



Telit Communications S.p.A.

LE910C4-WWX

LE910C1-WWX

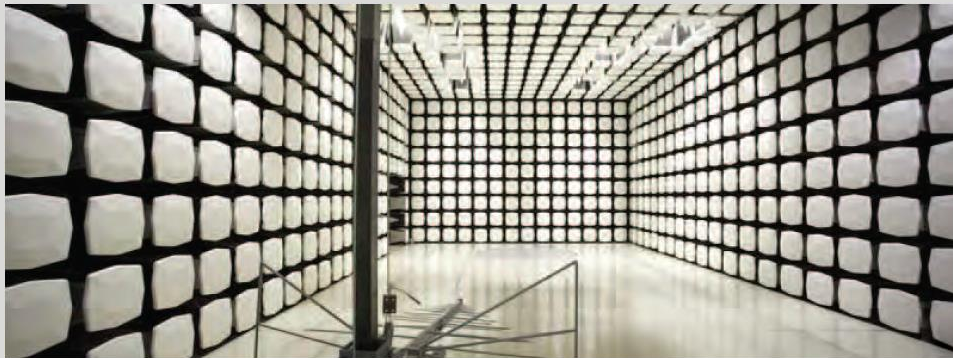
LE910C4-WWXD

LE910C1-WWXD

FCC 22H:2023, FCC 24E:2023, FCC 27:2023, FCC 90:2023

Cellular Radio

Report: TELI0004.0 Rev. 4, Issue Date: March 14, 2023



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CERTIFICATE OF TEST

Last Date of Test: March 13, 2023

Telit Communications S.p.A.

EUT: LE910C4-WWX, LE910C1-WWX, LE910C4-WWXD, LE910C1-WWXD

Radio Equipment Testing

Standards

Specification	Method
FCC 22H:2023, FCC 24E:2023, FCC 27:2023, FCC 90:2023	ANSI C63.26:2015 KDB 971168 D01 v03r01 – Section 6

Results

Test Description	Result	Specification Section(s)	Method Section(s)	Comments
Conducted Output Power	N/A	2.1046	5.2.4.2	
Frequency Stability	N/A	2.1055, 22.355, 24.235, 27.54	5.6	
Occupied Bandwidth / Emission Mask	N/A	2.1049, 22.917, 24.238, 27.53	5.4	
Out of Band Emissions - GSM BAND (GSM-850), WCDMA BAND V (GSM-850)	Pass	2.1053, 22.917	5.7	
Out of Band Emissions - GSM BAND (PCS-1900), WCDMA BAND II (PCS-1900)	Pass	2.1053, 24.238	5.7	
Out of Band Emissions - WCDMA BAND IV (AWS-1700)	Pass	2.1053, 27.53(h)	5.7	
Out of Band Emissions - LTE BAND 4, 12, & 13	Pass	2.1053, 27.53(h) 2.1053, 27.53(g) 2.1053, 27.53 (c)	5.7	
Out of Band Emissions - LTE BAND 14	Pass	2.1053, 90.210	5.7	
Out of Band Emissions - LTE BAND 25/2	Pass	2.1053, 24.238	5.7	
Out of Band Emissions - LTE BAND 26	Pass	2.1053, 22.917, 90.210(g,h)	5.7	
Out of Band Emissions - LTE BAND 26/5	Pass		5.7	
Out of Band Emissions – LTE BAND 7	Pass	2.1053, 27.50(h)	5.7	
Spurious Radiated Emissions	Pass	2.1053	5.5	
ERP of the Fundamental – GSM – BAND (GSM-850), WCDMA BAND V (GSM-850)	Pass	2.1046, 24.232(b)	5.2.4.2	
ERP of the Fundamental – LTE BAND 12 & 13	Pass	2.1046, 24.232(b)	5.2.4.2	
ERP of the Fundamental – LTE BAND 26	Pass	2.1046, 24.232(b)	5.2.4.2	
ERP of the Fundamental – LTE BAND 26/5	Pass	2.1046, 24.232(b)	5.2.4.2	
ERP of the Fundamental – LTE BAND 14	Pass	2.1046, 24.232(b)	5.2.4.2	
EIRP of the Fundamental – WCDMA BAND IV (AWS-1700)	Pass	2.1046, 24.232(b)	5.2.4.2	
EIRP of the Fundamental - GSM BAND PCS-1900, WCDMA BAND II (PCS-1900)	Pass	2.1046, 24.232(b)	5.2.4.2	
EIRP of the Fundamental – LTE BAND 25/2	Pass	2.1046, 24.232(b)	5.2.4.2	
EIRP of the Fundamental – LTE BAND 4	Pass	2.1046, 24.232(b)	5.2.4.2	
EIRP of the Fundamental – LTE BAND 7	Pass	2.1046, 24.232(b)	5.2.4.2	
Powerline Conducted Emissions (LTE)	N/A	15.107	ANSI C63.4 - 12.2.4	
Receiver Spurious Emissions	N/A	15.109	ANSI C63.4 - 12.2.5	

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

CERTIFICATE OF TEST



Deviations From Test Standards

None

Approved By:

Johnny Candelas, Operations Manager

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

REVISION HISTORY

Revision Number	Description	Date (yyyy-mm-dd)	Page Number
00	None		
01	Included missing Power setting and Antenna Gain information	2023-02-21	12
	Revised FCC standard date and added missing EUT models		Throughout report
	Included missing FCC rules parts		11
	Revised configurations and naming of Spurious Radiated Emissions		13
02	Updated Power Settings and Antennas Information	2023-03-01	12
03	Updated Power Settings and Antennas Information	2023-03-02	12
04	Added LTE Band 7 data to report	2023-03-14	Throughout report

ACCREDITATIONS AND AUTHORIZATIONS



United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Each laboratory is accredited by A2LA to ISO / IEC 17025, and as a product certifier to ISO / IEC 17065 which allows Element to certify transmitters to FCC and IC specifications.

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB) and as a CAB for the acceptance of test data.

European Union

European Commission – Recognized as an EU Notified Body validated for the EMCD and RED Directives.

United Kingdom

BEIS – Recognized by the UK as an Approved Body under the UK Radio Equipment and UK EMC Regulations.

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Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

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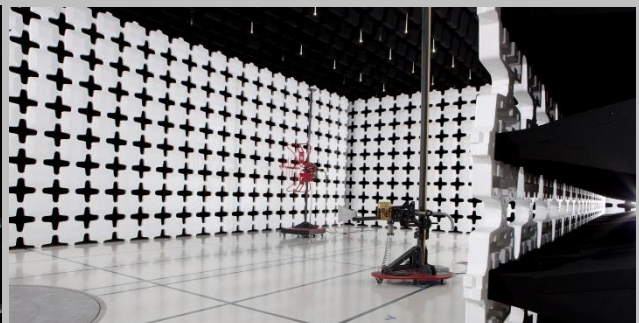
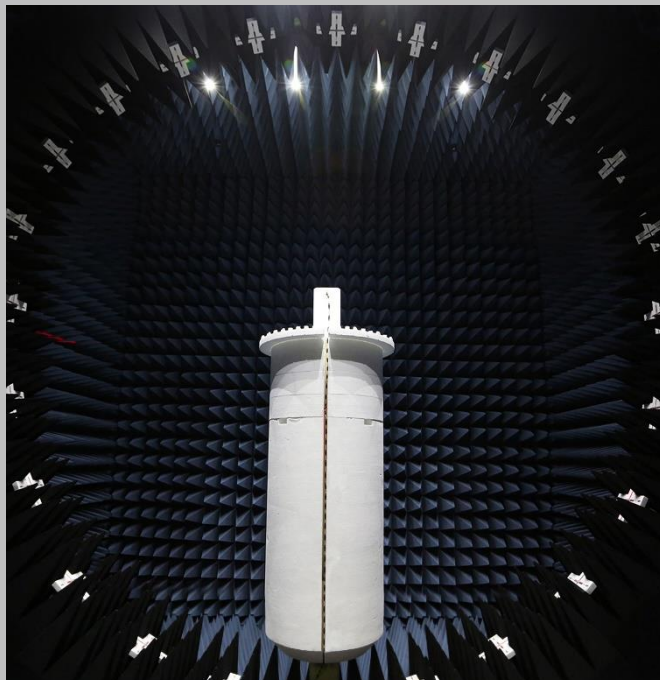
[Texas](#)

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FACILITIES



California Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918	Minnesota Labs MN01-11 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Oregon Labs EV01-12 6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	Texas Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Washington Labs NC01-05 19201 120 th Ave NE Bothell, WA 98011 (425)984-6600
A2LA				
Lab Code: 3310.04	Lab Code: 3310.05	Lab Code: 3310.02	Lab Code: 3310.03	Lab Code: 3310.06
Innovation, Science and Economic Development Canada				
2834B-1, 2834B-3	2834E-1, 2834E-3	2834D-1	2834G-1	2834F-1
BSMI				
SL2-IN-E-1154R	SL2-IN-E-1152R	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI				
A-0029	A-0109	A-0108	A-0201	A-0110
Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA				
US0158	US0175	US0017	US0191	US0157



MEASUREMENT UNCERTAINTY



Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found in the table below. A lab specific value may also be found in the applicable test description section. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	- MU
Frequency Accuracy	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	1.2 dB	-1.2 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.1 dB	-5.1 dB
AC Powerline Conducted Emissions (dB)	3.2 dB	-3.2 dB

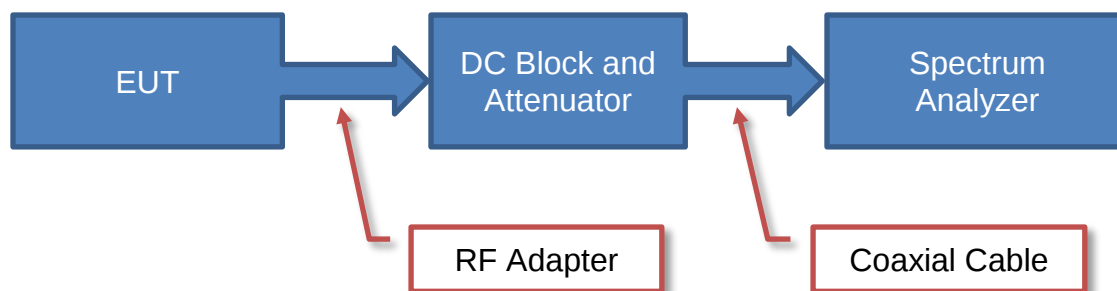
TEST SETUP BLOCK DIAGRAMS

Measurement Bandwidths

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

Unless otherwise stated, measurements were made using the bandwidths and detectors specified. No video filter was used.

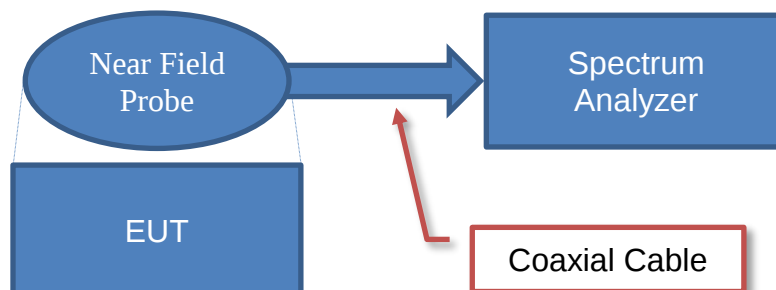
Antenna Port Conducted Measurements



Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

Near Field Test Fixture Measurements

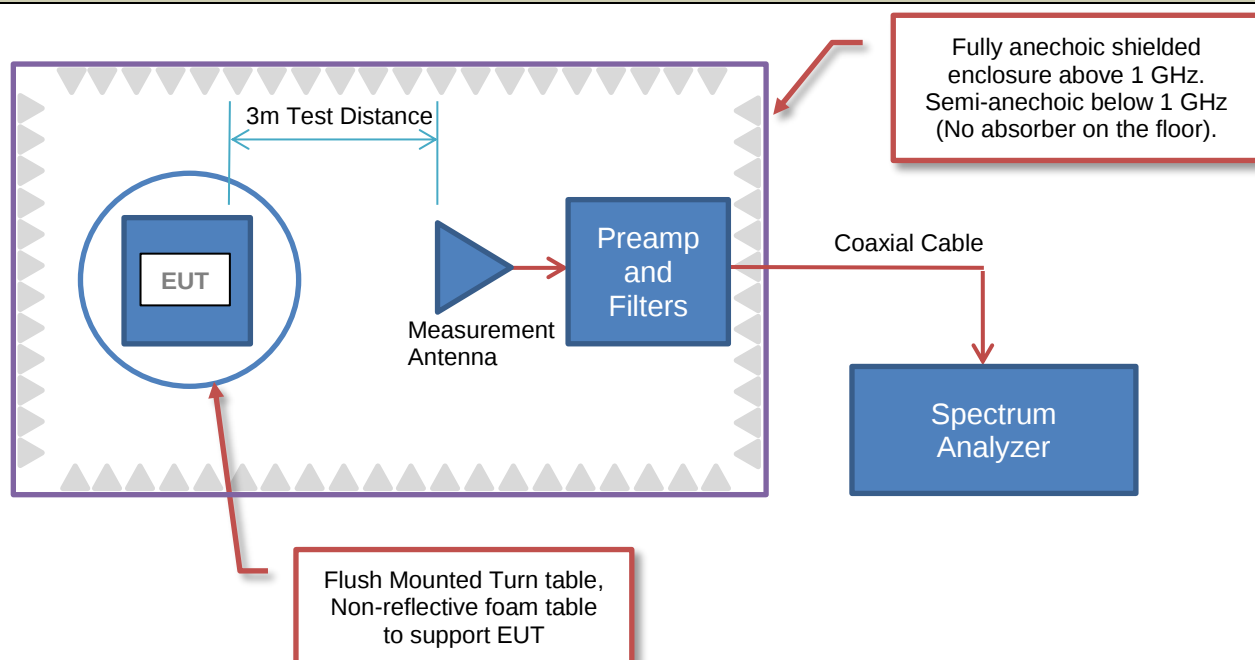


Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

TEST SETUP BLOCK DIAGRAMS

Emissions Measurements



Sample Calculation (logarithmic units)

Radiated Emissions:

Measured Level (Amplitude)	Factor			Distance Adjustment Factor	External Attenuation	Field Strength
	Antenna Factor	Cable Factor	Amplifier Gain			
42.6	28.6	3.1	40.8	0.0	0.0	33.5

Conducted Emissions:

Measured Level (Amplitude)	Factor		External Attenuation	Adjusted Level
	Transducer Factor	Cable Factor		
26.7	0.3	0.1	20.0	47.1

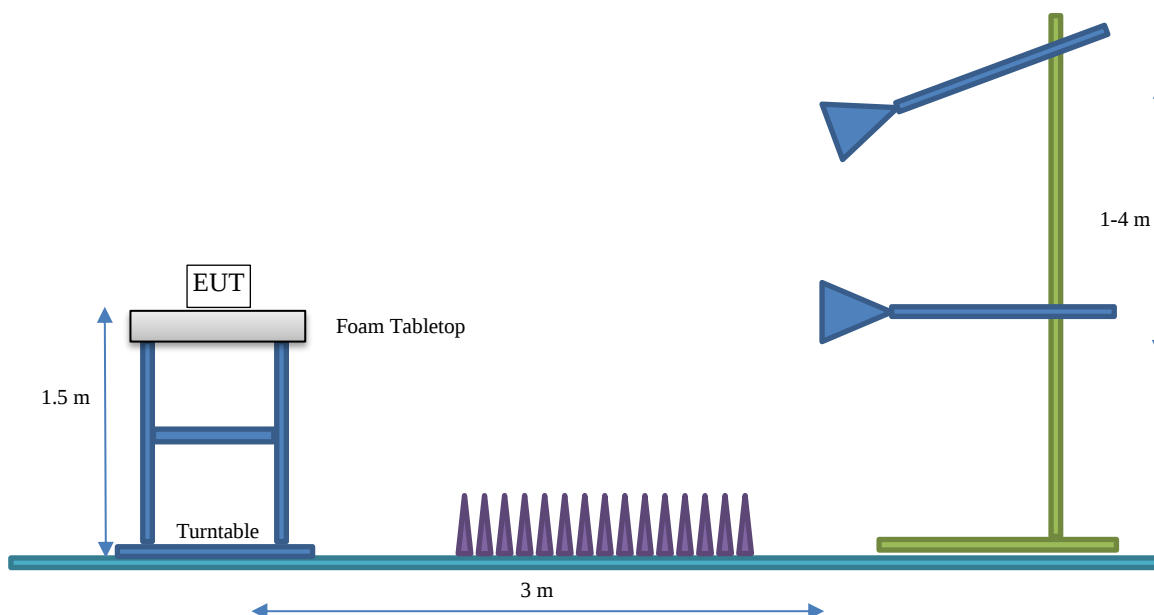
Radiated Power (ERP/EIRP) – Substitution Method:

Measured Level into Substitution Antenna (Amplitude dBm)	Substitution Antenna Factor (dBi)	EIRP to ERP (if applicable)	Measured power (dBm ERP/EIRP)
10.0	6.0	2.15	13.9/16.0

TEST SETUP BLOCK DIAGRAMS

Bore Sighting (>1GHz)

The diameter of the illumination area is the dimension of the line tangent to the EUT formed by 3 dB beamwidth of the measurement antenna at the measurement distance. At a 3 meter test distance, the diameter of the illumination area was 3.8 meters at 1 GHz and greater than 2.1 meters up to 6 GHz. Above 1 GHz, when required by the measurement standard, the antenna is pointed for both azimuth and elevation to maintain the receive antenna within the cone of radiation from the EUT. The specified measurement detectors were used for comparison of the emissions to the peak and average specification limits.



PRODUCT DESCRIPTION



Client and Equipment under Test (EUT) Information

Company Name:	Telit Communications S.p.A.
Address:	Viale Stazione di Prosecco 5/b
City, State, Zip:	Trieste, 34010
Test Requested By:	Paolomaria Schiratti
EUT:	LE910C1-WWX, LE910C4-WWX, LE910C1-WWXD, LE910C4-WWXD with HW 1.20
First Date of Test:	December 5, 2022
Last Date of Test:	January 12, 2023
Receipt Date of Samples:	December 5, 2022
Equipment Design Stage:	Prototype
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
A family of four cellular modules (LE910C1-WWX, LE910C4-WWX, LE910C1-WWXD, LE910C4-WWXD). The C1 and C4 descriptors are to include that the modules are Cat. 1 and Cat. 4 LTE, respectively. The "D" at the end of the last two modules indicates that those are the "data-only" (i.e. voice capability removed) versions of the C1 and C4 modules.
Testing Objective:
To demonstrate compliance of the Cellular radio to FCC 22H, FCC 24E, FCC 27, and FCC 90 requirements. Testing is for a Class 2 Permissive Change as per "HW Change Note LE910Cx-WWX_HW1.2_r1"
FCC ID:
RI7LE910CXWWX
EUT Photo:

Photos located in TELI0004.0 FCC Cellular Report Photos Only

POWER SETTINGS AND ANTENNAS



The power settings, antenna gain value(s) and cable loss (if applicable) used for the testing contained in this report were provided by the customer and will affect the validity of the results. Element assumes no responsibility for the accuracy of this information. The power settings below reflect the maximum power that the EUT is allowed to transmit at during normal operation.

ANTENNA GAIN (dBi)

Type	Model No:	Provided by:	Tx (Uplink) Frequency Range/ Channel number	Gain (dBi)
Dipole Antenna	WE14-LF-07	HNS (HANKOOK NETWORK SOLUTION)	WCDMA Band 2: 1852.4-1907.6 MHz WCDMA Band 4: 1712.4-1752.6 MHz WCDMA Band 5: 826.4-846.6 MHz	Band 2/4: 3.5dBi Band 5: 1.5dBi
			Band 2: 1850~1910 Band 4: 1710~1755 Band 5: 824~849 Band 7: 2500~2570 Band 12: 699~716 Band 13: 777~787 Band 14: 788~798 Band 66: 1710~1780 Band 71: 663~698	Band 2/4/66: 3.5dBi Band 5/12/13/14/71: 1.5dBi Band 7: 1.82dBi

The EUT was tested using the power settings provided by the manufacturer which were based upon:

☒ Test software settings Test software/firmware installed on EUT:

HW Version	1.20
LE910C1-WWX	M0F.503006
LE910C4-WWX	M0F.103006
LE910C1-WWXd	M0F.403006
LE910C4-WWXd	M0F.603006

☐ Rated power settings

SETTINGS FOR ALL TESTS IN THIS REPORT

Cellular Protocol	Bandwidths	Modulation Types	Channels	UL Frequency Range (MHz)	DL Frequency Range (MHz)	Power Setting
WCDMA	1.4, 3, 5, 10, 15, 20	QPSK, 16-QAM	Low, Mid, High	1850-1910	1930-1990	Max Default Setting
	1.4, 3, 5, 10, 15, 20	QPSK, 16-QAM	Low, Mid, High	1710-1755	2110-2155	Max Default Setting
	1.4, 3, 5, 10	QPSK, 16-QAM	Low, Mid, High	824-849	869-894	Max Default Setting
LTE	1.4, 3, 5, 10	QPSK, 16-QAM	Low, Mid, High	699-716	729-746	Max Default Setting
	5, 10	QPSK, 16-QAM	Low, High	777-787	746-756	Max Default Setting
	5, 10	QPSK, 16-QAM	Low, High	788-798	758-768	Max Default Setting
	1.4, 3, 5, 10, 15, 20	QPSK, 16-QAM	Low, Mid, High	1710-1780	2110-2200	Max Default Setting
	5, 10, 15, 20	QPSK, 16-QAM	Low, Mid, High	663-698	617-652	Max Default Setting
	5, 10, 15, 20	QPSK, 16-QAM	Low, Mid, High	2500~2570	2620~2690	Max Default Setting

*Maximum default setting based on specified tune-up procedure by the manufacturer.

CONFIGURATIONS

Configuration TELI0004- 1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Data Terminal Module	Telit Communications S.p.A.	LE910C4-WWX	ENG Sample 1 (IMEI: 353338970545965)

Peripherals			
Description	Manufacturer	Model/Part Number	Serial Number
DC Power Supply	Agilent	E3648A	MY51120046

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power Cable	No	1.0m	No	Data Terminal Module	DC Power Supply

Configuration TELI0004- 2

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Data Terminal Module	Telit Communications S.p.A.	LE910C4-WWX	ENG Sample 2 (IMEI: 353338970545643)

Peripherals			
Description	Manufacturer	Model/Part Number	Serial Number
DC Power Supply	Agilent	E3648A	MY51120046

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power Cable	No	1.0m	No	Data Terminal Module	DC Power Supply
USB Cable	Yes	1.2m	No	Data Terminal Module	Unterminated

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2022-12-15	ERP of the Fundamental	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	2023-03-12	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.
3	2023-03-13	Out of Band Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	2023-03-13	EIRP of the Fundamental	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.

OUT OF BAND EMISSIONS



XMH 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Programmable Power Supply	TekPower	772307	SBB	NCR	NCR
Generator - Signal	Keysight	N5182B	TES	2021-09-14	2024-09-14
Meter - Multimeter	Fluke	179	MBB	2021-03-05	2024-03-05
Directional Coupler	Fairview Microwave	MC2047-10	RHZ	1900-01-04	2023-04-25
Cable	Element	None	OC5	2022-02-14	2023-02-14
Attenuator	Fairview Microwave	SA18H-20	UAY	2022-03-30	2023-03-30
Block - DC	Aeroflex	INMET 8535	AMO	2022-02-18	2023-02-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	2022-10-21	2023-10-21

TEST DESCRIPTION

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. Per FCC ID: R17LE910CXWWX, the worst case modes of operation were investigated and the results are reported in this section.

OUT OF BAND EMISSIONS - GSM BAND (GSM-850), WCDMA BAND V (GSM-850)



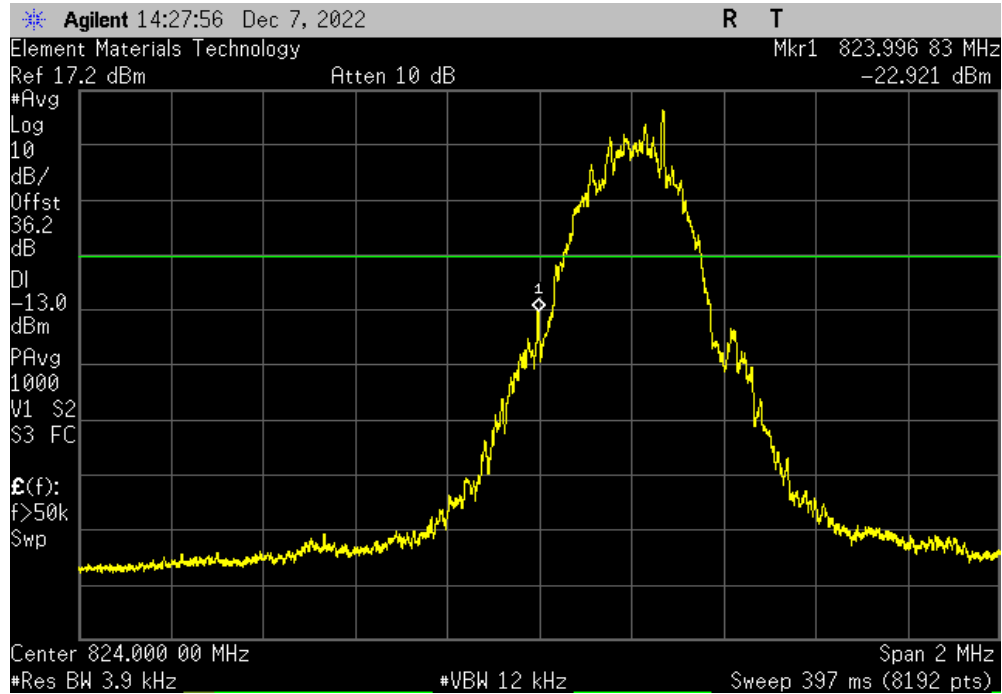
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 7-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19.3 °C	
Attendees: None		Humidity: 48.4% RH	
Project: None		Barometric Pres.: 1025 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
Job Site: OC13		Test Method	
FCC 22H:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965)			
Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0			
Spot check of out of band emissions based on worst case: FCC ID: R17LE910CXWWX (Band Edge Emissions at Antenna Terminal)			
Reference Level Offset = SMA pigtail + directional coupler + coax cable + 20 dB attenuator + DC block			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
	Frequency Range	Max Value (dBm)	Limit ≤ (dBm) Result
GSM Band GSM-850			
	Low Channel 128, 824.2 MHz	-22.92	-13 Pass
	Low Channel 128, 824.2 MHz	-46.33	-13 Pass
	Low Channel 128, 824.2 MHz	-56.87	-13 Pass
	High Channel 251, 848.8 MHz	-24.72	-13 Pass
	High Channel 251, 848.8 MHz	-46.24	-13 Pass
	High Channel 251, 848.8 MHz	-56.15	-13 Pass
WCDMA Band V (GSM-850)			
	Low Channel 4132, 826.4 MHz	-24.76	-13 Pass
	Low Channel 4132, 826.4 MHz	-17.6	-13 Pass
	Low Channel 4132, 826.4 MHz	-28.87	-13 Pass
	High Channel 4233, 846.6 MHz	-25.94	-13 Pass
	High Channel 4233, 846.6 MHz	-24.25	-13 Pass
	High Channel 4233, 846.6 MHz	-36.98	-13 Pass

OUT OF BAND EMISSIONS - GSM BAND (GSM-850), WCDMA BAND V (GSM-850)

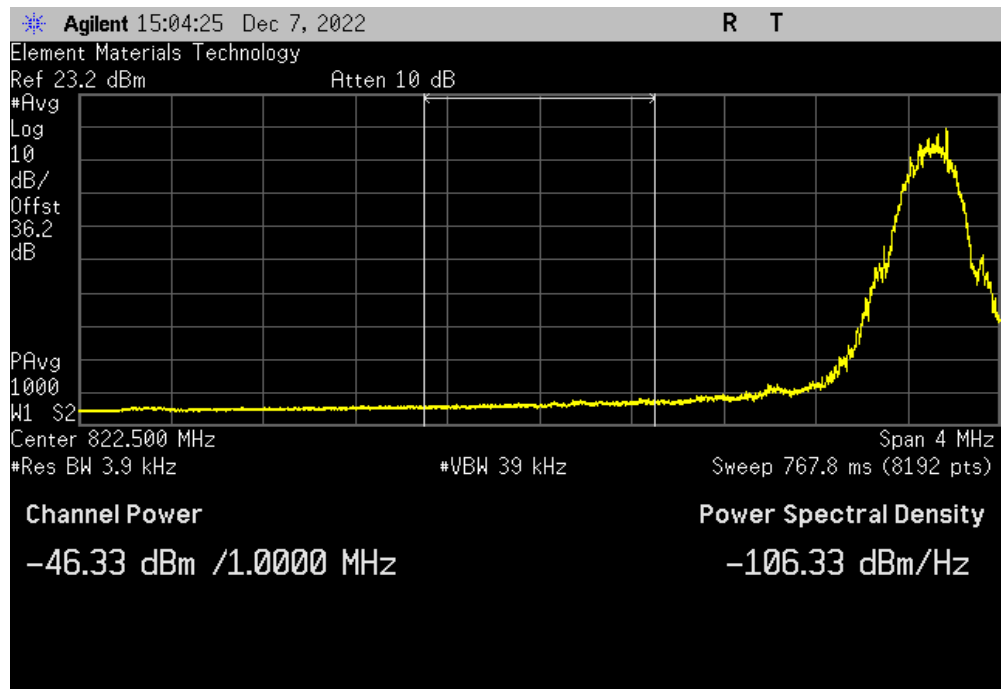


TelTel 2022.06.03.0 XM8 2022.02.07.0

GSM Band GSM-850, Low Channel 128, 824.2 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-22.92	-13	Pass



GSM Band GSM-850, Low Channel 128, 824.2 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-46.33	-13	Pass

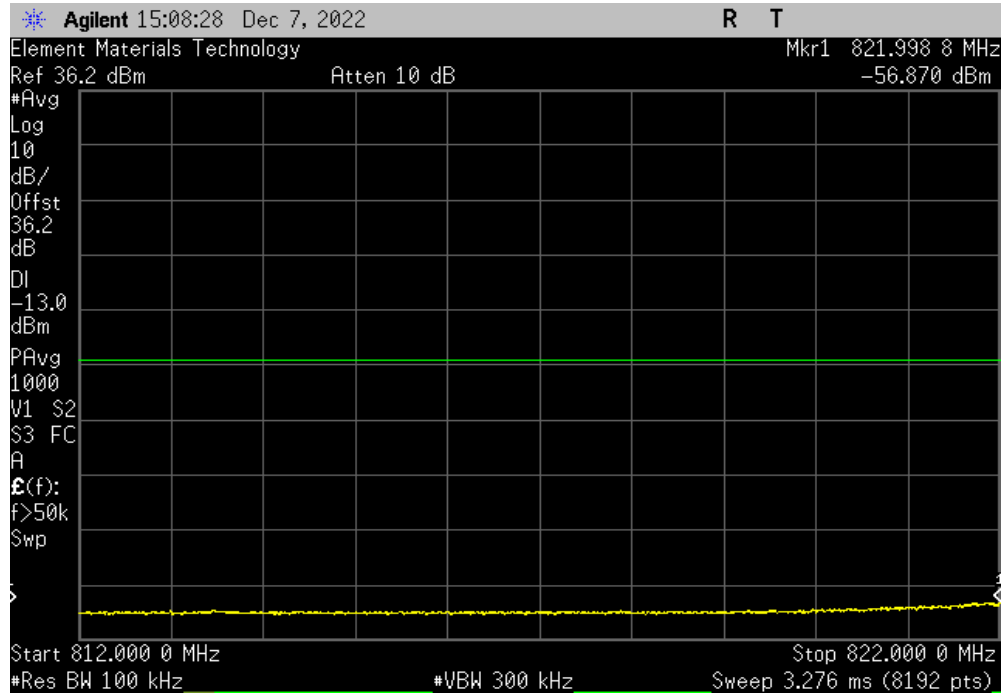


OUT OF BAND EMISSIONS - GSM BAND (GSM-850), WCDMA BAND V (GSM-850)

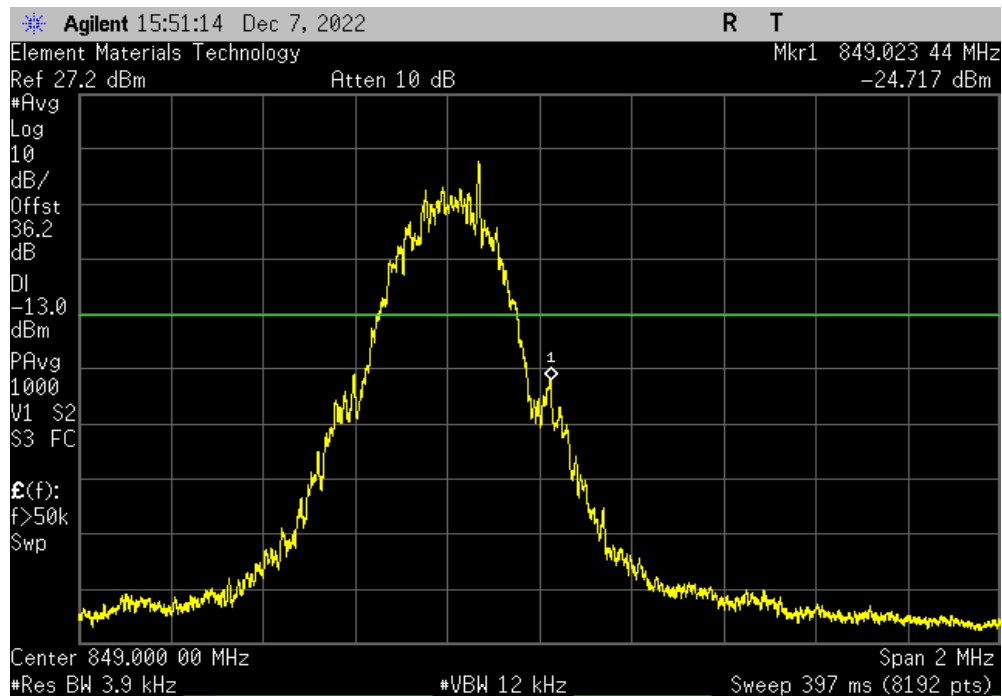


TelTel 2022.06.03.0 XMR 2022.02.07.0

GSM Band GSM-850, Low Channel 128, 824.2 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-56.87	-13	Pass



GSM Band GSM-850, High Channel 251, 848.8 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-24.72	-13	Pass

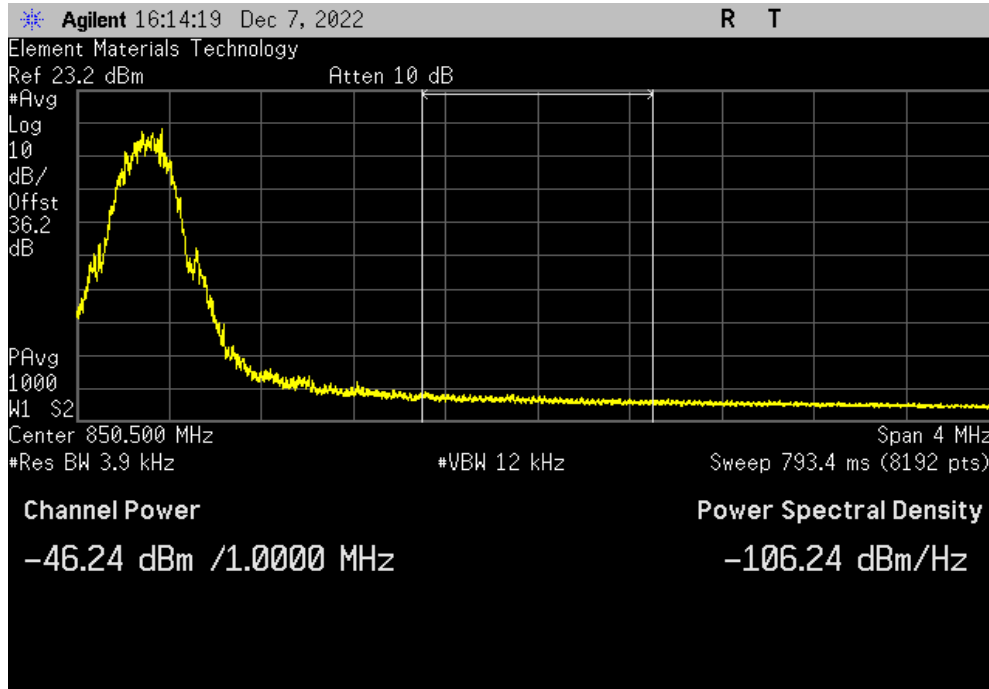


OUT OF BAND EMISSIONS - GSM BAND (GSM-850), WCDMA BAND V (GSM-850)

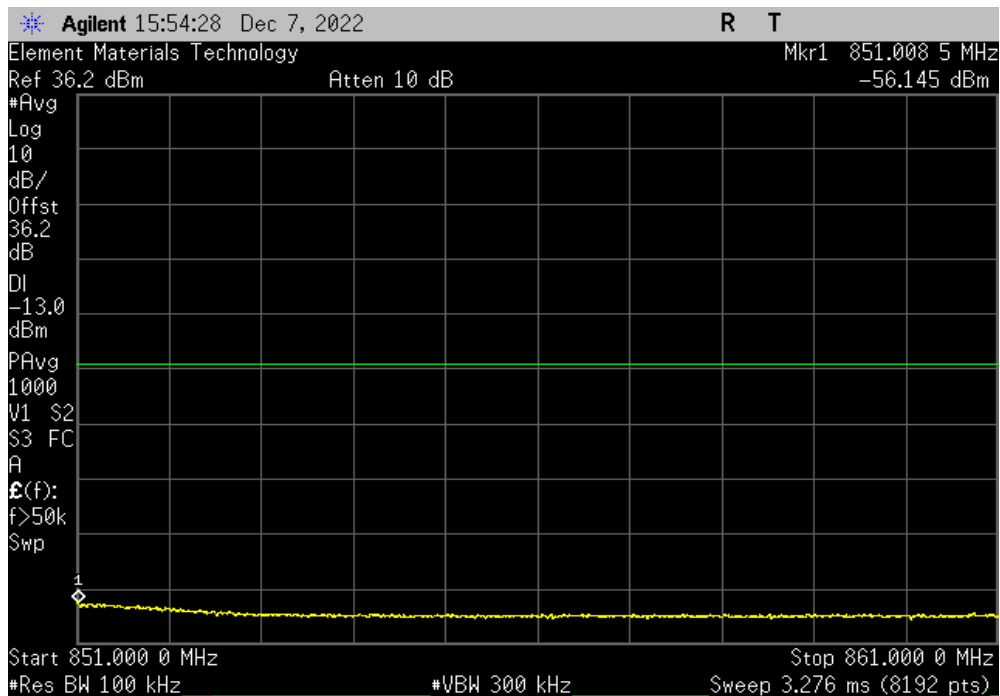


TUTTx 2022.06.03.0 XMR 2022.02.07.0

GSM Band GSM-850, High Channel 251, 848.8 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-46.24	-13	Pass



GSM Band GSM-850, High Channel 251, 848.8 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-56.15	-13	Pass

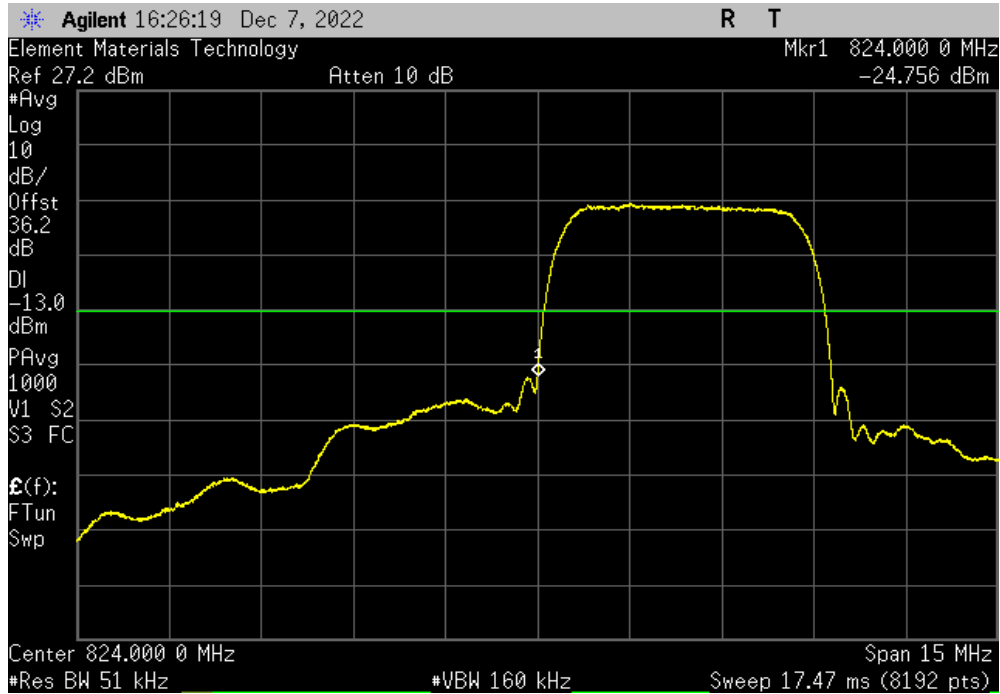


OUT OF BAND EMISSIONS - GSM BAND (GSM-850), WCDMA BAND V (GSM-850)

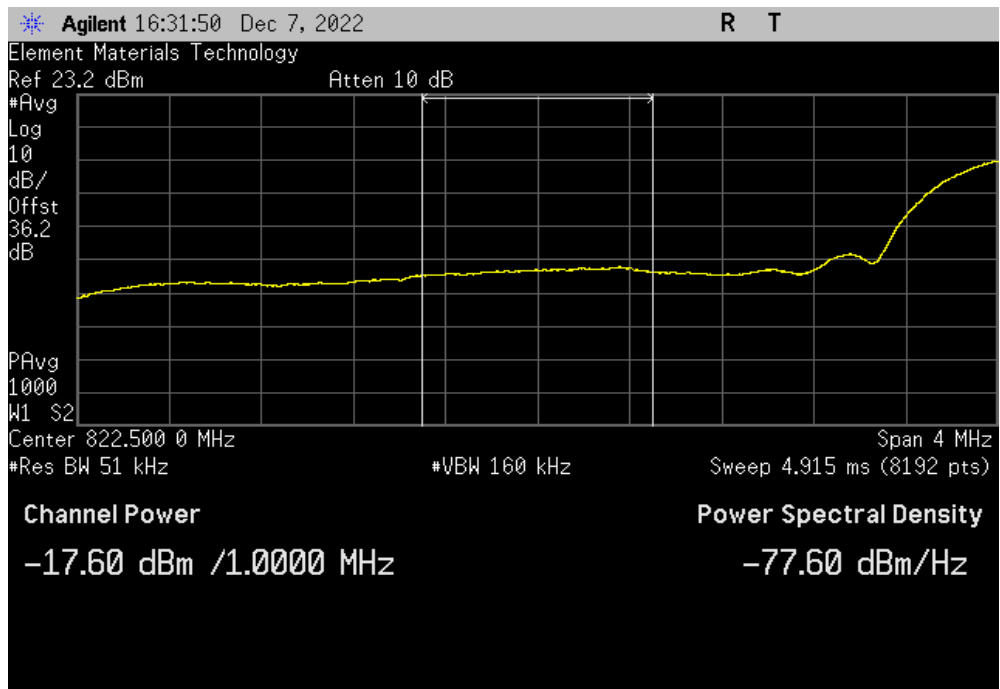


TelTx 2022.06.03.0 XMt 2022.02.07.0

WCDMA Band V (GSM-850), Low Channel 4132, 826.4 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-24.76	-13	Pass



