



FCC RADIO TEST REPORT

FCC ID : Z8H89FT0045
Equipment : 2GHz Palisade 220
Brand Name : Cambium Networks
Model Name : 2GHz Palisade 220
Applicant : Cambium Networks Inc.
3800 Golf Road, Suite 360 Rolling Meadows, IL
60008, USA
Manufacturer : Cambium Networks, Ltd.
Ashburton, TQ13 7UP, UK
Standard : 47 CFR Part2, 27

The product was received on Oct. 22, 2018, and testing was started from Oct. 22, 2018 and completed on Oct. 26, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI/TIA-603-E (2016), ANSI C63.26-2015 and shown 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.


Approved by: Cliff Chang

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
1 General Description	5
1.1 Information.....	5
1.2 Applicable Standards	6
1.3 Testing Location	6
1.4 Measurement Uncertainty	6
2 Test Configuration of Equipment Under Test	7
2.1 The Worst Case Measurement Configuration.....	7
2.2 Accessories	7
2.3 Support Equipment.....	8
2.4 Test Setup Diagram	9
2.5 Measurement Results Explanation Example	10
3 Test Result	11
3.1 Conducted Output Power and EIRP Measurement	11
3.2 Peak-to-Average Ratio Measurement.....	12
3.3 Occupied Bandwidth Measurement	13
3.4 Conducted Band Edge Measurement.....	15
3.5 Conducted Spurious Emission Measurement.....	16
3.6 Field Strength of Spurious Radiation Measurement	17
3.7 Frequency Stability Measurement.....	20
4 Test Equipment and Calibration Data	21
Appendix A. Test Results of Conducted Output Power/EIRP	
Appendix B. Test Results of Peak-to-Average Ratio	
Appendix C. Test Results of 99% OBW and 26dB Bandwidth	
Appendix D. Test Results of Conducted Band Edge and Conducted Spurious Emission	
Appendix E. Test Results of Field Strength of Spurious Radiation	
Appendix F. Test Results of Frequency Stability	
Appendix G. Test Photos	
Photographs of EUT v02	



TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB Ver1.0



Summary of Test Result

Report Clause	Band	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	☒41	2.1046	Conducted Output Power	PASS	-
	☒41	2.1046 27.50(h)	Equivalent Isotropic Radiated Power	PASS	-
3.2	☒41	-	Peak-to-Average Ratio	PASS	-
3.3	☒41	2.1049	Occupied Bandwidth	PASS	-
3.4	☒41	2.1051 27.53(m)	Conducted Band Edge	PASS	-
3.5	☒41	2.1051 27.53(m)	Conducted Emission	PASS	-
3.6	☒41	2.1053	Field Strength of Spurious Radiation	PASS	-
3.7	☒41	2.1055 27.54	Frequency Stability for Temperature & Voltage	PASS	-

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:

1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.
2. 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: Cliff Chang

Report Producer: Wendy Pan



1 General Description

1.1 Information

1.1.1 RF General Information

Items	Description			
EUT Power Type	AC Power Supply			
EUT Type	☒ Base Station ☐ Mobile Station ☐ Fixed Subscriber Station			
Operating Frequency	Band	Bandwidth (MHz)	TX Frequency (MHz)	RX Frequency (MHz)
	LTE Band 41	5	2498.5 ~ 2687.5	2498.5 ~ 2687.5
		10	2501.0 ~ 2685.0	2501.0 ~ 2685.0
		15	2503.5 ~ 2682.5	2503.5 ~ 2682.5
		20	2506.0 ~ 2680.0	2506.0 ~ 2680.0
Maximum Output Power to Antenna	Band	Bandwidth (MHz)	Maximum Conducted Power (dBm)	
	LTE Band 41	5	36.49	
		10	36.37	
		15	36.50	
		20	36.73	
99% Occupied Bandwidth	Band	Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	
	LTE Band 41	5	4.592	
		10	9.249	
		15	13.742	
		20	17.866	
Antenna Information	Antenna Type: Dual Slant Base Station Antenna Antenna Gain: 17dBi			
Type of Modulation	QPSK/16QAM/64QAM			

1.1.2 Maximum EIRP Power, Frequency Tolerance, and Emission Designator

LTE						
Band	Bandwidth	Type of Modulation	Max. Conducted Power (W)	Max. EIRP (W)	Frequency Tolerance (ppm)	Emission Designator
LTE Band 41	5 MHz	QPSK	4.457	223.357	-9.317	4M59G7D
	10 MHz	QPSK	4.335	217.270		9M25G7D
	15 MHz	QPSK	4.467	223.872		13M7G7D
	20 MHz	QPSK	4.710	236.048		17M9G7D



1.2 Applicable Standards

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

- 47 CFR Part2, 27
- ANSI/TIA-603-E (2016)
- ANSI C63.26-2015
- FCC KDB 971168 D01 v03r01
- FCC KDB 940660 D01 v01
- FCC KDB 412172 D01 v01r01
- FCC KDB 662911 D01 v02r01

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

1.3 Testing Location

Testing Location		
☐	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973
☒	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Roki Liu	22°C / 54%	Oct. 22, 2018 ~ Oct. 26, 2018
Radiated	03CH01-CB	Paul Chen	22°C / 54%	Oct. 24, 2018 ~ Oct. 25, 2018

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086B with Industry Canada.

1.4 Measurement Uncertainty

Test Items	Uncertainty	Remark
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%



2 Test Configuration of Equipment Under Test

2.1 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Conducted Output Power EIRP Peak-to-Average Ratio 99% OBW and 26dB Bandwidth Band Edge Conducted Spurious Emission Frequency Stability
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Field Strength of Spurious Radiation
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode > 1GHz	
1	EUT in Y axis

Note: The EUT can only be used at Y axis.

2.2 Accessories

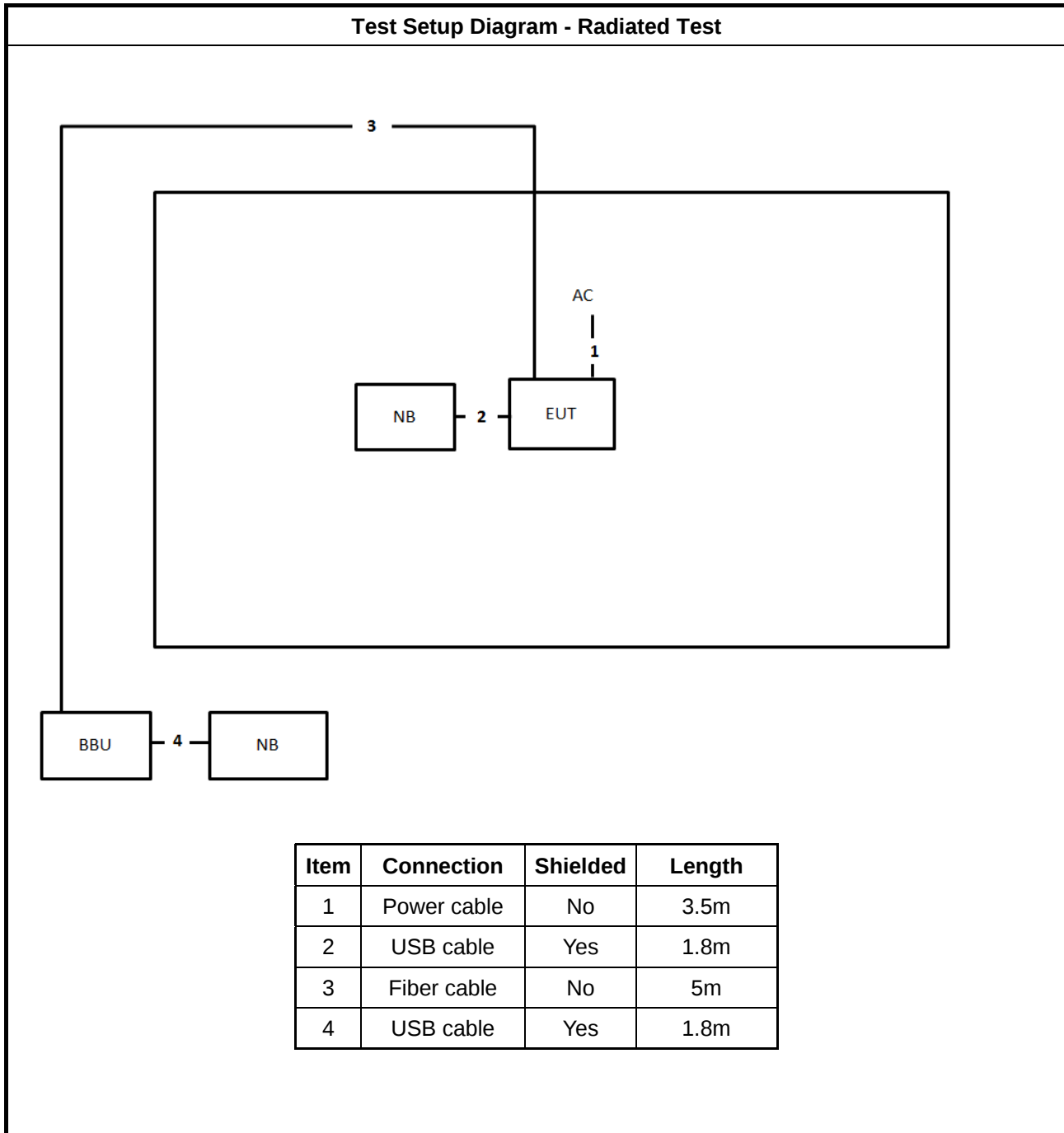
Accessories				
No.	Equipment Name	Brand Name	Model Name	Rating
1	AC Power Supply	XP POWER	DNR120AS48-I	Input: 115/230 VAC 28, 14A47-63Hz Output: 48VDC, 120W
Others				
AC power cable*1: Non-Shielded, 1.5m DC power cable*1: Non-Shielded, 2m				



2.3 Support Equipment

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E4300	NA
2	Notebook	DELL	E4300	N/A
3	BBU	Cambium	Sierra 800	N/A

2.4 Test Setup Diagram





2.5 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor 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 and attenuator factor.

Offset = RF cable loss + attenuator factor.

The following shows an offset computation example with RF cable loss 1 dB and a 20dB attenuator.

Example:

Offset (dB) = RF cable loss (dB) + attenuator factor (dB).

$$= 1 + 20 = 21 \text{ (dB)}$$

3 Test Result

3.1 Conducted Output Power and EIRP Measurement

3.1.1 Description of the Conducted Output Power and EIRP Measurement

FCC	
Conducted Output Power Limit	
☒ Band 41	N/A
Equivalent Isotropic Radiated Power (EIRP) Limit	
☒ Band 41	Base Station: $33 \text{ dBW} + 10 \log(X/Y) \text{ dBW} + 10 \log(360/\text{beamwidth}) \text{ dBW}$, where $X = \text{ChBW(MHz)}$, $Y = 5.5(\text{B and T channel})$ or $6(\text{M channel}) \text{ MHz}$ Mobile Station: 2 Watts Fixed Subscriber Station: N/A
Note 1: 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. Note 2: According to FCC KDB 412172 D01 v01r01 Power Approach, $\text{EIRP} = P_T + G_T - L_c$, $\text{ERP} = \text{EIRP} - 2.15$, 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	

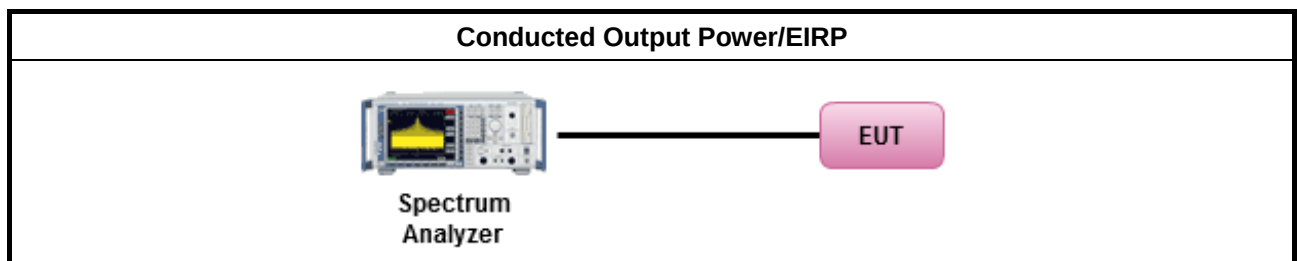
3.1.2 Measuring Instruments

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/EIRP

Refer as Appendix A

3.2 Peak-to-Average Ratio Measurement

3.2.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

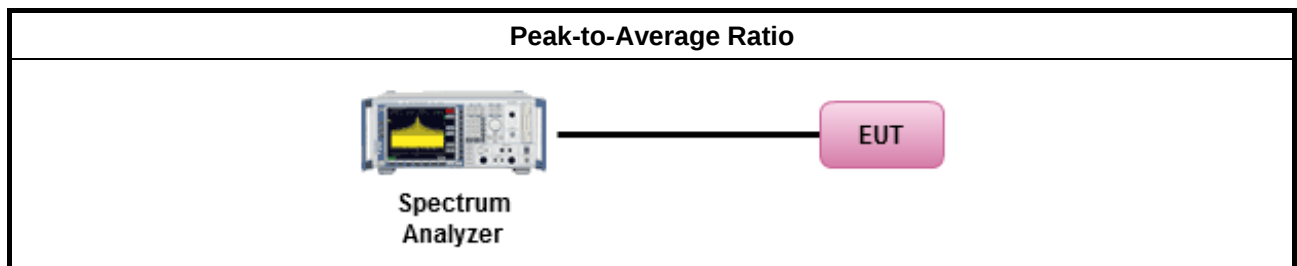
3.2.2 Measuring Instruments

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 and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. Record the deviation as Peak to Average Ratio.

3.2.4 Test Setup



3.2.5 Test Result of Peak-to-Average Ratio

Refer as Appendix B



3.3 Occupied Bandwidth Measurement

3.3.1 Description of Occupied Bandwidth Measurement

The 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 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

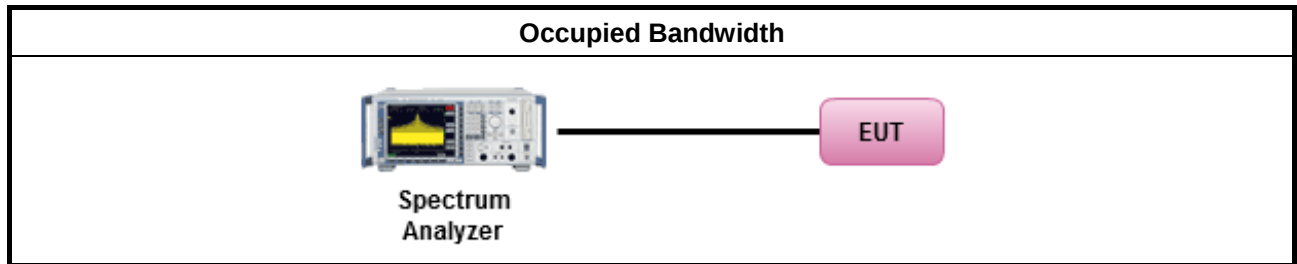
3.3.2 Measuring Instruments

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 system simulator via a power divider.
2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency.
The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
3. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
4. Set the detection mode to peak, and the trace mode to max hold.
5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace. (this is the reference value)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.3.4 Test Setup



3.3.5 Test Result of Occupied Bandwidth

Refer as Appendix C

3.4 Conducted Band Edge Measurement

3.4.1 Description of Conducted Band Edge Measurement

Conducted Band Edge	
☒ Band 41	For digital base stations: The attenuation shall be not less than $43 + 10 \log (P)$ dB. For mobile digital stations: The attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

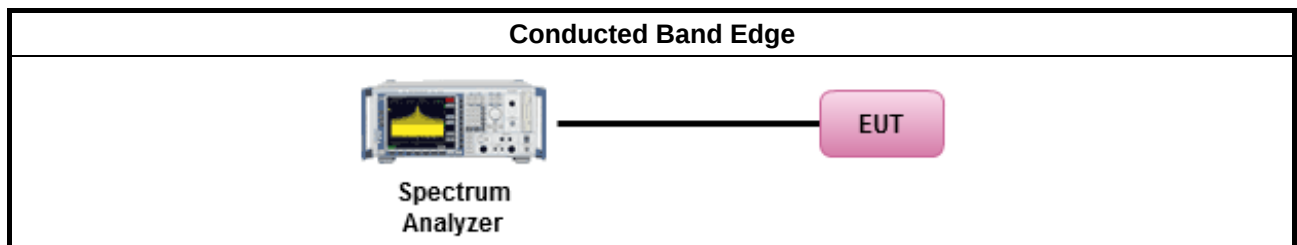
3.4.2 Measuring Instruments

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 band edges of low and high channels for the highest RF powers were measured.
3. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
5. Set spectrum analyzer with RMS detector.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. Checked that all the results comply with the emission limit line.

