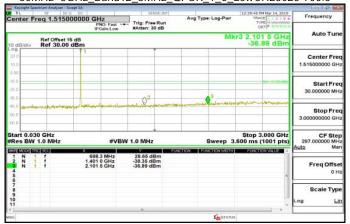
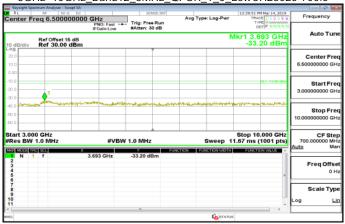


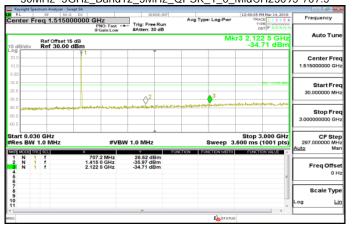
## 30MHz~3GHz\_Band12\_3MHz\_QPSK\_1\_0\_LowCH23025-700.5



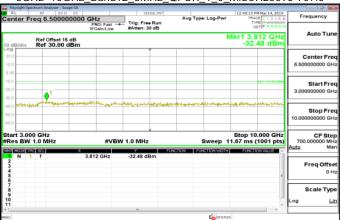
## 3GHz~10GHz\_Band12\_3MHz\_QPSK\_1\_0\_LowCH23025-700.5



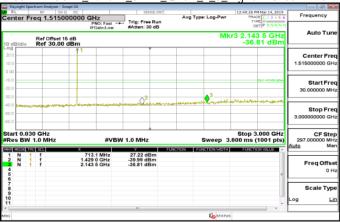
## 30MHz~3GHz\_Band12\_3MHz\_QPSK\_1\_0\_MidCH23095-707.5



## 3GHz~10GHz\_Band12\_3MHz\_QPSK\_1\_0\_MidCH23095-707.5



#### 30MHz~3GHz\_Band12\_3MHz\_QPSK\_1\_0\_HighCH23165-714.5



# 3GHz~10GHz\_Band12\_3MHz\_QPSK\_1\_0\_HighCH23165-714.5

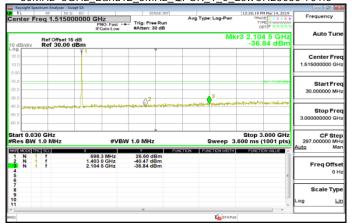


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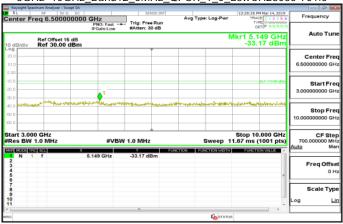
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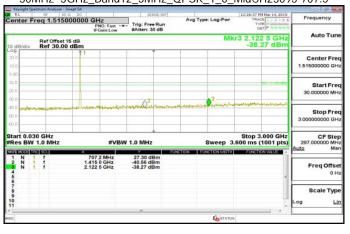
## 30MHz~3GHz\_Band12\_5MHz\_QPSK\_1\_0\_LowCH23035-701.5



## 3GHz~10GHz\_Band12\_5MHz\_QPSK\_1\_0\_LowCH23035-701.5



## 30MHz~3GHz\_Band12\_5MHz\_QPSK\_1\_0\_MidCH23095-707.5



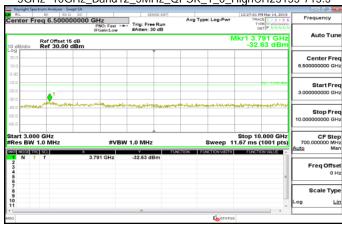
# 3GHz~10GHz\_Band12\_5MHz\_QPSK\_1\_0\_MidCH23095-707.5



#### 30MHz~3GHz\_Band12\_5MHz\_QPSK\_1\_0\_HighCH23155-713.5



## 3GHz~10GHz\_Band12\_5MHz\_QPSK\_1\_0\_HighCH23155-713.5

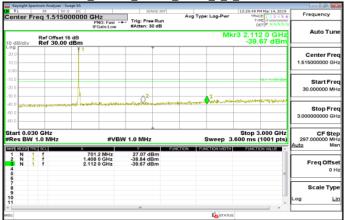


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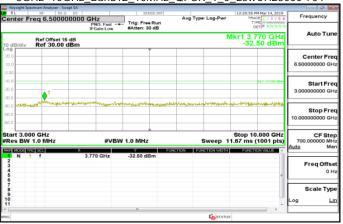
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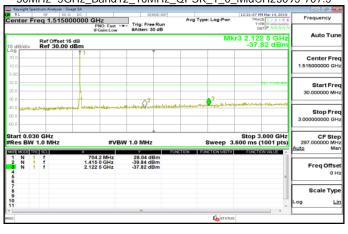
#### 30MHz~3GHz\_Band12\_10MHz\_QPSK\_1\_0\_LowCH23060-704



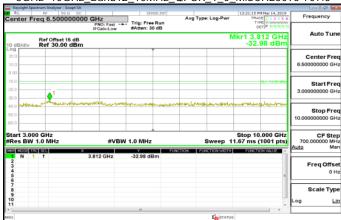
## 3GHz~10GHz\_Band12\_10MHz\_QPSK\_1\_0\_LowCH23060-704



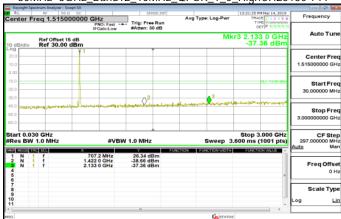
## 30MHz~3GHz\_Band12\_10MHz\_QPSK\_1\_0\_MidCH23095-707.5



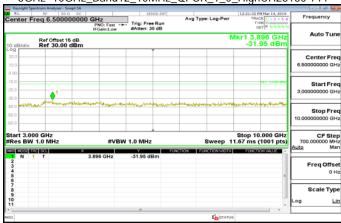
#### 3GHz~10GHz\_Band12\_10MHz\_QPSK\_1\_0\_MidCH23095-707.5



## 30MHz~3GHz\_Band12\_10MHz\_QPSK\_1\_0\_HighCH23130-711



## 3GHz~10GHz\_Band12\_10MHz\_QPSK\_1\_0\_HighCH23130-711



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## FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

## 9.1. Standard Applicable

According to FCC §2.1053,

FCC §22.917(a), §24.238(a), the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than 43 + 10 log (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm).

FCC §27.53(a) (h)

Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

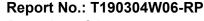
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB.

FCC §27.53(h) (3)

Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

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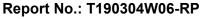
Table 2 — Unwanted Emissions for Mobile, Portable and Low-Power Fixed Subscriber **Equipment** 

Frequency (MHz)	Attenuation (dB)
<2200	$43 + 10 \log_{10}(p)$
2200 - 2288	$70 + 10 \log_{10}(p)$
2288 - 2292	$67 + 10 \log_{10}(p)$
2292 - 2296	$61 + 10 \log_{10}(p)$
2296 - 2300	$55 + 10 \log_{10}(p)$
2300 - 2305	$43 + 10 \log_{10}(p)$
2305 - 2320	$43 + 10 \log_{10}(p)^{\text{Note}}$
2320 - 2324	$55 + 10 \log_{10}(p)$
2324 - 2328	$61 + 10 \log_{10}(p)$
2328 - 2337	$67 + 10 \log_{10}(p)$
2337 - 2341	$61 + 10 \log_{10}(p)$
2341 - 2345	$55 + 10 \log_{10}(p)$
2345 - 2360	$43 + 10 \log_{10}(p)^{\text{Note}}$
2360 - 2365	$43 + 10 \log_{10}(p)$
2365 - 2395	$70 + 10 \log_{10}(p)$
>2395	$43 + 10 \log_{10}(p)$

Note: Measured at the edges of the highest and lowest frequency range(s) in which the equipment is designed to operate. See Section 1.2 for the permitted frequency ranges for various equipment types.

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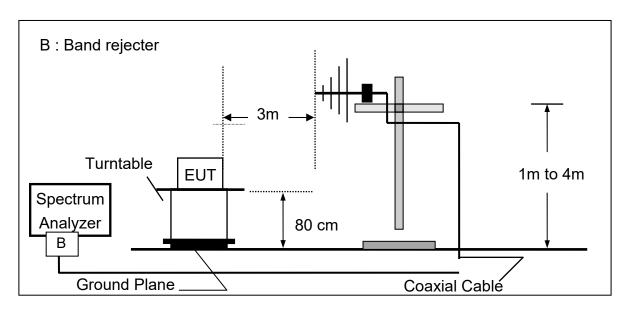


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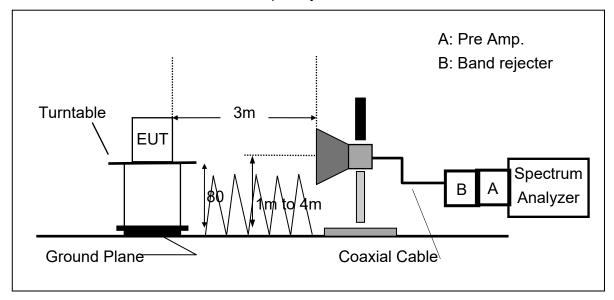


# 9.2. EUT Setup

Radiated Emission Test Set-Up, Frequency Below 1000MHz



# Radiated Emission Test Set-UP Frequency Over 1 GHz



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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## 9.3. Measurement Procedure:

The EUT was placed on a non-conductive; the measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequencies (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

ERP (dBm) = SG Level(dBm) + Antenna Gain(dBd) + Cable Loss(dB)

EIRP (dBm) = SG Level(dBm) + Antenna Gain(dBi) + Cable Loss(dB)



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# 9.4. Measurement Equipment Used:

	966A Chamber									
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.					
DC Power Supply	GWINSTEK	SPS-3610	GPE880163	01/14/2019	01/13/2020					
PSA Series Spec- trum Analyzer	Agilent	E4446A	MY46180323	05/31/2018	05/30/2019					
Digital Ther- mo-Hygro Meter	WISEWIND	1206	D07	01/30/2019	01/29/2020					
Pre-Amplifier	MITEQ	AMF-6F-260400-40-8P	985646	02/26/2019	02/25/2020					
Pre-Amplifier	EMEC	EM330	60609	02/26/2019	02/25/2020					
Pre-Amplifier	HP	8449B	3008A00965	02/26/2019	02/25/2020					
Horn Antenna	Schwarzbeck	BBHA9170	184	12/27/2018	12/26/2019					
Horn Antenna	ETS LINDGREN	3116	26370	12/26/2018	12/25/2019					
Horn Antenna	SCHWARZBECK	BBHA 9120D	779	03/09/2019	03/08/2020					
Bilog Antenna	Sunol Sciences	JB3	A030105	07/13/2018	07/12/2019					
Bilog Antenna	Sunol Sciences	JB1	A052609	03/06/2019	03/05/2020					
double Ridged Guide Horn An- tenna	ETC	MCTD 1209	DRH13M02003	08/20/2018	08/19/2019					
Loop Antenna	COM-POWER	AL-130	121051	03/22/2019	03/21/2020					
Loop Antenna	ETS.LINDGREN	6502	148045	10/08/2018	10/07/2019					
Attenuator	Marvelous	MVE2213-10	RF80	02/26/2019	02/25/2020					
Radio Communi- cation Analyer	Anritsu	MT8820C	6201465317	01/16/2019	01/15/2020					
Cable	HUBER SUHNER	SUCOFLEX 104PEA	25157	02/26/2019	02/25/2020					
Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/26/2019	02/25/2020					
Notch Filter	EWT	EWT-54-0037	RF53	02/26/2019	02/25/2020					
Notch Filter	EWT	EWT-54-0038	RF55	02/26/2019	02/25/2020					
Software		e3 V6.11-20	0180413							

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Member of the SGS Group (SGS SA)



:VERTICAL

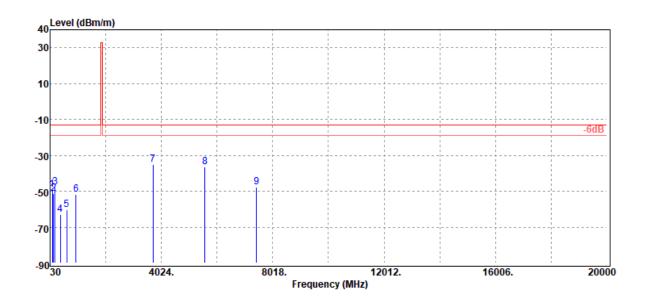
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#### 9.5. Measurement Result:

## Radiated Spurious Emission Measurement Result: LTE-Band 2 (The Worst Case)

:T190304W06 **Test Date** :2019-05-30 **Project Number Operation Band** :LTE B2 20 QPSK 1.0 Temp./Humi. :22.7/56.3 Fundamental Frequency :1860 MHz Engineer :Jerry

**Operation Mode** :Tx CH Low Measurement Antenna Pol. EUT Pol. :E2 Plan



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
104.69	-49.11	-39.03	-9.24	-0.84	-13.00	-36.11
149.31	-51.46	-43.29	-7.17	-1.00	-13.00	-38.46
216.24	-47.54	-44.25	-2.08	-1.21	-13.00	-34.54
401.51	-63.21	-59.82	-1.73	-1.66	-13.00	-50.21
624.61	-60.09	-56.58	-1.40	-2.11	-13.00	-47.09
958.29	-51.90	-48.01	-1.27	-2.62	-13.00	-38.90
3720.00	-35.30	-42.03	12.46	-5.73	-13.00	-22.30
5580.00	-36.43	-42.46	13.14	-7.11	-13.00	-23.43
7440.00	-47.52	-49.96	10.52	-8.08	-13.00	-34.52

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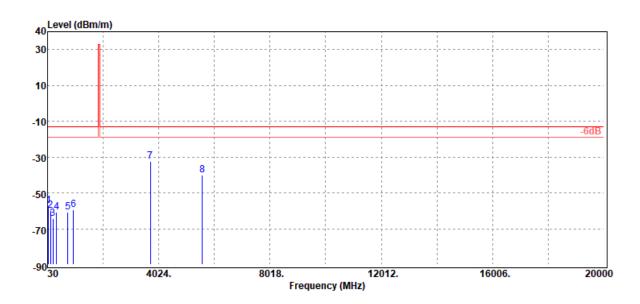
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**Project Number** :T190304W06 **Operation Band** :LTE B2 20 QPSK 1.0

Fundamental Frequency :1860 MHz **Operation Mode** :Tx CH Low EUT Pol. :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
70.74	-57.20	-46.91	-9.60	-0.69	-13.00	-44.20
136.70	-59.88	-49.86	-9.06	-0.96	-13.00	-46.88
219.15	-64.30	-61.06	-2.02	-1.22	-13.00	-51.30
354.95	-60.60	-57.64	-1.40	-1.56	-13.00	-47.60
760.41	-60.98	-57.26	-1.40	-2.32	-13.00	-47.98
958.29	-59.39	-55.5	-1.27	-2.62	-13.00	-46.39
3720.00	-32.24	-38.97	12.46	-5.73	-13.00	-19.24
5580.00	-40.21	-46.24	13.14	-7.11	-13.00	-27.21

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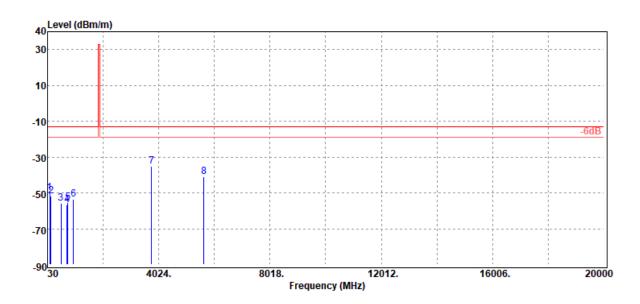
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**Project Number Operation Band**  :T190304W06 :LTE B2 20 QPSK 1.0

Fundamental Frequency **Operation Mode** 

:1880 MHz :Tx CH Mid

EUT Pol. :E2 Plan **Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry Measurement Antenna Pol. :VERTICAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
104.69	-50.04	-39.96	-9.24	-0.84	-13.00	-37.04
149.31	-51.92	-43.75	-7.17	-1.00	-13.00	-38.92
519.85	-55.74	-52.43	-1.40	-1.91	-13.00	-42.74
730.34	-56.64	-52.97	-1.39	-2.28	-13.00	-43.64
760.41	-55.15	-51.43	-1.40	-2.32	-13.00	-42.15
958.29	-53.45	-49.56	-1.27	-2.62	-13.00	-40.45
3760.00	-35.11	-41.77	12.42	-5.76	-13.00	-22.11
5640.00	-41.03	-47.15	13.26	-7.14	-13.00	-28.03

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**Project Number Operation Band** 

EUT Pol.

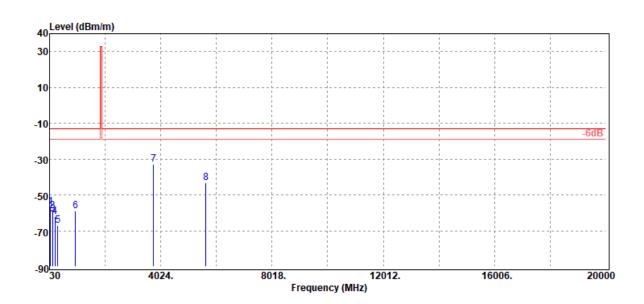
:T190304W06 :LTE B2 20 QPSK 1.0

Fundamental Frequency **Operation Mode** 

:1880 MHz :Tx CH Mid :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
69.77	-56.78	-46.44	-9.65	-0.69	-13.00	-43.78
137.67	-58.83	-49	-8.87	-0.96	-13.00	-45.83
151.25	-60.67	-52.61	-7.05	-1.01	-13.00	-47.67
225.94	-62.02	-58.85	-1.94	-1.23	-13.00	-49.02
327.79	-66.99	-63.75	-1.74	-1.50	-13.00	-53.99
956.35	-58.82	-54.97	-1.23	-2.62	-13.00	-45.82
3760.00	-32.80	-39.46	12.42	-5.76	-13.00	-19.80
5640.00	-43.21	-49.33	13.26	-7.14	-13.00	-30.21

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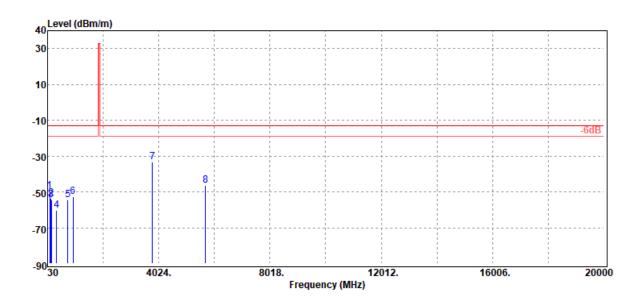
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**Project Number Operation Band** Fundamental Frequency :T190304W06 :LTE B2 20 QPSK 1.0

**Operation Mode** EUT Pol.

:1900 MHz :Tx CH High :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry Measurement Antenna Pol. :VERTICAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
104.69	-49.57	-39.49	-9.24	-0.84	-13.00	-36.57
151.25	-53.47	-45.41	-7.05	-1.01	-13.00	-40.47
170.65	-54.67	-48.27	-5.33	-1.07	-13.00	-41.67
352.04	-60.49	-57.48	-1.46	-1.55	-13.00	-47.49
760.41	-54.56	-50.84	-1.40	-2.32	-13.00	-41.56
951.50	-52.84	-49.02	-1.20	-2.62	-13.00	-39.84
3800.00	-33.15	-39.86	12.50	-5.79	-13.00	-20.15
5700.00	-46.52	-52.45	13.10	-7.17	-13.00	-33.52

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**Project Number Operation Band** 

EUT Pol.

