

FCC PART 27

TEST REPORT

For

Baicells Technologies Co., Ltd.

3F, Hui Yuan Development Building, No.1 Shangdi, Information Industry Base, Haidian Dist.,
Beijing, China

FCC ID: 2AG32EG7035EM1

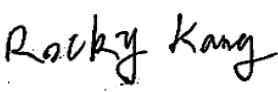
Report Type: Original Report	Product Type: LTE Outdoor CPE
Report Number: <u>RSZ180629008-00B</u>	
Report Date: <u>2018-07-27</u>	
Reviewed By: <u>RF Engineer</u>	<u>Rocky Kang</u> 
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Baicells Technologies Co., Ltd.*'s product, model number: EG7035E-M1 (FCC ID: 2AG32EG7035EM1) or the "EUT" in this report was a *LTE Outdoor CPE*, which was measured approximately: 25.0 cm (L) × 25.0 cm (W) × 8.0 cm (H), rated with input voltage: DC24.0V from POE.

**All measurement and test data in this report was gathered from production sample serial number: 180629008 (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2018-06-29.*

Objective

This test report is prepared on behalf of *Baicells Technologies Co., Ltd.* in accordance with Part 2-Subpart J, Subpart 27 of the Federal Communication Commissions rules.

The objective is to determine the compliance of the EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability and band edge.

Related Submittal(s)/Grant(s)

No Related Submittal(s)/Grant(s).

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 27 – Miscellaneous wireless communications services

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		±1.5dB
Unwanted Emission, conducted		±1.5dB
Emissions, radiated	Below 1GHz	±4.70dB
	Above 1GHz	±4.80dB
Temperature		±1 °C
Supply voltages		±0.4%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 342867, the FCC Designation No.: CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

No modification was made to the EUT.

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.002K50-116218-UY

Cable Description	Length (m)	From Port	To
Un-shielding Un-detachable AC cable	1.0	POE	Mains
Un-shielding detachable RJ45 cable	1.5	POE	EUT

AC Power Source

CMW500

Mains

Antenna

EUT

POE

Non-Conductive Table
150 cm above Ground Plane

1.5 Meters

1.0 Meter

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b)(1), §2.1091	Maximum Permissible Exposure (MPE)	Compliance
§2.1046;§27.50 (h)	RF Output Power	Compliance
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049;§27.53	Occupied Bandwidth	Compliance
§ 2.1051; §27.53 (m)	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053;§27.53 (m)	Field Strength of Spurious Radiation	Compliance
§27.53 (m)	Band Edge	Compliance
§ 2.1055; §27.54;	Frequency stability	Compliance

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Sunol Sciences	Horn Antenna	DRH-118	A052604	2017-12-22	2020-12-21
Rohde & Schwarz	Signal Analyzer	FSEM	845987/005	2018-04-24	2019-04-24
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2017-12-22	2020-12-21
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2018-05-21	2019-05-21
HP	Amplifier	HP8447E	1937A01046	2018-05-21	2018-11-19
Anritsu	Signal Generator	68369B	004114	2017-12-24	2018-12-24
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2018-01-11	2019-01-11
COM POWER	Dipole Antenna	AD-100	041000	NCR	NCR
A.H. System	Horn Antenna	SAS-200/571	135	2015-08-18	2018-08-17
Ducommun technologies	RF Cable	UFA210A-1-4724-30050U	MFR64369 223410-001	2018-05-21	2018-11-19
Ducommun technologies	RF Cable	104PEA	218124002	2018-05-21	2018-11-19
Ducommun technologies	RF Cable	RG-214	1	2018-05-21	2018-11-19
Ducommun technologies	RF Cable	RG-214	2	2018-05-22	2018-11-22
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-04	2017-12-29	2020-12-28
Ducommun technologies	Horn Antenna	ARH-4223-02	1007726-03	2017-12-29	2020-12-28
Ducommun technologies	Pre-amplifier	ALN-22093530-01	991373-01	2017-08-03	2018-08-03
RF Conducted Test					
Rohde & Schwarz	SPECTRUM ANALYZER	FSU26	200120	2017-12-24	2018-12-24
ESPEC	Temperature & Humidity Chamber	EL-10KA	09107726	2017-12-21	2018-12-21
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.002K50-146520-wh	2018-04-24	2019-04-24
Ducommun technologies	RF Cable	RG-214	3	Each Time	
WEINSCHL	10dB Attenuator	5324	AU 3842	Each Time	
N/A	Power Splitter	N/A	N/A	2018-05-21	2019-05-21

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC§1.1307 (b)(1) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)**Applicable Standard**

According to subpart 1.1307 (b)(1), 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Result**Calculated Formulary:**

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

For General Population/Uncontrolled Exposure:

Frequency (MHz)	Antenna Gain		Max Tune-up Power		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
	(dBi)	(numeric)	(dBm)	(mW)			
2496-2690	14	25.12	25	316	40	0.4	1.0

Radiation Exposure Statement:

To comply with FCC RF exposure requirements, a minimum separation distance of 40cm is required between the antenna and persons, and the available max antenna gain must not exceed 14 dBi.

FCC §2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC § 2.1046, §27.50(h) - RF OUTPUT POWER

Applicable Standard

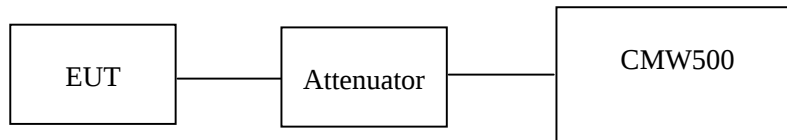
The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

According to §27.50(h), Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

Test Procedure

Conducted method:

The RF output of the transmitter was connected to the CMW500 through sufficient attenuation.



Radiated method:

TIA 603-D section 2.2.17

Test Data**Environmental Conditions**

Temperature:	25 °C
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Hill He on 2018-07-18.

LTE Band 41(This is a fixed digital user station):
Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/RB Offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5.0	QPSK	RB Size=1, RB Offset=0	22.72	22.64	22.79
		RB Size=1, RB Offset=12	22.36	22.51	22.44
		RB Size=1, RB Offset=24	22.25	22.35	22.26
		RB Size=12, RB Offset=0	21.84	22.20	22.08
		RB Size=12, RB Offset=6	21.59	22.12	22.15
		RB Size=12, RB Offset=11	22.02	21.95	22.08
		RB Size=25, RB Offset=0	21.38	21.78	21.80
	16QAM	RB Size=1, RB Offset=0	22.57	22.34	22.53
		RB Size=1, RB Offset=12	22.42	22.28	22.25
		RB Size=1, RB Offset=24	22.31	22.09	22.32
		RB Size=12, RB Offset=0	22.13	21.86	21.89
		RB Size=12, RB Offset=6	22.02	21.72	21.79
		RB Size=12, RB Offset=11	21.97	21.68	21.75
		RB Size=25, RB Offset=0	21.74	21.52	21.34
10.0	QPSK	RB Size=1, RB Offset=0	22.41	22.55	22.49
		RB Size=1, RB Offset=24	22.33	22.48	22.36
		RB Size=1, RB Offset=49	22.10	22.11	22.19
		RB Size=25, RB Offset=0	21.94	22.01	22.09
		RB Size=25, RB Offset=12	21.82	21.93	21.79
		RB Size=25, RB Offset=24	21.76	21.85	21.65
		RB Size=50, RB Offset=0	21.63	21.78	21.45
	16QAM	RB Size=1, RB Offset=0	22.51	22.62	22.62
		RB Size=1, RB Offset=24	22.33	22.29	22.45
		RB Size=1, RB Offset=49	22.29	22.38	22.29
		RB Size=25, RB Offset=0	22.18	22.05	22.15
		RB Size=25, RB Offset=12	21.92	22.08	22.02
		RB Size=25, RB Offset=24	21.85	21.95	21.99
		RB Size=50, RB Offset=0	21.75	21.77	21.77

Bandwidth (MHz)	Modulation	RB size/RB Offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15.0	QPSK	RB Size=1, RB Offset=0	22.81	22.71	22.83
		RB Size=1, RB Offset=37	22.67	22.35	22.44
		RB Size=1, RB Offset=74	22.32	22.18	22.27
		RB Size=36, RB Offset=0	22.08	22.06	22.02
		RB Size=36, RB Offset=18	21.83	21.96	21.91
		RB Size=36, RB Offset=37	21.52	21.69	21.78
		RB Size=75, RB Offset=0	21.38	21.35	21.29
	16QAM	RB Size=1, RB Offset=0	22.51	22.42	22.77
		RB Size=1, RB Offset=37	22.27	22.40	22.36
		RB Size=1, RB Offset=74	22.12	22.24	22.15
		RB Size=36, RB Offset=0	22.04	21.93	22.09
		RB Size=36, RB Offset=18	21.91	21.64	21.73
		RB Size=36, RB Offset=37	21.70	21.81	21.78
		RB Size=75, RB Offset=0	21.36	21.37	21.32
20.0	QPSK	RB Size=1, RB Offset=0	22.56	22.59	22.65
		RB Size=1, RB Offset=49	22.36	22.73	22.74
		RB Size=1, RB Offset=99	22.21	22.15	22.37
		RB Size=50, RB Offset=0	22.07	22.09	22.16
		RB Size=50, RB Offset=24	21.98	22.05	22.09
		RB Size=50, RB Offset=49	21.75	21.94	21.74
		RB Size=100, RB Offset=0	21.61	21.73	21.52
	16QAM	RB Size=1, RB Offset=0	22.39	22.53	22.52
		RB Size=1, RB Offset=49	22.18	22.28	22.37
		RB Size=1, RB Offset=99	22.24	22.31	22.27
		RB Size=50, RB Offset=0	22.08	22.04	22.14
		RB Size=50, RB Offset=24	22.01	22.05	22.03
		RB Size=50, RB Offset=49	21.76	21.78	21.79
		RB Size=100, RB Offset=0	21.37	21.64	21.70

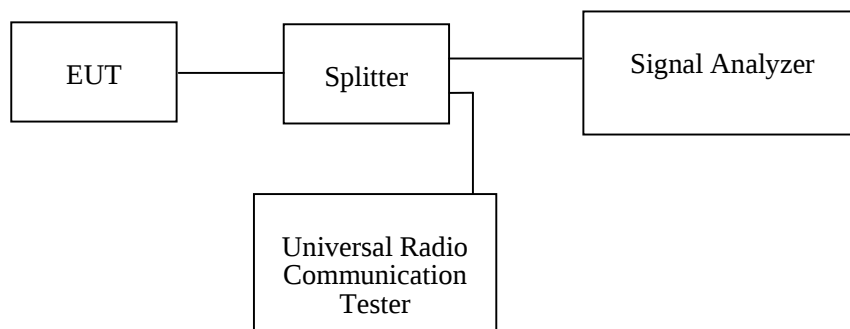
FCC §2.1049, §27.53 - OCCUPIED BANDWIDTH**Applicable Standard**

FCC 47 §2.1049, §27.53.

Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 1% to 5% of the anticipated emission bandwidth and the 26 dB & 99% bandwidth was recorded.

**Test Data****Environmental Conditions**

Temperature:	25 °C
Relative Humidity:	53 %
ATM Pressure:	101.2 kPa

The testing was performed by Hill He on 2018-07-05.

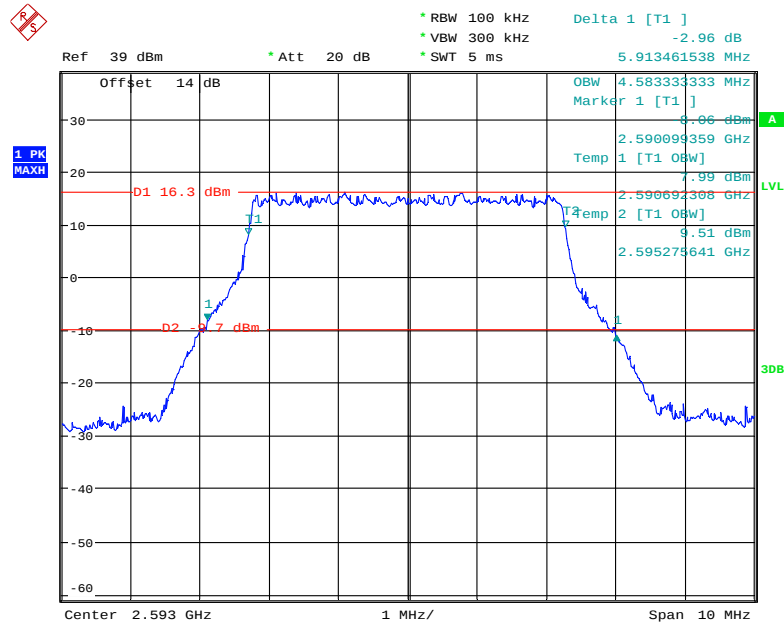
EUT operation mode: Transmitting

Test Result: Compliance. Please refer to the following tables and plots.

LTE Band 41: (Middle Channel)

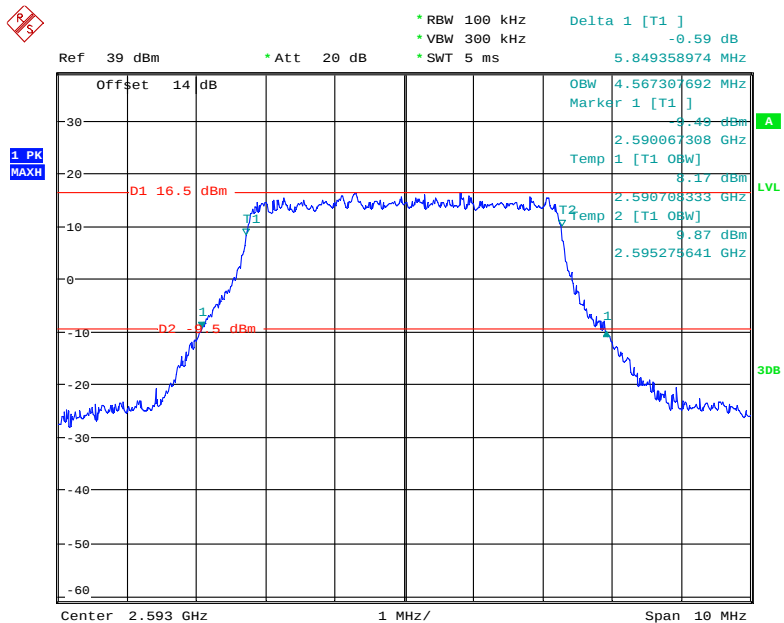
Bandwidth (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5.0	QPSK	4.583	5.913
	16QAM	4.567	5.849
10.0	QPSK	9.120	11.428
	16QAM	9.120	11.601
15.0	QPSK	13.510	15.833
	16QAM	13.462	15.785
20.0	QPSK	18.000	20.486
	16QAM	18.160	20.807

QPSK (5.0 MHz) - 26 dB Bandwidth & 99% Occupied Bandwidth, Middle channel

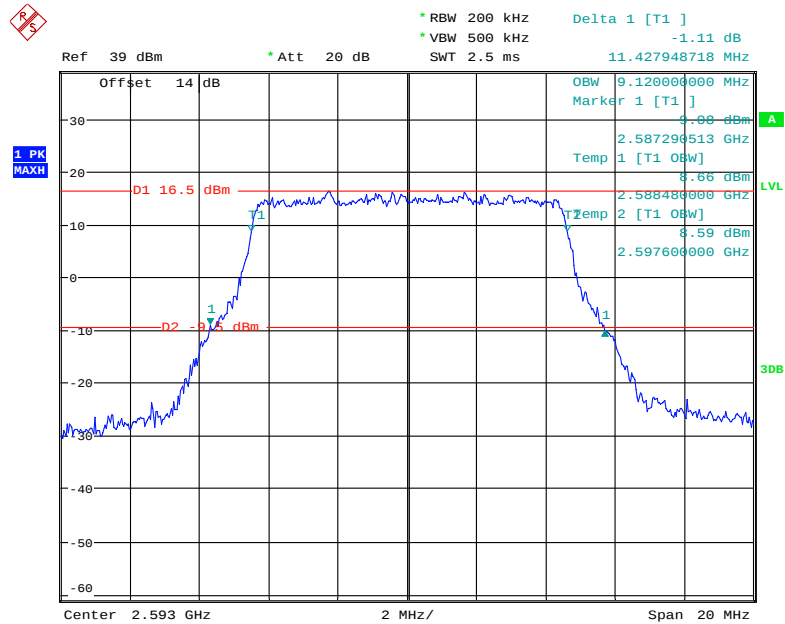


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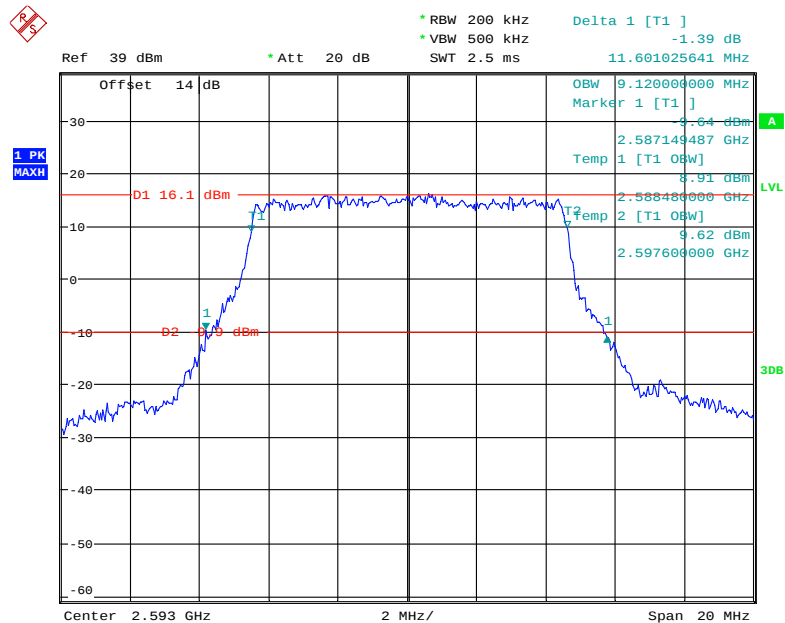
16-QAM (5.0 MHz) - 26 dB Bandwidth & 99% Occupied Bandwidth, Middle channel



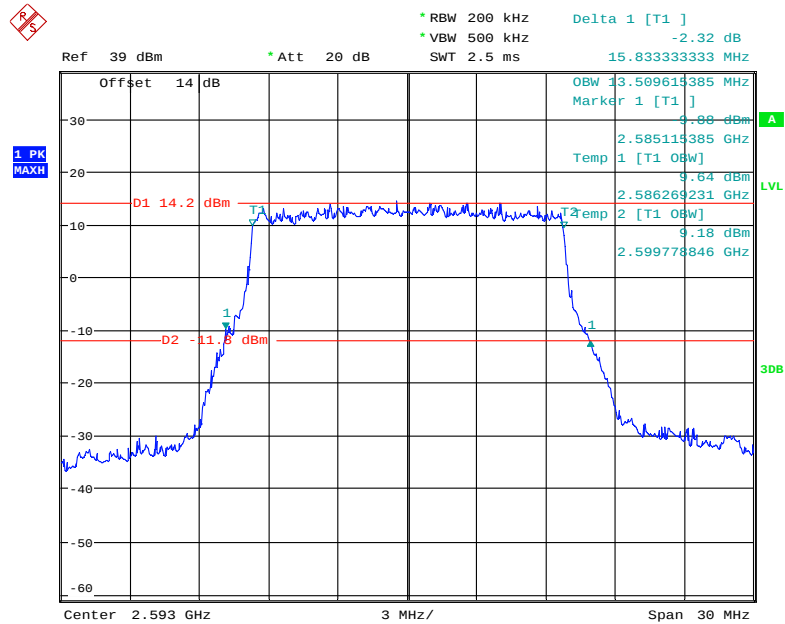
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QPSK (10.0 MHz) - 26 dB Bandwidth & 99% Occupied Bandwidth, Middle channel

