MOTOROLA SOLUTIONS

ACCREDITED

TESTING CERT # 2786.01

MOTOROLA PENANG ADV. COMM. LABORATORY
Motorola Solutions Malaysia Sdn Bhd,
Innoplex Plot 2A, Medan Bayan Lepas,
Mukim 12 S.W.D, 11900 Bayan Lepas,
Penang, Malaysia.

FCC TEST REPORT
Report Revision : Rev.A

Date/s Tested	:	21-September-2016 - 29-September-2016
Manufacturer/Location	:	Others / China
Requestor	:	EYAL KOREN
Product Type	:	Smart Phone
Tested Model	:	LEX L10i
Frequency Band	:	Refer to section 1.4
Rated / Max RF Output Power	:	199.5mW / 251mW
Applicant Name	:	Motorola Solution Malaysia Sdn Bhd
Applicant Address	:	Innoplex Plot 2A, Medan Bayan lepas, Mukim 12, S.W.D. 11900 Bayan Lepas, Penang, Malaysia
FCC Registrations	:	772092
IC Registrations	:	109AK

The equipment was tested accordance to the requirement listed below:

(LTE Band 2) **PASS**
FCC 47 CFR Part 2 / 24

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1.0. Summary of Test Results

FCC Clause	Test Item	Results	Remarks
2.1046 24.232(e)	Conducted RF Output Power	Pass	Meet the requirement of limit
24.232(d)	Peak-to-Average Power Ratio	Pass	Meet the requirement of limit
2.1049 24.238(b)	Occupied Bandwidth (26dBc, 99%)	Pass	Meet the requirement of limit
2.1055 24.235	Frequency Stability	Pass	Meet the requirement of limit
2.1051 24.238(a)(b)	Band Edge Conducted Spurious Emission	Pass	Meet the requirement of limit
2.1051 24.238(a)(b)	Conducted Spurious Emissions	Pass	Meet the requirement of limit
2.1053 24.238	Radiated Spurious Emission	Pass	Meet the requirement of limit
24.232 (c)	Equivalent Isotropically Radiated Power (EIRP)	Pass	Meet the requirement of limit

1.1. Measurement Uncertainty

Measurement	Frequency	Expended Uncertainty (k=1.96) (±)
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	5.01
	200MHz ~ 1000MHz	5.01
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.01
	18GHz ~ 25GHz	5.01

1.2. Equipment List

Description	Model	Serial Number	Calibration Date	Calibration Due Date
POWER SUPPLY	6621A	3102A01384	29-Jun-15	29-Jun-17
Wideband Radio Communication Tester	CMW500	140107	7-Jan-16	7-Jan-17
SIGNAL ANALYZER	FSV40	101431	2-Jul-16	1-Jul-17
CHAMBER	SH-641	92002651	8-Mar-16	7-Mar-17
DRG HORN FREQ.	SAS-571	1143	10-Nov-14	10-Nov-16
DRG HORN FREQ.	SAS-571	719	28-Apr-15	28-Apr-17
PREAMPLIFIER	PAM-0118	427	NA	NA
POWER SUPPLY	6674A	3126A00133	21-Apr-16	21-Apr-18
MICROWAVE SIGNAL GENERATOR	SMP04	100146	3-Jul-16	3-Jul-17
SYSTEM CONTROLLER	SC104V	050806-1	NA	NA
TURNTABLE FLUSH MOUNT 2M	FM2011	NA	NA	NA
ANTENNA POSITIONING TOWER	TLT2	NA	NA	NA
EMI TEST RECEIVER	ESIB40	100264	1-Jul-16	1-Jul-17
SIGNAL ANALYZER	FSV40	101103	25-Jun-16	25-Jun-17
Wideband Radio Communication Tester	CMW500	153173	30-Apr-16	30-Apr-17
5m Semi-anechoic Chamber	S800-HX	J2308	29-Jul-16	29-Jul-17
BILOG ANTENNA	CBL6112B	2964	23-Jan-15	23-Jan-17
DATA LOGGER	TM320	12249289	22-Apr-16	22-Apr-17
BILOG ANTENNA	CBL6112D	25516	23-Jan-16	23-Jan-17
18-40GHz PREAMPLIFIER	BBV9721	9721-011	NA	NA
BROAD-BAND HORN ANTENNA	BBHA9170	BBHA9170143	24-Nov-14	24-Nov-16

1.3. General Information

General Description of EUT

Product	Smart phone		
Brand	Motorola Solutions		
Test Model	LEX L10i		
Power Supply Rating	3.7Vdc (Battery), 5Vdc (Adapter)		
Mode of operation	LTE Band 2		
Modulation Type	QPSK, 16QAM		
Operating Frequency	LTE Band 2	Channel Bandwidth 1.4MHz	1850.7MHz~1909.3MHz
		Channel Bandwidth 3MHz	1851.5MHz~1908.5MHz
		Channel Bandwidth 5MHz	1852.5MHz~1907.5MHz
		Channel Bandwidth 10MHz	1855.0MHz~1905.0MHz
		Channel Bandwidth 15MHz	1857.5MHz~1902.5MHz
		Channel Bandwidth 20MHz	1860.0MHz~1900.0MHz
Max. EIRP Power	LTE Band 2 QPSK	Channel Bandwidth 1.4MHz	19.00dBm
		Channel Bandwidth 3MHz	20.86dBm
		Channel Bandwidth 5MHz	20.70dBm
		Channel Bandwidth 10MHz	21.90dBm
		Channel Bandwidth 15MHz	21.98dBm
		Channel Bandwidth 20MHz	21.84dBm
	LTE Band 2 16QAM	Channel Bandwidth 1.4MHz	19.67dBm
		Channel Bandwidth 3MHz	19.54dBm
		Channel Bandwidth 5MHz	17.43dBm
		Channel Bandwidth 10MHz	18.72dBm
		Channel Bandwidth 15MHz	17.08dBm
		Channel Bandwidth 20MHz	21.26dBm
Antenna Type	LTE Band 2	Inverted-L Monopole with 0.6 to 0.8 dBi gain	
SW Version	LEXL10ig-D20.29.00+LTE B2		
HW Version	Rev A		

Note:
The EUT contains following accessory devices and data cable.

Item	Brand	Model or P/N	Specification
Rechargeable Lithium ion battery	MOTOROLA	PMNN4472A	3.7Vdc, 2340mAh, 8.7Wh
Rechargeable Lithium ion battery	MOTOROLA	PMNN4475A	3.7Vdc, 4560mAh, 16.9Wh
ITE Power Supply	MOTOROLA	HKTN4009A	I/P: 100-240Vac, 50-60Hz, 0.2A O/P: 5Vdc, 1.2A
USB cable (CABLE: LEX USB SYNC AND CHARGE)	N/A	CB000262A01	-

Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	Product	Brand	Model No.	Serial No.	FCC ID
1	Wideband Radio Communication Tester	R&S	CMW500	140107	NA

NO.	Signal Cable Description of The above Support Units
1	NA

Note:

1. All power cords of the above support units are non-shielded.
2. Item 1 acted as a communication partner to transfer data.

EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency.

General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2
FCC 47 CFR Part 24
KDB 971168 D01 Power Meas License Digital Systems v02r02
ANSI/TIA/-603-D

NOTE: All test items have been performed and recorded as per the above standards.

1.4. Channel number and frequency info

			Test Channel Number			Test Channel Frequency (MHz)		
Band	Bandwidth supported	Available Channel Number	Low Channel	Mid Channel	High Channel	Low Channel	Mid Channel	High Channel
LTE Band 2	1.4 MHz	18607 ~ 19193	18607	18900	19193	1850.7	1880.0	1909.3
	3 MHz	18615 ~ 19185	18615	18900	19185	1851.5	1880.0	1908.5
	5 MHz	18625 ~ 19175	18625	18900	19175	1852.5	1880.0	1907.5
	10 MHz	18650 ~ 19150	18650	18900	19150	1855.0	1880.0	1905.0
	15 MHz	18675 ~ 19125	18675	18900	19125	1857.5	1880.0	1902.5
	20 MHz	18700 ~ 19100	18700	18900	19100	1860.0	1880.0	1900.0

1.5. Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.
The Radiated Emission and Equivalent Isotropically Radiated Power (EIRP) worst case was found when positioned on Z-Plane for LTE Band 2.
The following channel(s) was (were) selected for the final test as listed below:

LTE Band 2

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Conducted RF Output Power	18607 ~ 19193	18607, 18900, 19193	1.4 MHz	QPSK, 16QAM	As per table 1.6.2
	18615 ~ 19185	18615, 18900, 19185	3 MHz		
	18625 ~ 19175	18625, 18900, 19175	5 MHz		
	18650 ~ 19150	18650, 18900, 19150	10 MHz		
	18675 ~ 19125	18675, 18900, 19125	15 MHz		
	18700 ~ 19100	18700, 18900, 19100	20 MHz		
Peak to Average Power Ratio	18607 ~ 19193	18607, 18900, 19193	1.4 MHz	QPSK, 16QAM	6 RB / 0 RB Offset
	18615 ~ 19185	18615, 18900, 19185	3 MHz		15 RB / 0 RB Offset
	18625 ~ 19175	18625, 18900, 19175	5 MHz		25 RB / 0 RB Offset
	18650 ~ 19150	18650, 18900, 19150	10 MHz		50 RB / 0 RB Offset
	18675 ~ 19125	18675, 18900, 19125	15 MHz		75 RB / 0 RB Offset
	18700 ~ 19100	18700, 18900, 19100	20 MHz		100 RB / 0 RB Offset
Occupied Bandwidth	18607 ~ 19193	18607, 18900, 19193	1.4 MHz	QPSK, 16QAM	6 RB / 0 RB Offset
	18615 ~ 19185	18615, 18900, 19185	3 MHz		15 RB / 0 RB Offset
	18625 ~ 19175	18625, 18900, 19175	5 MHz		25 RB / 0 RB Offset
	18650 ~ 19150	18650, 18900, 19150	10 MHz		50 RB / 0 RB Offset
	18675 ~ 19125	18675, 18900, 19125	15 MHz		75 RB / 0 RB Offset
	18700 ~ 19100	18700, 18900, 19100	20 MHz		100 RB / 0 RB Offset
Frequency Stability	18607 ~ 19193	18607, 18900, 19193	1.4 MHz	QPSK	6 RB / 0 RB Offset
	18615 ~ 19185	18615, 18900, 19185	3 MHz		15 RB / 0 RB Offset
	18625 ~ 19175	18900	5 MHz		25 RB / 0 RB Offset
	18650 ~ 19150	18900	10 MHz		50 RB / 0 RB Offset
	18675 ~ 19125	18900	15 MHz		75 RB / 0 RB Offset
	18700 ~ 19100	18900	20 MHz		100 RB / 0 RB Offset
Band Edge Conducted Spurious Emission	18607 ~ 19193	18607, 19193	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 5 RB Offset 6 RB / 0 RB Offset
	18615 ~ 19185	18615, 19185	3 MHz		1 RB / 0 RB Offset 1 RB / 14 RB Offset 15 RB / 0 RB Offset
	18625 ~ 19175	18625, 19175	5 MHz		1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
	18650 ~ 19150	18650, 19150	10 MHz		1 RB / 0 RB Offset 1 RB / 49 RB Offset 50 RB / 0 RB Offset
	18675 ~ 19125	18675, 19125	15 MHz		1 RB / 0 RB Offset 1 RB / 74 RB Offset 75 RB / 0 RB Offset
	18700 ~ 19100	18700, 19100	20 MHz		1 RB / 0 RB Offset 1 RB / 99 RB Offset 100 RB / 0 RB Offset
Conducted Spurious Emission	18607 ~ 19193	18607, 18900, 19193	1.4 MHz	QPSK	1 RB / 5 RB Offset
	18615 ~ 19185	18615, 18900, 19185	3 MHz		1 RB / 14 RB Offset
	18625 ~ 19175	18625, 18900, 19175	5 MHz		1 RB / 0 RB Offset
	18650 ~ 19150	18650, 18900, 19150	10 MHz		1 RB / 0 RB Offset
	18675 ~ 19125	18675, 18900, 19125	15 MHz		1 RB / 0 RB Offset
	18700 ~ 19100	18700, 18900, 19100	20 MHz		1 RB / 99 RB Offset
Radiated	18607 ~ 19193	18607, 18900, 19193	1.4 MHz	QPSK	1 RB / 5 RB Offset

Emission	18615 ~ 19185	18615, 18900, 19185	3 MHz		1 RB / 14 RB Offset
	18625 ~ 19175	18625, 18900, 19175	5 MHz		1 RB / 0 RB Offset
	18650 ~ 19150	18650, 18900, 19150	10 MHz		1 RB / 0 RB Offset
	18675 ~ 19125	18675, 18900, 19125	15 MHz		1 RB / 0 RB Offset
	18700 ~ 19100	18700, 18900, 19100	20 MHz		1 RB / 99 RB Offset
Equivalent Isotropically Radiated Power (EIRP)	18607 ~ 19193	18900	1.4 MHz	QPSK, 16QAM	1 RB / 5 RB Offset
	18615 ~ 19185	18900	3 MHz		1 RB / 14 RB Offset
	18625 ~ 19175	18900	5 MHz		1 RB / 0 RB Offset
	18650 ~ 19150	18900	10 MHz		1 RB / 0 RB Offset
	18675 ~ 19125	18900	15 MHz		1 RB / 0 RB Offset
	18700 ~ 19100	18700	20 MHz		1 RB / 99 RB Offset

NOTE:

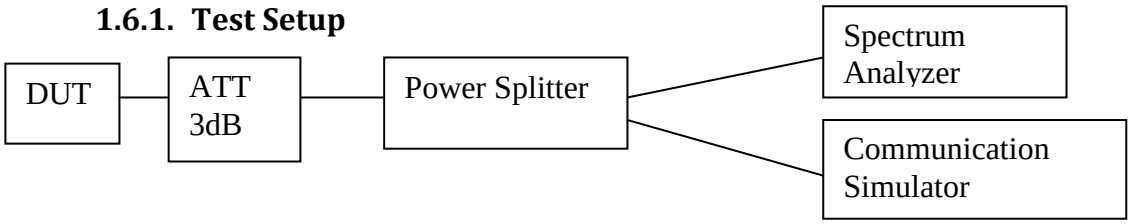
1. The Conducted RF Output Power for QPSK and 16QAM, measured value of QPSK mode is higher than 16QAM mode. Therefore, only Conducted Spurious Emission and Radiated Emission had been tested under QPSK modes.
2. Band Edge was performed with 1 and full Resource Block at the lowest and highest operating frequency band.
3. The Equivalent Isotropically Radiated Power (EIRP) was performed based on worst case mode from Conducted RF Output Power in QPSK and 16QAM modulation.
4. Peak to Average and Occupied Bandwidth were performed with full Resource Block which is the worst case.
5. Frequency stability was performed with full Resource Block in QPSK modulation.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
Conducted RF Output Power	**25°C, 50% RH**	**3.7V DC**	**ckchan**
Peak-to-Average Power Ratio	**25°C, 50% RH**	**3.7V DC**	**ckchan**
Occupied Bandwidth	**25°C, 50% RH**	**3.7V DC**	**ckchan**
Frequency Stability	**25°C, 50% RH**	**3.7V DC**	**ckchan**
Band Edge Conducted Spurious Emission	**25°C, 50% RH**	**3.7V DC**	**ckchan**
Conducted Spurious Emission	**25°C, 50% RH**	**3.7V DC**	**ckchan**
Radiated Spurious Emission	**25°C, 63.7% RH**	**3.7V DC**	**Nazrin/Qawiman**
Equivalent Isotropically Radiated Power (EIRP)	**25°C, 63.7% RH**	**3.7V DC**	**Nazrin/Qawiman**

1.6. Conducted RF Output Power

1.6.1. Test Setup



1. The DUT transmitter output port was connected to communication simulator with above setup.
2. Path loss for the measurement included.
3. Set DUT to transmit maximum power through communication simulator
4. All the measurement was done at low, mid, high channel for each band and different modulation.
5. Record the average power into the test report.

1.6.2. Conducted RF Output Power – LTE Band 2(1850-1910MHz)

Conducted Output Power (dBm)								
LTE Band/BW	RB Size	RB Offset	QPSK Modulation			16QAM Modulation		
			Low CH	Mid CH	High CH	Low CH	Mid CH	High CH
			18607	18900	19193	18607	18900	19193
			1850.7 MHz	1880.0 MHz	1909.3 MHz	1850.7 MHz	1880.0 MHz	1909.3 MHz
Band 2 / 1.4 MHz	**1**	**0**	23.126	23.288	22.698	21.911	**22.487**	21.849
	1	**3**	23.141	23.269	22.623	21.905	22.423	21.797
	1	**5**	23.124	**23.328**	22.702	21.955	22.485	21.842
	3	**0**	23.057	23.261	22.724	22.24	22.277	21.723
	3	**2**	23.026	23.202	22.735	22.209	22.226	21.689
	3	**3**	23.071	23.217	22.745	22.221	22.257	21.704
	6	**0**	22.088	22.299	21.783	21.208	21.148	20.821

Conducted Output Power (dBm)								
LTE Band/BW	RB Size	RB Offset	QPSK Modulation			16QAM Modulation		
			Low CH	Mid CH	High CH	Low CH	Mid CH	High CH
			18615	18900	19185	18615	18900	19185
			1851.5 MHz	1880.0 MHz	1908.5 MHz	1851.5 MHz	1880.0 MHz	1908.5 MHz
Band 2 / 3MHz	**1**	**0**	23.245	23.297	22.765	21.924	22.084	21.878
	1	**7**	23.078	23.264	22.713	21.86	22.056	21.88
	1	**14**	23.08	**23.327**	22.825	21.893	**22.096**	21.928
	8	**0**	22.119	22.296	21.755	21.115	21.233	20.786
	8	**4**	22.046	22.313	21.733	21.071	21.219	20.766
	8	**7**	22.104	22.29	21.712	21.052	21.241	20.792
	15	**0**	22.112	22.336	21.747	21.088	21.27	20.8

Conducted Output Power (dBm)								
LTE Band/BW	RB Size	RB Offset	QPSK Modulation			16QAM Modulation		
			Low CH	Mid CH	High CH	Low CH	Mid CH	High CH
			18625	18900	19175	18625	18900	19175
			1852.5MHz	1880.0MHz	1907.5MHz	1852.5MHz	1880.0MHz	1907.5MHz
Band 2 / 5MHz	**1**	**0**	23.002	**23.364**	22.636	21.862	**22.245**	21.755
	1	**13**	22.968	23.171	22.671	21.772	22.144	21.8
	1	**25**	23.051	23.325	22.77	21.898	22.217	21.813
	12	**0**	22.079	22.321	21.71	21.053	21.205	20.773
	12	**6**	22.062	22.307	21.763	20.967	21.19	20.769
	12	**13**	22.142	22.283	21.741	21.143	21.241	20.809
	25	**0**	22.095	22.381	21.797	21.132	21.226	20.798