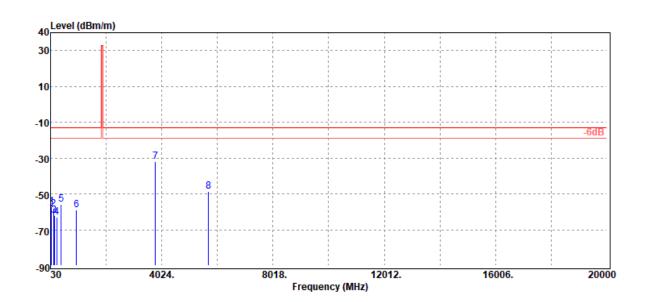
:T190304W06 :LTE B2 20 QPSK 1.0

Fundamental Frequency **Operation Mode** 

:1900 MHz :Tx CH High :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
70.74	-56.99	-46.7	-9.60	-0.69	-13.00	-43.99
133.79	-58.52	-48.05	-9.52	-0.95	-13.00	-45.52
165.80	-62.11	-55.31	-5.74	-1.06	-13.00	-49.11
256.01	-63.11	-60.15	-1.64	-1.32	-13.00	-50.11
416.06	-55.98	-52.39	-1.90	-1.69	-13.00	-42.98
958.29	-58.86	-54.97	-1.27	-2.62	-13.00	-45.86
3800.00	-32.01	-38.72	12.50	-5.79	-13.00	-19.01
5700.00	-48.80	-54.73	13.10	-7.17	-13.00	-35.80

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:VERTICAL

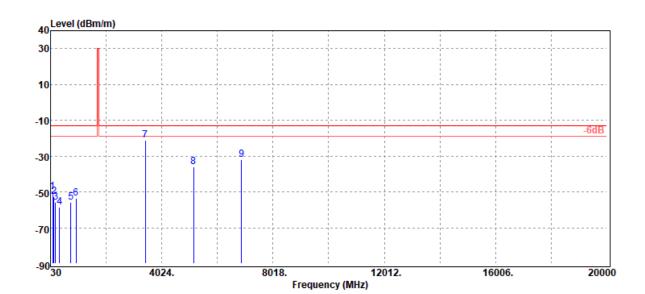
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Measurement Antenna Pol.

# Radiated Spurious Emission Measurement Result: LTE-Band 4 (The Worst Case)

**Project Number** :T190304W06 **Test Date** :2019-05-30 **Operation Band** :LTE B4 20 QPSK 1.0 Temp./Humi. :22.7/56.3 Fundamental Frequency Engineer :1720 MHz :Jerry

**Operation Mode** :Tx CH Low EUT Pol. :E2 Plan



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
104.69	-49.85	-39.77	-9.24	-0.84	-13.00	-36.85
150.28	-52.75	-44.64	-7.10	-1.01	-13.00	-39.75
206.54	-55.87	-52.11	-2.58	-1.18	-13.00	-42.87
350.10	-58.69	-55.64	-1.50	-1.55	-13.00	-45.69
760.41	-55.98	-52.26	-1.40	-2.32	-13.00	-42.98
951.50	-53.62	-49.8	-1.20	-2.62	-13.00	-40.62
3440.00	-21.11	-28.32	12.72	-5.51	-13.00	-8.11
5160.00	-36.08	-42.13	12.76	-6.71	-13.00	-23.08
6880.00	-32.11	-35.8	11.56	-7.87	-13.00	-19.11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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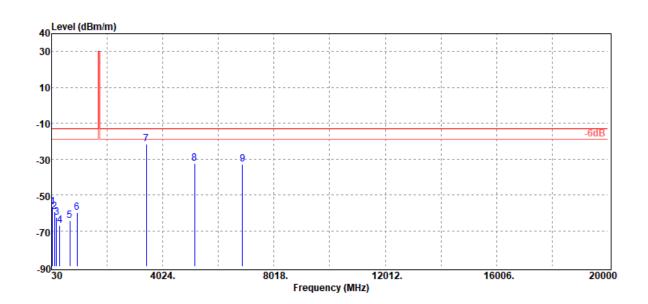
**Project Number Operation Band**  :T190304W06 :LTE B4 20 QPSK 1.0

Fundamental Frequency **Operation Mode** EUT Pol.

:1720 MHz :Tx CH Low :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
70.74	-56.74	-46.45	-9.60	-0.69	-13.00	-43.74
134.76	-59.57	-49.27	-9.35	-0.95	-13.00	-46.57
212.36	-62.64	-59.34	-2.10	-1.20	-13.00	-49.64
332.64	-67.06	-63.9	-1.65	-1.51	-13.00	-54.06
686.69	-64.16	-60.62	-1.33	-2.21	-13.00	-51.16
954.41	-59.72	-55.9	-1.20	-2.62	-13.00	-46.72
3440.00	-21.79	-29	12.72	-5.51	-13.00	-8.79
5160.00	-32.64	-38.69	12.76	-6.71	-13.00	-19.64
6880.00	-32.75	-36.44	11.56	-7.87	-13.00	-19.75

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number Operation Band** Fundamental Frequency **Operation Mode** 

EUT Pol.

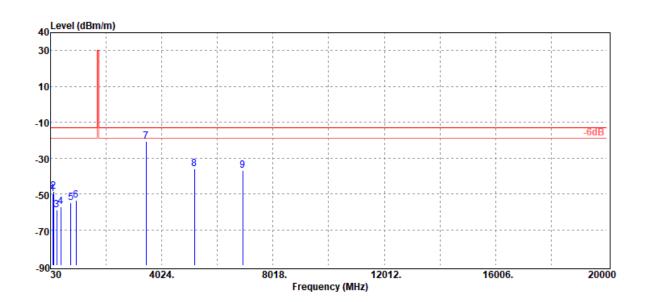
:T190304W06

:LTE B4 20 QPSK 1.0 :1732.5 MHz

:Tx CH Mid :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :VERTICAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
104.69	-50.04	-39.96	-9.24	-0.84	-13.00	-37.04
141.55	-48.81	-39.53	-8.30	-0.98	-13.00	-35.81
255.04	-58.82	-55.91	-1.60	-1.31	-13.00	-45.82
400.54	-57.04	-53.67	-1.71	-1.66	-13.00	-44.04
760.41	-54.72	-51	-1.40	-2.32	-13.00	-41.72
951.50	-53.62	-49.8	-1.20	-2.62	-13.00	-40.62
3465.00	-20.86	-27.97	12.64	-5.53	-13.00	-7.86
5197.50	-35.99	-42.22	12.98	-6.75	-13.00	-22.99
6930.00	-37.10	-40.54	11.34	-7.90	-13.00	-24.10

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number Operation Band** Fundamental Frequency

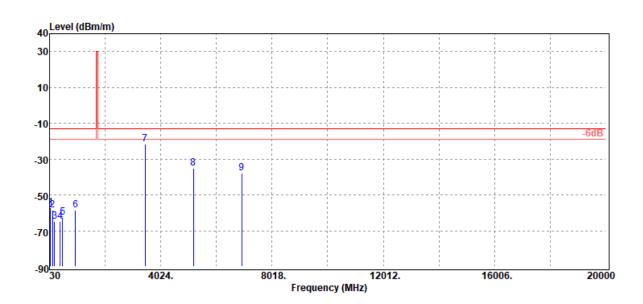
:T190304W06 :LTE B4 20 QPSK 1.0 :1732.5 MHz

**Operation Mode** EUT Pol.

:Tx CH Mid :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
69.77	-56.98	-46.64	-9.65	-0.69	-13.00	-43.98
133.79	-58.47	-48	-9.52	-0.95	-13.00	-45.47
209.45	-64.74	-61.37	-2.18	-1.19	-13.00	-51.74
413.15	-64.97	-61.43	-1.86	-1.68	-13.00	-51.97
493.66	-62.43	-58.53	-2.05	-1.85	-13.00	-49.43
958.29	-58.56	-54.67	-1.27	-2.62	-13.00	-45.56
3465.00	-21.55	-28.66	12.64	-5.53	-13.00	-8.55
5197.50	-35.06	-41.29	12.98	-6.75	-13.00	-22.06
6930.00	-38.03	-41.47	11.34	-7.90	-13.00	-25.03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number Operation Band** 

Fundamental Frequency

**Operation Mode** EUT Pol.

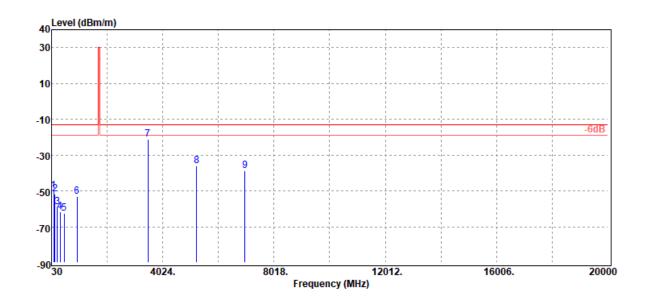
:T190304W06

:LTE B4 20 QPSK 1.0

:1745 MHz :Tx CH High :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :VERTICAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
104.69	-49.87	-39.79	-9.24	-0.84	-13.00	-36.87
151.25	-51.61	-43.55	-7.05	-1.01	-13.00	-38.61
243.40	-59.02	-55.78	-1.96	-1.28	-13.00	-46.02
338.46	-61.74	-58.69	-1.53	-1.52	-13.00	-48.74
479.11	-62.69	-58.47	-2.40	-1.82	-13.00	-49.69
951.50	-53.24	-49.42	-1.20	-2.62	-13.00	-40.24
3490.00	-20.97	-27.96	12.54	-5.55	-13.00	-7.97
5235.00	-35.97	-42.32	13.14	-6.79	-13.00	-22.97
6980.00	-38.86	-42.05	11.12	-7.93	-13.00	-25.86

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number Operation Band** 

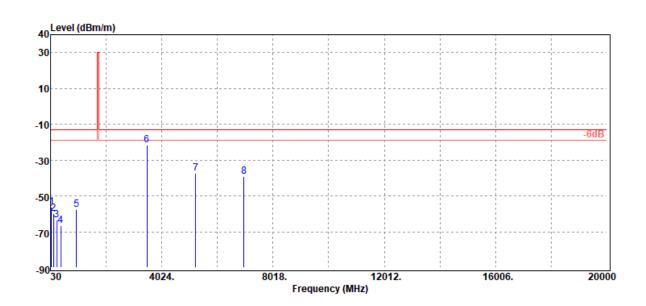
:T190304W06 :LTE B4 20 QPSK 1.0 :1745 MHz

Fundamental Frequency **Operation Mode** EUT Pol.

