FCC RF Test Report

APPLICANT : ZTE CORPORATION

EQUIPMENT: WCDMA/LTE CPE

BRAND NAME : ZTE

MODEL NAME : MF279T

FCC ID : SRQ-MF279T

STANDARD : FCC 47 CFR Part 2, and 90(S)
CLASSIFICATION : PCS Licensed Transmitter (PCB)

The product was received on Oct. 18, 2017 and testing was completed on Nov. 01, 2017. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI/TIA-603-E and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.



Approved by: James Huang / Manager



Sporton International (Kunshan) Inc.

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Sporton International (Kunshan) Inc.

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Report No.: FW7O1802

Report Version : Rev. 01
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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FW7O1802	Rev. 01	Initial issue of report	Nov. 22, 2017

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	Reporting only	PASS	-
3.2	§2.1049 §90.209	Occupied Bandwidth and 26dB Bandwidth	Reporting only	PASS	-
3.3	§2.1051 §90.691	Emission masks – In-band emissions	< 50+10log ₁₀ (P[Watts])	PASS	-
3.4	§2.1051 §90.691	Emission masks – Out of band emissions	< 43+10log ₁₀ (P[Watts])	PASS	-
3.5	§2.1053 §90.691	Field Strength of Spurious Radiation	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 45.93 dB at 2456.000 MHz
3.6	§2.1055 §90.213	Frequency Stability for Temperature & Voltage	< 2.5 ppm	PASS	-

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1 General Description

1.1 Applicant

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

1.2 Manufacturer

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

1.3 Feature of Equipment Under Test

Product Feature							
Equipment	WCDMA/LTE CPE						
Brand Name	ZTE						
Model Name	MF279T						
FCC ID	SRQ-MF279T						
	WCDMA/HSPA/HSPA+(16QAM uplink is not supported)/LTE/						
EUT aumanta Badica annication	WLAN 2.4GHz 802.11b/g/n HT20/HT40						
EUT supports Radios application	WLAN 5GHz 802.11a/n HT20/HT40						
	WLAN 5GHz 802.11ac VHT20/VHT40/VHT80						
IMEL Code	Conducted: 990008960002348						
IMEI Code	Radiation: 990008960002256						
HW Version	MF279THW1.0						
SW Version	MF279TV1.2						
EUT Stage	Identical Prototype						

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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1.4 Product Specification of Equipment Under Test

Product Specification subjective 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	22.45 dBm						
Antenna Type	PIFA Antenna						
Type of Modulation	QPSK / 16QAM						

Remark: This test report recorded only product characteristics and test results of PCS Licensed Transmitter (PCB).

1.5 Modification of EUT

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

1.6 Maximum Frequency Tolerance, Emission Designator and Conducted Power

FCC Rule	System	Type of Modulation	BW	Frequency Tolerance (ppm)	Emission Designator	Maximum Conducted power(W)
Part 90S	LTE Band 26	QPSK	1.4 MHz	-	1M09G7D	0.1734
Part 90S	LTE Band 26	16QAM	1.4 MHz	-	1M09W7D	0.1445
Part 90S	LTE Band 26	QPSK	3 MHz	-	2M73G7D	0.1758
Part 90S	LTE Band 26	16QAM	3 MHz	-	2M73W7D	0.1489
Part 90S	LTE Band 26	QPSK	5 MHz	-	4M51G7D	0.1726
Part 90S	LTE Band 26	16QAM	5 MHz	-	4M50W7D	0.1452
Part 90S	LTE Band 26	QPSK	10 MHz	0.0062 ppm	8M99G7D	0.1710
Part 90S	LTE Band 26	16QAM	10 MHz	-	9M03W7D	0.1452
Part 90S	LTE Band 26	QPSK	15 MHz	-	13M5G7D	0.1746
Part 90S	LTE Band 26	16QAM	15 MHz	-	13M3W7D	0.1459

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1.7 Testing Site

Sporton Lab is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0) and the FCC designation No. is CN5013.

Test Site	Sporton Internationa	Sporton International (Kunshan) Inc.					
	No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China						
Test Site Location	TEL: +86-512-57900158 FAX: +86-512-57900958						
Took Oite No	Sportor	n Site No.	FCC Test Firm Registration No.				
Test Site No.	TH01-KS	03CH03-KS	630927				

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

1.8 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
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03
- Interim Guidance for Equipment Authorization of Devices with Channel Bandwidths Combined Across Two Contiguous Service Rule Allocations OET/Lab/EACB, June 6, 2013

Remark:

- 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.

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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. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission is 30 MHz to 10th harmonic.

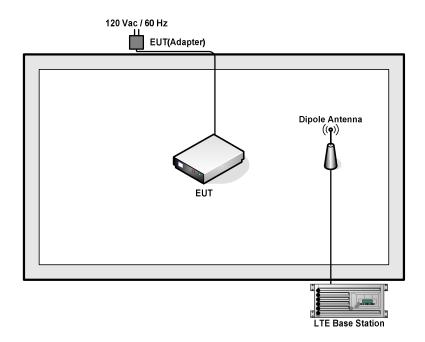
		Bandwidth (MHz)			Modulation		RB#		Test Channel						
Test Items	Band	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	М	Н
Max. Output Power	26	v	٧	v	v	v		v	v	v	v	v	٧	v	v
26dB and 99% Bandwidth	26	v	٧	v	v	v	,	v	v			v	v	v	v
Emission masks In-band emissions	26	v	٧	v	v	٧	•	v	v	>		>	٧		v
Emission masks – Out of band emissions	26	v	v	v	v	v		v	v	v			v	v	٧
Frequency Stability	26				v		,	v				v		v	
Radiated Spurious Emission 26 v v v v - v v					>				٧						
Note	2. The 3. LTE ER	2. The mark "-" means that this bandwidth is not supported.													

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2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

lt	Item Equipment Trade		Trade Name	Frade Name Model No. F		Data Cable	Power Cord	
	1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m	
	2.	DC Power Supply	GW INSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m	

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss

The following shows an offset computation example with RF cable loss 3.8dB.