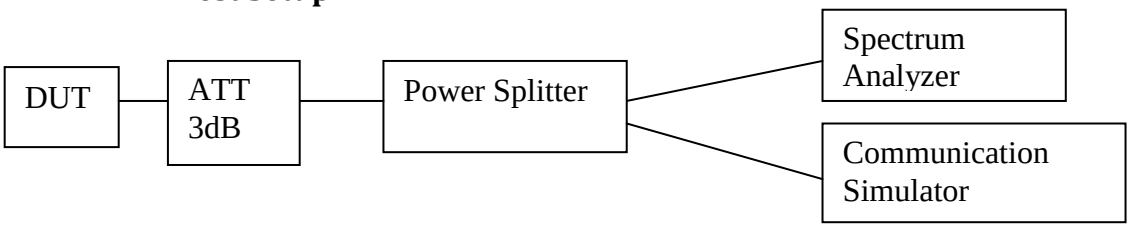
Conducted Output Power (dBm)								
LTE Band/BW	RB Size	RB Offset	QPSK Modulation			16QAM Modulation		
			Low CH	Mid CH	High CH	Low CH	Mid CH	High CH
			18650	18900	19150	18650	18900	19150
			1855.0MHz	1880.0MHz	1905.0MHz	1855.0MHz	1880.0MHz	1905.0MHz
Band 2 / 10MHz	**1**	**0**	23.095	**23.29**	22.605	21.927	**22.13**	21.757
	1	**25**	23.219	23.244	22.627	22.02	22.055	21.798
	1	**49**	23.272	23.16	22.763	21.989	22.006	21.906
	25	**0**	22.023	22.258	21.57	21.051	21.32	20.629
	25	**13**	22.218	22.291	21.693	21.184	21.362	20.675
	25	**25**	22.215	22.305	21.748	21.193	21.376	20.749
	50	**0**	22.165	22.292	21.694	21.185	21.269	20.709

Conducted Output Power (dBm)								
LTE Band/BW	RB Size	RB Offset	QPSK Modulation			16QAM Modulation		
			Low CH	Mid CH	High CH	Low CH	Mid CH	High CH
			18675	18900	19125	18675	18900	19125
			1857.5MHz	1880.0MHz	1902.5MHz	1857.5MHz	1880.0MHz	1902.5MHz
Band 2 / 15MHz	**1**	**0**	23.145	**23.364**	22.739	21.925	22.642	21.921
	1	**38**	23.266	23.339	22.636	22.04	**22.646**	21.833
	1	**74**	23.319	23.128	22.705	22.099	22.492	21.878
	36	**0**	22.166	22.251	21.682	21.132	21.146	20.747
	36	**19**	22.232	22.275	21.571	21.172	21.215	20.644
	36	**39**	22.258	22.224	21.636	21.205	21.142	20.678
	75	**0**	22.337	22.375	21.806	21.313	21.302	20.803

Conducted Output Power (dBm)								
LTE Band/BW	RB Size	RB Offset	QPSK Modulation			16QAM Modulation		
			Low CH	Mid CH	High CH	Low CH	Mid CH	High CH
			18700	18900	19100	18700	18900	19100
			1860.0MHz	1880.0MHz	1900.0MHz	1860.0MHz	1880.0MHz	1900.0MHz
Band 2 / 20MHz	**1**	**0**	23.072	23.251	23.011	22.258	**22.461**	22.004
	1	**49**	23.271	23.216	22.708	22.333	22.385	21.687
	1	**99**	**23.272**	22.928	22.833	22.401	22.104	21.806
	50	**0**	22.19	22.347	21.781	21.225	21.25	20.829
	50	**25**	22.269	22.284	21.665	21.277	21.203	20.717
	50	**50**	22.327	22.206	21.75	21.37	21.17	20.77
	100	**0**	22.311	22.285	21.799	21.353	21.267	20.86

1.7. Peak-to-Average Power Ratio

1.7.1. Test Setup



1. The DUT transmitter output port was connected to communication simulator with above setup.
2. Path loss for the measurement included.
3. Set DUT to transmit maximum power through communication simulator
4. Set the CCDF (Complementary Cumulative Distribution Function) option in the spectrum analyzer.
5. Spectrum Analyzer setting, RBW = 20MHz.
6. Recorded the maximum PAR level associated with a probability of 0.1% as Peak to Average Ratio.
7. All the measurement was done at low, mid, high channel for each band and different modulation.

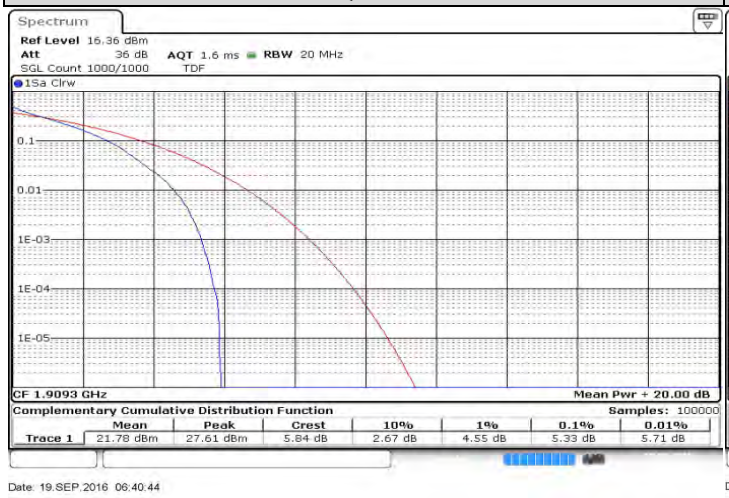
1.7.2. Test Limit

In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

1.7.3. Peak-to-Average Power Ratio – LTE Band 2(1850-1910MHz)

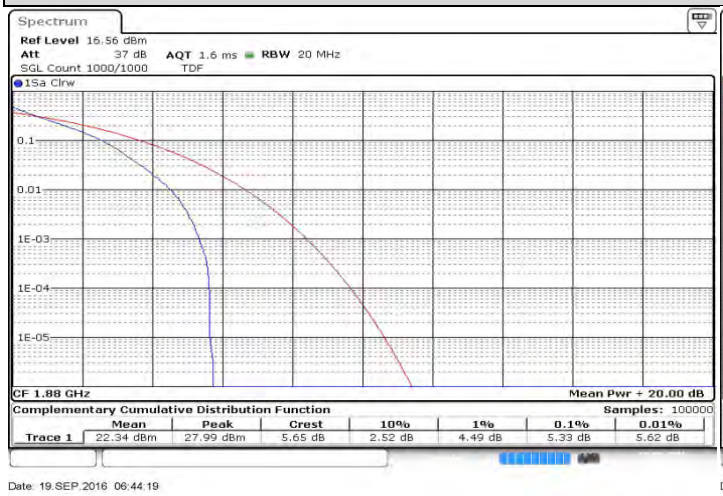
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	Peak To Average (dB)	
			QPSK Modulation	16QAM Modulation
Band 2/1.4MHz/6/0	Low CH 18607	1850.7 MHz	4.696	5.652
	Mid CH 18900	1880.0 MHz	5.188	**6.261**
	High CH 19193	1909.3 MHz	**5.333**	6.116

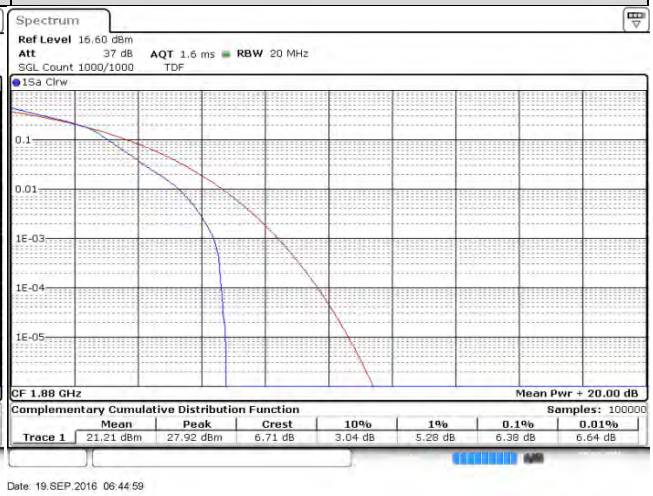
QPSK



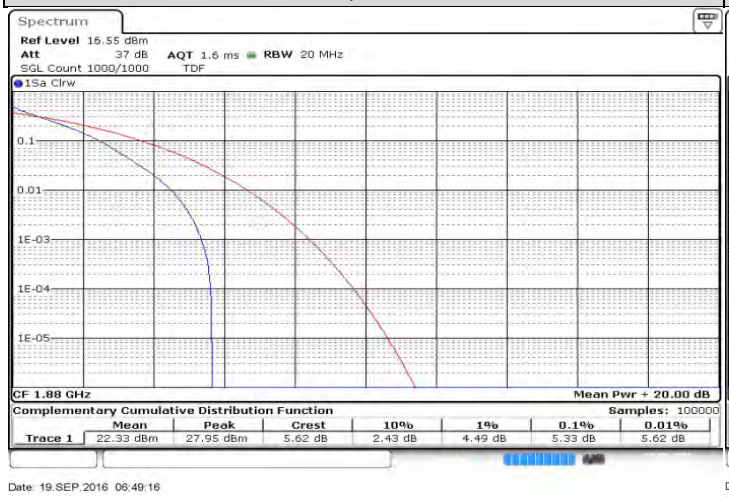
16QAM

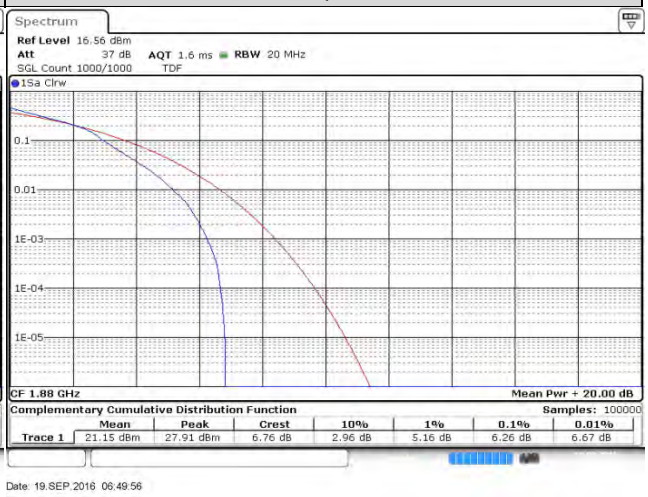
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	Peak To Average (dB)	
			QPSK Modulation	16QAM Modulation
Band 2/3MHz/15/0	Low CH 18615	1851.5 MHz	4.667	5.768
	Mid CH 18900	1880.0 MHz	**5.333**	**6.377**
	High CH 19185	1908.5 MHz	5.188	6.174
QPSK			16QAM	





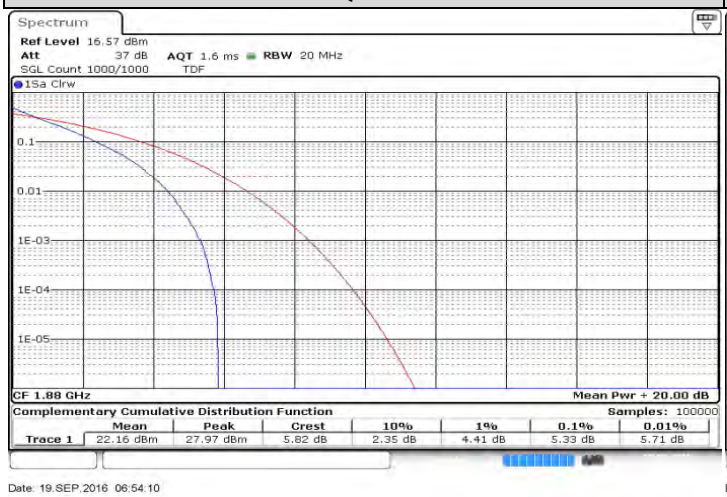
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	Peak To Average (dB)	
			QPSK Modulation	16QAM Modulation
Band 2 / 5MHz/25/0	Low CH 18625	1852.5 MHz	4.783	5.826
	Mid CH 18900	1880.0 MHz	**5.333**	**6.261**
	High CH 19175	1907.5 MHz	5.275	6.116
QPSK			16QAM	





LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	Peak To Average (dB)	
			QPSK Modulation	16QAM Modulation
Band 2 / 10MHz/50/0	Low CH 18650	1855.0 MHz	5.13	6.116
	Mid CH 18900	1880.0 MHz	**5.333**	**6.174**
	High CH 19150	1905.0 MHz	5.246	6.145

QPSK



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16QAM

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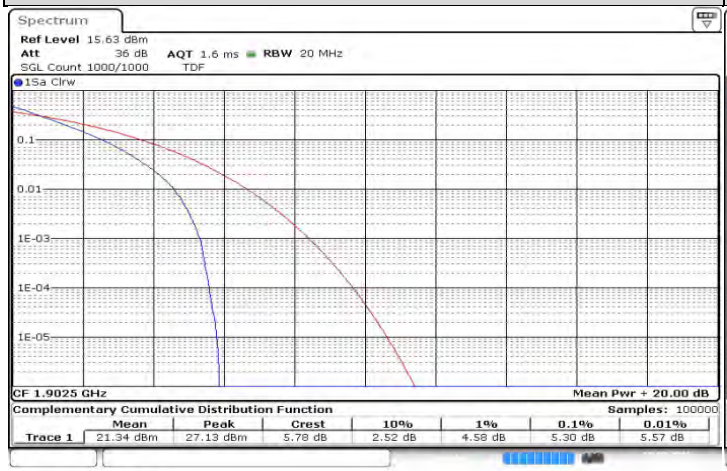
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	Peak To Average (dB)	
			QPSK Modulation	16QAM Modulation
Band 2 / 15MHz/75/0	Low CH 18675	1857.5 MHz	5.072	6
	Mid CH 18900	1880.0 MHz	5.188	6.058
	High CH 19125	1902.5 MHz	**5.304**	**6.058**

QPSK



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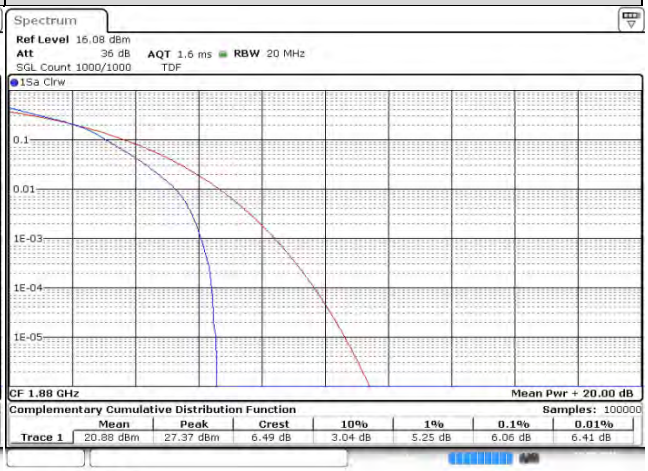
16QAM



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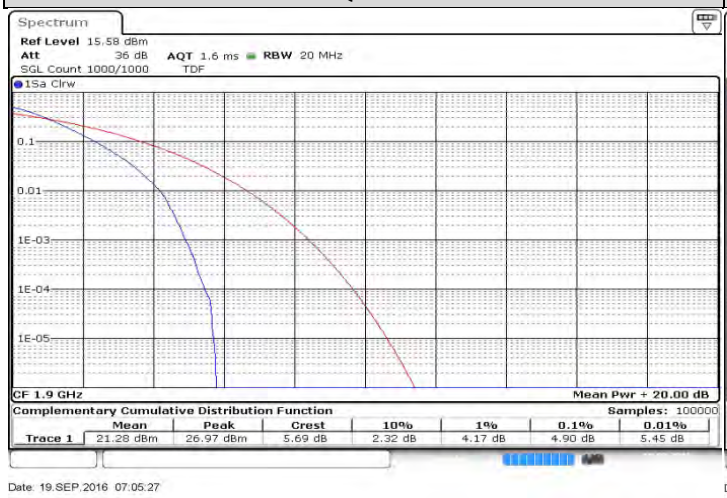
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	Peak To Average (dB)	
			QPSK Modulation	16QAM Modulation
Band 2 / 20MHz/100/0	Low CH 18700	1860.0 MHz	4.754	5.826
	Mid CH 18900	1880.0 MHz	4.841	5.884
	High CH 19100	1900.0 MHz	**4.899**	**5.942**
QPSK			16QAM	



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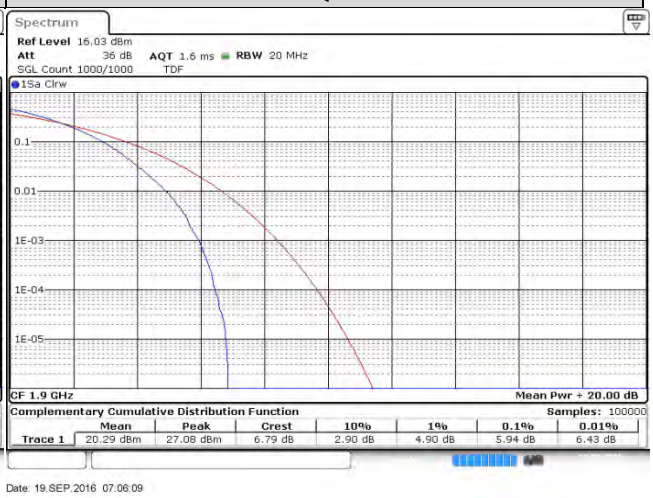
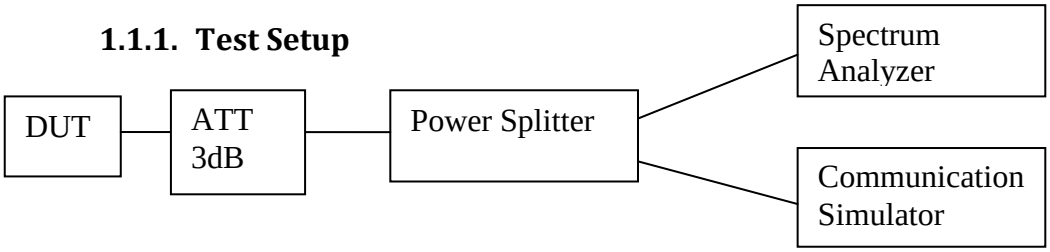


Date: 19.SEP.2016 07:06:09

1.1. Occupied Bandwidth

1.1.1. Test Setup



1) The DUT transmitter output port was connected to communication simulator with above setup.
2) Path loss for the measurement included.
3) For LTE measurement, set DUT to transmit maximum power & full RB size through communication simulator.
4) For LTE measurement, set DUT to transmit maximum power through communication simulator.
5) Spectrum Analyzer setting, RBW is 1% of OBW and VBW is 3 times of RBW.
6) Measure & record -26dBc and 99% occupied bandwidth (BW).
7) All the measurement was done at low, mid, high channel for each band and different modulation.

