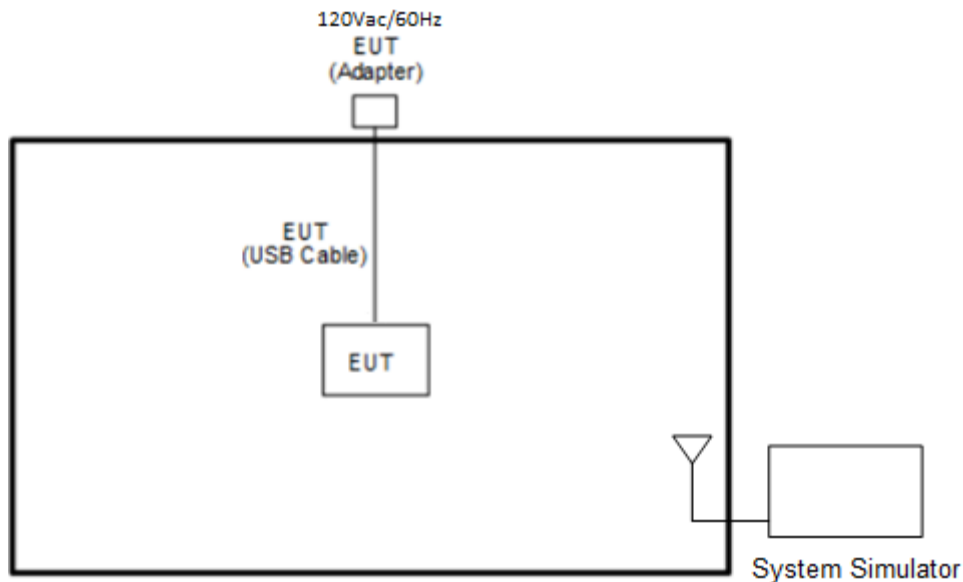
For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z, and Accessory. The worst cases (Z plane with Adapter) were recorded in this report.

Frequency range investigated for radiated emission is 30 MHz to 9000 MHz.

Conducted Test Cases	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	26	v	v	v	v	v	-	v	v	v	v	v	v	v	v	v
E.R.P.	26	v	v	v	v	v	-	v	v	v	v			v	v	v
Radiated Spurious Emission	26	Worst Case											v			
Remark	1. The mark "v " means that this configuration is chosen for testing 2. The mark "- " means that this bandwidth is not supported. 3. LTE Band26 transmit frequency for part22 rule is 824MHz-849MHz, for part90 rule is 814MHz-824MHz. ERP over 15MHz bandwidth complies the ERP limit line of part22 rule, therefore ERP of the partial frequency spectrum which falls within part 22 also complies.															

### 2.2 Connection Diagram of Test System

<EUT with Adapter>







### 2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	8820C	N/A	N/A	Unshielded, 1.8 m

### 2.4 Frequency List of Low/Middle/High Channels

LTE Band 26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	26765	-	-
	Frequency	821.5	-	-
10	Channel	-	26740	-
	Frequency	-	819	-
5	Channel	26715	26740	26765
	Frequency	816.5	819	821.5
3	Channel	26705	26740	26775
	Frequency	815.5	819	822.5
1.4	Channel	26697	26740	26783
	Frequency	814.7	819	823.3

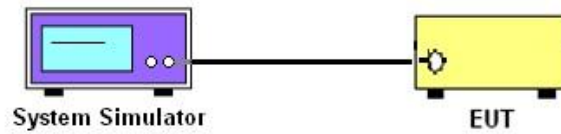
### 3 Conducted Test Items

#### 3.1 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.1 Test Setup

##### 3.1.2 Conducted Output Power



##### 3.1.3 Test Result of Conducted Test

Please refer to Appendix A.



## 3.2 Conducted Output Power Measurement and ERP Measurement

### 3.2.1 Description of the Conducted Output Power Measurement and ERP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 26.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$ , where

$P_T$  = transmitter output power in dBm

$G_T$  = gain of the transmitting antenna in dBi

$L_C$  = signal attenuation in the connecting cable between the transmitter and antenna in dB

### 3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.



### 3.3 Field Strength of Spurious Radiation Measurement

#### 3.3.1 Description of Field Strength of Spurious Radiated Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission FCC Part 90.691 on any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth at least  $43 + 10 \log (P)$  dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