3.4.4 Test Setup



3.4.5 Test Result of Conducted Band Edge

Refer as Appendix D

3.5 Conducted Spurious Emission Measurement

3.5.1 Description of Conducted Spurious Emission Measurement

Conducted Band Edge	
☒ Band 41	For digital base stations: The attenuation shall be not less than $43 + 10 \log (P)$ dB. For mobile digital stations: The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB. It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

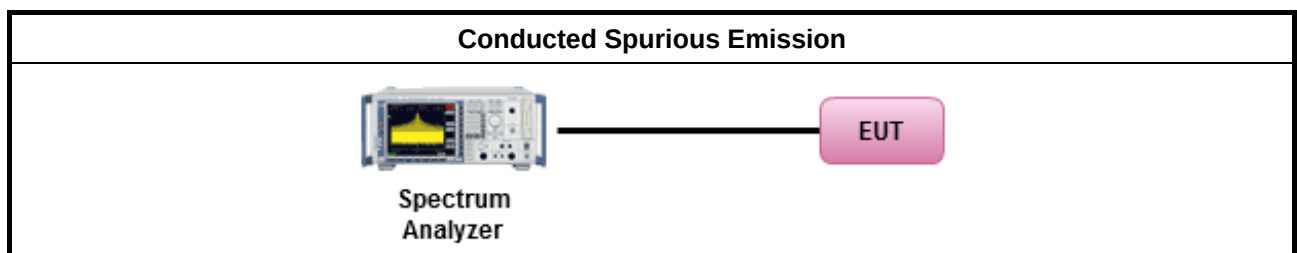
3.5.2 Measuring Instruments

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

3.5.3 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.
6. Set spectrum analyzer with RMS detector.
7. Taking the record of maximum spurious emission.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.5.4 Test Setup



3.5.5 Test Result of Conducted Spurious Emission

Refer as Appendix D



3.6 Field Strength of Spurious Radiation Measurement

3.6.1 Description of Field Strength of Spurious Radiated Measurement

Field Strength of Spurious Radiated	
FCC	
The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. 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 $43 + 10 \log (P)$ dB.	
☒ Band 41	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 $55 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.6.2 Measuring Instruments

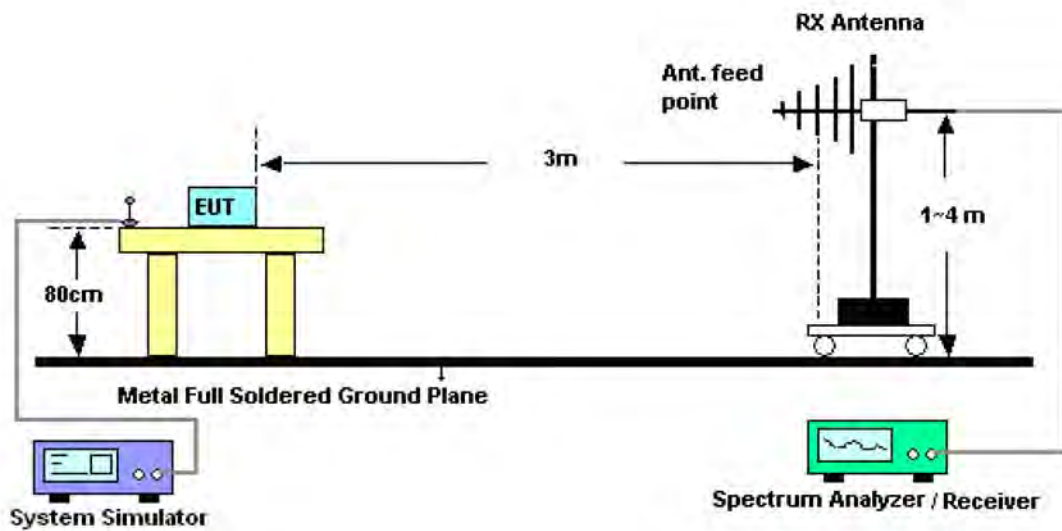
The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

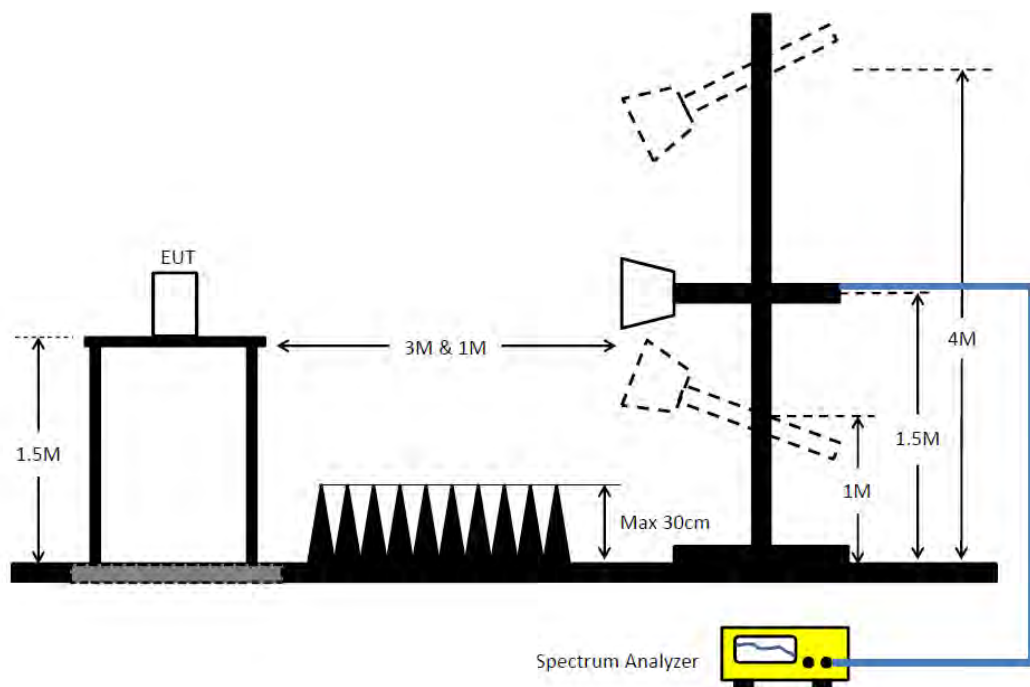
1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position 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. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, 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. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.6.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



**3.6.5 Test Result of Field Strength of Spurious Radiated (Below 1GHz)**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

3.6.6 Test Result of Field Strength of Spurious Radiated (Above 1GHz)

Refer as Appendix E

3.7 Frequency Stability Measurement

3.7.1 Description of Frequency Stability Measurement

Frequency Stability	
FCC	
☒ Band 41	Within Authorized Band
Note: 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.	

3.7.2 Measuring Instruments

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

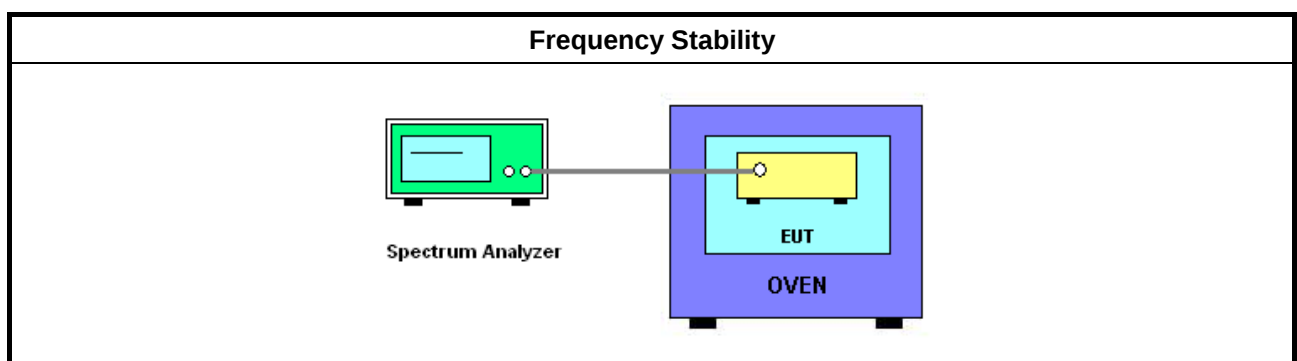
3.7.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -40°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in -40°C steps up to 55°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.

3.7.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85 to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

3.7.5 Test Setup



3.7.6 Test Result of Temperature and Voltage Variation

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Spectrum analyzer	Keysight	N9020A	MY55400138	10 Hz up to 26.5 GHz	Jan. 02, 2018	Jan. 01, 2019	Conducted (TH01-CB)
MW Analog Signal Generator	Keysight	N5183A	MY50142965	100kHz~20GHz	Nov. 24, 2017	Nov. 23, 2018	Conducted (TH01-CB)
Vector Signal Generator	Keysight	N5182B	MY53052408	9kHz~6GHz	Jan. 02, 2018	Jan. 01, 2019	Conducted (TH01-CB)
Temp. and Humidity Chamber	Gaint Force	GTH-408-40-C P-AR	MAA1410-011	-40~100 degree	Sep. 14, 2018	Sep. 13, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz ~26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz ~26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz ~26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz ~26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100354	9kHz ~ 2.75GHz	Dec. 08, 2017	Dec. 07, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)

Note: Calibration Interval of instruments listed above is one year.

Summary

Mode	Power (dBm)	Power (W)	EIRP (dBm)	EIRP (W)
Band 41	-	-	-	-
Band 41_LTE_5MHz_Nss1,(QPSK)_2TX	36.49	4.457	53.49	223.357
Band 41_LTE_10MHz_Nss1,(QPSK)_2TX	36.37	4.335	53.37	217.270
Band 41_LTE_15MHz_Nss1,(QPSK)_2TX	36.50	4.467	53.50	223.872
Band 41_LTE_20MHz_Nss1,(QPSK)_2TX	36.73	4.710	53.73	236.048

Result

Mode	Setting	Result	RB	RB Start	DG (dBi)	P1 (dBm)	P2 (dBm)	Power (dBm)	Power (W)	EIRP (dBm)	EIRP (W)	EIRP Lim. (W)
LTE_5MHz_Nss1,(QPSK)_2TX		-	-	-	-	-	-	-	-	-	-	-
2498.5MHz	2F	Pass	25	0	17.00	32.59	33.19	35.91	3.899	52.91	195.434	8531
2593MHz	2F	Pass	25	0	17.00	32.95	33.95	36.49	4.457	53.49	223.357	7816
2687.5MHz	2F	Pass	25	0	17.00	31.87	32.95	35.45	3.508	52.45	175.792	8570
LTE_10MHz_Nss1,(QPSK)_2TX		-	-	-	-	-	-	-	-	-	-	-
2501MHz	2C	Pass	50	0	17.00	32.31	33.10	35.73	3.741	52.73	187.499	8609
2593MHz	2C	Pass	50	0	17.00	32.93	33.75	36.37	4.335	53.37	217.270	7888
2685MHz	2C	Pass	50	0	17.00	31.70	32.82	35.31	3.396	52.31	170.216	8609
LTE_15MHz_Nss1,(QPSK)_2TX		-	-	-	-	-	-	-	-	-	-	-
2503.5MHz	2B	Pass	75	0	17.00	32.82	33.77	36.33	4.295	53.33	215.278	8511
2593MHz	2B	Pass	75	0	17.00	32.96	33.96	36.50	4.467	53.50	223.872	7816
2682.5MHz	2B	Pass	75	0	17.00	32.06	33.21	35.68	3.698	52.68	185.353	8531
LTE_20MHz_Nss1,(QPSK)_2TX		-	-	-	-	-	-	-	-	-	-	-
2506MHz	29	Pass	100	0	17.00	32.61	33.55	36.12	4.093	53.12	205.116	8336
2593MHz	29	Pass	100	0	17.00	33.17	34.20	36.73	4.710	53.73	236.048	7638
2680MHz	29	Pass	100	0	17.00	32.33	33.18	35.79	3.793	52.79	190.108	8317

DG = Directional Gain; **Port X** = Port X output power

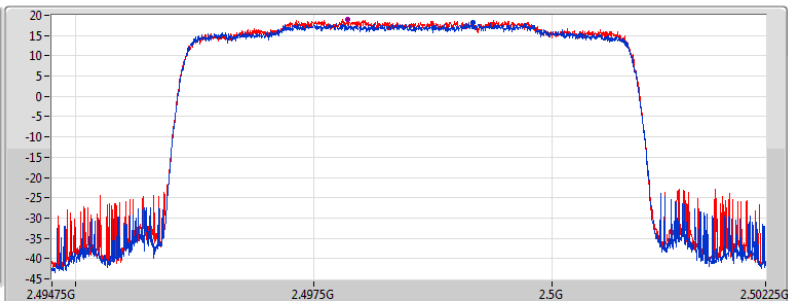
EIRP Lim. = $33 \text{ dBW} + 10 \log(X/Y) \text{ dBW} + 10 \log(360/\text{beamwidth}) \text{ dBW}$

Band 41_LTE_5MHz_Nss1,(QPSK)_2TX

AV Power

2498.5MHz

Ch Freq
2.4985GHz
Span
7.5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
20ms
Detector Type
RMS
CP BW
5MHz



22/10/2018

Port 1
Port 2

Sum=Total Power
PX=Port X

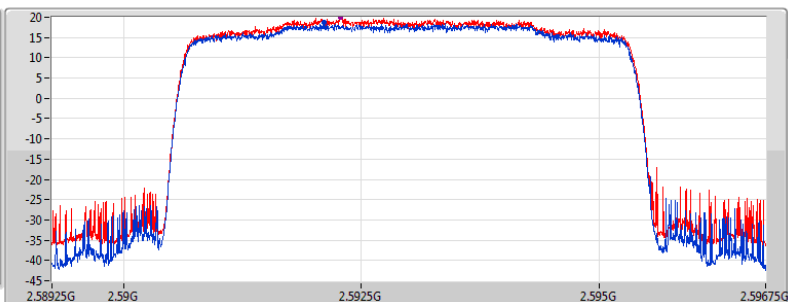
RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
25	0	35.91	32.59	33.19

Band 41_LTE_5MHz_Nss1,(QPSK)_2TX

AV Power

2593MHz

Ch Freq
2.593GHz
Span
7.5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
20ms
Detector Type
RMS
CP BW
5MHz



22/10/2018

Port 1
Port 2

Sum=Total Power
PX=Port X

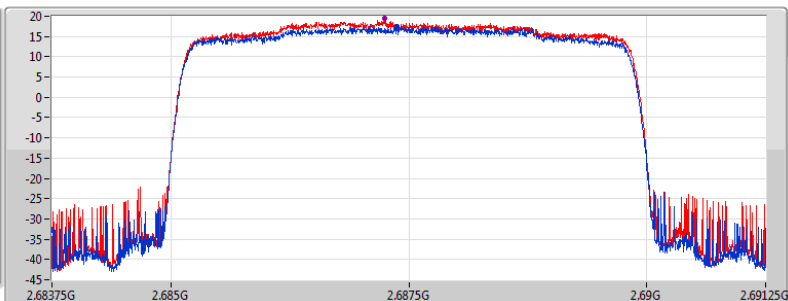
RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
25	0	36.49	32.95	33.95

Band 41_LTE_5MHz_Nss1,(QPSK)_2TX

AV Power

2687.5MHz

Ch Freq
2.6875GHz
Span
7.5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
20ms
Detector Type
RMS
CP BW
5MHz



22/10/2018

Port 1
Port 2

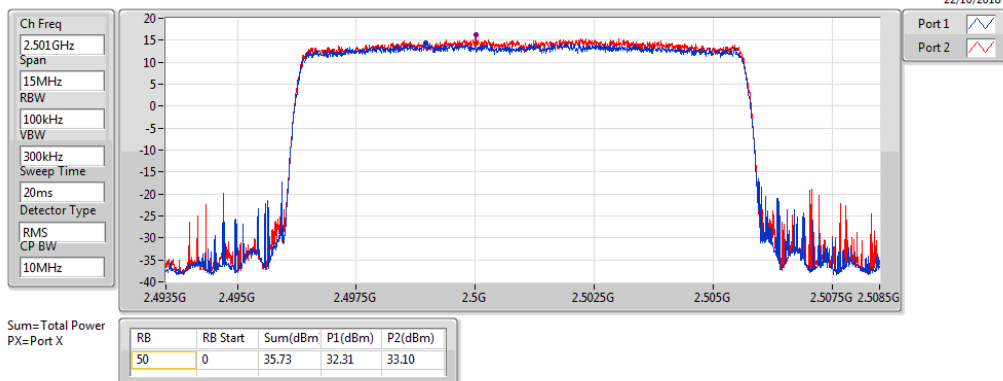
Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
25	0	35.45	31.87	32.95