WCDMA Band V (GSM-850), Low Channel 4132, 826.4 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-17.6	-13	Pass

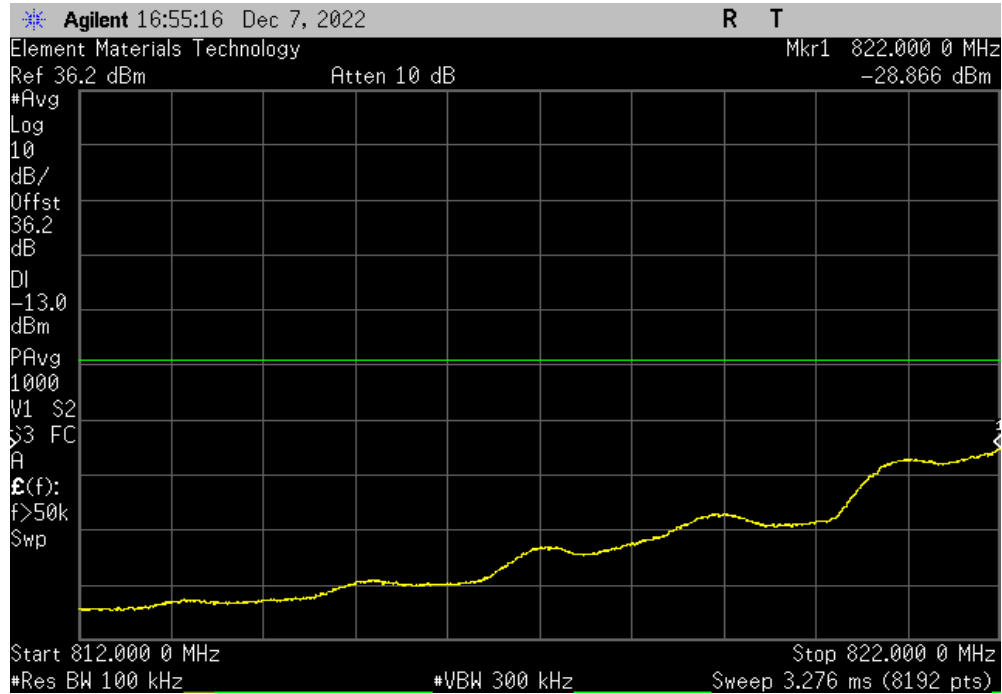


OUT OF BAND EMISSIONS - GSM BAND (GSM-850), WCDMA BAND V (GSM-850)

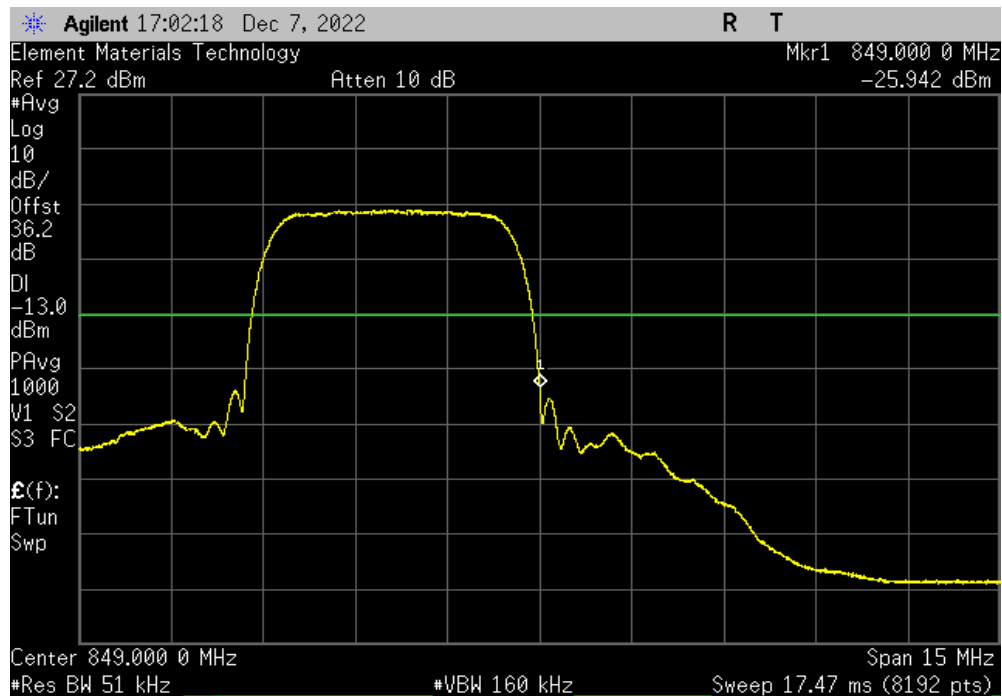


TUTX 2022.06.03.0 XMR 2022.02.07.0

WCDMA Band V (GSM-850), Low Channel 4132, 826.4 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-28.87	-13	Pass



WCDMA Band V (GSM-850), High Channel 4233, 846.6 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-25.94	-13	Pass

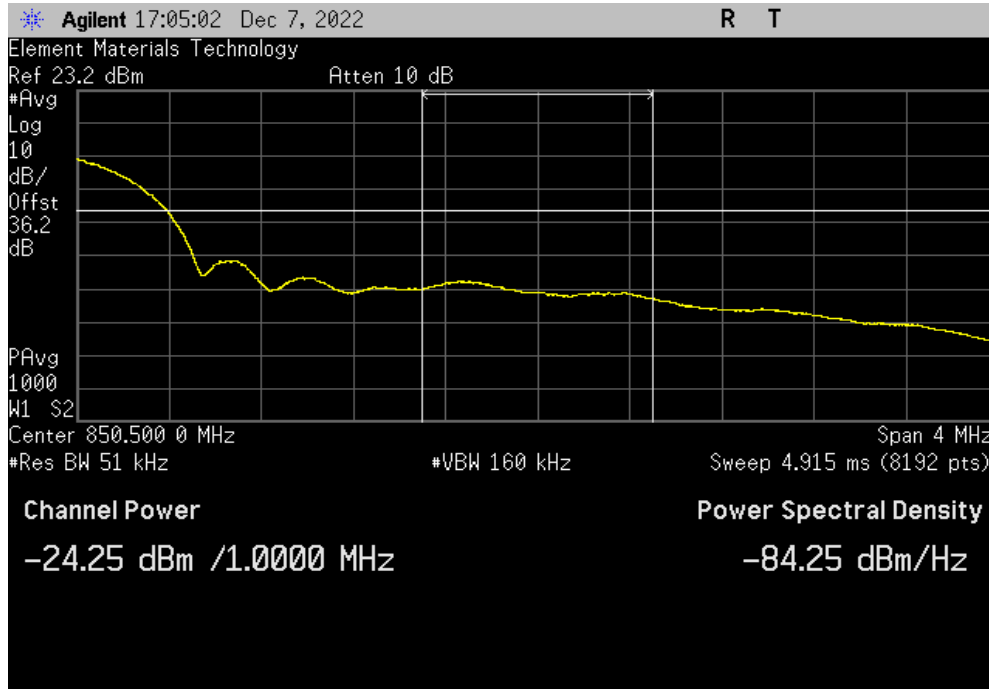


OUT OF BAND EMISSIONS - GSM BAND (GSM-850), WCDMA BAND V (GSM-850)

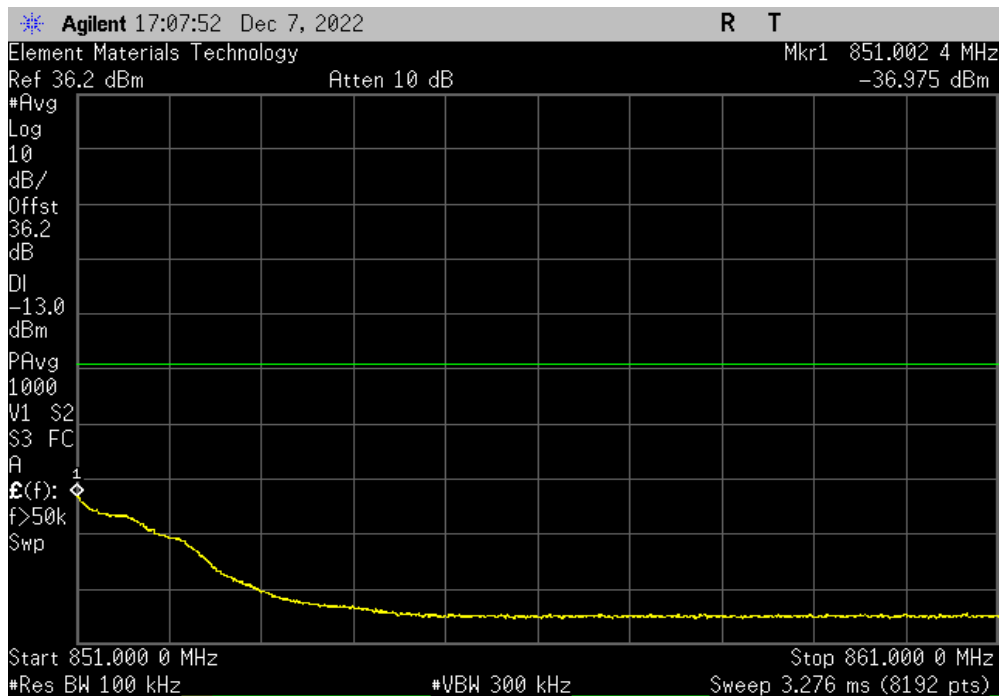


TUTx 2022.06.03.0 XMI 2022.02.07.0

WCDMA Band V (GSM-850), High Channel 4233, 846.6 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-24.25	-13	Pass



WCDMA Band V (GSM-850), High Channel 4233, 846.6 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-36.98	-13	Pass



OUT OF BAND EMISSIONS - GSM BAND PCS-1900, WCDMA BAND II (PCS-1900)



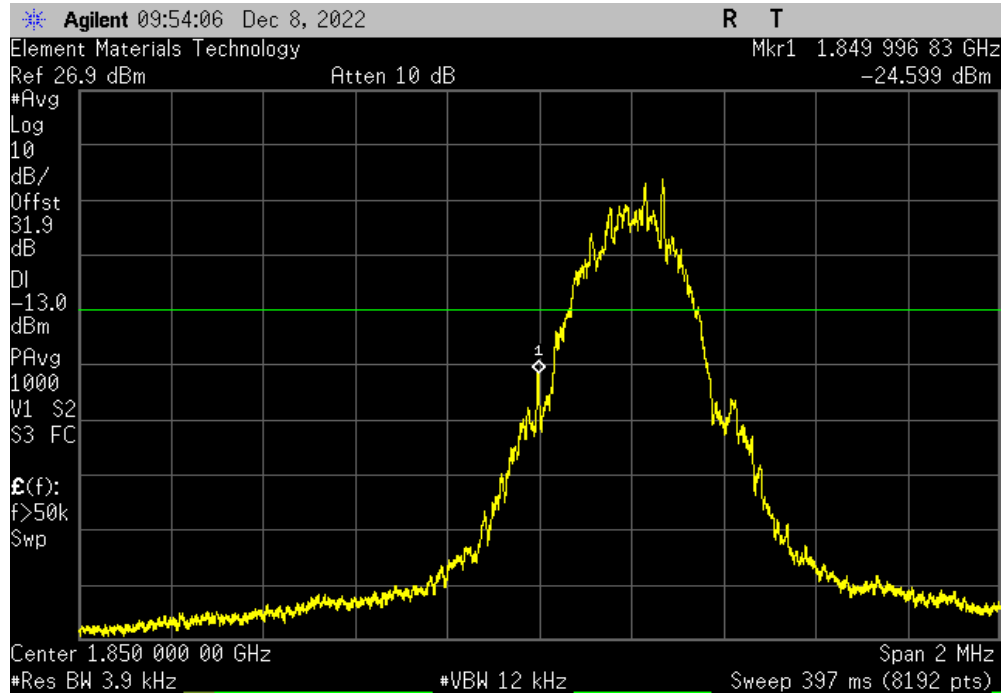
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 7-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19.3 °C	
Attendees: None		Humidity: 48.4% RH	
Project: None		Barometric Pres.: 1025 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
Job Site: OC13		Test Method	
FCC 24E:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965)			
Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0			
Spot check of out of band emissions based on worst case: FCC ID: R17LE910CXWWX (Band Edge Emissions at Antenna Terminal)			
Reference Level Offset = SMA pigtail + directional coupler + coax cable + 20 dB attenuator + DC block			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature	
	Frequency Range	Max Value (dBm)	Limit ≤ (dBm) Result
GSM Band PCS-1900			
	Low Channel 512 (1852.4 MHz)	1	-24.6 -13 Pass
	Low Channel 512 (1852.4 MHz)	2	-48.98 -13 Pass
	Low Channel 512 (1852.4 MHz)	3	-48.31 -13 Pass
	High Channel 810 (1909.8 MHz)	1	-28.6 -13 Pass
	High Channel 810 (1909.8 MHz)	2	-48.92 -13 Pass
	High Channel 810 (1909.8 MHz)	3	-48.33 -13 Pass
WCDMA Band II (PCS-1900)			
	Low Channel 9262 (1852.4 MHz)	1	-26.69 -13 Pass
	Low Channel 9262 (1852.4 MHz)	2	-26.28 -13 Pass
	Low Channel 9262 (1852.4 MHz)	3	-27.78 -13 Pass
	High Channel 9538 (1907.6 MHz)	1	-26.91 -13 Pass
	High Channel 9538 (1907.6 MHz)	2	-29.2 -13 Pass
	High Channel 9538 (1907.6 MHz)	3	-31.76 -13 Pass

OUT OF BAND EMISSIONS - GSM BAND PCS-1900, WCDMA BAND II (PCS-1900)

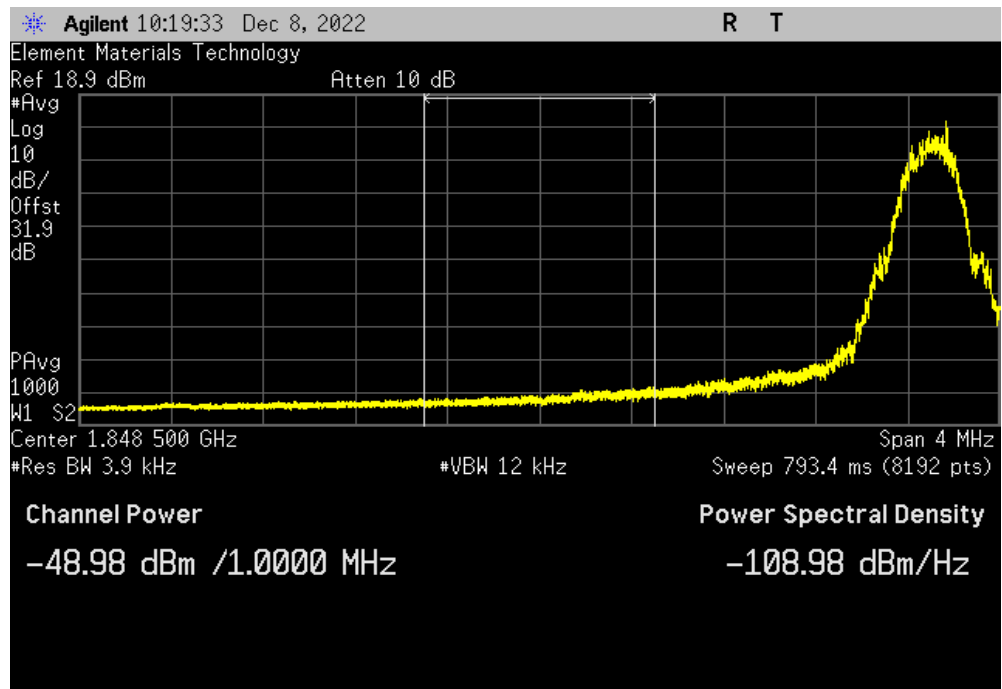


TUTTx 2022.06.03.0 XMt 2022.02.07.0

GSM Band PCS-1900, Low Channel 512 (1852.4 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-24.6	-13	Pass



GSM Band PCS-1900, Low Channel 512 (1852.4 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-48.98	-13	Pass

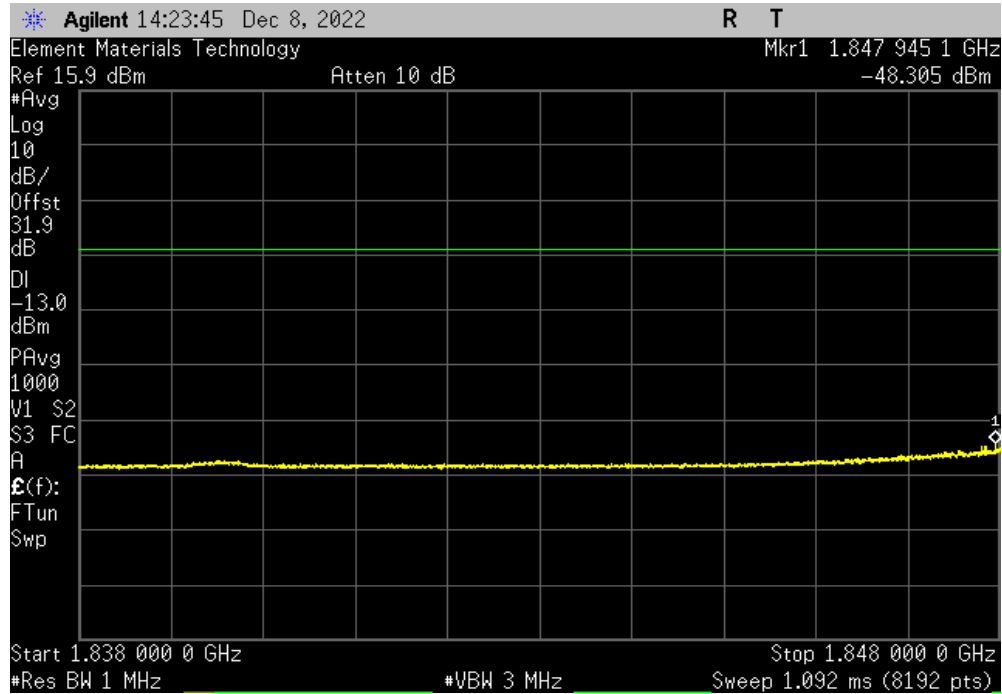


OUT OF BAND EMISSIONS - GSM BAND PCS-1900, WCDMA BAND II (PCS-1900)

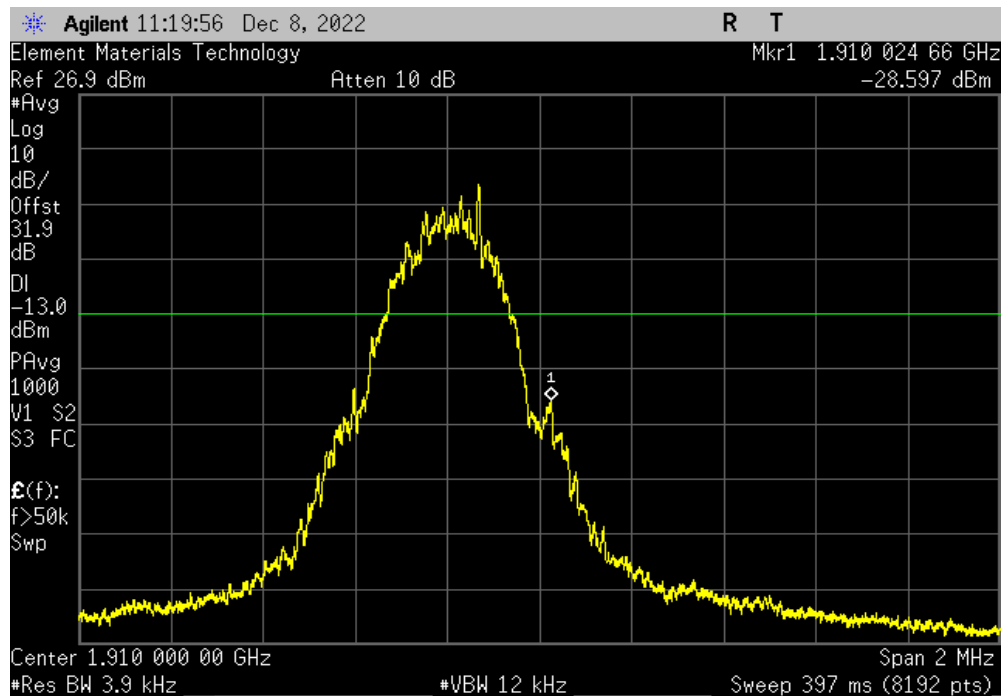


TUTX 2022.06.03.0 XMR 2022.02.07.0

GSM Band PCS-1900, Low Channel 512 (1852.4 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-48.31	-13	Pass



GSM Band PCS-1900, High Channel 810 (1909.8 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-28.6	-13	Pass

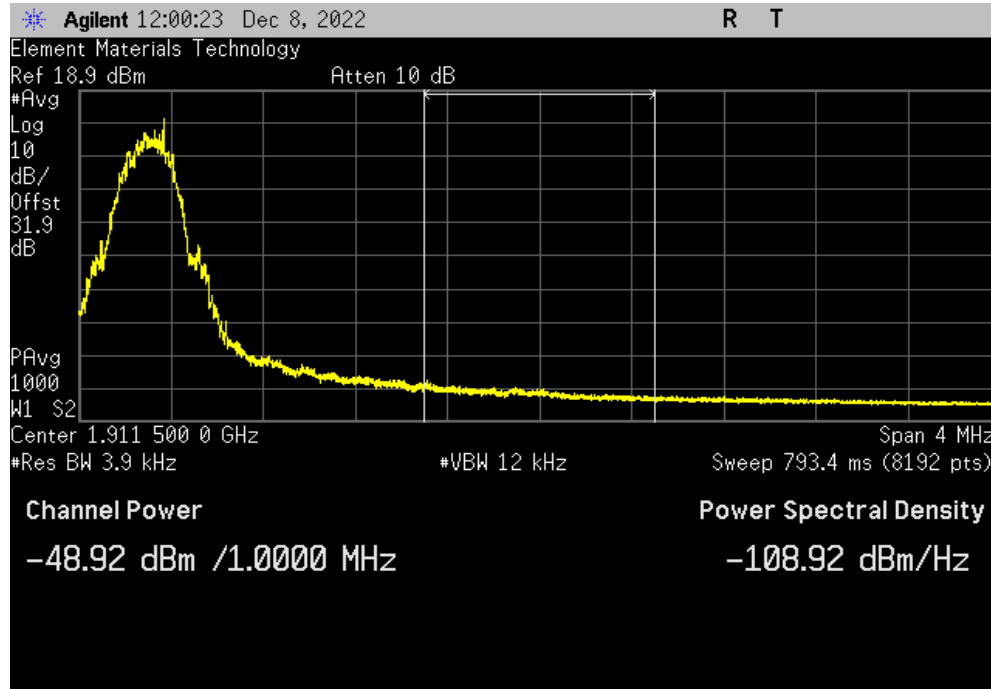


OUT OF BAND EMISSIONS - GSM BAND PCS-1900, WCDMA BAND II (PCS-1900)

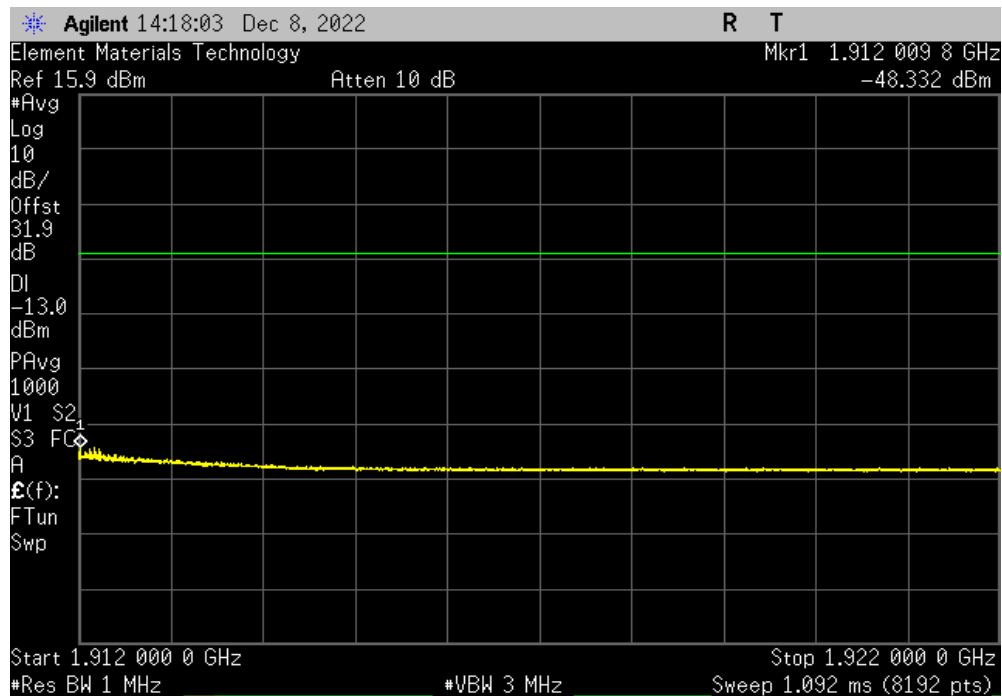


TUTx 2022.06.03.0 XMt 2022.02.07.0

GSM Band PCS-1900, High Channel 810 (1909.8 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-48.92	-13	Pass



GSM Band PCS-1900, High Channel 810 (1909.8 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-48.33	-13	Pass

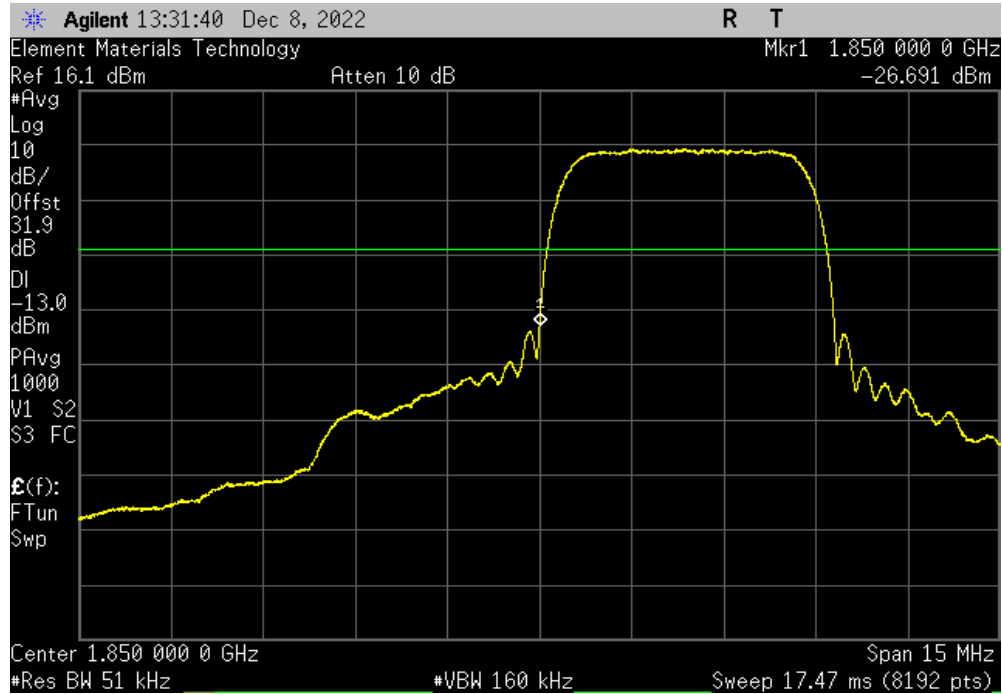


OUT OF BAND EMISSIONS - GSM BAND PCS-1900, WCDMA BAND II (PCS-1900)

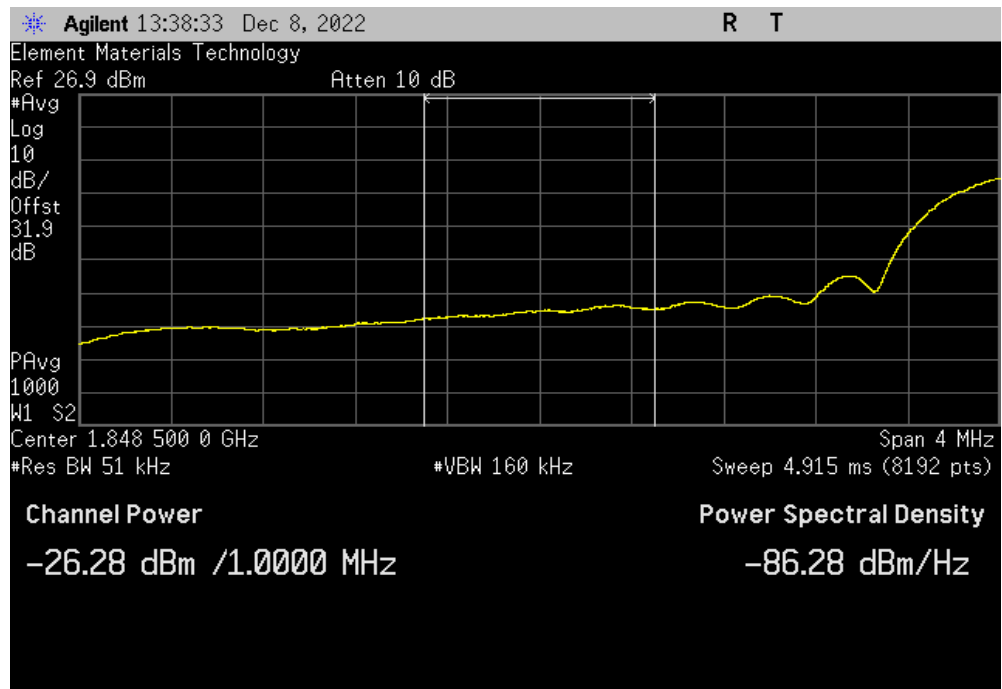


TUTTx 2022.06.03.0 XMt 2022.02.07.0

WCDMA Band II (PCS-1900), Low Channel 9262 (1852.4 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-26.69	-13	Pass



WCDMA Band II (PCS-1900), Low Channel 9262 (1852.4 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-26.28	-13	Pass

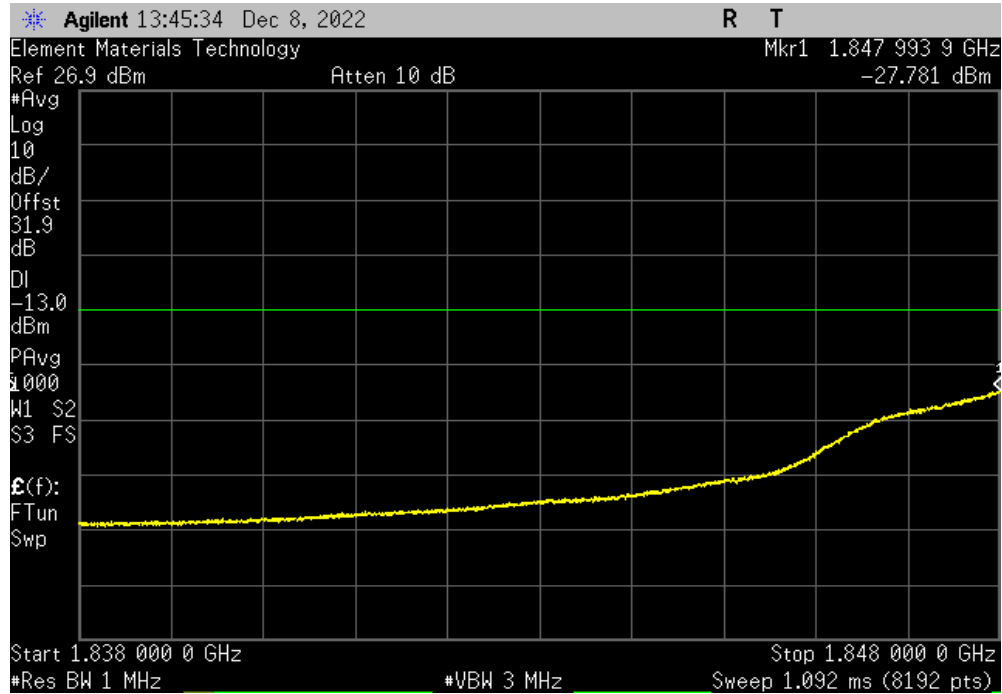


OUT OF BAND EMISSIONS - GSM BAND PCS-1900, WCDMA BAND II (PCS-1900)

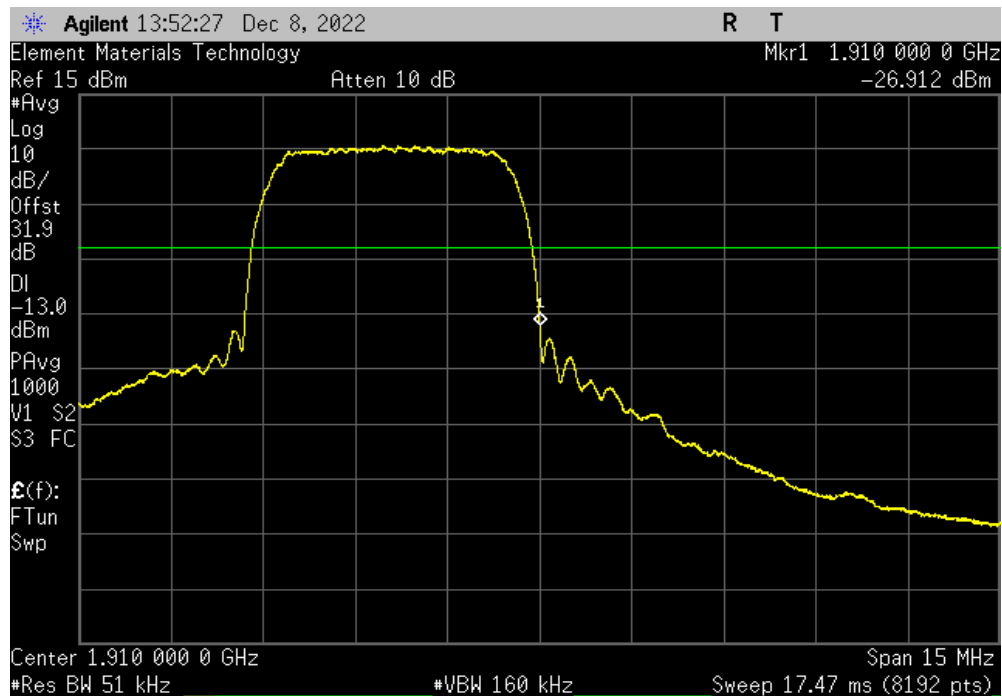


TUTx 2022.06.03.0 XMR 2022.02.07.0

WCDMA Band II (PCS-1900), Low Channel 9262 (1852.4 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-27.78	-13	Pass



WCDMA Band II (PCS-1900), High Channel 9538 (1907.6 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-26.91	-13	Pass

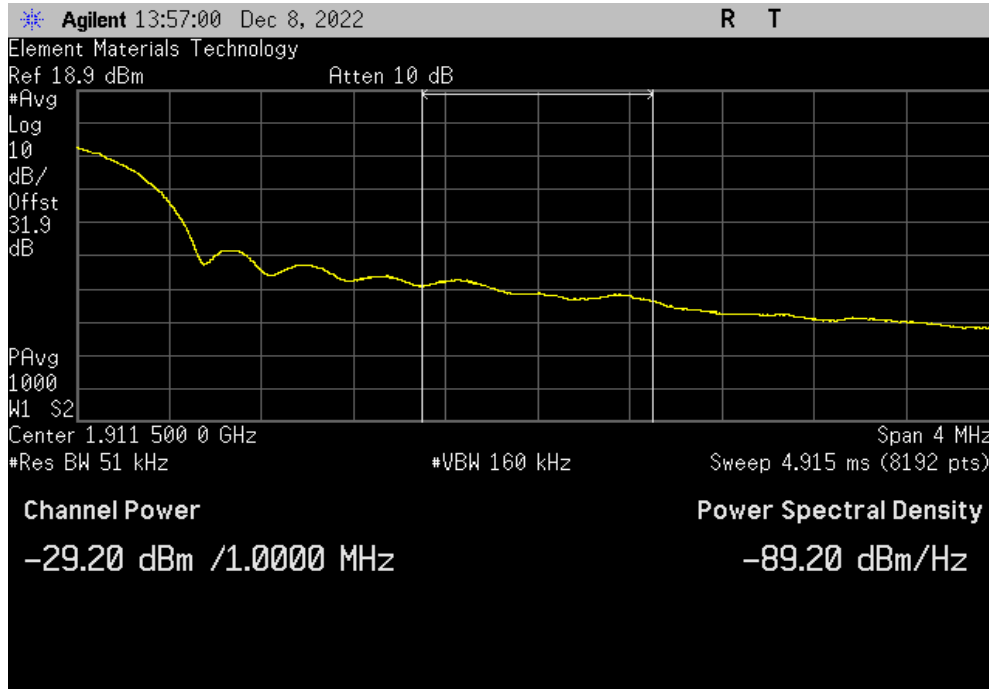


OUT OF BAND EMISSIONS - GSM BAND PCS-1900, WCDMA BAND II (PCS-1900)

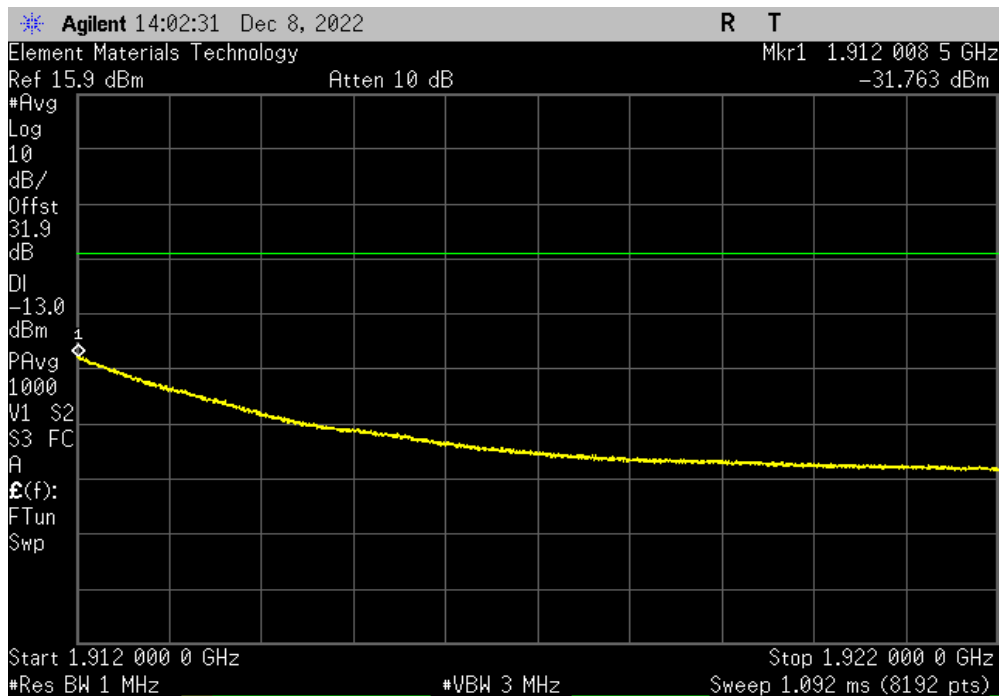


TUTTx 2022.06.03.0 XMR 2022.02.07.0

WCDMA Band II (PCS-1900), High Channel 9538 (1907.6 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-29.2	-13	Pass



WCDMA Band II (PCS-1900), High Channel 9538 (1907.6 MHz)						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-31.76	-13	Pass



OUT OF BAND EMISSIONS - WCDMA Band IV (AWS-1700)



TbTx 2022.06.03.0 XMit 2022.02.07.0

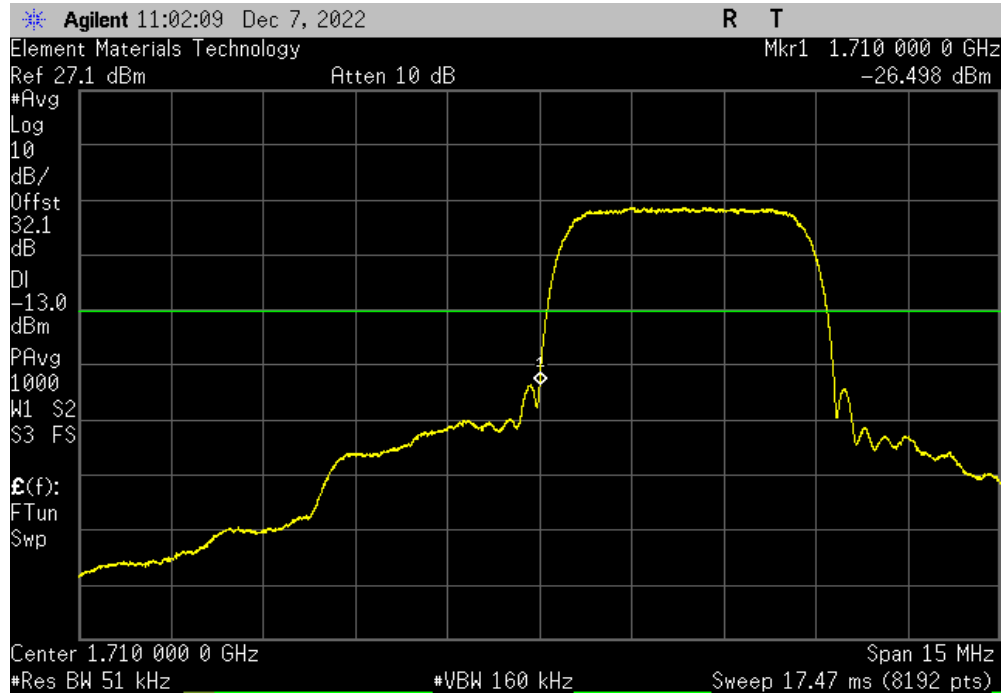
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 7-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19.3 °C	
Attendees: None		Humidity: 48.4% RH	
Project: None		Barometric Pres.: 1025 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
FCC 27:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965) Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0 Spot check of out of band emissions based on worst case: FCC ID: R17LE910CXWWX (Band Edge Emissions at Antenna Terminal) Reference Level Offset = SMA pigtail + directional coupler + coax cable + 20 dB attenuator + DC block			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Frequency Range	Max Value (dBm) Limit ≤ (dBm) Result
WCDMA Band IV (AWS-1700)			
		Low Channel 1312, 1712.4 MHz	1 -26.5 -13 N/A
		Low Channel 1312, 1712.4 MHz	2 -23.21 -13 N/A
		Low Channel 1312, 1712.4 MHz	3 -23.14 -13 N/A
		High Channel 1513, 1752.6 MHz	1 -26.9 -13 N/A
		High Channel 1513, 1752.6 MHz	2 -27.77 -13 N/A
		High Channel 1513, 1752.6 MHz	3 -27.31 -13 N/A

OUT OF BAND EMISSIONS - WCDMA Band IV (AWS-1700)