Example:

 $Offset(dB) = RF \ cable \ loss(dB).$

= 3.8 (dB)

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2.5 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	-	-					
15	Frequency	821.5	-	-					
40	Channel	- 26740		-					
10	Frequency	-	819	-					
_	Channel	26715	26740	26765					
5	Frequency	816.5	819	821.5					
3	Channel	26705	26740	26775					
3	Frequency	815.5	819	822.5					
1.4	Channel	26697	26740	26783					
1.4	Frequency	814.7	819	823.3					

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3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power 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.

3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 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.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

Please refer to Appendix A.

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3.2 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.2.1 Description of (Occupied) Bandwidth Limitations Measurement

The 99% occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

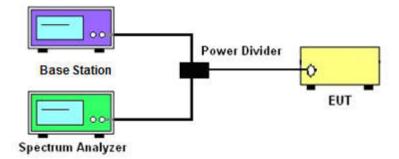
3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

- 1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
- The 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF power with full RB sizes were measured.

3.2.4 Test Setup



3.2.5 Test Result of 99% Occupied Bandwidth and 26dB Bandwidth

Please refer to Appendix A.

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3.3 Emissions Mask Measurement

3.3.1 Description of Emissions Mask Measurement

Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of FCC Part 90.691.(a)

- (a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
- (1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
- (2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

3.3.2 Measuring Instruments

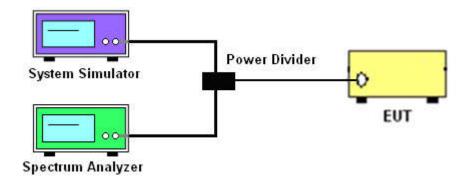
The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

- 1. The EUT was connected to spectrum analyzer and base station via power divider.
- 2. The emissions mask of low and high channels for the highest RF powers were measured.
- The measured RBW and the VBW set 3 times of RBW are then set in spectrum analyzer, and the RBW correction factor 10log (1% of OBW/measured RBW)(dB) was compensated, if required.
- 4. The test results were shown below plots with a correction offset factor including cable loss, insertion loss of power divider.

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3.3.4 Test Setup



3.3.5 Test Result (Plots) of Conducted Emissions Mask

Please refer to Appendix A.

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3.4 Emissions Mask – Out Of Band Emissions Measurement

3.4.1 Description of Conducted Emissions Out of band emissions measurement

The power of any emission FCC Part 90.691 (a)(2) on any frequency removed from the assigned frequency by out of the authorized bandwidth at least 43 + 10 log (P) dB. It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

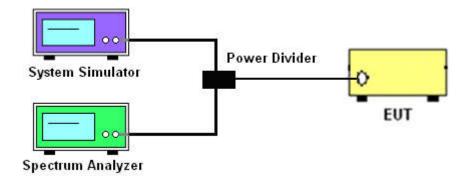
3.4.3 Test Procedures

- 1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
- 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 3. The middle channel for the highest RF power within the transmitting frequency was measured.
- 4. The conducted spurious emission for the whole frequency range was taken.
- 5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
- 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 7. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
 - = P(W) [43 + 10log(P)] (dB)
 - = [30 + 10log(P)] (dBm) [43 + 10log(P)] (dB)
 - = -13dBm.

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3.4.4 Test Setup



3.4.5 Test Result (Plots) of Conducted Emission

Please refer to Appendix A.

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3.5 Field Strength of Spurious Radiation Measurement

3.5.1 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+10log₁₀(P[Watts]) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.5.2 Measuring Instruments

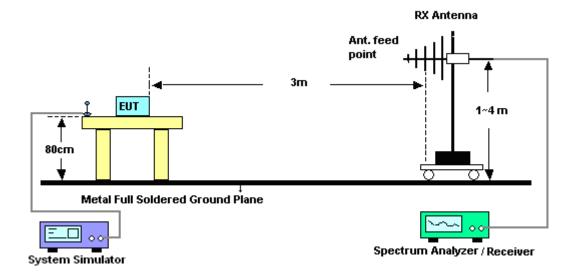
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

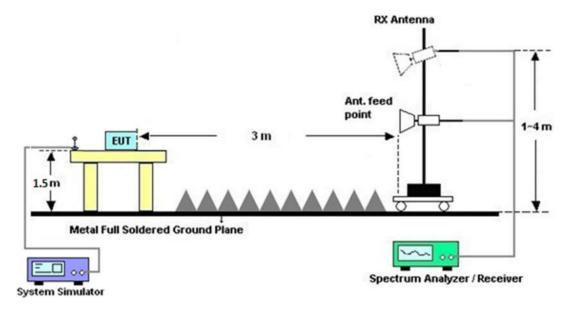
- The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
- 2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- 3. The table was rotated 360 degrees to determine the position 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.
- 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. EIRP (dBm) = S.G. Power Tx Cable Loss + Tx Antenna Gain
- 11. ERP (dBm) = 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 + 10log(P) dB below the transmitter power P(Watts)
 - = P(W) [43 + 10log(P)] (dB)
 - = [30 + 10log(P)] (dBm) [43 + 10log(P)] (dB)
 - = -13dBm.

3.5.4 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



3.5.5 Test Result of Field Strength of Spurious Radiated

Please refer to Appendix B.

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3.6 Frequency Stability Measurement

3.6.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency according to FCC Part 90.213.

3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures for Temperature Variation

- 1. The EUT was set up in the thermal chamber and connected with the base station.
- With power OFF, the temperature was decreased to -30°C and the EUT was stabilized for three
 hours. Power was applied and the maximum change in frequency was recorded within one
 minute.
- 3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

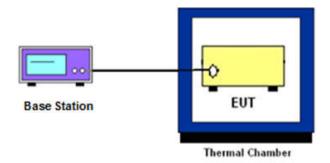
3.6.4 Test Procedures for Voltage Variation

- 1. The EUT was placed in a temperature chamber at 20±5° C and connected with the base station
- 2. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
- 3. The variation in frequency was measured for the worst case.

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3.6.5 Test Setup



3.6.6 Test Result of Temperature Variation

Please refer to Appendix A.