Band 41_LTE_10MHz_Nss1,(QPSK)_2TX

AV Power

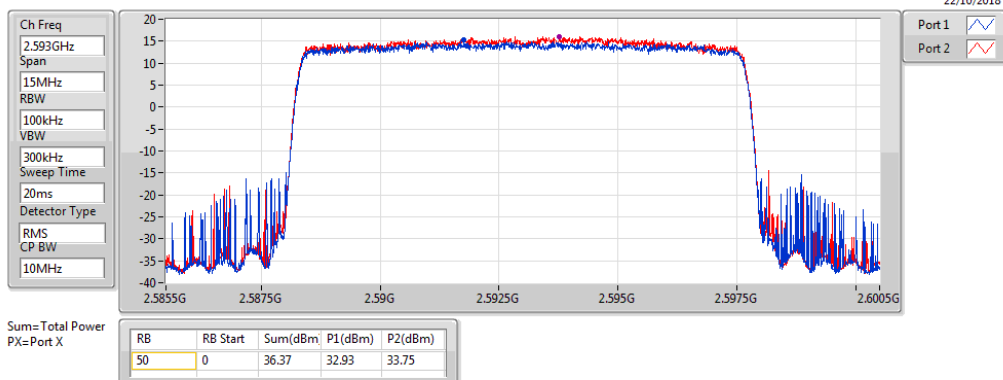
2501MHz



Band 41_LTE_10MHz_Nss1,(QPSK)_2TX

AV Power

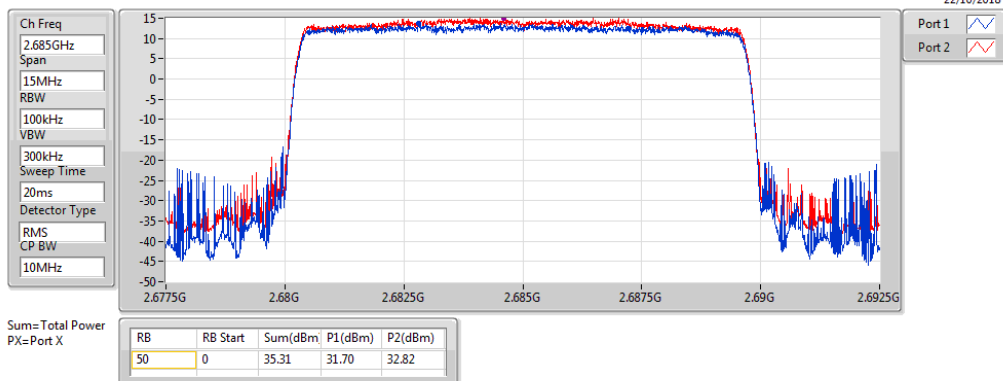
2593MHz



Band 41_LTE_10MHz_Nss1,(QPSK)_2TX

AV Power

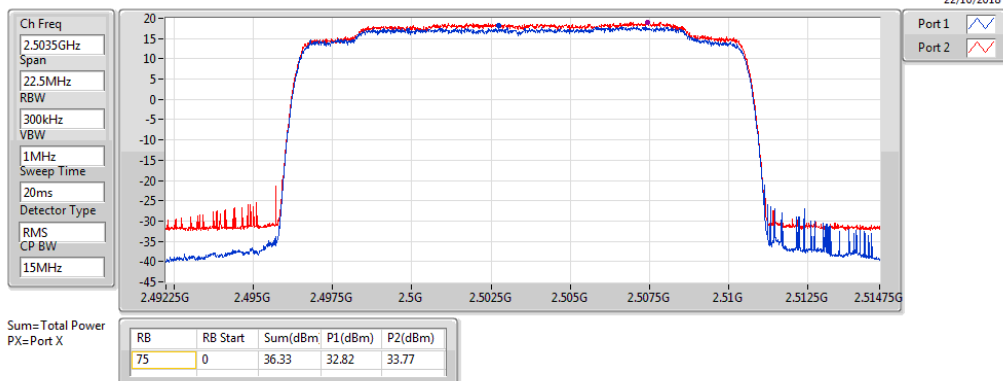
2685MHz



Band 41_LTE_15MHz_Nss1,(QPSK)_2TX

AV Power

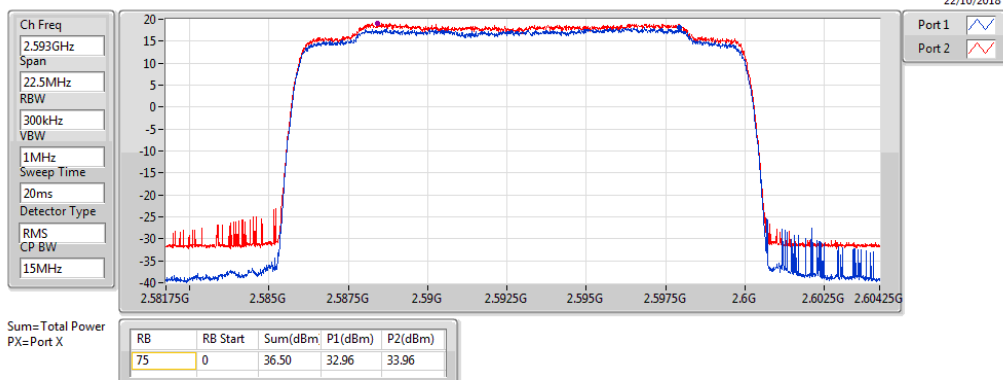
2503.5MHz



Band 41_LTE_15MHz_Nss1,(QPSK)_2TX

AV Power

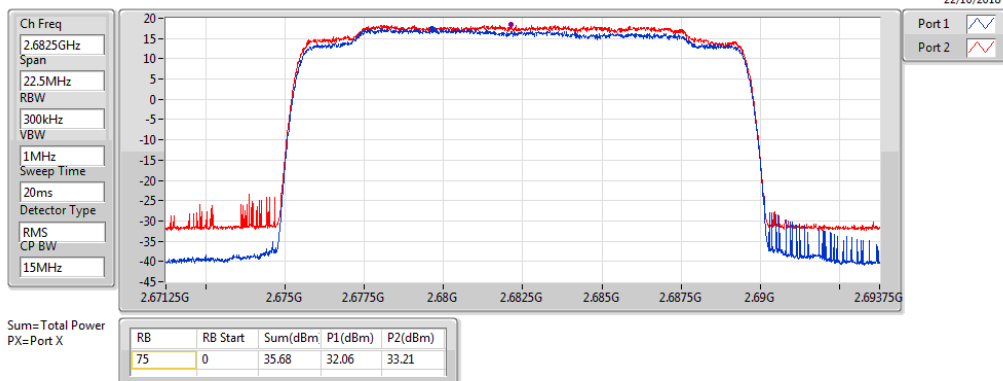
2593MHz



Band 41_LTE_15MHz_Nss1,(QPSK)_2TX

AV Power

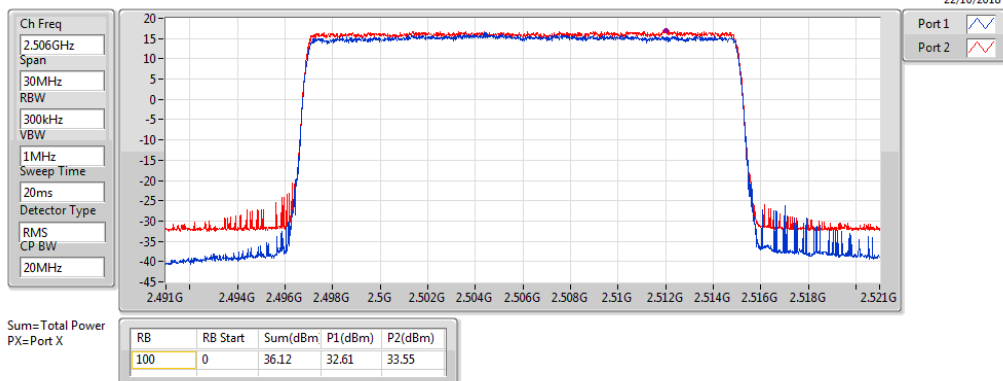
2682.5MHz



Band 41_LTE_20MHz_Nss1,(QPSK)_2TX

AV Power

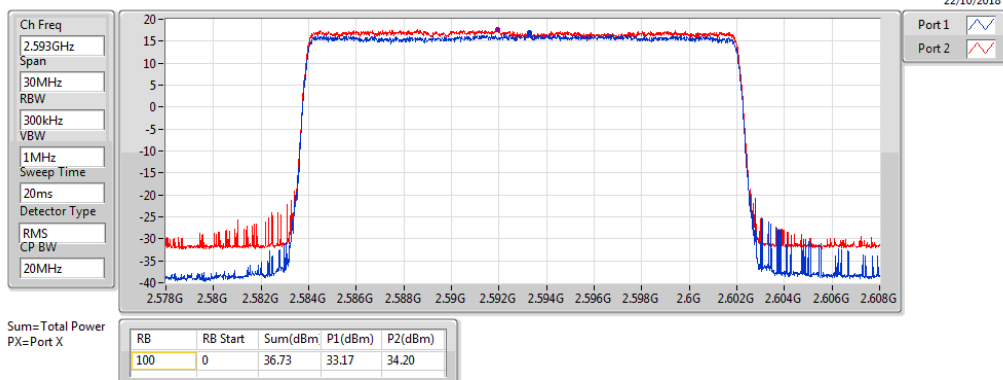
2506MHz



Band 41_LTE_20MHz_Nss1,(QPSK)_2TX

AV Power

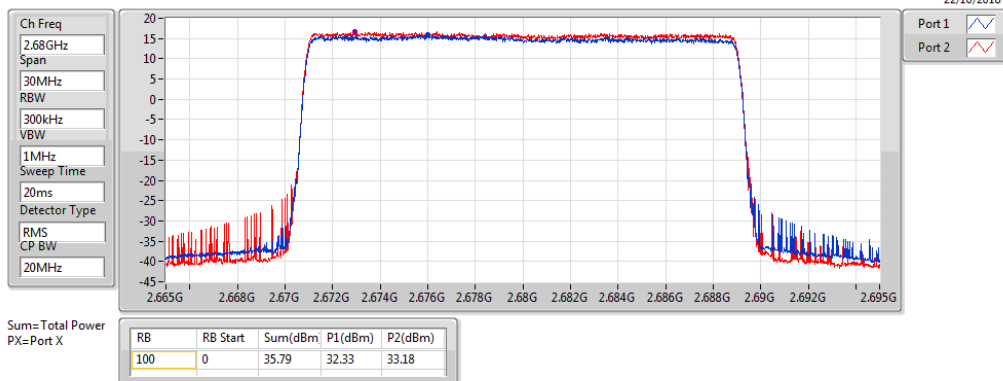
2593MHz



Band 41_LTE_20MHz_Nss1,(QPSK)_2TX

AV Power

2680MHz



Summary

Mode	Result	RB	0.1%	Margin (dB)	Limit (dB)	Port
Band 41	-	-	-	-	-	-
Band 41_LTE_5MHz_Nss1,(QPSK)_2TX	Pass	25	8.40	-4.60	13.00	1
Band 41_LTE_10MHz_Nss1,(QPSK)_2TX	Pass	50	9.87	-3.13	13.00	1
Band 41_LTE_15MHz_Nss1,(QPSK)_2TX	Pass	75	10.18	-2.82	13.00	1
Band 41_LTE_20MHz_Nss1,(QPSK)_2TX	Pass	100	8.00	-5.00	13.00	1

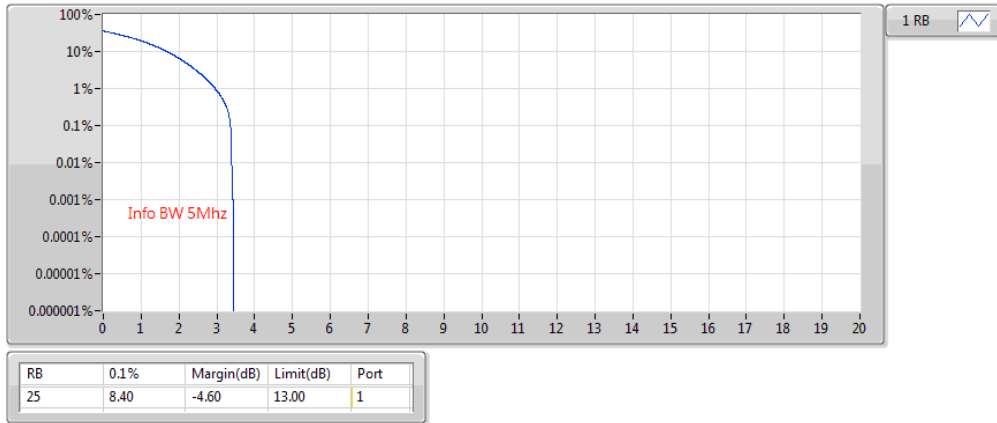
Result

Mode	Result	RB	0.1%	Margin (dB)	Limit (dB)	Port
LTE_5MHz_Nss1,(QPSK)_2TX	-	-	-	-	-	-
2593MHz	Pass	25	8.40	-4.60	13.00	1
LTE_10MHz_Nss1,(QPSK)_2TX	-	-	-	-	-	-
2593MHz	Pass	50	9.87	-3.13	13.00	1
LTE_15MHz_Nss1,(QPSK)_2TX	-	-	-	-	-	-
2593MHz	Pass	75	10.18	-2.82	13.00	1
LTE_20MHz_Nss1,(QPSK)_2TX	-	-	-	-	-	-
2593MHz	Pass	100	8.00	-5.00	13.00	1

Band 41_LTE_5MHz_Nss1,(QPSK)_2TX

PAR

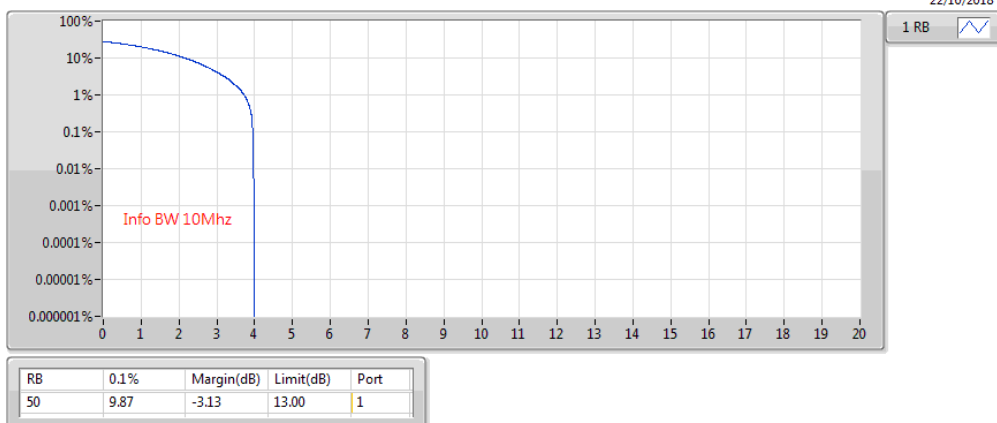
2593MHz



Band 41_LTE_10MHz_Nss1,(QPSK)_2TX

PAR

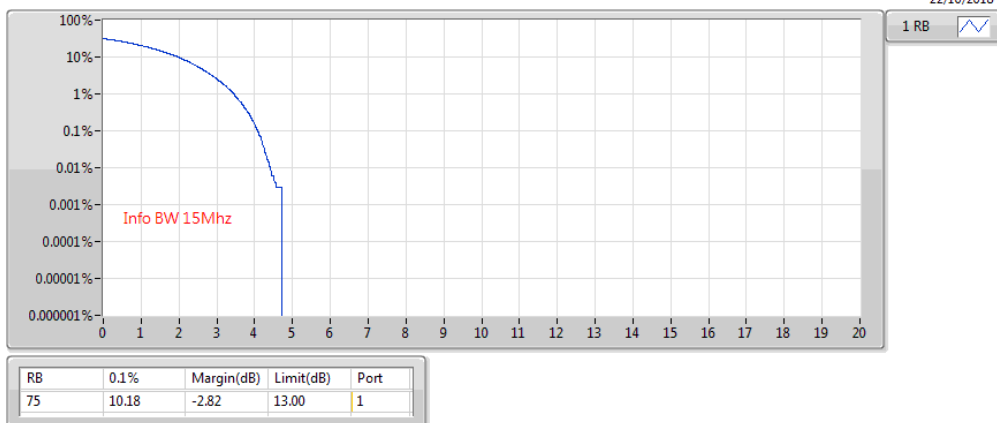
2593MHz



Band 41_LTE_15MHz_Nss1,(QPSK)_2TX

PAR

2593MHz

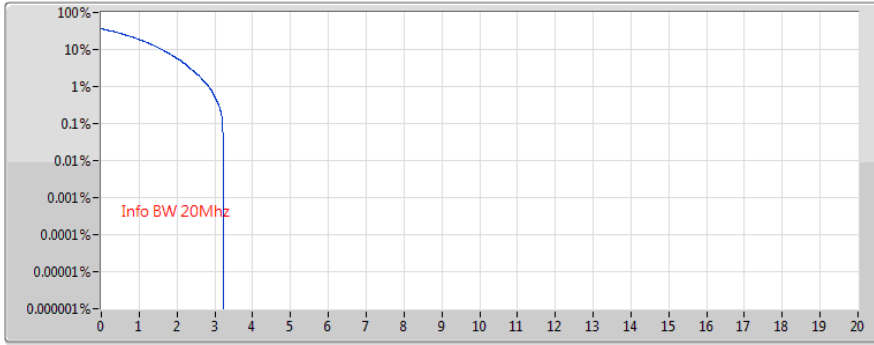


Band 41_LTE_20MHz_Nss1,(QPSK)_2TX
2593MHz

PAR

22/10/2018

1 RB



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	8.00	-5.00	13.00	1

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
Band 41	-	-	-	-	-
Band 41_LTE_5MHz_Nss1,(QPSK)_2TX	4.875M	4.592M	4M59G7D	4.856M	4.572M
Band 41_LTE_10MHz_Nss1,(QPSK)_2TX	9.763M	9.249M	9M25G7D	9.725M	9.222M
Band 41_LTE_15MHz_Nss1,(QPSK)_2TX	14.681M	13.742M	13M7G7D	14.625M	13.699M
Band 41_LTE_20MHz_Nss1,(QPSK)_2TX	19.375M	17.866M	17M9G7D	18.975M	17.847M