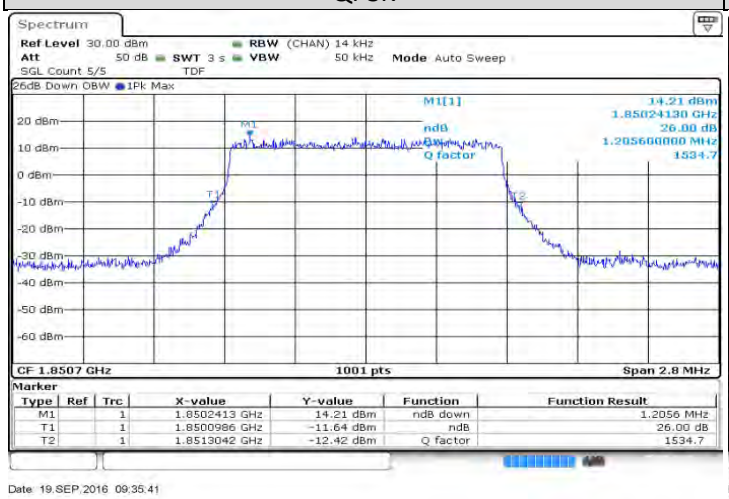
1.1.2. Test Limit

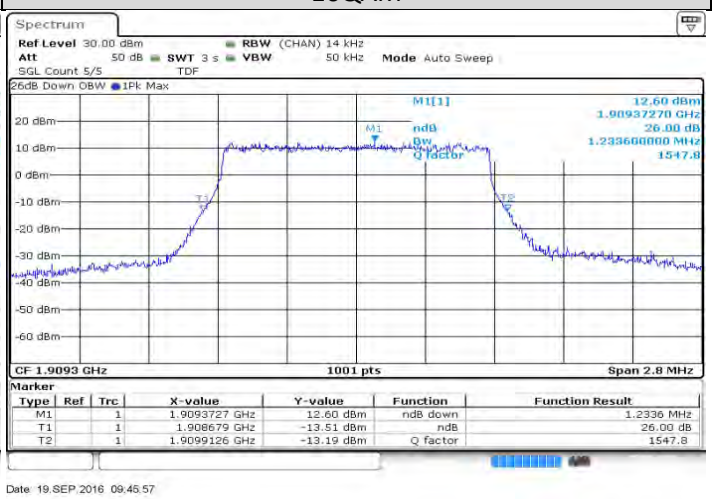
The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

1.1.3. Occupied Bandwidth – LTE Band 2 (1850 -1910 MHz)

LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	-26 dBc Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2/1.4MHz/6/0	Low CH 18607	1850.7 MHz	**1.206**	1.197
	Mid CH 18900	1880.0 MHz	1.206	1.189
	High CH 19193	1909.3 MHz	1.2	**1.234**

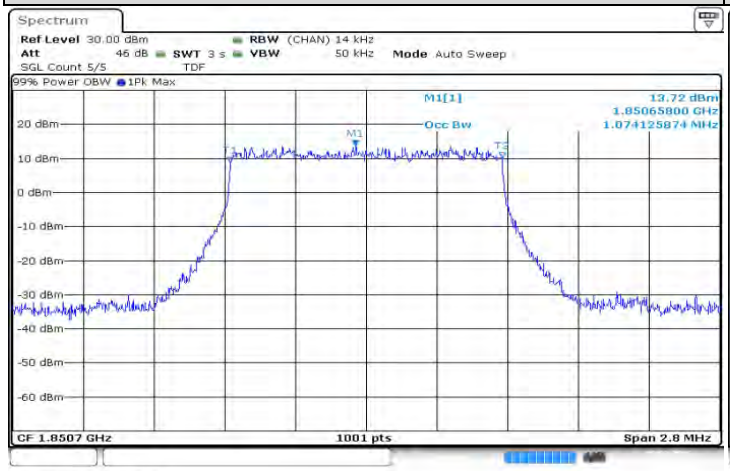
Spectrum Plot of Worst Value	
-26 dBc Bandwidth	
QPSK	16QAM





LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	99% Occupied Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2/1.4MHz/6/0	Low CH 18607	1850.7 MHz	**1.074**	**1.074**
	Mid CH 18900	1880.0 MHz	1.074	1.071
	High CH 19193	1909.3 MHz	1.074	1.074

Spectrum Plot of Worst Value	
99% Occupied Bandwidth	
QPSK	16QAM



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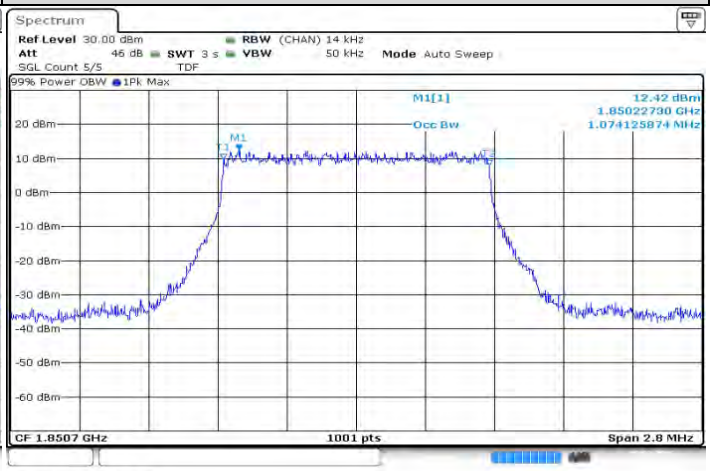

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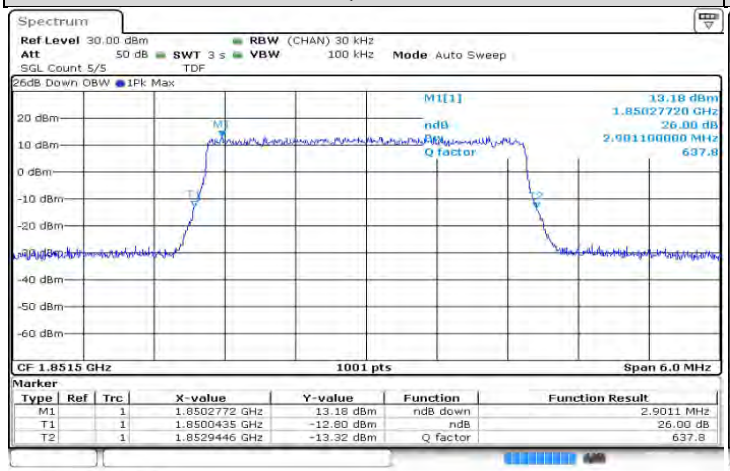
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	-26 dBc Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2/3MHz/15/0	Low CH 18615	1851.5 MHz	**2.901**	**2.901**
	Mid CH 18900	1880.0 MHz	2.877	2.865
	High CH 19185	1908.5 MHz	2.871	2.895

Spectrum Plot of Worst Value	
-26 dBc Bandwidth	
QPSK	16QAM



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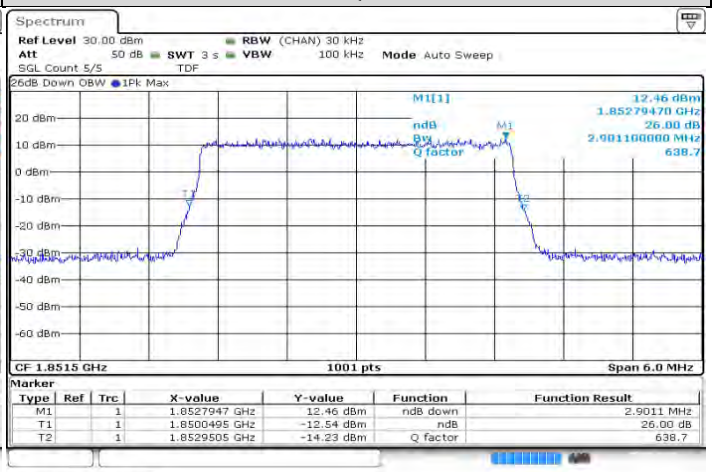
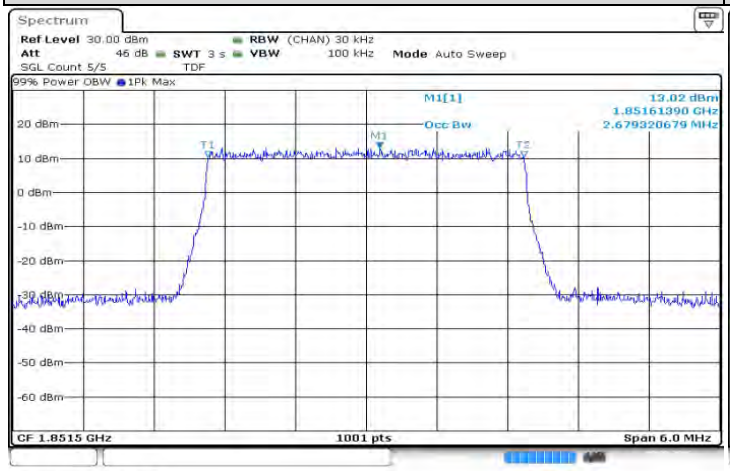


Date: 19.SEP.2016 09:50:22

LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	99% Occupied Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2/3MHz/15/0	Low CH 18615	1851.5 MHz	**2.679**	2.673
	Mid CH 18900	1880.0 MHz	2.679	**2.679**
	High CH 19185	1908.5 MHz	2.673	2.673

Spectrum Plot of Worst Value	
99% Occupied Bandwidth	
QPSK	16QAM



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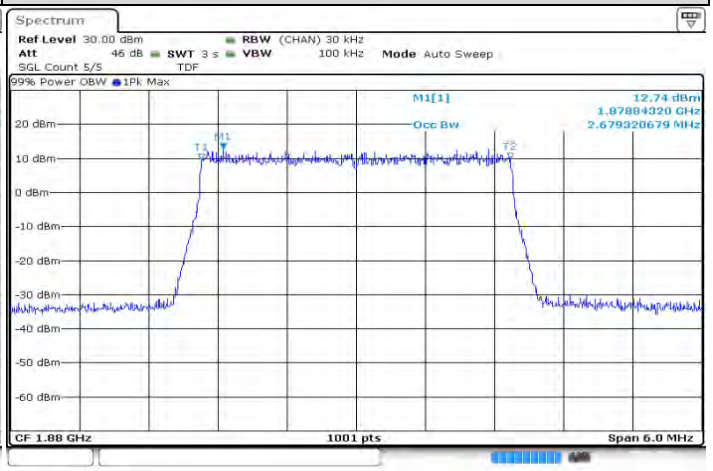
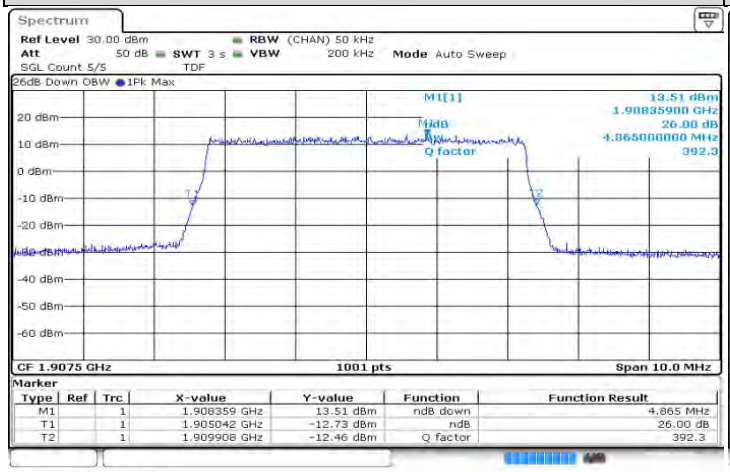


Date: 19.SEP.2016 09:54:02

LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	-26 dBc Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2 / 5MHz/25/0	Low CH 18625	1852.5 MHz	4.765	4.805
	Mid CH 18900	1880.0 MHz	4.835	**4.845**
	High CH 19175	1907.5 MHz	**4.865**	4.845

Spectrum Plot of Worst Value	
-26 dBc Bandwidth	
QPSK	16QAM



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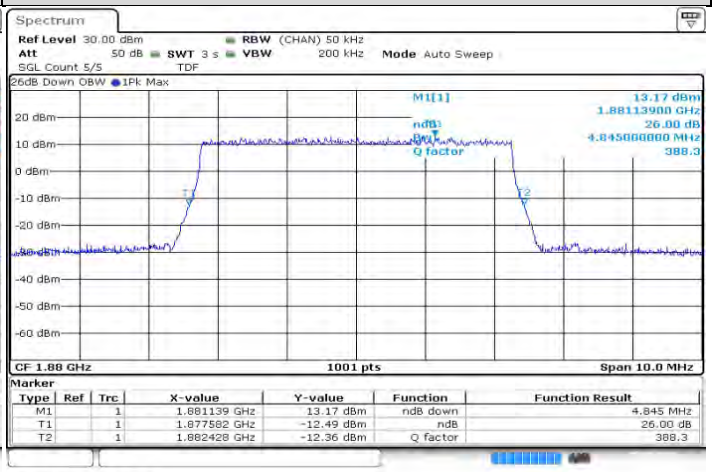
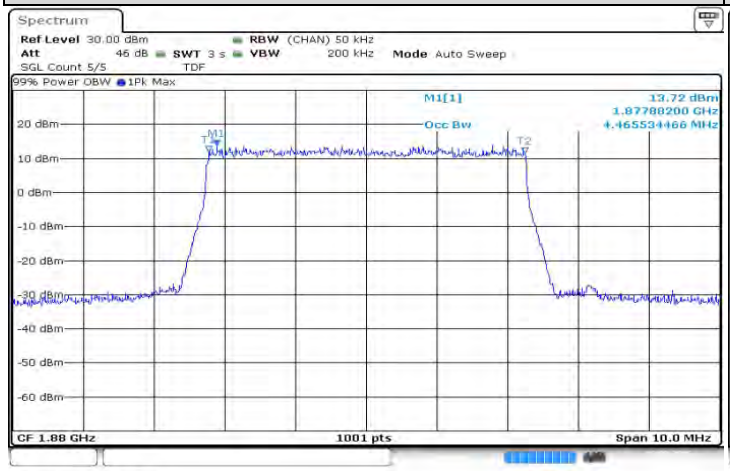


Date: 19.SEP.2016 10:39:20

LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	99% Occupied Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2 / 5MHz/25/0	Low CH 18625	1852.5 MHz	4.456	4.456
	Mid CH 18900	1880.0 MHz	**4.466**	**4.466**
	High CH 19175	1907.5 MHz	4.466	4.466

Spectrum Plot of Worst Value	
99% Occupied Bandwidth	
QPSK	16QAM



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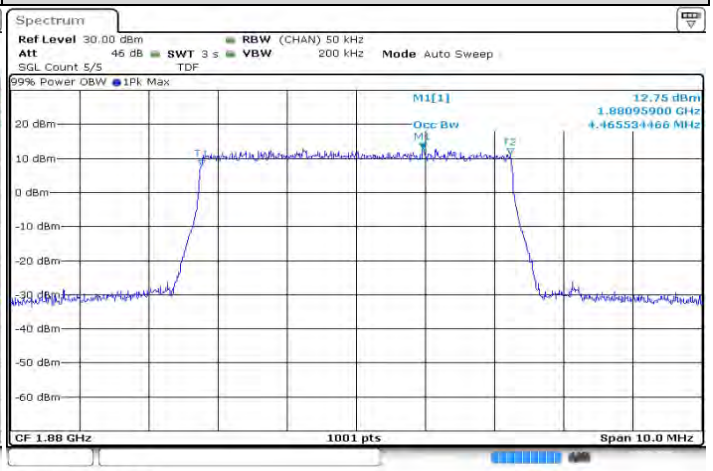

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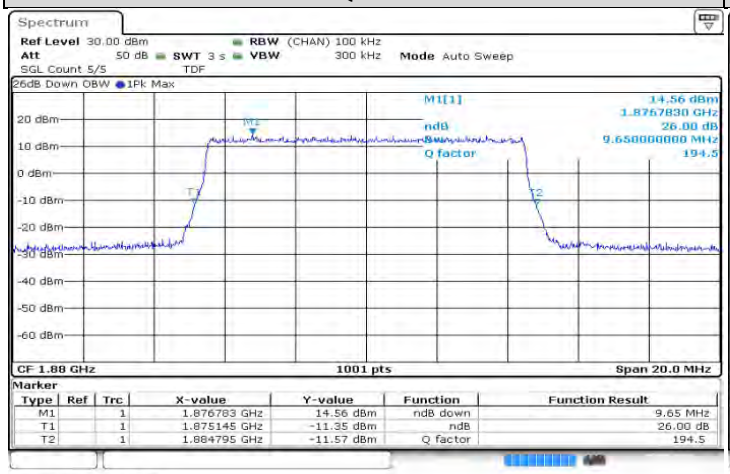
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	-26 dBc Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2 / 10MHz/50/0	Low CH 18650	1855.0 MHz	9.57	**9.57**
	Mid CH 18900	1880.0 MHz	**9.65**	9.55
	High CH 19150	1905.0 MHz	9.55	9.55

Spectrum Plot of Worst Value	
-26 dBc Bandwidth	
QPSK	16QAM



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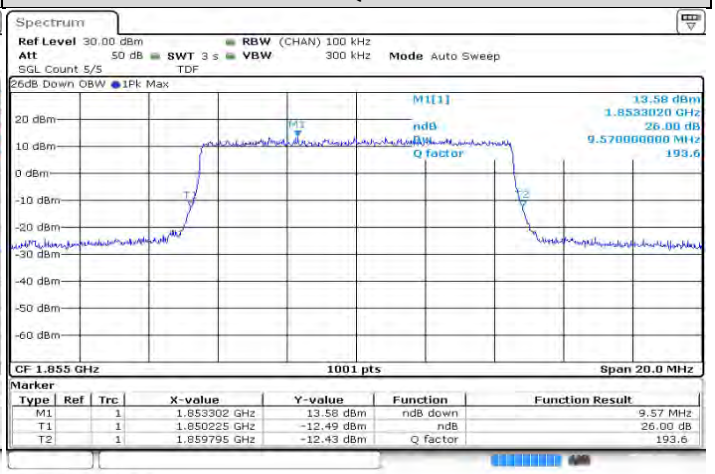
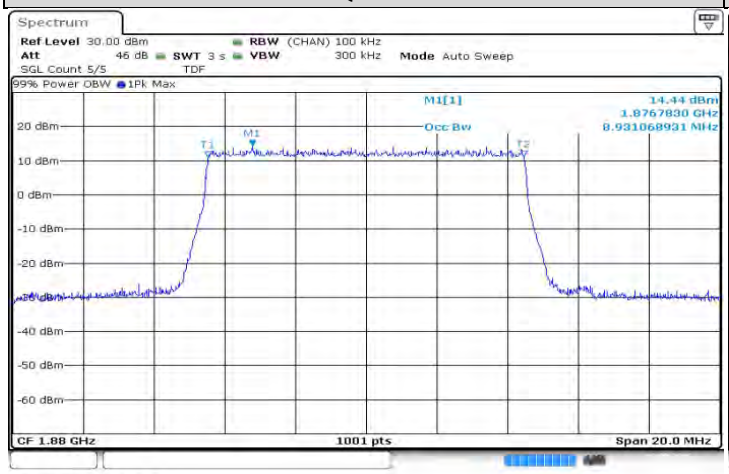


Date: 19.SEP.2016 10:48:11

LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	99% Occupied Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2 / 10MHz/50/0	Low CH 18650	1855.0 MHz	8.911	**8.931**
	Mid CH 18900	1880.0 MHz	**8.931**	8.911
	High CH 19150	1905.0 MHz	8.931	8.931

Spectrum Plot of Worst Value	
99% Occupied Bandwidth	
QPSK	16QAM



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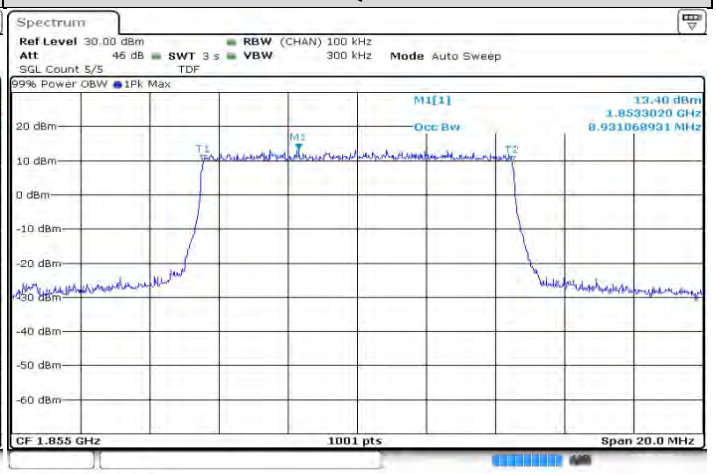