:Tx CH High :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
59.10	-56.08	-45.14	-10.31	-0.63	-13.00	-43.08
133.79	-59.64	-49.17	-9.52	-0.95	-13.00	-46.64
255.04	-63.34	-60.43	-1.60	-1.31	-13.00	-50.34
396.66	-66.61	-63.33	-1.63	-1.65	-13.00	-53.61
958.29	-57.48	-53.59	-1.27	-2.62	-13.00	-44.48
3490.00	-21.83	-28.82	12.54	-5.55	-13.00	-8.83
5235.00	-37.40	-43.75	13.14	-6.79	-13.00	-24.40
6980.00	-39.07	-42.26	11.12	-7.93	-13.00	-26.07

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



:VERTICAL

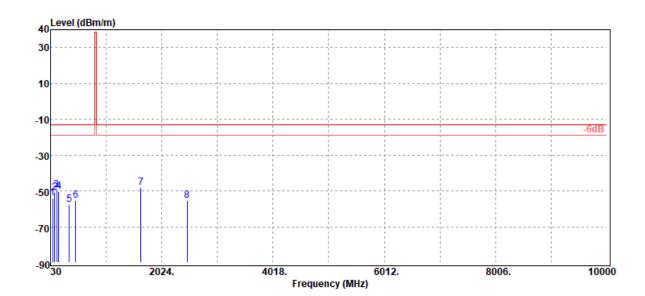
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Measurement Antenna Pol.

# Radiated Spurious Emission Measurement Result: LTE-Band 5 (The Worst Case)

**Project Number** :T190304W06 **Test Date** :2019-05-30 **Operation Band** :LTE B5 5 QPSK 1.0 Temp./Humi. :22.7/56.3 **Fundamental Frequency** Engineer :826.5 MHz :Jerry

**Operation Mode** :Tx CH Low EUT Pol. :E2 Plan



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
70.74	-54.05	-43.76	-9.60	-0.69	-13.00	-41.05
104.69	-50.76	-40.68	-9.24	-0.84	-13.00	-37.76
144.46	-49.73	-40.93	-7.81	-0.99	-13.00	-36.73
180.35	-50.41	-44.95	-4.36	-1.10	-13.00	-37.41
366.59	-57.48	-54.1	-1.80	-1.58	-13.00	-44.48
482.99	-55.47	-51.3	-2.34	-1.83	-13.00	-42.47
1653.00	-48.16	-54.33	9.72	-3.55	-13.00	-35.16
2479.50	-55.45	-61.62	10.72	-4.55	-13.00	-42.45

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number Operation Band** Fundamental Frequency

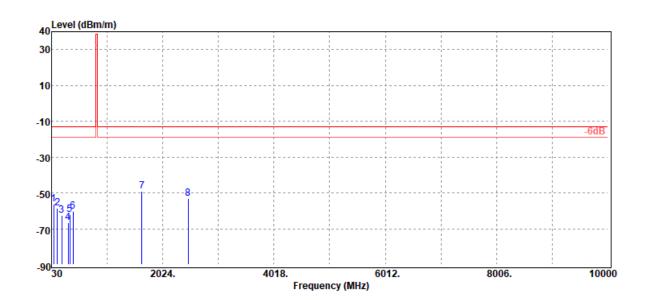
:T190304W06 :LTE B5 5 QPSK 1.0 :826.5 MHz

**Operation Mode** EUT Pol.

:Tx CH Low :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
70.74	-56.39	-46.1	-9.60	-0.69	-13.00	-43.39
136.70	-58.72	-48.7	-9.06	-0.96	-13.00	-45.72
212.36	-62.54	-59.24	-2.10	-1.20	-13.00	-49.54
330.70	-66.75	-63.56	-1.69	-1.50	-13.00	-53.75
356.89	-62.12	-59.01	-1.55	-1.56	-13.00	-49.12
416.06	-60.13	-56.54	-1.90	-1.69	-13.00	<b>-</b> 47.13
1653.00	-48.99	-55.16	9.72	-3.55	-13.00	-35.99
2479.50	-53.18	-59.35	10.72	-4.55	-13.00	-40.18

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



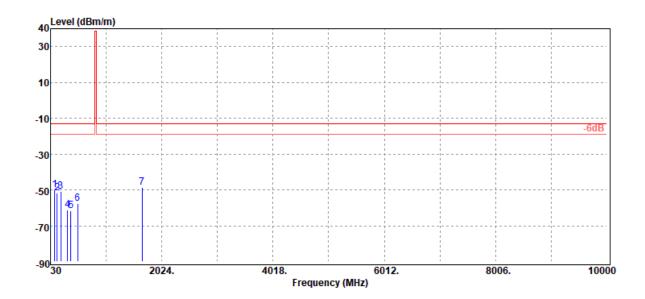
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**Project Number Operation Band** Fundamental Frequency

:T190304W06 :LTE B5 5 QPSK 1.0 :836.5 MHz

**Operation Mode** :Tx CH Mid EUT Pol. :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry Measurement Antenna Pol. :VERTICAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
105.66	-49.94	-39.73	-9.37	-0.84	-13.00	-36.94
146.40	-51.98	-43.45	-7.54	-0.99	-13.00	-38.98
211.39	-51.01	-47.72	-2.10	-1.19	-13.00	-38.01
333.61	-61.38	-58.24	-1.63	-1.51	-13.00	-48.38
390.84	-61.69	-58.62	-1.43	-1.64	-13.00	-48.69
517.91	-57.77	-54.43	-1.44	-1.90	-13.00	-44.77
1673.00	-48.80	-55.06	9.84	-3.58	-13.00	-35.80

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number Operation Band** 

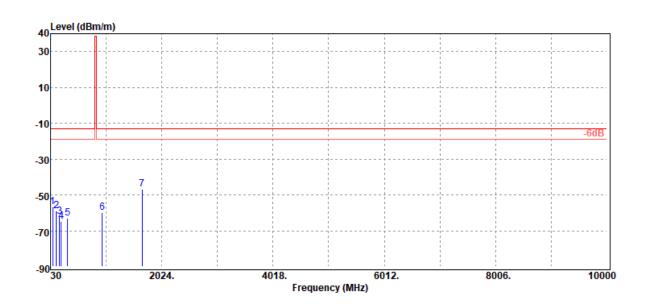
:T190304W06 :LTE B5 5 QPSK 1.0 :836.5 MHz

Fundamental Frequency **Operation Mode** EUT Pol.

:Tx CH Mid :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

:HORIZONTAL Measurement Antenna Pol.



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
70.74	-56.58	-46.29	-9.60	-0.69	-13.00	-43.58
136.70	-59.04	-49.02	-9.06	-0.96	-13.00	-46.04
190.05	-61.98	-56.85	-4.00	-1.13	-13.00	-48.98
224.00	-64.89	-61.74	-1.92	-1.23	-13.00	-51.89
335.55	-63.15	-60.05	-1.59	-1.51	-13.00	-50.15
956.35	-59.98	-56.13	-1.23	-2.62	-13.00	-46.98
1673.00	-46.95	-53.21	9.84	-3.58	-13.00	-33.95

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



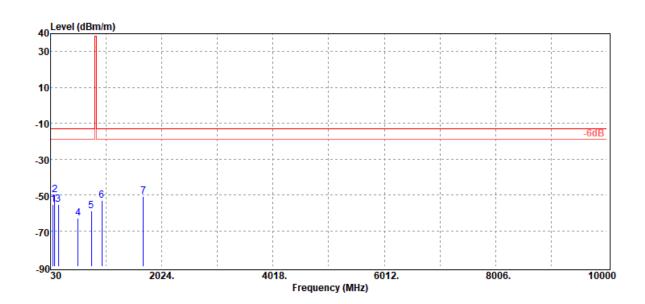
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**Project Number Operation Band** Fundamental Frequency :T190304W06 :LTE B5 5 QPSK 1.0

**Operation Mode** EUT Pol.

:846.5 MHz :Tx CH High :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry Measurement Antenna Pol. :VERTICAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
75.59	-55.20	-45.51	-8.98	-0.71	-13.00	-42.20
104.69	-49.79	-39.71	-9.24	-0.84	-13.00	-36.79
170.65	-55.14	-48.74	-5.33	-1.07	-13.00	-42.14
521.79	-62.99	-59.72	-1.36	-1.91	-13.00	-49.99
760.41	-58.93	-55.21	-1.40	-2.32	-13.00	-45.93
951.50	-52.98	-49.16	-1.20	-2.62	-13.00	-39.98
1693.00	-50.96	-57.32	9.96	-3.60	-13.00	-37.96

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number Operation Band** Fundamental Frequency

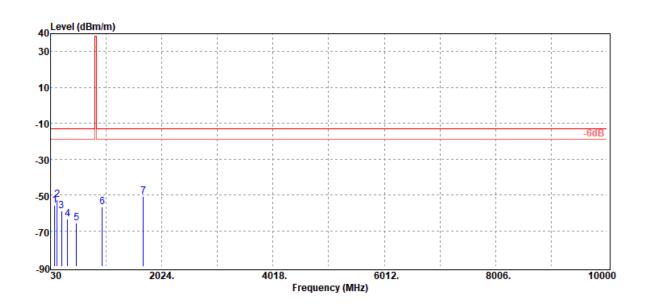
:T190304W06 :LTE B5 5 QPSK 1.0 :846.5 MHz

**Operation Mode** EUT Pol.

:Tx CH High :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
104.69	-55.89	-45.81	-9.24	-0.84	-13.00	-42.89
151.25	-52.67	-44.61	-7.05	-1.01	-13.00	-39.67
226.91	-59.13	-55.91	-1.98	-1.24	-13.00	-46.13
338.46	-63.46	-60.41	-1.53	-1.52	-13.00	-50.46
493.66	-65.69	-61.79	-2.05	-1.85	-13.00	-52.69
958.29	-56.71	-52.82	-1.27	-2.62	-13.00	-43.71
1693.00	-50.67	-57.03	9.96	-3.60	-13.00	-37.67

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



:VERTICAL

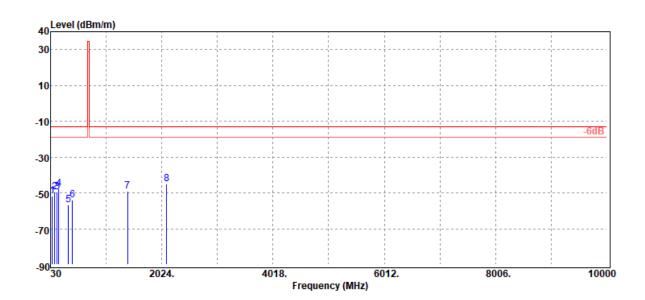
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Measurement Antenna Pol.