Max-N dB = Maximum26dB downbandwidth;**Max-OBW** = Maximum99% occupied bandwidth;

Min-N dB = Minimum26dB downbandwidth;**Min-OBW** = Minimum99% occupied bandwidth;

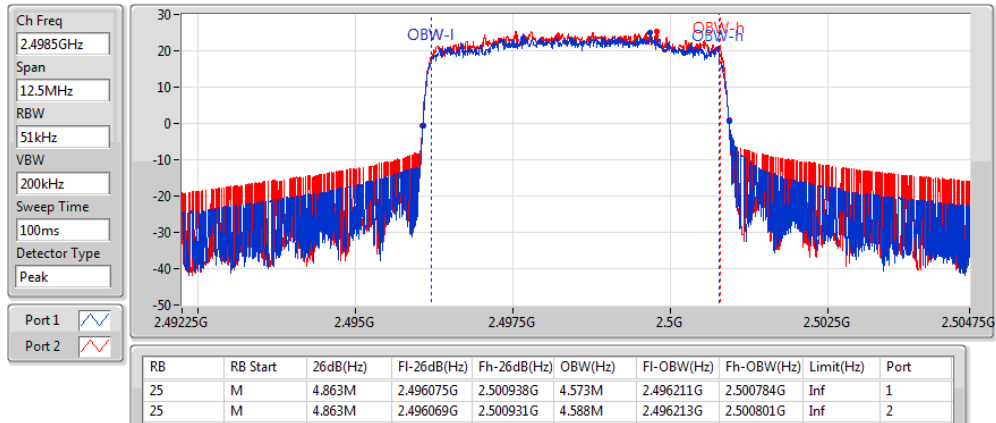
Result

Mode	Result	RB	RB Start	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)
LTE_5MHz_Nss1,(QPSK)_2TX	-	-	-	-	-	-	-
2498.5MHz	Pass	25	0	4.863M	4.573M	4.863M	4.588M
2593MHz	Pass	25	0	4.869M	4.588M	4.875M	4.572M
2687.5MHz	Pass	25	0	4.856M	4.592M	4.869M	4.574M
LTE_10MHz_Nss1,(QPSK)_2TX	-	-	-	-	-	-	-
2501MHz	Pass	50	0	9.763M	9.224M	9.738M	9.242M
2593MHz	Pass	50	0	9.763M	9.227M	9.725M	9.244M
2685MHz	Pass	50	0	9.738M	9.222M	9.738M	9.249M
LTE_15MHz_Nss1,(QPSK)_2TX	-	-	-	-	-	-	-
2503.5MHz	Pass	75	0	14.625M	13.699M	14.681M	13.741M
2593MHz	Pass	75	0	14.644M	13.709M	14.644M	13.737M
2682.5MHz	Pass	75	0	14.625M	13.714M	14.681M	13.742M
LTE_20MHz_Nss1,(QPSK)_2TX	-	-	-	-	-	-	-
2506MHz	Pass	100	0	19.325M	17.856M	19.175M	17.863M
2593MHz	Pass	100	0	19.05M	17.858M	19.375M	17.859M
2680MHz	Pass	100	0	18.975M	17.847M	19.325M	17.866M

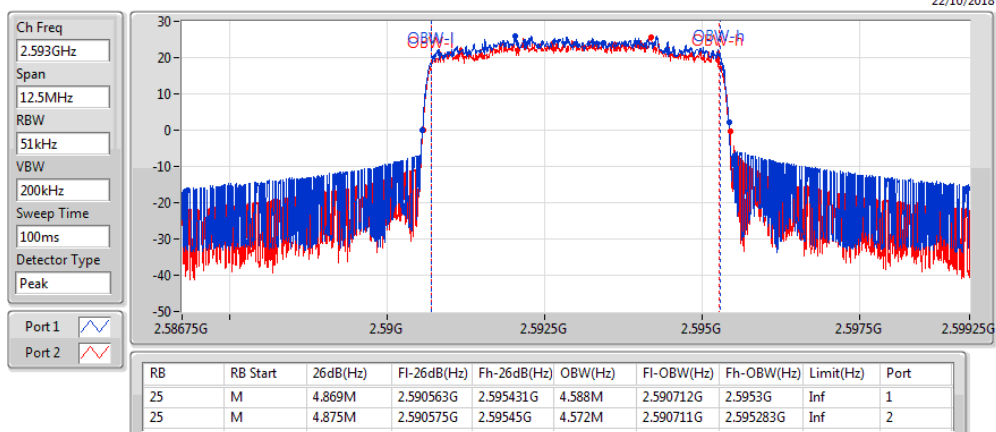
Port X-N dB = Port X26dB downbandwidth; **Port X-OBW** = Port X99% occupied bandwidth;