TUTx 2022.06.03.0 XMt 2022.02.07.0

WCDMA Band IV (AWS-1700), Low Channel 1312, 1712.4 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-26.5	-13	N/A



WCDMA Band IV (AWS-1700), Low Channel 1312, 1712.4 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-23.21	-13	N/A

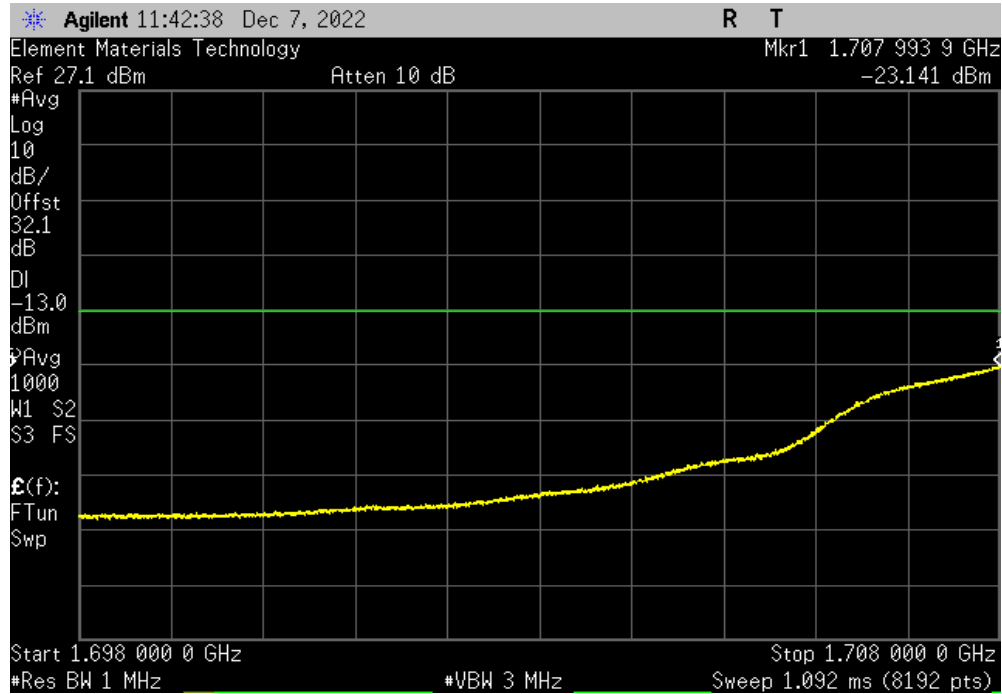


OUT OF BAND EMISSIONS - WCDMA Band IV (AWS-1700)

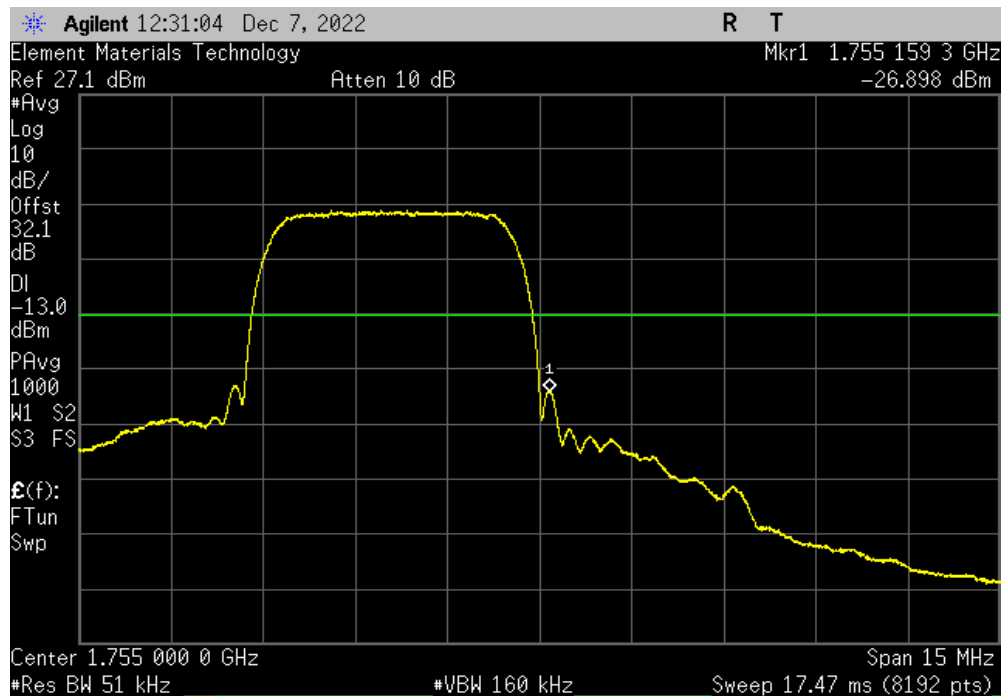


TUTx 2022.06.03.0 XMR 2022.02.07.0

WCDMA Band IV (AWS-1700), Low Channel 1312, 1712.4 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-23.14	-13	N/A



WCDMA Band IV (AWS-1700), High Channel 1513, 1752.6 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-26.9	-13	N/A

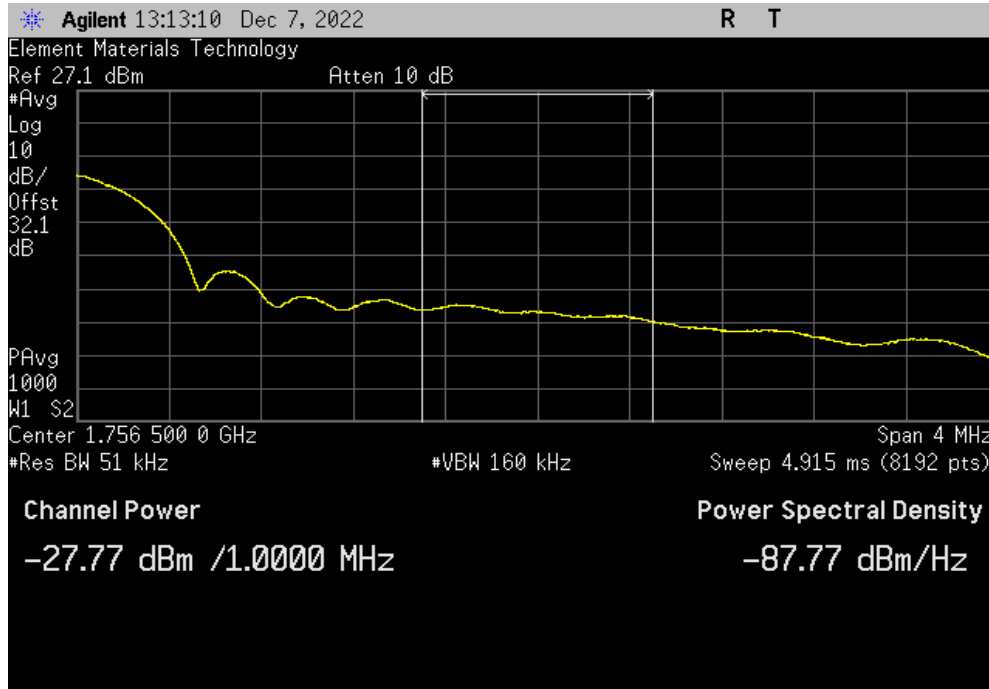


OUT OF BAND EMISSIONS - WCDMA Band IV (AWS-1700)

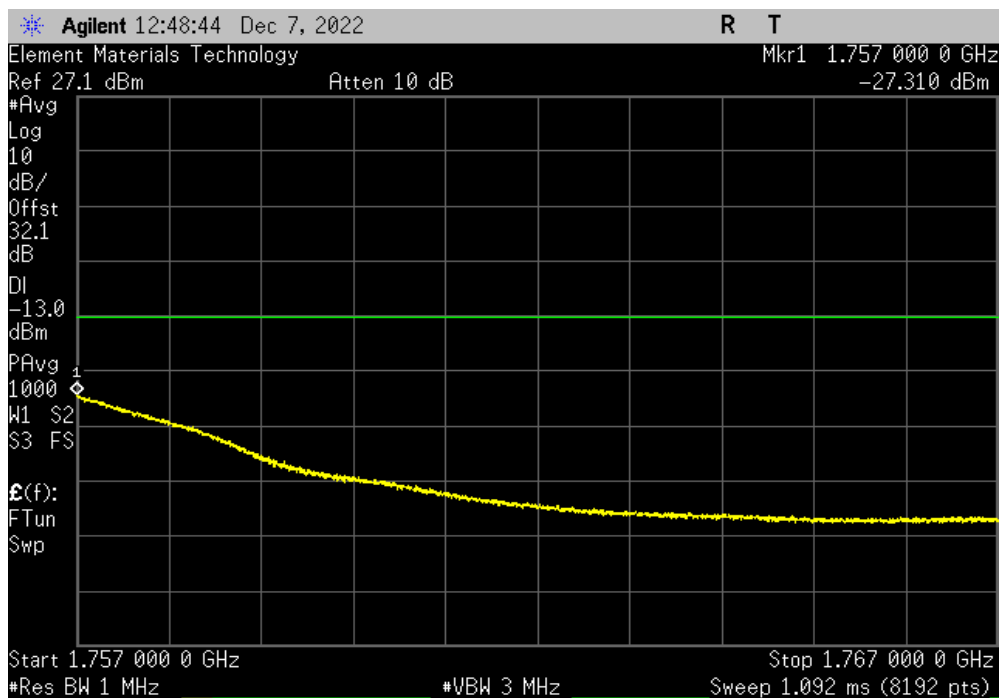


TUTx 2022.06.03.0 XMR 2022.02.07.0

WCDMA Band IV (AWS-1700), High Channel 1513, 1752.6 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-27.77	-13	N/A



WCDMA Band IV (AWS-1700), High Channel 1513, 1752.6 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-27.31	-13	N/A



OUT OF BAND EMISSIONS - LTE BAND 4, 12, & 13



ThruTv 2022.06.03.0 XMI 2022.02.07.0

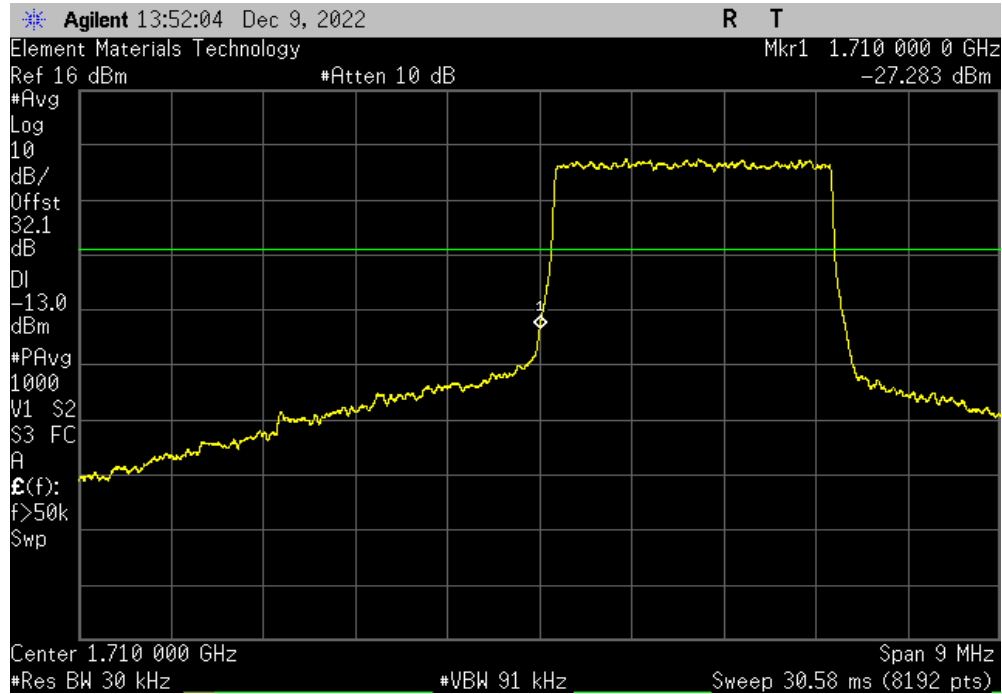
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 12-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Job Site: OC13	
Power: 3.8VDC			
TEST SPECIFICATIONS		Test Method	
FCC 27:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965)			
Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0			
Spot check of out of band emissions based on worst case: FCC ID: R17LE910CXWWX (Band Edge Emissions at Antenna Terminal)			
Reference Level Offset = SMA pigtail + directional coupler + coax cable + 20 dB attenuator + DC block			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Frequency Range	Max Value (dBm) Limit ≤ (dBm) Result
LTE Band 4			
3 MHz Bandwidth, QPSK, Full RB			
		Low Channel 19965, 1711.5 MHz	1 -27.28 -13 Pass
		Low Channel 19965, 1711.5 MHz	2 -24.94 -13 Pass
		Low Channel 19965, 1711.5 MHz	3 -26.98 -13 Pass
		High Channel 20385, 1753.5 MHz	1 -29.3 -13 Pass
		High Channel 20385, 1753.5 MHz	2 -28.65 -13 Pass
		High Channel 20385, 1753.5 MHz	3 -30.71 -13 Pass
LTE Band 12			
1.4 MHz Bandwidth, QPSK, Full RB			
		Low Channel 23017, 699.7 MHz	1 -46.38 -13 Pass
		Low Channel 23017, 699.7 MHz	2 -41.09 -13 Pass
		Low Channel 23017, 699.7 MHz	3 -54.26 -13 Pass
		High Channel 23173, 715.3 MHz	1 -30.14 -13 Pass
		High Channel 23173, 715.3 MHz	2 -35.44 -13 Pass
		High Channel 23173, 715.3 MHz	3 -49.66 -13 Pass
LTE Band 13			
5 MHz Bandwidth, QPSK, Full RB			
		Low Channel 23205, 779.5 MHz	1 -24.42 -13 Pass
		Low Channel 23205, 779.5 MHz	2 -32.88 -13 Pass
		Low Channel 23205, 779.5 MHz	3 -47.14 -13 Pass
		High Channel 23255, 784.5 MHz	1 -25.64 -13 Pass
		High Channel 23255, 784.5 MHz	2 -27.22 -13 Pass
		High Channel 23255, 784.5 MHz	3 -35.22 -13 Pass

OUT OF BAND EMISSIONS - LTE BAND 4, 12, & 13

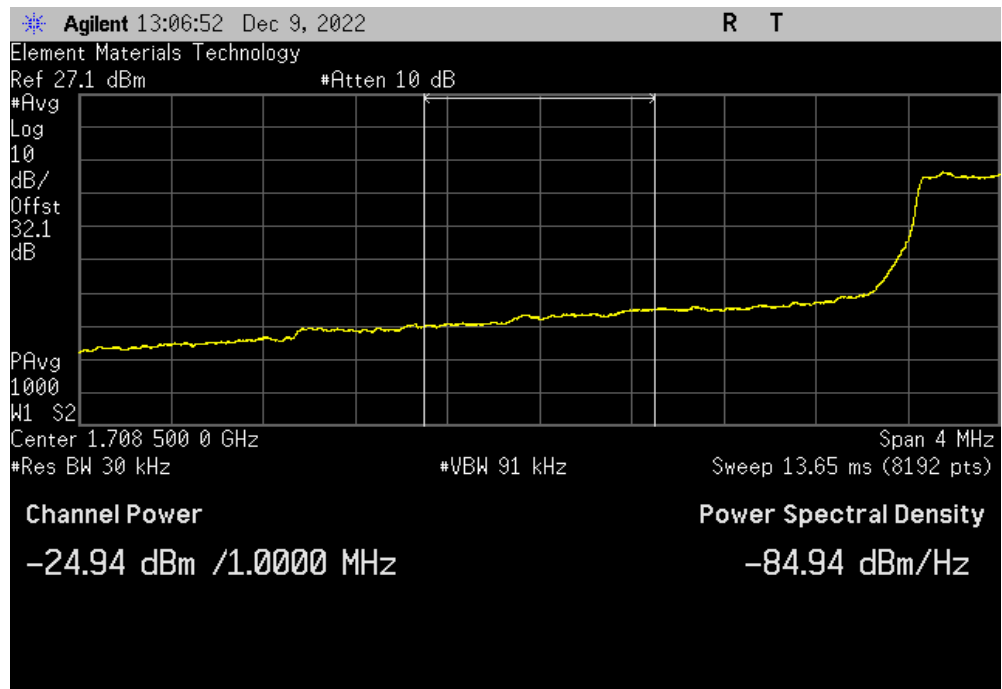


TMTx 2022.06.03.0 XMt 2022.02.07.0

LTE Band 4, 3 MHz Bandwidth, QPSK, Full RB, Low Channel 19965, 1711.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
1		-27.28	-13	Pass		



LTE Band 4, 3 MHz Bandwidth, QPSK, Full RB, Low Channel 19965, 1711.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
2		-24.94	-13	Pass		

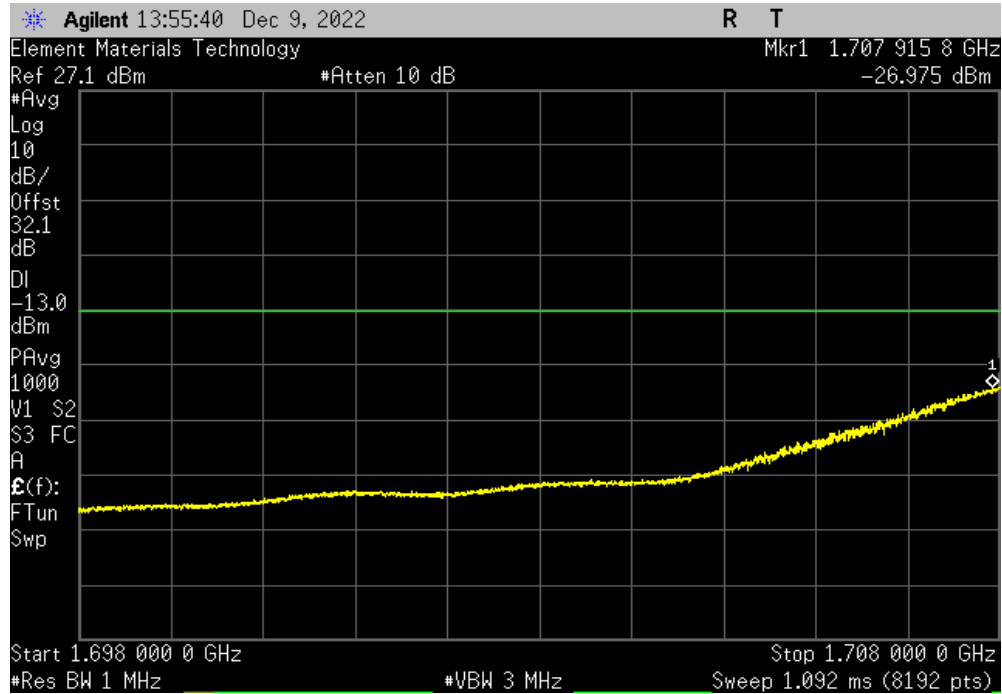


OUT OF BAND EMISSIONS - LTE BAND 4, 12, & 13

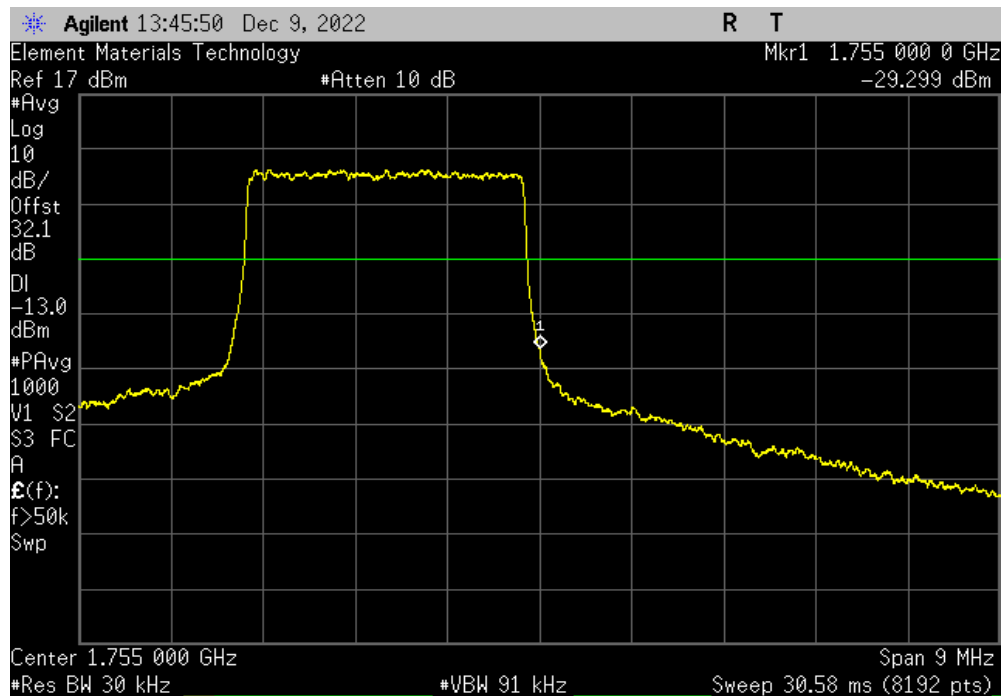


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 4, 3 MHz Bandwidth, QPSK, Full RB, Low Channel 19965, 1711.5 MHz						
Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result			
3	-26.98	-13	Pass			



LTE Band 4, 3 MHz Bandwidth, QPSK, Full RB, High Channel 20385, 1753.5 MHz						
Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result			
1	-29.3	-13	Pass			

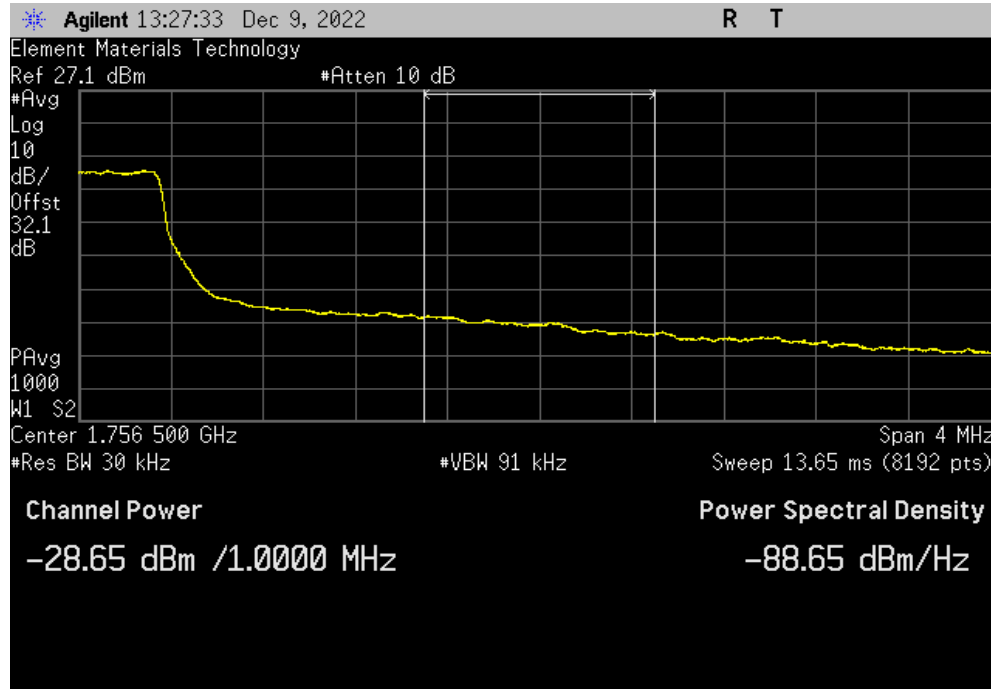


OUT OF BAND EMISSIONS - LTE BAND 4, 12, & 13

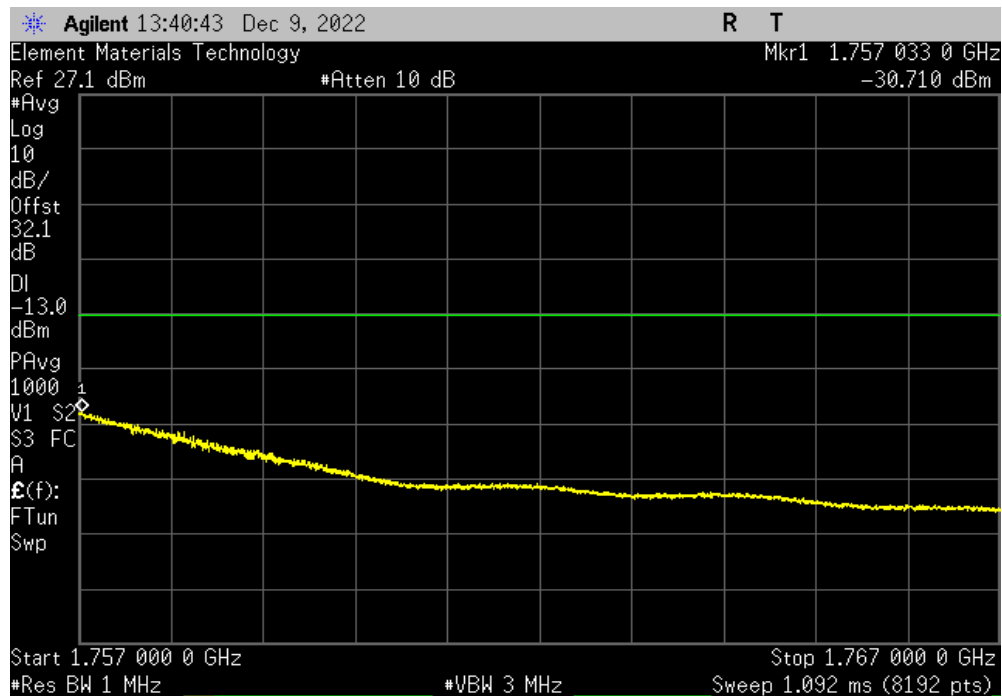


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 4, 3 MHz Bandwidth, QPSK, Full RB, High Channel 20385, 1753.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
2		-28.65	-13	Pass		



LTE Band 4, 3 MHz Bandwidth, QPSK, Full RB, High Channel 20385, 1753.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
3		-30.71	-13	Pass		

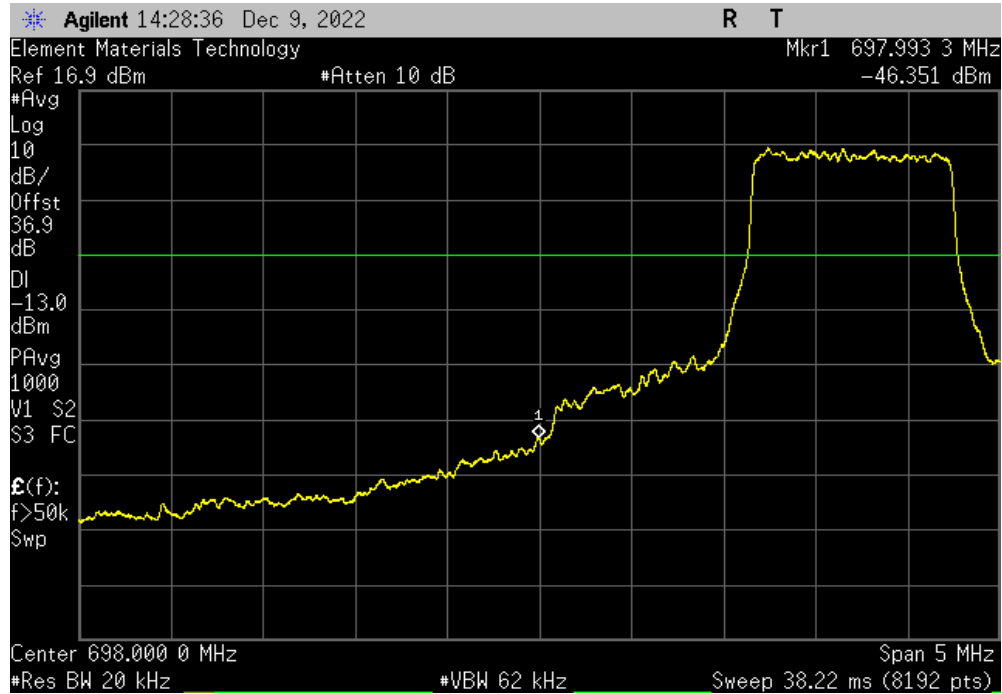


OUT OF BAND EMISSIONS - LTE BAND 4, 12, & 13

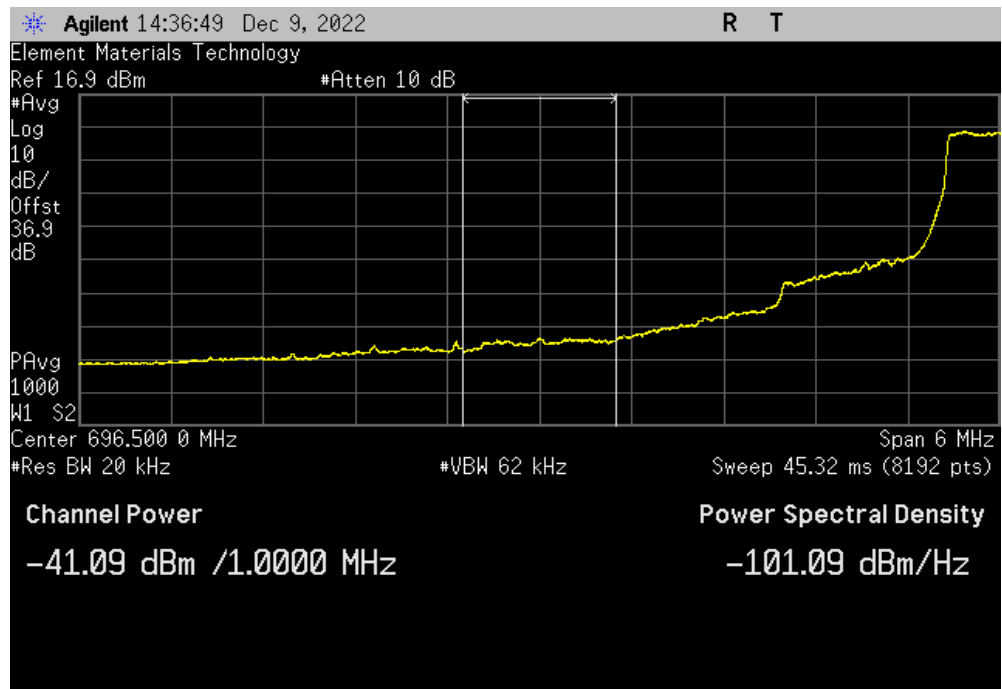


TMTx 2022.06.03.0 XMt 2022.02.07.0

LTE Band 12, 1.4 MHz Bandwidth, QPSK, Full RB, Low Channel 23017, 699.7 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
1		-46.38	-13	Pass		



LTE Band 12, 1.4 MHz Bandwidth, QPSK, Full RB, Low Channel 23017, 699.7 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
2		-41.09	-13	Pass		

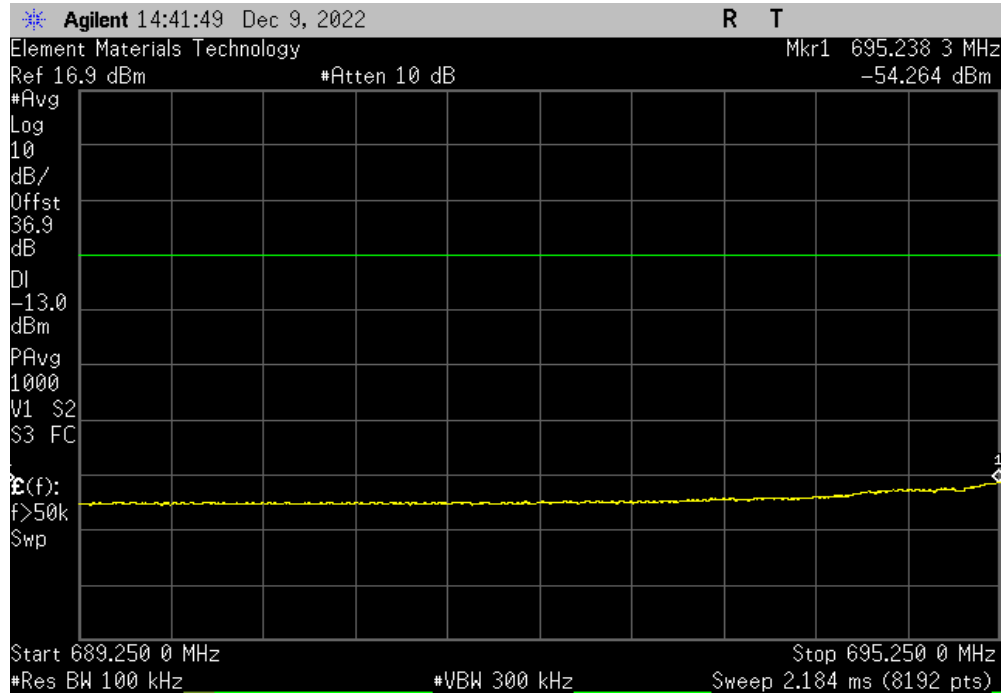


OUT OF BAND EMISSIONS - LTE BAND 4, 12, & 13

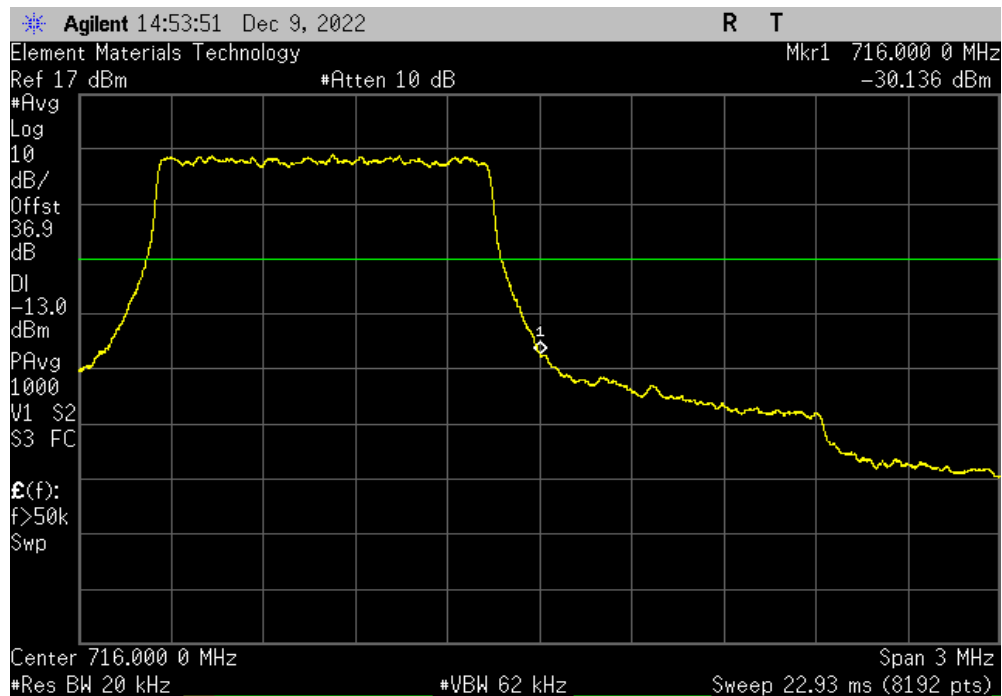


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 12, 1.4 MHz Bandwidth, QPSK, Full RB, Low Channel 23017, 699.7 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
3		-54.26	-13	Pass		



LTE Band 12, 1.4 MHz Bandwidth, QPSK, Full RB, High Channel 23173, 715.3 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
1		-30.14	-13	Pass		

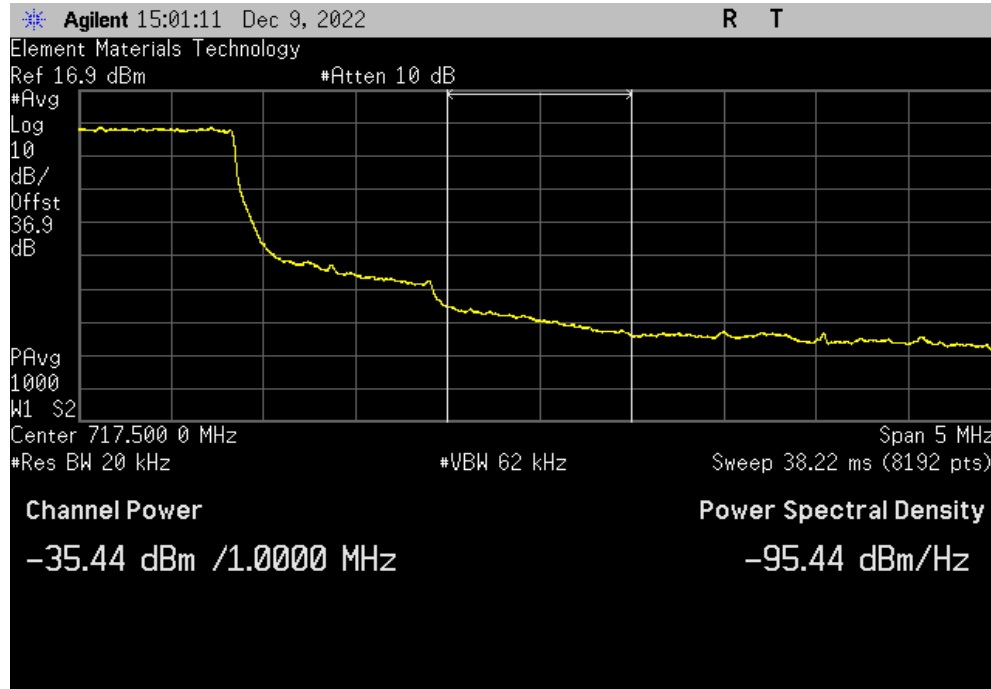


OUT OF BAND EMISSIONS - LTE BAND 4, 12, & 13

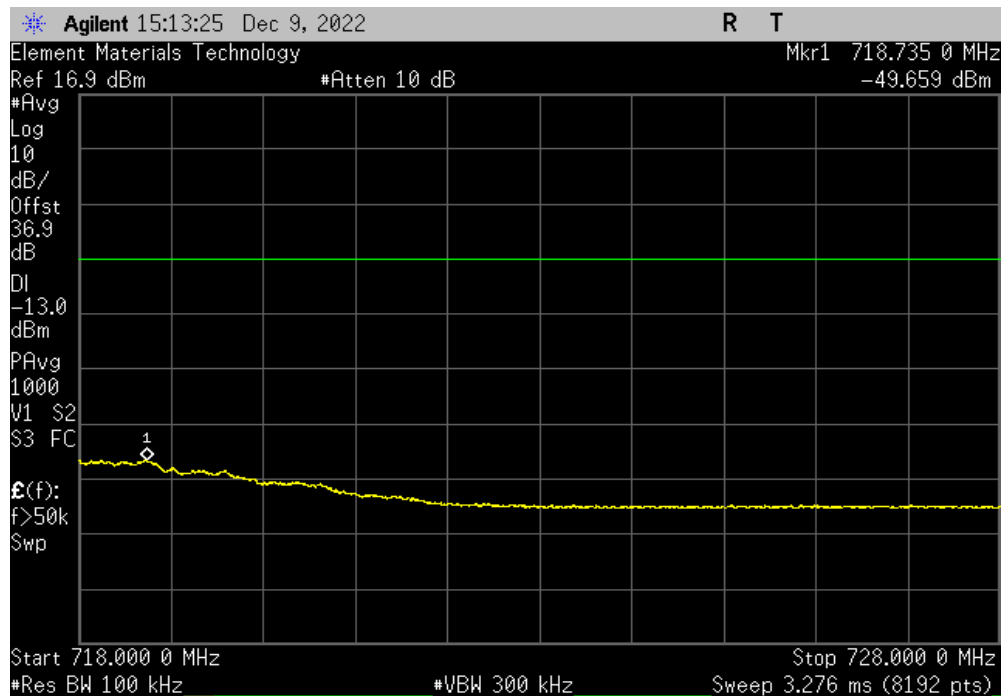


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 12, 1.4 MHz Bandwidth, QPSK, Full RB, High Channel 23173, 715.3 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
2		-35.44	-13	Pass		



LTE Band 12, 1.4 MHz Bandwidth, QPSK, Full RB, High Channel 23173, 715.3 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
3		-49.66	-13	Pass		

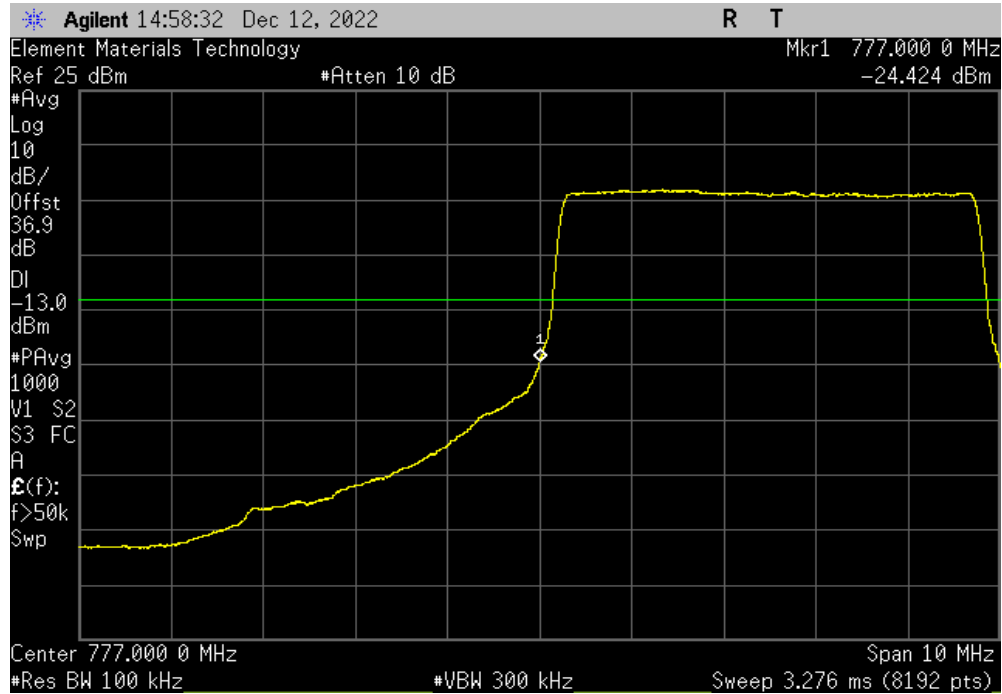


OUT OF BAND EMISSIONS - LTE BAND 4, 12, & 13

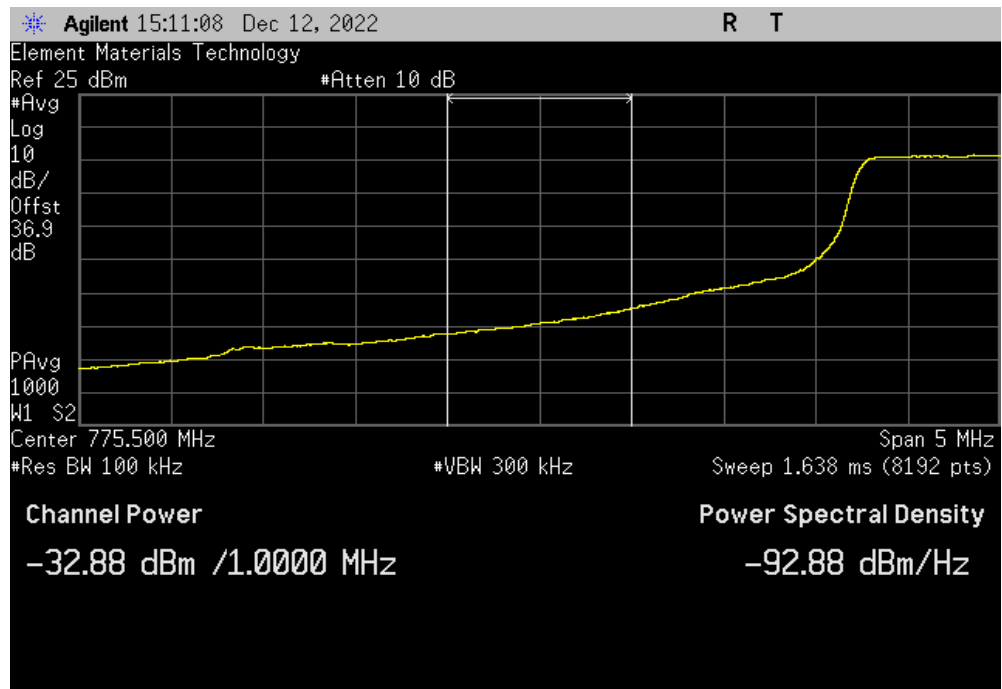


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 13, 5 MHz Bandwidth, QPSK, Full RB, Low Channel 23205, 779.5 MHz						
Frequency Range		Max Value (dBm)		Limit ≤ (dBm)		Result
1		-24.42		-13		Pass