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4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Aug. 08, 2017	Oct. 23, 2017~ Nov. 01, 2017	Aug. 07, 2018	Conducted (TH01-KS)
Radio communication analyzer	Anritsu	MT8820C	6201300652	2G/3G/LTE_ full band	Aug. 08, 2017	Oct. 23, 2017~ Nov. 01, 2017	Aug. 07, 2018	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 12, 2017	Oct. 23, 2017~ Nov. 01, 2017	Oct. 11, 2018	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY5515024 4	10Hz~44GHz	Apr. 18, 2017	Nov. 01, 2017	Apr. 17, 2018	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	35406	25MHz~2GHz	Apr. 22, 2017	Nov. 01, 2017	Apr. 21, 2018	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120 D	9120D-1356	1GHz~18GHz	Apr. 22, 2017	Nov. 01, 2017	Apr. 21, 2018	Radiation (03CH03-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA17024 9	15GHz~40GHz	Feb. 15, 2017	Nov. 01, 2017	Feb. 14, 2018	Radiation (03CH03-KS)
Amplifier	com-power	PA-103A	161069	1MHz~1000MH z / 32 dB	Apr. 18, 2017	Nov. 01, 2017	Apr. 17, 2018	Radiation (03CH03-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30- 10P	2025788	1GHz~18GHz	Apr. 18, 2017	Nov. 01, 2017	Apr. 17, 2018	Radiation (03CH03-KS)
Amplifier	MITEQ	TTA1840-35 -HG	1887435	18GHz~40GHz	Oct. 12, 2017	Nov. 01, 2017	Oct. 11, 2018	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 12, 2017	Nov. 01, 2017	Oct. 11, 2018	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Nov. 01, 2017	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Nov. 01, 2017	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Nov. 01, 2017	NCR	Radiation (03CH03-KS)

NCR: No Calibration Required

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5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	
· · · · · · · · · · · · · · · · · · ·	2.8dB
Confidence of 95% (U = 2Uc(y))	

<u>Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)</u>

Measuring Uncertainty for a Level of	3.3dB
Confidence of 95% (U = 2Uc(y))	

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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		22.42							
15	1	37		22.28							
15	1	74		22.20							
15	36	0	QPSK	21.34							
15	36	20		21.30							
15	36	39		21.46							
15	75	0		21.41							
15	1	0		21.64	-	-					
15	1	37		21.62							
15	1	74		21.49							
15	36	0	16-QAM	20.37							
15	36	20		20.35							
15	36	39		20.37							
15	75	0		20.28							

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LTE Band 26 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest				
10	1	0			22.29					
10	1	24			22.3					
10	1	49			22.33					
10	25	0	QPSK		21.35					
10	25	12			21.33					
10	25	24			21.28					
10	50	0			21.31					
10	1	0		-	21.62	-				
10	1	24			21.59					
10	1	49			21.58					
10	25	0	16-QAM		20.34					
10	25	12			20.38					
10	25	24			20.29					
10	50	0			20.36					
5	1	0		22.37	22.23	22.32				
5	1	12		22.31	22.22	22.26				
5	1	24	QPSK	22.29	22.18	22.36				
5	12	0		21.37	21.26	21.32				
5	12	6		21.39	21.25	21.33				
5	12	11		21.35	21.21	21.28				
5	25	0		21.35	21.2	21.31				
5	1	0		21.61	21.51	21.61				
5	1	12		21.59	21.48	21.56				
5	1	24		21.6	21.46	21.62				
5	12	0	16-QAM	20.41	20.29	20.38				
5	12	6		20.41	20.31	20.36				
5	12	11		20.37	20.23	20.31				
5	25	0		20.38	20.22	20.33				

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	LTE Band 26 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest					
3	1	0		22.38	22.24	22.29					
3	1	7		22.45	22.3	22.36					
3	1	14		22.33	22.21	22.34					
3	8	0	QPSK	21.34	21.24	21.3					
3	8	4		21.41	21.2	21.31					
3	8	7		21.33	21.19	21.4					
3	15	0		21.35	21.22	21.27					
3	1	0		21.61	21.49	21.54					
3	1	7		21.73	21.6	21.67					
3	1	14		21.6	21.45	21.61					
3	8	0	16-QAM	20.41	20.31	20.38					
3	8	4		20.46	20.33	20.39					
3	8	7		20.41	20.28	20.46					
3	15	0		20.38	20.27	20.31					
1.4	1	0	QPSK	22.27	22.14	22.28					
1.4	1	2		22.31	22.21	22.35					
1.4	1	5		22.25	22.15	22.27					
1.4	3	0		22.33	22.18	22.33					
1.4	3	1		22.39	22.25	22.38					
1.4	3	2		22.37	22.26	22.37					
1.4	6	0		21.29	21.17	21.3					
1.4	1	0		21.54	21.4	21.54					
1.4	1	2		21.57	21.48	21.6					
1.4	1	5		21.51	21.4	21.53					
1.4	3	0	16-QAM	21.33	21.21	21.36					
1.4	3	1		21.38	21.26	21.4					
1.4	3	2		21.37	21.27	21.4					
1.4	6	0		20.35	20.23	20.39					

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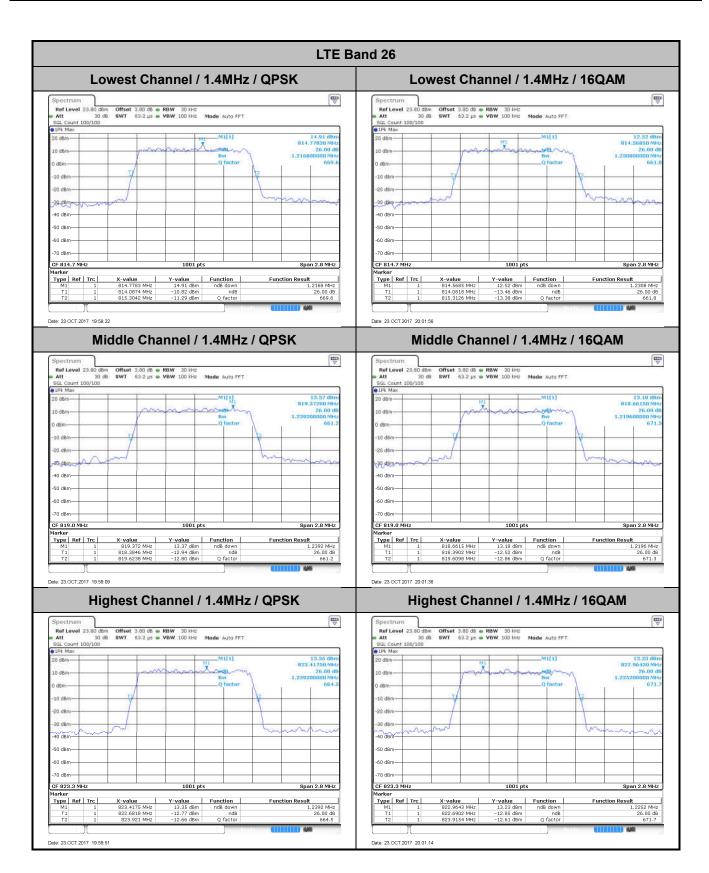
26dB Bandwidth

