



FCC RADIO TEST REPORT

FCC ID : YY3-1102418
Equipment : Wireless Module
Brand Name : AirPrime
Model Name : EM9191
Applicant : Handheld Group AB
Handheld Group AB, Kinnegatan 17 A, SE-531
33, Lidköping, Sweden
Manufacturer : iBASE
11F, No. 3-1, Yuan Qu Street, Nankang, Taipei,
Taiwan, R.O.C.
Standard : FCC 47 CFR Part 2, and 90(S)

Equipment: AirPrime EM9191 tested inside of Handheld Group ALGIZ 10XR.

The product was received on Oct. 17, 2022 and testing was performed from Nov. 05, 2022 to Nov. 30, 2022. 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 test results in this partial report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory



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History of this test report

Report No.	Version	Description	Issue Date
FG261002E	01	Initial issue of report	Mar. 23, 2023

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	-	See Note
-	§2.1049 §90.209	Occupied Bandwidth and 26dB Bandwidth	-	See Note
-	§2.1051 §90.691	Emission masks – In-band emissions	-	See Note
-	§2.1051 §90.691	Emission masks – Out of band emissions	-	See Note
-	§2.1055 §90.213	Frequency Stability for Temperature & Voltage	-	See Note
3.3	§2.1053 §90.691	Field Strength of Spurious Radiation	Pass	43.46 dB under the limit at 3257.000 MHz

Note: The Original module was performed with an antenna of higher gain, and the antenna was connected to the module in an open environment. The current host platform under application uses an antenna with lower gain and is installed inside the host platform enclosure. The physical restraints introduced by the host platform should have resulted in equal or lower level of radiated emission. Therefore, based on each rule part retest worst band for radiated emission test.

Declaration of Conformity:

- The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
- The measurement uncertainty please refer to report "Uncertainty of Evaluation".

Comments and Explanations:

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sheng Kuo

Report Producer: Lucy Wu

1 General Description

1.1 Feature of Equipment Under Test

Product Feature	
Equipment	Wireless Module
Brand Name	AirPrime
Model Name	EM9191
FCC ID	YY3-1102418
Installed into Host	Equipment Name: ALGIZ 10XR Brand Name: Handheld Group Model Name: ALGIZ 10XR Marketing Name: ALGIZ 10XR
EUT supports Radios application	WCDMA/HSPA/LTE/5G NR/GNSS
EUT Stage	Production Unit

Remark:

1. The above EUT's information was declared by manufacturer.
2. Equipment: AirPrime EM9191 tested inside of Handheld Group ALGIZ 10XR.

1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard	
Tx Frequency	LTE Band 26: 814.7 ~ 823.3 MHz
Rx Frequency	LTE Band 26: 859.7 ~ 868.3 MHz
Bandwidth	1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz
Maximum Output Power to Antenna	23.40 dBm
Antenna Type	PIFA LDS with coaxial cable Antenna
Antenna Gain	1.25 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM

Remark: The EUT's information above is declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.3 Modification of EUT

No modifications made to the EUT during the testing.

1.4 Testing Site

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333
Test Site No.	Sporton Site No.
	TH03-HY
Test Engineer	Ivy Yeh
Temperature (°C)	22~24
Relative Humidity (%)	50~53

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010
Test Site No.	Sporton Site No.
	03CH13-HY (TAF Code: 3786)
Test Engineer	Rain Lee, Jacky Hong and Mancy Chou
Temperature (°C)	20~26
Relative Humidity (%)	45~65
Remark	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

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

FCC Designation No.: TW1190 and TW3786

1.5 Applied Standards

According to the specifications declared by 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
- ♦ FCC KDB 414788 D01 Radiated Test Site 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 the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