LTE Band 13, 5 MHz Bandwidth, QPSK, Full RB, Low Channel 23205, 779.5 MHz						
Frequency Range		Max Value (dBm)		Limit ≤ (dBm)		Result
2		-32.88		-13		Pass

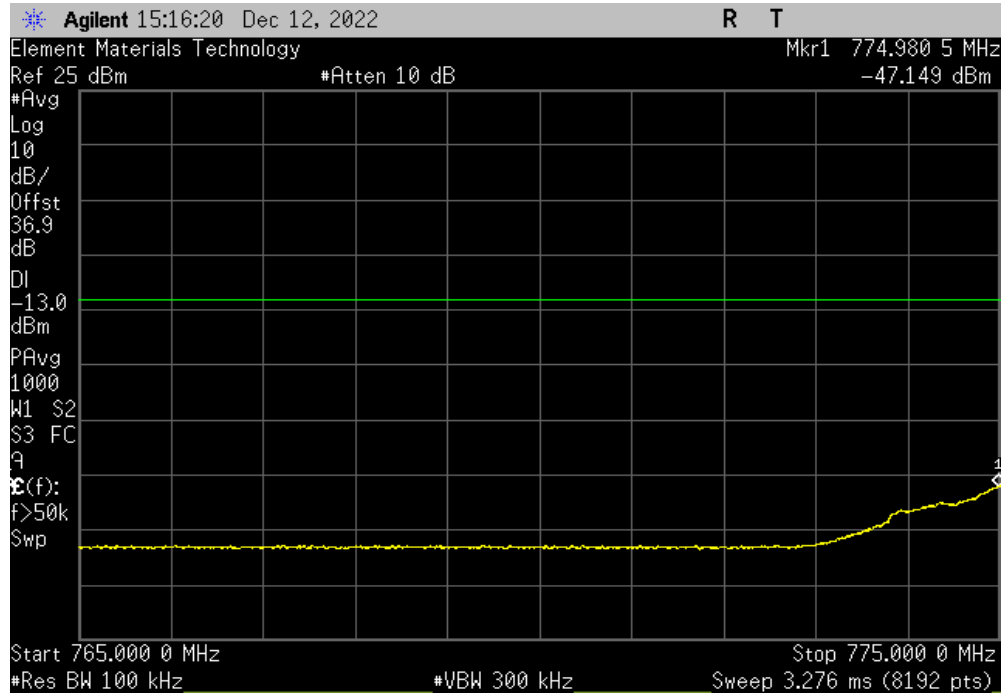


OUT OF BAND EMISSIONS - LTE BAND 4, 12, & 13

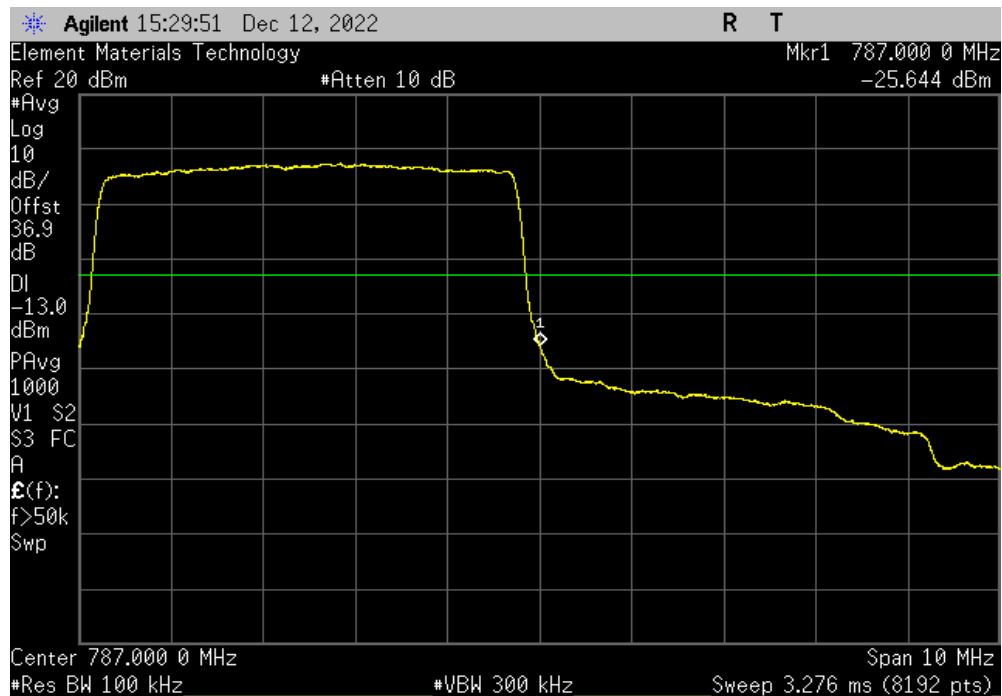


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 13, 5 MHz Bandwidth, QPSK, Full RB, Low Channel 23205, 779.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
3		-47.14	-13	Pass		



LTE Band 13, 5 MHz Bandwidth, QPSK, Full RB, High Channel 23255, 784.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
1		-25.64	-13	Pass		

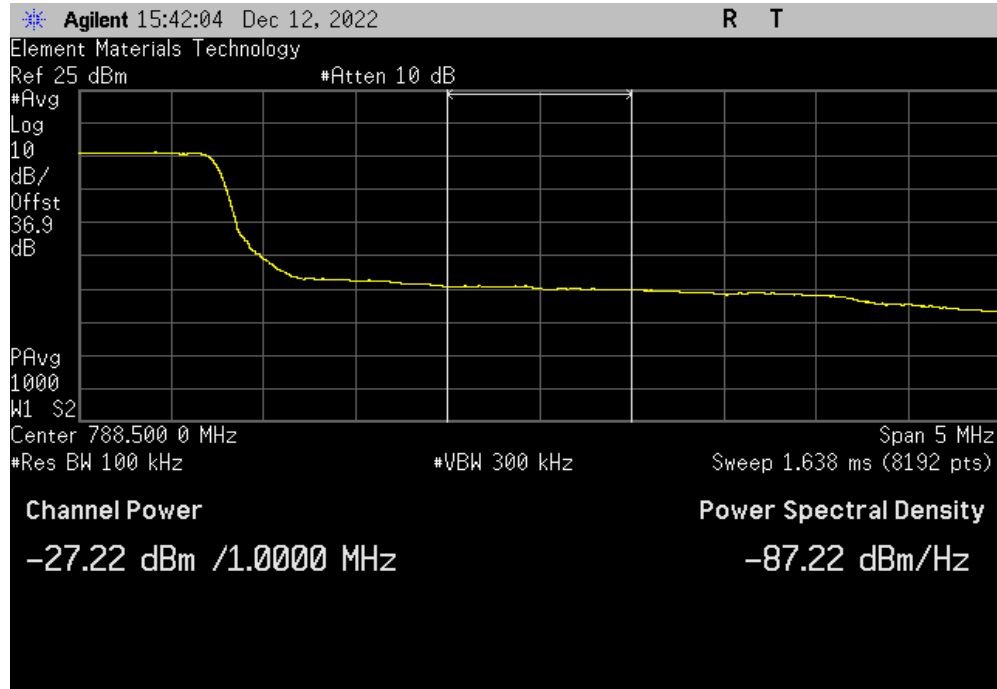


OUT OF BAND EMISSIONS - LTE BAND 4, 12, & 13

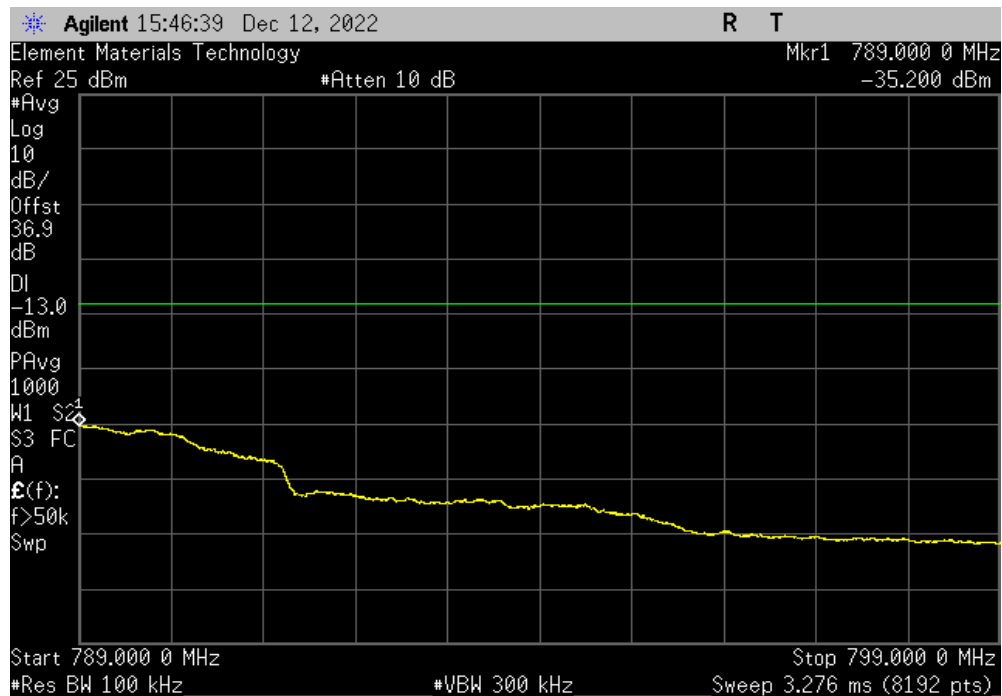


TUTTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 13, 5 MHz Bandwidth, QPSK, Full RB, High Channel 23255, 784.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
2		-27.22	-13	Pass		



LTE Band 13, 5 MHz Bandwidth, QPSK, Full RB, High Channel 23255, 784.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
3		-35.22	-13	Pass		



OUT OF BAND EMISSIONS - LTE BAND 14



TbTx 2022.06.03.0 XMI 2022.02.07.0

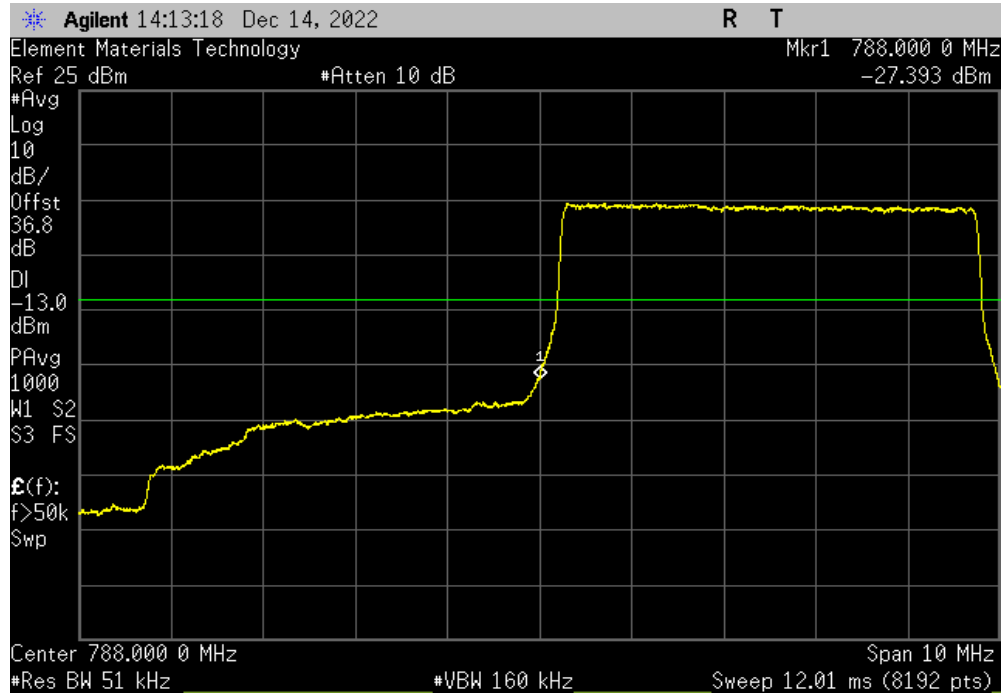
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 13-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
Job Site: OC13			
TEST SPECIFICATIONS		Test Method	
FCC 90R:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965) Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0 Spot check of out of band emissions based on worst case: FCC ID: RI7LE910CXWWX (Band Edge Emissions at Antenna Terminal) Reference Level Offset = SMA pigtail + directional coupler + coax cable + 20 dB attenuator + DC block			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Frequency Range	Max Value (dBm) Limit ≤ (dBm) Result
LTE Band 14			
5 MHz Bandwidth, QPSK, Full RB			
	Low Channel 23305, 790.5 MHz	1	-27.39 -13 Pass
	Low Channel 23305, 790.5 MHz	2	-21.86 -13 Pass
	Low Channel 23305, 790.5 MHz	3	-31.79 -13 Pass
	Low Channel 23305, 790.5 MHz	4	-69.34 -13 Pass
	High Channel 23355, 795.5 MHz	1	-30.26 -13 Pass
	High Channel 23355, 795.5 MHz	2	-44.89 -13 Pass

OUT OF BAND EMISSIONS - LTE BAND 14

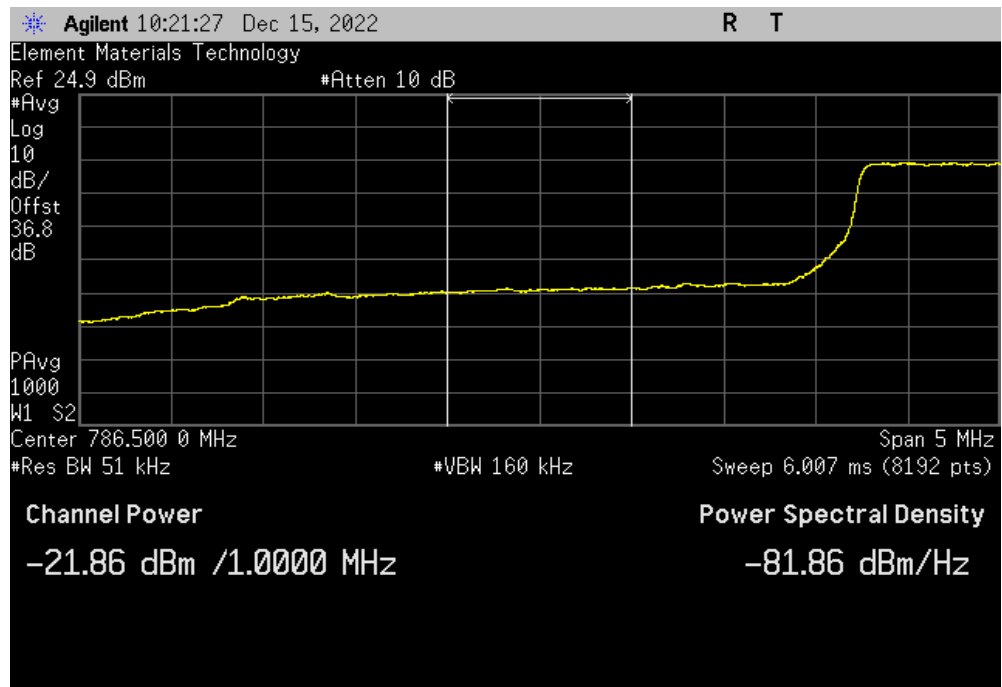


TUTx 2022.06.03.0 XMt 2022.02.07.0

LTE Band 14, 5 MHz Bandwidth, QPSK, Full RB, Low Channel 23305, 790.5 MHz						
Frequency Range		Max Value (dBm)		Limit ≤ (dBm)		Result
1		-27.39		-13		Pass



LTE Band 14, 5 MHz Bandwidth, QPSK, Full RB, Low Channel 23305, 790.5 MHz						
Frequency Range		Max Value (dBm)		Limit ≤ (dBm)		Result
2		-21.86		-13		Pass

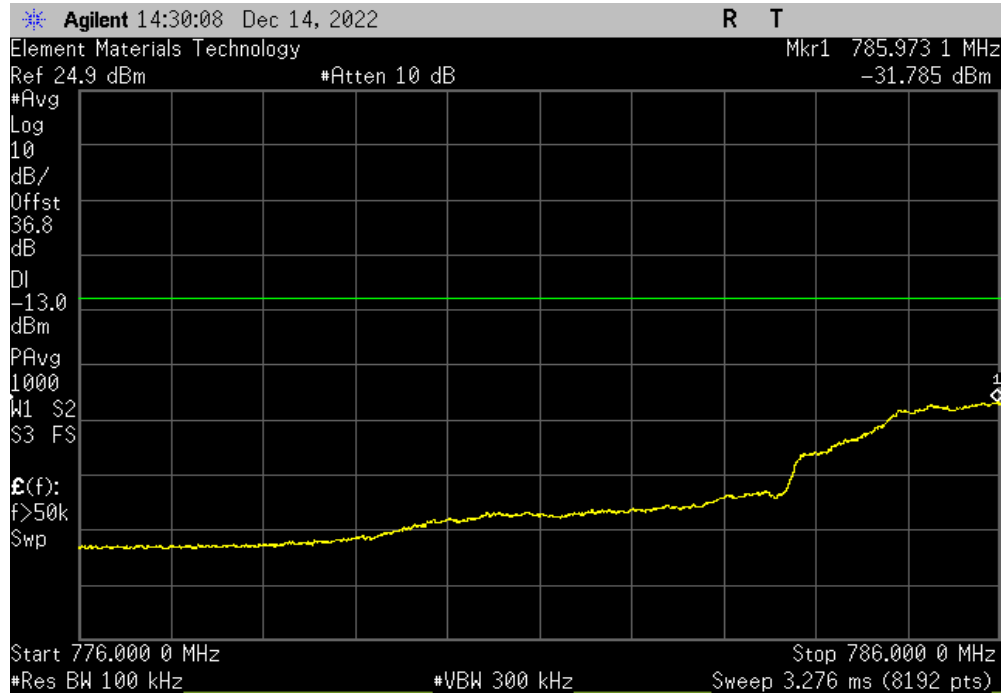


OUT OF BAND EMISSIONS - LTE BAND 14

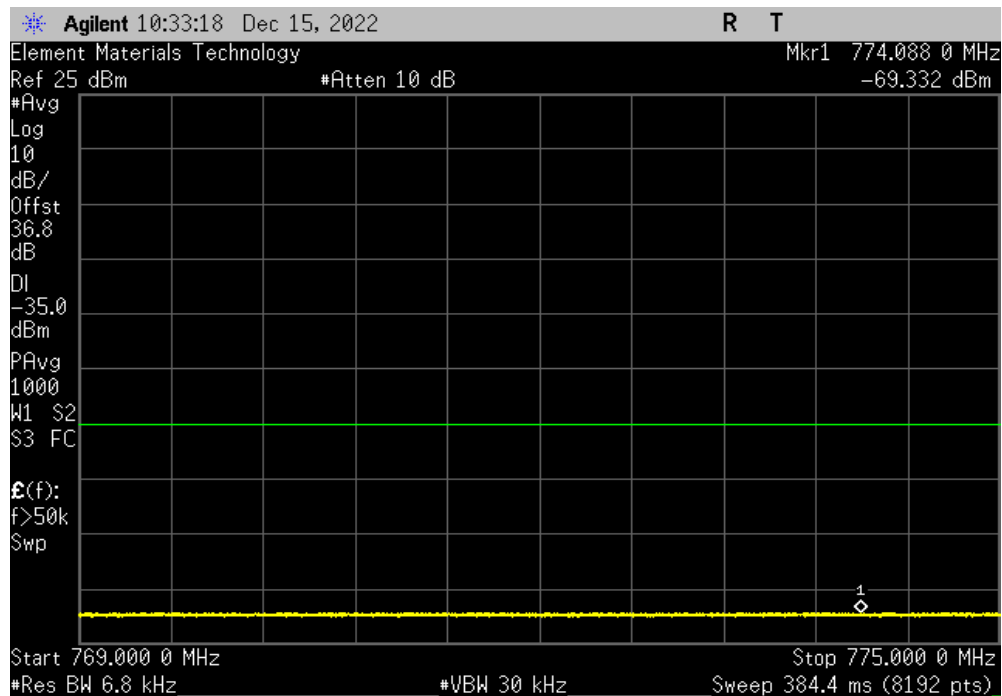


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 14, 5 MHz Bandwidth, QPSK, Full RB, Low Channel 23305, 790.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
3		-31.79	-13	Pass		



LTE Band 14, 5 MHz Bandwidth, QPSK, Full RB, Low Channel 23305, 790.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
4		-69.34	-13	Pass		

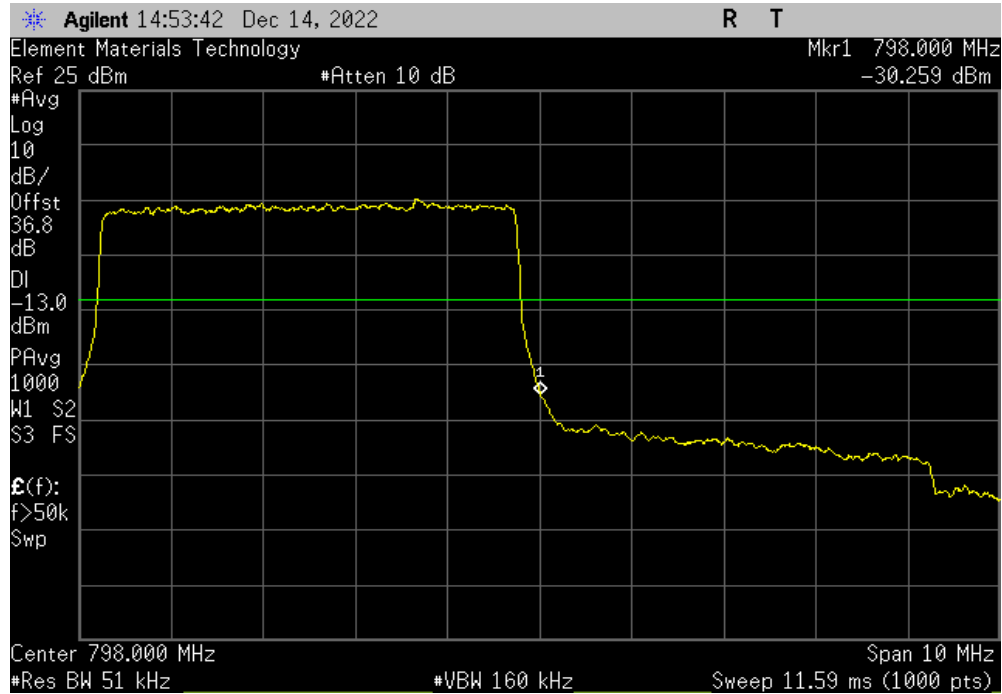


OUT OF BAND EMISSIONS - LTE BAND 14

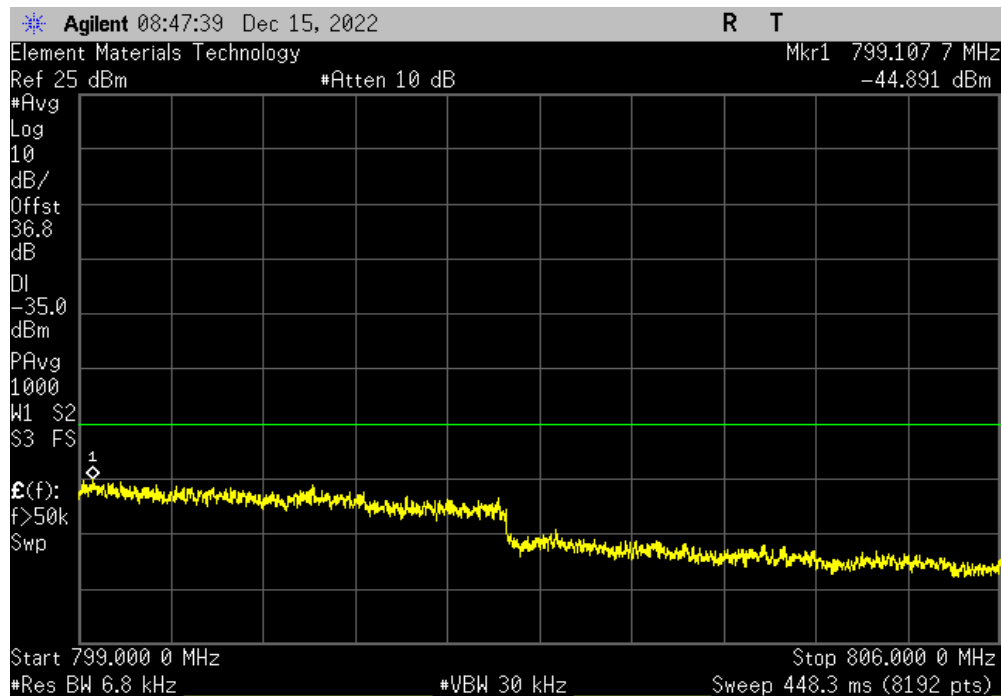


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 14, 5 MHz Bandwidth, QPSK, Full RB, High Channel 23355, 795.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
1		-30.26	-13	Pass		



LTE Band 14, 5 MHz Bandwidth, QPSK, Full RB, High Channel 23355, 795.5 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
2		-44.89	-13	Pass		



OUT OF BAND EMISSIONS - LTE BAND 25/2



TbTx 2022.06.03.0 XMI 2022.02.07.0

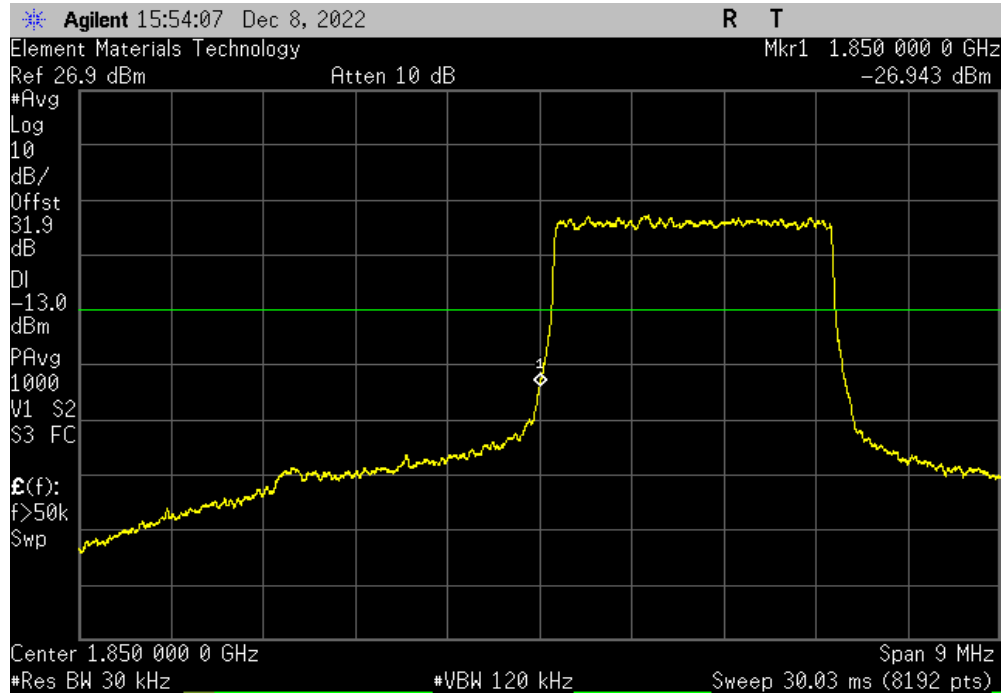
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 8-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19.3 °C	
Attendees: None		Humidity: 48.4% RH	
Project: None		Barometric Pres.: 1025 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
FCC 24E:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965) Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0 Spot check of out of band emissions based on worst case: FCC ID: R17LE910CXWWX (Band Edge Emissions at Antenna Terminal) Reference Level Offset = SMA pigtail + directional coupler + coax cable + 20 dB attenuator + DC block			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Frequency Range	Max Value (dBm) Limit ≤ (dBm) Result
LTE Band 25/2			
3 MHz Bandwidth, QPSK, Full RB			
		Low Channel 26055 (Band 25), 18615 (Band 2), 1851.5 MHz	1 -26.94 -13 Pass
		Low Channel 26055 (Band 25), 18615 (Band 2), 1851.5 MHz	2 -27.01 -13 Pass
		Low Channel 26055 (Band 25), 18615 (Band 2), 1851.5 MHz	3 -27.38 -13 Pass
LTE Band 2			
3 MHz Bandwidth, QPSK, Full RB			
		High Channel 19185, 1908.5 MHz	1 -27.46 -13 Pass
		High Channel 19185, 1908.5 MHz	2 -29.26 -13 Pass
		High Channel 19185, 1908.5 MHz	3 -30.32 -13 Pass
LTE Band 25			
3 MHz Bandwidth, QPSK, Full RB			
		High Channel 26675, 1913.5 MHz	1 -26.8 -13 Pass
		High Channel 26675, 1913.5 MHz	2 -25.91 -13 Pass
		High Channel 26675, 1913.5 MHz	3 -27.54 -13 Pass

OUT OF BAND EMISSIONS - LTE BAND 25/2

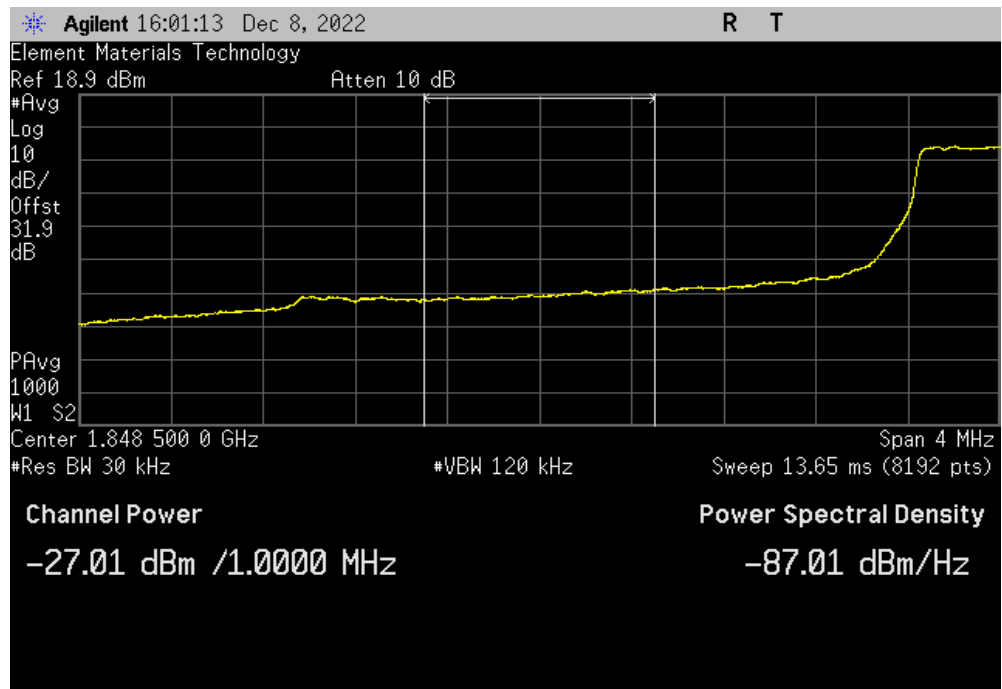


TUTTx 2022.06.03.0 XMt 2022.02.07.0

LTE Band 25/2, 3 MHz Bandwidth, QPSK, Full RB, Low Channel 26055 (Band 25), 18615 (Band 2), 1851.5 MHz						
Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result			
1	-26.94	-13	Pass			



LTE Band 25/2, 3 MHz Bandwidth, QPSK, Full RB, Low Channel 26055 (Band 25), 18615 (Band 2), 1851.5 MHz						
Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result			
2	-27.01	-13	Pass			

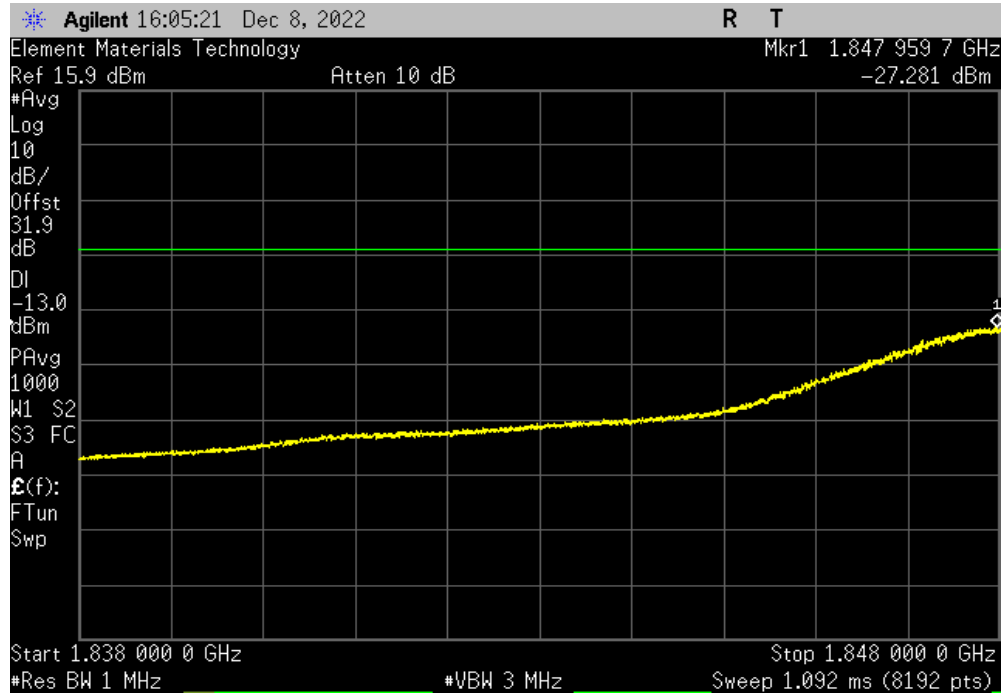


OUT OF BAND EMISSIONS - LTE BAND 25/2

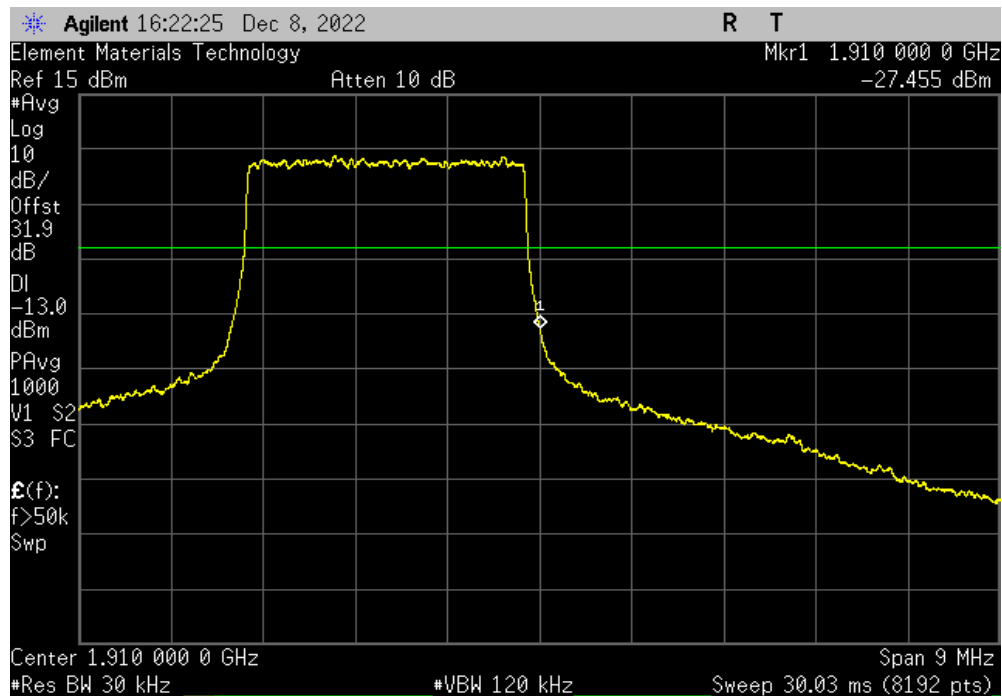


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 25/2, 3 MHz Bandwidth, QPSK, Full RB, Low Channel 26055 (Band 25), 18615 (Band 2), 1851.5 MHz						
Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result			
3	-27.38	-13	Pass			



LTE Band 2, 3 MHz Bandwidth, QPSK, Full RB, High Channel 19185, 1908.5 MHz						
Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result			
1	-27.46	-13	Pass			

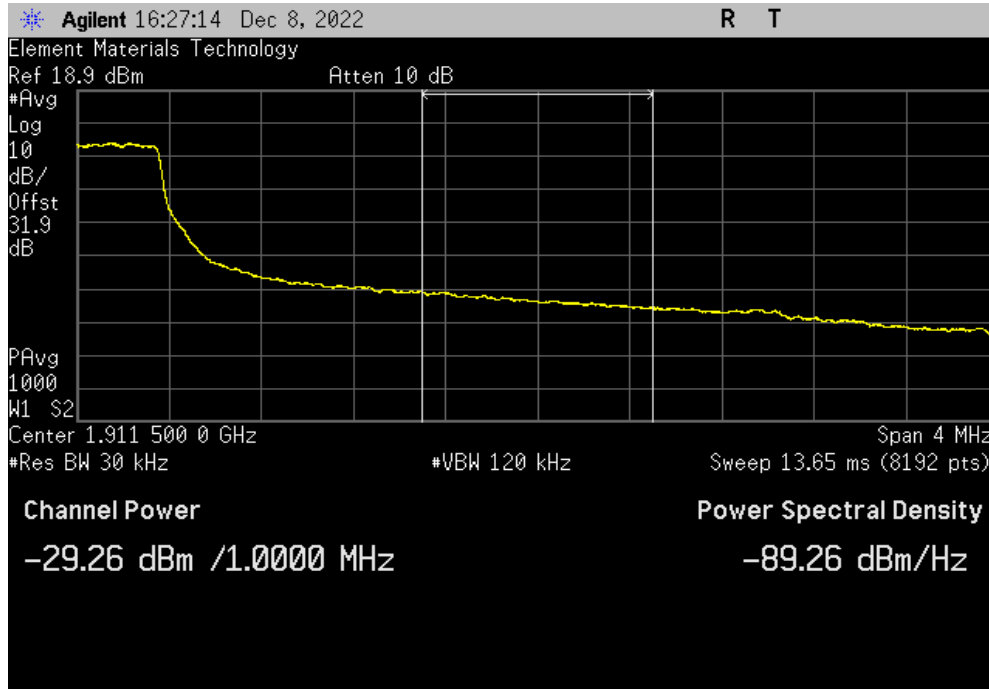


OUT OF BAND EMISSIONS - LTE BAND 25/2

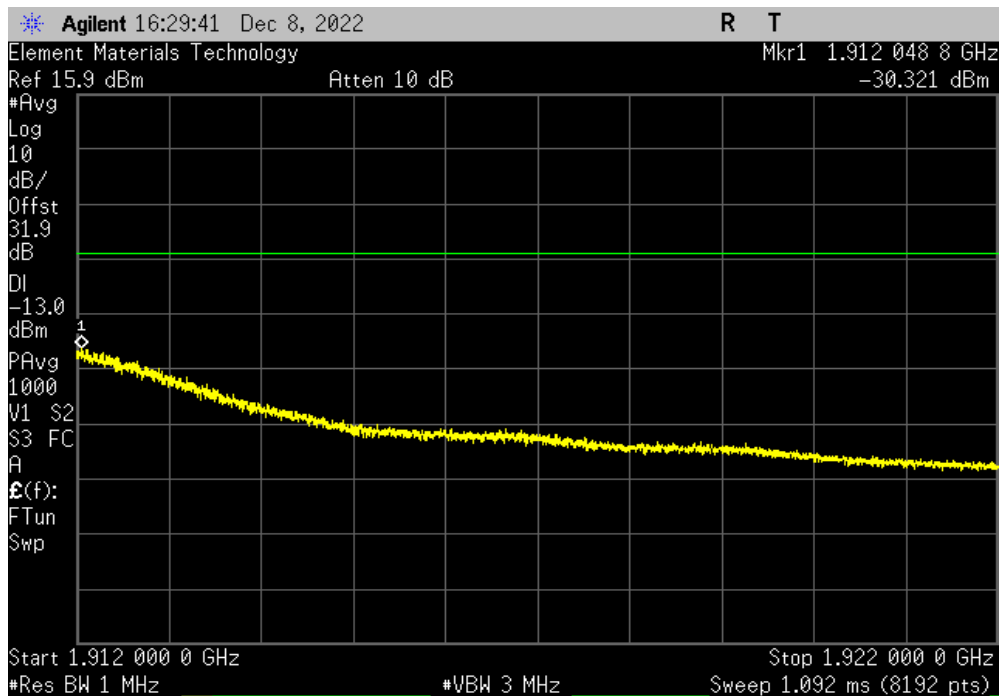


TUTTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 2, 3 MHz Bandwidth, QPSK, Full RB, High Channel 19185, 1908.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-29.26	-13	Pass



LTE Band 2, 3 MHz Bandwidth, QPSK, Full RB, High Channel 19185, 1908.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-30.32	-13	Pass