Band 41_LTE_5MHz_Nss1,(QPSK)_2TX
EBW
2498.5MHz

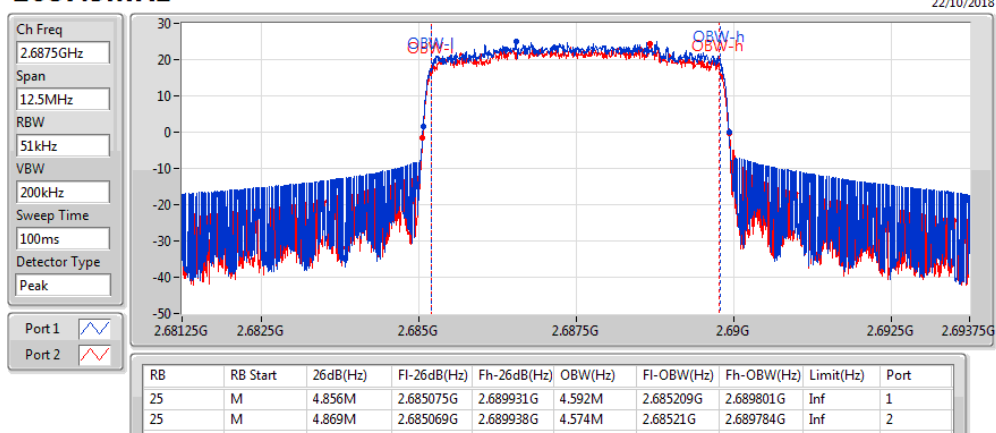
22/10/2018


Band 41_LTE_5MHz_Nss1,(QPSK)_2TX
EBW
2593MHz

22/10/2018

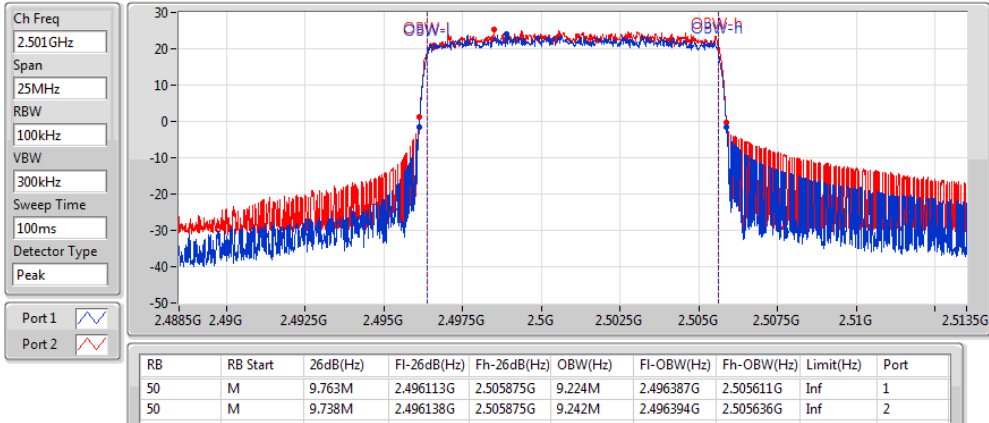

Band 41_LTE_5MHz_Nss1,(QPSK)_2TX
EBW
2687.5MHz

22/10/2018

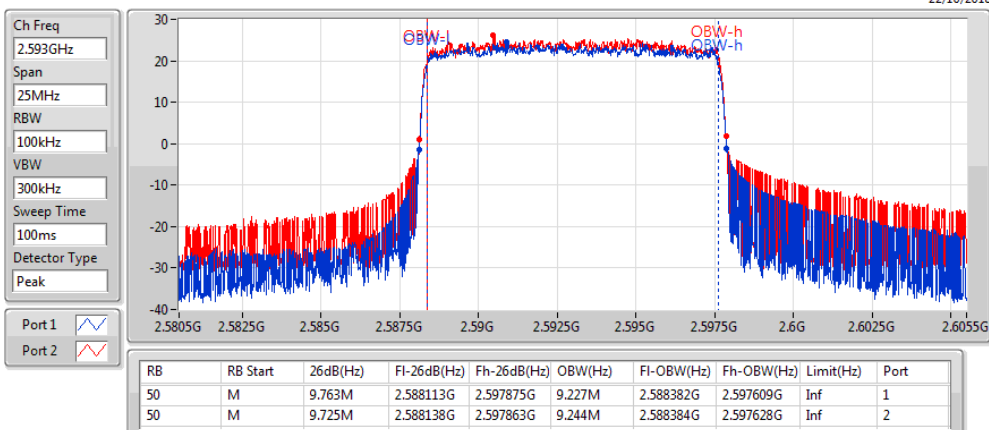


Band 41_LTE_10MHz_Nss1,(QPSK)_2TX
EBW
2501MHz

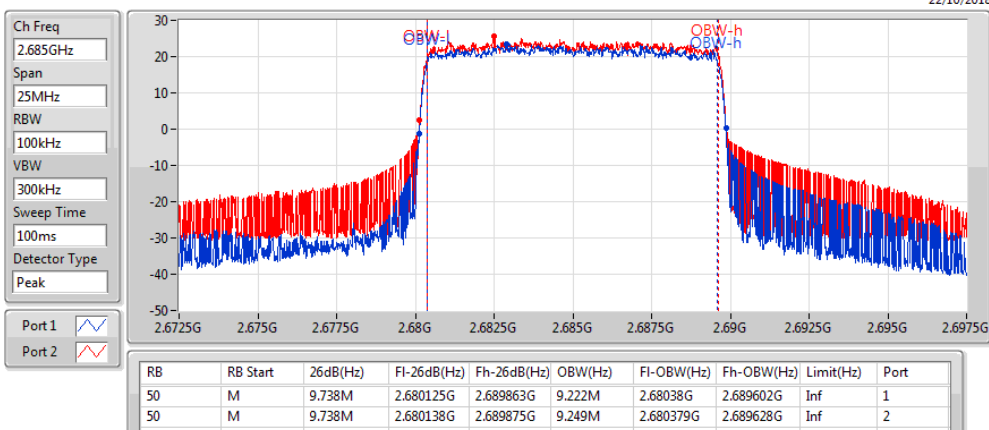
22/10/2018


Band 41_LTE_10MHz_Nss1,(QPSK)_2TX
EBW
2593MHz

22/10/2018

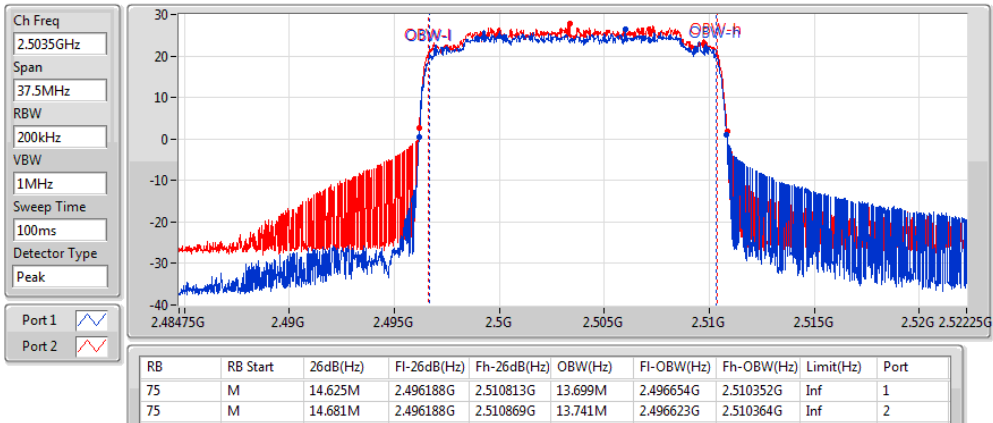

Band 41_LTE_10MHz_Nss1,(QPSK)_2TX
EBW
2685MHz

22/10/2018

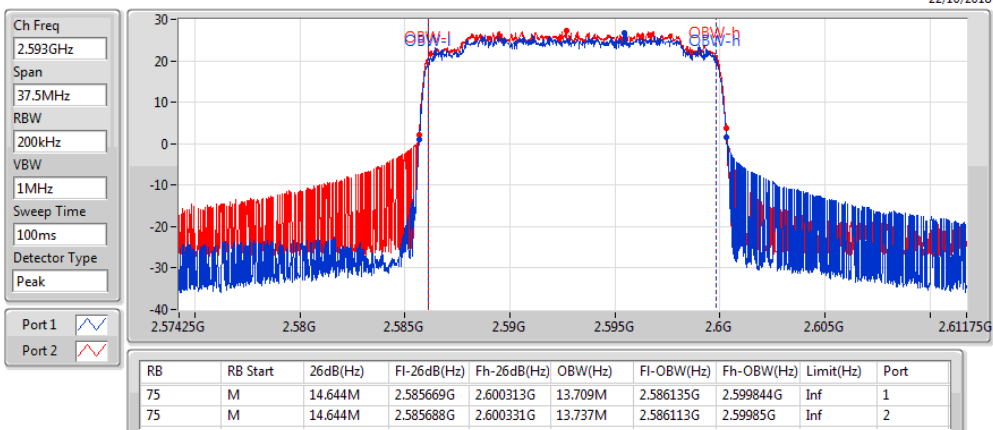


Band 41_LTE_15MHz_Nss1,(QPSK)_2TX
EBW
2503.5MHz

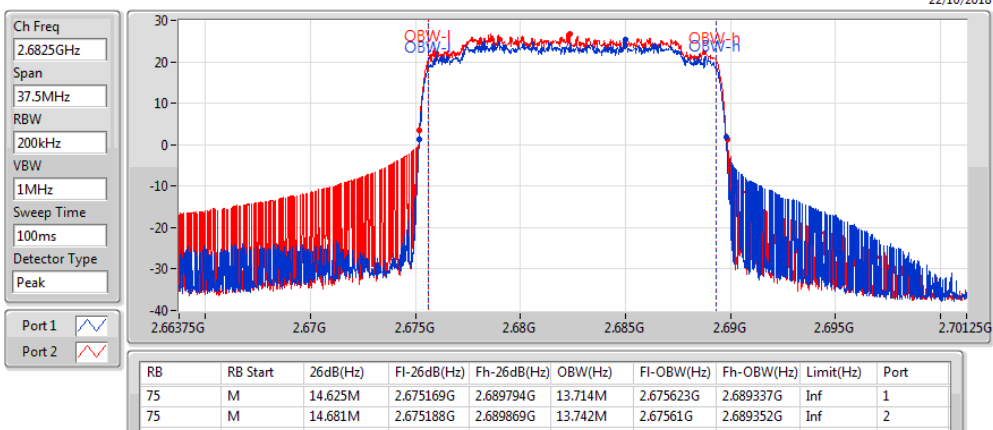
22/10/2018


Band 41_LTE_15MHz_Nss1,(QPSK)_2TX
EBW
2593MHz

22/10/2018

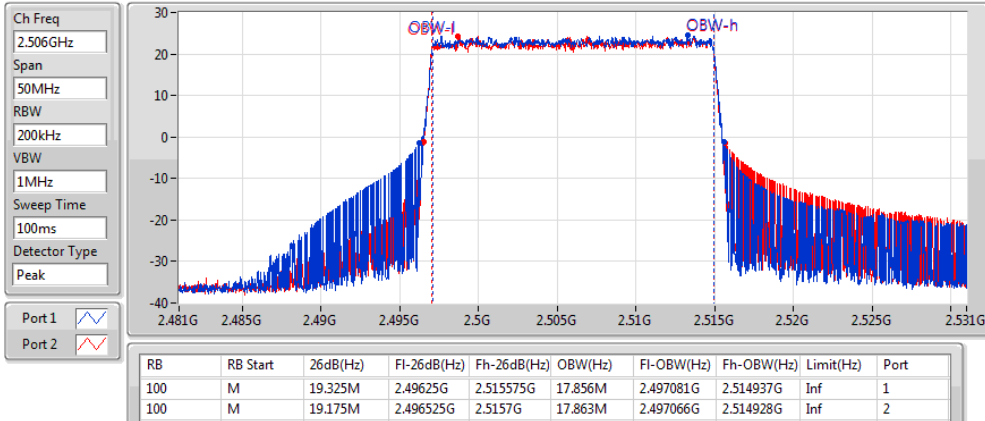

Band 41_LTE_15MHz_Nss1,(QPSK)_2TX
EBW
2682.5MHz

22/10/2018

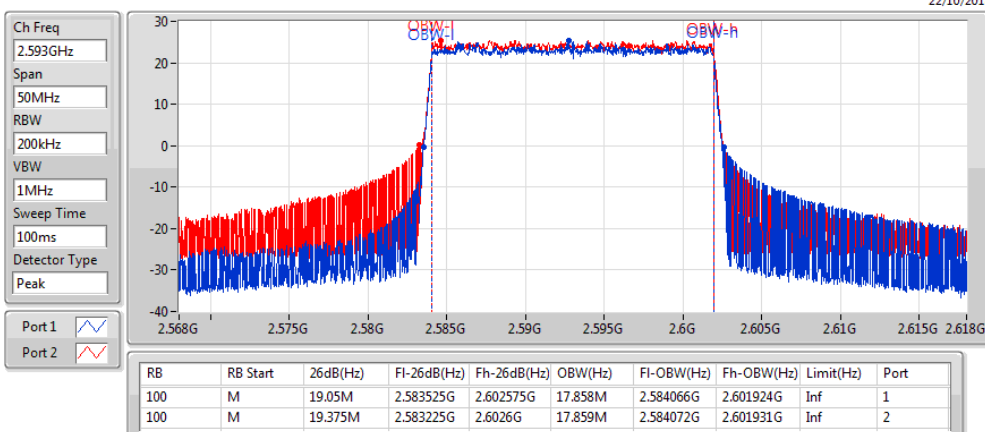


Band 41_LTE_20MHz_Nss1,(QPSK)_2TX
EBW
2506MHz

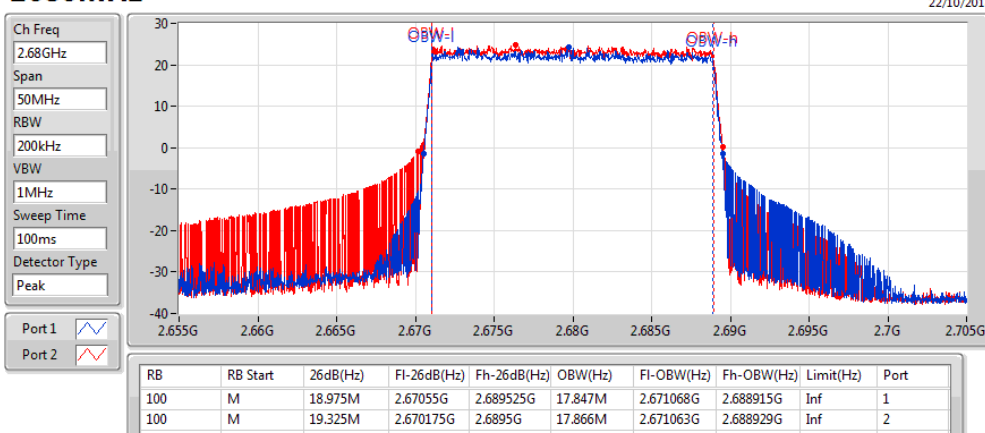
22/10/2018


Band 41_LTE_20MHz_Nss1,(QPSK)_2TX
EBW
2593MHz

22/10/2018


Band 41_LTE_20MHz_Nss1,(QPSK)_2TX
EBW
2680MHz

22/10/2018



Summary

Mode	Result	RB	RB Start	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Loss (dB)	Port	Remark
Band 41	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Band 41_LTE_20MHz_Nss1(QPSK)_2TX	Pass	100	0	2.69G	2.691G	200k	RMS	2.690949G	-16.99	-16.00	-0.99	33.49	1	-

DG = Directional Gain;

Result

Mode	Result	RB	RB Start	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Loss (dB)	Port	Remark
LTE_5MHz_Nss1(QPSK)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2498.5MHz	Pass	25	0	30M	2.49G	1M	RMS	260.3175M	-33.29	-16.00	-17.29	33.30	1	-
2498.5MHz	Pass	25	0	2.49G	2.495G	50k	RMS	2.4945G	-17.24	-16.00	-1.24	33.49	1	BP 1M
2498.5MHz	Pass	25	0	2.495G	2.496G	50k	RMS	2.495974G	-19.81	-16.00	-3.81	33.49	1	-
2498.5MHz	Pass	25	0	2.69G	2.691G	50k	RMS	2.690386G	-55.57	-16.00	-39.57	33.51	1	-
2498.5MHz	Pass	25	0	2.691G	2.696G	50k	RMS	2.6945G	-45.49	-16.00	-29.49	33.51	1	BP 1M
2498.5MHz	Pass	25	0	2.696G	27G	1M	RMS	25.569102G	-36.92	-16.00	-20.92	36.14	1	-
2498.5MHz	Pass	25	0	30M	2.49G	1M	RMS	260.3175M	-33.16	-16.00	-17.16	33.30	2	-
2498.5MHz	Pass	25	0	2.49G	2.495G	50k	RMS	2.4945G	-18.96	-16.00	-2.96	33.49	2	BP 1M
2498.5MHz	Pass	25	0	2.495G	2.496G	50k	RMS	2.495236G	-20.63	-16.00	-4.63	33.49	2	-
2498.5MHz	Pass	25	0	2.69G	2.691G	50k	RMS	2.69098G	-54.80	-16.00	-38.80	33.51	2	-
2498.5MHz	Pass	25	0	2.691G	2.696G	50k	RMS	2.6915G	-45.17	-16.00	-29.17	33.51	2	BP 1M
2498.5MHz	Pass	25	0	2.696G	27G	1M	RMS	26.298222G	-37.42	-16.00	-21.42	36.18	2	-
2593MHz	Pass	25	0	30M	2.49G	1M	RMS	260.3175M	-34.75	-16.00	-18.75	33.30	1	-
2593MHz	Pass	25	0	2.49G	2.495G	50k	RMS	2.4945G	-44.74	-16.00	-28.74	33.49	1	BP 1M
2593MHz	Pass	25	0	2.495G	2.496G	50k	RMS	2.495958G	-55.08	-16.00	-39.08	33.49	1	-
2593MHz	Pass	25	0	2.69G	2.691G	50k	RMS	2.690382G	-55.10	-16.00	-39.10	33.51	1	-
2593MHz	Pass	25	0	2.691G	2.696G	50k	RMS	2.6915G	-44.78	-16.00	-28.78	33.51	1	BP 1M
2593MHz	Pass	25	0	2.696G	27G	1M	RMS	25.46581G	-36.54	-16.00	-20.54	36.14	1	-
2593MHz	Pass	25	0	30M	2.49G	1M	RMS	260.3175M	-32.63	-16.00	-16.63	33.30	2	-
2593MHz	Pass	25	0	2.49G	2.495G	50k	RMS	2.4935G	-45.04	-16.00	-29.04	33.49	2	BP 1M
2593MHz	Pass	25	0	2.495G	2.496G	50k	RMS	2.49538G	-50.65	-16.00	-34.65	33.49	2	-
2593MHz	Pass	25	0	2.69G	2.691G	50k	RMS	2.690816G	-48.11	-16.00	-32.11	33.51	2	-
2593MHz	Pass	25	0	2.691G	2.696G	50k	RMS	2.6915G	-44.34	-16.00	-28.34	33.51	2	BP 1M
2593MHz	Pass	25	0	2.696G	27G	1M	RMS	25.599482G	-37.21	-16.00	-21.21	36.15	2	-
2687.5MHz	Pass	25	0	30M	2.49G	1M	RMS	260.3175M	-32.17	-16.00	-16.17	33.30	1	-
2687.5MHz	Pass	25	0	2.49G	2.495G	50k	RMS	2.4905G	-45.72	-16.00	-29.72	33.49	1	BP 1M
2687.5MHz	Pass	25	0	2.495G	2.496G	50k	RMS	2.49557G	-55.78	-16.00	-39.78	33.49	1	-
2687.5MHz	Pass	25	0	2.69G	2.691G	50k	RMS	2.690002G	-18.67	-16.00	-2.67	33.51	1	-
2687.5MHz	Pass	25	0	2.691G	2.696G	50k	RMS	2.6915G	-33.18	-16.00	-17.18	33.51	1	BP 1M
2687.5MHz	Pass	25	0	2.696G	27G	1M	RMS	26.128094G	-37.74	-16.00	-21.74	36.17	1	-
2687.5MHz	Pass	25	0	30M	2.49G	1M	RMS	260.3175M	-33.15	-16.00	-17.15	33.30	2	-
2687.5MHz	Pass	25	0	2.49G	2.495G	50k	RMS	2.4915G	-45.57	-16.00	-29.57	33.49	2	BP 1M
2687.5MHz	Pass	25	0	2.495G	2.496G	50k	RMS	2.495996G	-55.78	-16.00	-39.78	33.49	2	-
2687.5MHz	Pass	25	0	2.69G	2.691G	50k	RMS	2.690002G	-25.71	-16.00	-9.71	33.51	2	-
2687.5MHz	Pass	25	0	2.691G	2.696G	50k	RMS	2.6915G	-24.88	-16.00	-8.88	33.51	2	BP 1M
2687.5MHz	Pass	25	0	2.696G	27G	1M	RMS	26.158474G	-37.24	-16.00	-21.24	36.17	2	-
LTE_10MHz_Nss1(QPSK)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2501MHz	Pass	50	0	30M	2.49G	1M	RMS	260.3175M	-35.67	-16.00	-19.67	31.50	1	-
2501MHz	Pass	50	0	2.49G	2.495G	100k	RMS	2.4915G	-20.40	-16.00	-4.40	31.69	1	BP 1M
2501MHz	Pass	50	0	2.495G	2.496G	100k	RMS	2.495922G	-26.74	-16.00	-10.74	31.69	1	-
2501MHz	Pass	50	0	2.69G	2.691G	100k	RMS	2.690816G	-52.98	-16.00	-36.98	31.71	1	-
2501MHz	Pass	50	0	2.691G	2.696G	100k	RMS	2.6925G	-47.32	-16.00	-31.32	31.71	1	BP 1M
2501MHz	Pass	50	0	2.696G	27G	1M	RMS	26.197968G	-39.04	-16.00	-23.04	34.37	1	-
2501MHz	Pass	50	0	30M	2.49G	1M	RMS	260.3175M	-36.44	-16.00	-20.44	31.50	2	-
2501MHz	Pass	50	0	2.49G	2.495G	100k	RMS	2.4935G	-27.89	-16.00	-11.89	31.69	2	BP 1M
2501MHz	Pass	50	0	2.495G	2.496G	100k	RMS	2.495106G	-22.48	-16.00	-6.48	31.69	2	-

Mode	Result	RB	RB Start	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Loss (dB)	Port	Remark
2501MHz	Pass	50	0	2.69G	2.691G	100k	RMS	2.69044G	-51.02	-16.00	-35.02	31.71	2	-
2501MHz	Pass	50	0	2.691G	2.696G	100k	RMS	2.6915G	-46.16	-16.00	-30.16	31.71	2	BP 1M
2501MHz	Pass	50	0	2.696G	27G	1M	RMS	26.340754G	-38.94	-16.00	-22.94	34.38	2	-
2593MHz	Pass	50	0	30M	2.49G	1M	RMS	260.3175M	-32.60	-16.00	-16.60	31.50	1	-
2593MHz	Pass	50	0	2.49G	2.495G	100k	RMS	2.4935G	-31.54	-16.00	-15.54	31.69	1	BP 1M
2593MHz	Pass	50	0	2.495G	2.496G	100k	RMS	2.495596G	-53.64	-16.00	-37.64	31.69	1	-
2593MHz	Pass	50	0	2.69G	2.691G	100k	RMS	2.690192G	-53.65	-16.00	-37.65	31.71	1	-
2593MHz	Pass	50	0	2.691G	2.696G	100k	RMS	2.6915G	-31.95	-16.00	-15.95	31.71	1	BP 1M
2593MHz	Pass	50	0	2.696G	27G	1M	RMS	25.54176G	-39.49	-16.00	-23.49	34.34	1	-
2593MHz	Pass	50	0	30M	2.49G	1M	RMS	260.3175M	-33.81	-16.00	-17.81	31.50	2	-
2593MHz	Pass	50	0	2.49G	2.495G	100k	RMS	2.4935G	-46.51	-16.00	-30.51	31.69	2	BP 1M
2593MHz	Pass	50	0	2.495G	2.496G	100k	RMS	2.495044G	-48.07	-16.00	-32.07	31.69	2	-
2593MHz	Pass	50	0	2.69G	2.691G	100k	RMS	2.690692G	-46.08	-16.00	-30.08	31.71	2	-
2593MHz	Pass	50	0	2.691G	2.696G	100k	RMS	2.6955G	-46.07	-16.00	-30.07	31.71	2	BP 1M
2593MHz	Pass	50	0	2.696G	27G	1M	RMS	26.246576G	-39.06	-16.00	-23.06	34.37	2	-
2685MHz	Pass	50	0	30M	2.49G	1M	RMS	260.3175M	-32.62	-16.00	-16.62	31.50	1	-
2685MHz	Pass	50	0	2.49G	2.495G	100k	RMS	2.4915G	-47.49	-16.00	-31.49	31.69	1	BP 1M
2685MHz	Pass	50	0	2.495G	2.496G	100k	RMS	2.495574G	-54.65	-16.00	-38.65	31.69	1	-
2685MHz	Pass	50	0	2.69G	2.691G	100k	RMS	2.690548G	-19.55	-16.00	-3.55	31.71	1	-
2685MHz	Pass	50	0	2.691G	2.696G	100k	RMS	2.6915G	-28.12	-16.00	-12.12	31.71	1	BP 1M
2685MHz	Pass	50	0	2.696G	27G	1M	RMS	26.201006G	-39.28	-16.00	-23.28	34.37	1	-
2685MHz	Pass	50	0	30M	2.49G	1M	RMS	260.3175M	-33.35	-16.00	-17.35	31.50	2	-
2685MHz	Pass	50	0	2.49G	2.495G	100k	RMS	2.4935G	-47.68	-16.00	-31.68	31.69	2	BP 1M
2685MHz	Pass	50	0	2.495G	2.496G	100k	RMS	2.495444G	-54.49	-16.00	-38.49	31.69	2	-
2685MHz	Pass	50	0	2.69G	2.691G	100k	RMS	2.690576G	-19.68	-16.00	-3.68	31.71	2	-
2685MHz	Pass	50	0	2.691G	2.696G	100k	RMS	2.6915G	-31.56	-16.00	-15.56	31.71	2	BP 1M
2685MHz	Pass	50	0	2.696G	27G	1M	RMS	25.49619G	-39.37	-16.00	-23.37	34.34	2	-
LTE_15MHz_Nss1(QPSK)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2503.5MHz	Pass	75	0	30M	2.49G	1M	RMS	260.3175M	-31.42	-16.00	-15.42	33.28	1	-
2503.5MHz	Pass	75	0	2.49G	2.495G	200k	RMS	2.4945G	-37.50	-16.00	-21.50	33.47	1	BP 1M
2503.5MHz	Pass	75	0	2.495G	2.496G	200k	RMS	2.495899G	-22.86	-16.00	-6.86	33.47	1	-
2503.5MHz	Pass	75	0	2.69G	2.691G	200k	RMS	2.69094G	-48.25	-16.00	-32.25	33.49	1	-
2503.5MHz	Pass	75	0	2.691G	2.696G	200k	RMS	2.6915G	-46.06	-16.00	-30.06	33.49	1	BP 1M
2503.5MHz	Pass	75	0	2.696G	27G	1M	RMS	25.487076G	-37.02	-16.00	-21.02	36.12	1	-
2503.5MHz	Pass	75	0	30M	2.49G	1M	RMS	260.3175M	-31.81	-16.00	-15.81	33.28	2	-
2503.5MHz	Pass	75	0	2.49G	2.495G	200k	RMS	2.4945G	-34.66	-16.00	-18.66	33.47	2	BP 1M
2503.5MHz	Pass	75	0	2.495G	2.496G	200k	RMS	2.495981G	-26.19	-16.00	-10.19	33.47	2	-
2503.5MHz	Pass	75	0	2.69G	2.691G	200k	RMS	2.690648G	-49.23	-16.00	-33.23	33.49	2	-
2503.5MHz	Pass	75	0	2.691G	2.696G	200k	RMS	2.6945G	-46.09	-16.00	-30.09	33.49	2	BP 1M
2503.5MHz	Pass	75	0	2.696G	27G	1M	RMS	26.31645G	-37.68	-16.00	-21.68	36.16	2	-
2593MHz	Pass	75	0	30M	2.49G	1M	RMS	260.3175M	-31.62	-16.00	-15.62	33.28	1	-
2593MHz	Pass	75	0	2.49G	2.495G	200k	RMS	2.4935G	-45.21	-16.00	-29.21	33.47	1	BP 1M
2593MHz	Pass	75	0	2.495G	2.496G	200k	RMS	2.495817G	-43.21	-16.00	-27.21	33.47	1	-
2593MHz	Pass	75	0	2.69G	2.691G	200k	RMS	2.69013G	-42.79	-16.00	-26.79	33.49	1	-
2593MHz	Pass	75	0	2.691G	2.696G	200k	RMS	2.6915G	-44.42	-16.00	-28.42	33.49	1	BP 1M
2593MHz	Pass	75	0	2.696G	27G	1M	RMS	26.04303G	-37.68	-16.00	-21.68	36.15	1	-
2593MHz	Pass	75	0	30M	2.49G	1M	RMS	260.3175M	-31.50	-16.00	-15.50	33.28	2	-
2593MHz	Pass	75	0	2.49G	2.495G	200k	RMS	2.4935G	-45.10	-16.00	-29.10	33.47	2	BP 1M
2593MHz	Pass	75	0	2.495G	2.496G	200k	RMS	2.495702G	-43.25	-16.00	-27.25	33.47	2	-
2593MHz	Pass	75	0	2.69G	2.691G	200k	RMS	2.690858G	-43.75	-16.00	-27.75	33.49	2	-
2593MHz	Pass	75	0	2.691G	2.696G	200k	RMS	2.6915G	-44.39	-16.00	-28.39	33.49	2	BP 1M
2593MHz	Pass	75	0	2.696G	27G	1M	RMS	25.487076G	-37.31	-16.00	-21.31	36.12	2	-
2682.5MHz	Pass	75	0	30M	2.49G	1M	RMS	260.3175M	-32.90	-16.00	-16.90	33.28	1	-
2682.5MHz	Pass	75	0	2.49G	2.495G	200k	RMS	2.4945G	-46.08	-16.00	-30.08	33.47	1	BP 1M
2682.5MHz	Pass	75	0	2.495G	2.496G	200k	RMS	2.495164G	-49.23	-16.00	-33.23	33.47	1	-
2682.5MHz	Pass	75	0	2.69G	2.691G	200k	RMS	2.690011G	-27.32	-16.00	-11.32	33.49	1	-