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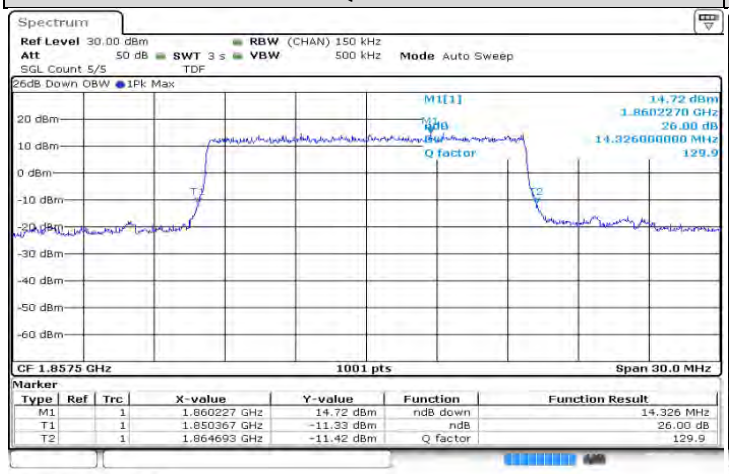
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	-26 dBc Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2 / 15MHz/75/0	Low CH 18675	1857.5 MHz	**14.326**	**14.236**
	Mid CH 18900	1880.0 MHz	14.236	14.146
	High CH 19125	1902.5 MHz	14.326	14.176

Spectrum Plot of Worst Value	
-26 dBc Bandwidth	
QPSK	16QAM



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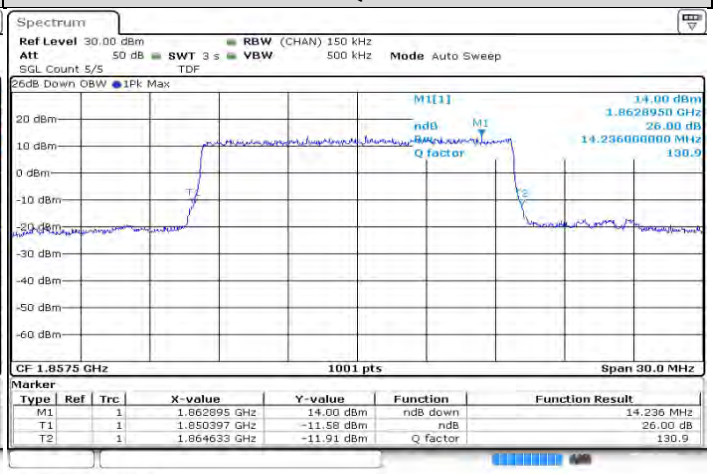

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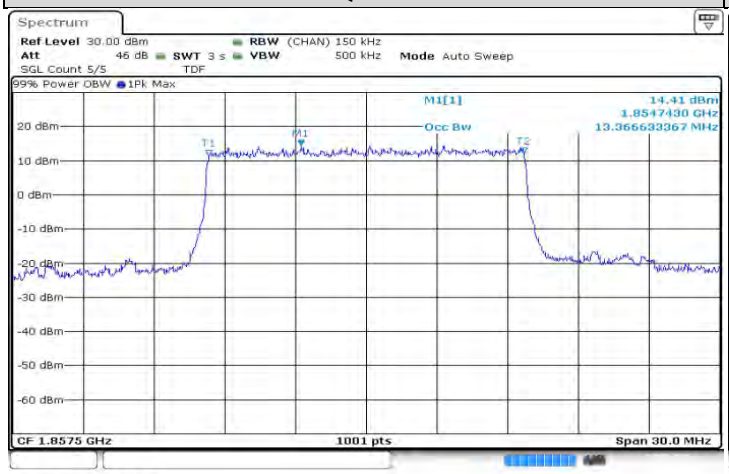
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	99% Occupied Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2 / 15MHz/75/0	Low CH 18675	1857.5 MHz	**13.367**	**13.367**
	Mid CH 18900	1880.0 MHz	13.367	13.367
	High CH 19125	1902.5 MHz	13.367	13.367

Spectrum Plot of Worst Value

99% Occupied Bandwidth

QPSK



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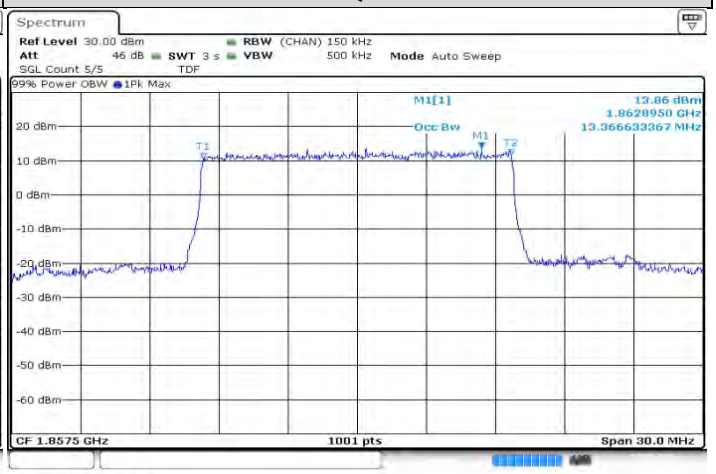
16QAM



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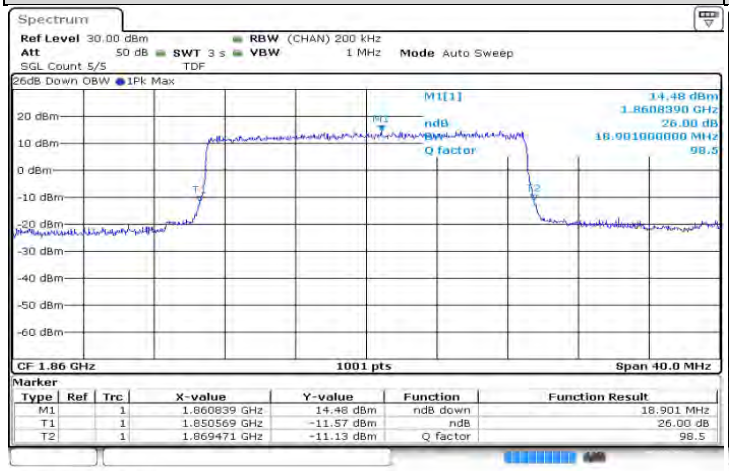
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	-26 dBc Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2 / 20MHz/100/0	Low CH 18700	1860.0 MHz	**18.901**	18.901
	Mid CH 18900	1880.0 MHz	18.861	18.901
	High CH 19100	1900.0 MHz	18.901	**18.941**

Spectrum Plot of Worst Value

-26 dBc Bandwidth

QPSK



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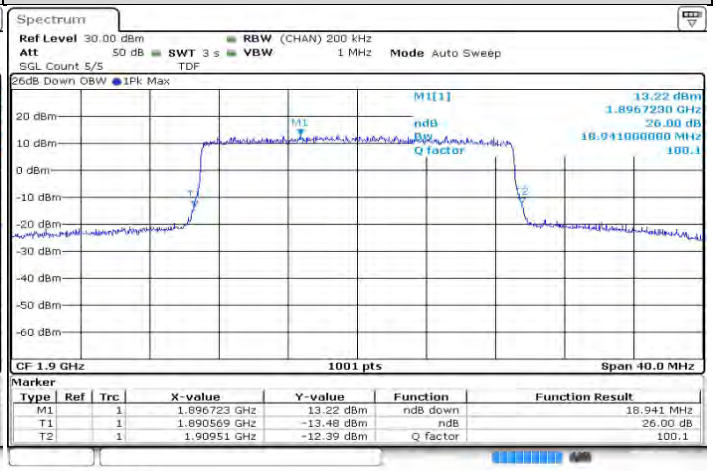
16QAM



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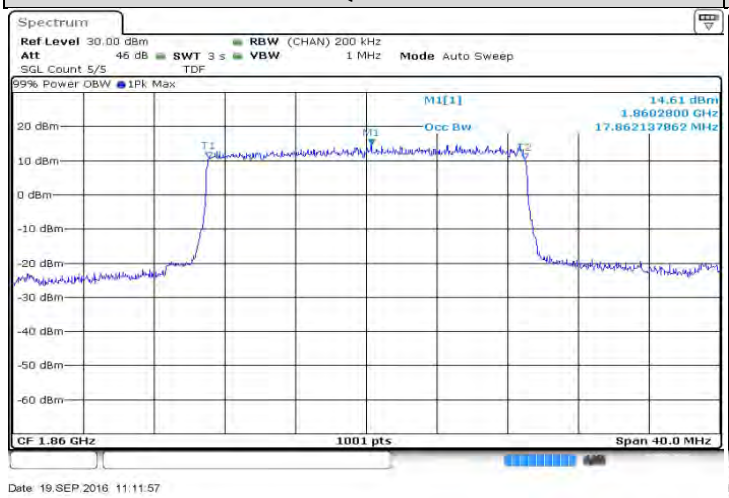
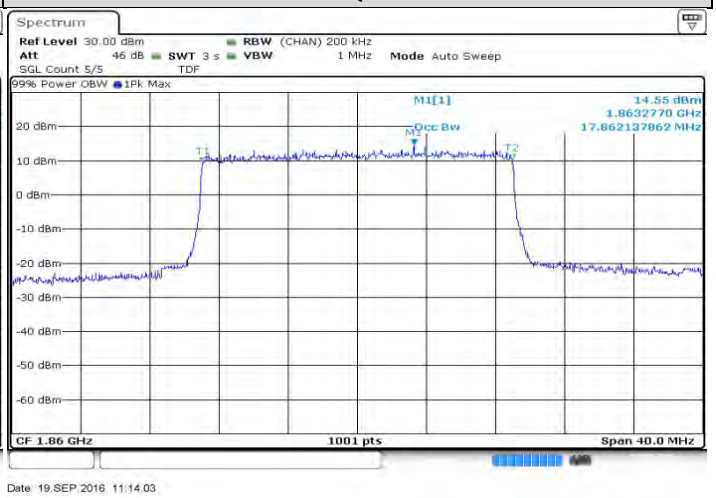
LTE Band/ BW/ RB Size/ RB Offset	Channel Number	Tx Frequency (MHz)	99% Occupied Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 2 / 20MHz/100/0	Low CH 18700	1860.0 MHz	**17.862**	**17.862**
	Mid CH 18900	1880.0 MHz	17.822	17.822
	High CH 19100	1900.0 MHz	17.822	17.822

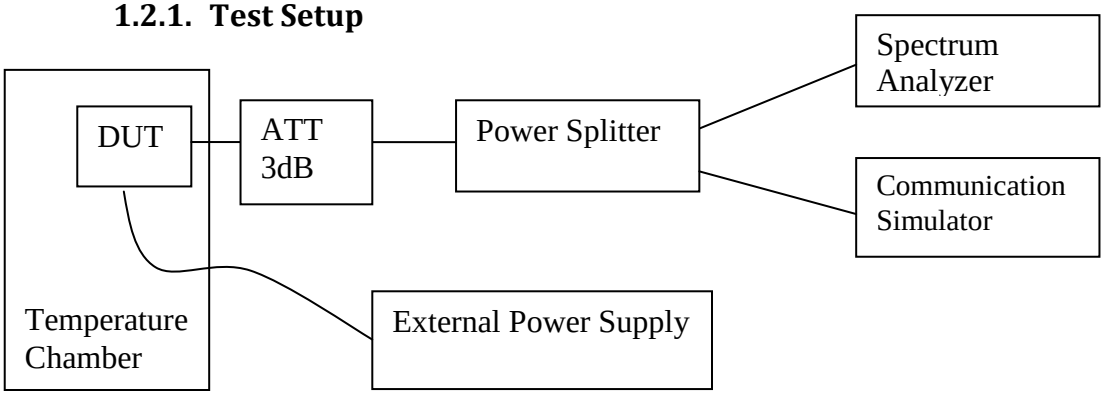
Spectrum Plot of Worst Value	
99% Occupied Bandwidth	
QPSK	16QAM





1.2. Frequency Stability

1.2.1. Test Setup



1) The DUT is placed in the temperature chamber and DUT is power up by external power supply to control the DC input voltage.
2) The temperature chamber could control the temperature and humidity and external power supply could control the test voltage range from minimum to maximum operating voltage.
3) Measured frequency error from the communication simulator by vary below step :
   i. Vary temperature of the temperature chamber from -10 ~ 60 deg C (10 deg C / Step) and set external supply voltage constant at nominal voltage.
   ii. Vary external supply voltage from minimum to maximum operation voltage support by DUT and set temperature chamber constant at room temp.
4) All the measurement was done at mid channel for each band.

1.2.2. Test Limit

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

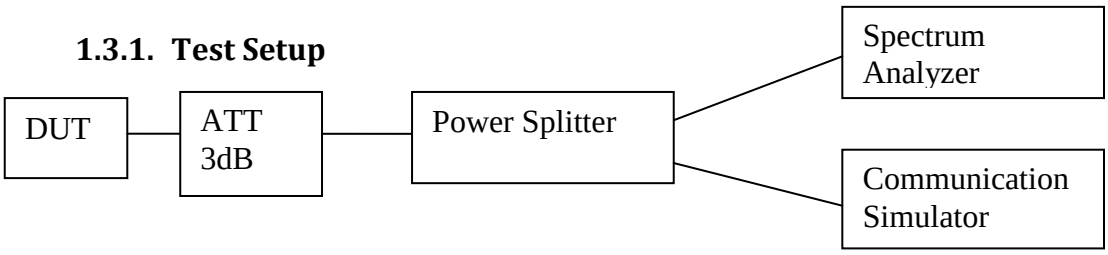
1.2.3. Frequency Stability – LTE Band 2 (1850 -1910 MHz)

LTE Band/ Modulation/ RB Size/ RB Offset	Frequency Error VS Temperature						
	Temp (Deg C)	Frequency Error (ppm)					
		1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz
Band 2 QPSK RB Size= 100% RB Offset = 0	**50**	0.004193	0.004109	0.00417	0.005182	0.003972	0.004231
	40	0.004596	-0.004048	0.004512	0.005052	0.004185	0.004231
	30	**0.004877**	0.004398	0.004619	0.005121	**0.005098**	0.004147
	20	0.004056	**0.005463**	0.004101	**0.005509**	0.004292	**0.006589**
	10	0.004489	0.00487	**0.004832**	0.004459	0.004588	-0.004307
	0	0.004505	0.003911	0.004664	0.004565	0.004177	0.005129
	-10	0.004497	0.004139	0.004505	0.004505	0.004193	0.004695
	-20	0.004139	0.004809	0.003728	0.004398	0.004101	0.006103
	-30	-0.003713	0.003668	0.003911	0.003706	0.004664	0.00385

LTE Band/ Modulation/ RB Size/ RB Offset	Frequency Error VS Voltage						
	Voltage (V)	Frequency Error (ppm)					
		1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz
Band 2 QPSK RB Size= 100% RB Offset = 0	**4.1**	**0.004839**	0.004893	**0.005988**	**0.005927**	0.004976	0.004748
	3.7	0.004231	0.004505	0.004969	0.004558	**0.005791**	0.004413
	3.5	0.004763	**0.005022**	0.004451	0.005106	0.005182	**0.005098**

1.3. Band Edge Conducted Spurious Emission

1.3.1. Test Setup



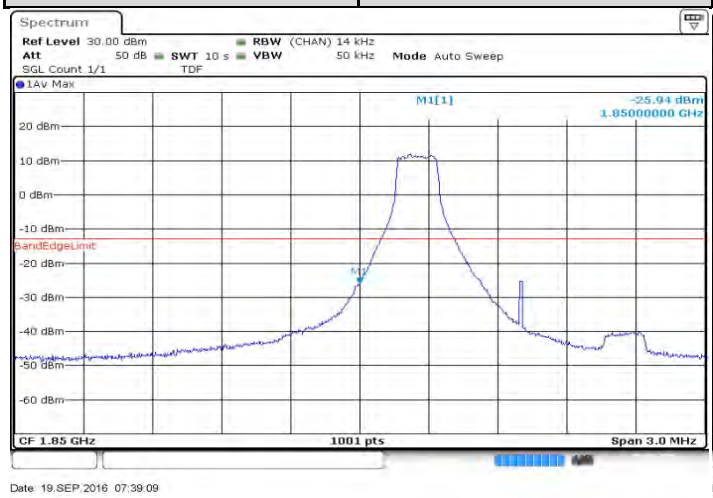
1) The DUT transmitter output port was connected to communication simulator with above setup.
2) Path loss for the measurement included.
3) Set DUT to transmit maximum power through communication simulator.
4) The band edges of lowest and highest channels with the highest RF powers were measured.
5) The center frequency of spectrum is the band edge frequency, span is 3MHz, RBW is 1~3% of OBW and VBW is at least 3 times of RBW.
6) Record the maximum trace plot into the test report.

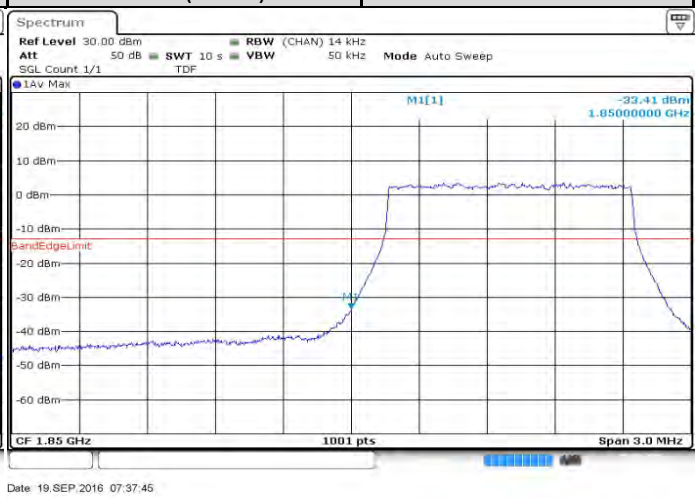
1.3.2. Test Limit

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 $\log_{10}$ (P) dB. 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.