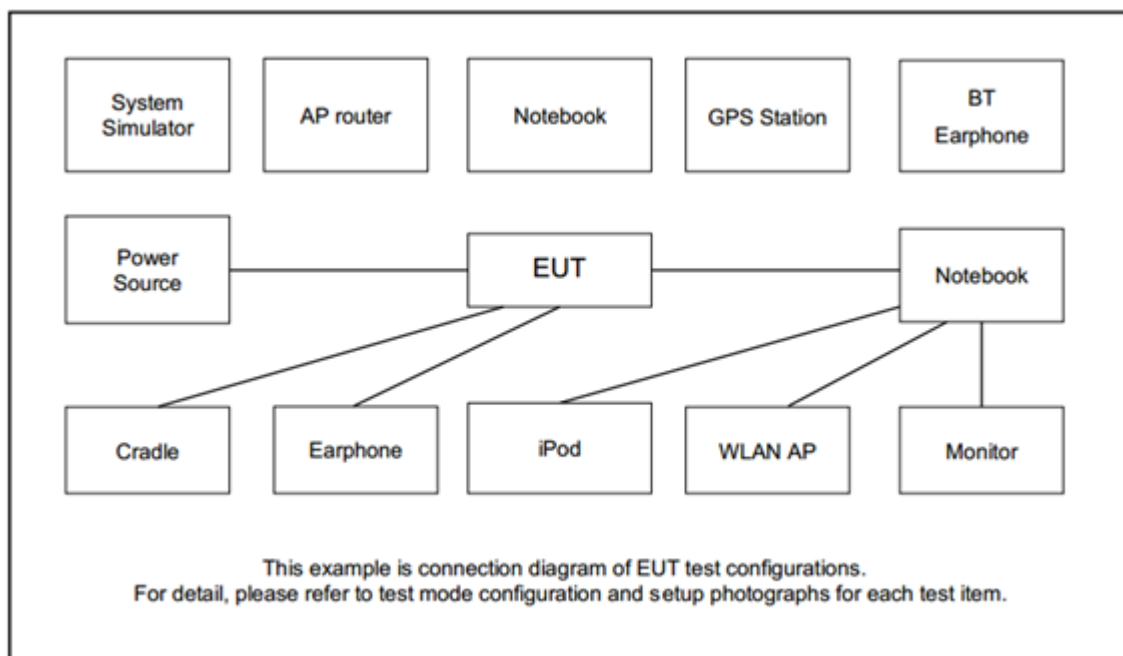
During all testing, EUT is in link mode with base station emulator at maximum power level.

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and only the worst case emissions were reported 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	256QAM	1	Half	Full	L	M	H
Max. Output Power	26	v	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	Max. Power					
Radiated Spurious Emission	26			v		v	-	v				v			v	v	v
Remark	1. The mark "v" means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported.																

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	MT8821C	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

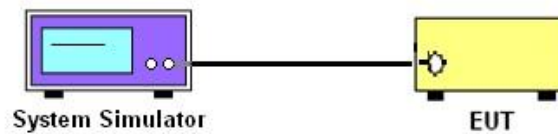
3 Conducted Test Items

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 output power of mobile transmitters must not exceed 100 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.

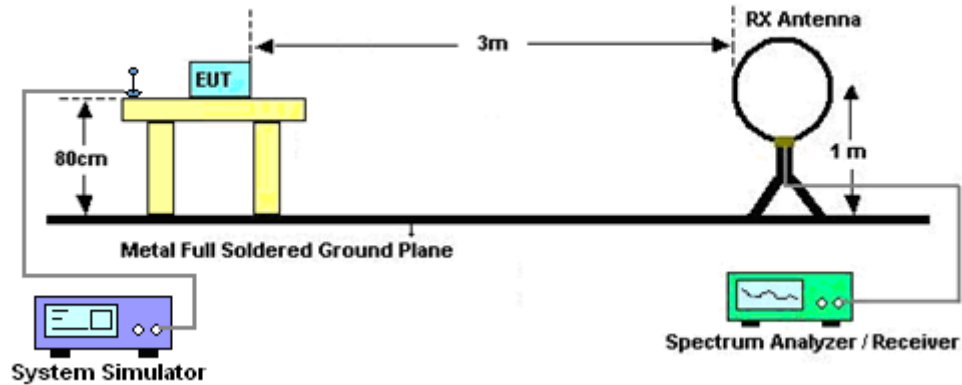
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log_{10}(P[\text{Watts}])$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.3.2 Test Procedures