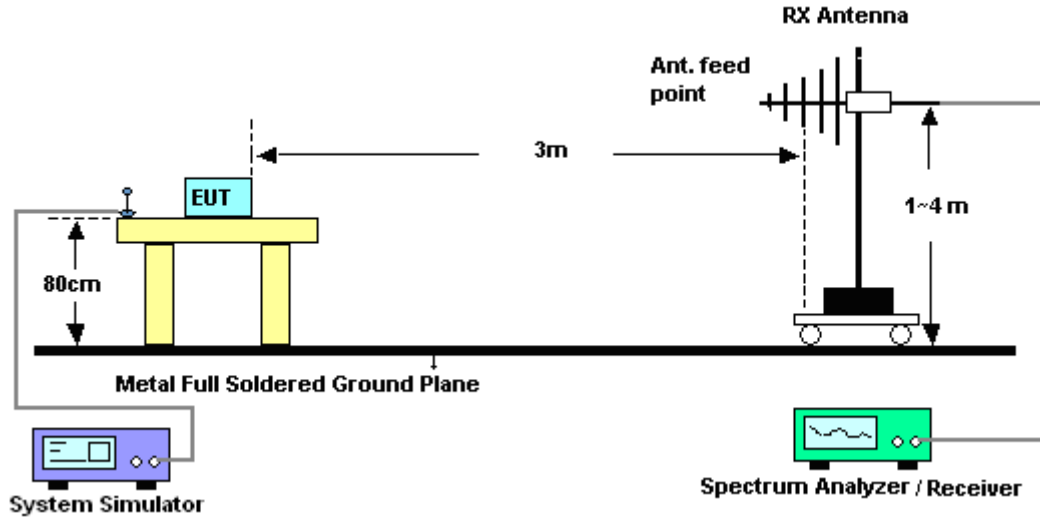
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43+10\log_{10}(P[\text{Watts}])$  dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

#### 3.3.2 Test Procedures

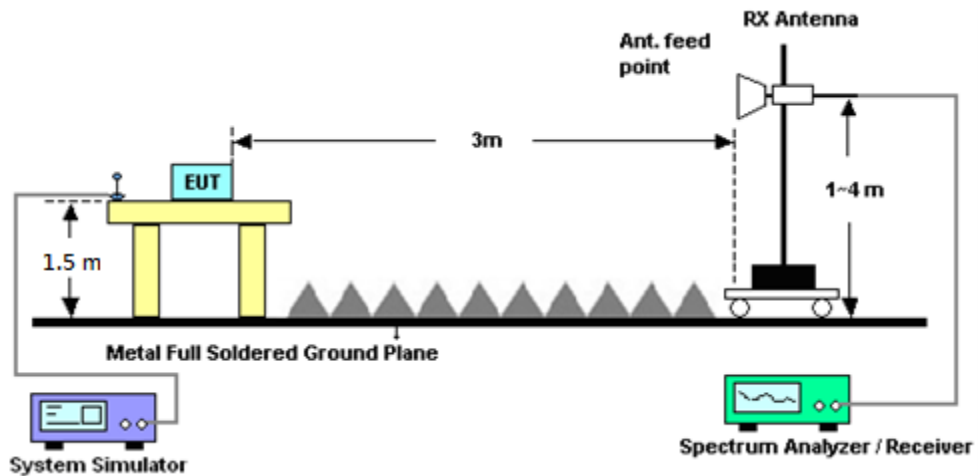
1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. For testing below 1GHz, make the measurement with the spectrum analyzer's RBW = 100 kHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
6. For testing above 1GHz, make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11.  $\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
12.  $\text{ERP (dBm)} = \text{EIRP} - 2.15$
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)

### 3.3.3 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



### 3.3.4 Test Result of Field Strength of Spurious Radiated

Please refer to Appendix B.



## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Base Station (Measure)	Anritsu	MT8821C	6201664755	GSM / GPRS / WCDMA / LTE FDD/TDD with 44) / LTE-3CC DLCA,2CC ULCA	Mar. 03, 2019	Jun. 25, 2019~ Jun. 29, 2019	Mar. 02, 2020	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 13, 2018	Jun. 25, 2019~ Jun. 29, 2019	Nov. 12, 2019	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SH-641	92013720	-40°C~90°C	Aug. 29, 2018	Jun. 25, 2019~ Jun. 29, 2019	Aug. 28, 2019	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890094	1V~20V 0.5A~5A	Oct. 02, 2018	Jun. 25, 2019~ Jun. 29, 2019	Oct. 01, 2019	Conducted (TH05-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#A	1-18GHz	Jan. 14, 2019	Jun. 25, 2019~ Jun. 29, 2019	Jan. 13, 2020	Conducted (TH05-HY)
Hygrometer	TECPEL	HTC-1	2	N/A	Mar. 05, 2019	Jun. 25, 2019~ Jun. 29, 2019	Mar. 04, 2020	Conducted (TH05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Nov. 22, 2018	Jun. 27, 2019~ Jun. 29, 2019	Nov. 21, 2019	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D&0080 0N1D01N-06	40103&07	30MHz to 1GHz	Apr. 30, 2019	Jun. 27, 2019~ Jun. 29, 2019	Apr. 29, 2020	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz ~ 18GHz	May 14, 2019	Jun. 27, 2019~ Jun. 29, 2019	May 13, 2020	Radiation (03CH13-HY)
Horn Antenna	ESCO	3117	00211469	1GHz~18GHz	Aug. 06, 2018	Jun. 27, 2019~ Jun. 29, 2019	Aug. 05, 2019	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA91705 84	18GHz- 40GHz	Dec. 05, 2018	Jun. 27, 2019~ Jun. 29, 2019	Dec. 04, 2019	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA91702 51	18GHz- 40GHz	Nov. 20, 2018	Jun. 27, 2019~ Jun. 29, 2019	Nov. 19, 2019	Radiation (03CH13-HY)
Amplifier	Sonoma-Instrument	310 N	187282	9KHz~1GHz	Dec. 18, 2018	Jun. 27, 2019~ Jun. 29, 2019	Dec. 17, 2019	Radiation (03CH13-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz ~ 40GHz	Dec. 06, 2018	Jun. 27, 2019~ Jun. 29, 2019	Dec. 05, 2019	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY5327014 7	1GHz~26.5GHz	Mar. 15, 2019	Jun. 27, 2019~ Jun. 29, 2019	Mar. 14, 2020	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY5537052 6	10Hz~44GHz	Mar. 19, 2019	Jun. 27, 2019~ Jun. 29, 2019	Mar. 18, 2020	Radiation (03CH13-HY)
Hygrometer	TECPEL	DTM-303A	TP157075	N/A	May 18, 2019	Jun. 27, 2019~ Jun. 29, 2019	May 17, 2020	Radiation (03CH13-HY)
Notch Filter	Wainwright	WTRCT5-82 4-849-20-70-60SSK	SN1	824-849	Mar. 21, 2019	Jun. 27, 2019~ Jun. 29, 2019	Mar. 20, 2020	Radiation (03CH13-HY)
Notch Filter	Wainwright	WRCT2500/ 2570-10/40-10SSK	SN1 R	LTE Band 7	Aug. 23, 2018	Jun. 27, 2019~ Jun. 29, 2019	Aug. 22, 2019	Radiation (03CH13-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Filter	Wainwright	WLJ4-1000-1530-6000-40ST	SN3	1.53 GHz Lowpass	Mar. 20, 2019	Jun. 27, 2019~Jun. 29, 2019	Mar. 19, 2020	Radiation (03CH13-HY)
Filter	Microwave	H1G013G1	SN477215	1.0G High Pass	Nov. 02, 2018	Jun. 27, 2019~Jun. 29, 2019	Nov. 01, 2019	Radiation (03CH13-HY)
Filter	Microwave	H3G018G1	SN477220	3.0G High Pass	Nov. 02, 2018	Jun. 27, 2019~Jun. 29, 2019	Nov. 01, 2019	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SF102/2*11 SK252	MY4278/2	9kHz~40GHz	May 16, 2019	Jun. 27, 2019~Jun. 29, 2019	May 15, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30M-18G	Feb. 13, 2019	Jun. 27, 2019~Jun. 29, 2019	Feb. 12, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30M~40GHz	Mar. 13, 2019	Jun. 27, 2019~Jun. 29, 2019	Mar. 12, 2020	Radiation (03CH13-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Jun. 27, 2019~Jun. 29, 2019	N/A	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Jun. 27, 2019~Jun. 29, 2019	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Jun. 27, 2019~Jun. 29, 2019	N/A	Radiation (03CH13-HY)
Signal Generator	Anritsu	MG3694C	163401	0.1Hz~40GHz	Jan. 21, 2019	Jun. 27, 2019~Jun. 29, 2019	Jan. 20, 2020	Radiation (03CH13-HY)
Software	Audix	E3 6.2009-8-24c	RK-001124	N/A	N/A	Jun. 27, 2019~Jun. 29, 2019	N/A	Radiation (03CH13-HY)