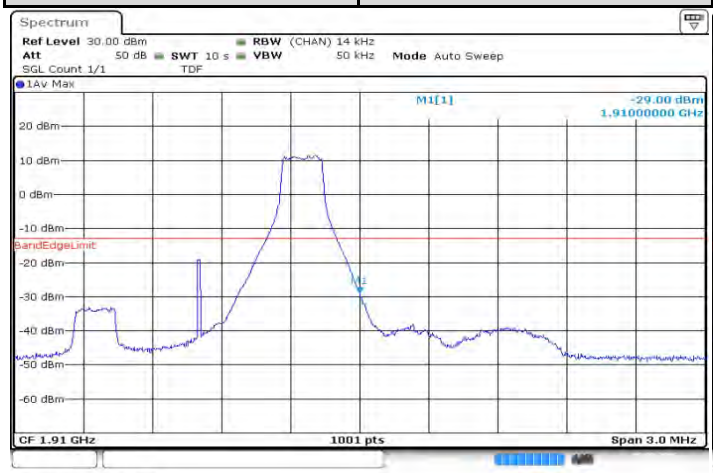
1.3.3. Band Edge Conducted Spurious Emission – LTE Band 2 (1850 -1910 MHz)

Band 2, 1.4MHz QPSK , Low Channel 18607			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0

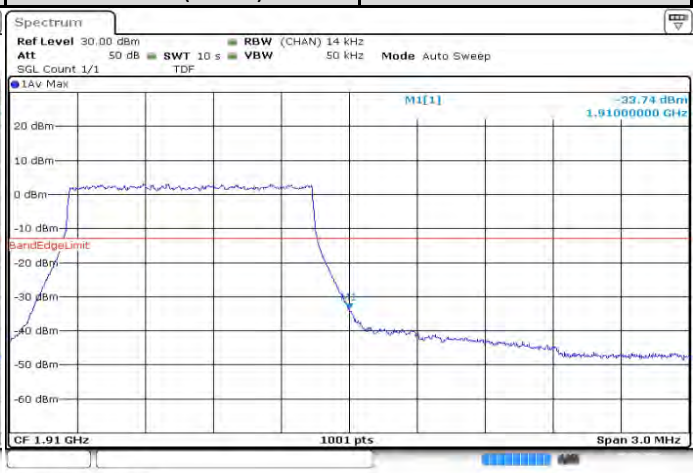




Band 2, 1.4MHz QPSK , High Channel 19193			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0

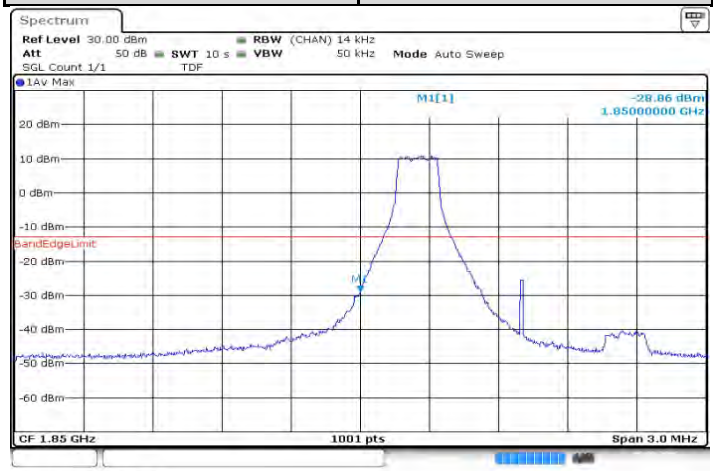


Date: 19.SEP.2016 07:40:04

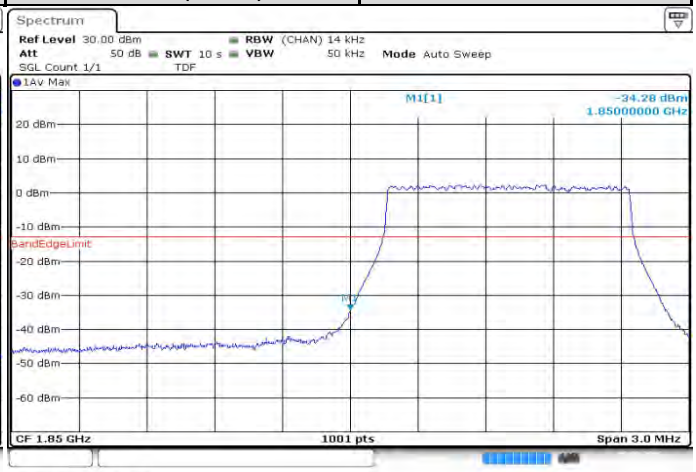


Date: 19.SEP.2016 07:38:27

Band 2, 1.4MHz 16-QAM , Low Channel 18607			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0

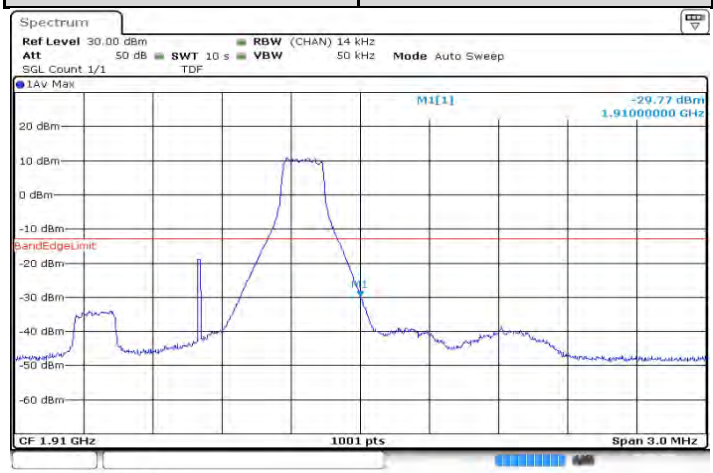


Date: 19.SEP.2016 07:42:58



Date: 19.SEP.2016 07:41:04

Band 2, 1.4MHz 16-QAM, High Channel 19193			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0



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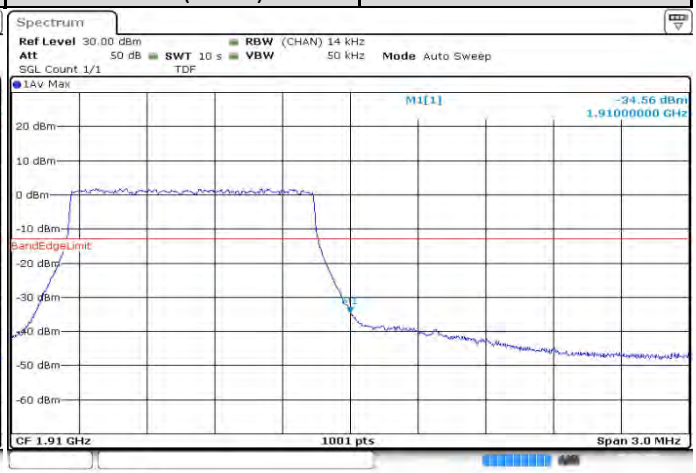
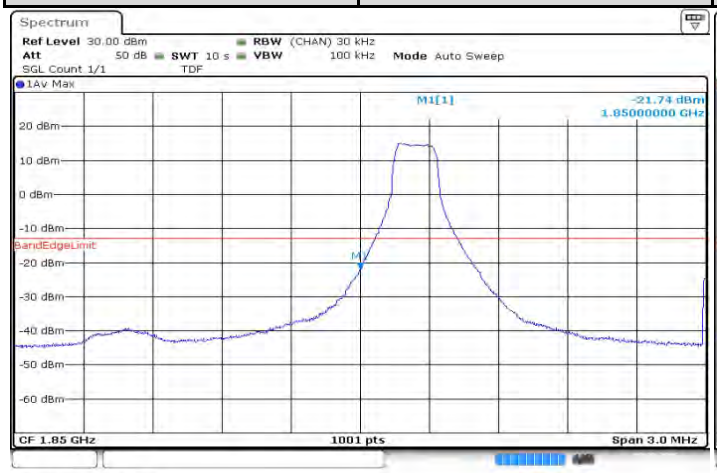
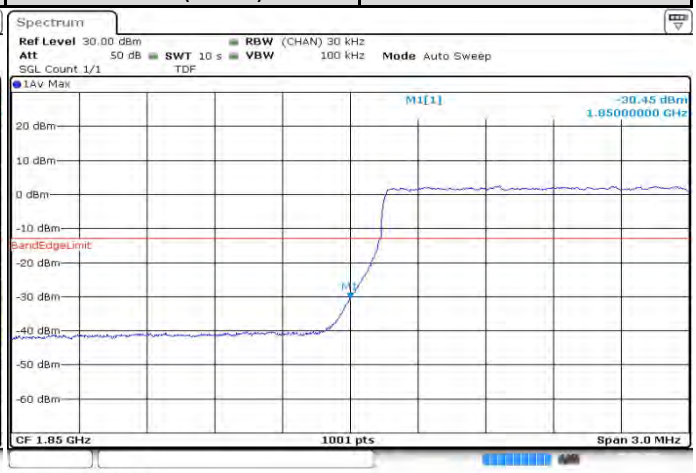


Date: 19.SEP.2016 07:42:02

Band 2, 3MHz QPSK, Low CH 18615			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0

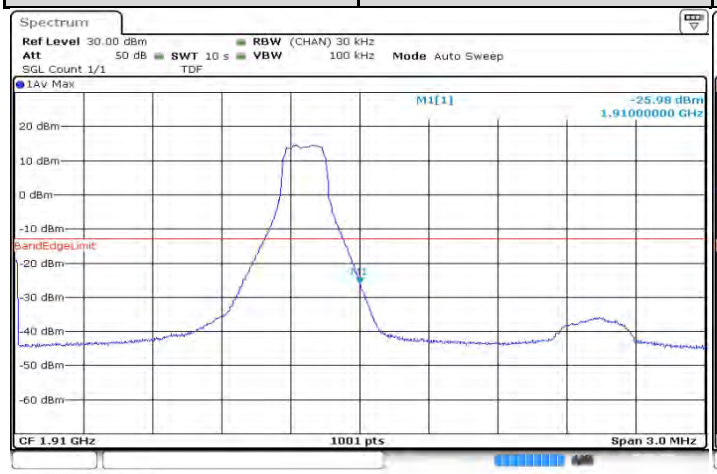


Date: 19.SEP.2016 07:46:57



Date: 19.SEP.2016 07:45:05

Band 2, 3MHz QPSK, High CH 19185			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0



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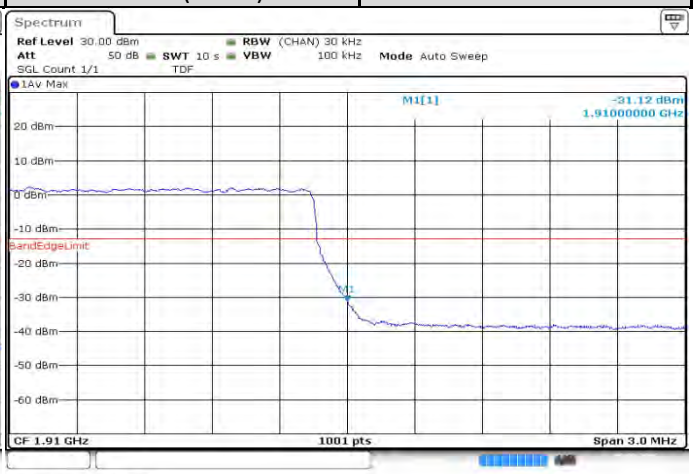
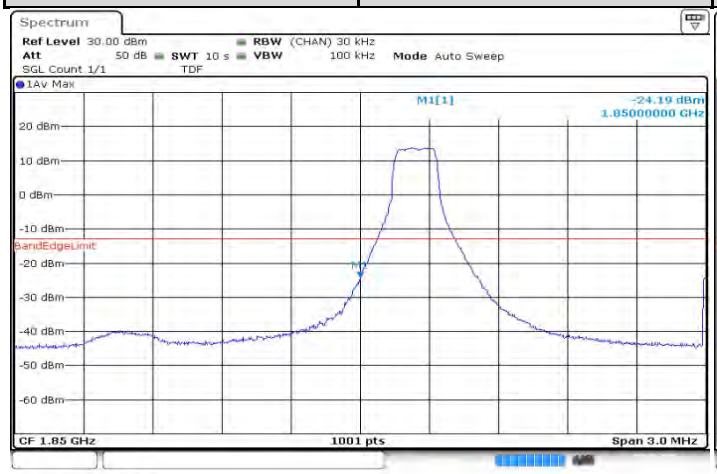
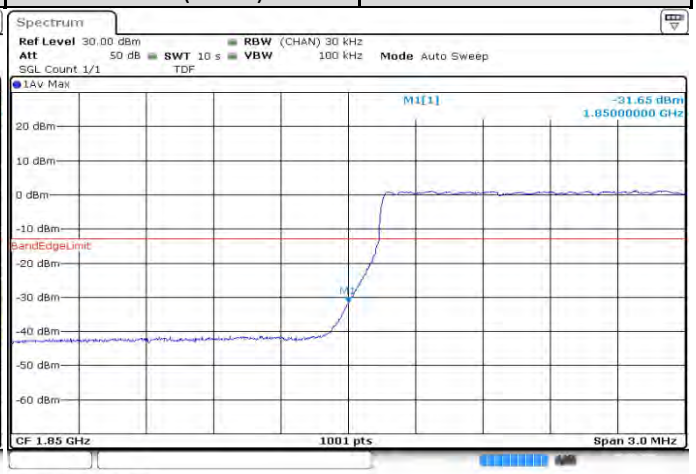


Date: 19.SEP.2016 07:46:01

Band 2, 3MHz 16-QAM, Low CH 18615			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0

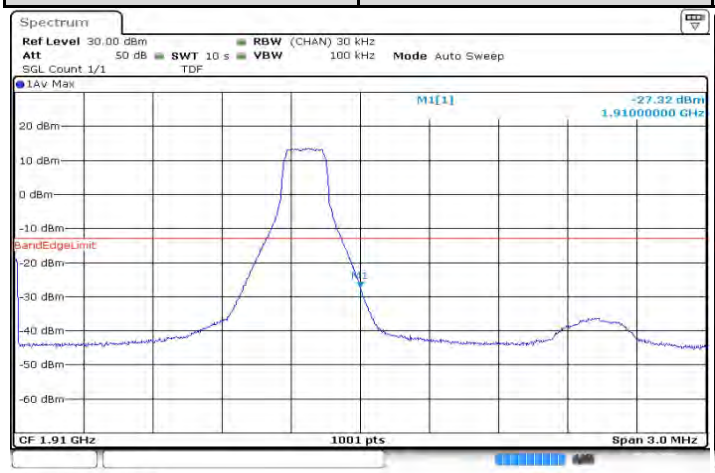


Date: 19.SEP.2016 07:50:43



Date: 19.SEP.2016 07:48:50

Band 2, 3MHz 16-QAM, High CH 19185			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0



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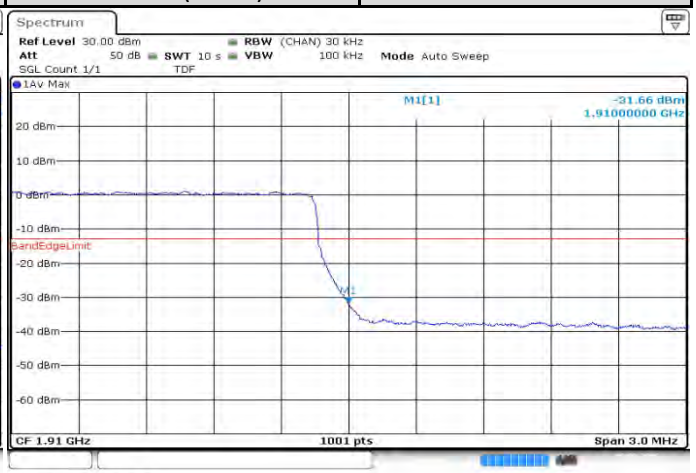
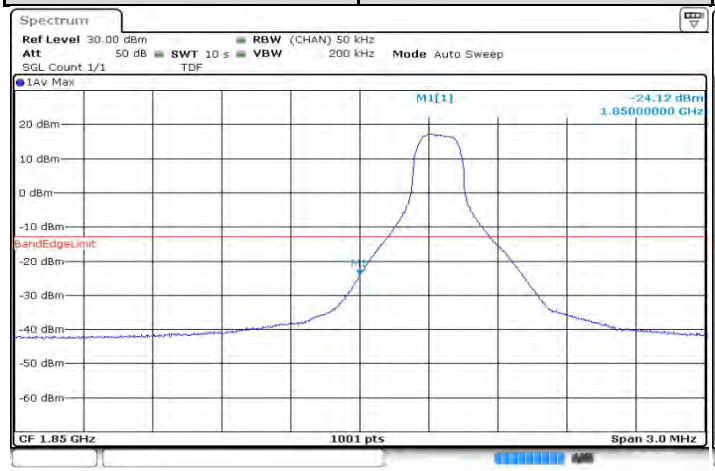


Date: 19.SEP.2016 07:49:46

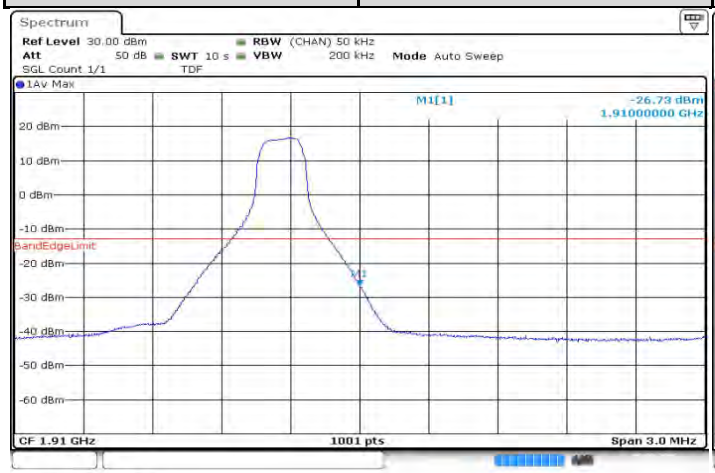
Band 2, 5MHz QPSK, Low CH 18625			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0



Date: 19.SEP.2016 07:55:16

Date: 19.SEP.2016 07:53:25

Band 2, 5MHz QPSK, High CH 19175			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0



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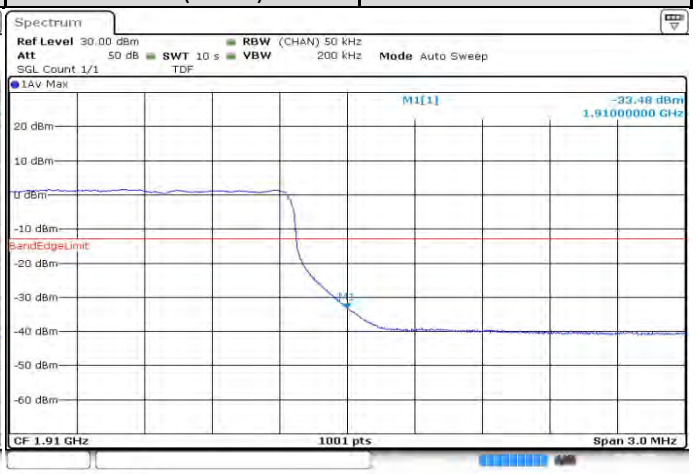
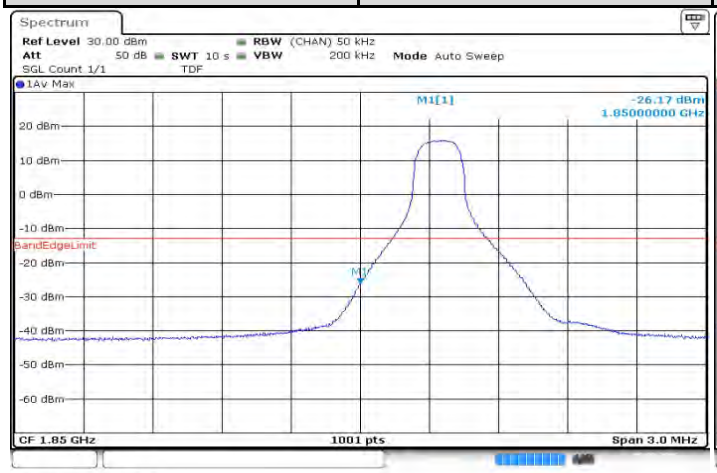


Date: 19.SEP.2016 07:54:20

Band 2, 5MHz 16-QAM, Low CH 18625			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0