# Radiated Spurious Emission Measurement Result: LTE-Band 12 (The Worst Case)

**Project Number** :T190304W06 **Test Date** :2019-05-30 **Operation Band** :LTE B12 10 QPSK 1.0 Temp./Humi. :22.7/56.3 **Fundamental Frequency** :704 MHz Engineer :Jerry

**Operation Mode** :Tx CH Low EUT Pol. :E2 Plan



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
65.89	-51.82	-41.31	-9.84	-0.67	-13.00	-38.82
104.69	-49.63	-39.55	-9.24	-0.84	-13.00	-36.63
151.25	-49.38	-41.32	-7.05	-1.01	-13.00	-36.38
180.35	-47.89	-42.43	-4.36	-1.10	-13.00	-34.89
348.16	-56.81	-53.77	-1.50	-1.54	-13.00	-43.81
419.94	-53.96	-50.36	-1.90	-1.70	-13.00	-40.96
1408.00	-48.94	-53.74	8.05	-3.25	-13.00	-35.94
2112.00	-44.99	-50.58	9.70	-4.11	-13.00	-31.99

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number** 

:T190304W06

**Operation Band** 

:LTE B12 10 QPSK 1.0

Fundamental Frequency **Operation Mode** 

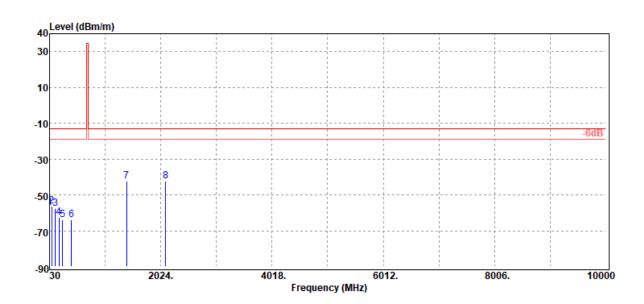
:704 MHz

EUT Pol.

:Tx CH Low :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	-57.29	-26.74	-30.10	-0.45	-13.00	-44.29
70.74	-56.15	-45.86	-9.60	-0.69	-13.00	-43.15
136.70	-57.79	-47.77	-9.06	-0.96	-13.00	-44.79
202.66	-62.37	-57.46	-3.74	-1.17	-13.00	-49.37
262.80	-64.12	-60.64	-2.14	-1.34	-13.00	-51.12
422.85	-63.78	-60.18	-1.90	-1.70	-13.00	-50.78
1408.00	-42.51	-47.31	8.05	-3.25	-13.00	-29.51
2112.00	-42.12	-47.71	9.70	-4.11	-13.00	-29.12

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number Operation Band** Fundamental Frequency :T190304W06 :LTE B12 10 QPSK 1.0

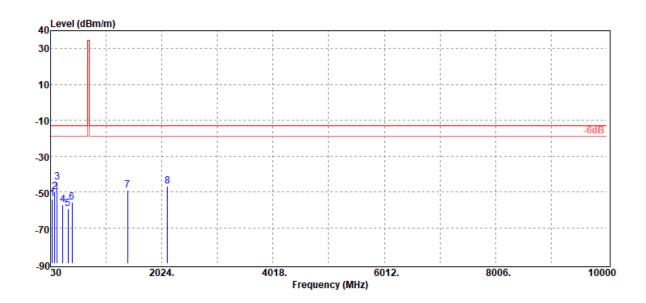
:E2 Plan

**Operation Mode** EUT Pol.

:707.5 MHz :Tx CH Mid

Measurement Antenna Pol.

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry :VERTICAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
65.89	-53.93	-43.42	-9.84	-0.67	-13.00	-40.93
104.69	-50.03	-39.95	-9.24	-0.84	-13.00	-37.03
148.34	-44.60	-36.33	-7.27	-1.00	-13.00	-31.60
248.25	-57.38	-54.25	-1.83	-1.30	-13.00	-44.38
342.34	-59.63	-56.6	-1.50	-1.53	-13.00	-46.63
415.09	-55.87	-52.28	-1.90	-1.69	-13.00	-42.87
1415.00	-49.07	-53.91	8.09	-3.25	-13.00	-36.07
2122.50	-46.88	-52.38	9.62	-4.12	-13.00	-33.88

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number Operation Band** 

EUT Pol.

:T190304W06

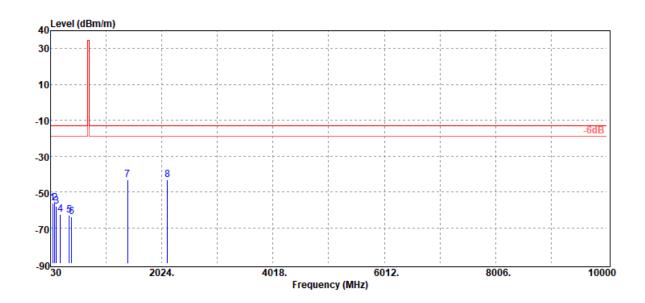
:LTE B12 10 QPSK 1.0 :707.5 MHz

Fundamental Frequency **Operation Mode** 

:Tx CH Mid :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
70.74	-56.21	-45.92	-9.60	-0.69	-13.00	-43.21
104.69	-56.33	-46.25	-9.24	-0.84	-13.00	-43.33
136.70	-58.08	-48.06	-9.06	-0.96	-13.00	-45.08
205.57	-62.46	-58.56	-2.72	-1.18	-13.00	-49.46
362.71	-62.90	-59.52	-1.80	-1.58	-13.00	-49.90
405.39	-63.77	-60.3	-1.80	-1.67	-13.00	-50.77
1415.00	-43.00	-47.84	8.09	-3.25	-13.00	-30.00
2122.50	-43.33	-48.83	9.62	-4.12	-13.00	-30.33

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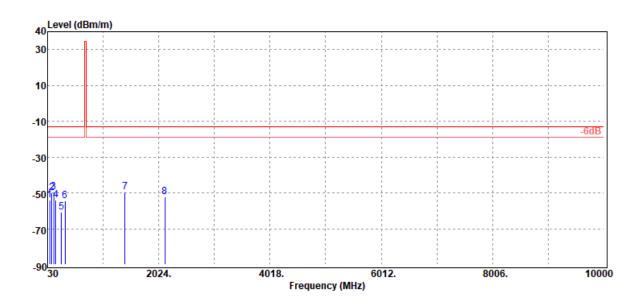
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**Project Number Operation Band** Fundamental Frequency :T190304W06 :LTE B12 10 QPSK 1.0

**Operation Mode** EUT Pol.

:711 MHz :Tx CH High :E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry Measurement Antenna Pol. :VERTICAL



Freq.	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBd/dBi	dB	dBm	dB
70.74	-53.90	-43.61	-9.60	-0.69	-13.00	-40.90
104.69	-49.90	-39.82	-9.24	-0.84	-13.00	-36.90
144.46	-49.65	-40.85	-7.81	-0.99	-13.00	-36.65
178.41	-53.80	-48.14	-4.56	-1.10	-13.00	-40.80
279.29	-60.93	-56.95	-2.60	-1.38	-13.00	-47.93
340.40	-54.31	-51.28	-1.50	-1.53	-13.00	-41.31
1422.00	-49.68	-54.55	8.13	-3.26	-13.00	-36.68
2133.00	-52.36	-57.76	9.54	-4.14	-13.00	-39.36

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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**Project Number Operation Band** 

Fundamental Frequency **Operation Mode** EUT Pol.

:T190304W06

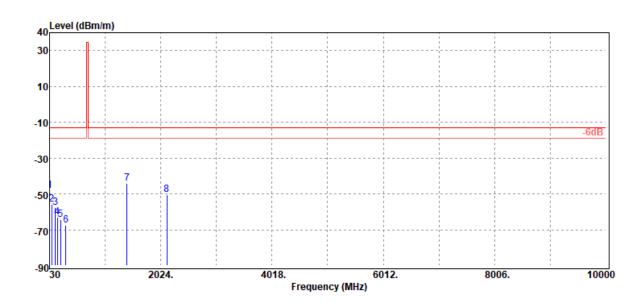
:LTE B12 10 QPSK 1.0

:711 MHz :Tx CH High

:E2 Plan

**Test Date** :2019-05-30 Temp./Humi. :22.7/56.3 Engineer :Jerry

Measurement Antenna Pol. :HORIZONTAL



Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB
IVII IZ	чын	ubili	dDd/dDi	ub_	ubili	UD
30.00	-48.09	-17.54	-30.10	-0.45	-13.00	-35.09
70.74	-56.03	-45.74	-9.60	-0.69	-13.00	-43.03
136.70	-57.83	-47.81	-9.06	-0.96	-13.00	-44.83
173.56	-62.91	-56.84	-4.99	-1.08	-13.00	-49.91
226.91	-64.22	-61	-1.98	-1.24	-13.00	-51.22
323.91	-67.50	-64.21	-1.80	-1.49	-13.00	-54.50
1422.00	-43.91	-48.78	8.13	-3.26	-13.00	-30.91
2133.00	-50.46	-55.86	9.54	-4.14	-13.00	-37.46

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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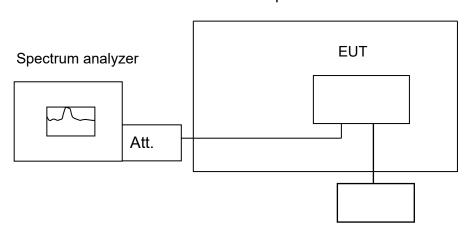
#### FREQUENCY STABILITY MEASUREMENT 10.