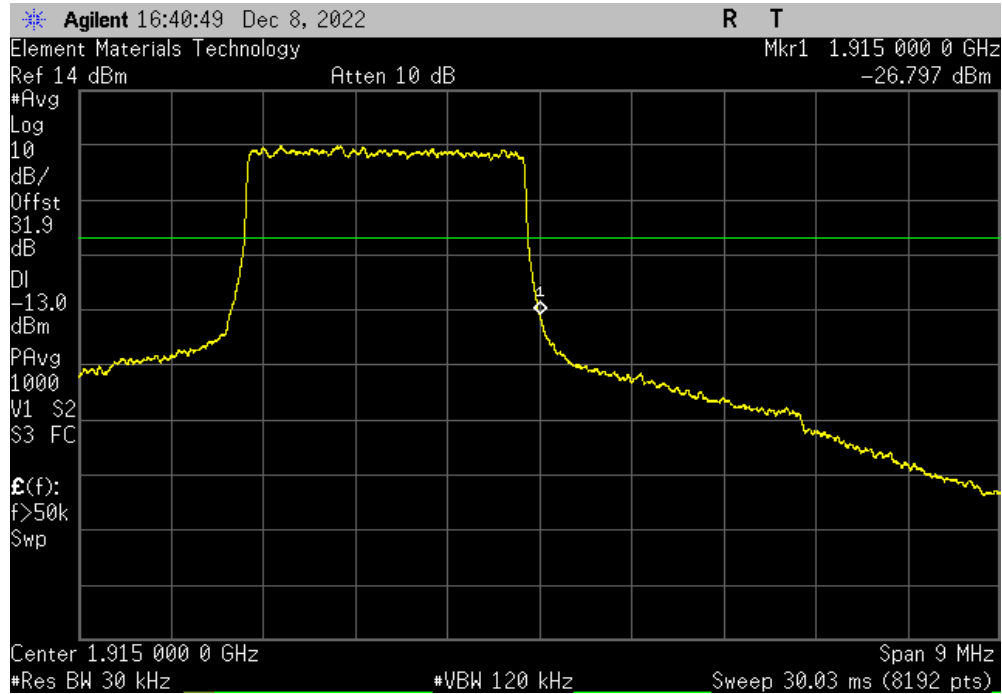


OUT OF BAND EMISSIONS - LTE BAND 25/2

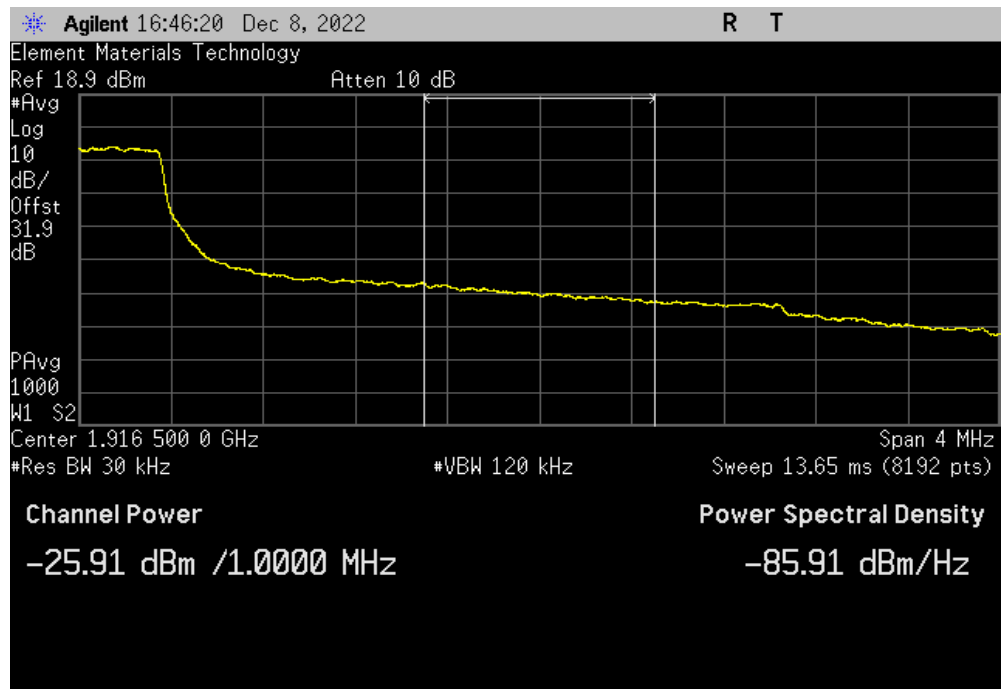


TUTx 2022.06.03.0 XMt 2022.02.07.0

LTE Band 25, 3 MHz Bandwidth, QPSK, Full RB, High Channel 26675, 1913.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-26.8	-13	Pass



LTE Band 25, 3 MHz Bandwidth, QPSK, Full RB, High Channel 26675, 1913.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-25.91	-13	Pass

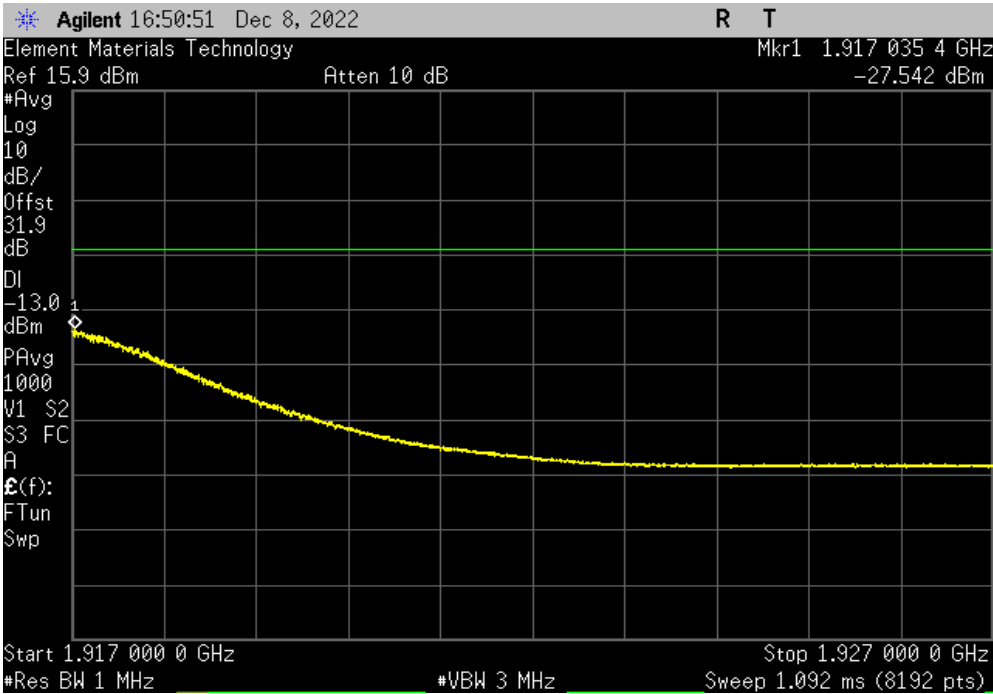


OUT OF BAND EMISSIONS -
LTE BAND 25/2



TbTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 25, 3 MHz Bandwidth, QPSK, Full RB, High Channel 26675, 1913.5 MHz						
Frequency Range	Max Value (dBm)			Limit ≤ (dBm)	Result	
3	-27.54			-13	Pass	



OUT OF BAND EMISSIONS - LTE BAND 26



TbTx 2022.06.03.0 XMi 2022.02.07.0

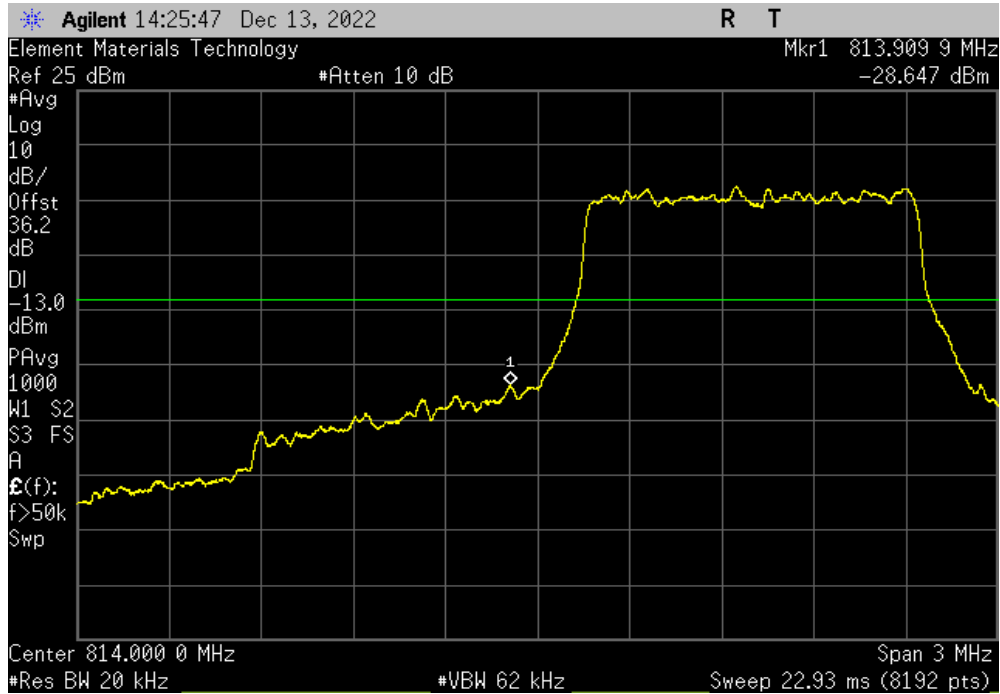
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 13-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
FCC 90I:2022		ANSI C63.26:2015	
FCC 22H:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965)			
Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0			
Spot check of out of band emissions based on worst case: FCC ID: R17LE910CXWWX (Band Edge Emissions at Antenna Terminal)			
Reference Level Offset = SMA pigtail + directional coupler + coax cable + 20 dB attenuator + DC block			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Frequency Range	Max Value (dBm)
			Limit ≤ (dBm)
			Result
LTE Band 26			
1.4 MHz Bandwidth, QPSK, Full RB			
	Low Channel	26697, 814.7 MHz	1
	Low Channel	26697, 814.7 MHz	2
	Low Channel	26697, 814.7 MHz	3
	High Channel	26783, 823.3 MHz	1
	High Channel	26783, 823.3 MHz	2
	High Channel	26783, 823.3 MHz	3
			-28.65
			-32.89
			-54.8
			-27.63
			-33.6
			-49.09
			-13
			-13
			-13
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass

OUT OF BAND EMISSIONS - LTE BAND 26

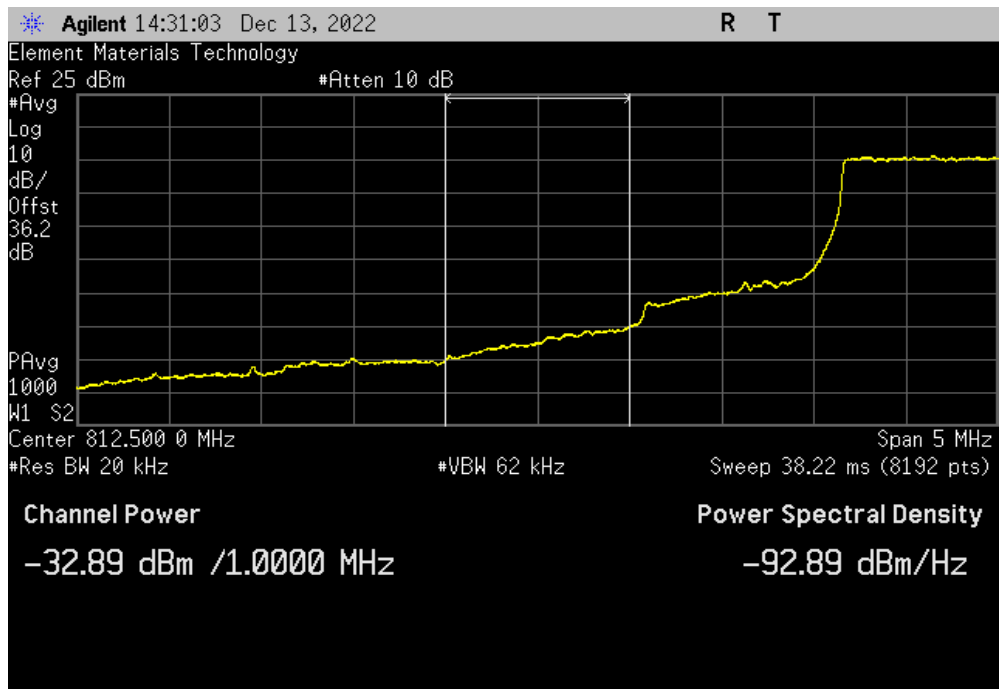


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 26, 1.4 MHz Bandwidth, QPSK, Full RB, Low Channel 26697, 814.7 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-28.65	-13	Pass



LTE Band 26, 1.4 MHz Bandwidth, QPSK, Full RB, Low Channel 26697, 814.7 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-32.89	-13	Pass

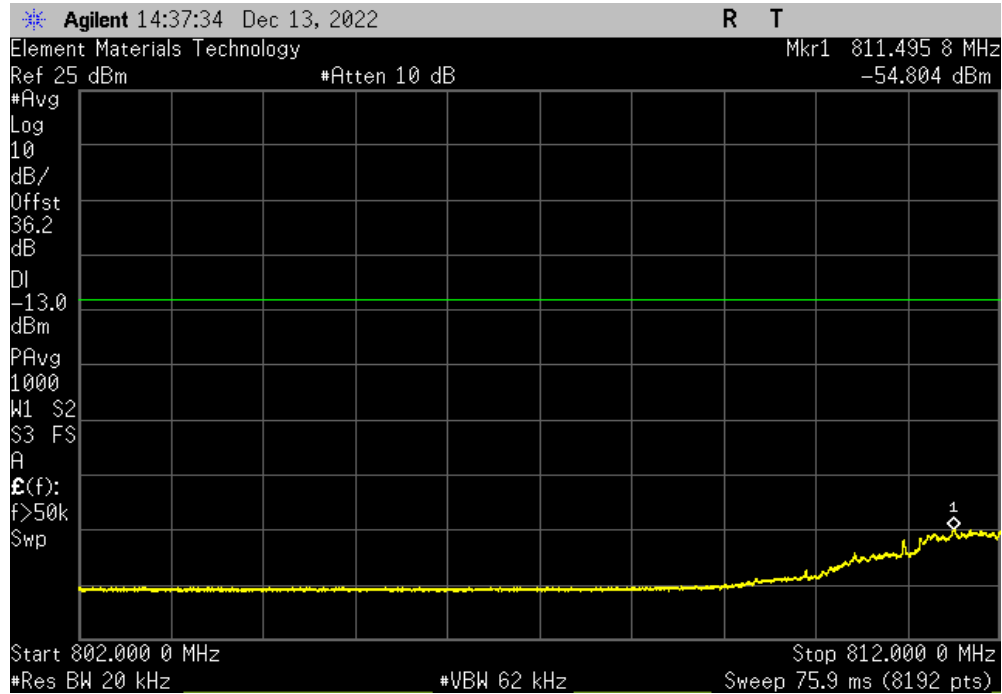


OUT OF BAND EMISSIONS - LTE BAND 26

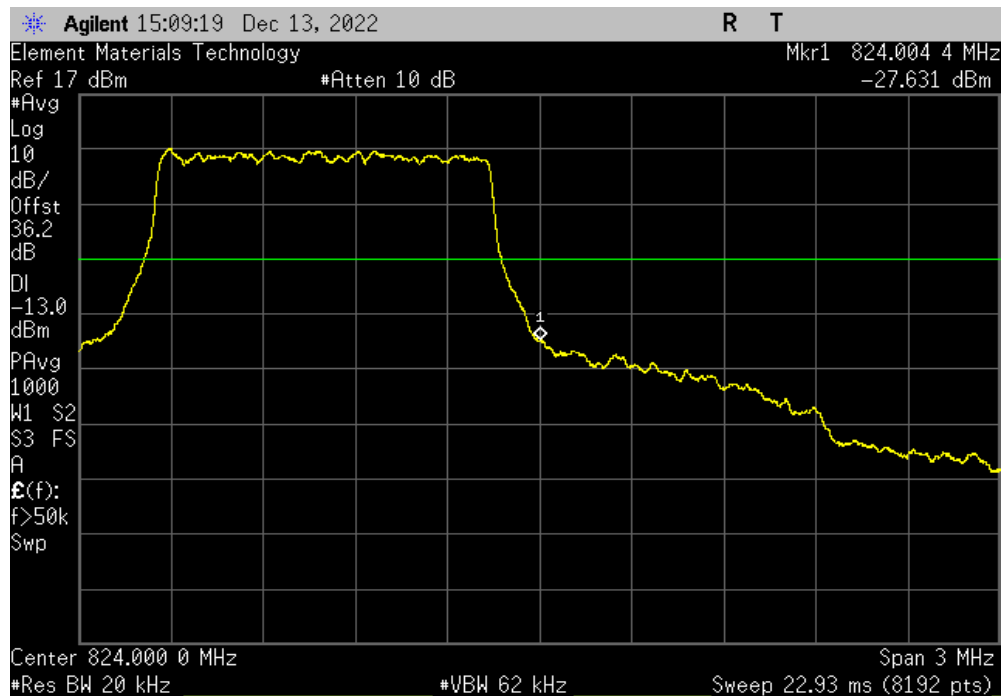


TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 26, 1.4 MHz Bandwidth, QPSK, Full RB, Low Channel 26697, 814.7 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-54.8	-13	Pass



LTE Band 26, 1.4 MHz Bandwidth, QPSK, Full RB, High Channel 26783, 823.3 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-27.63	-13	Pass

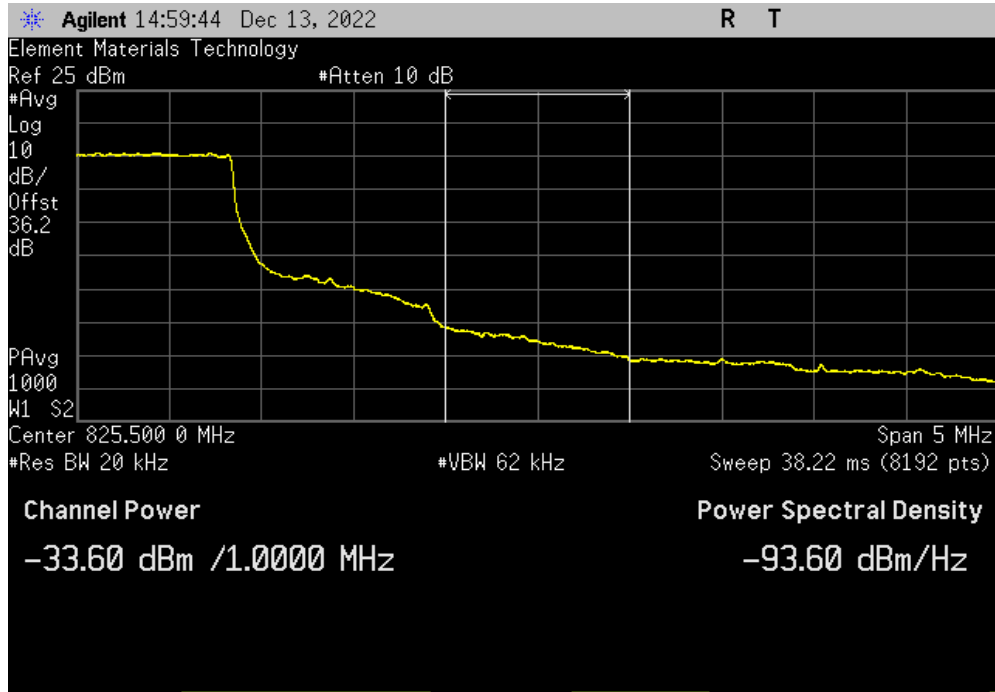


OUT OF BAND EMISSIONS - LTE BAND 26

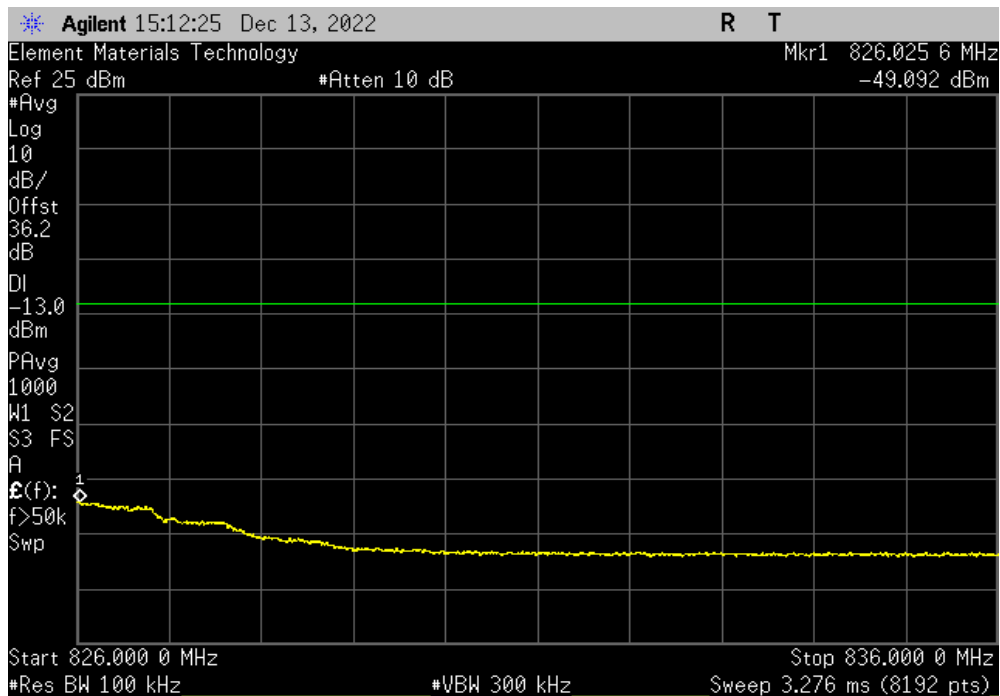


TUTTx 2022.06.03.0 XMt 2022.02.07.0

LTE Band 26, 1.4 MHz Bandwidth, QPSK, Full RB, High Channel 26783, 823.3 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-33.6	-13	Pass



LTE Band 26, 1.4 MHz Bandwidth, QPSK, Full RB, High Channel 26783, 823.3 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-49.09	-13	Pass



OUT OF BAND EMISSIONS - LTE BAND 26/5



TbTx 2022.06.03.0 XMit 2022.02.07.0

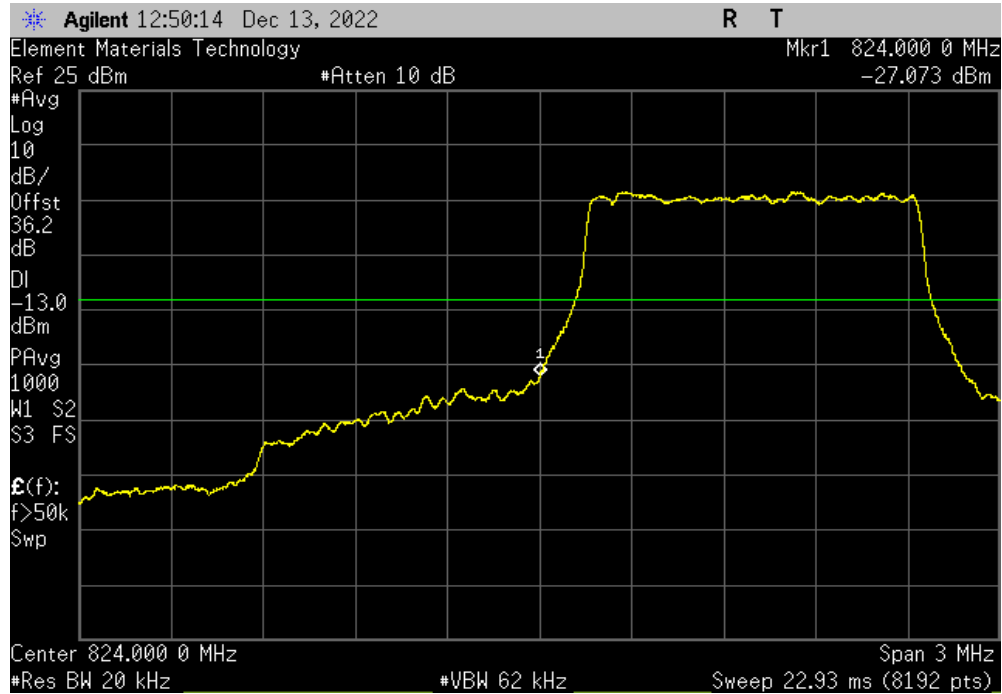
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 13-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
FCC 22H:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965)			
Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0			
Spot check of out of band emissions based on worst case: FCC ID: RI7LE910CXWWX (Band Edge Emissions at Antenna Terminal)			
Reference Level Offset = SMA pigtail + directional coupler + coax cable + 20 dB attenuator + DC block			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Frequency Range	Max Value (dBm)
			Limit ≤ (dBm)
			Result
LTE Band 26/5			
1.4 MHz Bandwidth, QPSK, Full RB			
		Low Channel 26797 (Band 26), 20407 (Band 5), 824.7 MHz	1
		Low Channel 26797 (Band 26), 20407 (Band 5), 824.7 MHz	2
		Low Channel 26797 (Band 26), 20407 (Band 5), 824.7 MHz	3
		High Channel 27033 (Band 26), 20643 (Band 5), 848.3 MHz	1
		High Channel 27033 (Band 26), 20643 (Band 5), 848.3 MHz	2
		High Channel 27033 (Band 26), 20643 (Band 5), 848.3 MHz	3
			-27.07
			-33.12
			-50.18
			-27.26
			-42.72
			-50.38
			-13
			-13
			-13
			-13
			-13
			-13
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass

OUT OF BAND EMISSIONS - LTE BAND 26/5

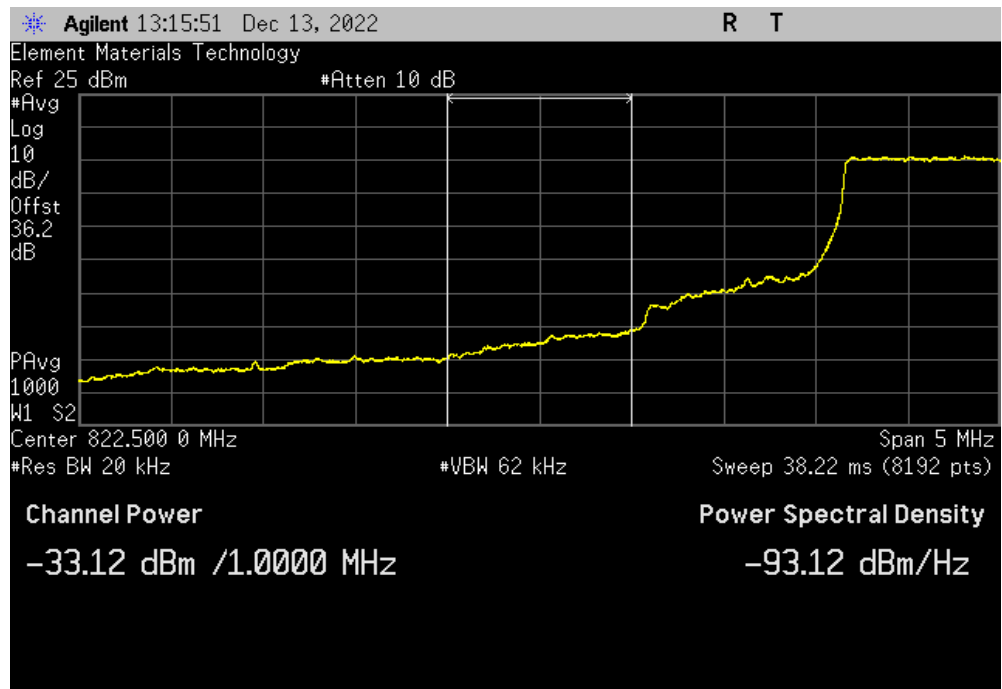


TUTTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 26/5, 1.4 MHz Bandwidth, QPSK, Full RB, Low Channel 26797 (Band 26), 20407 (Band 5), 824.7 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
1		-27.07	-13	Pass		



LTE Band 26/5, 1.4 MHz Bandwidth, QPSK, Full RB, Low Channel 26797 (Band 26), 20407 (Band 5), 824.7 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
2		-33.12	-13	Pass		

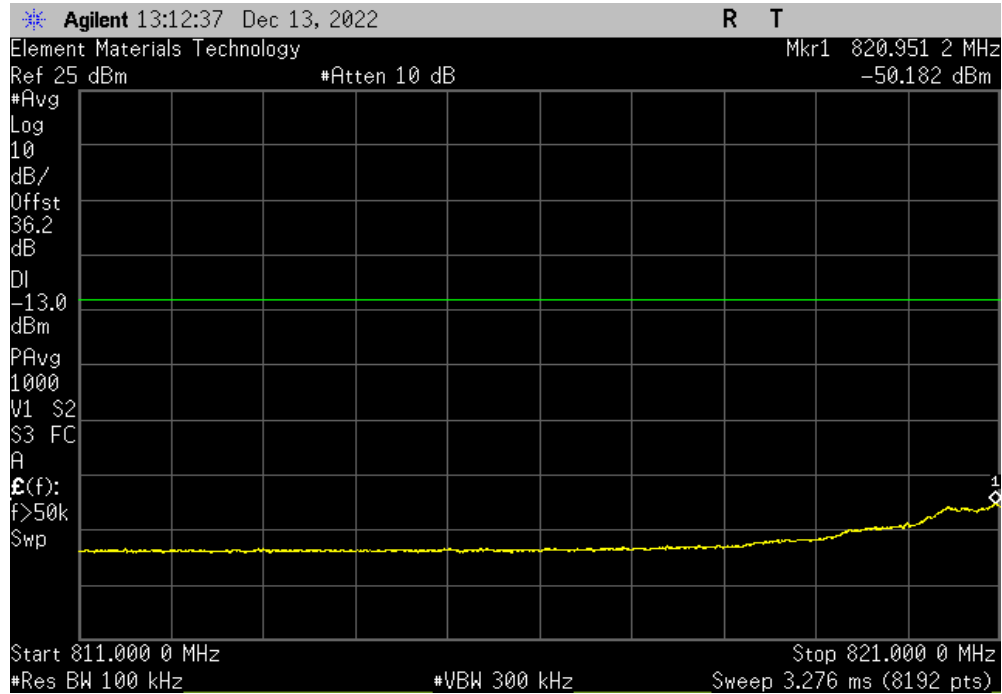


OUT OF BAND EMISSIONS - LTE BAND 26/5



TUTx 2022.06.03.0 XMR 2022.02.07.0

LTE Band 26/5, 1.4 MHz Bandwidth, QPSK, Full RB, Low Channel 26797 (Band 26), 20407 (Band 5), 824.7 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
3		-50.18	-13	Pass		



LTE Band 26/5, 1.4 MHz Bandwidth, QPSK, Full RB, High Channel 27033 (Band 26), 20643 (Band 5), 848.3 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
1		-27.26	-13	Pass		

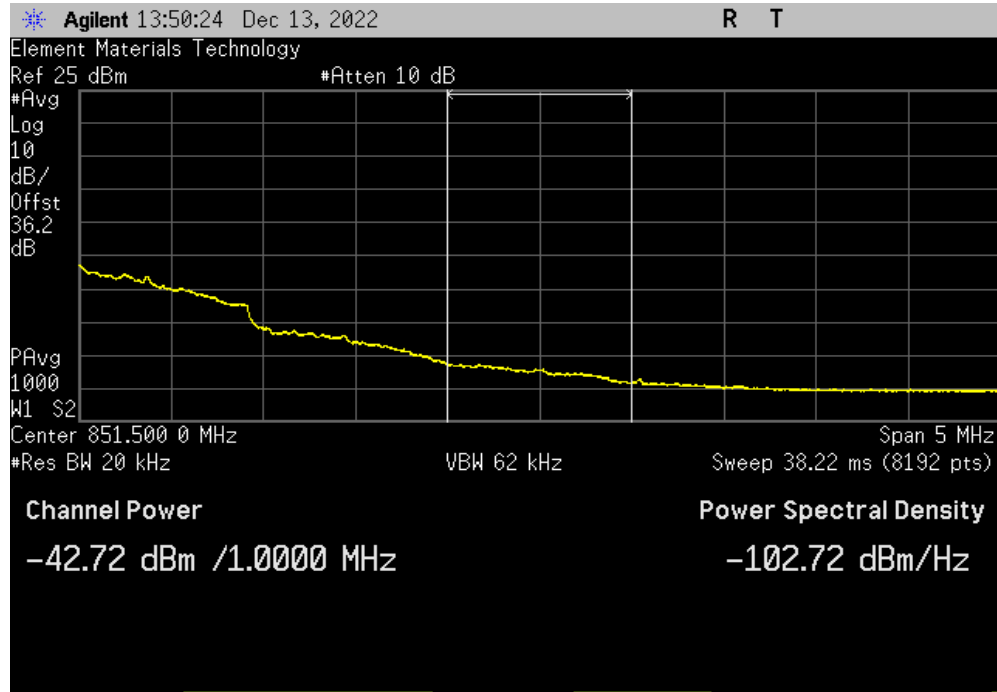


OUT OF BAND EMISSIONS - LTE BAND 26/5

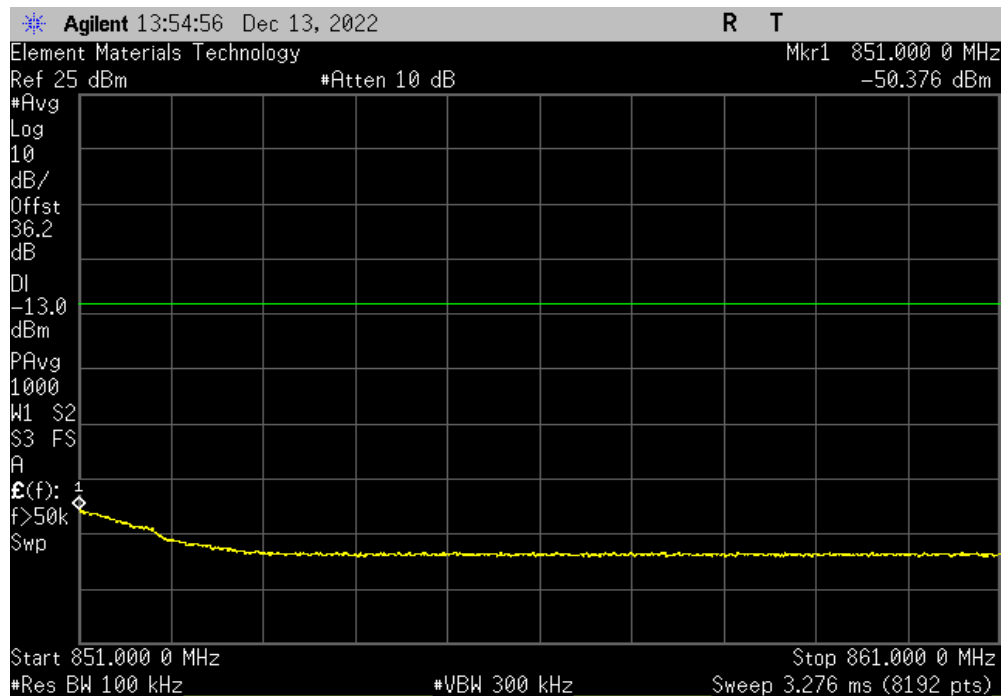


TUTTx 2022.06.03.0 XMt 2022.02.07.0

LTE Band 26/5, 1.4 MHz Bandwidth, QPSK, Full RB, High Channel 27033 (Band 26), 20643 (Band 5), 848.3 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
2		-42.72	-13	Pass		



LTE Band 26/5, 1.4 MHz Bandwidth, QPSK, Full RB, High Channel 27033 (Band 26), 20643 (Band 5), 848.3 MHz						
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result		
3		-50.38	-13	Pass		



OUT OF BAND EMISSIONS - LTE BAND 7



XMIT 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5182B	TFU	2022-12-02	2024-12-02
Block - DC	Fairview Microwave	SD3473	AMY	2022-07-05	2023-07-05
Attenuator	Fairview Microwave	SA26B-20	TWJ	2022-03-15	2023-03-15
Directional Coupler	Fairview Microwave	MC2047-10	RGT	2022-06-27	2023-06-27
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2022-12-02	2023-12-02
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2023-02-06	2024-02-06
Cellular Base Station Simulator	Anritsu	MT8820C	AFK	NCR	NCR

TEST DESCRIPTION

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. Per FCC ID: R17LE910CXWWX, the worst case modes of operation were investigated and the results are reported in this section.

OUT OF BAND EMISSIONS - LTE BAND 7



XMIT 2022.02.07.0

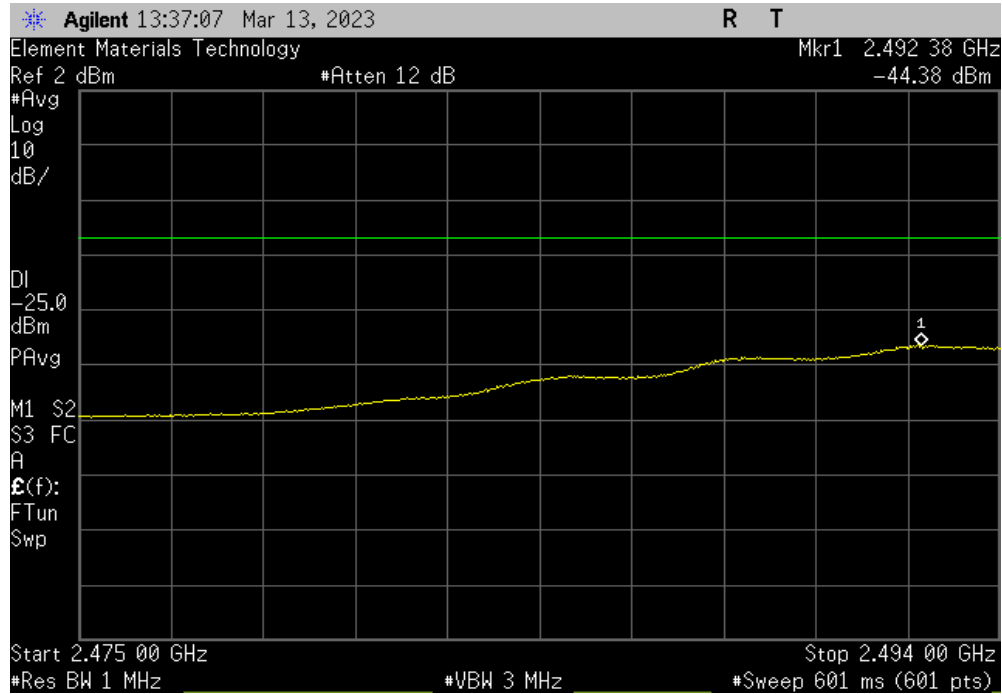
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 2		Date: 13-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 21.7 °C	
Attendees: None		Humidity: 40.6% RH	
Project: None		Barometric Pres.: 1012 mbar	
Tested by: Jeff Alcock		Power: 3.8VDC	Job Site: EV06
TEST SPECIFICATIONS		Test Method	
FCC 27:2023		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965) Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0 Spot check of out of band emissions based on worst case: FCC ID: RI7LE910CXWWX (Conducted Band Edge) All losses in the measurement system (Measurement cable, 20 dB attenuator, DC Block, Directional Coupler) were applied to the analyzer through the internal corrections settings.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Frequency Range	Max Value (dBm) Limit ≤ (dBm) Result
LTE Band 7			
5 MHz BW, QPSK, Full RB			
		Low Channel 20775, 2502.5 MHz	1 -44.3 -25 Pass
		Low Channel 20775, 2502.5 MHz	2 -39.66 -13 Pass
		Low Channel 20775, 2502.5 MHz	3 -15.88 -10 Pass
		Low Channel 20775, 2502.5 MHz	4 -25.94 -10 Pass
		High Channel 21425, 2567.5 MHz	1 -23.45 -10 Pass
		High Channel 21425, 2567.5 MHz	2 -13.39 -10 Pass
		High Channel 21425, 2567.5 MHz	3 -40.63 -13 Pass
		High Channel 21425, 2567.5 MHz	4 -42.1 -25 Pass

OUT OF BAND EMISSIONS - LTE BAND 7

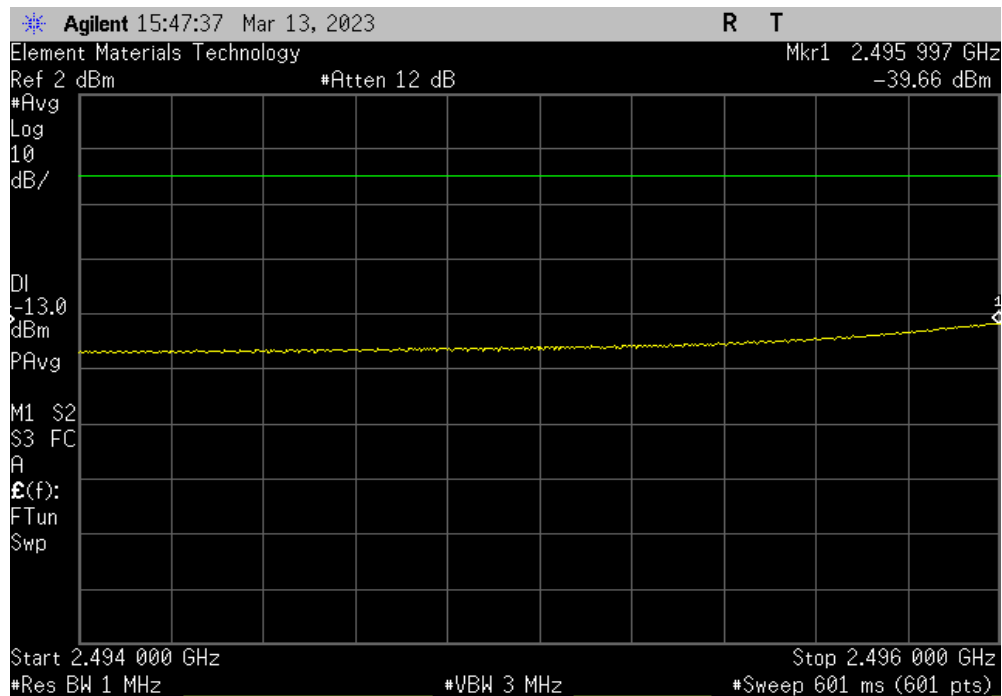


XMH 2022.02.07.0

LTE Band 7, 5 MHz BW, QPSK, Full RB, Low Channel 20775, 2502.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-44.3	-25	Pass



LTE Band 7, 5 MHz BW, QPSK, Full RB, Low Channel 20775, 2502.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-39.66	-13	Pass