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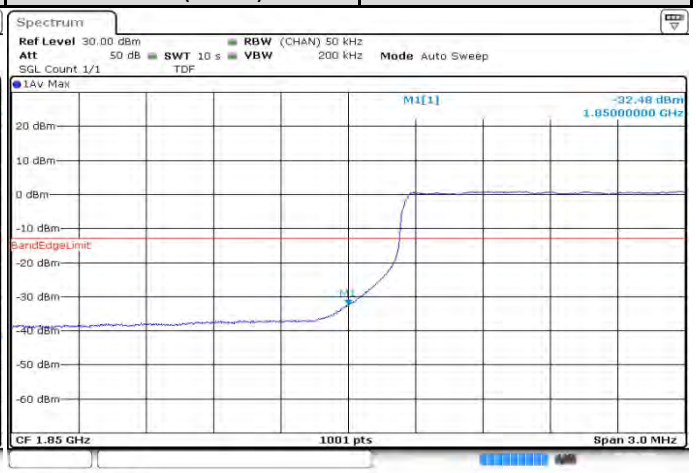
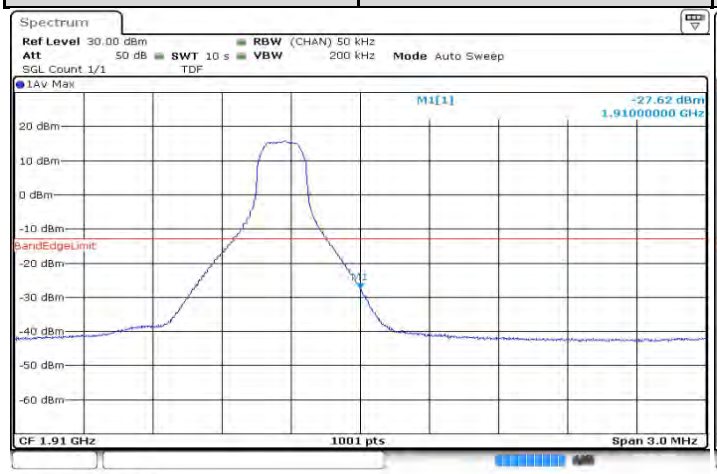


Date: 19.SEP.2016 07:56:53

Band 2, 5MHz 16-QAM, High CH 19175			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0



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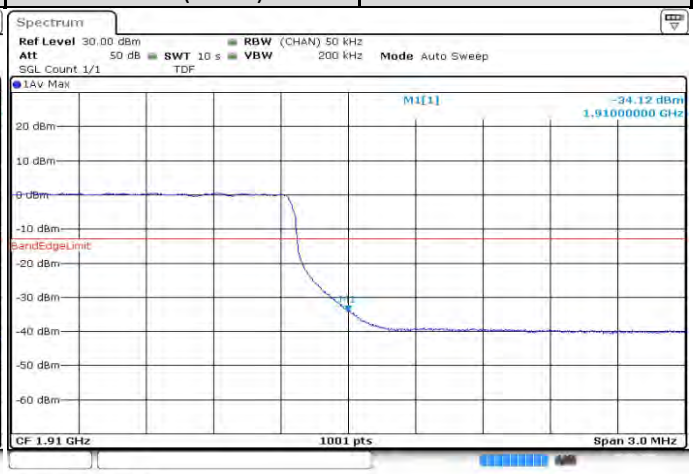
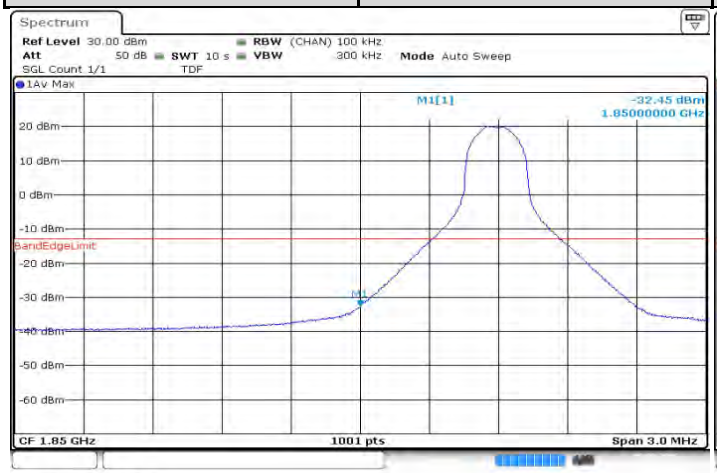


Date: 19.SEP.2016 07:57:48

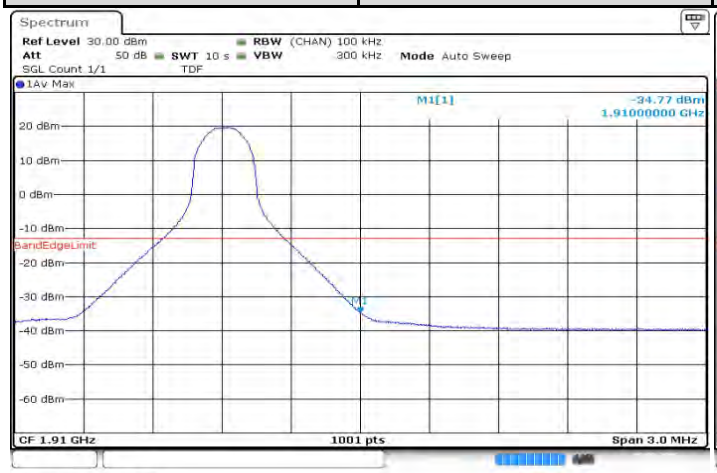
Band 2, 10MHz QPSK, Low CH 18650			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0



Date: 19.SEP.2016 08:03:19

Date: 19.SEP.2016 08:01:29

Band 2, 10MHz QPSK, High CH 19150			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0



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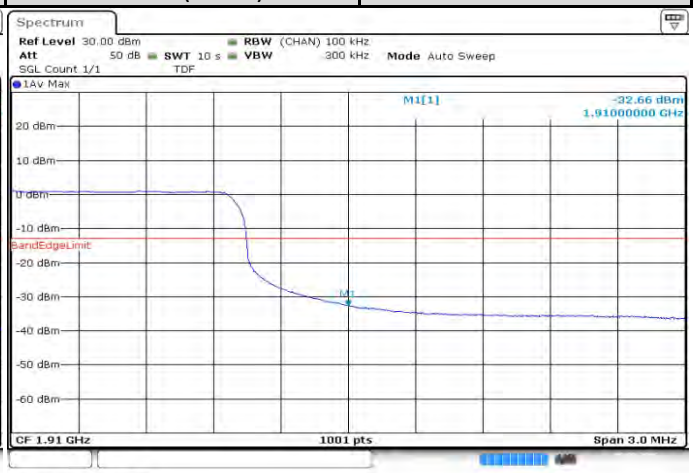
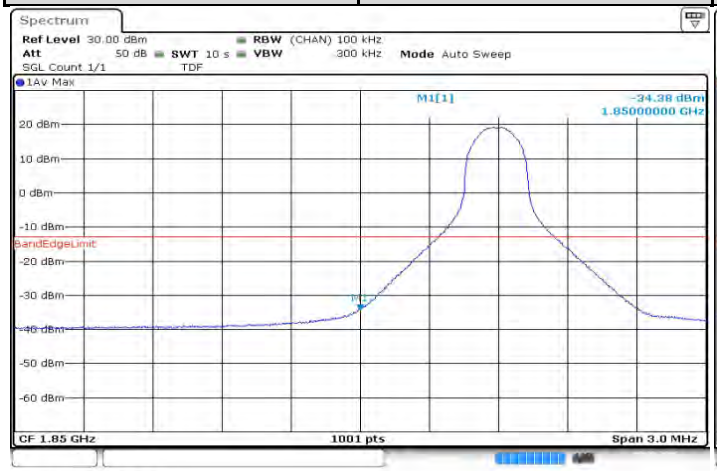


Date: 19.SEP.2016 08:02:23

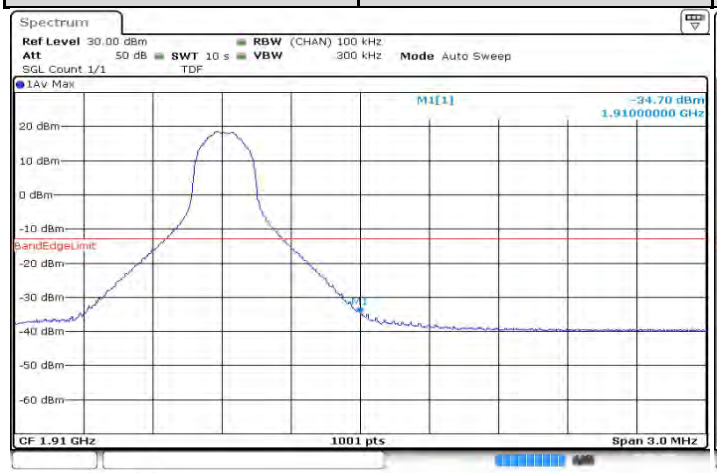
Band 2, 10MHz 16-QAM, Low CH 18650			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0



Date: 19.SEP.2016 08:06:50

Date: 19.SEP.2016 08:05:10

Band 2, 10MHz 16-QAM, High CH 19150			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0



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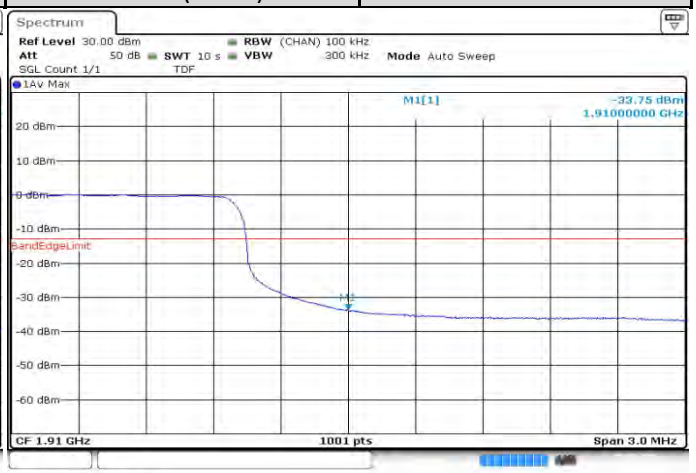
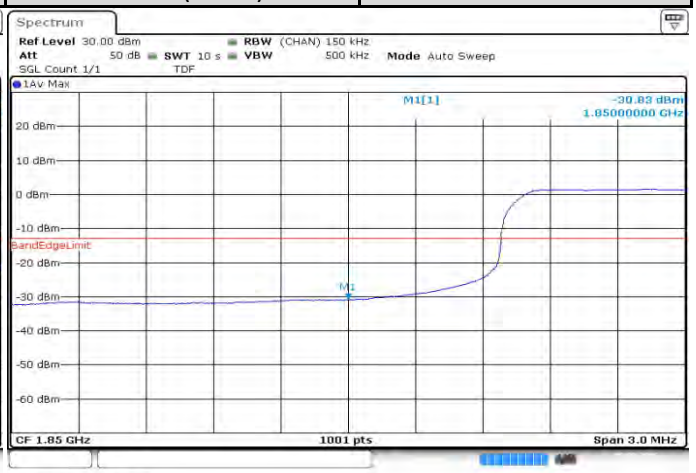


Date: 19.SEP.2016 08:05:53

Band 2, 15MHz QPSK, Low CH 18675			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0

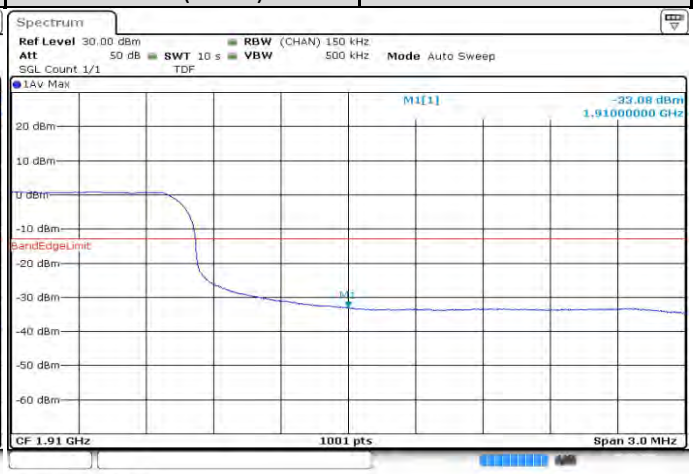
Date: 19.SEP.2016 08:11:25



Date: 19.SEP.2016 08:09:33

Band 2, 15MHz QPSK, High CH 19125			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0

Date: 19.SEP.2016 08:12:21



Date: 19.SEP.2016 08:10:28

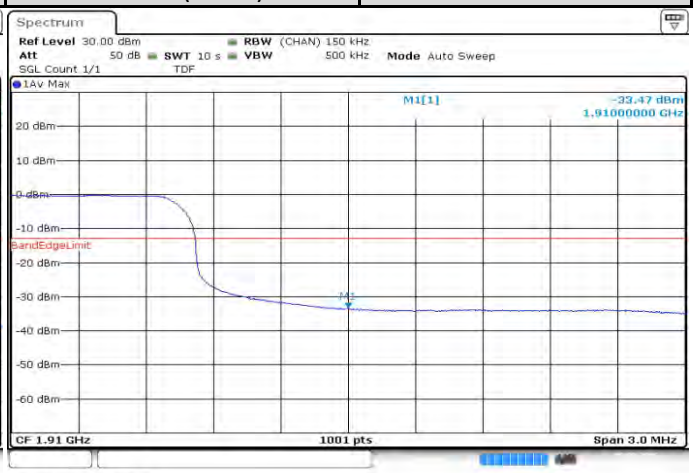
Band 2, 15MHz 16-QAM, Low CH 18675			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0

Date: 19.SEP.2016 08:15:10

Date: 19.SEP.2016 08:13:17

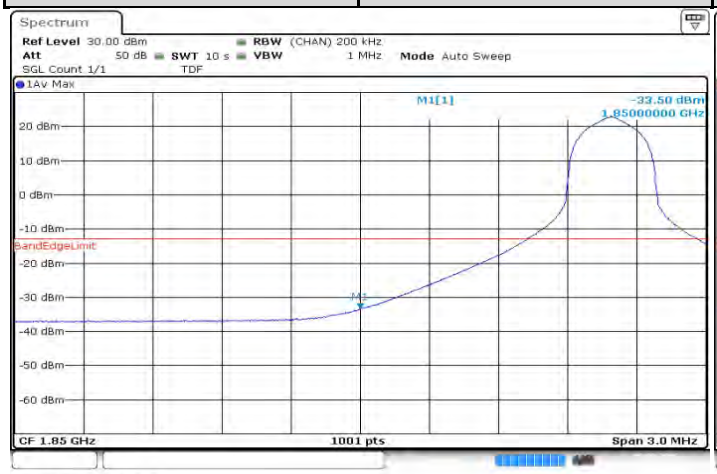
Band 2, 15MHz 16-QAM, High CH 19125			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0

Date: 19.SEP.2016 08:16:06

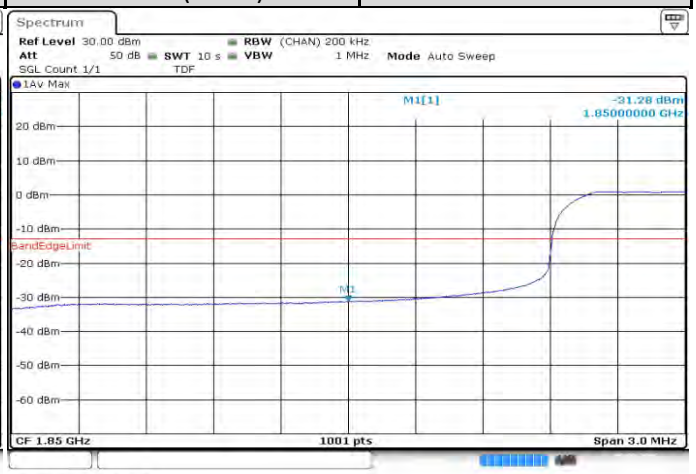


Date: 19.SEP.2016 08:14:13

Band 2, 20MHz QPSK, Low CH 18700			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0

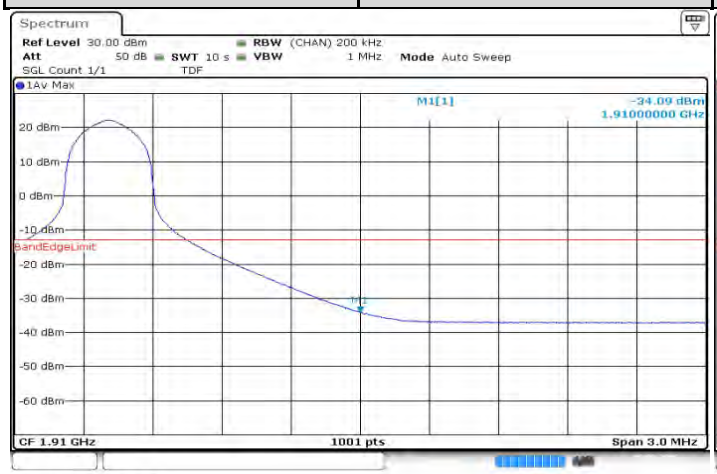


Date: 19.SEP.2016 08:19:46

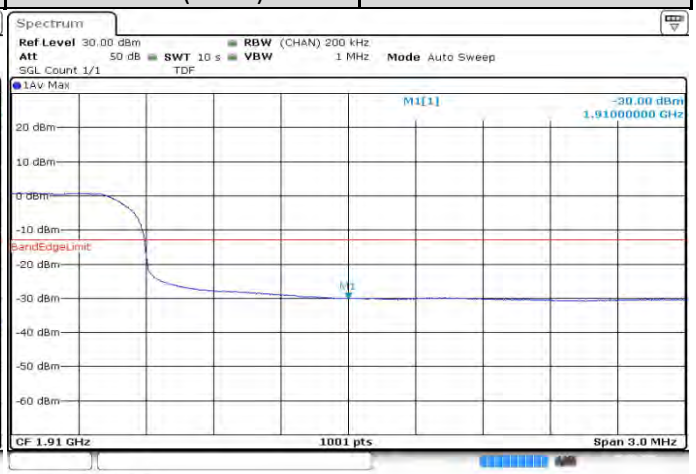


Date: 19.SEP.2016 08:17:54

Band 2, 20MHz QPSK, High CH 19100			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0



Date: 19.SEP.2016 08:20:28



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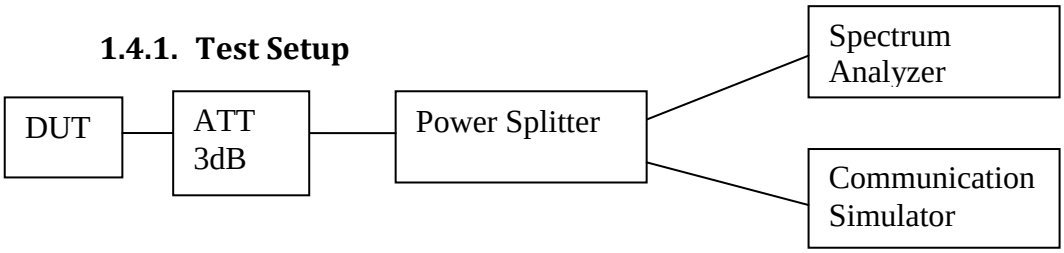
Band 2, 20MHz 16-QAM, Low CH 18700			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0

Band 2, 20MHz 16-QAM, High CH 19100			
RB = 1	Offset =X-1	RB = X (100%)	Offset = 0

1.4. Conducted Spurious Emission

1.4.1. Test Setup



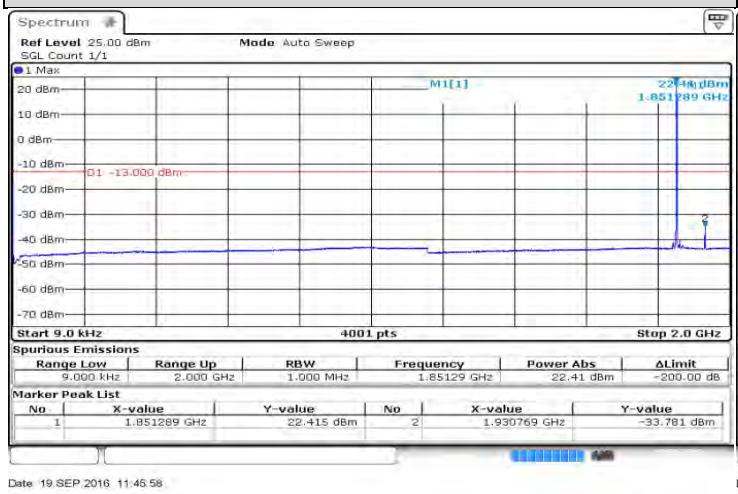
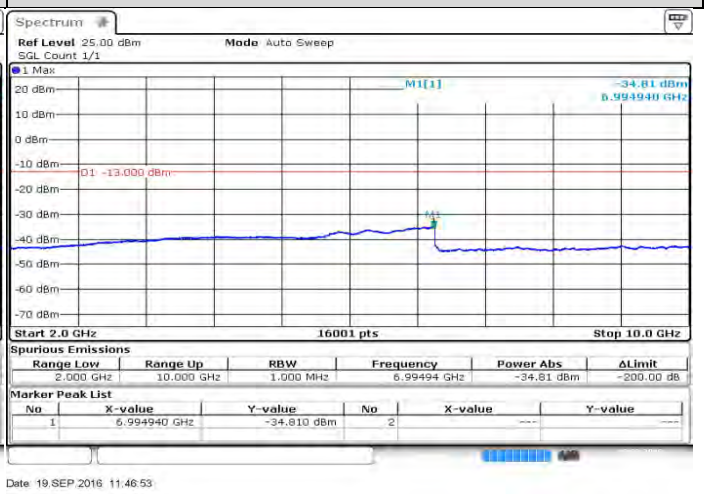
1) The DUT transmitter output port was connected to communication simulator with above setup.
2) Path loss for the measurement included.
3) Set DUT to transmit maximum power through communication simulator.
4) Spectrum Analyzer setting, RBW = 1 MHz, VBW = 3 MHz.
5) The spurious emission of lowest, middle and highest channels with the highest RF powers were measured.
6) Record the maximum trace plot into the test report.