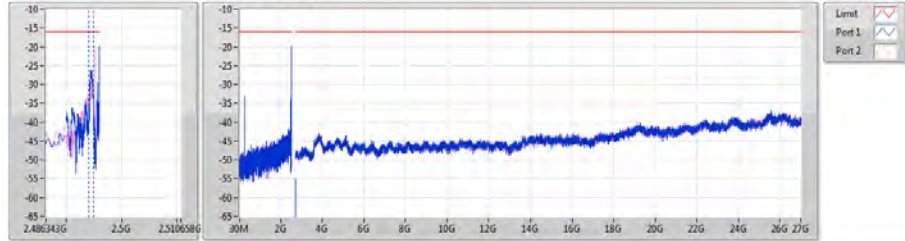
Mode	Result	RB	RB Start	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Detector	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Loss (dB)	Port	Remark
2682.5MHz	Pass	75	0	2.691G	2.696G	200k	RMS	2.6915G	-30.92	-16.00	-14.92	33.49	1	BP 1M
2682.5MHz	Pass	75	0	2.696G	27G	1M	RMS	25.559988G	-37.42	-16.00	-21.42	36.12	1	-
2682.5MHz	Pass	75	0	30M	2.49G	1M	RMS	260.3175M	-33.18	-16.00	-17.18	33.28	2	-
2682.5MHz	Pass	75	0	2.49G	2.495G	200k	RMS	2.4935G	-46.32	-16.00	-30.32	33.47	2	BP 1M
2682.5MHz	Pass	75	0	2.495G	2.496G	200k	RMS	2.495791G	-49.88	-16.00	-33.88	33.47	2	-
2682.5MHz	Pass	75	0	2.69G	2.691G	200k	RMS	2.690001G	-27.00	-16.00	-11.00	33.49	2	-
2682.5MHz	Pass	75	0	2.691G	2.696G	200k	RMS	2.6935G	-33.95	-16.00	-17.95	33.49	2	BP 1M
2682.5MHz	Pass	75	0	2.696G	27G	1M	RMS	26.264804G	-37.46	-16.00	-21.46	36.16	2	-
LTE_20MHz_Nss1,(QPSK)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2506MHz	Pass	100	0	30M	2.49G	1M	RMS	260.3175M	-31.81	-16.00	-15.81	33.28	1	-
2506MHz	Pass	100	0	2.49G	2.495G	200k	RMS	2.4945G	-36.44	-16.00	-20.44	33.47	1	BP 1M
2506MHz	Pass	100	0	2.495G	2.496G	200k	RMS	2.495424G	-35.70	-16.00	-19.70	33.47	1	-
2506MHz	Pass	100	0	2.69G	2.691G	200k	RMS	2.690906G	-48.93	-16.00	-32.93	33.49	1	-
2506MHz	Pass	100	0	2.691G	2.696G	200k	RMS	2.6925G	-45.95	-16.00	-29.95	33.49	1	BP 1M
2506MHz	Pass	100	0	2.696G	27G	1M	RMS	26.076448G	-37.66	-16.00	-21.66	36.15	1	-
2506MHz	Pass	100	0	30M	2.49G	1M	RMS	260.3175M	-31.41	-16.00	-15.41	33.28	2	-
2506MHz	Pass	100	0	2.49G	2.495G	200k	RMS	2.4935G	-36.76	-16.00	-20.76	33.47	2	BP 1M
2506MHz	Pass	100	0	2.495G	2.496G	200k	RMS	2.495877G	-34.80	-16.00	-18.80	33.47	2	-
2506MHz	Pass	100	0	2.69G	2.691G	200k	RMS	2.690645G	-49.56	-16.00	-33.56	33.49	2	-
2506MHz	Pass	100	0	2.691G	2.696G	200k	RMS	2.6925G	-45.97	-16.00	-29.97	33.49	2	BP 1M
2506MHz	Pass	100	0	2.696G	27G	1M	RMS	25.477962G	-37.62	-16.00	-21.62	36.12	2	-
2593MHz	Pass	100	0	30M	2.49G	1M	RMS	260.3175M	-31.78	-16.00	-15.78	33.28	1	-
2593MHz	Pass	100	0	2.49G	2.495G	200k	RMS	2.4935G	-44.67	-16.00	-28.67	33.47	1	BP 1M
2593MHz	Pass	100	0	2.495G	2.496G	200k	RMS	2.495919G	-42.18	-16.00	-26.18	33.47	1	-
2593MHz	Pass	100	0	2.69G	2.691G	200k	RMS	2.6901G	-40.96	-16.00	-24.96	33.49	1	-
2593MHz	Pass	100	0	2.691G	2.696G	200k	RMS	2.6925G	-44.92	-16.00	-28.92	33.49	1	BP 1M
2593MHz	Pass	100	0	2.696G	27G	1M	RMS	26.16455G	-37.48	-16.00	-21.48	36.15	1	-
2593MHz	Pass	100	0	30M	2.49G	1M	RMS	260.3175M	-31.74	-16.00	-15.74	33.28	2	-
2593MHz	Pass	100	0	2.49G	2.495G	200k	RMS	2.4935G	-45.36	-16.00	-29.36	33.47	2	BP 1M
2593MHz	Pass	100	0	2.495G	2.496G	200k	RMS	2.4954G	-48.18	-16.00	-32.18	33.47	2	-
2593MHz	Pass	100	0	2.69G	2.691G	200k	RMS	2.690035G	-48.92	-16.00	-32.92	33.49	2	-
2593MHz	Pass	100	0	2.691G	2.696G	200k	RMS	2.6915G	-44.60	-16.00	-28.60	33.49	2	BP 1M
2593MHz	Pass	100	0	2.696G	27G	1M	RMS	25.523532G	-37.44	-16.00	-21.44	36.12	2	-
2680MHz	Pass	100	0	30M	2.49G	1M	RMS	260.3175M	-31.05	-16.00	-15.05	33.28	1	-
2680MHz	Pass	100	0	2.49G	2.495G	200k	RMS	2.4945G	-45.90	-16.00	-29.90	33.47	1	BP 1M
2680MHz	Pass	100	0	2.495G	2.496G	200k	RMS	2.495293G	-49.12	-16.00	-33.12	33.47	1	-
2680MHz	Pass	100	0	2.69G	2.691G	200k	RMS	2.690949G	-16.99	-16.00	-0.99	33.49	1	-
2680MHz	Pass	100	0	2.691G	2.696G	200k	RMS	2.6925G	-32.09	-16.00	-16.09	33.49	1	BP 1M
2680MHz	Pass	100	0	2.696G	27G	1M	RMS	26.106828G	-37.43	-16.00	-21.43	36.15	1	-
2680MHz	Pass	100	0	30M	2.49G	1M	RMS	260.3175M	-30.35	-16.00	-14.35	33.28	2	-
2680MHz	Pass	100	0	2.49G	2.495G	200k	RMS	2.4945G	-46.01	-16.00	-30.01	33.47	2	BP 1M
2680MHz	Pass	100	0	2.495G	2.496G	200k	RMS	2.495009G	-48.75	-16.00	-32.75	33.47	2	-
2680MHz	Pass	100	0	2.69G	2.691G	200k	RMS	2.690859G	-36.04	-16.00	-20.04	33.49	2	-
2680MHz	Pass	100	0	2.691G	2.696G	200k	RMS	2.6915G	-35.08	-16.00	-19.08	33.49	2	BP 1M
2680MHz	Pass	100	0	2.696G	27G	1M	RMS	26.0886G	-37.50	-16.00	-21.50	36.15	2	-

DG = Directional Gain;

Band 41_LTE_5MHz_Nss1,(QPSK)_2TX

CSE-TX

2498.5MHz

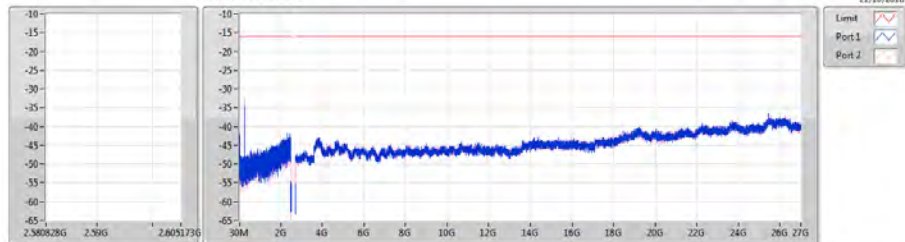


RB	RB Start	F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
25	0	30M	2.49G	1M	3M	RMS	250.3175M	-33.29	-16.00	-17.29	1	-
25	0	2.49G	2.495G	50k	150k	RMS	2.4945G	-17.24	-16.00	-1.24	1	BP 1M
25	0	2.495G	2.496G	50k	150k	RMS	2.495974G	-19.81	-16.00	-3.81	1	-
25	0	2.69G	2.691G	50k	150k	RMS	2.690386G	-55.57	-16.00	-39.57	1	-
25	0	2.691G	2.696G	50k	150k	RMS	2.6945G	-45.49	-16.00	-29.49	1	BP 1M
25	0	2.696G	2.7G	1M	3M	RMS	25.569102G	-36.82	-16.00	-20.82	1	-
25	0	30M	2.49G	1M	3M	RMS	260.3175M	-33.16	-16.00	-17.16	2	-
25	0	2.49G	2.495G	50k	150k	RMS	2.4945G	-18.96	-16.00	-2.96	2	BP 1M
25	0	2.495G	2.496G	50k	150k	RMS	2.495236G	-20.63	-16.00	-4.63	2	-
25	0	2.69G	2.691G	50k	150k	RMS	2.69098G	-54.80	-16.00	-38.80	2	-
25	0	2.691G	2.696G	50k	150k	RMS	2.6915G	-45.17	-16.00	-29.17	2	BP 1M
25	0	2.696G	2.7G	1M	3M	RMS	26.296222G	-37.42	-16.00	-21.42	2	-

Band 41_LTE_5MHz_Nss1,(QPSK)_2TX

CSE-TX

2593MHz

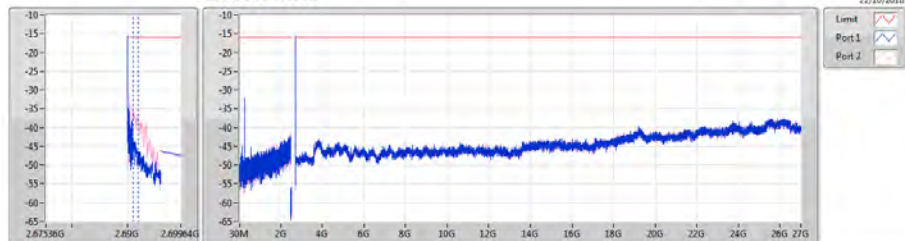


RB	RB Start	F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
25	0	30M	2.49G	1M	3M	RMS	260.3175M	-34.75	-16.00	-18.75	1	-
25	0	2.49G	2.495G	50k	150k	RMS	2.4945G	-44.74	-16.00	-28.74	1	BP 1M
25	0	2.495G	2.496G	50k	150k	RMS	2.49558G	-55.08	-16.00	-39.08	1	-
25	0	2.69G	2.691G	50k	150k	RMS	2.690382G	-55.10	-16.00	-39.10	1	-
25	0	2.691G	2.696G	50k	150k	RMS	2.6915G	-44.78	-16.00	-28.78	1	BP 1M
25	0	2.696G	2.7G	1M	3M	RMS	25.463M1G	-36.54	-16.00	-20.54	1	-
25	0	30M	2.49G	1M	3M	RMS	260.3175M	-32.63	-16.00	-16.63	2	-
25	0	2.49G	2.495G	50k	150k	RMS	2.4935G	-45.04	-16.00	-29.04	2	BP 1M
25	0	2.495G	2.496G	50k	150k	RMS	2.49538G	-50.65	-16.00	-34.65	2	-
25	0	2.69G	2.691G	50k	150k	RMS	2.690016G	-48.11	-16.00	-32.11	2	-
25	0	2.691G	2.696G	50k	150k	RMS	2.6915G	-44.34	-16.00	-28.34	2	BP 1M
25	0	2.696G	2.7G	1M	3M	RMS	25.599482G	-37.21	-16.00	-21.21	2	-

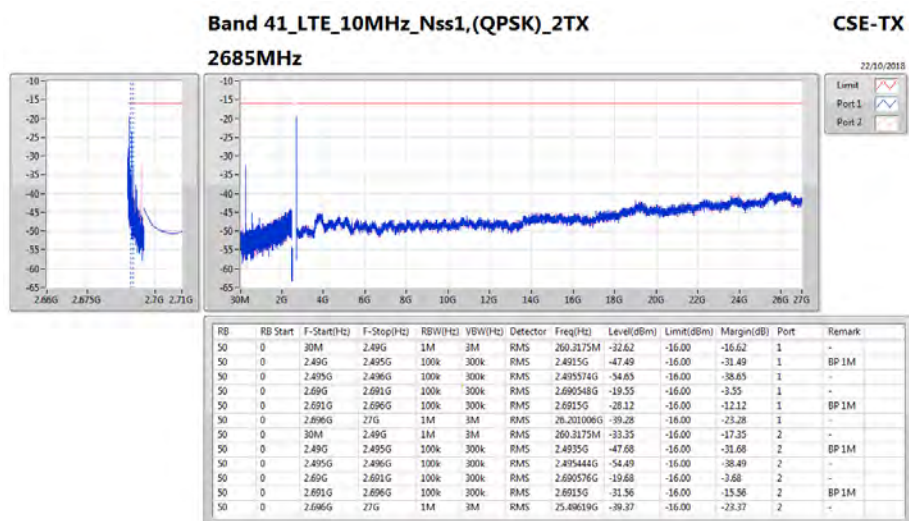
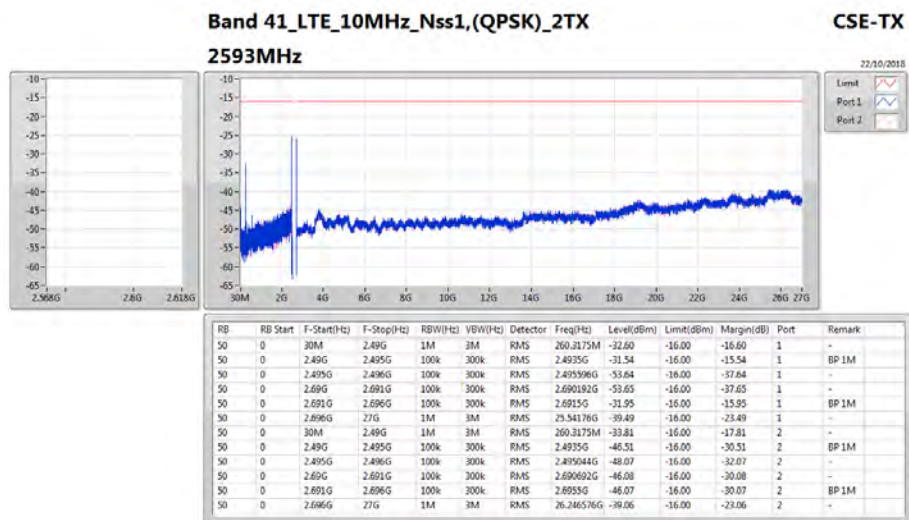
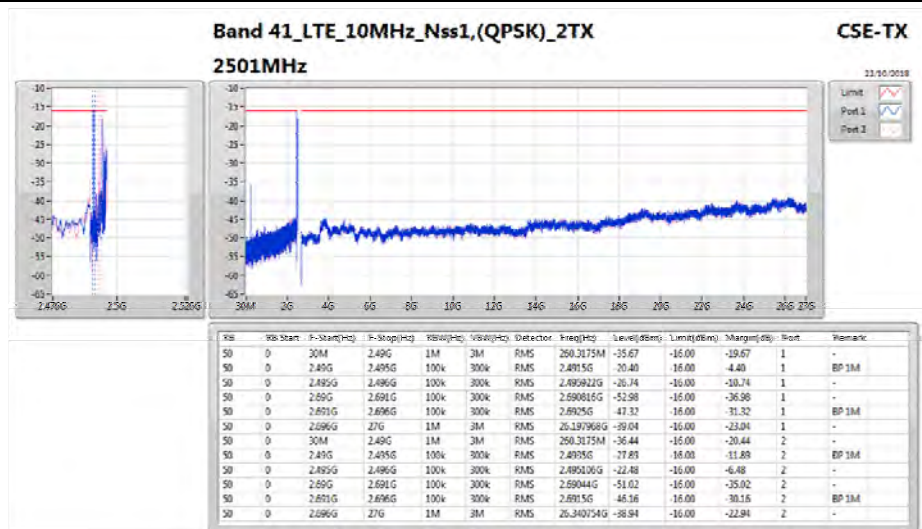
Band 41_LTE_5MHz_Nss1,(QPSK)_2TX