Mode	LTE Band 26 : 26dB BW(MHz)											
BW	1.4MHz 3MHz			5MHz 10MHz		15MHz		20MHz				
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.22	1.23	3.03	3.06	4.88	4.80	-	-	14.27	14.12	-	-
Middle CH	1.24	1.22	3.05	3.05	4.93	4.87	9.91	9.71	-	-	-	-
Highest CH	1.24	1.23	3.05	3.03	4.87	4.82	-	-	-	-	-	-

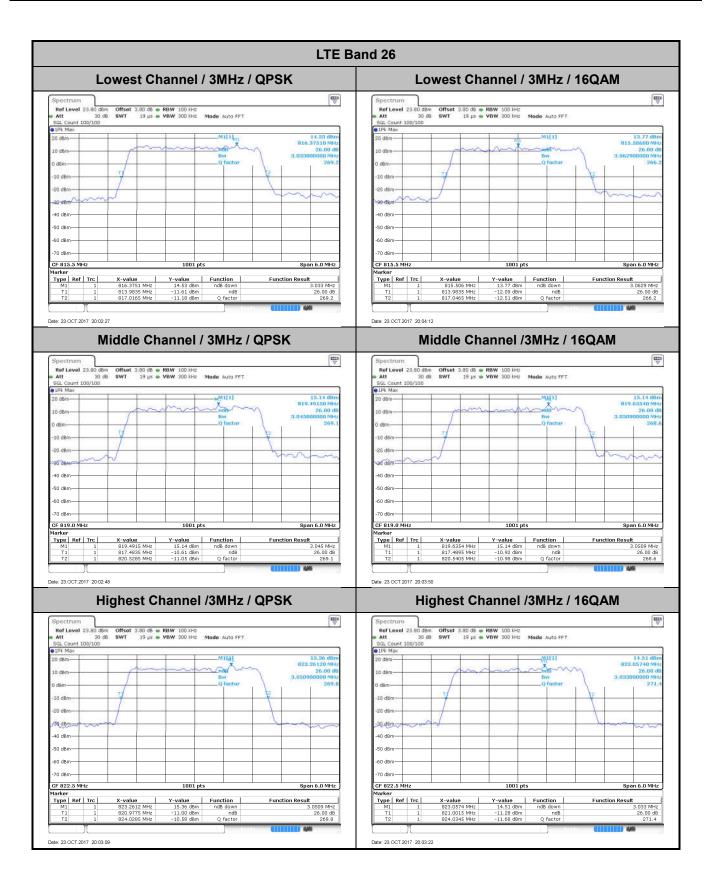
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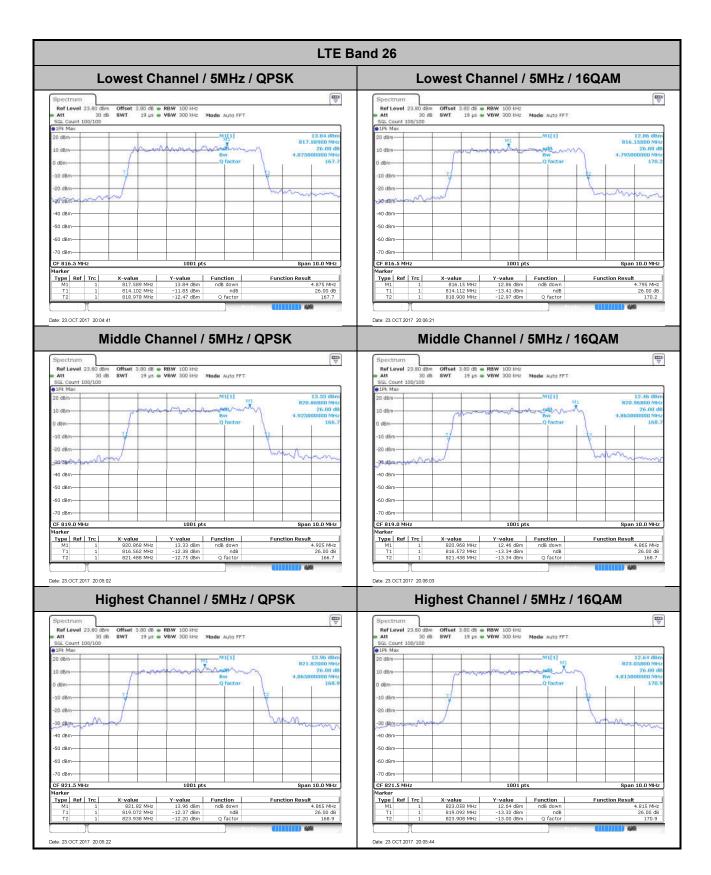
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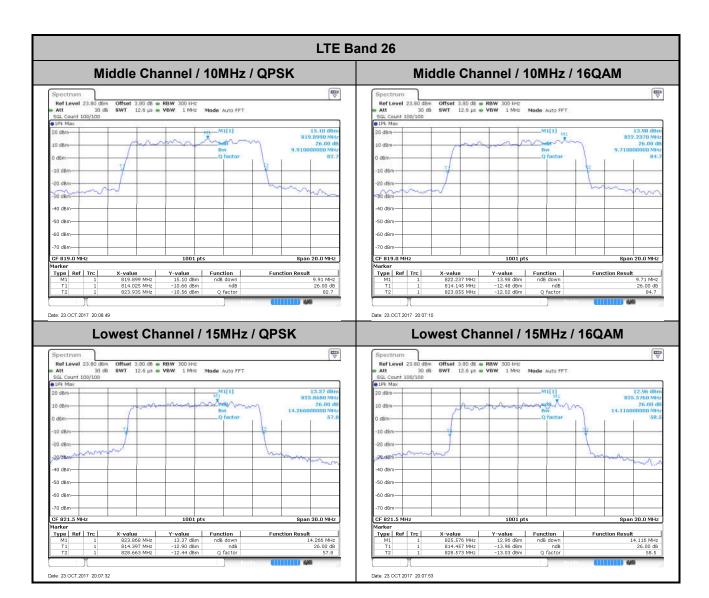
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Occupied Bandwidth