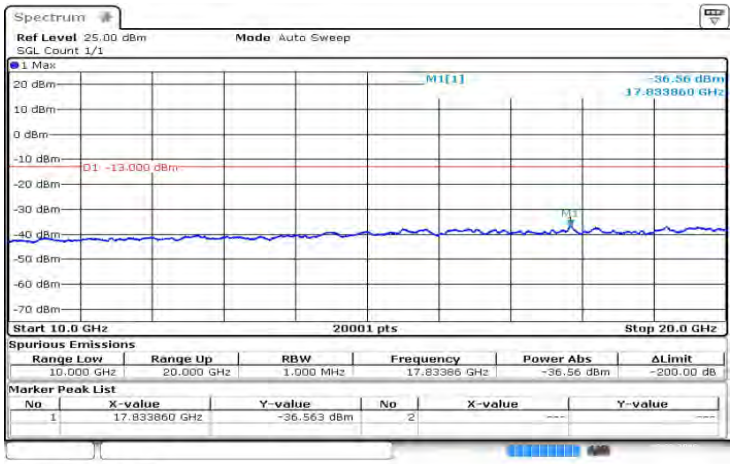
1.4.2. Test Limit

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 $\log_{10}$ (P) dB. The measurement instrumentation is employing a resolution bandwidth of 1 megahertz or greater.

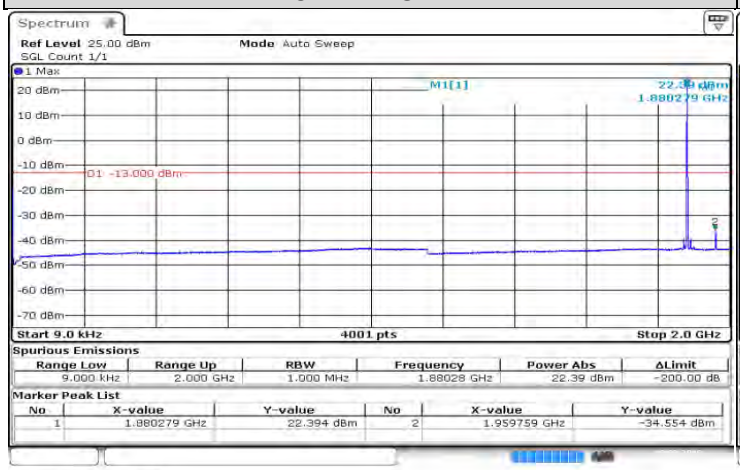
1.4.3. Conducted Spurious Emissions – LTE Band 2 (1850 -1910 MHz)

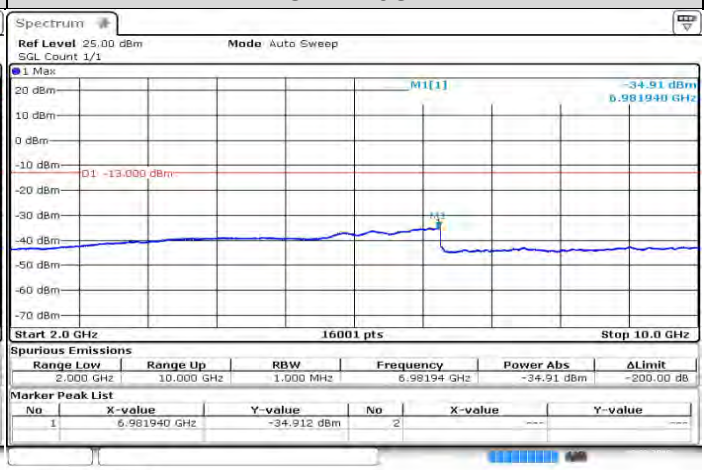
<u>1.4MHz</u>

QPSK - Low Freq (1850.7 MHz)	
RB Size =1, RB Offset = 5	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
10GHz ~ 20GHz	

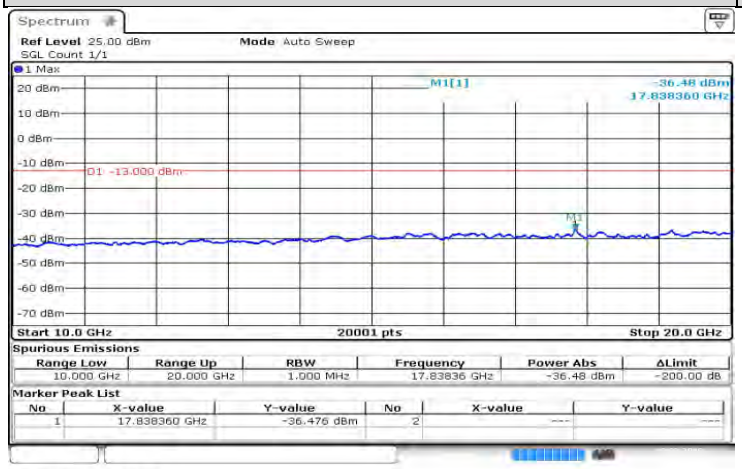


QPSK - Mid Freq (1880.0 MHz)	
RB Size =1, RB Offset = 5	
9kHz ~ 2GHz	2GHz ~ 10GHz

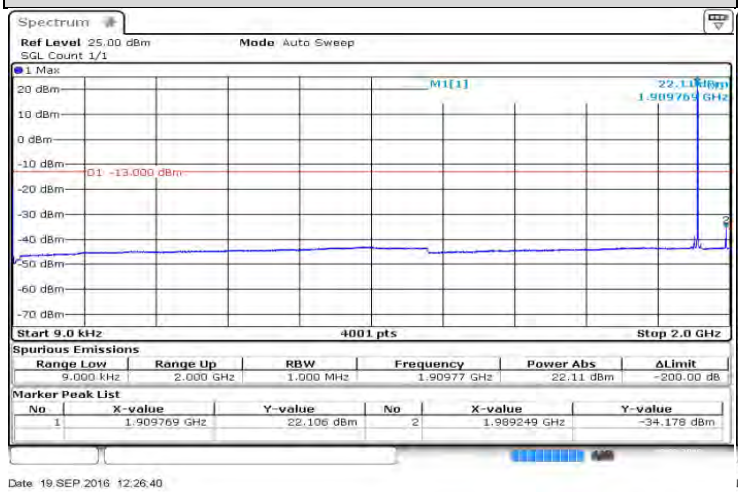


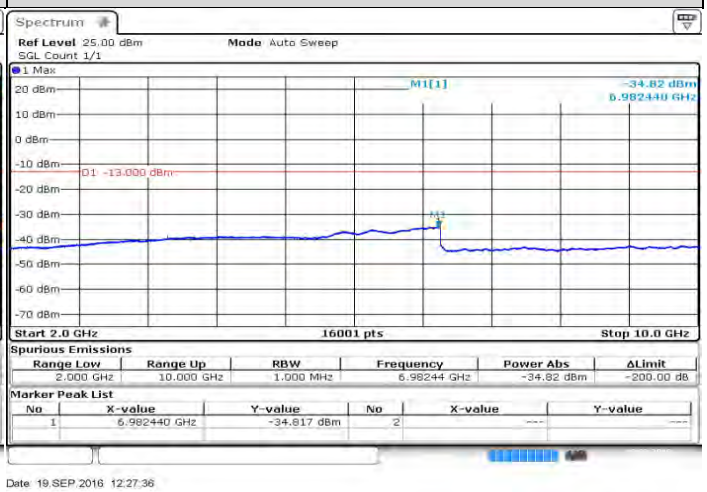


10GHz ~ 20GHz	

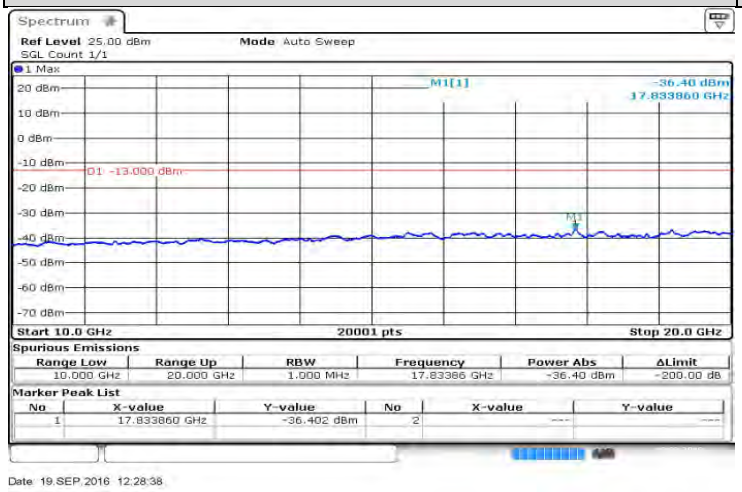


QPSK - High Freq (1909.3 MHz)	
RB Size =1, RB Offset = 5	
9kHz ~ 2GHz	2GHz ~ 10GHz

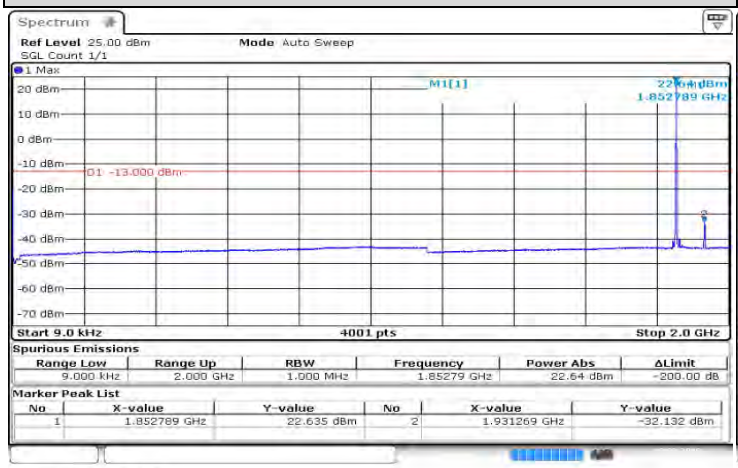
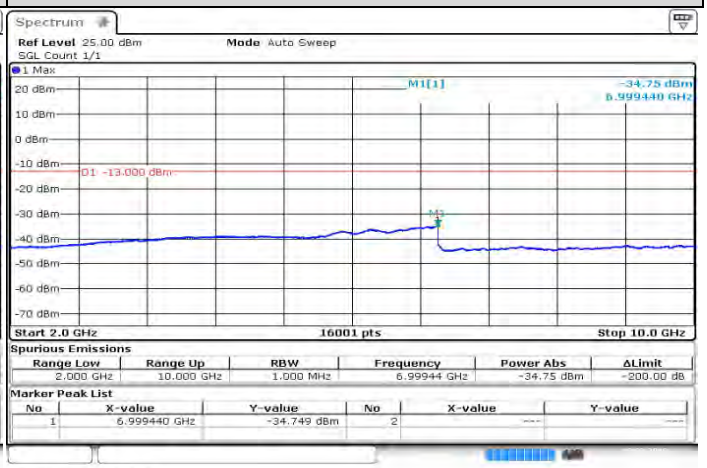


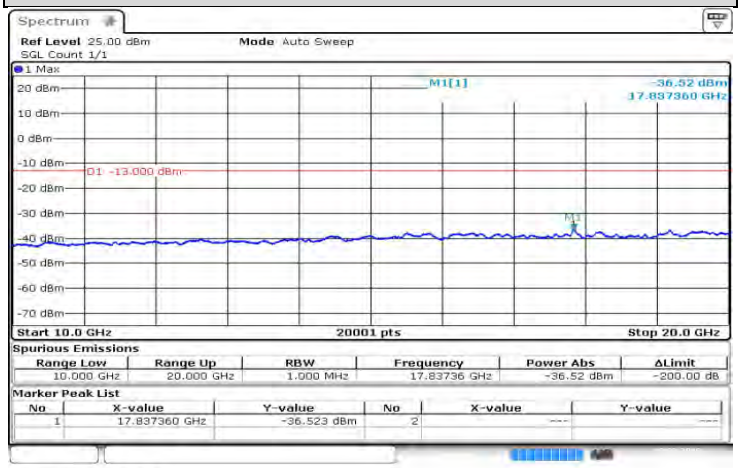


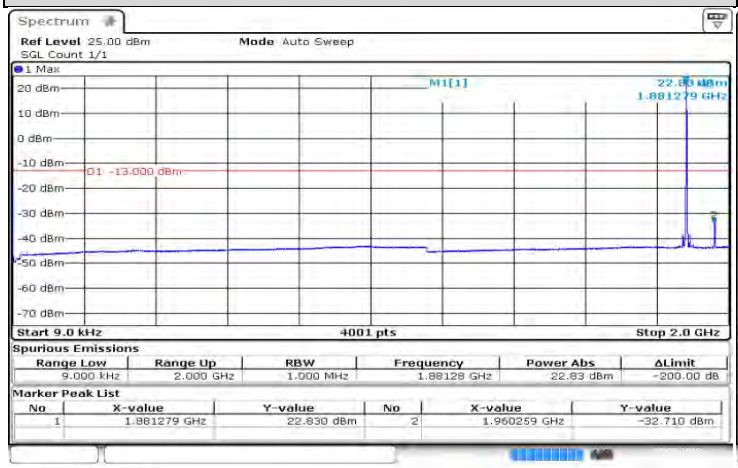
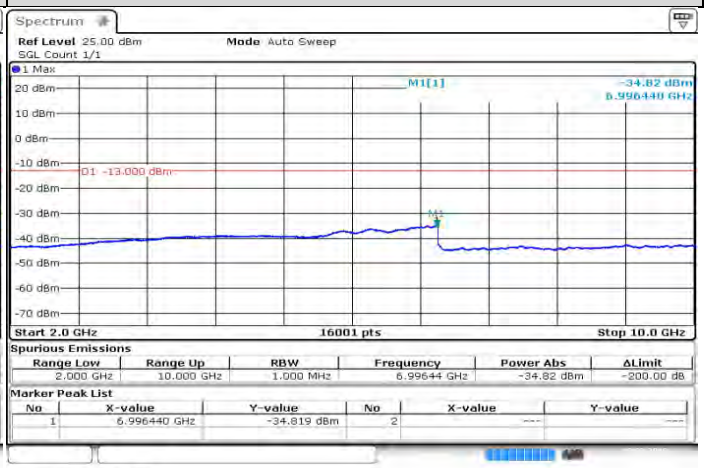
10GHz ~ 20GHz	



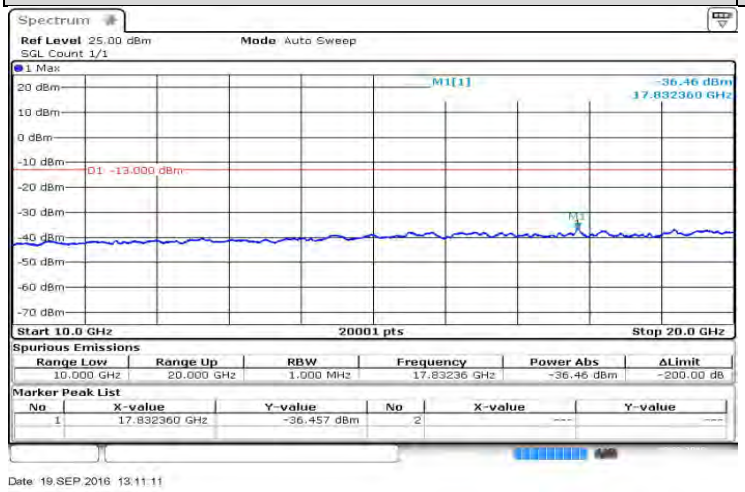
3MHz

QPSK - Low Freq (1851.5 MHz)	
RB Size =1, RB Offset = 14	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
Date 19.SEP.2016 12:47:48	Date 19.SEP.2016 12:48:45

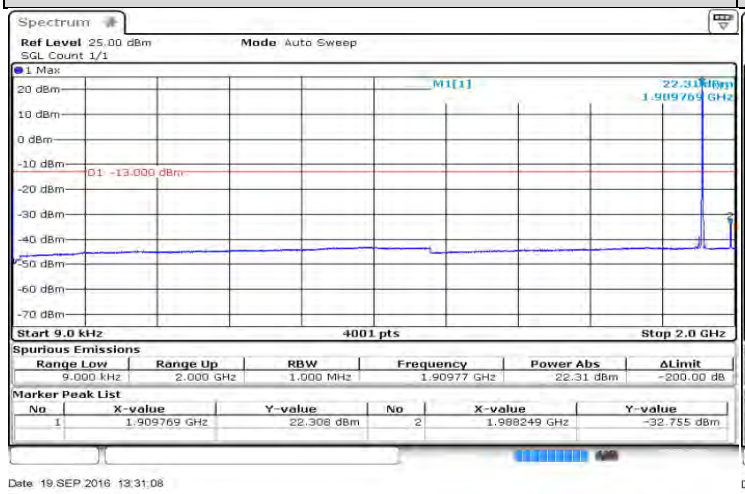
10GHz ~ 20GHz	
	
Date 19.SEP.2016 12:49:46	

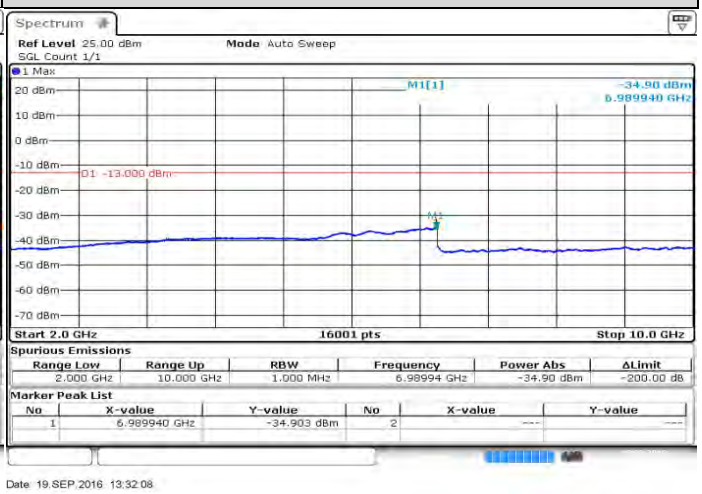
QPSK - Mid Freq (1880.0 MHz)	
RB Size =1, RB Offset = 14	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
Date 19.SEP.2016 13:09:09	Date 19.SEP.2016 13:10:07