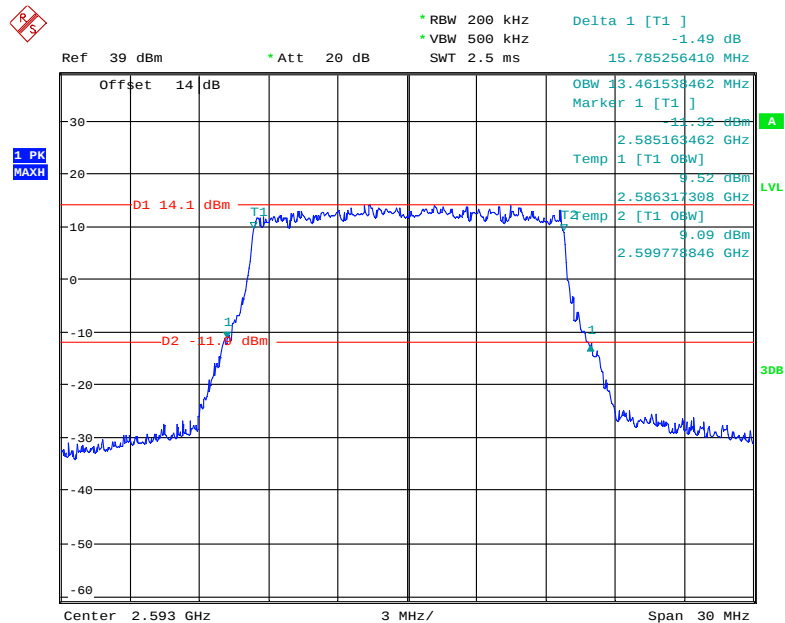
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16-QAM (10.0 MHz) - 26 dB Bandwidth & 99% Occupied Bandwidth, Middle channel

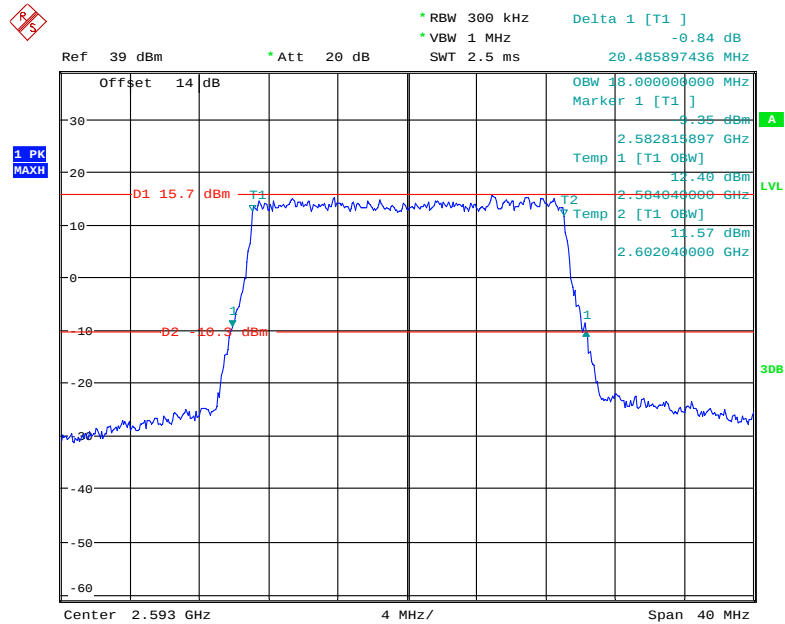
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QPSK (15.0 MHz) - 26 dB Bandwidth & 99% Occupied Bandwidth, Middle channel

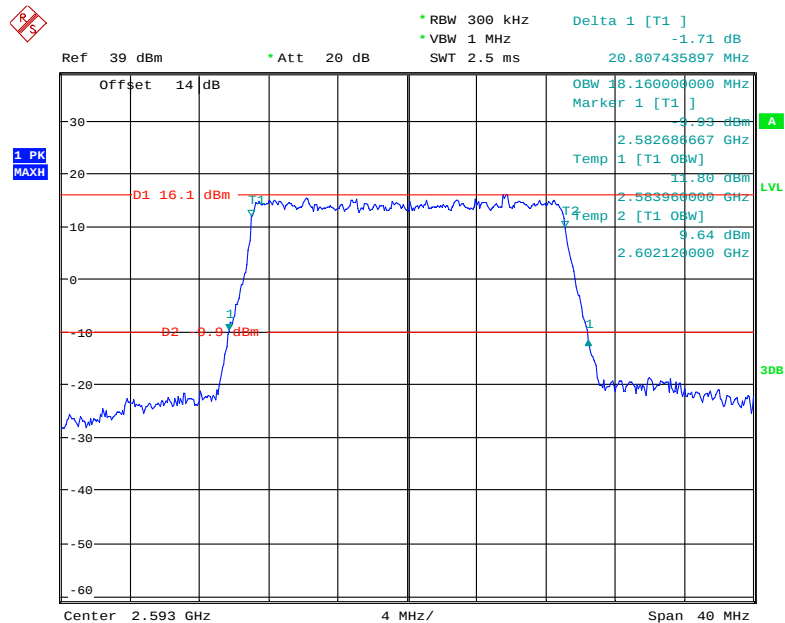
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16-QAM (15.0 MHz) - 26 dB Bandwidth & 99% Occupied Bandwidth, Middle channel

Date: 5.JUL.2018 09:55:23

QPSK (20.0 MHz) - 26 dB Bandwidth & 99% Occupied Bandwidth, Middle channel

Date: 5.JUL.2018 17:13:18

16-QAM (20.0 MHz) - 26 dB Bandwidth & 99% Occupied Bandwidth, Middle channel

Date: 5.JUL.2018 17:15:32

FCC §2.1051, §27.53 (m) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

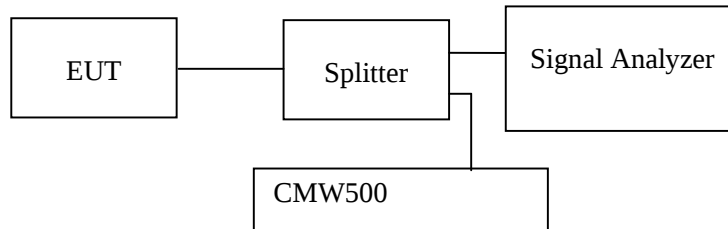
Applicable Standard

FCC §2.1051, §27.53 (m).

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.



Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	53 %
ATM Pressure:	101.2 kPa

The testing was performed by Hill He on 2018-07-05.

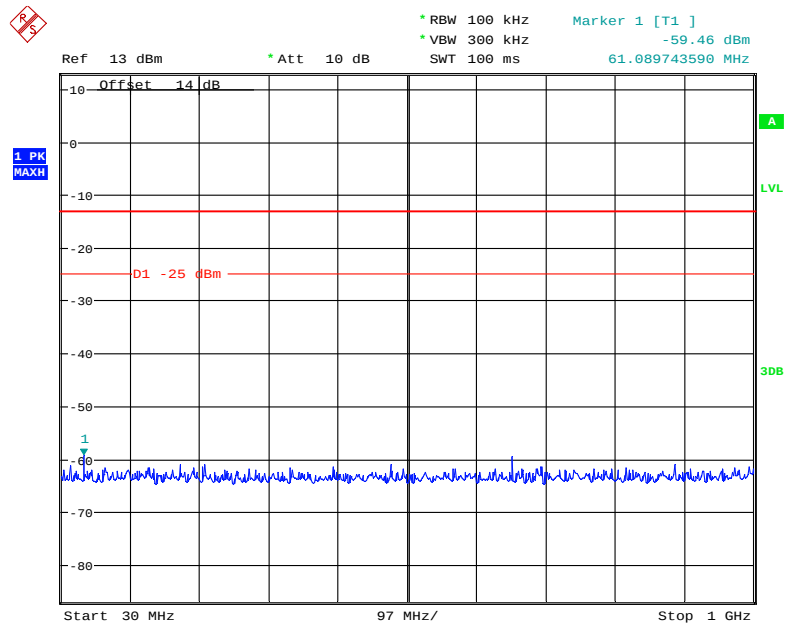
Test result: Compliance.

EUT operation mode: transmitting(testing with QPSK mode which the worst case)

Please refer to the following plots.