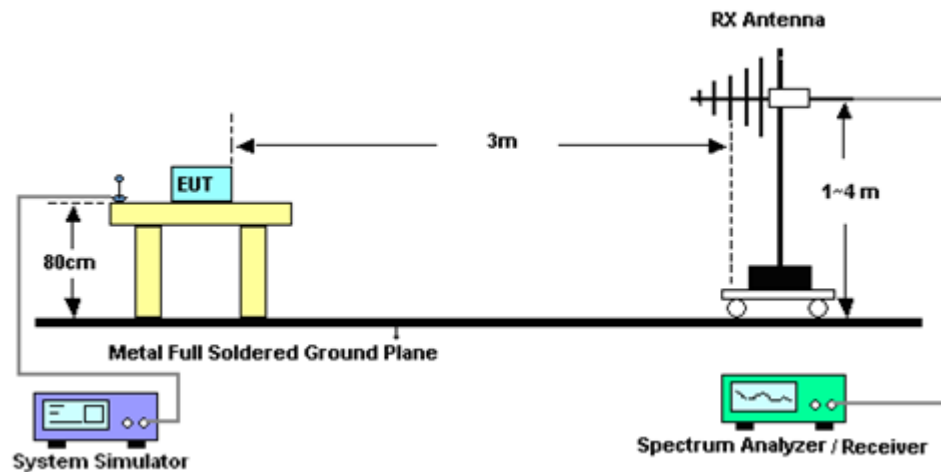
1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
1. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
2. The table was rotated 360 degrees to determine the position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

3.3.3 Test Setup

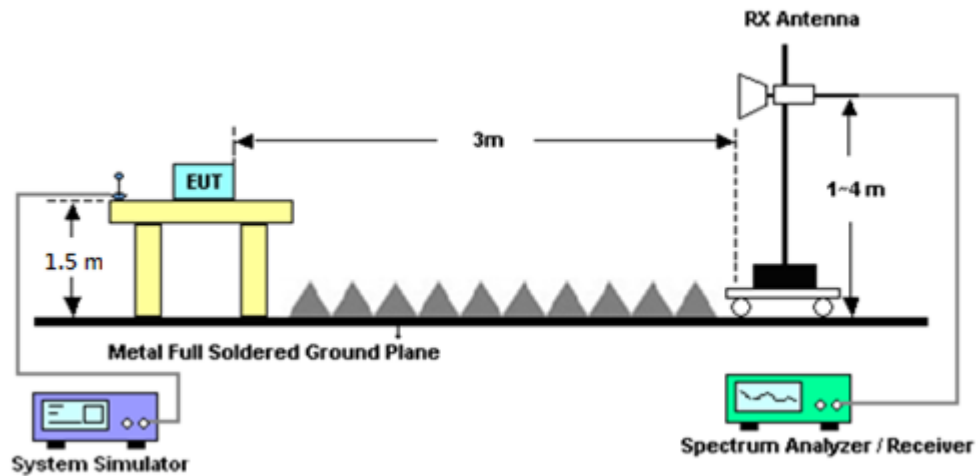
For radiated test below 30MHz



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.

Note:

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 20, 2022	Nov. 05, 2022~Nov. 30, 2022	Sep. 19, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 21, 2022	Nov. 05, 2022~Nov. 30, 2022	Feb. 20, 2023	Radiation (03CH13-HY)
Amplifier	SONOMA	310N	187282	9kHz~1GHz	Dec. 15, 2021	Nov. 05, 2022~Nov. 30, 2022	Dec. 14, 2022	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	40103 & 07	30MHz~1GHz	Apr. 24, 2022	Nov. 05, 2022~Nov. 30, 2022	Apr. 23, 2023	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	41912 & 05	30MHz~1GHz	Feb. 06, 2022	Nov. 05, 2022~Nov. 30, 2022	Feb. 05, 2023	Radiation (03CH13-HY)
Hygrometer	TECPEL	DTM-303B	TP200722	N/A	Mar. 22, 2022	Nov. 05, 2022~Nov. 30, 2022	Mar. 21, 2023	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590074	1GHz~18GHz	May 17, 2022	Nov. 05, 2022~Nov. 30, 2022	May 16, 2023	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Oct. 25, 2022	Nov. 05, 2022~Nov. 30, 2022	Oct. 24, 2023	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 18, 2022	Nov. 05, 2022~Nov. 30, 2022	Mar. 17, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN12	1.53GHz Low Pass Filter	Sep. 13, 2022	Nov. 05, 2022~Nov. 30, 2022	Sep. 12, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-1080-1200-15000-60SS	SN3	1.2GHz High Pass Filter	Jun. 30, 2022	Nov. 05, 2022~Nov. 30, 2022	Jun. 29, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60SS	SN2	3GHz High Pass Filter	Jul. 12, 2022	Nov. 05, 2022~Nov. 30, 2022	Jul. 11, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0030/126E	30MHz~18GHz	Feb. 09, 2022	Nov. 05, 2022~Nov. 30, 2022	Feb. 08, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	804793/4	30MHz~18GHz	Feb. 09, 2022	Nov. 05, 2022~Nov. 30, 2022	Feb. 08, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9 kHz~30 MHz	Mar. 10, 2022	Nov. 05, 2022~Nov. 30, 2022	Mar. 09, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30MHz~18GHz	Feb. 09, 2022	Nov. 05, 2022~Nov. 30, 2022	Feb. 08, 2023	Radiation (03CH13-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Nov. 05, 2022~Nov. 30, 2022	N/A	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Nov. 05, 2022~Nov. 30, 2022	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Nov. 05, 2022~Nov. 30, 2022	N/A	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1241	1-18GHz	Jul. 25, 2022	Nov. 05, 2022~Nov. 30, 2022	Jul. 24, 2023	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz~18GHz	Mar. 10, 2022	Nov. 05, 2022~Nov. 30, 2022	Mar. 09, 2023	Radiation (03CH13-HY)
Base Station (Measure)	Anritsu	MT8821C	6262116730	LTE	Jun. 15, 2022	Nov. 21, 2022~Nov. 25, 2022	Jun. 14, 2023	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8000A	6262134933	FR1	Jun. 13, 2022	Nov. 21, 2022~Nov. 25, 2022	Jun. 12, 2023	Conducted (TH03-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.40 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.81 dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power & ERP)

LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
15	1	0	QPSK	23.49	-	-	22.62	0.1828
15	1	37		22.92	-	-		
15	1	74		23.52	-	-		
15	36	0		22.45	-	-		
15	36	20		22.57	-	-		
15	36	39		22.49	-	-		
15	75	0		22.54	-	-		
15	1	0	16-QAM	22.37	-	-	21.92	0.1556
15	1	37		22.69	-	-		
15	1	74		22.82	-	-		
15	36	0		21.43	-	-		
15	36	20		21.56	-	-		
15	36	39		21.49	-	-		
15	75	0		21.55	-	-		
15	1	0	64-QAM	21.77	-	-	20.89	0.1227
15	1	37		21.76	-	-		
15	1	74		21.79	-	-		
15	36	0		20.43	-	-		
15	36	20		20.53	-	-		
15	36	39		20.58	-	-		
15	75	0		20.42	-	-		
15	1	0	256-QAM	18.31	-	-	17.41	0.0551
15	1	37		18.09	-	-		
15	1	74		17.91	-	-		
15	36	0		18.09	-	-		
15	36	20		17.89	-	-		
15	36	39		17.80	-	-		
15	75	0		17.91	-	-		
Limit	Output Power < 100W			Result			Pass	



LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	-	23.39	-	22.49	0.1774
10	1	25		-	22.76	-		
10	1	49		-	22.58	-		
10	25	0		-	21.76	-		
10	25	12		-	21.91	-		
10	25	25		-	21.63	-		
10	50	0		-	21.77	-		
10	1	0	16-QAM	-	22.79	-	21.89	0.1545
10	1	25		-	22.08	-		
10	1	49		-	21.95	-		
10	25	0		-	20.92	-		
10	25	12		-	20.86	-		
10	25	25		-	20.67	-		
10	50	0		-	20.83	-		
10	1	0	64-QAM	-	21.62	-	20.92	0.1236
10	1	25		-	21.76	-		
10	1	49		-	21.82	-		
10	25	0		-	20.54	-		
10	25	12		-	20.53	-		
10	25	25		-	20.49	-		
10	50	0		-	20.40	-		
10	1	0	256-QAM	-	18.34	-	17.44	0.0555
10	1	25		-	18.05	-		
10	1	49		-	17.80	-		
10	25	0		-	18.03	-		
10	25	12		-	18.06	-		
10	25	25		-	17.81	-		
10	50	0		-	18.04	-		
Limit	Output Power < 100W			Result			Pass	



LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	22.88	23.64	23.50	22.74	0.1879
5	1	12		22.75	22.75	22.54		
5	1	24		22.69	22.60	22.28		
5	12	0		22.06	21.78	21.62		
5	12	7		22.08	21.91	21.67		
5	12	13		21.96	21.77	21.50		
5	25	0		22.08	21.74	21.69		
5	1	0	16-QAM	22.94	22.02	22.06	22.04	0.1600
5	1	12		22.16	22.04	21.79		
5	1	24		22.06	21.87	21.49		
5	12	0		20.91	20.85	20.72		
5	12	7		20.91	20.78	20.75		
5	12	13		20.91	20.76	20.56		
5	25	0		21.11	20.80	20.72		
5	1	0	64-QAM	21.78	21.36	21.50	21.05	0.1274
5	1	12		21.68	21.32	21.89		
5	1	24		21.95	21.82	21.84		
5	12	0		20.56	20.52	20.70		
5	12	7		20.54	20.48	20.58		
5	12	13		20.47	20.58	20.58		
5	25	0		20.57	20.44	20.53		
5	1	0	256-QAM	18.11	18.20	18.12	17.30	0.0537
5	1	12		18.04	18.05	18.06		
5	1	24		17.77	17.84	17.75		
5	12	0		17.90	18.07	17.81		
5	12	7		17.74	17.93	17.81		
5	12	13		17.77	17.78	17.86		
5	25	0		17.81	17.86	17.80		
Limit	Output Power < 100W			Result			Pass	



LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0	QPSK	23.53	23.54	23.48	22.64	0.1837
3	1	8		22.87	22.64	22.53		
3	1	14		22.76	22.54	22.39		
3	8	0		22.08	21.75	21.69		
3	8	4		22.08	21.81	21.54		
3	8	7		22.02	21.77	21.45		
3	15	0		21.91	21.77	21.68		
3	1	0	16-QAM	22.11	21.99	21.98	21.24	0.1330
3	1	8		22.08	22.14	21.67		
3	1	14		22.01	21.89	21.56		
3	8	0		21.03	20.75	20.69		
3	8	4		20.99	20.82	20.62		
3	8	7		21.01	20.66	20.49		
3	15	0		20.93	20.78	20.75		
3	1	0	64-QAM	21.61	21.98	21.56	21.08	0.1282
3	1	8		21.50	21.76	21.63		
3	1	14		21.19	21.46	21.96		
3	8	0		20.53	20.64	20.56		
3	8	4		20.57	20.45	20.59		
3	8	7		20.53	20.53	20.55		
3	15	0		20.58	20.43	20.61		
3	1	0	256-QAM	18.17	18.24	18.12	17.34	0.0542
3	1	8		18.07	18.02	17.94		
3	1	14		17.79	17.90	17.77		
3	8	0		17.98	18.09	17.87		
3	8	4		17.80	17.97	17.93		
3	8	7		17.66	17.86	17.82		
3	15	0		17.71	17.85	17.92		
Limit	Output Power < 100W			Result			Pass	



LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0	QPSK	22.79	23.43	23.47	22.57	0.1807
1.4	1	3		22.88	22.77	22.40		
1.4	1	5		22.80	22.63	22.36		
1.4	3	0		22.91	22.77	22.70		
1.4	3	1		22.92	22.62	22.54		
1.4	3	3		22.73	22.63	22.28		
1.4	6	0		21.93	21.75	21.70		
1.4	1	0	16-QAM	22.19	22.14	22.06	21.29	0.1346
1.4	1	3		22.15	22.04	21.72		
1.4	1	5		22.09	21.78	21.56		
1.4	3	0		22.19	21.94	22.07		
1.4	3	1		22.19	21.97	21.81		
1.4	3	3		21.94	21.75	21.49		
1.4	6	0		21.11	20.72	20.65		
1.4	1	0	64-QAM	21.67	21.64	21.42	20.79	0.1199
1.4	1	3		21.64	21.69	21.46		
1.4	1	5		21.62	21.62	21.48		
1.4	3	0		21.55	21.57	21.44		
1.4	3	1		21.47	21.38	21.48		
1.4	3	3		21.40	21.35	21.50		
1.4	6	0		20.27	20.48	20.45		
1.4	1	0	256-QAM	0.00	18.29	18.17	17.39	0.0548
1.4	1	3		17.89	18.13	18.02		
1.4	1	5		17.81	17.76	17.87		
1.4	3	0		18.04	18.17	17.83		
1.4	3	1		17.84	17.98	17.93		
1.4	3	3		17.67	17.94	17.87		
1.4	6	0		17.72	17.92	17.82		
Limit	Output Power < 100W			Result			Pass	



Appendix B. Test Results of Radiated Test

LTE Band 26

LTE Band 26 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1624	-60.26	-13	-47.26	-75.26	-61.08	6.31	9.28	H
	2443	-58.80	-13	-45.80	-75.58	-59.00	7.87	10.22	H
	3257	-56.86	-13	-43.86	-76.07	-57.45	9.07	11.81	H
									H
									H
									H
	1624	-59.60	-13	-46.60	-74.61	-60.42	6.31	9.28	V
	2443	-58.74	-13	-45.74	-75.37	-58.94	7.87	10.22	V
	3257	-56.46	-13	-43.46	-75.8	-57.05	9.07	11.81	V
									V
									V
									V
Middle	1632	-59.85	-13	-46.85	-74.95	-60.69	6.32	9.31	H
	2450	-58.94	-13	-45.94	-75.68	-59.13	7.91	10.25	H
	3267	-56.55	-13	-43.55	-75.76	-57.18	9.09	11.87	H
									H
									H
									H
	1632	-60.17	-13	-47.17	-75.28	-61.01	6.32	9.31	V
	2450	-59.13	-13	-46.13	-75.72	-59.32	7.91	10.25	V
	3267	-56.92	-13	-43.92	-76.25	-57.55	9.09	11.87	V
									V
									V
									V



Highest	1640	-60.06	-13	-47.06	-75.27	-60.92	6.33	9.34	H
	2458	-56.86	-13	-43.86	-73.59	-57.05	7.95	10.29	H
	3277	-56.85	-13	-43.85	-76.07	-57.51	9.11	11.92	H
									H
									H
									H
	1640	-59.82	-13	-46.82	-74.99	-60.68	6.33	9.34	V
	2458	-59.50	-13	-46.50	-76.07	-59.69	7.95	10.29	V
	3277	-56.62	-13	-43.62	-75.95	-57.28	9.11	11.92	V
									V
									V
									V



LTE Band 26 / 15MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1632	-60.51	-13	-47.51	-75.61	-61.35	6.32	9.31	H
	2444	-58.96	-13	-45.96	-75.73	-59.15	7.88	10.22	H
	3259	-57.12	-13	-44.12	-76.33	-57.72	9.07	11.82	H
									H
									H
									H
	1632	-60.42	-13	-47.42	-75.53	-61.26	6.32	9.31	V
	2444	-59.20	-13	-46.20	-75.83	-59.39	7.88	10.22	V
	3259	-56.80	-13	-43.80	-76.14	-57.40	9.07	11.82	V
									V
									V
									V