# 10.1. Standard Applicable

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.







Variable DC Power Supply

Note: Measurement setup for testing on Antenna connector

#### 10.3. Measurement Procedure

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Set chamber temperature to 25°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint as declared by the manufacturer, record the maximum frequency change.

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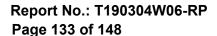


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# 10.4. Measurement Equipment Used

EQUIPMENT TYPE	MFR	MODEL NUM- BER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EXA Spectrum Analyzer	Agilent	N9010A	MY57120290	02/13/2019	02/12/2020
Radio Communication Analyer	Anritsu	MT8820C	6201465317	01/16/2019	01/15/2020
DC Power Supply	Agilent	E3640A	MY52410006	12/04/2018	12/03/2019
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2019	01/01/2020
DC Block	Mini-Circuits	BLK-18-S+	1	01/02/2019	01/01/2020
Splitter	RF-LAMBAD	RFLT2W1G18G	11-JSPF412-018	01/02/2019	01/01/2020
Coaxial Cables	N/A	WK CE Cable	N/A	01/02/2019	01/01/2020

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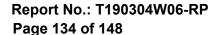


#### 10.5. Measurement Result

Reterence Fren ·		B2 Mid annel		MHz 20M QPSK CH 18900			
Power Supply Vdc	Temp. (°C)	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)			
		Freq. ERROR vs	s. VOLTAGE				
4.1	25	1880.000004	4	4700			
3.6	25	1879.999996	-4	4700			
3	25	1879.999993	-7	4700			
2.9 (End Point)	25	1880.000002	2	4700			
Freq. ERROR vs. Temp.							
3.6	-30	1880.000000	0	4700			
3.6	-20	1880.000004	4	4700			
3.6	-10	1880.000009	9.0000001	4700			
3.6	0	1879.999996	-4	4700			
3.6	10	1879.999995	-5	4700			
3.6	20	1879.999998	-2	4700			
3.6	30	1879.999991	-9	4700			
3.6	40	1880.000007	7.0000001	4700			
3.6	50	1880.000004	4	4700			

Reference Freq.:	LTE B4 Mid Channel		1732.5	MHz 20M QPSK CH 20175				
Power Supply Vdc	Temp. (°C)	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)				
Freq. ERROR vs. VOLTAGE								
4.1	25	1732.500004	4	4331				
3.6	25	1732.499993	-7	4331				
3	25	1732.500008	8	4331				
2.9 (End Point)	25	1732.500001	1.0000001	4331				
Freq. ERROR vs. Temp.								
3.6	-30	1732.500003	3.0000001	4331				
3.6	-20	1732.500008	8	4331				
3.6	-10	1732.499994	-6	4331				
3.6	0	1732.499992	-8	4331				
3.6	10	1732.499995	-5	4331				
3.6	20	1732.500002	2	4331				
3.6	30	1732.499998	-2	4331				
3.6	40	1732.500002	2	4331				
3.6	50	1732.500002	2	4331				

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Reference Freq.:		LTE B5 Mid Channel		MHz 10M QPSK CH 20525				
Power Supply Vdc	Temp. (°C)	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)				
Freq. ERROR vs. VOLTAGE								
4.1	25	836.499992	-8	2091				
3.6	25	836.500007	7	2091				
3	25	836.499998	-2	2091				
2.9 (End Point)	25	836.500003	3	2091				
Freq. ERROR vs. Temp.								
3.6	-30	836.499997	-3	2091				
3.6	-20	836.500001	1	2091				
3.6	-10	836.500007	7	2091				
3.6	0	836.499998	-2	2091				
3.6	10	836.499997	-3	2091				
3.6	20	836.500003	3	2091				
3.6	30	836.500000	0	2091				
3.6	40	836.499992	-8	2091				
3.6	50	836.500006	6	2091				

Reference Freq.:	LTE B12 Mid Channel		707.5	MHz 10M QPSK CH 23095				
Power Supply Vdc	Power Supply Vdc Temp. (°C)		Delta (Hz)	Limit = +/- 2.5 ppm (Hz)				
Freq. ERROR vs. VOLTAGE								
4.1	25	707.500004	4	1769				
3.6	25	707.500005	5	1769				
3	25	707.500004	4	1769				
2.9 (End Point)	25	707.500007	7	1769				
Freq. ERROR vs. Temp.								
3.6	-30	707.499999	-1	1769				
3.6	-20	707.500003	3	1769				
3.6	-10	707.500002	2	1769				
3.6	0	707.500007	7	1769				
3.6	10	707.500003	3	1769				
3.6	20	707.500003	3	1769				
3.6	30	707.500005	5	1769				
3.6	40	707.500002	2	1769				
3.6	50	707.500001	1	1769				

# Note: The battery is rated 3.6Vdc.

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Report No.: T190304W06-RP

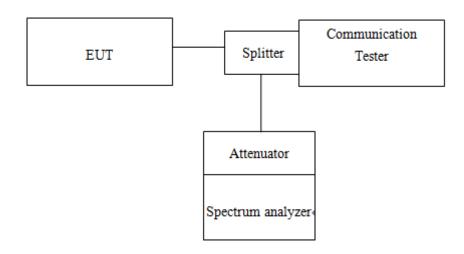
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#### 11. **PEAK TO AVERAGE RATIO**

## 11.1. Standard Applicable

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

### 11.2. Test SET-UP



### 11.3. Measurement Procedure

- 1. KDB 971168 D01 is employed as the following procedure is proper adjusted accordingly:
- 2. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth; & internal =1ms
- Set the number of counts to a value that stabilizes the measured CCDF curve.

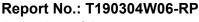
# 11.4. Measurement Equipment Used

	=qp	~ ·-			
EQUIPMENT TYPE	MFR	MODEL NUM- BER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EXA Spectrum Analyzer	Agilent	N9010A	MY57120290	02/13/2019	02/12/2020
Radio Communication Analyer	Anritsu	MT8820C	6201465317	01/16/2019	01/15/2020
DC Power Supply	Agilent	E3640A	MY52410006	12/04/2018	12/03/2019
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2019	01/01/2020
DC Block	Mini-Circuits	BLK-18-S+	1	01/02/2019	01/01/2020
Splitter	RF-LAMBAD	RFLT2W1G18G	11-JSPF412-018	01/02/2019	01/01/2020
Coaxial Cables	N/A	WK CE Cable	N/A	01/02/2019	01/01/2020

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### 11.5. Measurement Result

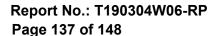
#### **Tabular Results:**

	LTE BAND 2										
Channel bandwidth: 1.4MHz				Char	nnel band	lwidth: 3M	Hz				
Freq.	СН	PAPR	(dB)	Freq. CH		PAPR (dB)					
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
1850.7	18607	6.42	13	1851.5	18615	6.63	13				
1880.0	18900	5.72	13	1880.0	18900	6.19	13				
1909.3	19193	5.65	13	1908.5	19185	6.09	13				

	LTE BAND 2										
Channel bandwidth: 5MHz				Chan	Channel bandwidth: 10MHz						
Freq. CH	PAPR	(dB)	Freq. CH		PAPR	(dB)					
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
1852.5	18625	6.53	13	1855.0	18650	6.31	13				
1880.0	18900	5.93	13	1880.0	18900	6.10	13				
1907.5	19175	5.83	13	1905.0	19150	5.99	13				

	LTE BAND 2										
Channel bandwidth: 15MHz				Chan	Channel bandwidth: 20MHz						
Freq. CH	PAPR	(dB)	Freq. CH PAF		PAPR	R (dB)					
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
1857.5	18675	6.43	13	1860.0	18700	6.74	13				
1880.0	18900	6.21	13	1880.0	18900	6.71	13				
1902.5	19125	6.18	13	1900.0	19100	6.61	13				

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	LTE BAND 4										
Channel bandwidth: 1.4MHz				Chan	nel band	dwidth: 3N	ЛHz				
Freq.	СН	PAPR	(dB)	Freq. CH		PAPR	PAPR (dB)				
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
1710.7	19957	6.55	13	1711.5	19965	6.47	13				
1732.5	20175	6.82	13	1732.5	20175	6.62	13				
1754.3	20393	6.15	13	1753.5	20385	6.23	13				

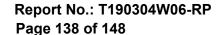
	LTE BAND 4										
Channel bandwidth: 5MHz				Chan	nel band	lwidth: 10l	MHz				
Freq.	СН	PAPR	(dB)	Freq. CH		PAPR	PAPR (dB)				
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
1712.5	19957	6.30	13	1715.0	20000	6.18	13				
1732.5	20175	6.55	13	1732.5	20175	6.39	13				
1752.5	20375	5.99	13	1750.0	20350	5.79	13				

	LTE BAND 4										
Channel bandwidth: 15MHz				Channel bandwidth: 20MHz							
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)				
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
1717.5	20025	6.20	13	1720.0	20050	6.69	13				
1732.5	20175	6.28	13	1732.5	20175	6.75	13				
1747.5	20325	6.03	13	1745.0	20300	6.69	13				

	LTE BAND 5										
Channel bandwidth: 1.4MHz				Chai	nnel band	dwidth: 3M	lHz				
Freq. CH	PAPR	(dB)	Freq.	СН	PAPR	(dB)					
(MHz)	СП	16QAM	Limit	(MHz)	СН	16QAM	Limit				
824.7	20407	6.30	13	825.5	20415	6.17	13				
836.5	20525	5.11	13	836.5	20525	5.90	13				
848.3	20643	6.40	13	847.5	20635	6.59	13				