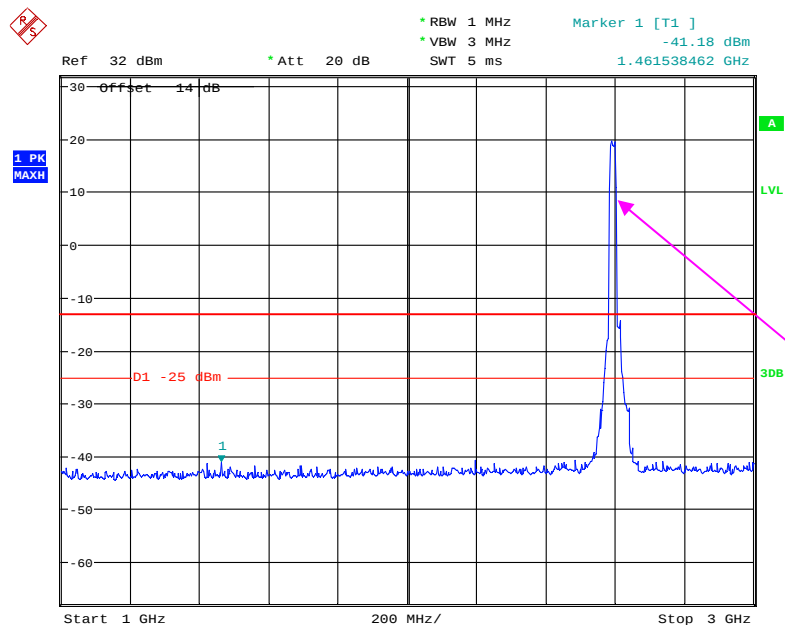
LTE Band 41:

30 MHz - 1 GHz (5.0 MHz, Middle Channel)



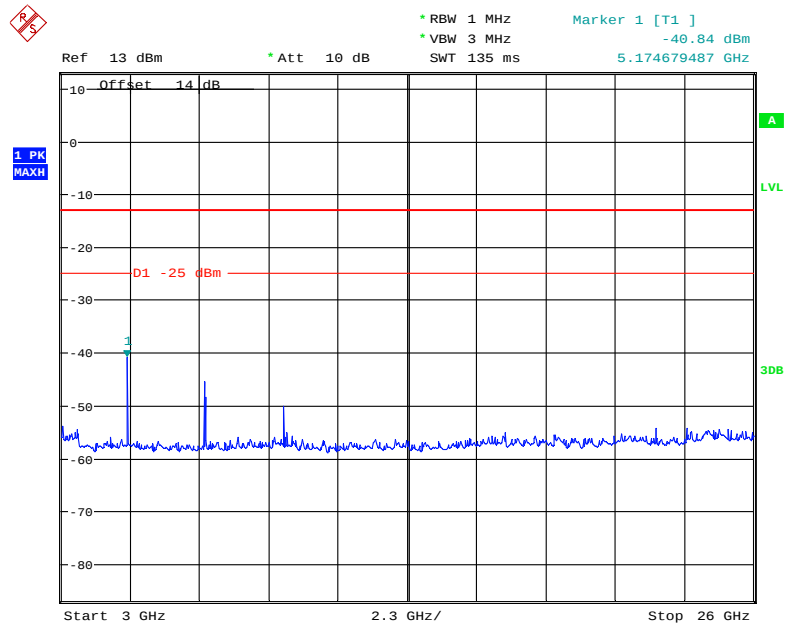
Date: 5.JUL.2018 10:04:35

1 GHz – 3 GHz (5.0 MHz, Middle Channel)



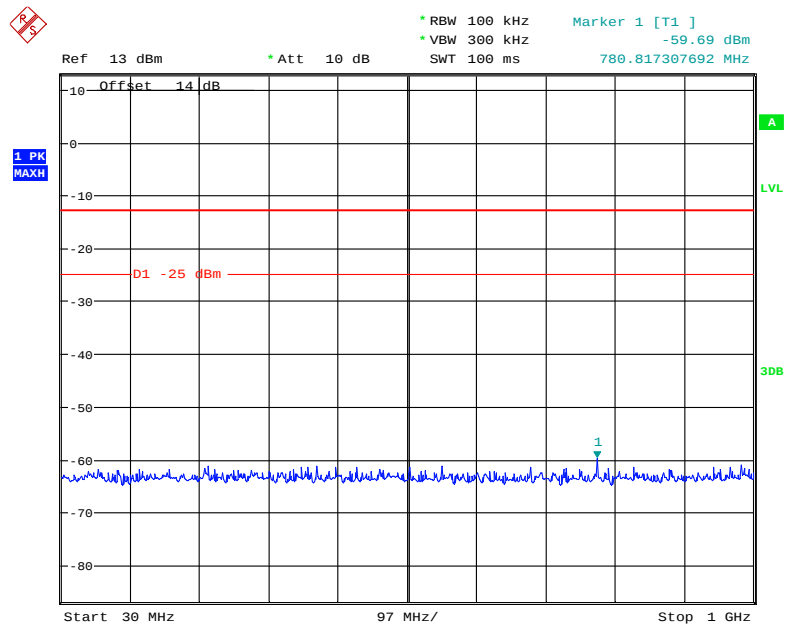
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3 GHz – 26 GHz (5.0 MHz, Middle Channel)



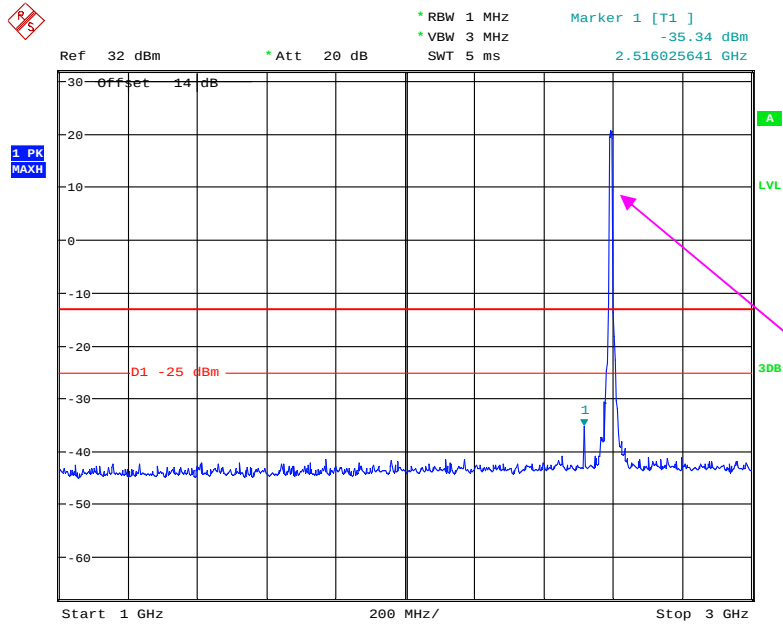
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30 MHz - 1 GHz (10.0 MHz, Middle Channel)



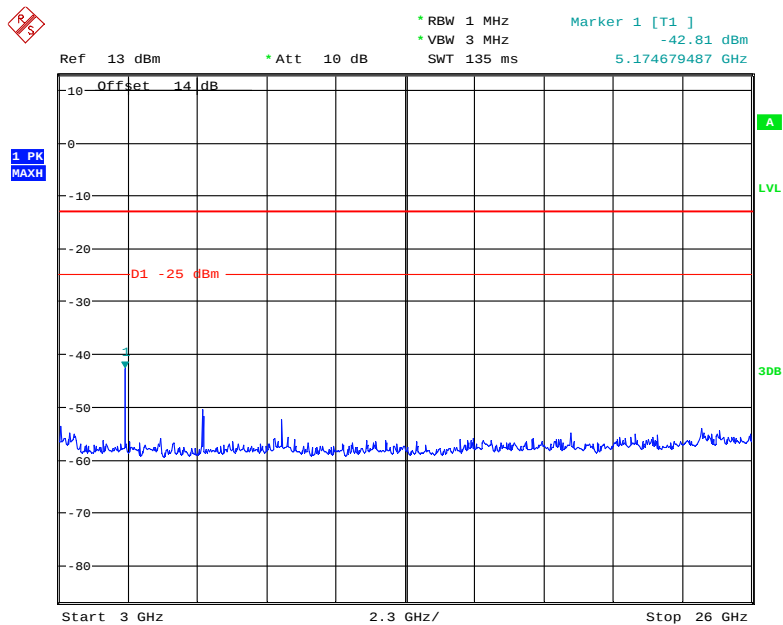
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1 GHz – 3 GHz (10.0 MHz, Middle Channel)



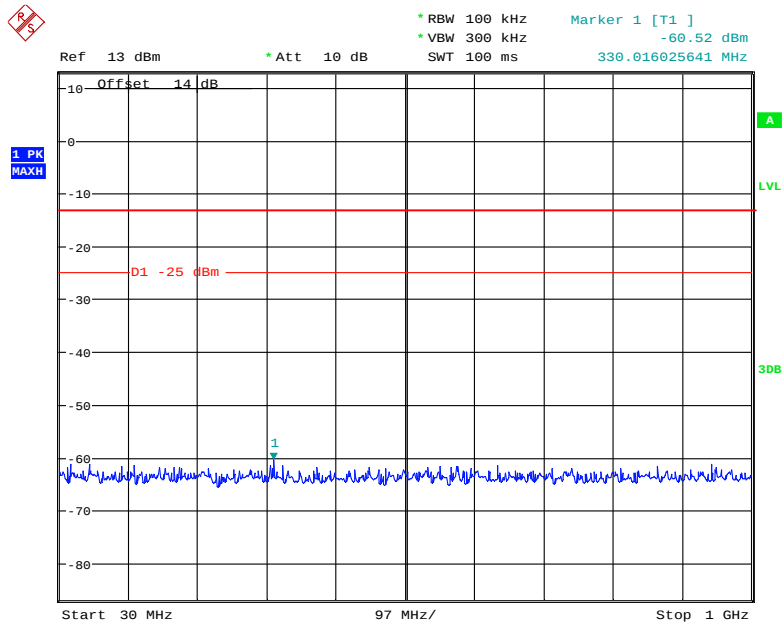
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3 GHz – 26 GHz (10.0 MHz, Middle Channel)