Mode		LTE Band 26 : 99%OBW(MHz)											
BW	1.4MHz 3MHz			lHz	5MHz		10MHz		15MHz		20MHz		
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	
Lowest CH	1.09	1.09	2.73	2.73	4.50	4.50	-	-	13.46	13.34	-	-	
Middle CH	1.09	1.09	2.73	2.71	4.51	4.50	8.99	9.03	-	-	-	_	
Highest CH	1.09	1.09	2.70	2.72	4.49	4.48	-	-	-	-	-	-	

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LTE Band 26 Lowest Channel / 1.4MHz / QPSK Lowest Channel / 1.4MHz / 16QAM ₩ V 20 dBm -50 dBm -50 dBm -70 dBm -70 dBm-CF 814.7 MHz CF 814.7 MH Type Ref Trc X-value 814.6944 MHz 814.15455 MHz 815.24266 MHz Type Ref Trc X-value 814.2524 MHz 814.16014 MHz 815.25385 MHz Function **Function Result** Function 1.088111888 MHz 1.093706294 MHz Date: 23.OCT.2017 19:58:03 Date: 23.OCT.2017 20:01:48 Middle Channel / 1.4MHz / QPSK Middle Channel / 1.4MHz / 16QAM ₩ ∀ ₩ ∀ Offset 3.80 dB • RBW 30 kHz SWT 63.2 µs • VBW 100 kHz Mode Auto FFT Offset 3.80 dB • RBW 30 kHz SWT 63.2 µs • VBW 100 kHz Mode Auto FFT 13.96 dB 819.11190 MH 1,093706 10 dBm -30 dBm--40 dBm--40 dBm -60 dBm--60 dBm-CF 819.0 MHz
Marker
Type | Ref | Trc | CF 819.0 MH Type | Ref | Trc | Function Occ Bw 1.093706294 MHz 1.085314685 MHz Date: 23.OCT.2017 20:01:26 Highest Channel / 1.4MHz / QPSK Highest Channel / 1.4MHz / 16QAM ₩. 14,93 dBn 823,37830 ** 1,0881 ** SGL Cou ●1Pk Max M1[1] M1[1] 10 dBm-20 dBm -60 dBm--60 dBm--70 d8m--70 d8m-Span 2.8 MHz CF 823.3 MHz 1001 pts CF 823.3 MHz 1001 pts Y-value Function
14.93 dBm
6.08 dBm Occ Bw
6.29 dBm Type | Ref | Trc | Function Result Y-value Function Function Result 1.088111888 MHz 1.093706294 MHz

Date: 23.OCT.2017 20:01:04

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Date: 23.OCT.2017 19:59:42

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LTE Band 26 Lowest Channel / 3MHz / QPSK Lowest Channel / 3MHz / 16QAM E V Ref Level 23.80 dBm • Att 30 dB SGL Count 100/100 • 1Pk Max 20 dBm 40 dBm 40 dBm -50 dBm--50 dBm -70 dBm 70 dBm CF 815.5 MHz 1001 pts CF 815.5 MHz 1001 pts Y-value Function
14.24 dBm
8.48 dBm Occ Bw
7.72 dBm Type Ref Trc Function **Function Result** Type Ref Trc **Function Result** 2.733266733 MHz 2.727272727 MHz Date: 23 OCT 2017 20:02:19 Date: 23.OCT.2017 20:04:22 Middle Channel / 3MHz / QPSK Middle Channel / 3MHz / 16QAM ₩ ∀ \bar{\bar{\pi}} 3.80 dB • RBW 100 kHz 19 µs • VBW 300 kHz Mode Auto FFT 3.80 dB • RBW 100 kHz 19 µs • VBW 300 kHz Mode Auto FFT en diam--50 dBm -70 dBm -70 dBm CF 819.0 MHz CF 819.0 MHz 1001 pts
 X-value
 Y-value

 819.7373 MHz
 13.34 dBm

 817.65135 MHz
 6.99 dBm

 820.36064 MHz
 7.24 dBm

 X-value
 Y-value
 Function

 819.3417 MHz
 14.55 dBm

 817.64535 MHz
 8.67 dBm
 Occ Bw

 820.37862 MHz
 7.72 dBm
 Type | Ref | Trc | Type Ref Trc Function Function Result **Function Result** 2.733266733 MHz Occ Bw 2.709290709 MHz Date: 23.OCT.2017 20:02:39 Date: 23.OCT.2017 20:03:59 Highest Channel / 3MHz / QPSK Highest Channel / 3MHz / 16QAM \rightarrow \forall \text{\tin}\text{\tetx{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\ti}\\\ \text{\texi}\text{\text{\text{\text{\text{\texi}\text{\text{\text{\text{\texi}\text{\text{\texi}\text{\text{\texi}\til\text{\text{\texi}\text{\text{\text{\text{\text{\text{\tet \vec{\vec{v}} 3.80 dB • RBW 100 kHz 19 µs • VBW 300 kHz Mode Auto FFT 3.80 dB • RBW 100 kHz 19 µs • VBW 300 kHz Mode Auto FFT 14.70 dBn 822.82970 MP 2.697302* in dam-38. dBm 40 dBm -60 dBm--60 dBm-70 dBm CF 822.5 MH: CF 822.5 MHz Type | Ref | Trc | Type Ref Trc 821.15135 MHz 823.84865 MHz Occ Bw 2.697302697 MHz Occ Bw 2.715284715 MHz

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LTE Band 26 Lowest Channel / 5MHz / QPSK Lowest Channel / 5MHz / 16QAM E V Ref Level 23.80 dBm • Att 30 dB SGL Count 100/100 • 1Pk Max 20 dBm 40 dBm 40 dBm -50 dBm--50 dBm -70 dBm 70 dBm CF 816.5 MHz 1001 pts Span 10.0 MHz CF 816.5 MHz 1001 pts Span 10.0 MHz Y-value Function