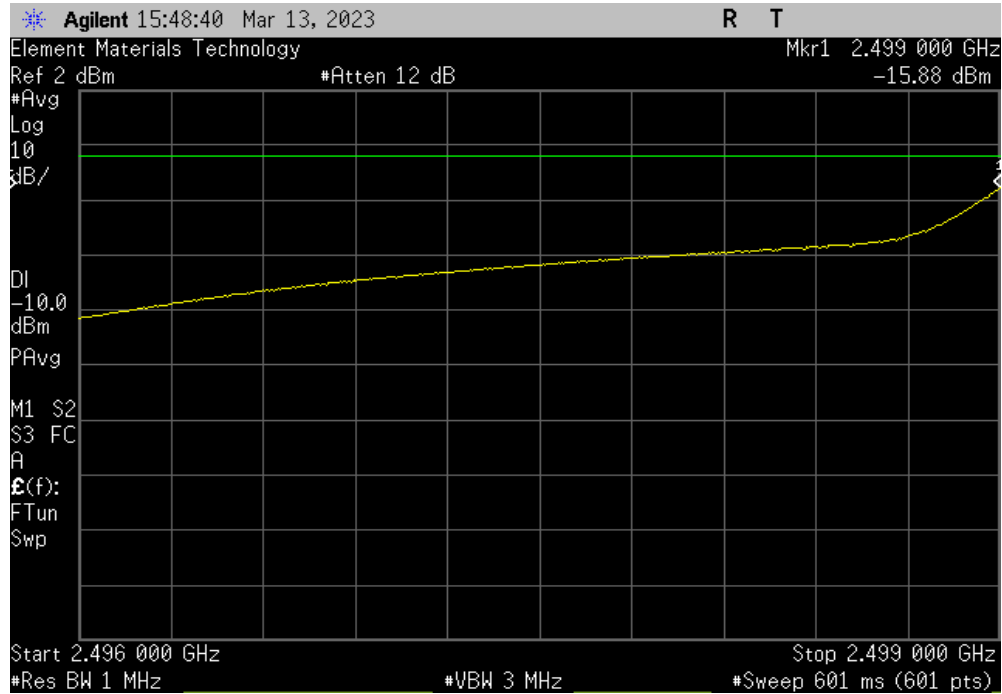


OUT OF BAND EMISSIONS - LTE BAND 7

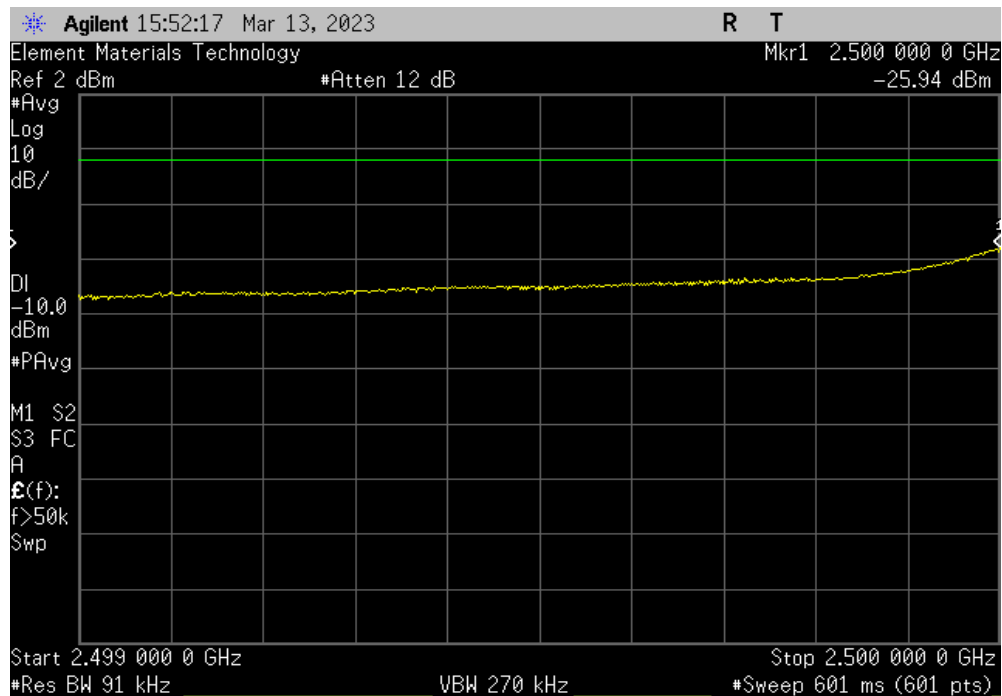


XM8 2022.02.07.0

LTE Band 7, 5 MHz BW, QPSK, Full RB, Low Channel 20775, 2502.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-15.88	-10	Pass



LTE Band 7, 5 MHz BW, QPSK, Full RB, Low Channel 20775, 2502.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
4				-25.94	-10	Pass

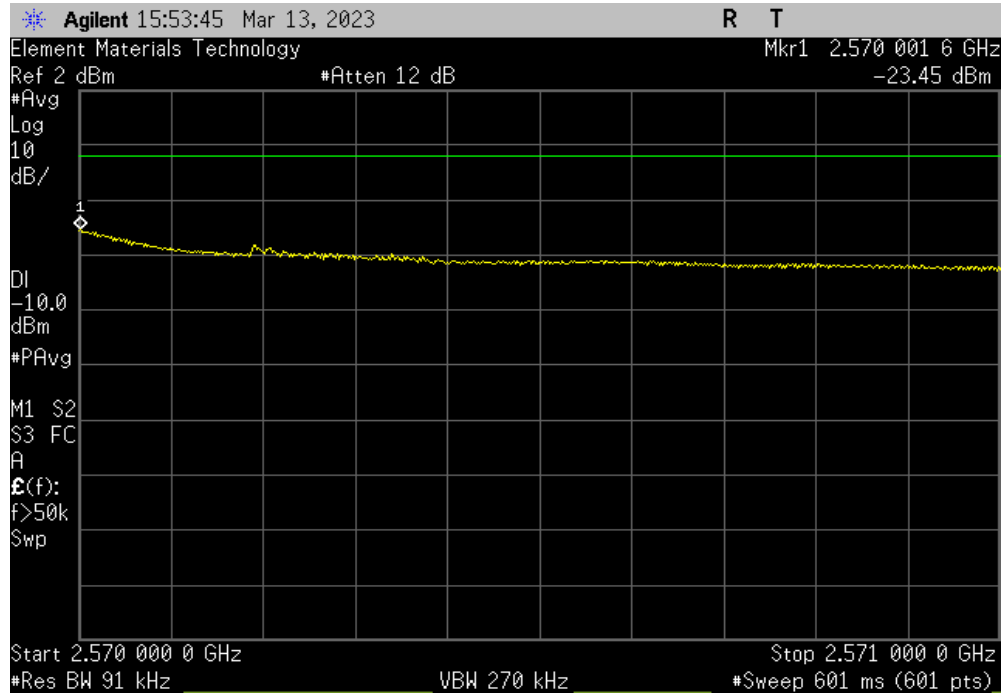


OUT OF BAND EMISSIONS - LTE BAND 7

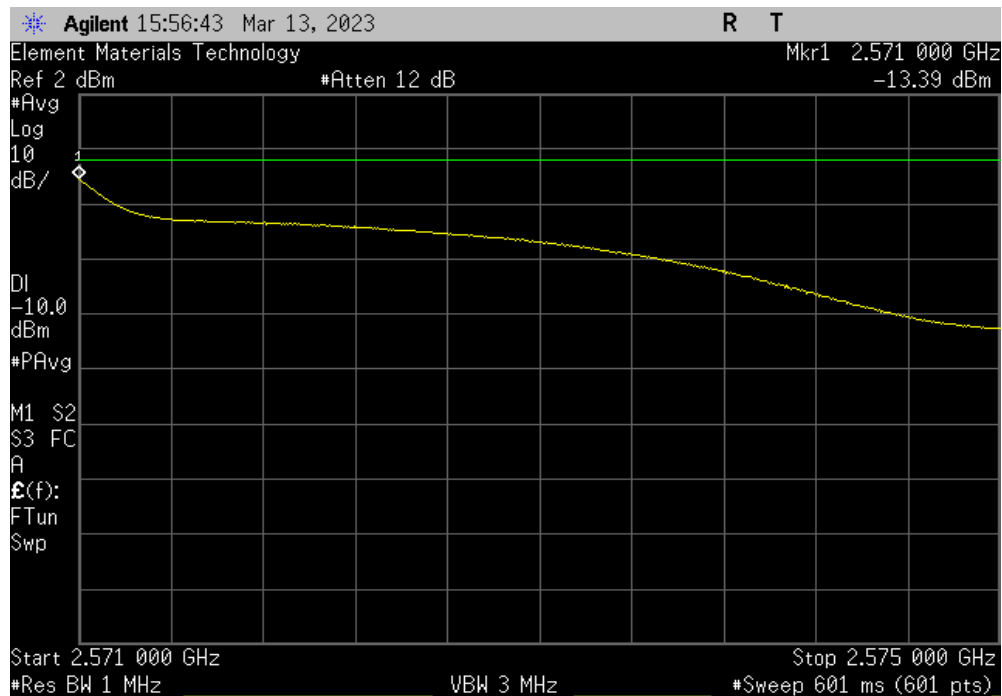


XMI 2022.02.07.0

LTE Band 7, 5 MHz BW, QPSK, Full RB, High Channel 21425, 2567.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
1				-23.45	-10	Pass



LTE Band 7, 5 MHz BW, QPSK, Full RB, High Channel 21425, 2567.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
2				-13.39	-10	Pass

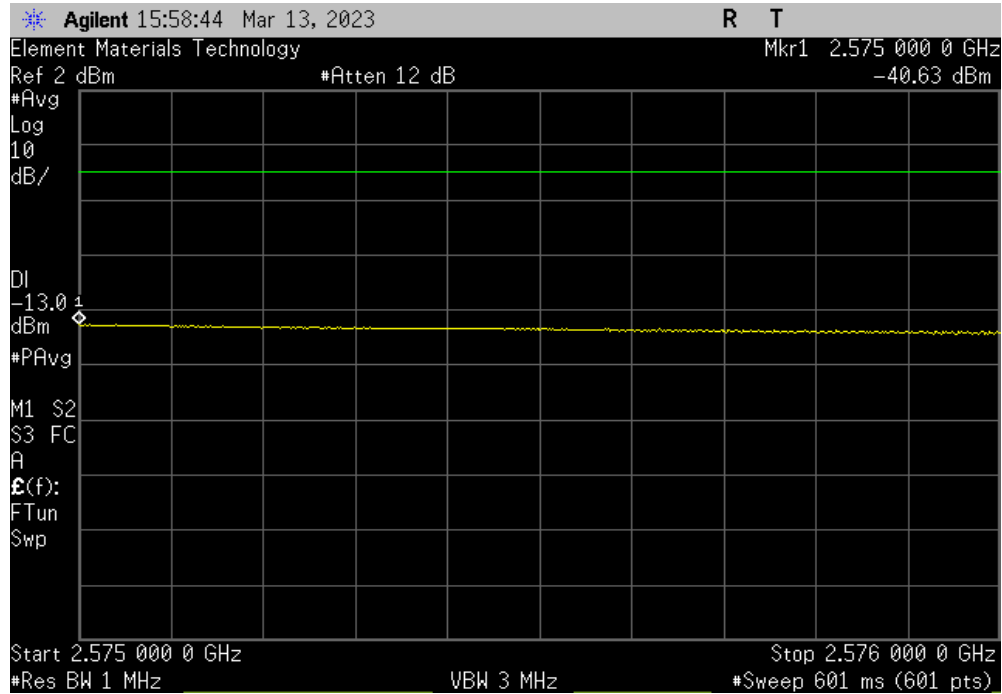


OUT OF BAND EMISSIONS - LTE BAND 7

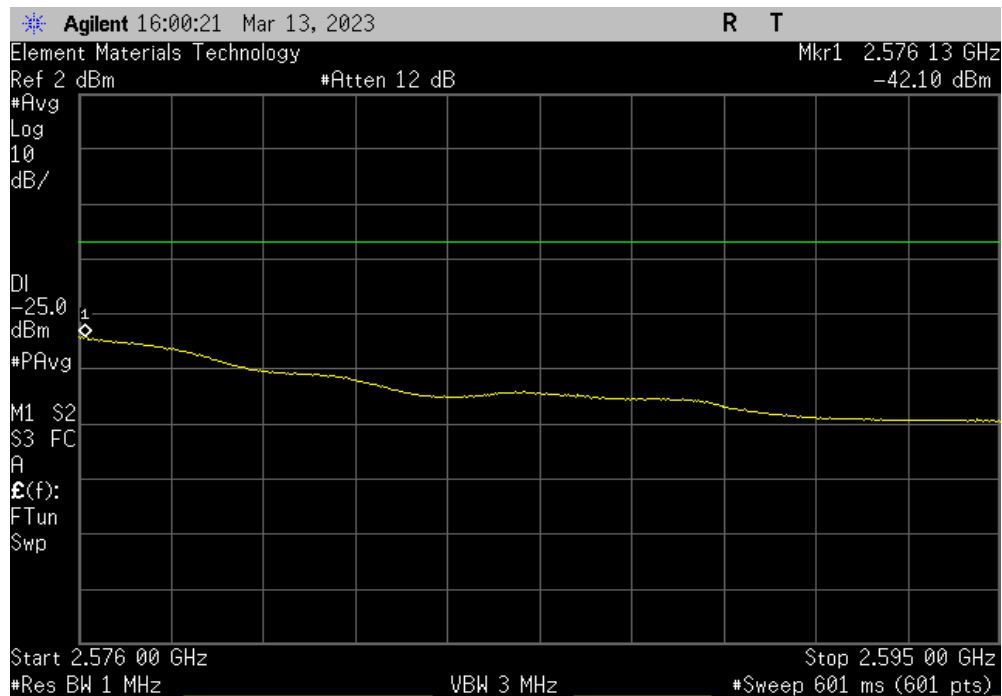


XMI 2022.02.07.0

LTE Band 7, 5 MHz BW, QPSK, Full RB, High Channel 21425, 2567.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
3				-40.63	-13	Pass



LTE Band 7, 5 MHz BW, QPSK, Full RB, High Channel 21425, 2567.5 MHz						
Frequency Range				Max Value (dBm)	Limit ≤ (dBm)	Result
4				-42.1	-25	Pass



SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

At an approved test site, the transmitter was placed on a remotely controlled turntable, and the measurement antenna was placed 3 meters from the transmitter. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axes. The turntable azimuth was varied to maximize the level of spurious emissions. The height of the measurement antenna was also varied from 1 to 4 meters. A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity. The amplitude and frequency of the highest emissions was noted.

The transmitter was then replaced with a $\frac{1}{2}$ wave dipole that was successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator was connected to the dipole (horn antenna for frequencies above 1 GHz), and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the antenna and its gain, the power (dBm) was determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Double Ridge	EMCO	3115	AHB	2022-04-13	2024-04-13
Cable	ESM Cable Corp.	1-8GHz Cables	OCX	2022-02-04	2023-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	2022-02-04	2023-02-04
Filter - High Pass	Micro-Tronics	HPM50108	HGP	2022-01-13	2023-01-13
Antenna - Standard Gain	ETS Lindgren	3160-07	AHX	NCR	NCR
Cable	ESM Cable Corp.	8-18GHz Cables	OCY	2022-02-04	2023-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	2022-02-04	2023-02-04
Filter - High Pass	Micro-Tronics	HPM50111	HGQ	2022-01-13	2023-01-13
Antenna - Standard Gain	EMCO	3160-08	AHK	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVP	2022-02-04	2023-02-04
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAY	2022-12-06	2023-12-06
Meter - Power	Hewlett Packard	E4418A	SPA	2022-12-16	2023-12-16
Generator - Signal	Agilent	E8257D	TGU	2020-11-03	2023-11-03
Power Sensor	Agilent	E4412A	SQE	2022-12-16	2023-12-16

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

1 GHz TO 18 GHz

POWER INVESTIGATED

3.8VDC

CONFIGURATIONS INVESTIGATED

TELI0004-2

MODES INVESTIGATED

GSM Band (GSM-850), GPRS, Ch 128, 824.2 MHz

WCDMA, Band V (CLR-850), RMC, Ch 4233, 846.6 MHz

LTE Band 26/5, Ch 20575 (Band 5), Ch 26965 (Band 26), 841.5 MHz, QPSK, 15 MHz Bandwidth, RB 1, Offset 37

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-12
Customer:	Telit Communications S.p.A.	Temperature:	22.3°C
Attendees:	None	Relative Humidity:	47.1%
Customer Project:	None	Bar. Pressure (PMSL):	1024 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 22.917:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	31	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643).

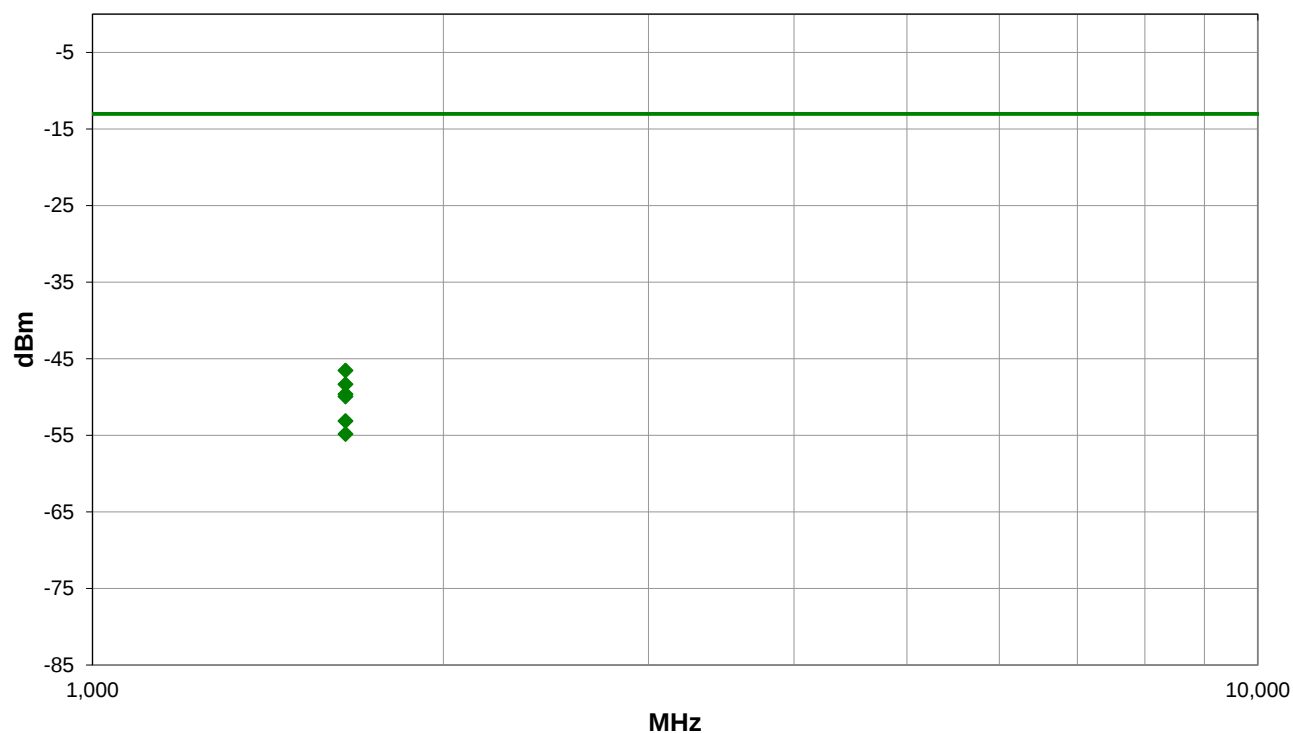
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

GSM Band (GSM-850), GPRS, Ch 128, 824.2 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 31

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #31

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1648.400	1.41	157.0	Vert	AV	22.2E-9	-46.5	-13.0	-33.5	Tx 824.2 MHz, EUT Horz
1648.358	1.2	82.0	Horz	AV	14.7E-9	-48.3	-13.0	-35.3	Tx 824.2 MHz, EUT on Side
1648.392	1.2	2.0	Vert	AV	10.9E-9	-49.6	-13.0	-36.6	Tx 824.2 MHz, EUT Vert
1648.467	1.2	98.0	Horz	AV	10.2E-9	-49.9	-13.0	-36.9	Tx 824.2 MHz, EUT Horz
1648.400	1.21	69.0	Vert	AV	4.9E-9	-53.1	-13.0	-40.1	Tx 824.2 MHz, EUT on Side
1648.425	1.2	353.0	Horz	AV	3.3E-9	-54.8	-13.0	-41.8	Tx 824.2 MHz, EUT Vert

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-12
Customer:	Telit Communications S.p.A.	Temperature:	22.3°C
Attendees:	None	Relative Humidity:	47.5%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 22.917:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	34	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643).

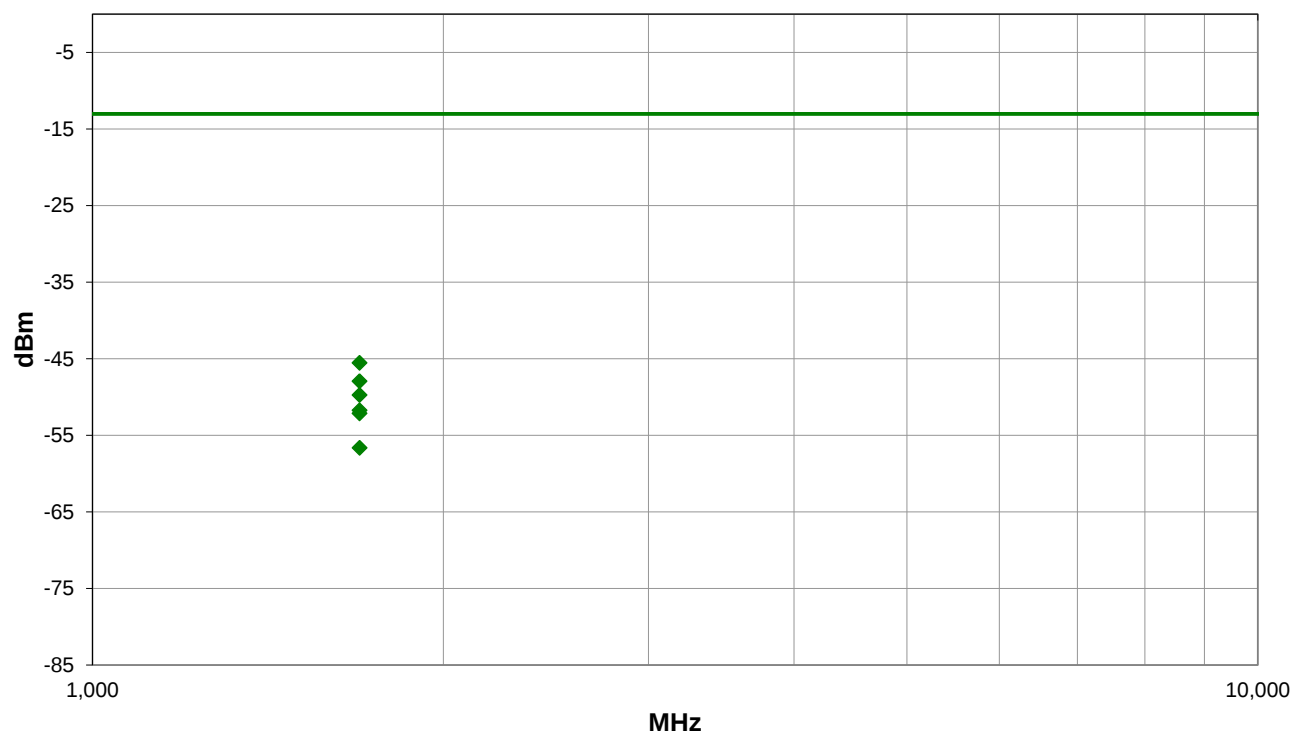
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

WCDMA, Band V (CLR-850), RMC, Ch 4233, 846.6 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 34

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #34

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1694.792	2.43	175.0	Vert	AV	28.0E-9	-45.5	-13.0	-32.5	Tx 846.6 MHz, EUT Vert
1694.792	1.17	70.0	Horz	AV	16.1E-9	-47.9	-13.0	-34.9	Tx 846.6 MHz, EUT on Side
1694.800	1.2	116.0	Horz	AV	10.6E-9	-49.7	-13.0	-36.7	Tx 846.6 MHz, EUT Horz
1694.833	3.12	227.0	Vert	AV	6.7E-9	-51.7	-13.0	-38.7	Tx 846.6 MHz, EUT Horz
1694.775	2.35	169.0	Horz	AV	6.1E-9	-52.1	-13.0	-39.1	Tx 846.6 MHz, EUT Vert
1695.008	1.2	191.0	Vert	AV	2.2E-9	-56.6	-13.0	-43.6	Tx 846.6 MHz, EUT on Side

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-10
Customer:	Telit Communications S.p.A.	Temperature:	22°C
Attendees:	None	Relative Humidity:	56.1%
Customer Project:	None	Bar. Pressure (PMSL):	1019 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 22.917:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	14	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643).

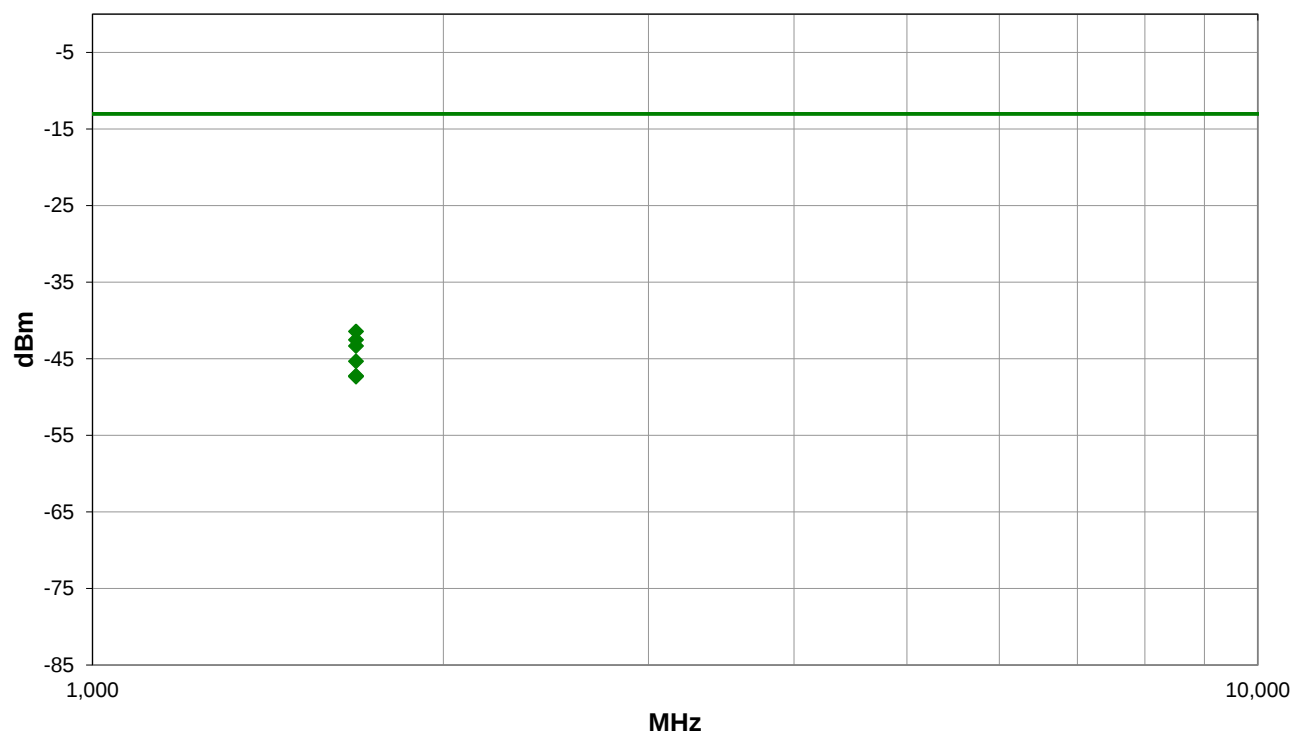
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

LTE Band 26/5, Ch 20575 (Band 5), Ch 26965 (Band 26), 841.5 MHz, QPSK, 15 MHz Bandwidth, RB 1, Offset 37

DEVIATIONS FROM TEST STANDARD

None



Run #: 14

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #14

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1683.042	2.65	31.0	Horz	AV	72.0E-9	-41.4	-13.0	-28.4	Tx 841.5 MHz, EUT on Side, Ant 180°
1683.000	1.2	278.0	Horz	AV	55.9E-9	-42.5	-13.0	-29.5	Tx 841.5 MHz, EUT Horz, Ant 180°
1682.958	1.2	223.0	Vert	AV	46.5E-9	-43.3	-13.0	-30.3	Tx 841.5 MHz, EUT Vert, Ant 180°
1683.000	1.59	193.0	Vert	AV	29.3E-9	-45.3	-13.0	-32.3	Tx 841.5 MHz, EUT on Side, Ant 180°
1683.000	1.11	241.0	Horz	AV	18.9E-9	-47.2	-13.0	-34.2	Tx 841.5 MHz, EUT Vert, Ant 180°
1683.000	1.3	336.0	Vert	AV	18.5E-9	-47.3	-13.0	-34.3	Tx 841.5 MHz, EUT Horz, Ant 180°

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

At an approved test site, the transmitter was placed on a remotely controlled turntable, and the measurement antenna was placed 3 meters from the transmitter. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axes. The turntable azimuth was varied to maximize the level of spurious emissions. The height of the measurement antenna was also varied from 1 to 4 meters. A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity. The amplitude and frequency of the highest emissions was noted.

The transmitter was then replaced with a $\frac{1}{2}$ wave dipole that was successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator was connected to the dipole (horn antenna for frequencies above 1 GHz), and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the antenna and its gain, the power (dBm) was determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Double Ridge	EMCO	3115	AHB	2022-04-13	2024-04-13
Cable	ESM Cable Corp.	1-8GHz Cables	OCX	2022-02-04	2023-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	2022-02-04	2023-02-04
Filter - High Pass	Micro-Tronics	HPM50111	HGQ	2022-01-13	2023-01-13
Antenna - Standard Gain	ETS Lindgren	3160-07	AHX	NCR	NCR
Cable	ESM Cable Corp.	8-18GHz Cables	OCY	2022-02-04	2023-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	2022-02-04	2023-02-04
Antenna - Standard Gain	EMCO	3160-08	AHK	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVP	2022-02-04	2023-02-04
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAY	2022-12-06	2023-12-06
Antenna - Standard Gain	ETS Lindgren	3160-07	AHX	NCR	NCR

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

1 GHz TO 18 GHz

POWER INVESTIGATED

3.8VDC

CONFIGURATIONS INVESTIGATED

TELI0004-2

MODES INVESTIGATED

GSM Band (PCS-1900), GPRS, Ch 810, 1909.8 MHz

WCDMA, Band II (PCS-1900), RMC, Ch 9400, 1880 MHz

LTE Band 25/2, Ch 18925 (Band 2), Ch 26365 (Band 25), 1882.5 MHz, QPSK, 20 MHz Bandwidth, RB 1, Offset 50

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-12
Customer:	Telit Communications S.p.A.	Temperature:	22.1°C
Attendees:	None	Relative Humidity:	48.5%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 24.238:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	40	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643).

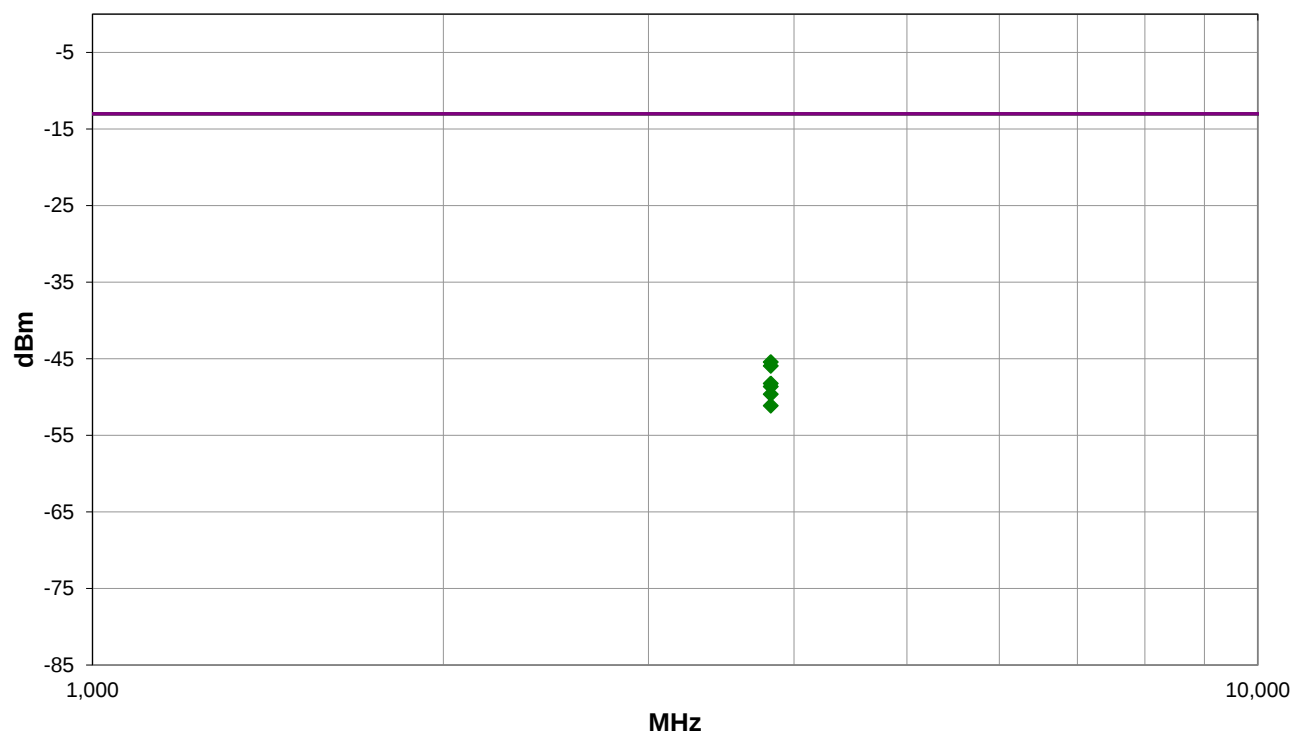
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

GSM Band (PCS-1900), GPRS, Ch 810, 1909.8 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 40

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #40

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3819.633	1.2	187.0	Horz	AV	28.6E-9	-45.4	-13.0	-32.4	Tx 1909.8 MHz, EUT Horz
3819.675	1.2	359.0	Horz	AV	25.5E-9	-45.9	-13.0	-32.9	Tx 1909.8 MHz, EUT Vert
3819.625	1.2	89.0	Horz	AV	15.0E-9	-48.2	-13.0	-35.2	Tx 1909.8 MHz, EUT on Side
3819.625	1.12	89.0	Vert	AV	13.7E-9	-48.6	-13.0	-35.6	Tx 1909.8 MHz, EUT on Side
3819.592	1.18	123.0	Vert	AV	10.9E-9	-49.6	-13.0	-36.6	Tx 1909.8 MHz, EUT Horz
3819.625	1.0	3.0	Vert	AV	7.7E-9	-51.1	-13.0	-38.1	Tx 1909.8 MHz, EUT Vert

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2022-12-30
Customer:	Telit Communications S.p.A.	Temperature:	22.7°C
Attendees:	None	Relative Humidity:	51.5%
Customer Project:	None	Bar. Pressure (PMSL):	1021 mb
Tested By:	Mark Baytan	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 24.238:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	3	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643)

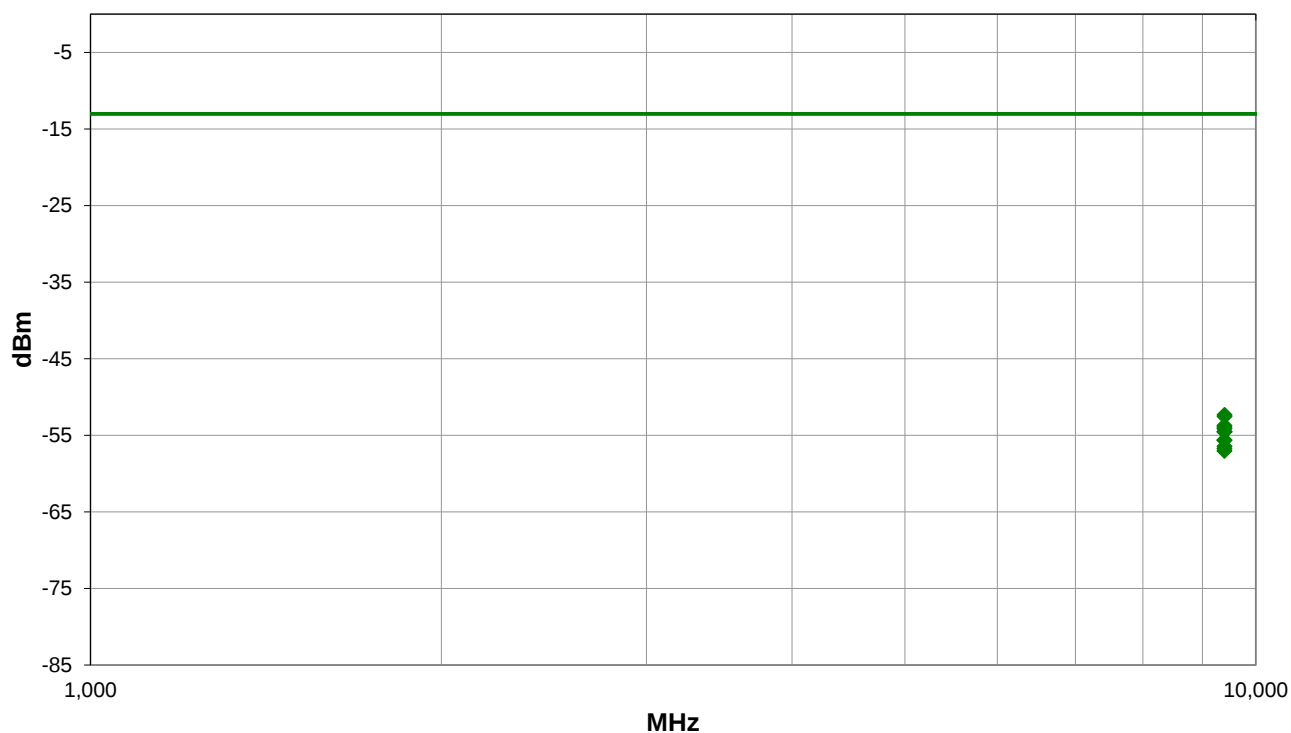
Spot check of out of band emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

WCDMA, Band II (PCS-1900), RMC, Ch 9400, 1880 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 3

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #3

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
9401.092	2.21	212.0	Horz	AV	5.8E-9	-52.3	-13.0	-39.3	Ch 9400, EUT on Side, Ant 180°
9401.217	2.2	12.0	Vert	AV	5.6E-9	-52.5	-13.0	-39.5	Ch 9400, EUT Horz, Ant 90°
9398.733	1.84	126.0	Horz	AV	4.2E-9	-53.7	-13.0	-40.7	Ch 9400, EUT Vert, Ant 180°
9398.958	1.96	173.0	Vert	AV	4.0E-9	-53.9	-13.0	-40.9	Ch 9400, EUT Horz, Ant 180°
9398.900	1.65	241.0	Vert	AV	3.9E-9	-54.1	-13.0	-41.1	Ch 9400, EUT Vert, Ant 90°
9401.192	1.5	195.0	Vert	AV	3.5E-9	-54.5	-13.0	-41.5	Ch 9400, EUT Vert, Ant 180°
9398.867	1.49	14.0	Horz	AV	3.5E-9	-54.5	-13.0	-41.5	Ch 9400, EUT on Side, Ant 90°
9398.742	3.5	240.0	Vert	AV	2.7E-9	-55.6	-13.0	-42.6	Ch 9400, EUT on Side, Ant 180°
9398.725	1.31	235.0	Vert	AV	2.7E-9	-55.6	-13.0	-42.6	Ch 9400, EUT on Side, Ant 90°
9401.083	2.48	56.0	Horz	AV	2.3E-9	-56.4	-13.0	-43.4	Ch 9400, EUT Horz, Ant 90°
9398.817	2.21	61.0	Horz	AV	2.1E-9	-56.7	-13.0	-43.7	Ch 9400, EUT Horz, Ant 180°
9398.975	1.52	221.0	Horz	AV	2.0E-9	-57.0	-13.0	-44.0	Ch 9400, EUT Vert, Ant 90°

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-09
Customer:	Telit Communications S.p.A.	Temperature:	21.6°C
Attendees:	None	Relative Humidity:	58%
Customer Project:	None	Bar. Pressure (PMSL):	1020 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 24.238:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	11	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643).

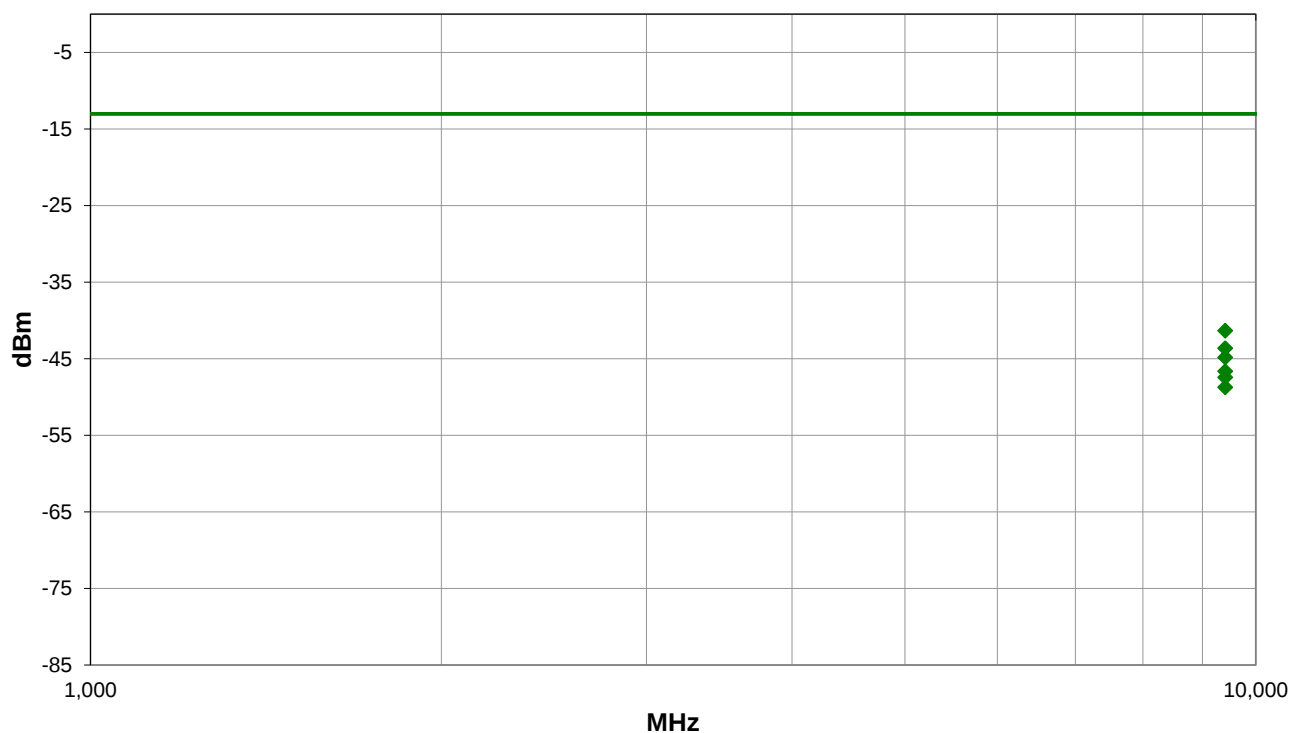
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

LTE Band 25/2, Ch 18925 (Band 2), Ch 26365 (Band 25), 1882.5 MHz, QPSK, 20 MHz Bandwidth, RB 1, Offset 50

DEVIATIONS FROM TEST STANDARD

None



Run #: 11

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #11

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
9412.975	1.92	263.0	Horz	AV	73.6E-9	-41.3	-13.0	-28.3	Tx 1882.5 MHz, EUT on Side, Ant 180°
9412.992	2.2	13.0	Vert	AV	43.4E-9	-43.6	-13.0	-30.6	Tx 1882.5 MHz, EUT Horz, Ant 180°
9412.950	1.79	128.0	Horz	AV	32.9E-9	-44.8	-13.0	-31.8	Tx 1882.5 MHz, EUT Vert, Ant 180°
9413.000	1.58	207.0	Vert	AV	21.7E-9	-46.6	-13.0	-33.6	Tx 1882.5 MHz, EUT Vert, Ant 180°
9412.958	1.89	251.0	Vert	AV	18.1E-9	-47.4	-13.0	-34.4	Tx 1882.5 MHz, EUT on Side, Ant 180°
9412.950	2.31	57.0	Horz	AV	13.4E-9	-48.7	-13.0	-35.7	Tx 1882.5 MHz, EUT Horz, Ant 180°

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

At an approved test site, the transmitter was placed on a remotely controlled turntable, and the measurement antenna was placed 3 meters from the transmitter. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axes. The turntable azimuth was varied to maximize the level of spurious emissions. The height of the measurement antenna was also varied from 1 to 4 meters. A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity. The amplitude and frequency of the highest emissions was noted.