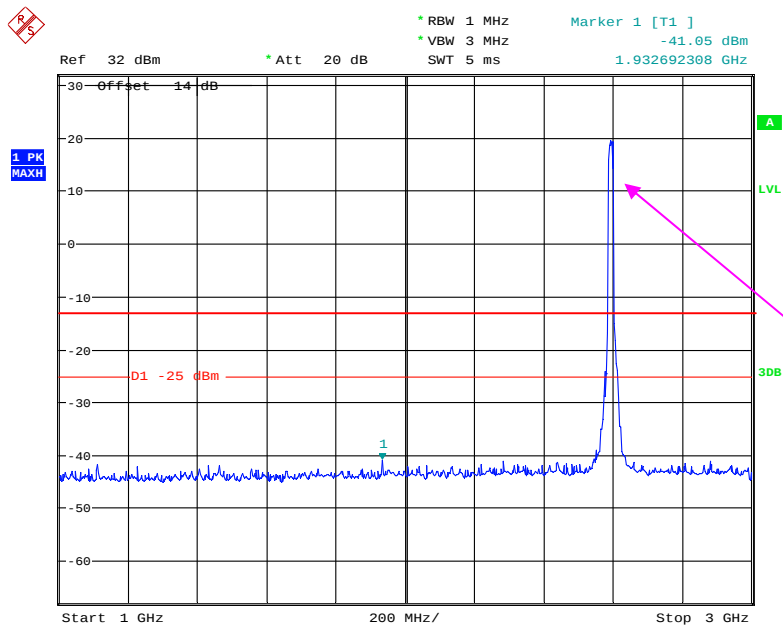
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30 MHz - 1 GHz (15.0 MHz, Middle Channel)



Date: 5.JUL.2018 10:03:59

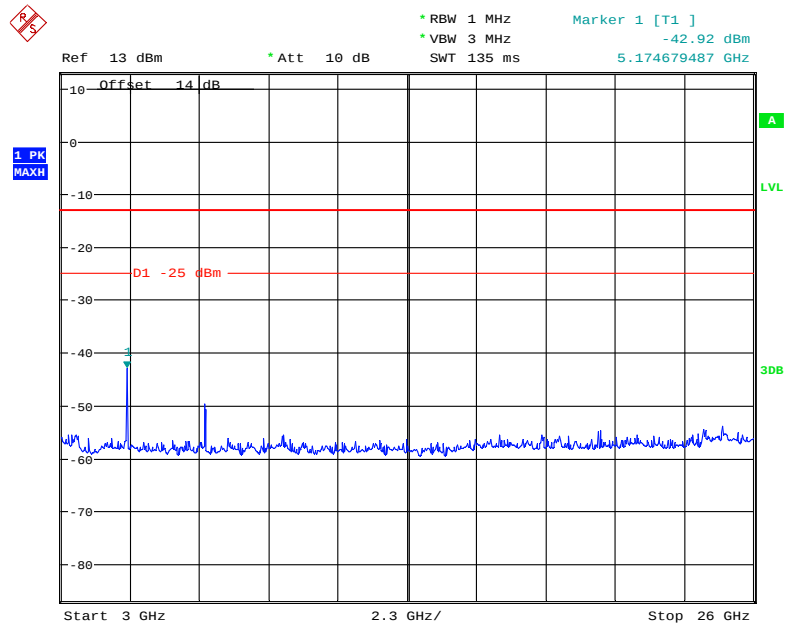
1 GHz - 3 GHz (15.0 MHz, Middle Channel)



Fundamental test

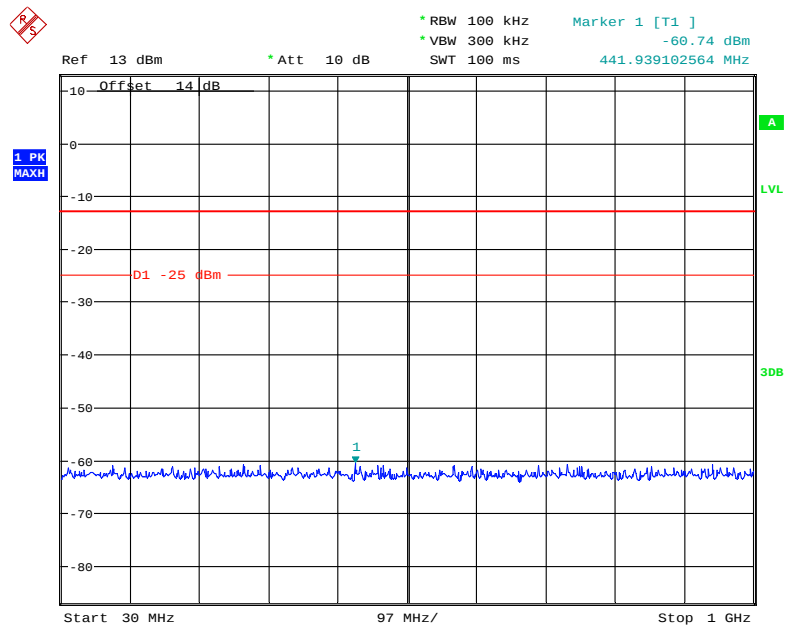
Date: 5.JUL.2018 10:13:52

3 GHz – 26 GHz (15.0 MHz, Middle Channel)



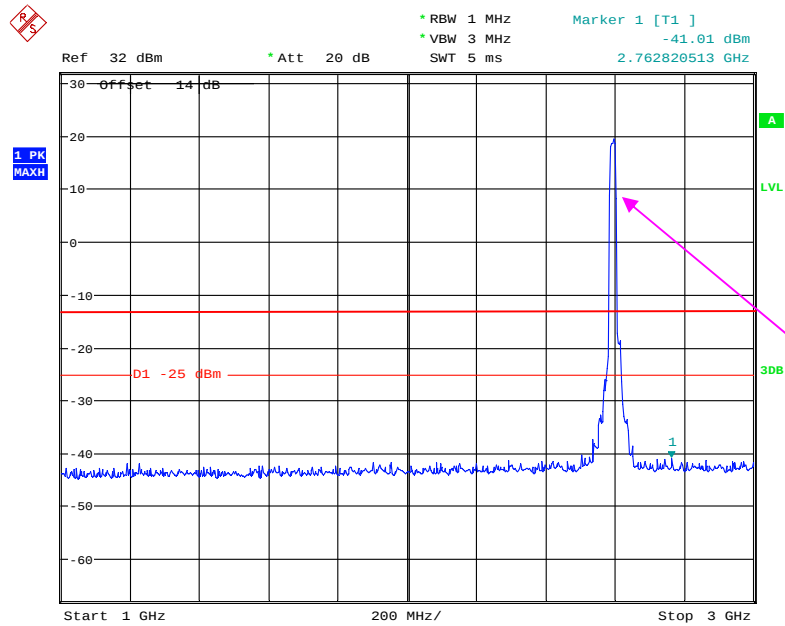
Date: 5.JUL.2018 11:28:58

30 MHz - 1 GHz (20.0 MHz, Middle Channel)



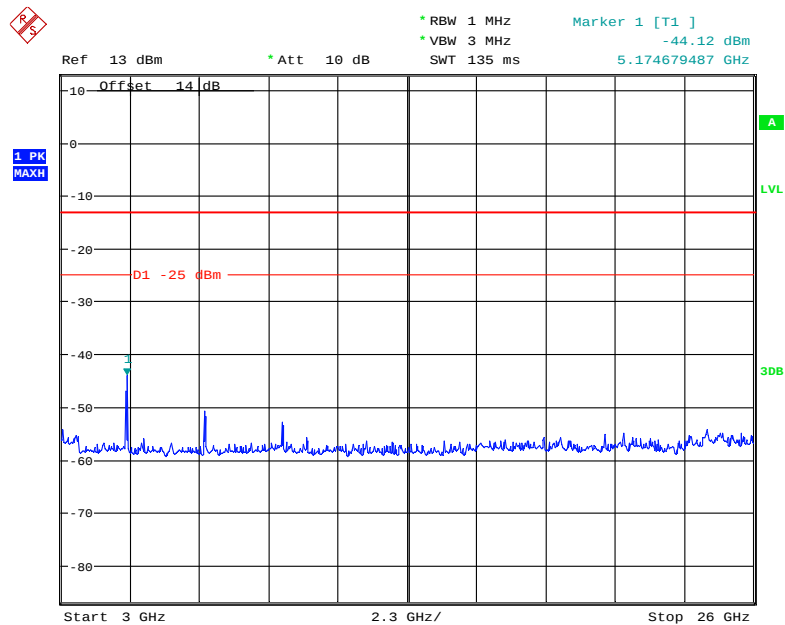
Date: 5.JUL.2018 10:03:14

1 GHz – 3 GHz (20.0 MHz, Middle Channel)



Date: 5.JUL.2018 10:14:24

3 GHz – 26 GHz (20.0 MHz, Middle Channel)



Date: 5.JUL.2018 11:29:15

FCC § 2.1053; §27.53 (m) SPURIOUS RADIATED EMISSIONS

Applicable Standard

FCC § 2.1053, § 27.53 (m)

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Hill He on 2018-07-17.