12.90 dBm
6.89 dBm Occ Bw
7.37 dBm
 X-value
 Y-value
 Function

 818.158 MHz
 12.85 dBm

 814.25225 MHz
 7.67 dBm
 Occ Bw

 818.74775 MHz
 7.59 dBm
 Type Ref Trc **Function Result** Type Ref Trc **Function Result** 4.495504496 MHz 4.495504496 MHz Date: 23 OCT 2017 20:04:51 Date: 23.OCT.2017 20:06:30 Middle Channel / 5MHz / QPSK Middle Channel / 5MHz / 16QAM ₩ ∀ \bar{\bar{\pi}} 3.80 dB • RBW 100 kHz 19 µs • VBW 300 kHz Mode Auto FFT 3.80 dB • RBW 100 kHz 19 µs • VBW 300 kHz Mode Auto FFT many -1 -50 dBm--50 dBm -70 dBm -70 dBm CF 819.0 MHz Span 10.0 MHz CF 819.0 MHz 1001 pts
 Marker
 Trc
 X-value
 Y-value
 Function

 M1
 1
 820.958 MHz
 13.22 d8m
 13.22 d8m

 T1
 1
 816.75225 MHz
 7.97 d8m
 Occ 8w

 T2
 1
 821.25774 MHz
 8.40 d8m
 Occ 8w

 X-value
 Y-value

 820.129 MHz
 12.48 dBm

 816.75225 MHz
 8.32 dBm

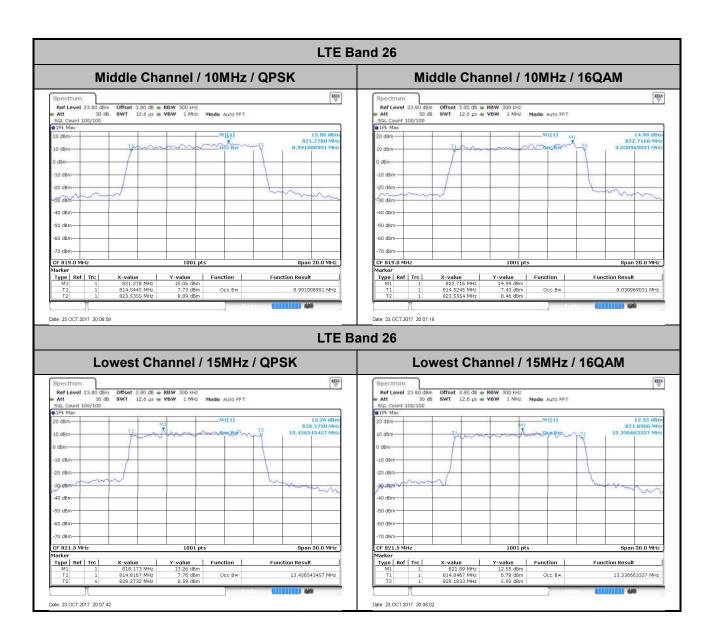
 821.24775 MHz
 7.99 dBm
 Type Ref Trc Function Function Result Function Result 4.505494505 MHz Occ Bw 4.495504496 MHz Date: 23.OCT.2017 20:05:10 Date: 23.OCT.2017 20:06:11 Highest Channel / 5MHz / QPSK Highest Channel / 5MHz / 16QAM \rightarrow \forall \text{\tin}\text{\tetx{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\ti}\\\ \text{\texi}\text{\text{\text{\text{\text{\texi}\text{\text{\text{\text{\texi}\text{\text{\texi}\text{\text{\texi}\til\text{\text{\texi}\text{\text{\text{\text{\text{\text{\tet \vec{\vec{v}} Offset 3,80 dB • RBW 100 kHz SWT 19 μs • VBW 300 kHz Mode Auto FFT in dam-10 dBm 30 dBm--60 dBm--60 dBm-70 dBm CF 821.5 MH: Span 10.0 MHz CF 821.5 MHz
 X-value
 Y-value
 Function

 822.189 MHz
 12.12 dBm
 Type | Ref | Trc |
 X-value
 Y-value
 Function

 823.018 MHz
 13.76 dBm
 Type Ref Trc Occ Bw 4.485514486 MHz Occ Bw 4.475524476 MHz

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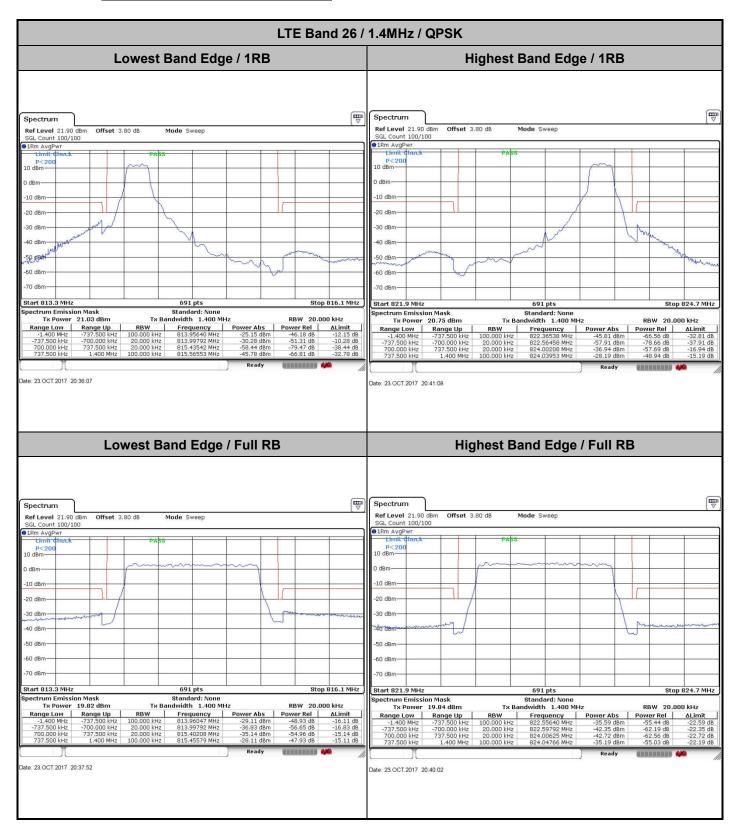
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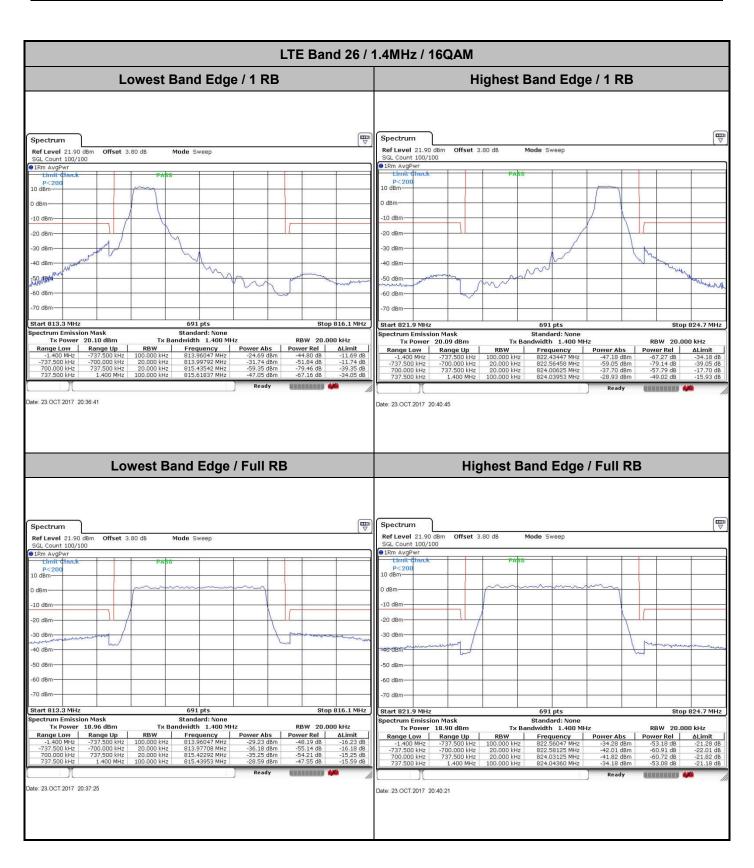
Conducted Band Edge