## 5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.07
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.48
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### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.92
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## Appendix A. Test Results of Conducted Test

### Conducted Output Power(Average power)

LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.59	-	-
15	1	37		23.12	-	-
15	1	74		23.17	-	-
15	36	0		22.55	-	-
15	36	20		22.50	-	-
15	36	39		22.40	-	-
15	75	0		22.79	-	-
15	1	0	16-QAM	22.51	-	-
15	1	37		22.51	-	-
15	1	74		21.92	-	-
15	36	0		21.14	-	-
15	36	20		21.27	-	-
15	36	39		21.23	-	-
15	75	0		21.19	-	-
15	1	0	64-QAM	21.35	-	-
15	1	37		21.20	-	-
15	1	74		21.34	-	-
15	36	0		20.24	-	-
15	36	20		20.02	-	-
15	36	39		20.25	-	-
15	75	0		20.07	-	-
10	1	0	QPSK	-	23.38	-
10	1	25		-	23.52	-
10	1	49		-	23.20	-
10	25	0		-	22.71	-
10	25	12		-	22.51	-
10	25	25		-	22.35	-
10	50	0		-	22.39	-
10	1	0	16-QAM	-	22.29	-
10	1	25		-	22.01	-
10	1	49		-	22.44	-
10	25	0		-	20.89	-
10	25	12		-	21.23	-
10	25	25		-	21.04	-
10	50	0		-	21.15	-
10	1	0	64-QAM	-	21.43	-
10	1	25		-	21.14	-
10	1	49		-	21.09	-
10	25	0		-	20.03	-
10	25	12		-	20.06	-
10	25	25		-	20.04	-
10	50	0		-	20.28	-



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.20	23.45	23.50
5	1	12		23.35	23.29	23.24
5	1	24		23.17	23.26	23.45
5	12	0		22.76	22.63	22.47
5	12	7		22.56	22.62	22.38
5	12	13		22.55	22.54	22.51
5	25	0		22.82	22.46	22.50
5	1	0	16-QAM	22.50	22.09	22.32
5	1	12		22.49	22.03	21.95
5	1	24		21.97	22.36	22.21
5	12	0		21.16	21.09	21.09
5	12	7		21.56	21.17	21.25
5	12	13		21.19	20.88	21.04
5	25	0		21.04	20.94	21.16
5	1	0	64-QAM	21.33	21.59	21.13
5	1	12		21.09	21.04	21.61
5	1	24		21.30	21.01	21.20
5	12	0		20.18	20.17	20.05
5	12	7		19.95	20.13	20.14
5	12	13		20.19	20.20	20.01
5	25	0		20.01	20.10	20.05
3	1	0	QPSK	23.14	23.28	23.35
3	1	8		23.31	23.44	23.17
3	1	14		23.09	23.28	23.44
3	8	0		22.59	22.54	22.59
3	8	4		22.55	22.63	22.51
3	8	7		22.58	22.43	22.63
3	15	0		22.87	22.54	22.46
3	1	0	16-QAM	22.39	22.20	22.29
3	1	8		22.49	22.20	22.00
3	1	14		21.83	22.52	22.13
3	8	0		21.26	21.12	21.06
3	8	4		21.43	21.16	21.13
3	8	7		21.15	21.04	21.03
3	15	0		21.04	20.95	21.06
3	1	0	64-QAM	21.47	21.53	21.39
3	1	8		21.27	21.12	21.57
3	1	14		21.40	20.99	21.30
3	8	0		20.32	20.07	19.93
3	8	4		20.10	20.10	20.16
3	8	7		20.15	20.30	19.91
3	15	0		20.17	20.24	20.00



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.14	23.40	23.32
1.4	1	3		23.38	23.21	23.27
1.4	1	5		23.13	23.28	23.39
1.4	3	0		22.61	22.62	22.57
1.4	3	1		22.48	22.40	22.31
1.4	3	3		22.57	22.47	22.40
1.4	6	0		22.78	22.48	22.43
1.4	1	0	16-QAM	22.54	22.08	22.15
1.4	1	3		22.56	22.02	22.09
1.4	1	5		22.04	22.56	22.23
1.4	3	0		21.17	20.98	21.20
1.4	3	1		21.28	21.12	21.22
1.4	3	3		21.13	21.11	20.95
1.4	6	0		21.09	21.20	21.02
1.4	1	0	64-QAM	21.36	21.70	21.30
1.4	1	3		21.26	21.17	21.60
1.4	1	5		21.45	20.94	21.34
1.4	3	0		20.06	20.02	20.15
1.4	3	1		20.21	20.10	20.10
1.4	3	3		20.11	20.16	20.01
1.4	6	0		19.91	20.17	19.86