EUT operation mode: Transmitting

Pre-scan with Low, Middle and High channel, the worst case as below:

LTE Band: *(Pre-scan with all the bandwidth, and worse case as below)*

Frequency	Receiver	Turntable	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
(MHz)	Reading (dBμV)	Angle Degree	Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)			
Band 41-QPSK middle channel										
Test frequency range: 30 MHz ~ 26GHz										
280.26	36.07	356	1.6	H	-60.9	0.34	0	-61.24	-13	48.24
280.26	37.82	118	1.2	V	-59.2	0.34	0	-59.54	-13	46.54
5186.00	51.24	20	2.3	H	-47.4	1.60	12.10	-36.90	-13	23.90
5186.00	49.87	289	2.0	V	-48.3	1.60	12.10	-37.80	-13	24.80
7779.00	47.25	312	1.5	H	-46.9	2.00	10.50	-38.40	-13	25.40
7779.00	46.85	9	2.4	V	-47.2	2.00	10.50	-38.70	-13	25.70

Note:

1) Absolute Level = Substituted Level - Cable loss + Antenna Gain

2) Margin = Limit- Absolute Level

FCC §27.53 (m) - BAND EDGES

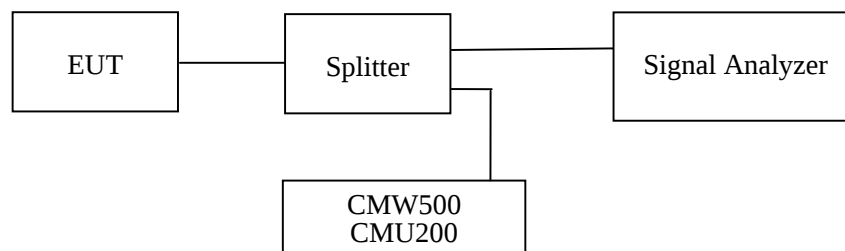
Applicable Standard

According to FCC §27.53 (m), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency



Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	53 %
ATM Pressure:	101.2 kPa

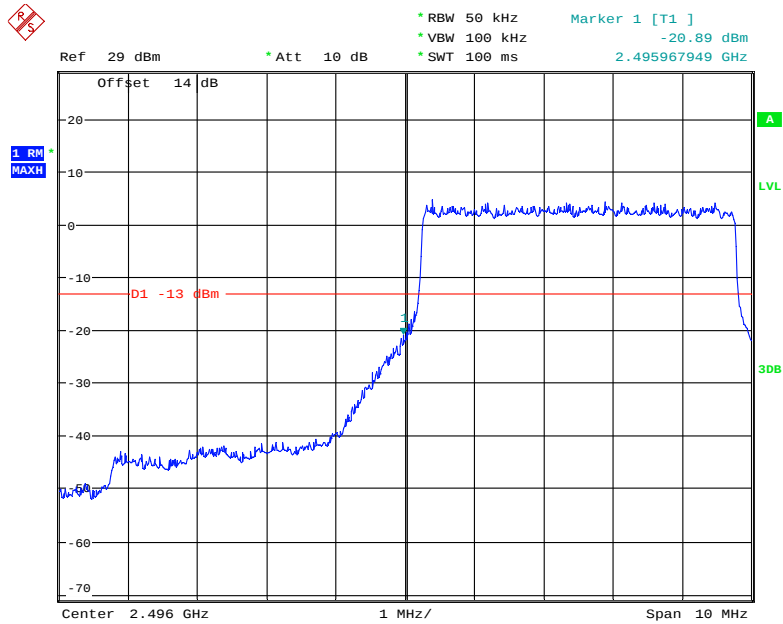
The testing was performed by Hill He on 2018-07-05.

EUT operation mode: Transmitting

Test Result: Compliance. Please refer to the following plots.

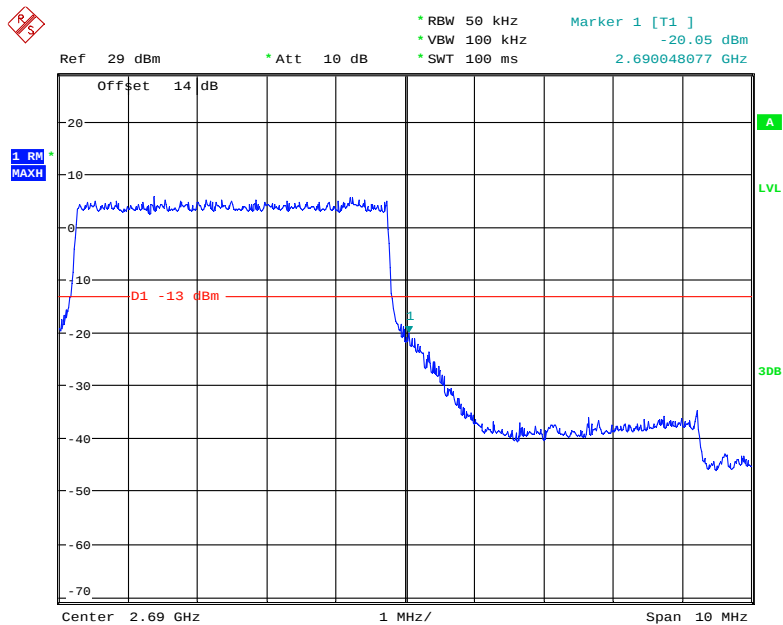
Band 41:

QPSK (5.0 MHz, FULL RB) - Left Band Edge



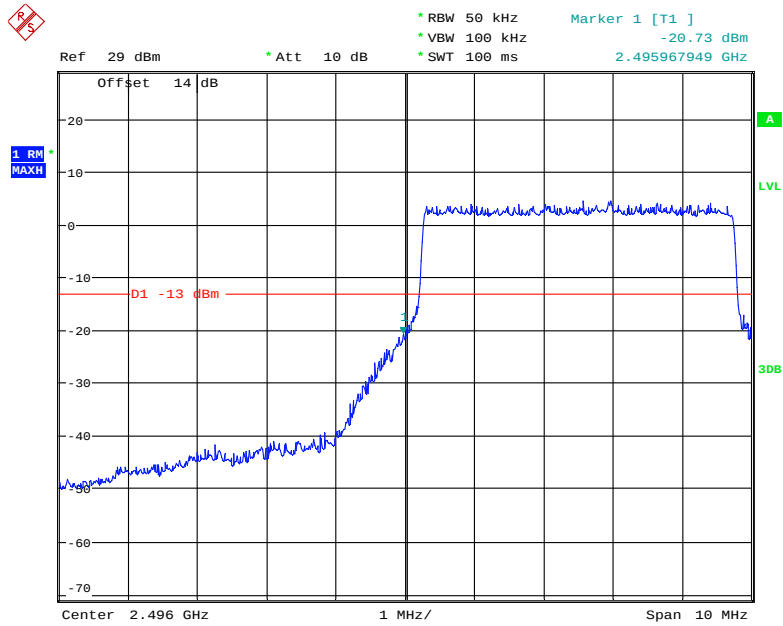
Date: 5.JUL.2018 11:37:18

QPSK (5.0 MHz, FULL RB) - Right Band Edge



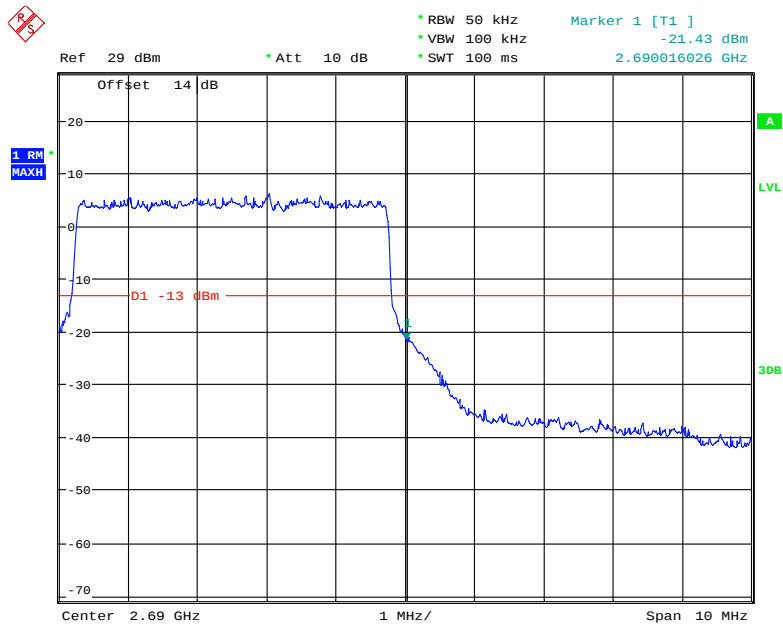
Date: 5.JUL.2018 11:40:08

16-QAM (5.0 MHz, FULL RB) - Left Band Edge



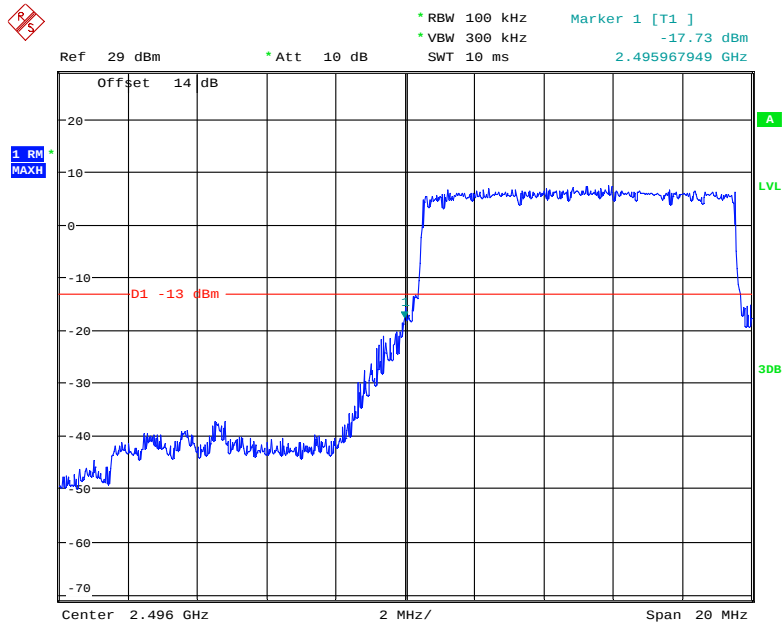
Date: 5.JUL.2018 11:38:22

16-QAM (5.0 MHz, FULL RB) - Right Band Edge



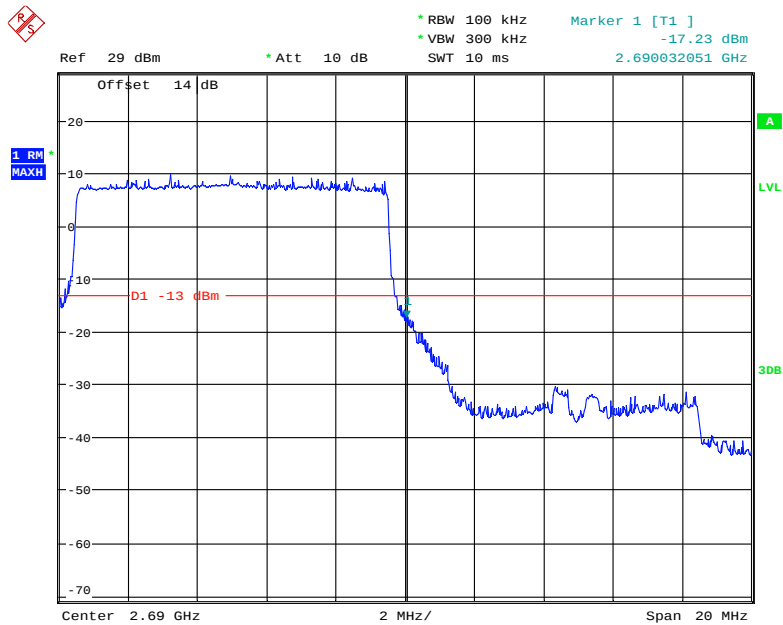
Date: 5.JUL.2018 11:39:42

QPSK (10.0 MHz, FULL RB) - Left Band Edge



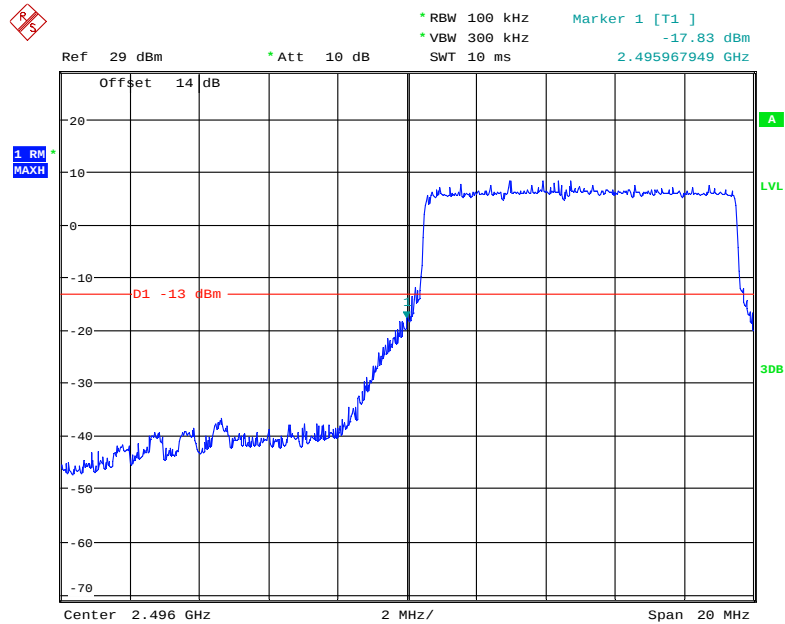
Date: 5.JUL.2018 11:43:48

QPSK (10.0 MHz, FULL RB) - Right Band Edge



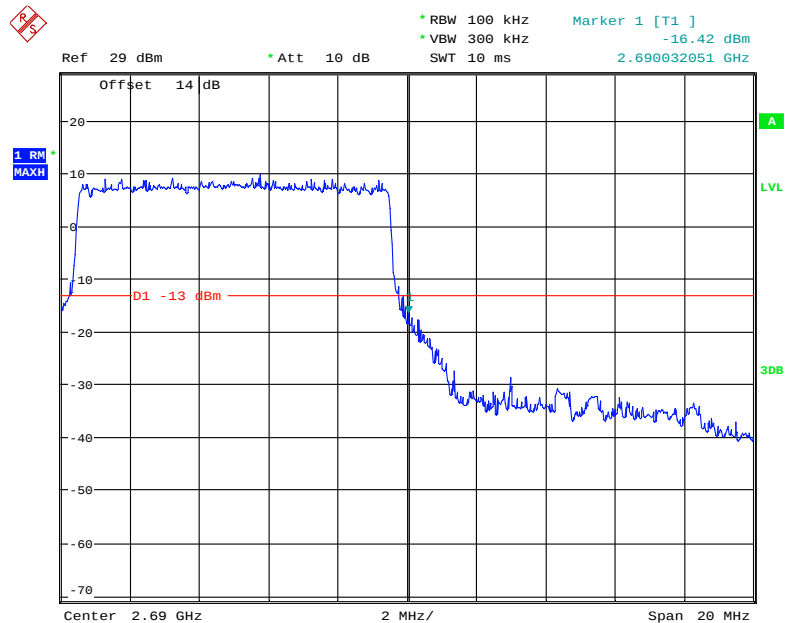
Date: 5.JUL.2018 11:41:40

16-QAM (10.0 MHz, FULL RB) - Left Band Edge



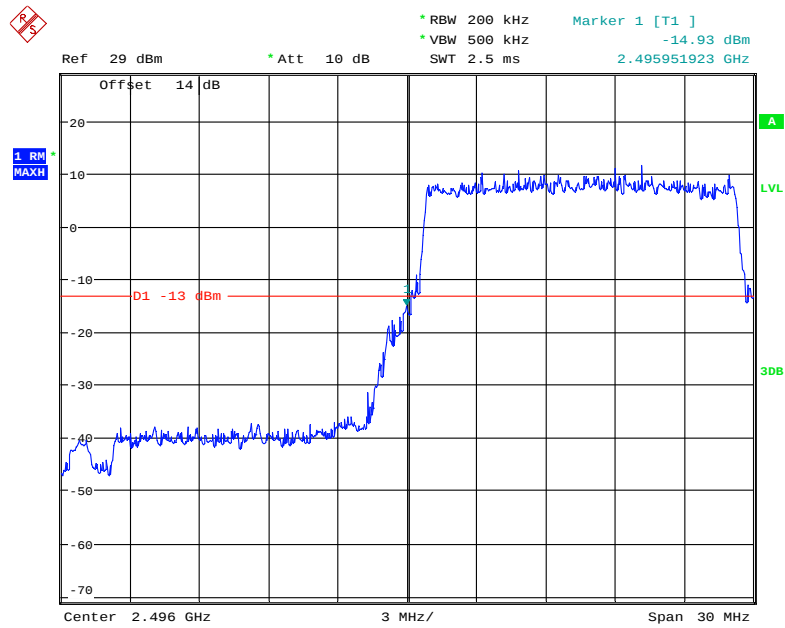
Date: 5.JUL.2018 11:43:26

16-QAM (10.0 MHz, FULL RB) - Right Band Edge



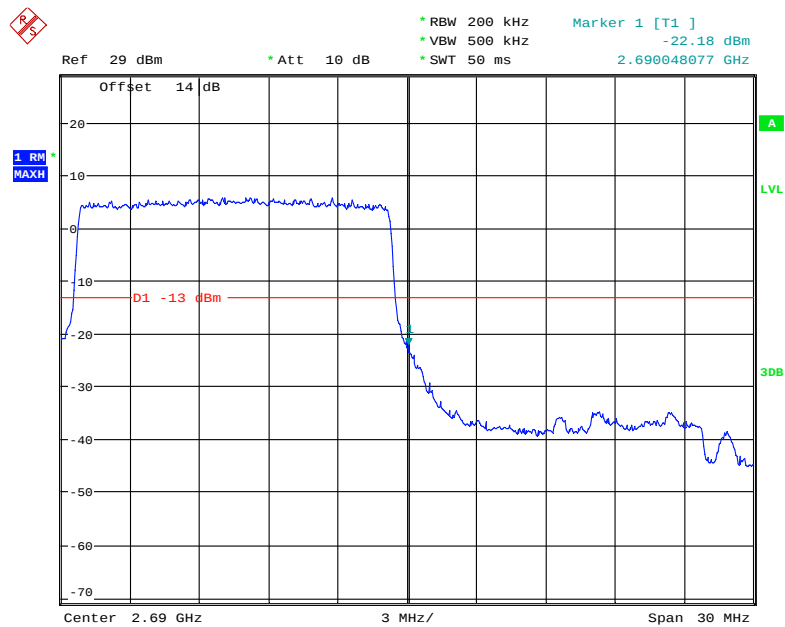
Date: 5.JUL.2018 11:42:37

QPSK (15.0 MHz, FULL RB) - Left Band Edge



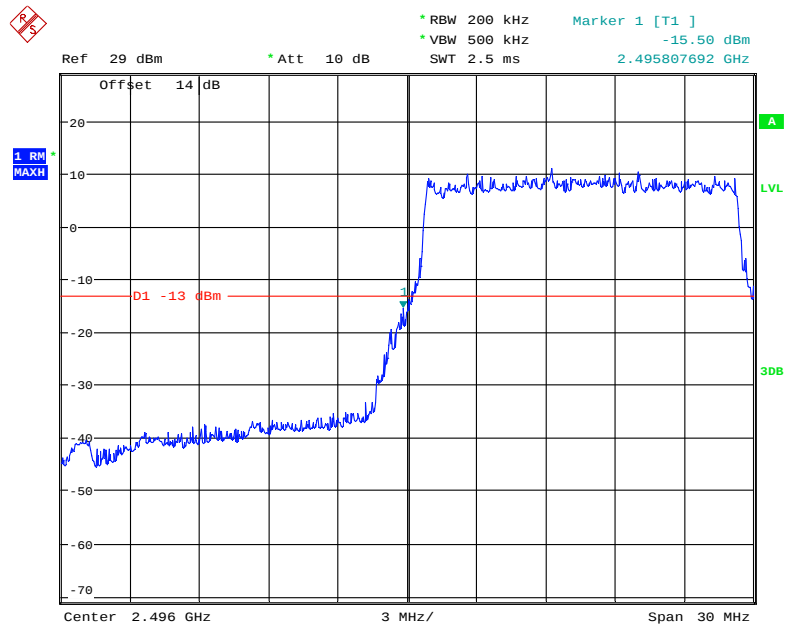
Date: 5.JUL.2018 11:45:37

QPSK (15.0 MHz, FULL RB) - Right Band Edge



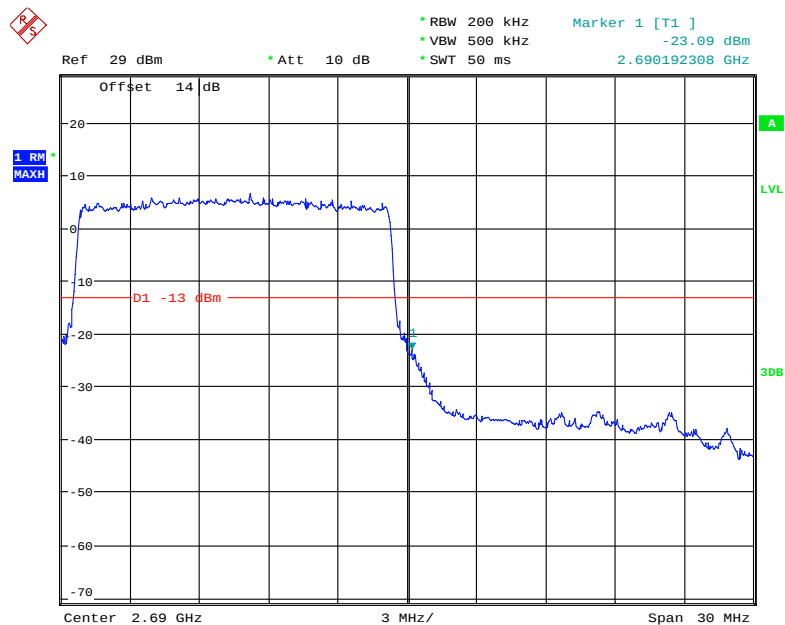
Date: 5.JUL.2018 11:47:08

16-QAM (15.0 MHz, FULL RB) - Left Band Edge



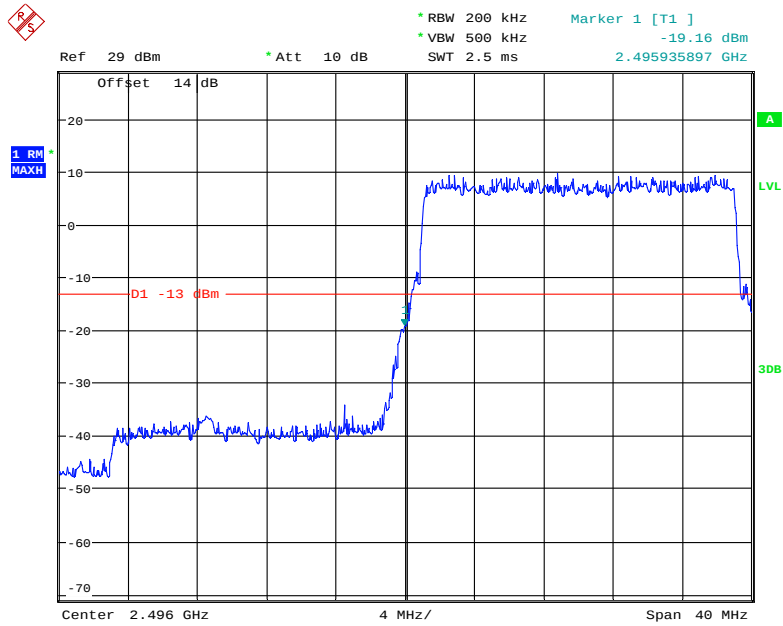
Date: 5.JUL.2018 11:44:47

16-QAM (15.0 MHz, FULL RB) - Right Band Edge



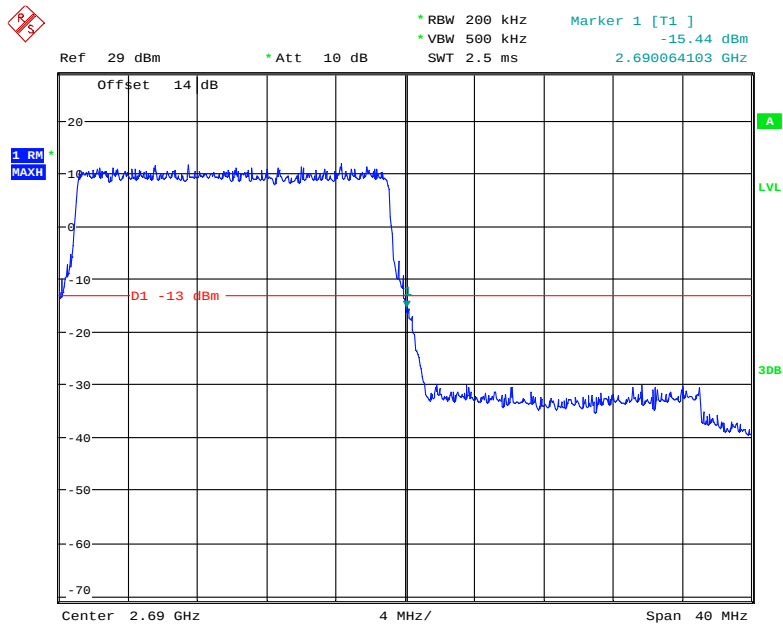
Date: 5.JUL.2018 11:47:43

QPSK (20.0 MHz, FULL RB) - Left Band Edge



Date: 5.JUL.2018 11:57:22

QPSK (20.0 MHz, FULL RB) - Right Band Edge



Date: 5.JUL.2018 11:53:58

Ref 29 dBm * Att 10 dB

* RBW 200 kHz Marker 1 [T1] -17.51 dBm
 * VBW 500 kHz
 SWT 2.5 ms 2.495615385 GHz