	LTE BAND 5										
Channel bandwidth: 5MHz				Chan	Channel bandwidth: 10MHz						
Freq.	СН	PAPR	(dB)	Freq. CH		PAPR	PAPR (dB)				
(MHz)	(MHz)	16QAM	Limit	(MHz)	Сп	16QAM	Limit				
826.5	20425	6.11	13	829.0	20450	5.79	13				
836.5	20525	5.69	13	836.5	20525	5.81	13				
846.5	20625	6.37	13	844.0	20600	6.56	13				

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	LTE BAND 12										
Channel bandwidth: 1.4MHz				Chai	nnel band	lwidth: 3M	Hz				
Freq.	СН	PAPR	(dB)	Freq. CH		PAPR	PAPR (dB)				
(MHz)	СП	16QAM	Limit	(MHz)	GI	16QAM	Limit				
699.7	23017	6.42	13	700.5	23025	6.26	13				
707.5	23095	6.59	13	707.5	23095	6.66	13				
715.3	23173	6.65	13	714.5	23165	6.45	13				

	LTE BAND 12										
Channel bandwidth: 5MHz				Chan	nel band	width: 10N	ЛHz				
Freq. CH	PAPR	(dB)	Freq.	СН	PAPR	(dB)					
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
701.5	23035	6.17	13	704.0	23060	6.16	13				
707.5	23095	6.44	13	707.5	23095	6.30	13				
713.5	23155	5.94	13	711.0	23130	6.21	13				

### **Measurement Results:**

Please refer to next page.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



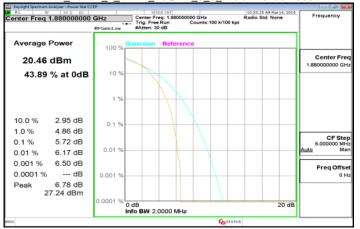
# LTE\_Band2\_1\_4MHz\_16QAM\_6\_0\_LowCH18607-1850.7



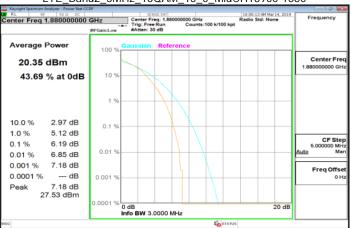
#### LTE\_Band2\_3MHz\_16QAM\_15\_0\_LowCH18615-1851.5



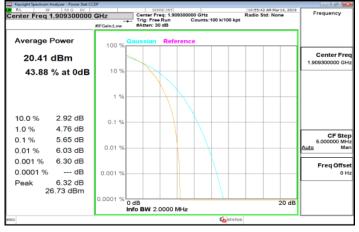
#### LTE\_Band2\_1\_4MHz\_16QAM\_6\_0\_MidCH18900-1880



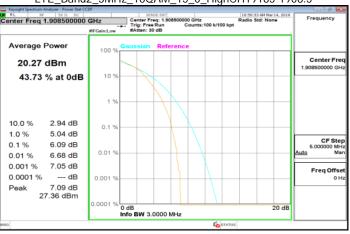
#### LTE\_Band2\_3MHz\_16QAM\_15\_0\_MidCH18900-1880



### LTE\_Band2\_1\_4MHz\_16QAM\_6\_0\_HighCH19193-1909.3



# LTE\_Band2\_3MHz\_16QAM\_15\_0\_HighCH19185-1908.5

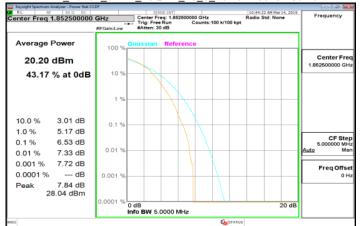


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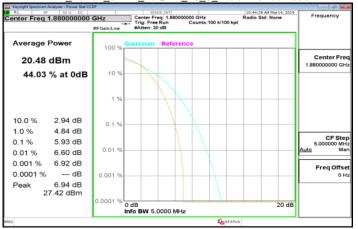
#### LTE\_Band2\_5MHz\_16QAM\_25\_0\_LowCH18625-1852.5



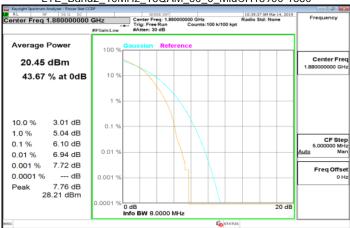
#### LTE\_Band2\_10MHz\_16QAM\_50\_0\_LowCH18650-1855



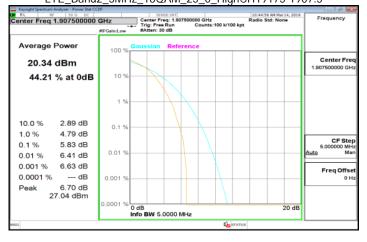
#### LTE\_Band2\_5MHz\_16QAM\_25\_0\_MidCH18900-1880



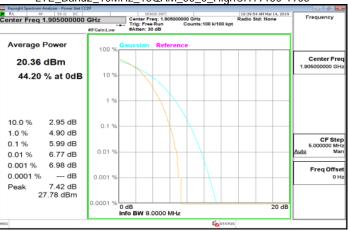
#### LTE\_Band2\_10MHz\_16QAM\_50\_0\_MidCH18900-1880



# LTE\_Band2\_5MHz\_16QAM\_25\_0\_HighCH19175-1907.5



### LTE\_Band2\_10MHz\_16QAM\_50\_0\_HighCH19150-1905

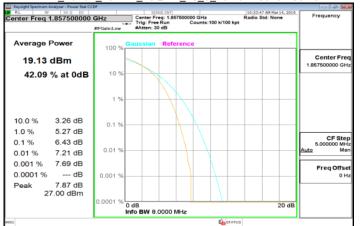


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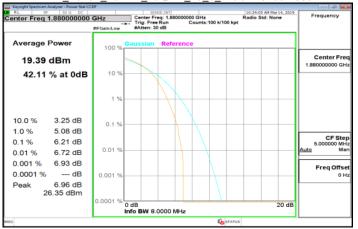
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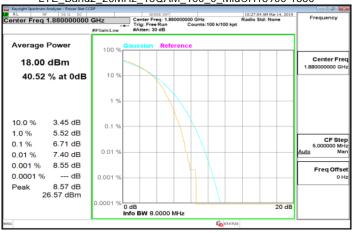
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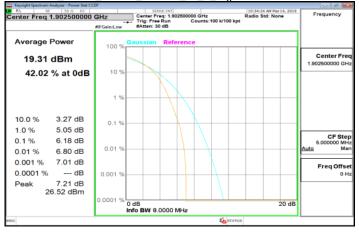
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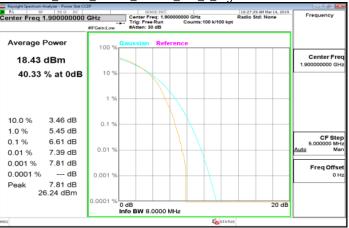
### LTE\_Band2\_20MHz\_16QAM\_100\_0\_MidCH18900-1880



### LTE\_Band2\_15MHz\_16QAM\_75\_0\_HighCH19125-1902.5



LTE\_Band2\_20MHz\_16QAM\_100\_0\_HighCH19100-1900

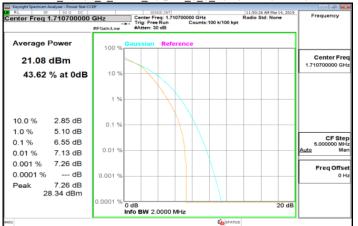


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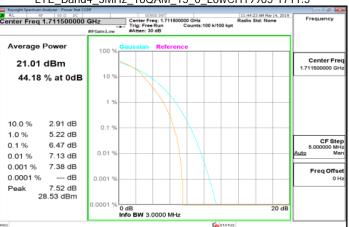
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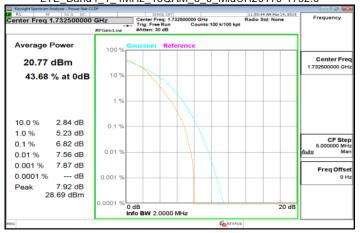
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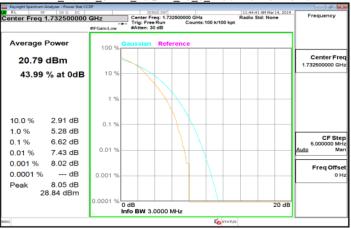
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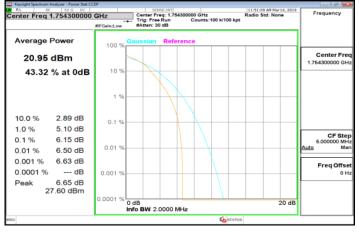
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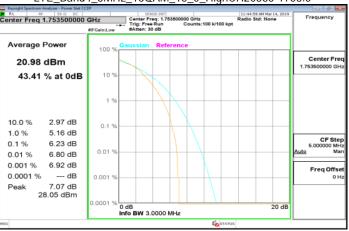
#### LTE\_Band4\_3MHz\_16QAM\_15\_0\_MidCH20175-1732.5