## Appendix B. Test Results of ERP and Radiated Test

### ERP

LTE Band 26 / 1.4MHz (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	3	23.20	0.2089	17.55	0.0569
Middle		1	3	23.32	0.2148	17.67	0.0585
Highest		1	3	23.07	0.2028	17.42	0.0552
Lowest	16QAM	1	3	22.22	0.1667	16.57	0.0454
Middle		1	3	21.81	0.1517	16.16	0.0413
Highest		1	3	21.93	0.1560	16.28	0.0425
Lowest	64QAM	1	3	21.05	0.1274	15.40	0.0347
Middle		1	3	21.18	0.1312	15.53	0.0357
Highest		1	3	20.76	0.1191	15.11	0.0324
Limit	ERP < 100W			Result		PASS	

LTE Band 26 / 3MHz (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	8	23.29	0.2133	17.64	0.0581
Middle		1	8	23.33	0.2153	17.68	0.0586
Highest		1	8	23.13	0.2056	17.48	0.0560
Lowest	16QAM	1	0	21.85	0.1531	16.20	0.0417
Middle		1	0	21.93	0.1560	16.28	0.0425
Highest		1	0	22.13	0.1633	16.48	0.0445
Lowest	64QAM	1	0	20.83	0.1211	15.18	0.0330
Middle		1	0	21.41	0.1384	15.76	0.0377
Highest		1	0	20.41	0.1099	14.76	0.0299
Limit	ERP < 100W			Result		PASS	

LTE Band 26 / 5MHz (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	23.21	0.2094	17.56	0.0570
Middle		1	24	23.29	0.2133	17.64	0.0581
Highest		1	24	23.10	0.2042	17.45	0.0556
Lowest	16QAM	1	24	21.63	0.1455	15.98	0.0396
Middle		1	24	21.85	0.1531	16.20	0.0417
Highest		1	24	22.09	0.1618	16.44	0.0441
Lowest	64QAM	1	12	21.01	0.1262	15.36	0.0344
Middle		1	12	21.3	0.1349	15.65	0.0367
Highest		1	12	20.96	0.1247	15.31	0.0340
Limit	ERP < 100W			Result		PASS	



LTE Band 26 / 10MHz (Channel 26740) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	-	-	-	-	-	-
Middle		1	25	23.30	0.2138	17.65	0.0582
Highest		-	-	-	-	-	-
Lowest	16QAM	-	-	-	-	-	-
Middle		1	25	22.15	0.1641	16.50	0.0447
Highest		-	-	-	-	-	-
Lowest	64QAM	-	-	-	-	-	-
Middle		1	0	21.11	0.1291	15.46	0.0352
Highest		-	-	-	-	-	-
Limit	ERP < 100W			Result		PASS	

LTE Band 26 / 15MHz (Channel 26765) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	23.59	0.2286	17.94	0.0622
Middle		-	-	-	-	-	-
Highest		-	-	-	-	-	-
Lowest	16QAM	1	0	22.51	0.1782	16.86	0.0485
Middle		-	-	-	-	-	-
Highest		-	-	-	-	-	-
Lowest	64QAM	1	0	21.35	0.1365	15.70	0.0372
Middle		-	-	-	-	-	-
Highest		-	-	-	-	-	-
Limit	ERP < 100W			Result		PASS	



**Radiated Spurious Emission**

**LTE Band 26**

LTE Band 26 / 1.4MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1632	-64.16	-13	-51.16	-74.84	-69.49	1.22	8.70	H
	2444	-59.41	-13	-46.41	-74	-66.28	1.43	10.46	H
	3259	-59.44	-13	-46.44	-75.73	-67.29	1.67	11.68	H
									H
									H
									H
									H
	1632	-64.31	-13	-51.31	-74.85	-69.64	1.22	8.70	V
	2444	-60.27	-13	-47.27	-75.25	-67.14	1.43	10.46	V
	3259	-58.96	-13	-45.96	-75.54	-66.81	1.67	11.68	V
									V
									V
									V
									V

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.