The transmitter was then replaced with a $\frac{1}{2}$ wave dipole that was successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator was connected to the dipole (horn antenna for frequencies above 1 GHz), and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the antenna and its gain, the power (dBm) was determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Standard Gain	EMCO	3160-08	AHK	NCR	NCR
Cable	ESM Cable Corp.	8-18GHz Cables	OCY	2022-02-04	2023-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVP	2022-02-04	2023-02-04
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAV	2022-12-06	2023-12-06
Antenna - Standard Gain	ETS Lindgren	3160-07	AHX	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	2022-02-04	2023-02-04
Filter - High Pass	Micro-Tronics	HPM50111	HGQ	2022-01-13	2023-01-13
Antenna - Double Ridge	EMCO	3115	AHB	2022-04-13	2024-04-13
Cable	ESM Cable Corp.	1-8GHz Cables	OCX	2022-02-04	2023-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	2022-02-04	2023-02-04
Generator - Signal	Agilent	E8257D	TGU	2020-11-03	2023-11-03
Power Sensor	Agilent	E4412A	SQE	2022-12-16	2023-12-16
Meter - Power	Hewlett Packard	E4418A	SPA	2022-12-16	2023-12-16

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

1 GHz TO 18 GHz

POWER INVESTIGATED

3.8VDC

CONFIGURATIONS INVESTIGATED

TELI0004-2

MODES INVESTIGATED

LTE Band 4, Ch 20300, 1745 MHz, QPSK, 20 MHz Bandwidth, RB 1, Offset 50
LTE Band 12, Ch 23130, 711 MHz, QPSK, 10 MHz Bandwidth, RB 1, Offset 25
LTE Band 13, Ch 23130, 782 MHz, QPSK, 10 MHz Bandwidth, RB 1, Offset 25
WCDMA, Band IV (AWS-1700), RMC, Ch 1312, 1712.4 MHz

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-09
Customer:	Telit Communications S.p.A.	Temperature:	22.4°C
Attendees:	None	Relative Humidity:	42%
Customer Project:	None	Bar. Pressure (PMSL):	1022 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	7	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643)

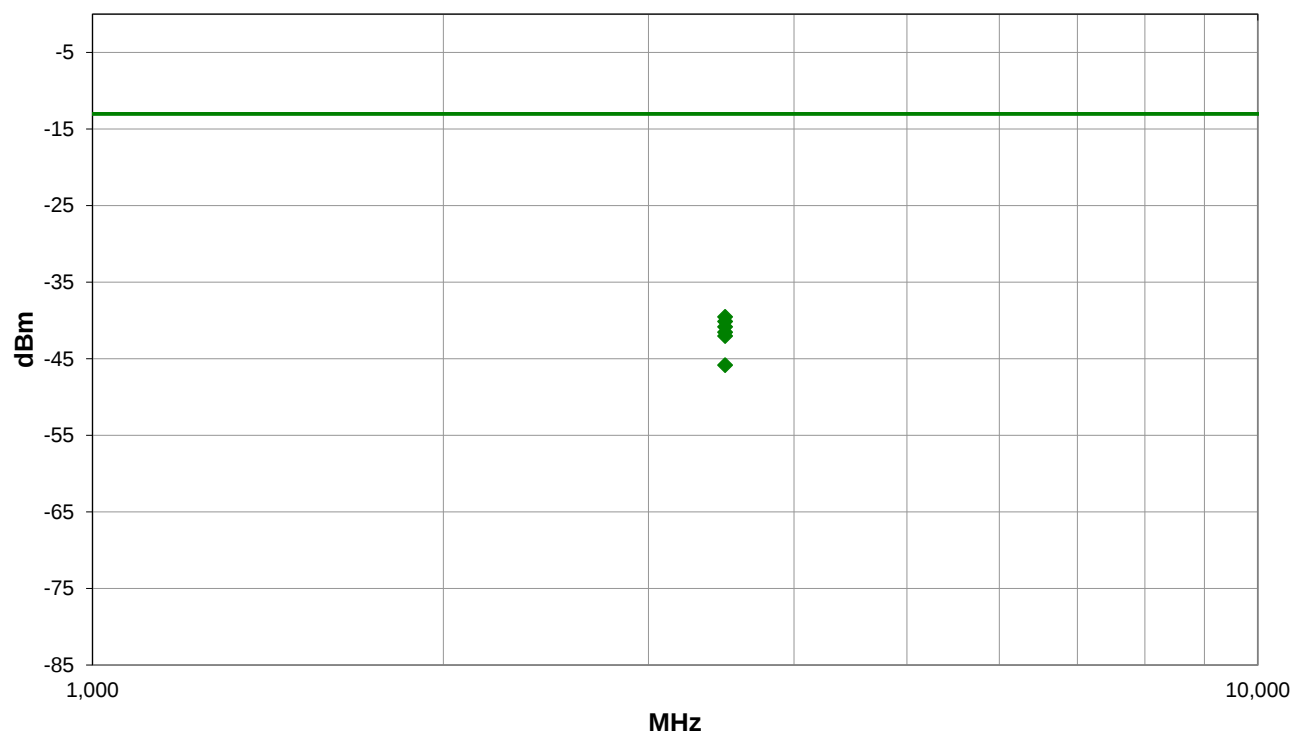
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

LTE Band 4, Ch 20300, 1745 MHz, QPSK, 20 MHz Bandwidth, RB 1, Offset 50

DEVIATIONS FROM TEST STANDARD

None



Run #: 7

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #7

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3490.150	1.2	191.0	Horz	AV	111.5E-9	-39.5	-13.0	-26.5	Ch 20300. EUT on Side, Ant 180°
3490.167	1.01	267.0	Horz	AV	97.1E-9	-40.1	-13.0	-27.1	Ch 20300. EUT Horz, Ant 180°
3490.150	1.2	350.0	Vert	AV	82.6E-9	-40.8	-13.0	-27.8	Ch 20300. EUT Vert, Ant 180°
3490.158	3.5	308.0	Vert	AV	70.3E-9	-41.5	-13.0	-28.5	Ch 20300. EUT on Side, Ant 180°
3490.167	3.77	206.0	Vert	AV	62.7E-9	-42.0	-13.0	-29.0	Ch 20300. EUT Horz, Ant 180°
3490.100	1.2	169.0	Horz	AV	26.1E-9	-45.8	-13.0	-32.8	Ch 20300. EUT Vert, Ant 180°

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-10
Customer:	Telit Communications S.p.A.	Temperature:	22.1°C
Attendees:	None	Relative Humidity:	56.1%
Customer Project:	None	Bar. Pressure (PMSL):	1020 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	19	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643).

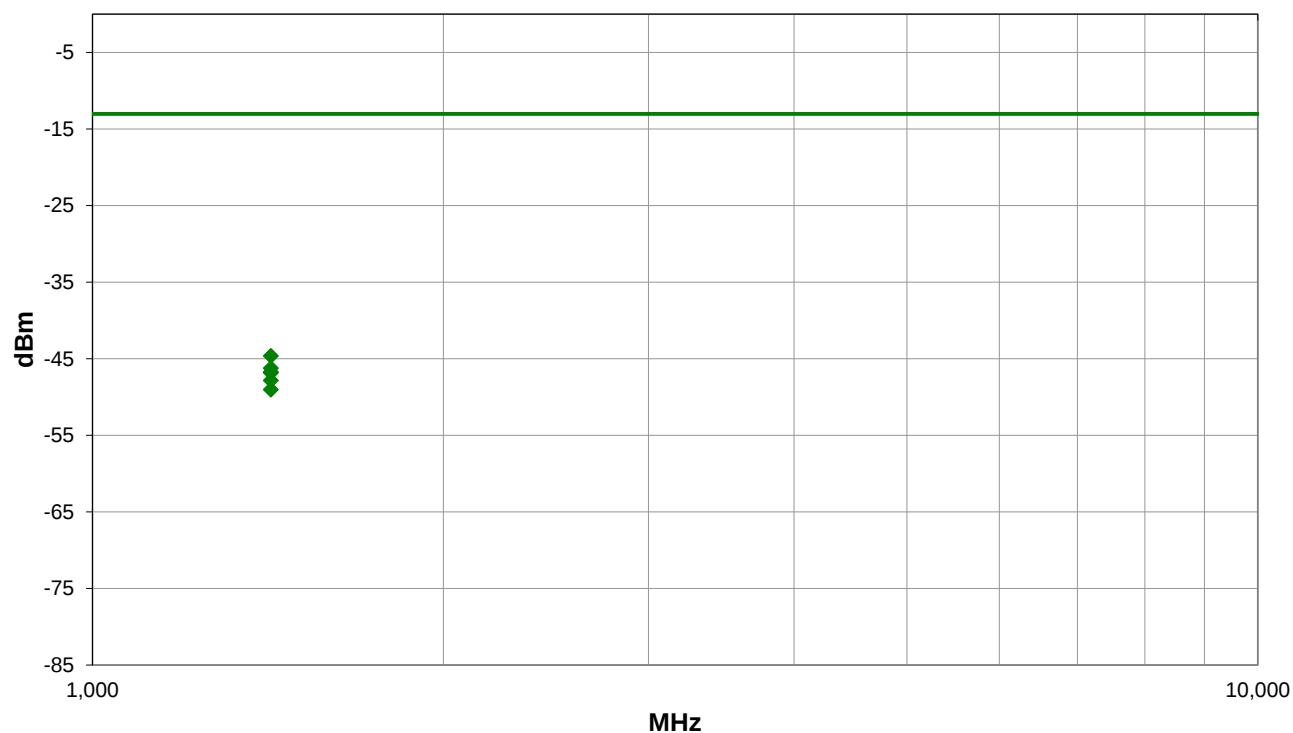
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

LTE Band 12, Ch 23130, 711 MHz, QPSK, 10 MHz Bandwidth, RB 1, Offset 25

DEVIATIONS FROM TEST STANDARD

None



Run #: 19

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #19

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1422.350	3.89	141.0	Horz	AV	34.4E-9	-44.6	-13.0	-31.6	Tx 711 MHz, EUT on Side, ANT 180°
1422.350	1.28	4.0	Vert	AV	23.8E-9	-46.2	-13.0	-33.2	Tx 711 MHz, EUT Horz, ANT 180°
1422.325	1.2	280.0	Horz	AV	21.2E-9	-46.7	-13.0	-33.7	Tx 711 MHz, EUT Vert, ANT 180°
1422.350	1.09	330.0	Horz	AV	20.8E-9	-46.8	-13.0	-33.8	Tx 711 MHz, EUT Horz, ANT 180°
1422.325	2.65	234.0	Vert	AV	16.5E-9	-47.8	-13.0	-34.8	Tx 711 MHz, EUT Vert, ANT 180°
1422.317	1.17	271.0	Vert	AV	12.5E-9	-49.0	-13.0	-36.0	Tx 711 MHz, EUT on Side, ANT 180°

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-12
Customer:	Telit Communications S.p.A.	Temperature:	20.9°C
Attendees:	None	Relative Humidity:	47.5%
Customer Project:	None	Bar. Pressure (PMSL):	1026 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	22	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643).

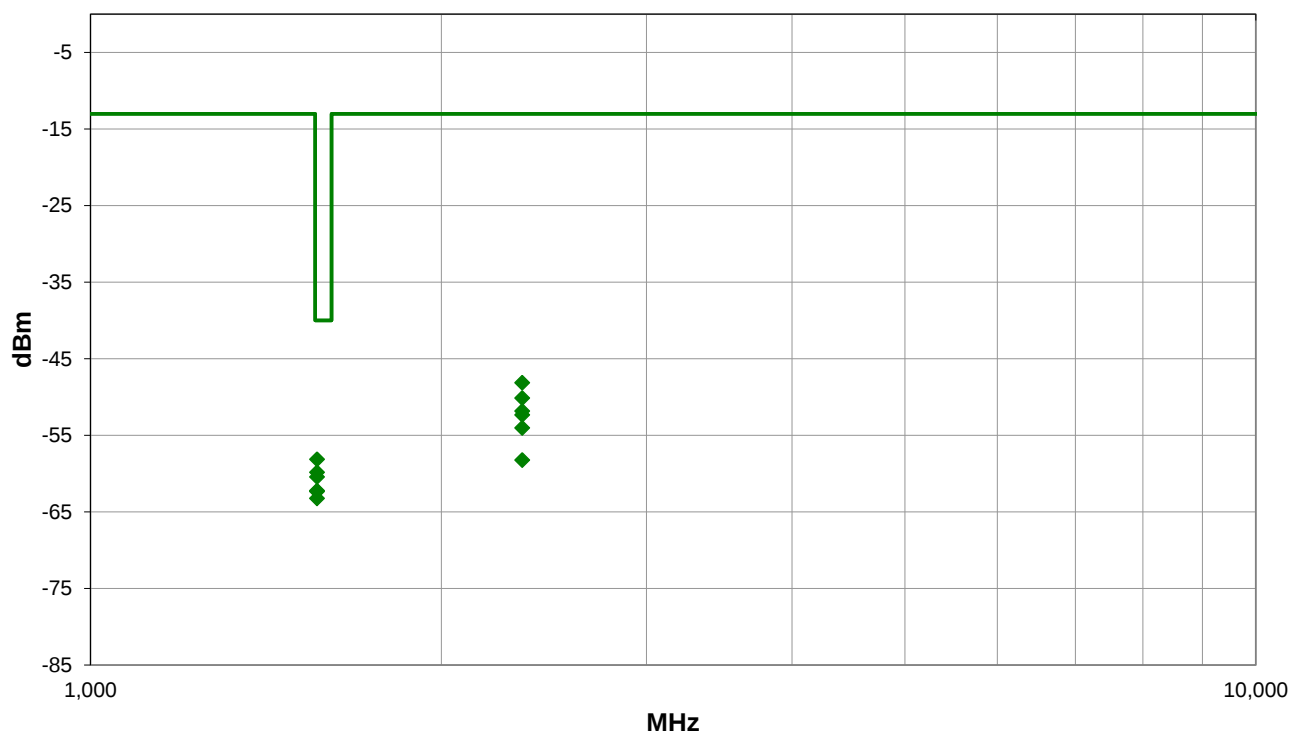
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

LTE Band 13, Ch 23130, 782 MHz, QPSK, 10 MHz Bandwidth, RB 1, Offset 25

DEVIATIONS FROM TEST STANDARD

None



Run #: 22

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #22

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1564.458	1.69	44.0	Horz	AV	1.5E-9	-58.1	-40.0	-18.1	Tx 782 MHz, EUT Vert
1564.408	3.12	40.0	Vert	AV	1.0E-9	-59.8	-40.0	-19.8	Tx 782 MHz, EUT on Side
1564.383	1.18	83.0	Horz	AV	906.0E-12	-60.4	-40.0	-20.4	Tx 782 MHz, EUT on Side
1564.342	1.2	329.0	Vert	AV	598.6E-12	-62.2	-40.0	-22.2	Tx 782 MHz, EUT Horz
1564.358	1.04	341.0	Vert	AV	585.0E-12	-62.3	-40.0	-22.3	Tx 782 MHz, EUT Vert
1564.300	1.28	210.0	Horz	AV	475.5E-12	-63.2	-40.0	-23.2	Tx 782 MHz, EUT Horz
2346.492	1.2	312.0	Horz	AV	15.4E-9	-48.1	-13.0	-35.1	Tx 782 MHz, EUT Horz
2346.542	1.14	47.0	Horz	AV	9.7E-9	-50.1	-13.0	-37.1	Tx 782 MHz, EUT on Side
2346.508	3.67	30.0	Vert	AV	6.6E-9	-51.8	-13.0	-38.8	Tx 782 MHz, EUT Horz
2346.508	1.2	295.0	Vert	AV	5.8E-9	-52.3	-13.0	-39.3	Tx 782 MHz, EUT Vert
2346.550	1.2	72.0	Horz	AV	4.0E-9	-54.0	-13.0	-41.0	Tx 782 MHz, EUT Vert
2346.567	1.2	241.0	Vert	AV	1.5E-9	-58.2	-13.0	-45.2	Tx 782 MHz, EUT on Side

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-12
Customer:	Telit Communications S.p.A.	Temperature:	22.1°C
Attendees:	None	Relative Humidity:	48.4%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	37	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643).

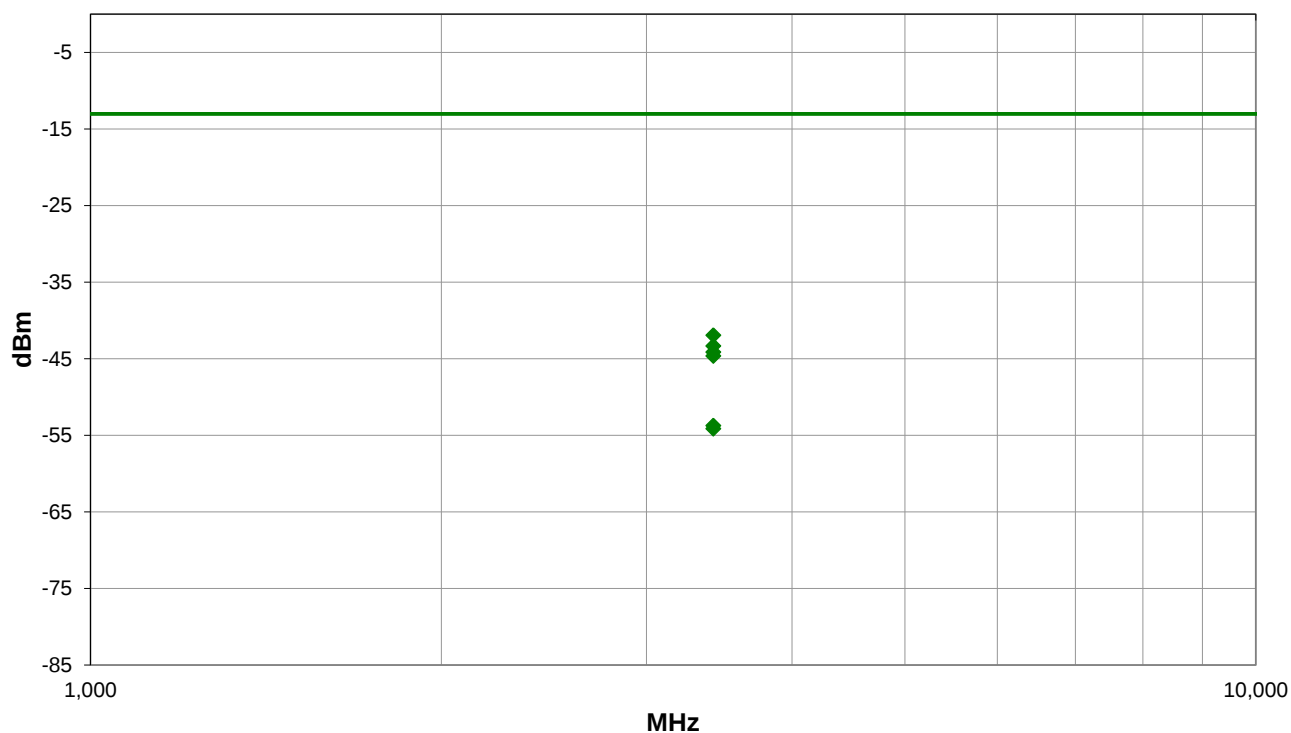
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

WCDMA, Band IV (AWS-1700), RMC, Ch 1312, 1712.4 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 37

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #37

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3423.442	1.18	305.0	Horz	AV	64.1E-9	-41.9	-13.0	-28.9	Tx 1712.4 MHz, EUT Horz
3423.192	3.86	201.0	Vert	AV	46.5E-9	-43.3	-13.0	-30.3	Tx 1712.4 MHz, EUT Vert
3423.158	1.17	9.0	Horz	AV	38.6E-9	-44.1	-13.0	-31.1	Tx 1712.4 MHz, EUT on Side
3423.325	3.22	339.0	Vert	AV	34.4E-9	-44.6	-13.0	-31.6	Tx 1712.4 MHz, EUT on Side
3423.325	1.23	355.0	Horz	AV	4.2E-9	-53.7	-13.0	-40.7	Tx 1712.4 MHz, EUT Vert
3423.217	1.2	314.0	Vert	AV	3.9E-9	-54.1	-13.0	-41.1	Tx 1712.4 MHz, EUT Horz

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

At an approved test site, the transmitter is placed on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a $\frac{1}{2}$ wave dipole that is successively tuned to each of the highest spurious emissions. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the dipole antenna and its gain, the power (dBm) into an ideal $\frac{1}{2}$ wave dipole antenna is determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Double Ridge	EMCO	3115	AHB	2022-04-13	2024-04-13
Cable	ESM Cable Corp.	1-8GHz Cables	OCX	2022-02-04	2023-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	2022-02-04	2023-02-04
Filter - High Pass	Micro-Tronics	HPM50108	HGP	2022-01-13	2023-01-13
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAY	2022-12-06	2023-12-06
Antenna - Standard Gain	ETS Lindgren	3160-07	AHX	NCR	NCR
Cable	ESM Cable Corp.	8-18GHz Cables	OCY	2022-02-04	2023-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	2022-02-04	2023-02-04
Filter - High Pass	Micro-Tronics	HPM50111	HGQ	2022-01-13	2023-01-13
Antenna - Standard Gain	EMCO	3160-08	AHK	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVP	2022-02-04	2023-02-04
Generator - Signal	Agilent	E8257D	TGU	2020-11-03	2023-11-03
Power Sensor	Agilent	E4412A	SQE	2022-12-16	2023-12-16
Meter - Power	Hewlett Packard	E4418A	SPA	2022-12-16	2023-12-16

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

1 GHz TO 18 GHz

POWER INVESTIGATED

3.8VDC

CONFIGURATIONS INVESTIGATED

TELI0004-2

MODES INVESTIGATED

LTE Band 26, Ch 26740, 819 MHz, QPSK, 10 MHz Bandwidth, RB 1, Offset 25

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-12
Customer:	Telit Communications S.p.A.	Temperature:	21°C
Attendees:	None	Relative Humidity:	48%
Customer Project:	None	Bar. Pressure (PMSL):	1026 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 90.543(e):2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	25	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643).

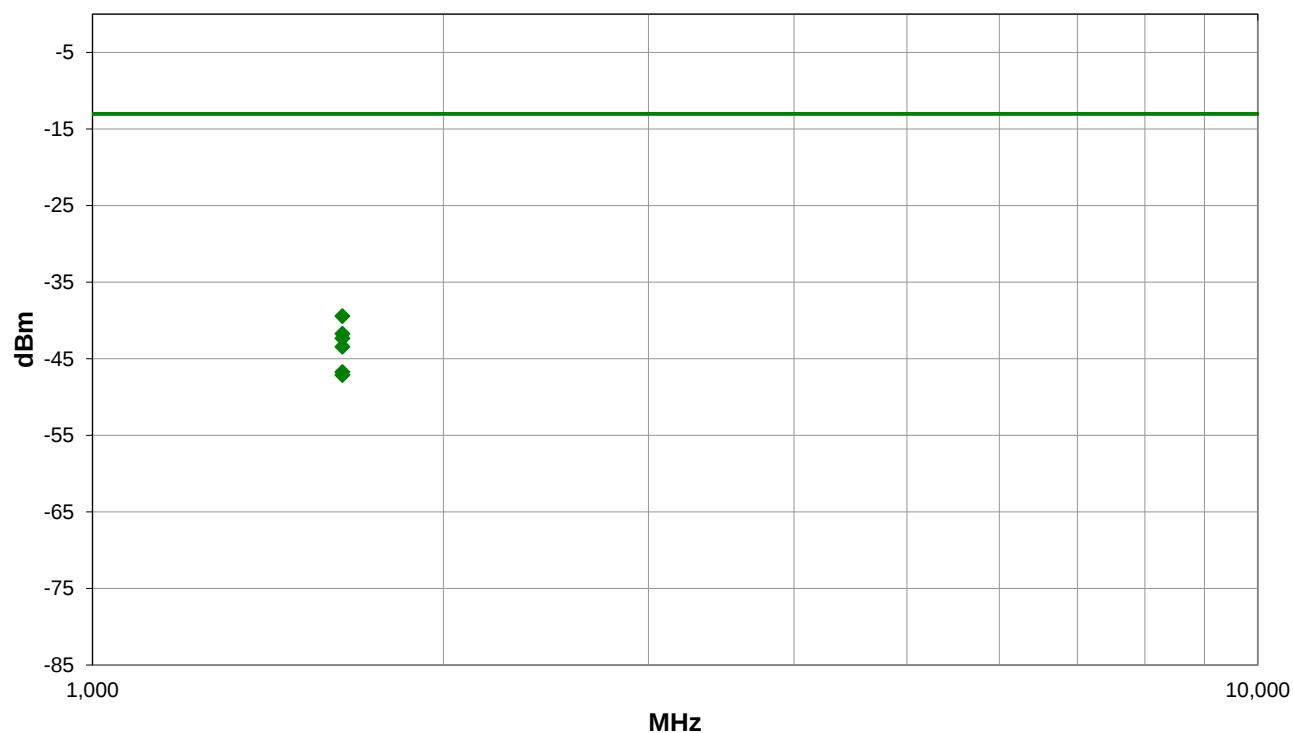
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

LTE Band 26, Ch 26740, 819 MHz, QPSK, 10 MHz Bandwidth, RB 1, Offset 25

DEVIATIONS FROM TEST STANDARD

None



Run #: 25

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #25

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1638.317	1.1	135.0	Horz	AV	114.1E-9	-39.4	-13.0	-26.4	Tx 819 MHz, EUT Horz
1638.367	1.2	0.0	Vert	AV	67.2E-9	-41.7	-13.0	-28.7	Tx 819 MHz, EUT Vert
1638.375	1.2	84.0	Horz	AV	58.5E-9	-42.3	-13.0	-29.3	Tx 819 MHz, EUT on Side
1638.342	3.08	37.0	Vert	AV	45.4E-9	-43.4	-13.0	-30.4	Tx 819 MHz, EUT on Side
1638.308	1.01	70.0	Horz	AV	21.2E-9	-46.7	-13.0	-33.7	Tx 819 MHz, EUT Vert
1638.317	1.16	342.0	Vert	AV	19.4E-9	-47.1	-13.0	-34.1	Tx 819 MHz, EUT Horz

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

At an approved test site, the transmitter is placed on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a $\frac{1}{2}$ wave dipole that is successively tuned to each of the highest spurious emissions. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the dipole antenna and its gain, the power (dBm) into an ideal $\frac{1}{2}$ wave dipole antenna is determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Standard Gain	EMCO	3160-08	AHK	NCR	NCR
Cable	ESM Cable Corp.	8-18GHz Cables	OCY	2022-02-04	2023-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVP	2022-02-04	2023-02-04
Filter - High Pass	Micro-Tronics	HPM50111	HGQ	2022-01-13	2023-01-13
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAY	2022-12-06	2023-12-06
Antenna - Standard Gain	ETS Lindgren	3160-07	AHX	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	2022-02-04	2023-02-04
Antenna - Double Ridge	EMCO	3115	AHB	2022-04-13	2024-04-13
Cable	ESM Cable Corp.	1-8GHz Cables	OCX	2022-02-04	2023-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	2022-02-04	2023-02-04
Filter - High Pass	Micro-Tronics	HPM50108	HGP	2022-01-13	2023-01-13
Generator - Signal	Agilent	E8257D	TGU	2020-11-03	2023-11-03
Power Sensor	Agilent	E4412A	SQE	2022-12-16	2023-12-16
Meter - Power	Hewlett Packard	E4418A	SPA	2022-12-16	2023-12-16

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.2 dB	-5.2 dB

FREQUENCY RANGE INVESTIGATED

1 GHz TO 18 GHz

POWER INVESTIGATED

3.8VDC

CONFIGURATIONS INVESTIGATED

TELI0004-2

MODES INVESTIGATED

LTE Band 14, Ch 23305, 790.5 MHz, QPSK, 5 MHz Bandwidth, RB 1, Offset 12

SPURIOUS RADIATED EMISSIONS

EUT:	LE910C4-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-01-12
Customer:	Telit Communications S.p.A.	Temperature:	21.8°C
Attendees:	None	Relative Humidity:	47.1%
Customer Project:	None	Bar. Pressure (PMSL):	1024 mb
Tested By:	Nolan De Ramos	Job Site:	OC07
Power:	3.8VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 90.543(f):2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	28	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643).

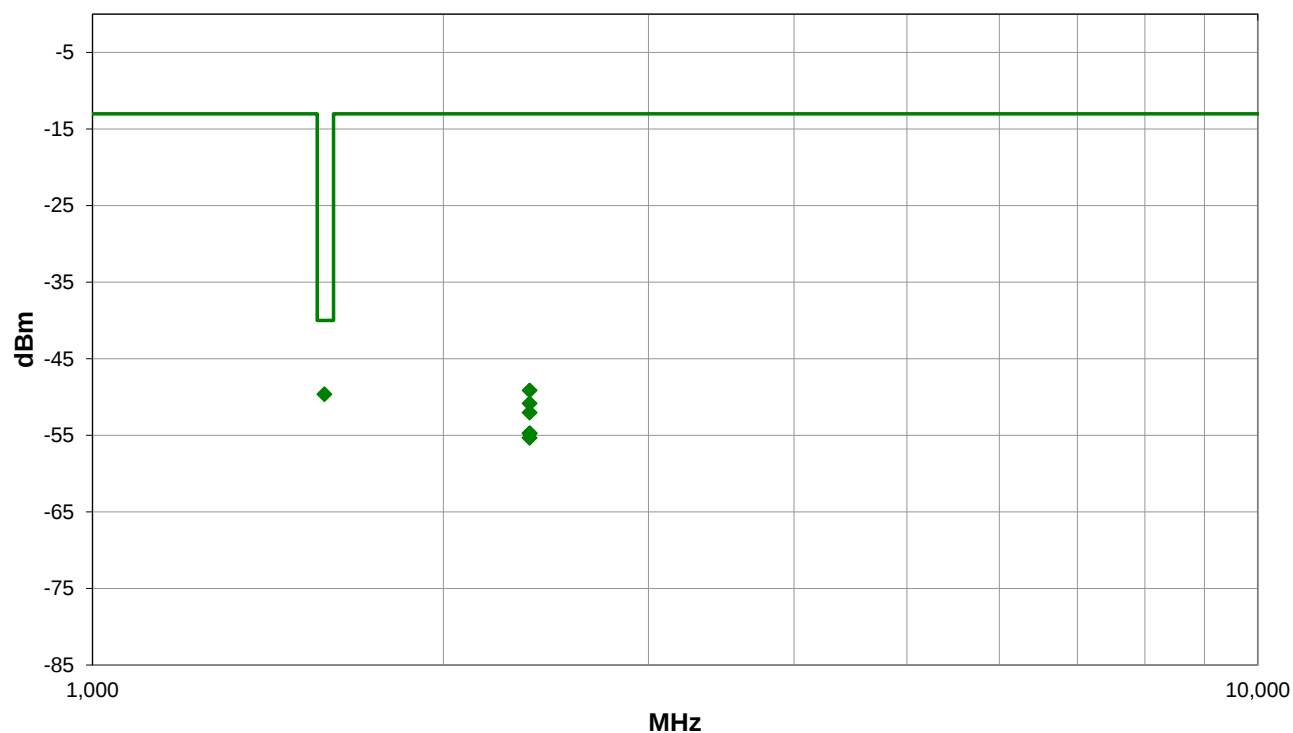
Spot check of Spurious Radiated Emissions based on worst case: FCC ID: RI7LE910CXWWX

EUT OPERATING MODES

LTE Band 14, Ch 23305, 790.5 MHz, QPSK, 5 MHz Bandwidth, RB 1, Offset 12

DEVIATIONS FROM TEST STANDARD

None



Run #: 28

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #28

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1581.152	1.2	293.0	Horz	AV	10.9E-9	-49.6	-40.0	-9.6	Tx 790.5 MHz, EUT Horz
2371.833	1.2	308.0	Horz	AV	12.2E-9	-49.1	-13.0	-36.1	Tx 790.5 MHz, EUT Horz
2371.700	1.05	268.0	Horz	AV	8.3E-9	-50.8	-13.0	-37.8	Tx 790.5 MHz, EUT on Side
2371.658	1.0	275.0	Vert	AV	6.3E-9	-52.0	-13.0	-39.0	Tx 790.5 MHz, EUT Vert
2371.783	1.0	40.0	Vert	AV	3.4E-9	-54.7	-13.0	-41.7	Tx 790.5 MHz, EUT Horz
2371.750	1.0	27.0	Horz	AV	3.4E-9	-54.7	-13.0	-41.7	Tx 790.5 MHz, EUT Vert
2371.517	1.14	16.0	Vert	AV	2.9E-9	-55.3	-13.0	-42.3	Tx 790.5 MHz, EUT on Side

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS – FCC

Band 7



TEST DESCRIPTION

At an approved test site, the transmitter was placed on a remotely controlled turntable, and the measurement antenna was placed 3 meters from the transmitter. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axes. The turntable azimuth was varied to maximize the level of spurious emissions. The height of the measurement antenna was also varied from 1 to 4 meters. A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity. The amplitude and frequency of the highest emissions was noted.

The transmitter was then replaced with a $\frac{1}{2}$ wave dipole that was successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator was connected to the dipole (horn antenna for frequencies above 1 GHz), and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the antenna and its gain, the power (dBm) was determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFI	2022-12-19	2023-12-19
Antenna - Double Ridge	ETS Lindgren	3115	AIZ	2022-03-02	2024-03-02
Antenna - Standard Gain	ETS Lindgren	3160-07	AHU	NCR	NCR
Antenna - Standard Gain	ETS Lindgren	3160-08	AHV	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	2022-05-03	2023-05-03
Amplifier - Pre-Amplifier	L-3 Narda-MITEQ	AMF-6F-08001200-30-10P	PAO	2022-11-03	2023-11-03
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	2022-11-03	2023-11-03
Cable	N/A	Double Ridge Horn Cables	EVB	2023-02-12	2024-02-12
Cable	None	Standard Gain Horn Cables	EVF	2022-11-03	2023-11-03
Cellular Base Station Simulator	Anritsu	MT8820C	AFK	NCR	NCR
Antenna - Double Ridge	EMCO	3115	AHC	2022-07-08	2024-07-08
Generator - Signal	Keysight	N5182B	TFU	2022-12-02	2024-12-02
Power Sensor	Agilent	E9300H	SQO	2022-10-17	2023-10-17
Meter - Power	Agilent	N1913A	SQR	2022-10-17	2023-10-17

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.2 dB	-5.2 dB

FREQUENCY RANGE INVESTIGATED

2700 MHz TO 18000 MHz

POWER INVESTIGATED

3.8 VDC

CONFIGURATIONS INVESTIGATED

TELI0004-TELI0004-2

MODES INVESTIGATED

LTE Band 7, Ch 21100, 2535 MHz, QPSK, 20 MHz Bandwidth, 1 RB, Offset 50

SPURIOUS RADIATED EMISSIONS – FCC

Band 7



EUT:	LE910C1-WWX	Work Order:	TELI0004
Serial Number:	ENG Sample 2	Date:	2023-03-10
Customer:	Telit Communications S.p.A.	Temperature:	19.9°C
Attendees:	None	Relative Humidity:	37.4%
Customer Project:	None	Bar. Pressure (PMSL):	1003 mb
Tested By:	Jeff Alcock	Job Site:	EV01
Power:	3.8 VDC	Configuration:	TELI0004-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	3	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Data Terminal Module (IMEI: 353338970545643)

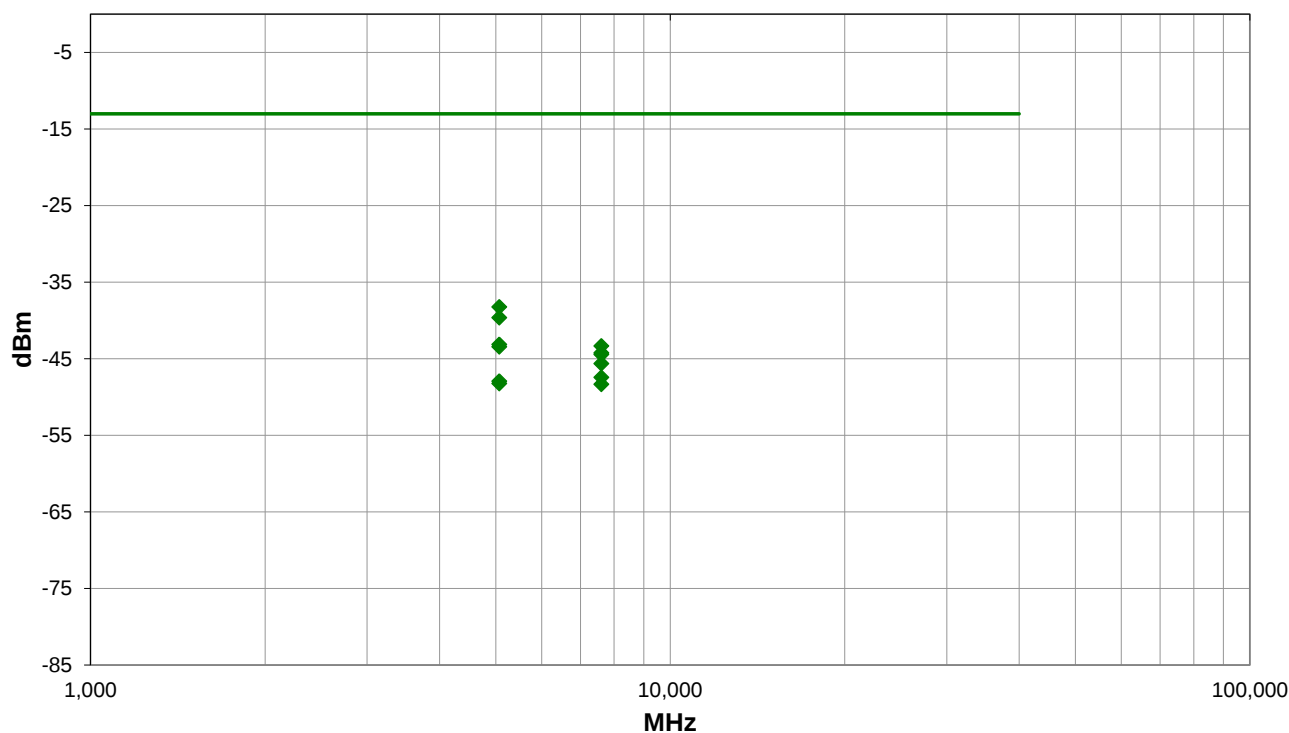
Spot check Spurious Radiated Emissions based on worst case: FCC ID: R17LE910CXWWX

EUT OPERATING MODES

LTE Band 7, Ch 21100, 2535 MHz, QPSK, 20 MHz Bandwidth, 1 RB, Offset 50

DEVIATIONS FROM TEST STANDARD

None



Run #: 3

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS – FCC Band 7

RESULTS - Run #3

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5070.192	1.91	329.0	Horz	AV	150.4E-9	-38.2	-13.0	-25.2	EUT Vert
5070.192	2.49	24.0	Vert	AV	108.9E-9	-39.6	-13.0	-26.6	EUT on Side
5070.217	3.69	66.0	Vert	AV	48.7E-9	-43.1	-13.0	-30.1	EUT Horz
7605.242	1.99	30.0	Vert	AV	46.5E-9	-43.3	-13.0	-30.3	EUT on Side
5070.133	4.0	14.0	Horz	AV	45.4E-9	-43.4	-13.0	-30.4	EUT Horz
7605.258	1.88	39.0	Horz	AV	37.8E-9	-44.2	-13.0	-31.2	EUT Vert
7605.317	2.6	7.0	Vert	AV	36.1E-9	-44.4	-13.0	-31.4	EUT Horz
7605.300	3.07	197.0	Vert	AV	27.4E-9	-45.6	-13.0	-32.6	EUT Vert
7605.192	2.36	24.0	Horz	AV	18.1E-9	-47.4	-13.0	-34.4	EUT Horz
5070.167	1.5	278.0	Horz	AV	16.1E-9	-47.9	-13.0	-34.9	EUT on Side
5070.208	1.0	334.0	Vert	AV	15.0E-9	-48.2	-13.0	-35.2	EUT Vert
7605.317	1.5	37.0	Horz	AV	14.7E-9	-48.3	-13.0	-35.3	EUT on Side

CONCLUSION

Pass



Tested By

ERP/EIRP OF THE FUNDAMENTAL



XMH 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Programmable Power Supply	TekPower	772307	SBB	NCR	NCR
Generator - Signal	Keysight	N5182B	TES	2021-09-14	2024-09-14
Meter - Multimeter	Fluke	179	MBB	2021-03-05	2024-03-05
Directional Coupler	Fairview Microwave	MC2047-10	RHZ	2022-04-25	2023-04-25
Cable	Element	None	OC5	2022-02-14	2023-02-14
Attenuator	Fairview Microwave	SA18H-20	UAY	2022-03-30	2023-03-30
Block - DC	Aeroflex	INMET 8535	AMO	2022-02-18	2023-02-18
EMPower USB RF Power Sensor	ETS-Lindgren	7002-006	SRU	2022-11-21	2023-11-21

TEST DESCRIPTION

The transmitter conducted output power is a measure of the total average power contained within an allocated channel bandwidth. Per FCC ID: RI7LE910CXWWX, the worst case modes of operation were investigated and the results are reported in this section.