### LTE\_Band4\_1\_4MHz\_16QAM\_6\_0\_HighCH20393-1754.3



#### LTE\_Band4\_3MHz\_16QAM\_15\_0\_HighCH20385-1753.5

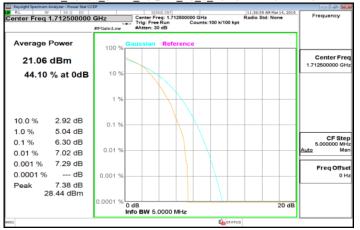


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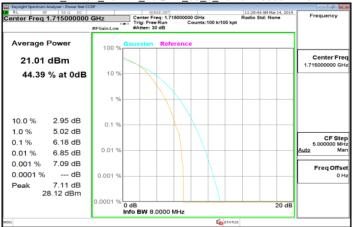
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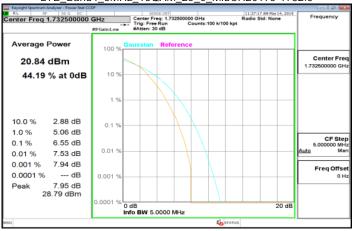
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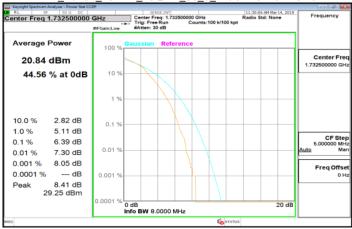
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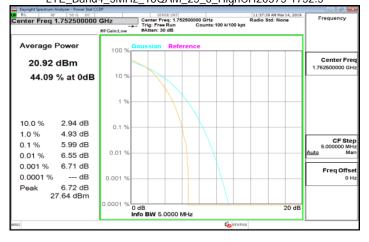
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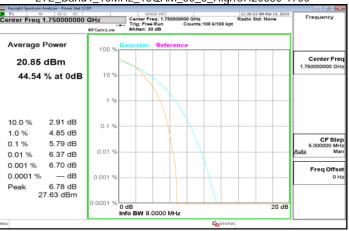
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# LTE\_Band4\_5MHz\_16QAM\_25\_0\_HighCH20375-1752.5



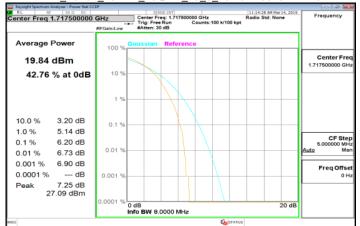
LTE\_Band4\_10MHz\_16QAM\_50\_0\_HighCH20350-1750



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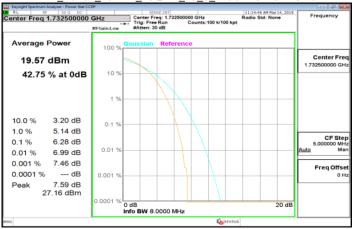
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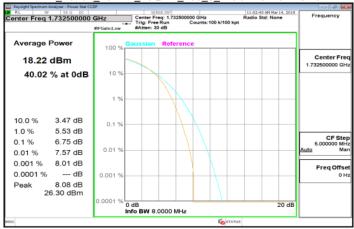
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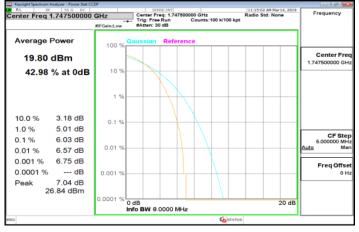
#### LTE\_Band4\_15MHz\_16QAM\_75\_0\_MidCH20175-1732.5



#### LTE\_Band4\_20MHz\_16QAM\_100\_0\_MidCH20175-1732.5



### LTE\_Band4\_15MHz\_16QAM\_75\_0\_HighCH20325-1747.5



### LTE\_Band4\_20MHz\_16QAM\_100\_0\_HighCH20300-1745

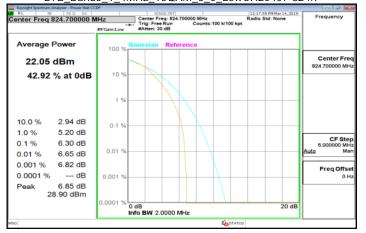


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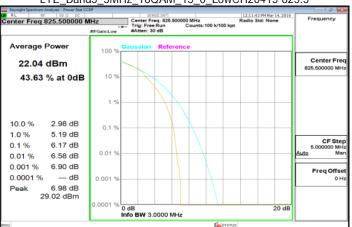
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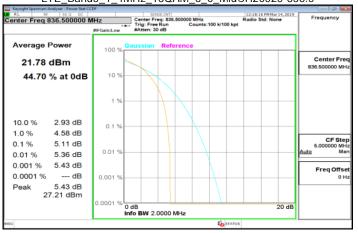
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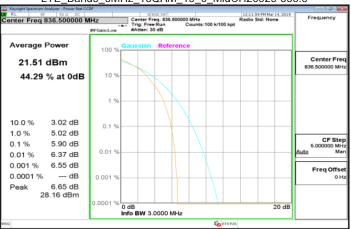
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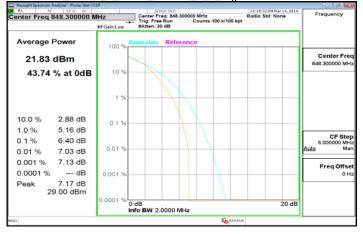
# LTE\_Band5\_1\_4MHz\_16QAM\_6\_0\_MidCH20525-836.5



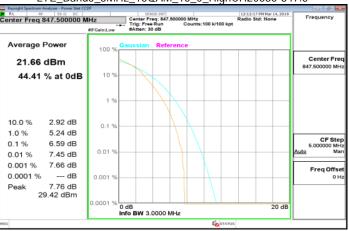
#### LTE\_Band5\_3MHz\_16QAM\_15\_0\_MidCH20525-836.5



### LTE\_Band5\_1\_4MHz\_16QAM\_6\_0\_HighCH20643-848.3



### LTE\_Band5\_3MHz\_16QAM\_15\_0\_HighCH20635-847.5



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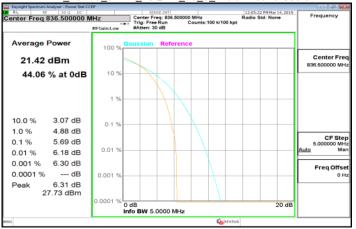
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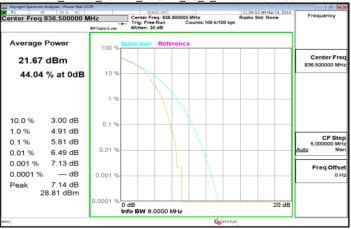
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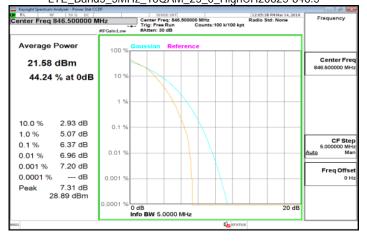
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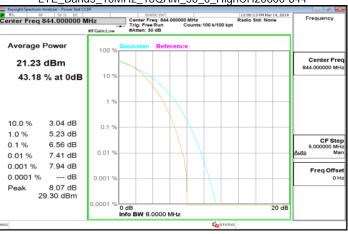
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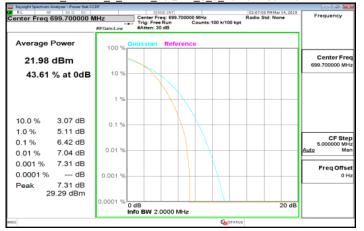
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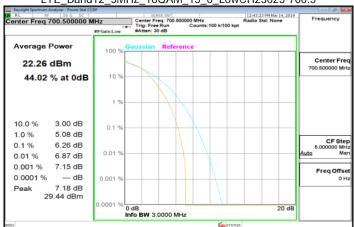
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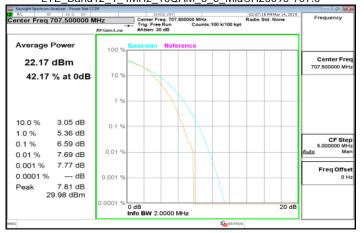
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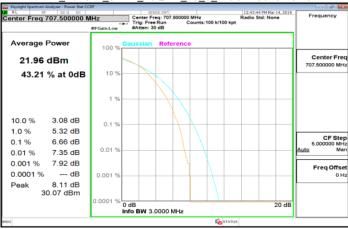
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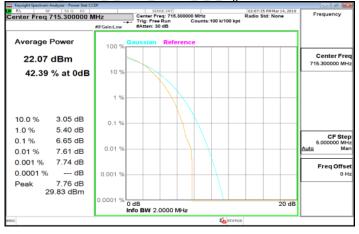
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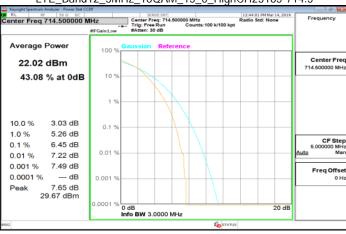
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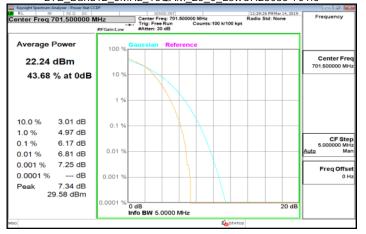
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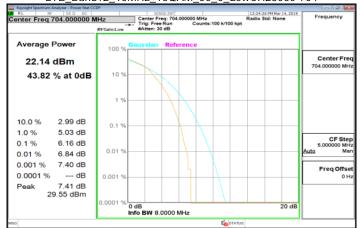
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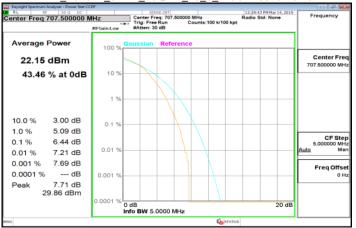
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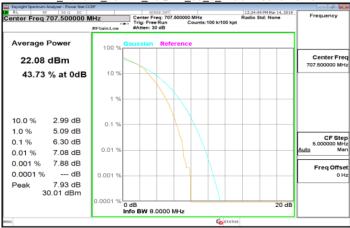
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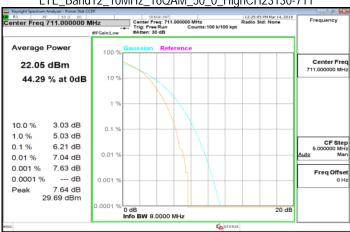
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### LTE Band12 5MHz 16QAM 25 0 HighCH23155-713.5



### LTE\_Band12\_10MHz\_16QAM\_50\_0\_HighCH23130-711



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