CSE-TX

2687.5MHz



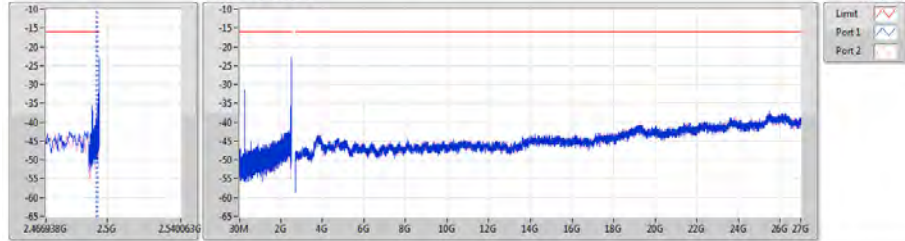
RB	RB Start	F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
25	0	30M	2.49G	1M	3M	RMS	260.3175M	-22.17	-16.00	-16.17	1	-
25	0	2.49G	2.495G	50k	150k	RMS	2.4905G	-45.72	-16.00	-29.72	1	BP 1M
25	0	2.495G	2.496G	50k	150k	RMS	2.49557G	-55.78	-16.00	-39.78	1	-
25	0	2.69G	2.691G	50k	150k	RMS	2.690002G	-18.67	-16.00	-2.67	1	-
25	0	2.691G	2.696G	50k	150k	RMS	2.6915G	-33.18	-16.00	-17.18	1	BP 1M
25	0	2.696G	2.7G	1M	3M	RMS	26.128094G	-37.74	-16.00	-21.74	1	-
25	0	30M	2.49G	1M	3M	RMS	260.3175M	-33.15	-16.00	-17.15	2	-
25	0	2.49G	2.495G	50k	150k	RMS	2.4915G	-45.57	-16.00	-29.57	2	BP 1M
25	0	2.495G	2.496G	50k	150k	RMS	2.495996G	-55.78	-16.00	-39.78	2	-
25	0	2.69G	2.691G	50k	150k	RMS	2.690002G	-25.71	-16.00	-9.71	2	-
25	0	2.691G	2.696G	50k	150k	RMS	2.6915G	-24.88	-16.00	-8.88	2	BP 1M
25	0	2.696G	2.7G	1M	3M	RMS	26.158474G	-37.24	-16.00	-21.24	2	-



Band 41_LTE_15MHz_Nss1,(QPSK)_2TX

CSE-TX

2503.5MHz

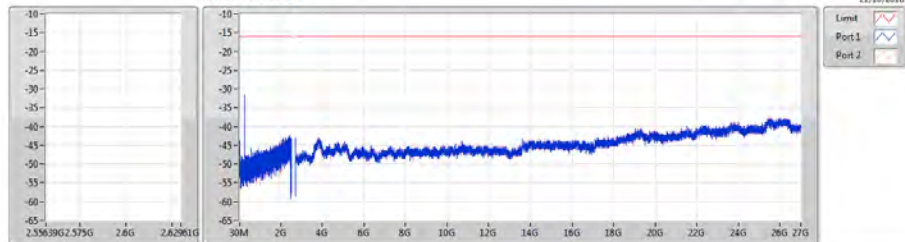


RB	RB Start	F_Start(Hz)	F_Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
75	0	30M	2.49G	1M	3M	RMS	250.3175M	-31.42	-16.00	-15.42	1	-
75	0	2.49G	2.495G	200k	600k	RMS	2.4945G	-37.50	-16.00	-21.50	1	BP 1M
75	0	2.495G	2.496G	200k	600k	RMS	2.495899G	-22.86	-16.00	-6.86	1	-
75	0	2.69G	2.691G	200k	600k	RMS	2.69094G	-48.25	-16.00	-32.25	1	-
75	0	2.691G	2.696G	200k	600k	RMS	2.6913G	-46.06	-16.00	-30.06	1	BP 1M
75	0	2.696G	2.7G	1M	3M	RMS	25.487076G	-37.02	-16.00	-21.02	1	-
75	0	30M	2.49G	1M	3M	RMS	260.3175M	-31.81	-16.00	-15.81	2	-
75	0	2.49G	2.495G	200k	600k	RMS	2.4945G	-34.66	-16.00	-18.66	2	BP 1M
75	0	2.495G	2.496G	200k	600k	RMS	2.495981G	-26.19	-16.00	-10.19	2	-
75	0	2.69G	2.691G	200k	600k	RMS	2.690648G	-49.23	-16.00	-33.23	2	-
75	0	2.691G	2.696G	200k	600k	RMS	2.6945G	-46.09	-16.00	-30.09	2	BP 1M
75	0	2.696G	2.7G	1M	3M	RMS	26.31645G	-37.68	-16.00	-21.68	2	-

Band 41_LTE_15MHz_Nss1,(QPSK)_2TX

CSE-TX

2593MHz

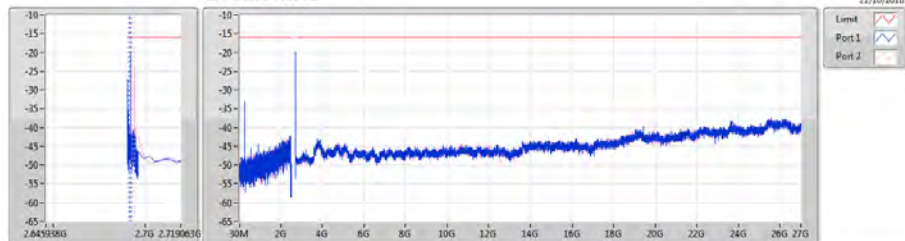


RB	RB Start	F_Start(Hz)	F_Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
75	0	30M	2.49G	1M	3M	RMS	260.3175M	-21.62	-16.00	-15.62	1	-
75	0	2.49G	2.495G	200k	600k	RMS	2.4935G	-45.21	-16.00	-29.21	1	BP 1M
75	0	2.495G	2.496G	200k	600k	RMS	2.495817G	-43.21	-16.00	-27.21	1	-
75	0	2.69G	2.691G	200k	600k	RMS	2.69013G	-42.39	-16.00	-26.39	1	-
75	0	2.691G	2.696G	200k	600k	RMS	2.6915G	-44.42	-16.00	-28.42	1	BP 1M
75	0	2.696G	2.7G	1M	3M	RMS	26.04303G	-37.88	-16.00	-21.88	1	-
75	0	30M	2.49G	1M	3M	RMS	260.3175M	-31.50	-16.00	-15.50	2	-
75	0	2.49G	2.495G	200k	600k	RMS	2.4935G	-45.10	-16.00	-29.10	2	BP 1M
75	0	2.495G	2.496G	200k	600k	RMS	2.495702G	-43.25	-16.00	-27.25	2	-
75	0	2.69G	2.691G	200k	600k	RMS	2.690858G	-43.75	-16.00	-27.75	2	-
75	0	2.691G	2.696G	200k	600k	RMS	2.6915G	-44.39	-16.00	-28.39	2	BP 1M
75	0	2.696G	2.7G	1M	3M	RMS	25.487076G	-37.31	-16.00	-21.31	2	-

Band 41_LTE_15MHz_Nss1,(QPSK)_2TX

CSE-TX

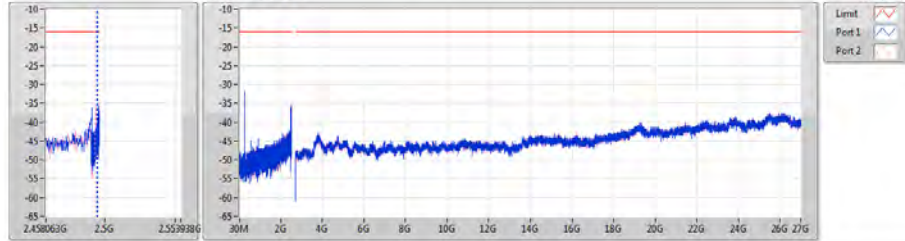
2682.5MHz



RB	RB Start	F_Start(Hz)	F_Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
75	0	30M	2.49G	1M	3M	RMS	260.3175M	-22.90	-16.00	-16.90	1	-
75	0	2.49G	2.495G	200k	600k	RMS	2.4945G	-46.06	-16.00	-30.06	1	BP 1M
75	0	2.495G	2.496G	200k	600k	RMS	2.495164G	-49.23	-16.00	-33.23	1	-
75	0	2.69G	2.691G	200k	600k	RMS	2.690011G	-27.32	-16.00	-11.32	1	-
75	0	2.691G	2.696G	200k	600k	RMS	2.6915G	-30.92	-16.00	-14.92	1	BP 1M
75	0	2.696G	2.7G	1M	3M	RMS	25.559988G	-37.42	-16.00	-21.42	1	-
75	0	30M	2.49G	1M	3M	RMS	260.3175M	-33.18	-16.00	-17.18	2	-
75	0	2.49G	2.495G	200k	600k	RMS	2.4935G	-46.32	-16.00	-30.32	2	BP 1M
75	0	2.495G	2.496G	200k	600k	RMS	2.495791G	-49.68	-16.00	-33.68	2	-
75	0	2.69G	2.691G	200k	600k	RMS	2.690001G	-27.00	-16.00	-11.00	2	-
75	0	2.691G	2.696G	200k	600k	RMS	2.6935G	-33.95	-16.00	-17.95	2	BP 1M
75	0	2.696G	2.7G	1M	3M	RMS	26.264804G	-37.46	-16.00	-21.46	2	-

Band 41_LTE_20MHz_Nss1,(QPSK)_2TX
2506MHz

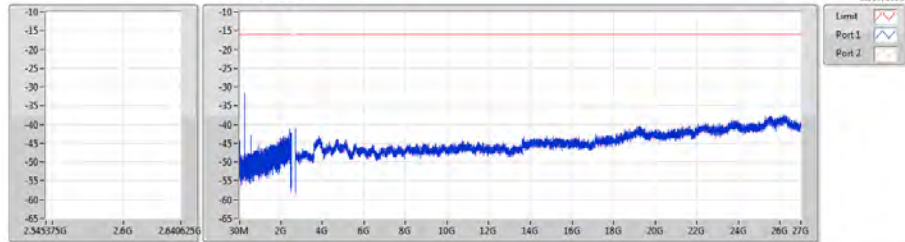
CSE-TX



RB	RB Start	F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
100	0	30M	2.49G	1M	3M	RMS	260.3175M	-31.81	-16.00	-15.81	1	-
100	0	2.49G	2.495G	200k	600k	RMS	2.4943G	-36.44	-16.00	-20.44	1	BP 1M
100	0	2.495G	2.496G	200k	600k	RMS	2.495434G	-35.70	-16.00	-19.70	1	-
100	0	2.69G	2.691G	200k	600k	RMS	2.690906G	-48.93	-16.00	-32.93	1	-
100	0	2.691G	2.696G	200k	600k	RMS	2.6925G	-45.95	-16.00	-29.95	1	BP 1M
100	0	2.696G	2.7G	1M	3M	RMS	26.076448G	-37.66	-16.00	-21.66	1	-
100	0	30M	2.49G	1M	3M	RMS	260.3175M	-31.41	-16.00	-15.41	2	-
100	0	2.49G	2.495G	200k	600k	RMS	2.4935G	-36.76	-16.00	-20.76	2	BP 1M
100	0	2.495G	2.496G	200k	600k	RMS	2.495877G	-34.80	-16.00	-18.80	2	-
100	0	2.69G	2.691G	200k	600k	RMS	2.690645G	-49.56	-16.00	-33.56	2	-
100	0	2.691G	2.696G	200k	600k	RMS	2.6925G	-45.97	-16.00	-29.97	2	BP 1M
100	0	2.696G	2.7G	1M	3M	RMS	25.477963G	-37.62	-16.00	-21.62	2	-

Band 41_LTE_20MHz_Nss1,(QPSK)_2TX
2593MHz

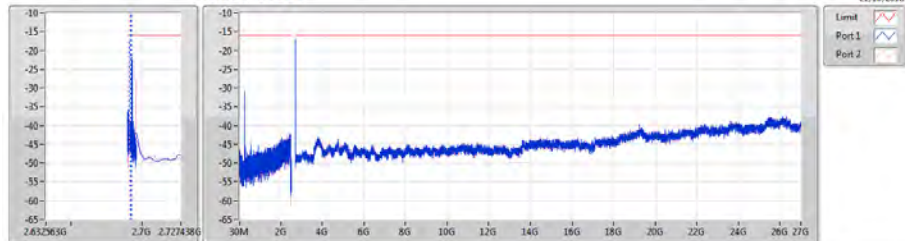
CSE-TX



RB	RB Start	F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
100	0	30M	2.49G	1M	3M	RMS	260.3175M	-21.78	-16.00	-15.78	1	-
100	0	2.49G	2.495G	200k	600k	RMS	2.4935G	-44.67	-16.00	-28.67	1	BP 1M
100	0	2.495G	2.496G	200k	600k	RMS	2.495919G	-42.18	-16.00	-26.18	1	-
100	0	2.69G	2.691G	200k	600k	RMS	2.6921G	-40.96	-16.00	-24.96	1	-
100	0	2.691G	2.696G	200k	600k	RMS	2.6925G	-44.92	-16.00	-28.92	1	BP 1M
100	0	2.696G	2.7G	1M	3M	RMS	26.164355G	-37.48	-16.00	-21.48	1	-
100	0	30M	2.49G	1M	3M	RMS	260.3175M	-31.74	-16.00	-15.74	2	-
100	0	2.49G	2.495G	200k	600k	RMS	2.4935G	-45.36	-16.00	-29.36	2	BP 1M
100	0	2.495G	2.496G	200k	600k	RMS	2.4954G	-48.18	-16.00	-32.18	2	-
100	0	2.69G	2.691G	200k	600k	RMS	2.690035G	-48.02	-16.00	-32.02	2	-
100	0	2.691G	2.696G	200k	600k	RMS	2.6913G	-44.60	-16.00	-28.60	2	BP 1M
100	0	2.696G	2.7G	1M	3M	RMS	25.523532G	-37.44	-16.00	-21.44	2	-

Band 41_LTE_20MHz_Nss1,(QPSK)_2TX
2680MHz

CSE-TX



RB	RB Start	F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port	Remark
100	0	30M	2.49G	1M	3M	RMS	260.3175M	-21.05	-16.00	-15.05	1	-
100	0	2.49G	2.495G	200k	600k	RMS	2.4945G	-45.90	-16.00	-29.90	1	BP 1M
100	0	2.495G	2.496G	200k	600k	RMS	2.495293G	-49.12	-16.00	-33.12	1	-
100	0	2.69G	2.691G	200k	600k	RMS	2.690949G	-16.99	-16.00	-0.99	1	-
100	0	2.691G	2.696G	200k	600k	RMS	2.6925G	-32.09	-16.00	-16.09	1	BP 1M
100	0	2.696G	2.7G	1M	3M	RMS	26.100828G	-37.43	-16.00	-21.43	1	-
100	0	30M	2.49G	1M	3M	RMS	260.3175M	-30.35	-16.00	-14.35	2	-
100	0	2.49G	2.495G	200k	600k	RMS	2.4945G	-46.01	-16.00	-30.01	2	BP 1M
100	0	2.495G	2.496G	200k	600k	RMS	2.495009G	-48.75	-16.00	-32.75	2	-
100	0	2.69G	2.691G	200k	600k	RMS	2.690859G	-36.04	-16.00	-20.04	2	-
100	0	2.691G	2.696G	200k	600k	RMS	2.6913G	-35.08	-16.00	-19.08	2	BP 1M
100	0	2.696G	2.7G	1M	3M	RMS	26.0886G	-37.50	-16.00	-21.50	2	-

Band	LTE Band 41	Test Mode	QPSK / 20 MHz
Test Channel	39750 (2506MHz)		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	8601.72	52.77	82.20	-29.43	40.91	9.05	38.08	35.27	150	253	Average	HORIZONTAL
2	10024.03	51.50	82.20	-30.70	38.20	10.52	38.19	35.41	150	6	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	8601.60	58.73	82.20	-23.47	46.87	9.05	38.08	35.27	103	291	Average	VERTICAL
2	10023.97	50.39	82.20	-31.81	37.09	10.52	38.19	35.41	147	102	Average	VERTICAL