ERP OF THE FUNDAMENTAL - GSM BAND (GSM-850), WCDMA BAND V (GSM-850)



TSTx 2022.06.03.0 XMR 2022.02.07.0

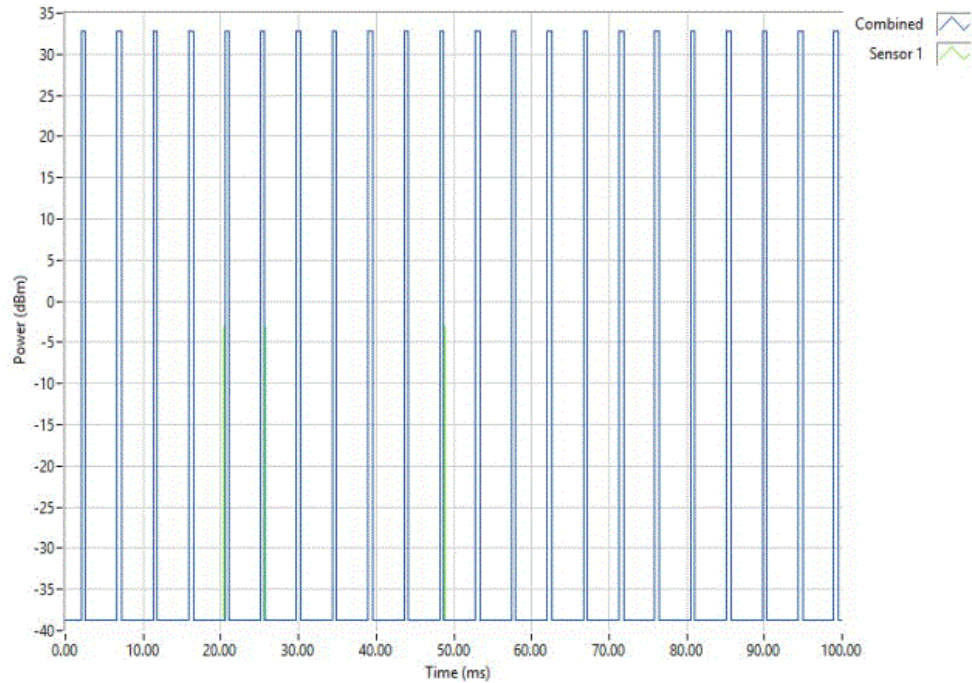
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 15-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
Job Site: OC13			
TEST SPECIFICATIONS			
FCC 22H:2022		Test Method	
		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965) Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0 Spot check of conducted output power based on worst case: FCC ID: RI7LE910CXWWX (Transmitter Conducted Output Power/Effective Radiated Power) The maximum Equivalent Radiated Power (ERP) calculation: ERP = Conducted Power (dBm) + Antenna Gain (dBi) - 2.15 dB			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Avg Cond Pwr (dBm)	Duty Cycle (%)
		Antenna Gain (dBi)	ERP (dBm)
		Limit (dBm)	Results
GSM Band GSM-850 (GPRS)			
	High Channel 251, 848.8 MHz	32.8	12.182
		1.5	32.15
		38.45	Pass
WCDMA Band V (GSM-850) (RMC)			
	Mid Channel 4183, 836.6 MHz	24.06	100
		1.5	23.41
		38.45	Pass

ERP OF THE FUNDAMENTAL - GSM BAND (GSM-850), WCDMA BAND V (GSM-850)

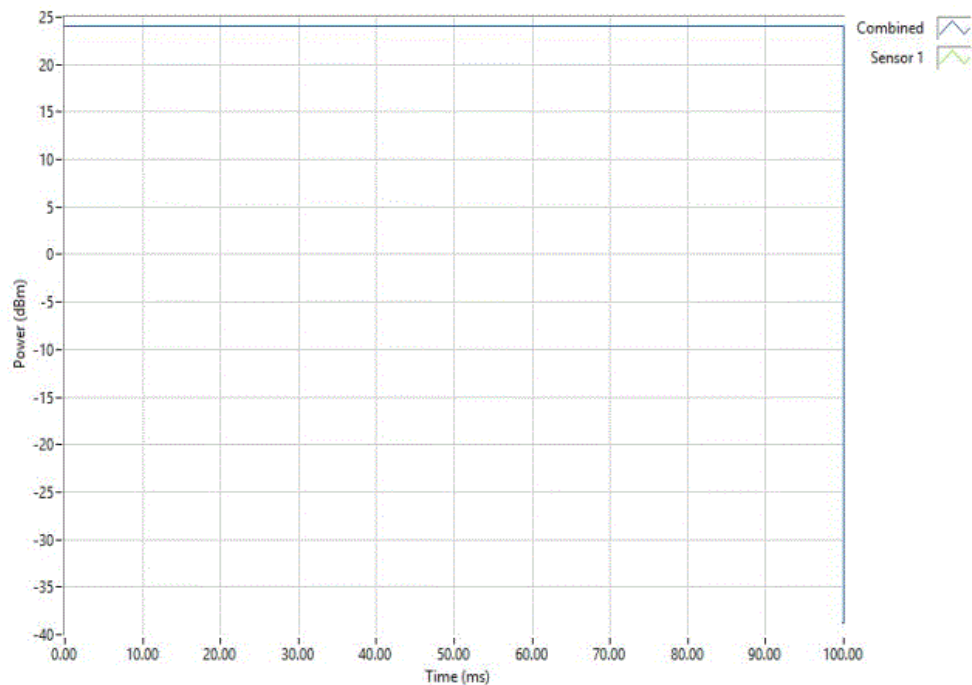


TMTx 2022.06.03.0 XMt 2022.02.07.0

GSM Band GSM-850 (GPRS), High Channel 251, 848.8 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Results
	32.8	12.182	1.5	32.15	38.45	Pass



WCDMA Band V (GSM-850) (RMC), Mid Channel 4183, 836.6 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Results
	24.06	100	1.5	23.41	38.45	Pass



EIRP OF THE FUNDAMENTAL - GSM BAND PCS-1900, WCDMA BAND II (PCS-1900)



TbTx 2022.06.03.0 XMt 2022.02.07.0

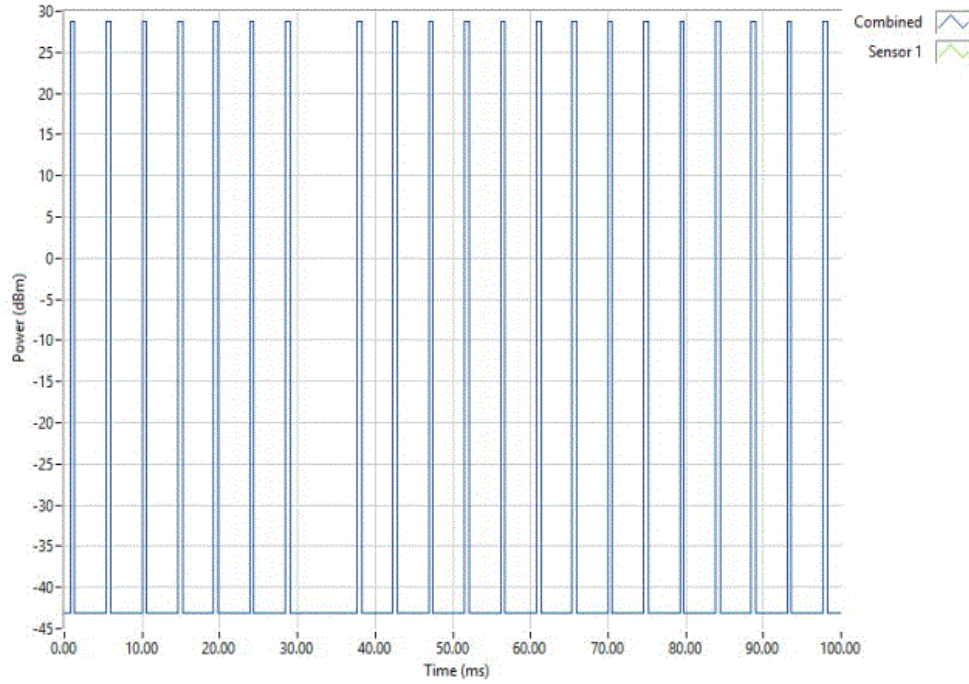
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 15-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
FCC 24E:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965)			
Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0			
Spot check of conducted output power based on worst case: FCC ID: RI7LE910CXWWX (Transmitter Conducted Output Power/Effective Radiated Power)			
The maximum Effective Isotropic Radiated Power (EIRP) calculation: EIRP = Conducted Power (dBm) + Antenna Gain (dBi)			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Avg Cond Pwr (dBm)	Duty Cycle (%)
		Antenna Gain (dBi)	EIRP (dBm)
		Limit (dBm)	Results
GSM Band PCS-1900 (GPRS)			
	High Channel 810 (1909.8 MHz)	28.77	11.611
WCDMA Band II (PCS-1900) (RMC)			
	Low Channel 9262 (1852.4 MHz)	23.3	100
		3.5	26.8
		33.01	Pass

EIRP OF THE FUNDAMENTAL - GSM BAND PCS-1900, WCDMA BAND II (PCS-1900)

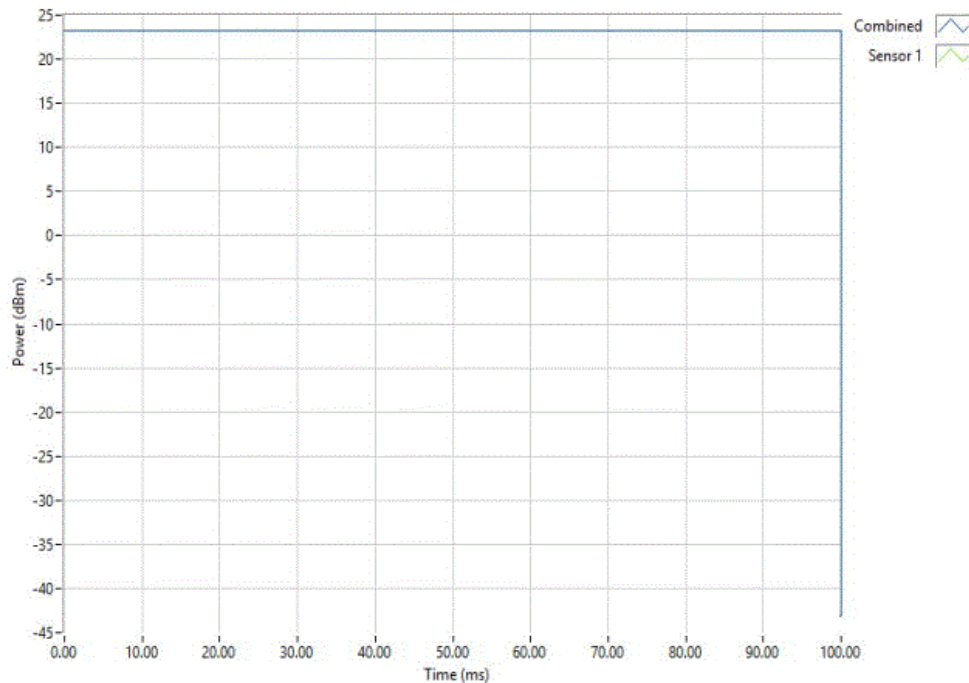


TbTx 2022.06.03.0 XMt 2022.02.07.0

GSM Band PCS-1900 (GPRS), High Channel 810 (1909.8 MHz)						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Results
	28.77	11.611	3.5	32.3	33.01	Pass



WCDMA Band II (PCS-1900) (RMC), Low Channel 9262 (1852.4 MHz)						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Results
	23.3	100	3.5	26.8	33.01	Pass



EIRP OF THE FUNDAMENTAL - WCDMA BAND IV (AWS-1700)



TbTx 2022.06.03.0 XMi 2022.02.07.0

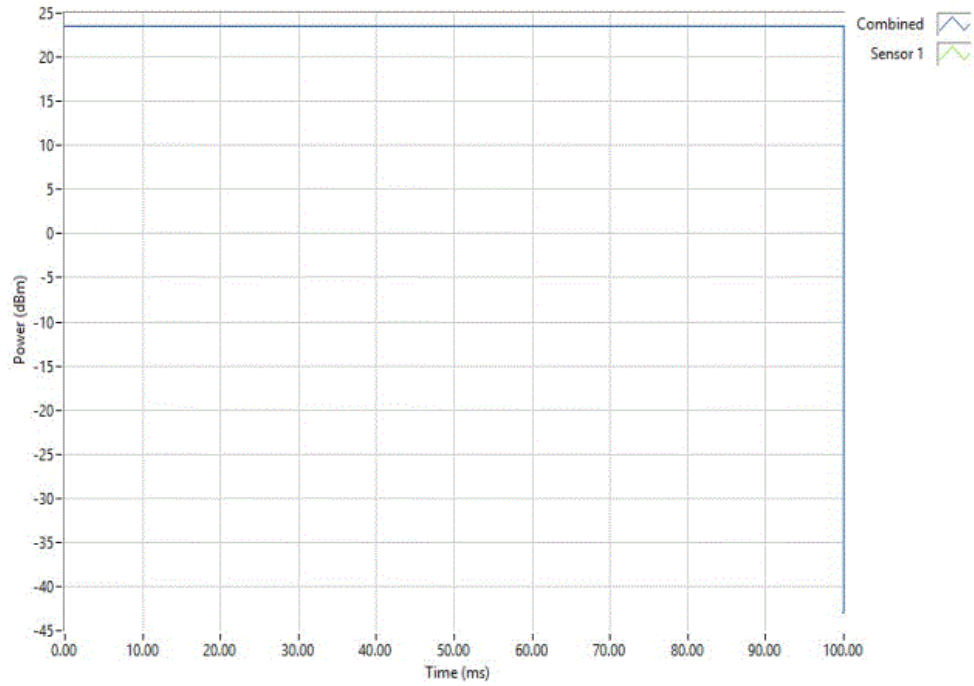
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 15-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
FCC 27:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965) Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0 Spot check of conducted output power based on worst case: FCC ID: R17LE910CXWWX (Transmitter Conducted Output Power/Effective Radiated Power) The maximum Effective Isotropic Radiated Power (EIRP) calculation: $EIRP = \text{Conducted Power (dBm)} + \text{Antenna Gain (dBi)}$			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Avg Cond Pwr (dBm)	Duty Cycle (%)
		Antenna Gain (dBi)	EIRP (dBm)
		Limit (dBm)	Results
Band IV (AWS-1700) (AMR)			
High Channel 1513, 1752.6 MHz		23.53	100
		3.5	27.0
		30	Pass

EIRP OF THE FUNDAMENTAL - WCDMA BAND IV (AWS-1700)



TbTx 2022.06.03.0 XbTx 2022.02.07.0

Band IV (AWS-1700) (AMR), High Channel 1513, 1752.6 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Results
	23.53	100	3.5	27.0	30	Pass



EIRP OF THE FUNDAMENTAL - LTE BAND 4



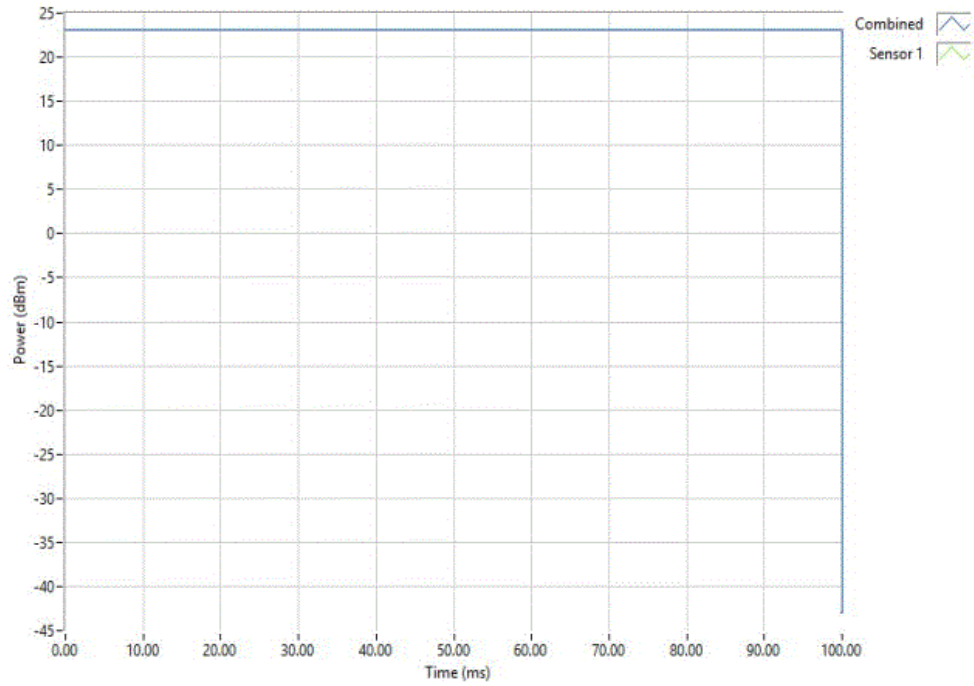
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 15-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
Job Site: OC13			
TEST SPECIFICATIONS			
FCC 27:2022		Test Method	
		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965) Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0 Spot check of conducted output power based on worst case: FCC ID: RI7LE910CXWWX (Transmitter Conducted Output Power/Effective Radiated Power) The maximum Effective Isotropic Radiated Power (EIRP) calculation: $EIRP = \text{Conducted Power (dBm)} + \text{Antenna Gain (dBi)}$			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Avg Cond Pwr (dBm)	Duty Cycle (%)
		Antenna Gain (dBi)	EIRP (dBm)
		Limit (dBm)	Results
LTE Band 4			
15 MHz Bandwidth, QPSK, RB Size 1, Offset 37			
Mid Channel 20175, 1732.5 MHz		23.04	100
		3.5	26.5
		30	Pass

EIRP OF THE FUNDAMENTAL - LTE BAND 4



TbTx 2022.06.03.0 XbTx 2022.02.07.0

LTE Band 4, 15 MHz Bandwidth, QPSK, RB Size 1, Offset 37, Mid Channel 20175, 1732.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Results
	23.04	100	3.5	26.5	30	Pass



ERP OF THE FUNDAMENTAL - LTE BAND 12 & 13



TSTx 2022.06.03.0 XMR 2022.02.07.0

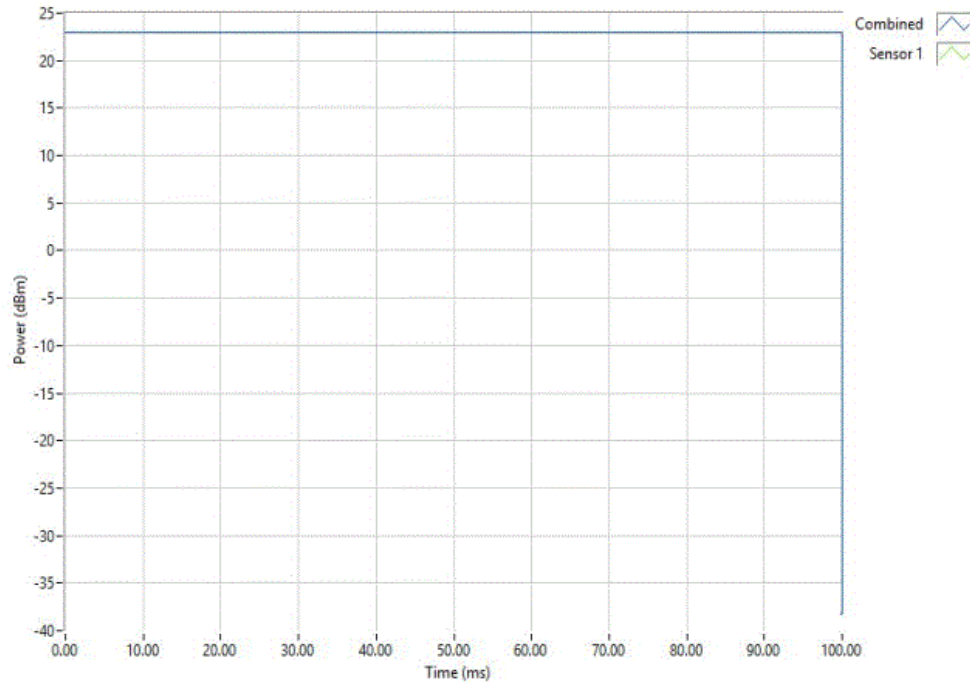
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 15-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
Job Site: OC13			
TEST SPECIFICATIONS			
FCC 27:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965) Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0 Spot check of conducted output power based on worst case: FCC ID: R17LE910CXWWX (Transmitter Conducted Output Power/Effective Radiated Power) The maximum Equivalent Radiated Power (ERP) calculation: ERP = Conducted Power (dBm) + Antenna Gain (dBi) - 2.15 dB			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Avg Cond Pwr (dBm)	Duty Cycle (%)
		Antenna Gain (dBi)	ERP (dBm)
		Limit (dBm)	Results
LTE Band 12			
10 MHz Bandwidth, QPSK, RB Size 1, Offset 25			
Mid Channel 23095, 707.5 MHz		22.9	100
		1.5	22.25
		34.77	Pass
LTE Band 13			
10 MHz Bandwidth, QPSK, RB Size 1, Offset 25			
Mid Channel 23230, 782 MHz		23.98	100
		1.5	23.33
		34.77	Pass

ERP OF THE FUNDAMENTAL - LTE BAND 12 & 13

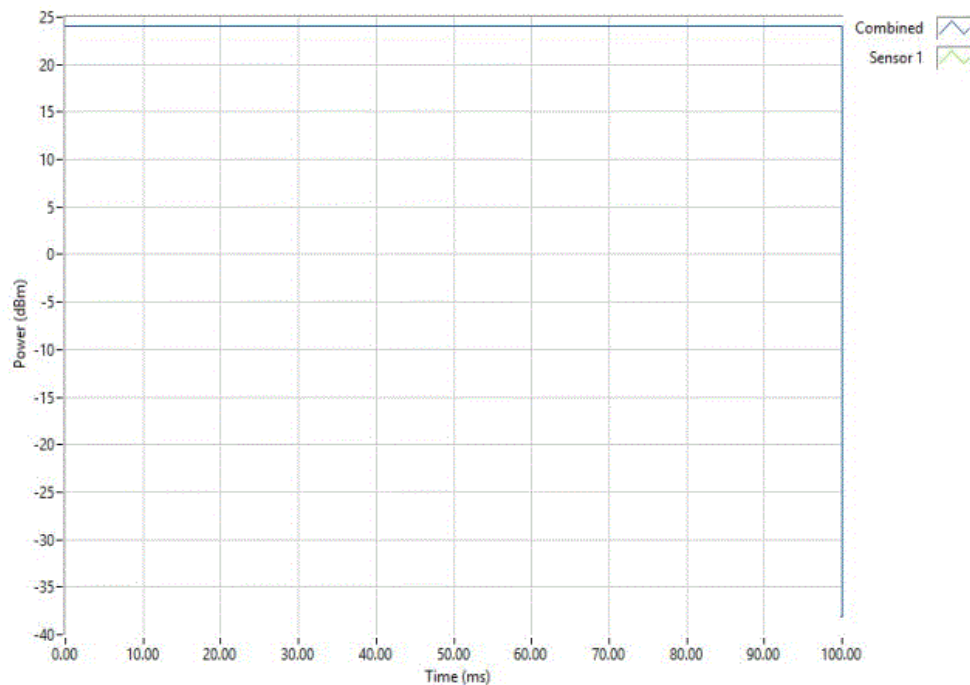


TM7Tx 2022.06.03.0 XM8 2022.02.07.0

LTE Band 12, 10 MHz Bandwidth, QPSK, RB Size 1, Offset 25, Mid Channel 23095, 707.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Results
	22.9	100	1.5	22.25	34.77	Pass



LTE Band 13, 10 MHz Bandwidth, QPSK, RB Size 1, Offset 25, Mid Channel 23230, 782 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Results
	23.98	100	1.5	23.33	34.77	Pass



ERP OF THE FUNDAMENTAL - LTE BAND 14



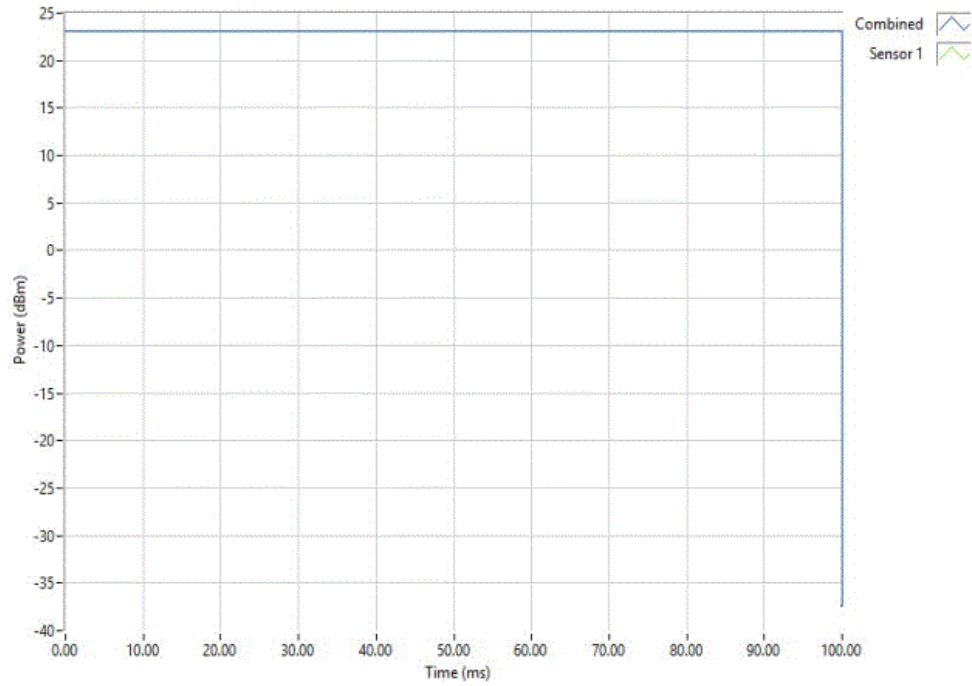
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 15-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Job Site: OC13	
Power: 3.8VDC			
TEST SPECIFICATIONS		Test Method	
FCC 901:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965) Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0 Spot check of conducted output power based on worst case: FCC ID: RI7LE910CXWWX (Transmitter Conducted Output Power/Effective Radiated Power) The maximum Equivalent Radiated Power (ERP) calculation: $ERP = \text{Conducted Power (dBm)} + \text{Antenna Gain (dBi)} - 2.15 \text{ dB}$			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Avg Cond Pwr (dBm)	Duty Cycle (%)
		Antenna Gain (dBi)	ERP (dBm)
		Limit (dBm)	Results
LTE Band 14			
10 MHz Bandwidth, QPSK, RB Size 1, Offset 25			
Mid Channel 23330, 793 MHz		23.12	100
		1.5	22.47
		34.77	Pass

ERP OF THE FUNDAMENTAL - LTE BAND 14



TbTx 2022.06.03.0 XMt 2022.02.07.0

LTE Band 14, 10 MHz Bandwidth, QPSK, RB Size 1, Offset 25, Mid Channel 23330, 793 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Results
	23.12	100	1.5	22.47	34.77	Pass



EIRP OF THE FUNDAMENTAL - LTE BAND 25/2



TbTx 2022.06.03.0 XMe 2022.02.07.0

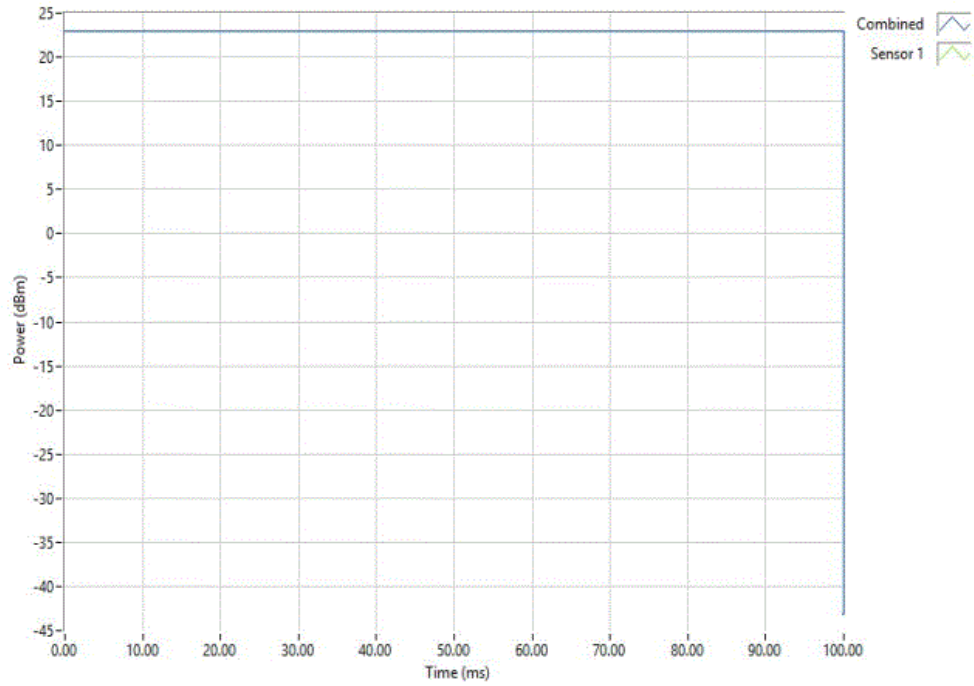
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 15-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Job Site: OC13	
Power: 3.8VDC			
TEST SPECIFICATIONS		Test Method	
FCC 24E:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965) Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0 Spot check of conducted output power based on worst case: FCC ID: RI7LE910CXWWX (Transmitter Conducted Output Power/Effective Radiated Power) The maximum Effective Isotropic Radiated Power (EIRP) calculation: EIRP = Conducted Power (dBm) + Antenna Gain (dBi)			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Avg Cond Pwr (dBm)	Duty Cycle (%)
		Antenna Gain (dB)	EIRP (dBm)
		Limit (dBm)	Results
LTE Band 25/2			
10 MHz Bandwidth, QPSK, RB Size 1, Offset 25			
Low Channel 26365 (Band 25), 18925 (Band 2), 1882.5			
		22.91	100
		3.5	26.4
		33.01	Pass

EIRP OF THE FUNDAMENTAL - LTE BAND 25/2



TbTx 2022.06.03.0 XMt 2022.02.07.0

LTE Band 25/2, 10 MHz Bandwidth, QPSK, RB Size 1, Offset 25, Low Channel 26365 (Band 25), 18925 (Band 2), 1882.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Results
	22.91	100	3.5	26.4	33.01	Pass



ERP OF THE FUNDAMENTAL - LTE BAND 26



TbT x 2022.06.03.0 XMI 2022.02.07.0

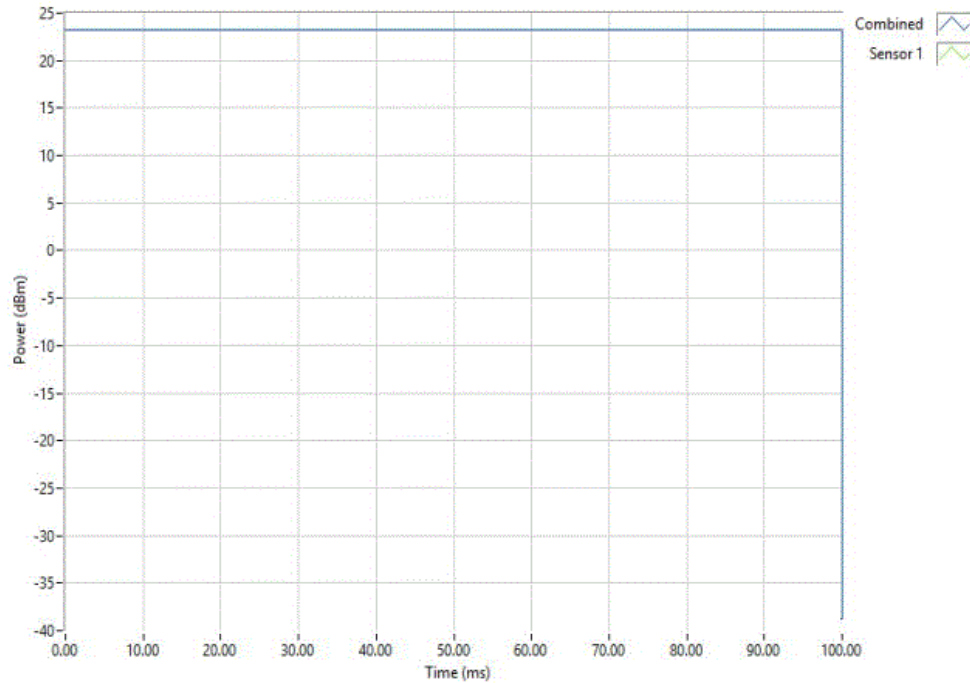
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 15-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos	Power: 3.8VDC	Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
FCC 22H:2022		ANSI C63.26:2015	
FCC 90S:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965)			
Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0			
Spot check of conducted output power based on worst case: FCC ID: RI7LE910CXWWX (Transmitter Conducted Output Power/Effective Radiated Power)			
The maximum Equivalent Radiated Power (ERP) calculation: ERP = Conducted Power (dBm) + Antenna Gain (dBi) - 2.15 dB			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Avg Cond Pwr (dBm)	Duty Cycle (%)
		Antenna Gain (dBi)	ERP (dBm)
		Limit (dBm)	Results
LTE Band 26			
15 MHz Bandwidth, QPSK, RB Size 1, Offset 37			
Low Channel 26765, 821.5 MHz		23.29	100
10 MHz Bandwidth, QPSK, RB Size 1, Offset 25			
Low Channel 26740, 819 MHz		23.48	100
		1.5	22.64
		50	Pass

ERP OF THE FUNDAMENTAL - LTE BAND 26

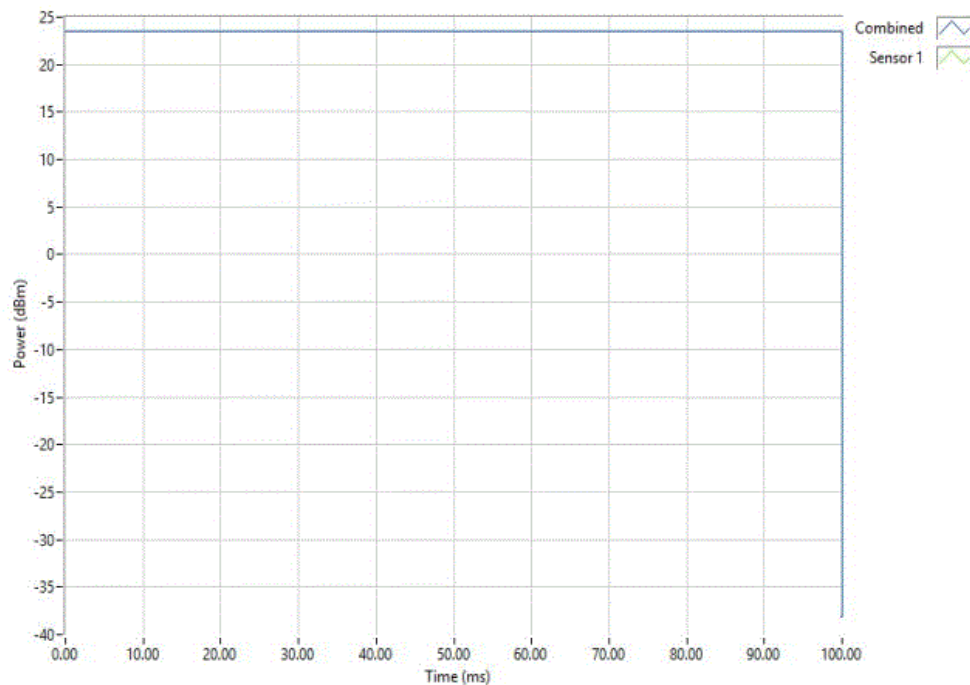


TM7Tx 2022.06.03.0 XM8 2022.02.07.0

LTE Band 26, 15 MHz Bandwidth, QPSK, RB Size 1, Offset 37, Low Channel 26765, 821.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Results
	23.29	100	1.5	22.64	38.45	Pass



LTE Band 26, 10 MHz Bandwidth, QPSK, RB Size 1, Offset 25, Low Channel 26740, 819 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Results
	23.48	100	1.5	22.83	50	Pass



ERP OF THE FUNDAMENTAL - LTE BAND 26/5



TbTx 2022.06.03.0 XMt 2022.02.07.0

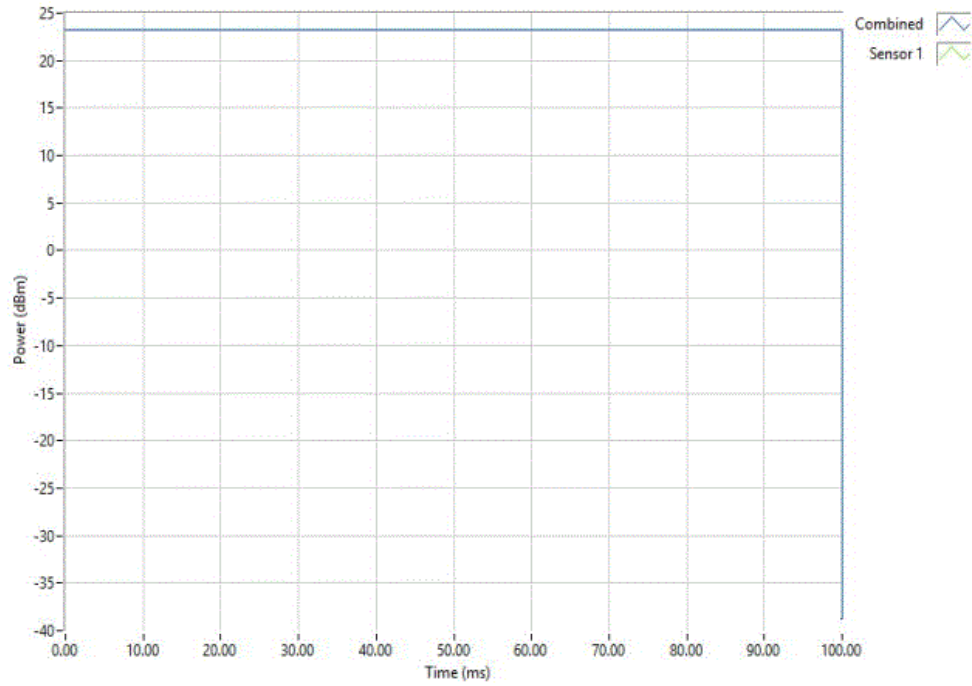
EUT: LE910C4-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 1		Date: 15-Dec-22	
Customer: Telit Communications S.p.A.		Temperature: 19 °C	
Attendees: None		Humidity: 49.6% RH	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Nolan De Ramos		Power: 3.8VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
FCC 22H:2022		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965)			
Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0			
Spot check of conducted output power based on worst case: FCC ID: RI7LE910CXWWX (Transmitter Conducted Output Power/Effective Radiated Power)			
The maximum Equivalent Radiated Power (ERP) calculation: ERP = Conducted Power (dBm) + Antenna Gain (dBi) - 2.15 dB			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Avg Cond Pwr (dBm)	Duty Cycle (%)
		Antenna Gain (dBi)	ERP (dBm)
		Limit (dBm)	Results
LTE Band 26/5			
10 MHz Bandwidth, QPSK, RB Size 1, Offset 25			
Low Channel 26840 (Band 26), 20450 (Band 5), 829 MHz			
		23.26	100
		1.5	22.61
		38.45	Pass

ERP OF THE FUNDAMENTAL - LTE BAND 26/5



TbTx 2022.06.03.0 XMt 2022.02.07.0

LTE Band 26/5, 10 MHz Bandwidth, QPSK, RB Size 1, Offset 25, Low Channel 26840 (Band 26), 20450 (Band 5), 829 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Results
	23.26	100	1.5	22.61	38.45	Pass



EIRP OF THE FUNDAMENTAL - LTE BAND 7



XMit 2022.12.28.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Block - DC	Fairview Microwave	SD3473	AMY	2022-07-05	2023-07-05
Attenuator	Fairview Microwave	SA26B-20	TWJ	2022-03-15	2023-03-15
Directional Coupler	Fairview Microwave	MC2047-10	RGT	2022-06-27	2023-06-27
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2022-12-02	2023-12-02
Cellular Base Station Simulator	Anritsu	MT8820C	AFK	NCR	NCR
Meter - Power	ETS Lindgren	7002-006	SRF	2022-09-22	2023-09-22
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2023-02-06	2024-02-06

TEST DESCRIPTION

The transmitter conducted output power is a measure of the total average power contained within an allocated channel bandwidth. Per FCC ID: R17LE910CXWWX, the worst case modes of operation were investigated and the results are reported in this section.

EIRP OF THE FUNDAMENTAL - LTE BAND 7



Thru 2022.06.03.0 XMt 2022.12.28.0

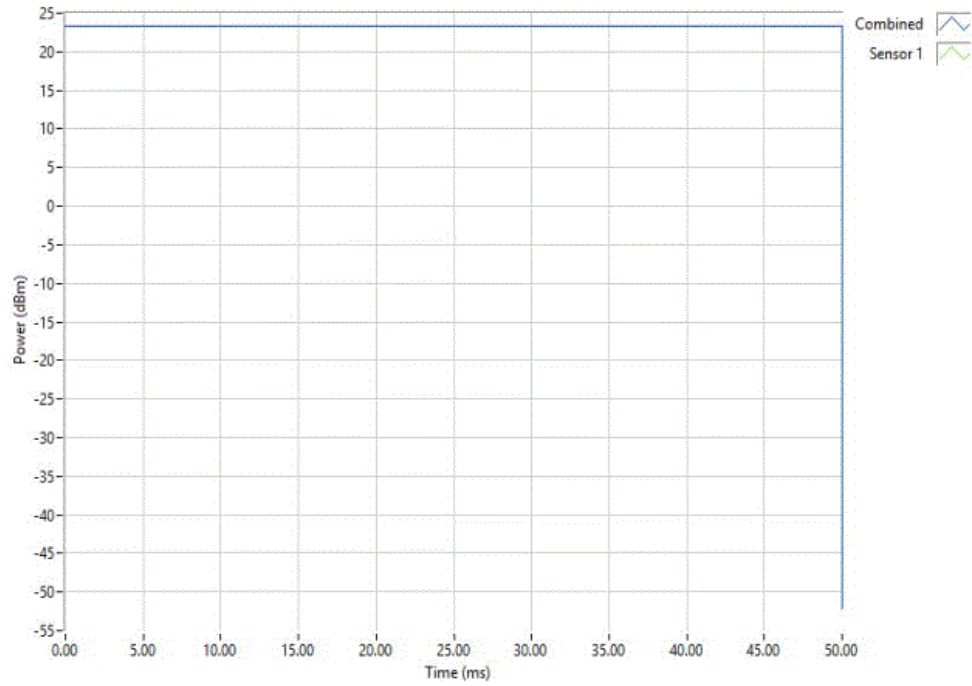
EUT: LE910C1-WWX		Work Order: TELI0004	
Serial Number: ENG Sample 2		Date: 03/13/2023	
Customer: Telit Communications S.p.A.		Temperature: 21.7°C	
Attendees: None		Humidity: 40.9%	
Project: None		Barometric Pres.: 1009 mbar	
Tested by: Jeff Alcock		Job Site: EV06	
Power: 3.8 VDC			
TEST SPECIFICATIONS		Test Method	
FCC 27:2023		ANSI C63.26:2015	
COMMENTS			
Data Terminal Module (IMEI: 353338970545965)			
Test Procedure Used: KDB 971168 D01 v03r01 - Section 6.0			
Spot check of fundamental emissions based on worst case: FCC ID: RI7LE910CXWWX (Transmitter Conducted Output Power / Equivalent Isotropic Radiated Power)			
The maximum Effective Isotropic Radiated Power (EIRP) calculation:			
EIRP = Conducted Power (dBm) + Antenna Gain (dBi)			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	TELI0004-2	Signature	
		Avg Cond Pwr (dBm)	Duty Cycle (%)
		Antenna Gain (dBi)	EIRP (dBm)
		Limit (dBm)	Results
LTE Band 7			
10 MHz BW, QPSK			
Mid Channel 21100, 2535 MHz, 1 RB / 25 offset			
		23.27	100
		1.82	25.09
		33.01	Pass

EIRP OF THE FUNDAMENTAL - LTE BAND 7



TMTx 2022.06.03.0 XMR 2022.12.28.0

LTE Band 7, 10 MHz BW, QPSK, Mid Channel 21100, 2535 MHz, 1 RB / 25 offset						
Avg Cond	Duty	Antenna	EIRP	Limit	Results	
Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)		
23.27	100	1.82	25.09	33.01	Pass	



End of Test Report