Offset 14 dB

1 RM
 MAXH

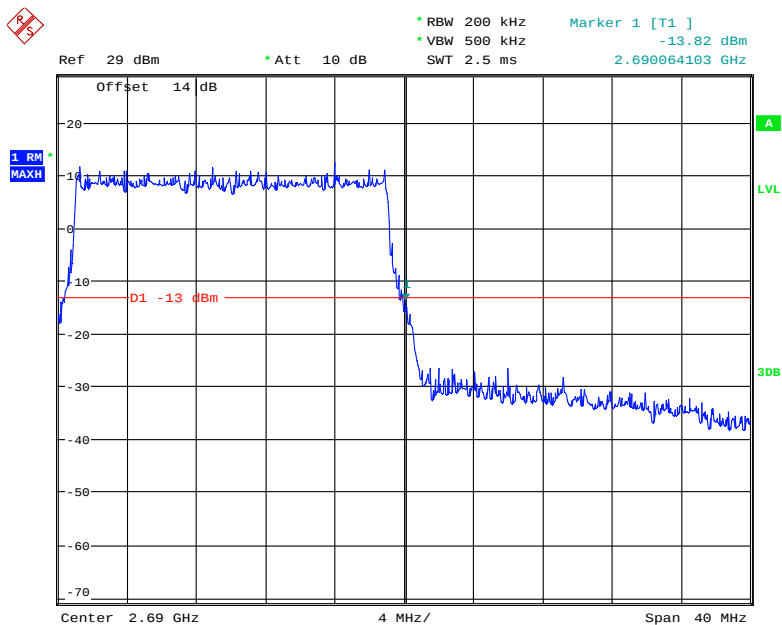
D1 -13 dBm

1

Center 2.496 GHz 4 MHz/ Span 40 MHz

LVL
 30dB

16-QAM (20.0 MHz, FULL RB) - Right Band Edge



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FCC § 2.1055; §27.54 - FREQUENCY STABILITY

Applicable Standard

FCC § 2.1055, §27.54.

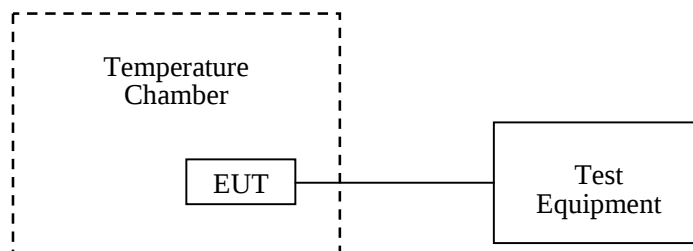
According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	53 %
ATM Pressure:	101.2 kPa

The testing was performed by Hill He on 2018-07-05.

EUT operation mode: Transmitting

Test Result: Compliance. Please refer to the following tables.

**LTE:
QPSK-20MHz:****Band41:**

Temperature (°C)	Power Supplied (V _{AC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	120	2496.822	2689.333	2496	2690
-20		2496.754	2689.254	2496	2690
-10		2496.830	2689.350	2496	2690
0		2496.824	2689.234	2496	2690
10		2496.845	2689.211	2496	2690
20		2496.858	2689.308	2496	2690
30		2496.838	2689.303	2496	2690
40		2496.876	2689.330	2496	2690
50		2496.782	2689.299	2496	2690
20	V min.= 102	2496.842	2689.210	2496	2690
	V max.= 138	2496.790	2689.213	2496	2690

16QAM-20MHz:**Band 41:**

Temperature (°C)	Power Supplied (V _{AC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	120	2496.834	2689.289	2496	2690
-20		2496.791	2689.237	2496	2690
-10		2496.826	2689.301	2496	2690
0		2496.825	2689.160	2496	2690
10		2496.799	2689.204	2496	2690
20		2496.792	2689.331	2496	2690
30		2496.816	2689.318	2496	2690
40		2496.843	2689.337	2496	2690
50		2496.868	2689.259	2496	2690
20	V min.= 102	2496.853	2689.256	2496	2690
	V max.= 138	2496.772	2689.258	2496	2690

******* END OF REPORT *******