Band	LTE Band 41	Test Mode	QPSK / 20 MHz
Test Channel	40620 (2593MHz)		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	8601.65	57.16	82.20	-25.04	45.30	9.05	38.08	35.27	101	307	Average	HORIZONTAL
2	10372.02	49.54	82.20	-32.66	36.03	10.46	38.13	35.08	164	54	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	8601.64	58.46	82.20	-23.74	46.60	9.05	38.08	35.27	101	291	Average	VERTICAL
2	10372.01	49.17	82.20	-33.03	35.66	10.46	38.13	35.08	259	357	Average	VERTICAL

Band	LTE Band 41	Test Mode	QPSK / 20 MHz
Test Channel	41490 (2680MHz)		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	8601.57	56.72	82.20	-25.48	44.86	9.05	38.08	35.27	101	308	Average	HORIZONTAL
2	10720.02	46.65	82.20	-35.55	32.88	10.41	38.23	34.87	168	360	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	8601.58	57.97	82.20	-24.23	46.11	9.05	38.08	35.27	101	292	Average	VERTICAL
2	10720.01	48.62	82.20	-33.58	34.85	10.41	38.23	34.87	299	349	Average	VERTICAL



Frequency Stability Result

Appendix F

Summary

Mode	Voltage (V)	Temp (°C)	Ch (Hz)	Center (Hz)	Fl (Hz)	Fh (Hz)	Fl Limit (Hz)	Fh Limit (Hz)	ppm	Port	Result
Band 41			-	-	-	-	-	-		-	-
2682.5MHz	115	-30	2.6825G	2.682475G	2.675616G	2.689334G	2.496G	2.69G	-9.317	1	Pass



Result

Mode	Result	Voltage (V)	Temp (°C)	Ch (Hz)	Center (Hz)	Fl (Hz)	Fh (Hz)	Fl Limit (Hz)	Fh Limit (Hz)	ppm	Port	Remark
LTE_Band41_5MHz,(QPSK)_2TX	-			-	-	-	-	-	-	-	-	-
2498.5MHz	Pass	115	-40	2.4985G	2.498501G	2.496204G	2.50085G	2.496G	2.69G	0.255	1	-
2498.5MHz	Pass	115	-30	2.4985G	2.498501G	2.496202G	2.5008G	2.496G	2.69G	0.248	1	-
2498.5MHz	Pass	115	-20	2.4985G	2.498497G	2.496196G	2.500797G	2.496G	2.69G	-1.352	1	-
2498.5MHz	Pass	115	-10	2.4985G	2.498497G	2.496199G	2.500794G	2.496G	2.69G	-1.379	1	-
2498.5MHz	Pass	115	0	2.4985G	2.498499G	2.496206G	2.500793G	2.496G	2.69G	-0.282	1	-
2498.5MHz	Pass	115	10	2.4985G	2.498499G	2.4962G	2.500797G	2.496G	2.69G	-0.475	1	-
2498.5MHz	Pass	97.75	20	2.4985G	2.498496G	2.496197G	2.500794G	2.496G	2.69G	-1.76	1	-
2498.5MHz	Pass	115	20	2.4985G	2.498496G	2.4962G	2.500792G	2.496G	2.69G	-1.599	1	-
2498.5MHz	Pass	132.25	20	2.4985G	2.498501G	2.496206G	2.500797G	2.496G	2.69G	0.586	1	-
2498.5MHz	Pass	115	30	2.4985G	2.498497G	2.496202G	2.500793G	2.496G	2.69G	-1.149	1	-
2498.5MHz	Pass	115	40	2.4985G	2.498503G	2.496202G	2.500803G	2.496G	2.69G	1.02	1	-
2498.5MHz	Pass	115	50	2.4985G	2.498497G	2.496199G	2.500795G	2.496G	2.69G	-1.183	1	-
2498.5MHz	Pass	115	55	2.4985G	2.498497G	2.496202G	2.500793G	2.496G	2.69G	-1.185	1	-
2687.5MHz	Pass	115	-40	2.6875G	2.687496G	2.685196G	2.689797G	2.496G	2.69G	-1.331	1	-
2687.5MHz	Pass	115	-30	2.6875G	2.687496G	2.685196G	2.689796G	2.496G	2.69G	-1.5	1	-
2687.5MHz	Pass	115	-20	2.6875G	2.687497G	2.685196G	2.689798G	2.496G	2.69G	-1.133	1	-
2687.5MHz	Pass	115	-10	2.6875G	2.687497G	2.685197G	2.689796G	2.496G	2.69G	-1.232	1	-
2687.5MHz	Pass	115	0	2.6875G	2.687496G	2.685196G	2.689797G	2.496G	2.69G	-1.341	1	-
2687.5MHz	Pass	115	10	2.6875G	2.687494G	2.685195G	2.689793G	2.496G	2.69G	-2.309	1	-
2687.5MHz	Pass	97.75	20	2.6875G	2.687497G	2.685197G	2.689797G	2.496G	2.69G	-1.129	1	-
2687.5MHz	Pass	115	20	2.6875G	2.687498G	2.685201G	2.689794G	2.496G	2.69G	-0.863	1	-
2687.5MHz	Pass	132.25	20	2.6875G	2.687494G	2.685201G	2.689788G	2.496G	2.69G	-2.096	1	-
2687.5MHz	Pass	115	30	2.6875G	2.687495G	2.685198G	2.689793G	2.496G	2.69G	-1.759	1	-
2687.5MHz	Pass	115	40	2.6875G	2.687501G	2.685201G	2.689801G	2.496G	2.69G	0.294	1	-
2687.5MHz	Pass	115	50	2.6875G	2.687494G	2.685197G	2.689791G	2.496G	2.69G	-2.234	1	-
2687.5MHz	Pass	115	55	2.6875G	2.687495G	2.685198G	2.689793G	2.496G	2.69G	-1.459	1	-
LTE_Band41_10MHz,(QPSK)_2TX	-			-	-	-	-	-	-	-	-	-
2501MHz	Pass	115	-40	2.501G	2.501004G	2.496395G	2.505612G	2.496G	2.69G	0.321	1	-
2501MHz	Pass	115	-30	2.501G	2.501G	2.496392G	2.505608G	2.496G	2.69G	0.112	1	-
2501MHz	Pass	115	-20	2.501G	2.501001G	2.496394G	2.505608G	2.496G	2.69G	0.497	1	-
2501MHz	Pass	115	-10	2.501G	2.501G	2.496387G	2.505612G	2.496G	2.69G	-0.043	1	-
2501MHz	Pass	115	0	2.501G	2.501001G	2.496392G	2.50561G	2.496G	2.69G	0.589	1	-
2501MHz	Pass	115	10	2.501G	2.501004G	2.496395G	2.505612G	2.496G	2.69G	1.521	1	-
2501MHz	Pass	97.75	20	2.501G	2.501G	2.496392G	2.505607G	2.496G	2.69G	-0.151	1	-
2501MHz	Pass	115	20	2.501G	2.500993G	2.496385G	2.5056G	2.496G	2.69G	-2.844	1	-
2501MHz	Pass	132.25	20	2.501G	2.501002G	2.496393G	2.50561G	2.496G	2.69G	0.669	1	-
2501MHz	Pass	115	30	2.501G	2.501001G	2.496391G	2.505611G	2.496G	2.69G	0.525	1	-
2501MHz	Pass	115	40	2.501G	2.501002G	2.496391G	2.505614G	2.496G	2.69G	0.918	1	-
2501MHz	Pass	115	50	2.501G	2.500997G	2.49639G	2.505604G	2.496G	2.69G	-1.045	1	-
2501MHz	Pass	115	55	2.501G	2.501002G	2.496393G	2.50561G	2.496G	2.69G	0.887	1	-
2685MHz	Pass	115	-40	2.685G	2.684994G	2.680384G	2.689604G	2.496G	2.69G	-1.913	1	-
2685MHz	Pass	115	-30	2.685G	2.684994G	2.680382G	2.689606G	2.496G	2.69G	-2.266	1	-



Frequency Stability Result

Appendix F

Mode	Result	Voltage (V)	Temp (°C)	Ch (Hz)	Center (Hz)	Fl (Hz)	Fh (Hz)	Fl Limit (Hz)	Fh Limit (Hz)	ppm	Port	Remark
2685MHz	Pass	115	-20	2.685G	2.684994G	2.680384G	2.689604G	2.496G	2.69G	-2.31	1	-
2685MHz	Pass	115	-10	2.685G	2.684992G	2.680377G	2.689606G	2.496G	2.69G	-3.104	1	-
2685MHz	Pass	115	0	2.685G	2.684989G	2.680382G	2.689596G	2.496G	2.69G	-4.241	1	-
2685MHz	Pass	115	10	2.685G	2.68499G	2.680379G	2.689601G	2.496G	2.69G	-3.721	1	-
2685MHz	Pass	97.75	20	2.685G	2.684993G	2.680388G	2.689598G	2.496G	2.69G	-2.61	1	-
2685MHz	Pass	115	20	2.685G	2.684997G	2.680387G	2.689606G	2.496G	2.69G	-1.142	1	-
2685MHz	Pass	132.25	20	2.685G	2.684993G	2.680379G	2.689608G	2.496G	2.69G	-2.489	1	-
2685MHz	Pass	115	30	2.685G	2.684992G	2.680381G	2.689604G	2.496G	2.69G	-2.939	1	-
2685MHz	Pass	115	40	2.685G	2.684994G	2.680384G	2.689603G	2.496G	2.69G	-2.318	1	-
2685MHz	Pass	115	50	2.685G	2.684994G	2.680385G	2.689603G	2.496G	2.69G	-2.284	1	-
2685MHz	Pass	115	55	2.685G	2.684992G	2.680381G	2.689604G	2.496G	2.69G	-2.369	1	-
LTE_Band41_15MHz,(QPSK)_2TX	-			-	-	-	-	-	-	-	-	-
2503.5MHz	Pass	115	-40	2.5035G	2.503503G	2.496645G	2.51036G	2.496G	2.69G	1.112	1	-
2503.5MHz	Pass	115	-30	2.5035G	2.5035G	2.496637G	2.510362G	2.496G	2.69G	-0.157	1	-
2503.5MHz	Pass	115	-20	2.5035G	2.503498G	2.496643G	2.510353G	2.496G	2.69G	-0.755	1	-
2503.5MHz	Pass	115	-10	2.5035G	2.503496G	2.496649G	2.510343G	2.496G	2.69G	-1.592	1	-
2503.5MHz	Pass	115	0	2.5035G	2.503503G	2.496645G	2.51036G	2.496G	2.69G	1.175	1	-
2503.5MHz	Pass	115	10	2.5035G	2.503503G	2.496656G	2.510351G	2.496G	2.69G	1.267	1	-
2503.5MHz	Pass	97.75	20	2.5035G	2.503501G	2.496634G	2.510368G	2.496G	2.69G	0.332	1	-
2503.5MHz	Pass	115	20	2.5035G	2.503515G	2.496656G	2.510375G	2.496G	2.69G	6.165	1	-
2503.5MHz	Pass	132.25	20	2.5035G	2.503496G	2.496637G	2.510356G	2.496G	2.69G	-1.457	1	-
2503.5MHz	Pass	115	30	2.5035G	2.503499G	2.496644G	2.510355G	2.496G	2.69G	-0.215	1	-
2503.5MHz	Pass	115	40	2.5035G	2.503506G	2.496656G	2.510356G	2.496G	2.69G	2.438	1	-
2503.5MHz	Pass	115	50	2.5035G	2.503502G	2.496642G	2.510362G	2.496G	2.69G	0.898	1	-
2503.5MHz	Pass	115	55	2.5035G	2.503506G	2.496656G	2.510356G	2.496G	2.69G	2.122	1	-
2682.5MHz	Pass	115	-40	2.6825G	2.682482G	2.675626G	2.689338G	2.496G	2.69G	-3.971	1	-
2682.5MHz	Pass	115	-30	2.6825G	2.682475G	2.675616G	2.689334G	2.496G	2.69G	-9.317	1	-
2682.5MHz	Pass	115	-20	2.6825G	2.682488G	2.675633G	2.689343G	2.496G	2.69G	-4.517	1	-
2682.5MHz	Pass	115	-10	2.6825G	2.682482G	2.675626G	2.689338G	2.496G	2.69G	-6.697	1	-
2682.5MHz	Pass	115	0	2.6825G	2.6825G	2.675637G	2.689363G	2.496G	2.69G	-0.096	1	-
2682.5MHz	Pass	115	10	2.6825G	2.682491G	2.67563G	2.689353G	2.496G	2.69G	-3.191	1	-
2682.5MHz	Pass	97.75	20	2.6825G	2.682482G	2.675617G	2.689346G	2.496G	2.69G	-6.896	1	-
2682.5MHz	Pass	115	20	2.6825G	2.682493G	2.675618G	2.689367G	2.496G	2.69G	-2.767	1	-
2682.5MHz	Pass	132.25	20	2.6825G	2.682482G	2.675616G	2.689349G	2.496G	2.69G	-6.636	1	-
2682.5MHz	Pass	115	30	2.6825G	2.682479G	2.675626G	2.689331G	2.496G	2.69G	-7.982	1	-
2682.5MHz	Pass	115	40	2.6825G	2.682483G	2.675625G	2.689341G	2.496G	2.69G	-6.332	1	-
2682.5MHz	Pass	115	50	2.6825G	2.682486G	2.675624G	2.689349G	2.496G	2.69G	-5.128	1	-
2682.5MHz	Pass	115	55	2.6825G	2.682486G	2.675624G	2.689349G	2.496G	2.69G	-4.822	1	-
LTE_Band41_20MHz,(QPSK)_2TX	-			-	-	-	-	-	-	-	-	-
2506MHz	Pass	115	-40	2.506G	2.506006G	2.497074G	2.514938G	2.496G	2.69G	2.433	1	-
2506MHz	Pass	115	-30	2.506G	2.506002G	2.497077G	2.514928G	2.496G	2.69G	0.885	1	-
2506MHz	Pass	115	-20	2.506G	2.505996G	2.497066G	2.514926G	2.496G	2.69G	-1.465	1	-
2506MHz	Pass	115	-10	2.506G	2.506006G	2.497074G	2.514938G	2.496G	2.69G	2.456	1	-
2506MHz	Pass	115	0	2.506G	2.505999G	2.497077G	2.514921G	2.496G	2.69G	-0.475	1	-
2506MHz	Pass	115	10	2.506G	2.506G	2.497068G	2.514931G	2.496G	2.69G	-0.084	1	-



Frequency Stability Result

Appendix F

Mode	Result	Voltage (V)	Temp (°C)	Ch (Hz)	Center (Hz)	Fl (Hz)	Fh (Hz)	Fl Limit (Hz)	Fh Limit (Hz)	ppm	Port	Remark
2506MHz	Pass	97.75	20	2.506G	2.506009G	2.497073G	2.514945G	2.496G	2.69G	3.556	1	-
2506MHz	Pass	115	20	2.506G	2.506006G	2.497081G	2.514931G	2.496G	2.69G	2.393	1	-
2506MHz	Pass	132.25	20	2.506G	2.505999G	2.497078G	2.514919G	2.496G	2.69G	-0.532	1	-
2506MHz	Pass	115	30	2.506G	2.506005G	2.497077G	2.514932G	2.496G	2.69G	1.876	1	-
2506MHz	Pass	115	40	2.506G	2.506008G	2.497069G	2.514946G	2.496G	2.69G	3.051	1	-
2506MHz	Pass	115	50	2.506G	2.506002G	2.497067G	2.514938G	2.496G	2.69G	0.872	1	-
2506MHz	Pass	115	55	2.506G	2.506008G	2.497069G	2.514946G	2.496G	2.69G	2.574	1	-
2680MHz	Pass	115	-40	2.68G	2.679987G	2.671069G	2.688906G	2.496G	2.69G	-1.459	1	-
2680MHz	Pass	115	-30	2.68G	2.679994G	2.671061G	2.688926G	2.496G	2.69G	-2.391	1	-
2680MHz	Pass	115	-20	2.68G	2.679997G	2.671065G	2.688929G	2.496G	2.69G	-1.188	1	-
2680MHz	Pass	115	-10	2.68G	2.679983G	2.671057G	2.688909G	2.496G	2.69G	-6.262	1	-
2680MHz	Pass	115	0	2.68G	2.679987G	2.671069G	2.688906G	2.496G	2.69G	-4.776	1	-
2680MHz	Pass	115	10	2.68G	2.679997G	2.67107G	2.688924G	2.496G	2.69G	-1.169	1	-
2680MHz	Pass	97.75	20	2.68G	2.679997G	2.671067G	2.688928G	2.496G	2.69G	-0.947	1	-
2680MHz	Pass	115	20	2.68G	2.68G	2.671069G	2.688931G	2.496G	2.69G	-0.003	1	-
2680MHz	Pass	132.25	20	2.68G	2.679987G	2.671058G	2.688916G	2.496G	2.69G	-4.847	1	-
2680MHz	Pass	115	30	2.68G	2.680002G	2.671065G	2.688939G	2.496G	2.69G	0.772	1	-
2680MHz	Pass	115	40	2.68G	2.679994G	2.671064G	2.688924G	2.496G	2.69G	-2.232	1	-
2680MHz	Pass	115	50	2.68G	2.679994G	2.671066G	2.688922G	2.496G	2.69G	-2.251	1	-
2680MHz	Pass	115	55	2.68G	2.679994G	2.671066G	2.688922G	2.496G	2.69G	-2.055	1	-