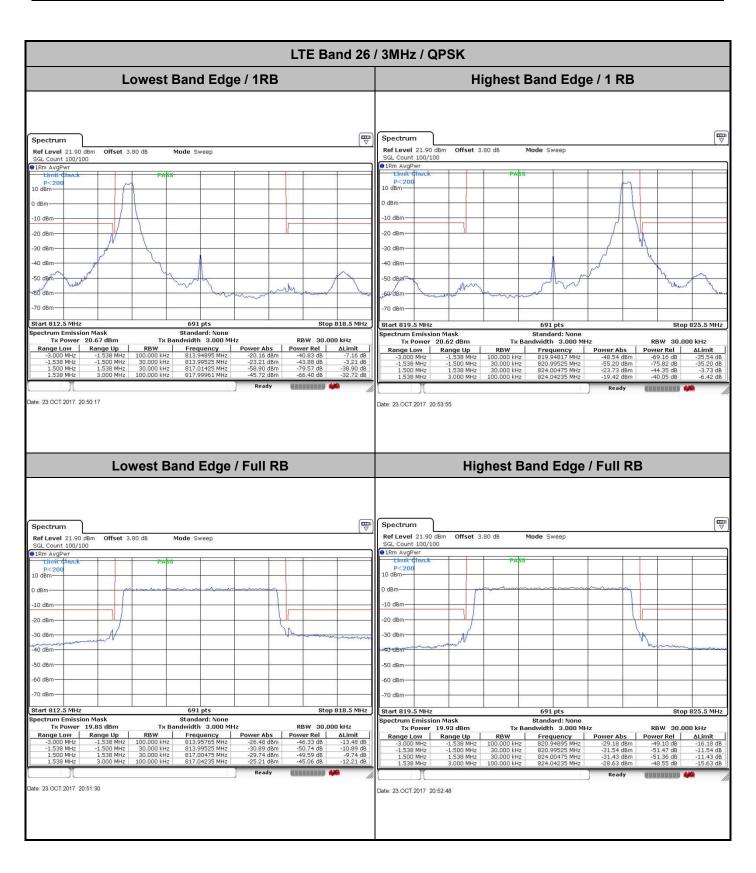
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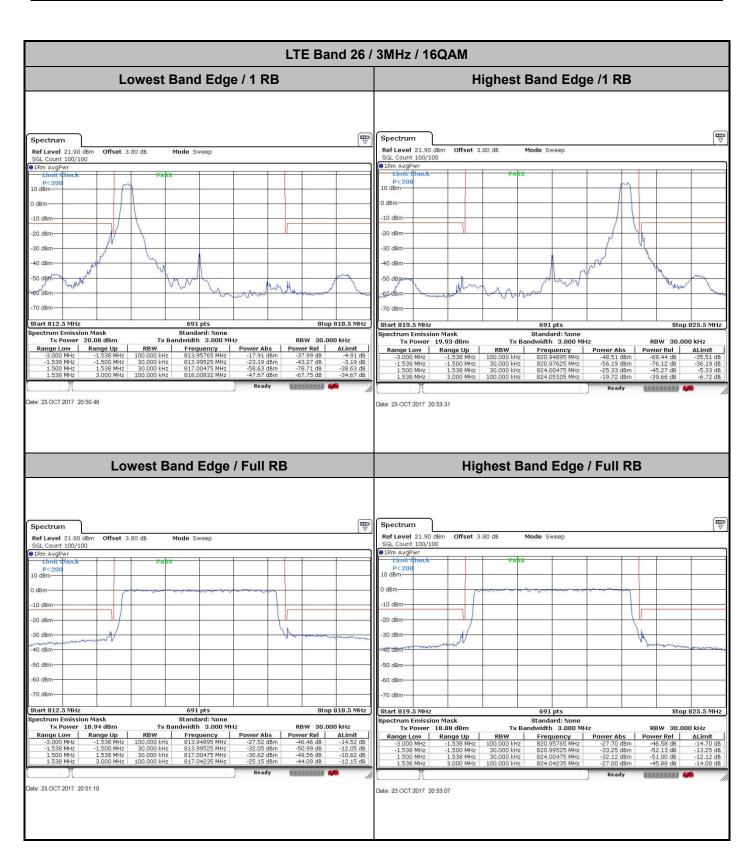
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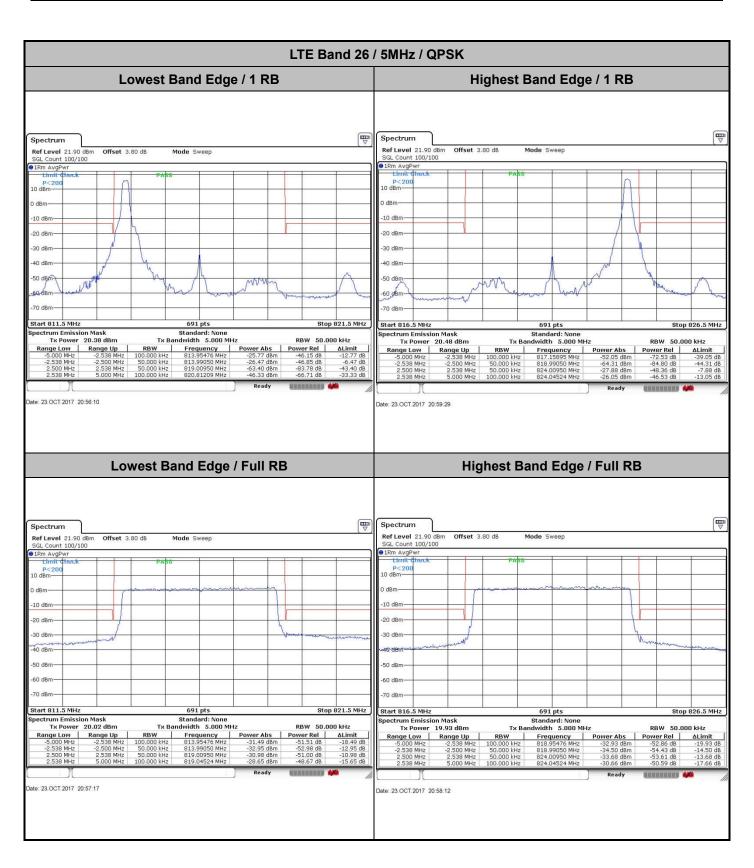
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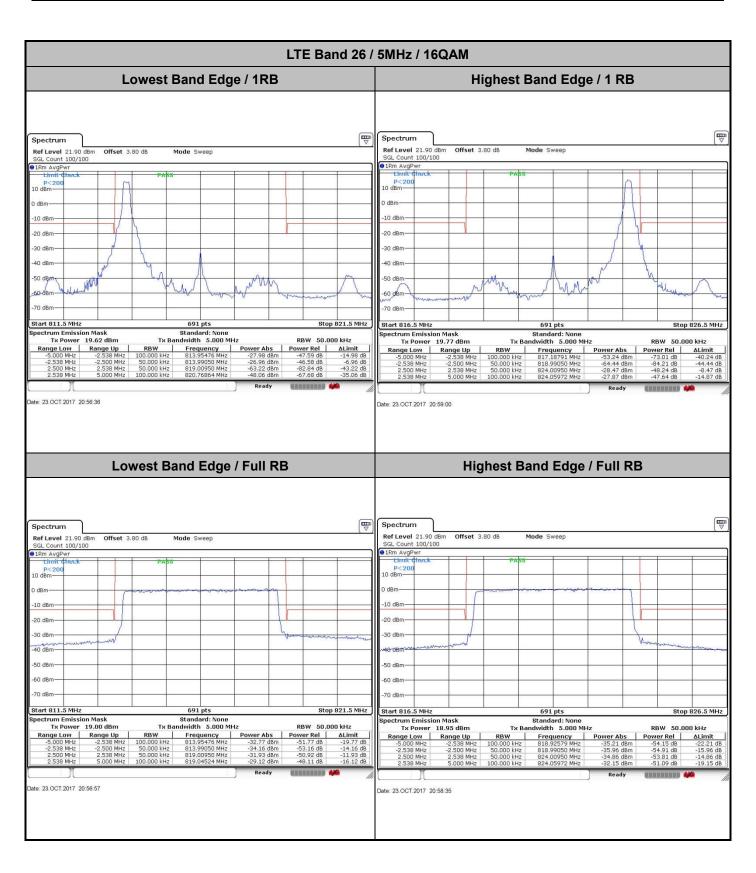
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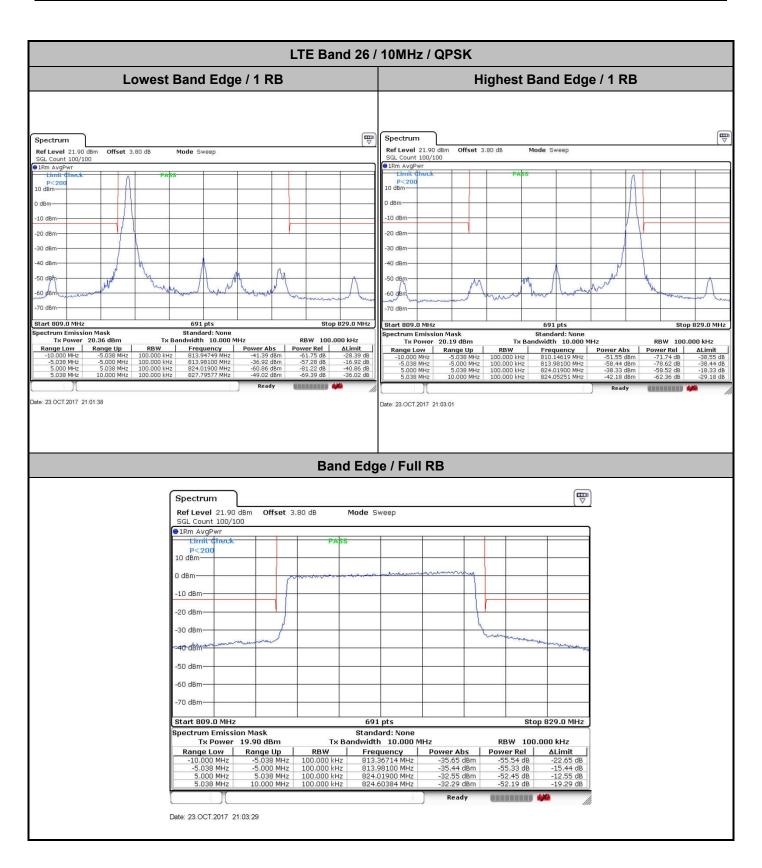
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