10GHz ~ 20GHz	

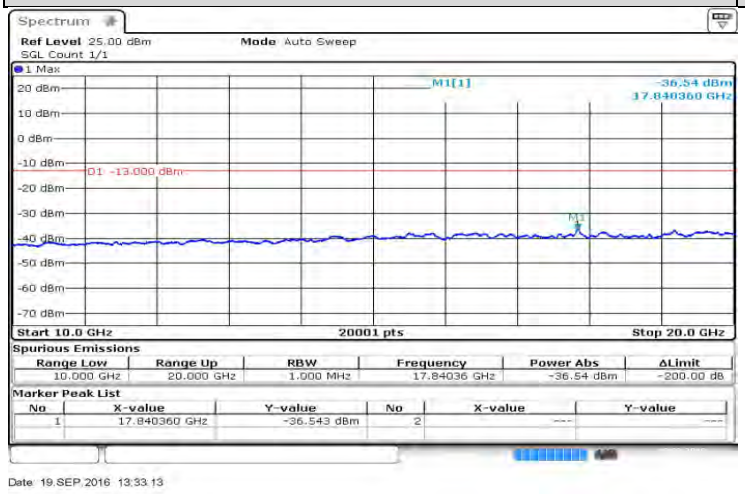


QPSK - High Freq (1908.5 MHz)	
RB Size =1, RB Offset = 14	
9kHz ~ 2GHz	2GHz ~ 10GHz

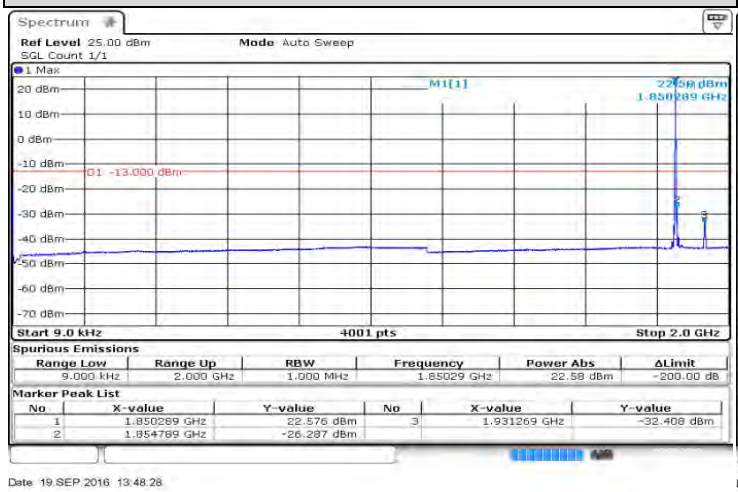
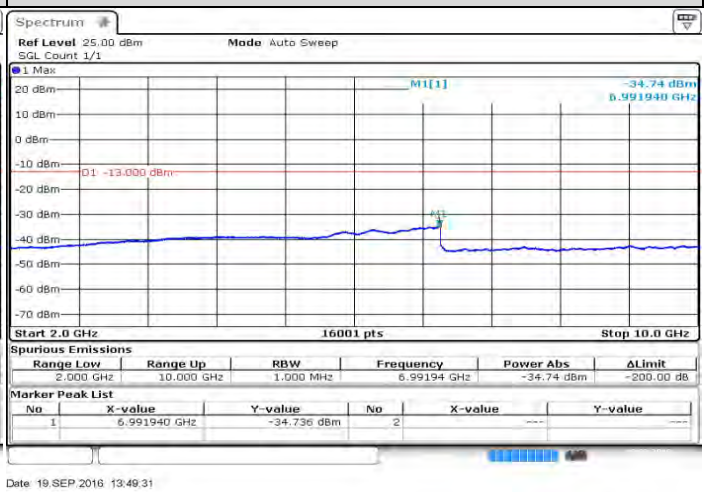


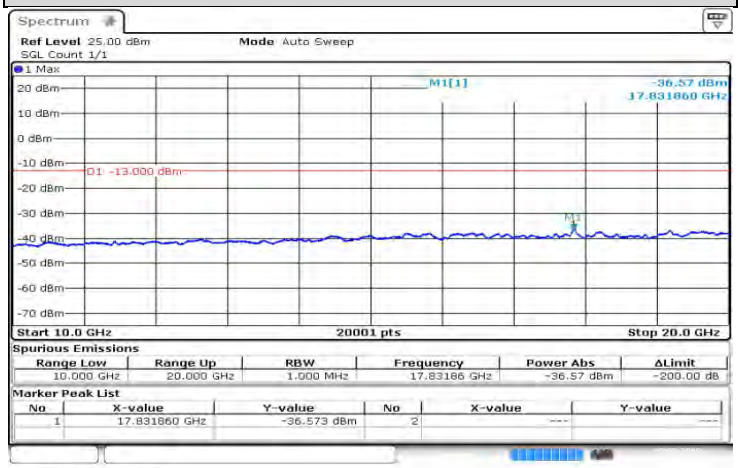


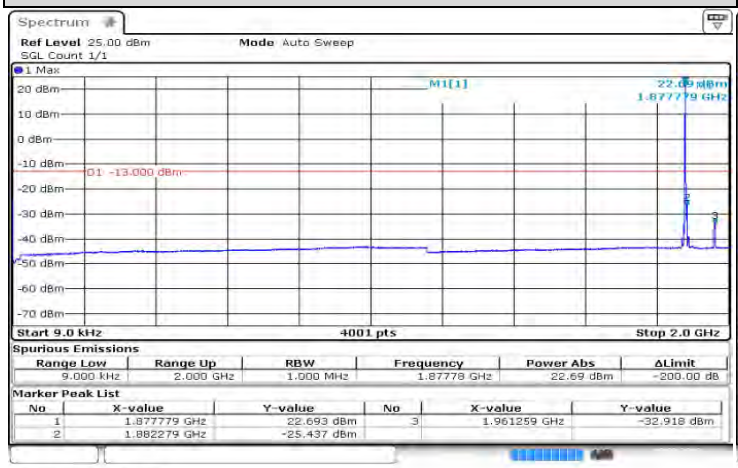
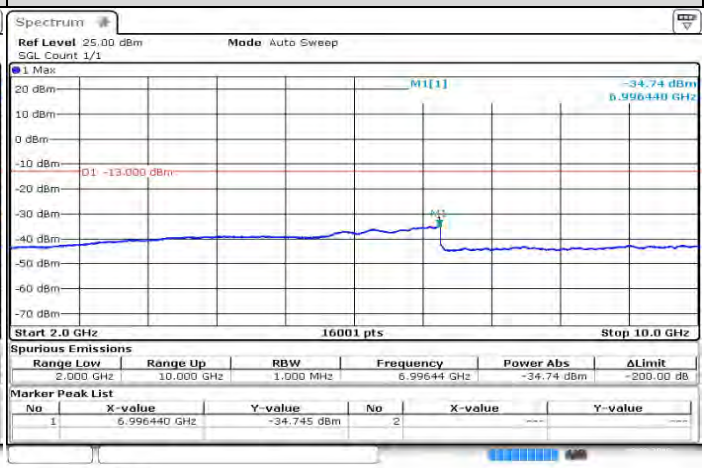
10GHz ~ 20GHz	



5MHz

QPSK - Low Freq (1852.5 MHz)	
RB Size =1, RB Offset = 0	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
Date: 19.SEP.2016 13:48:28	Date: 19.SEP.2016 13:49:31

10GHz ~ 20GHz	
	
Date: 19.SEP.2016 13:50:37	

QPSK - Mid Freq (1880.0 MHz)	
RB Size =1, RB Offset = 0	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
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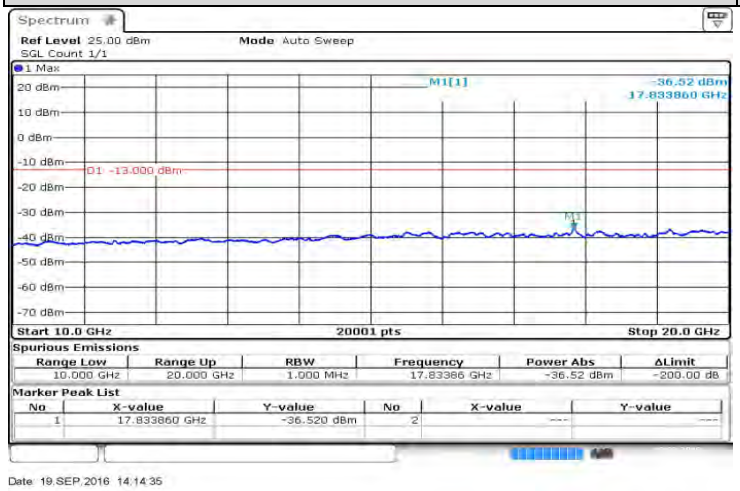
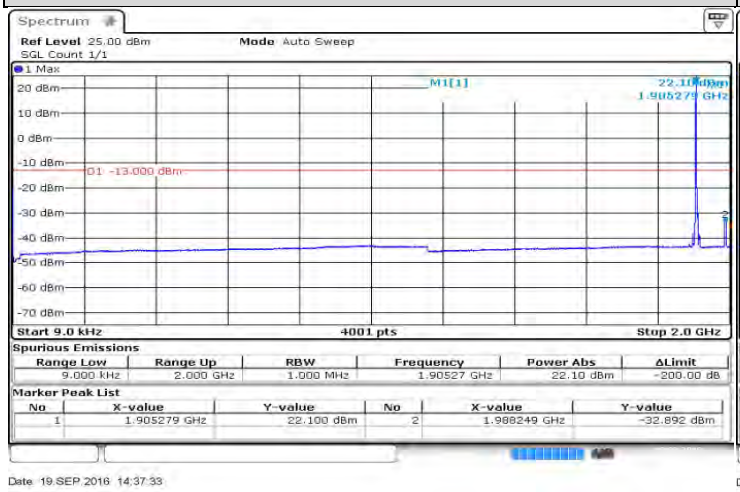
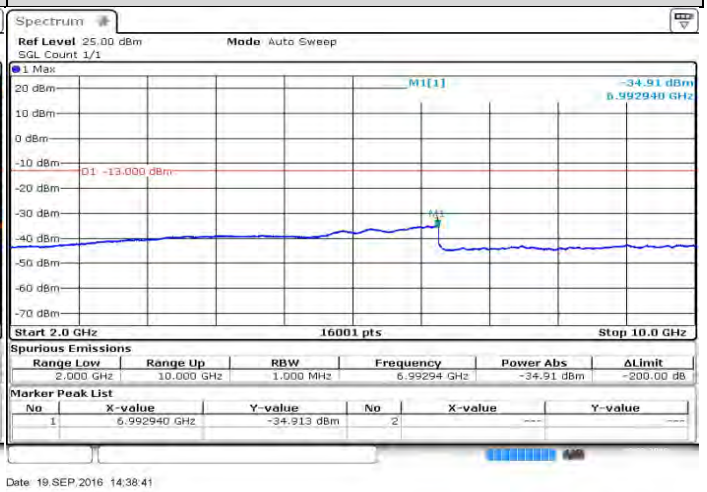
10GHz ~ 20GHz	

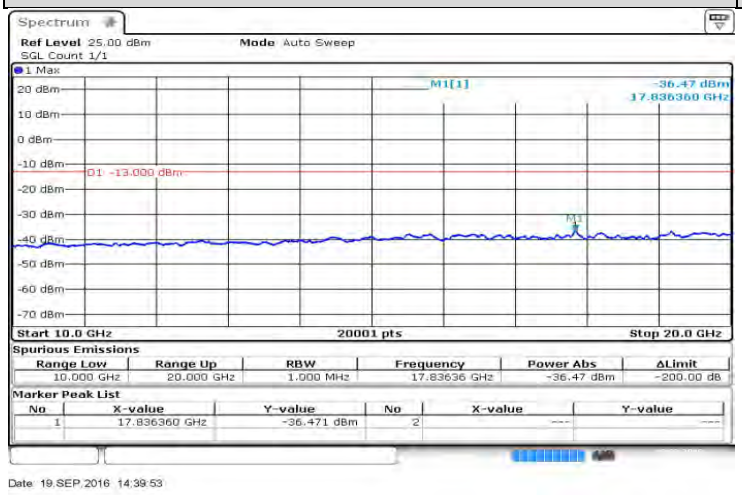


QPSK - High Freq (1907.5 MHz)	
RB Size =1, RB Offset = 0	
9kHz ~ 2GHz	2GHz ~ 10GHz

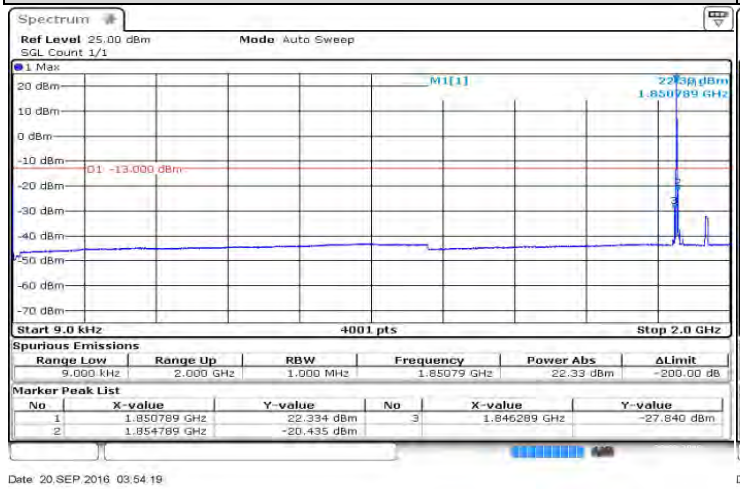
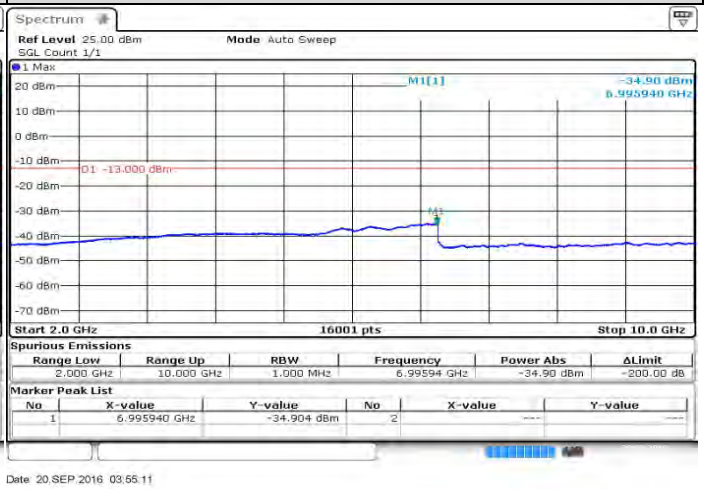
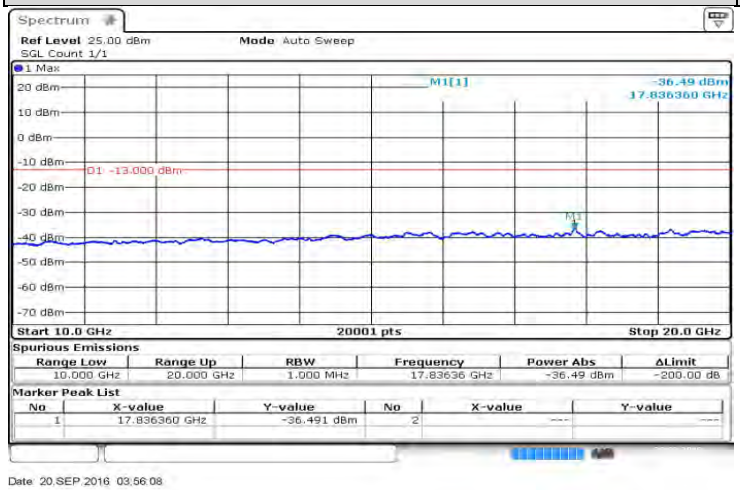


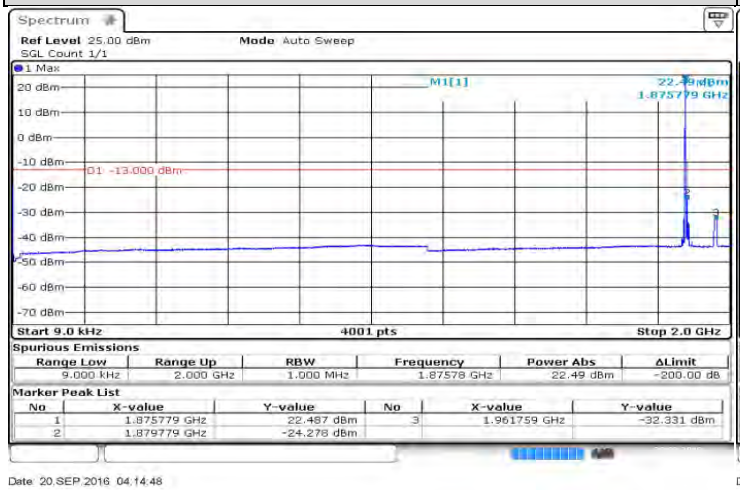
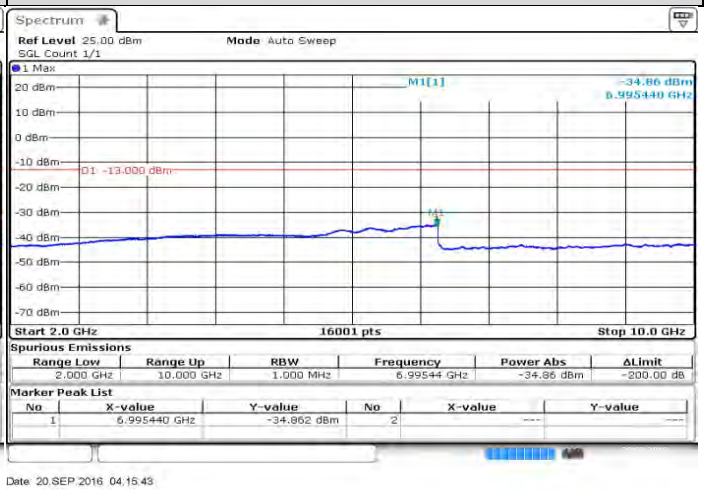


10GHz ~ 20GHz	

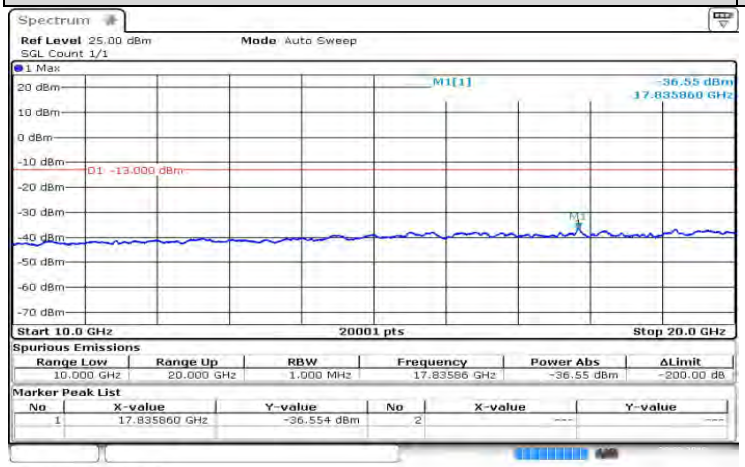


10MHz

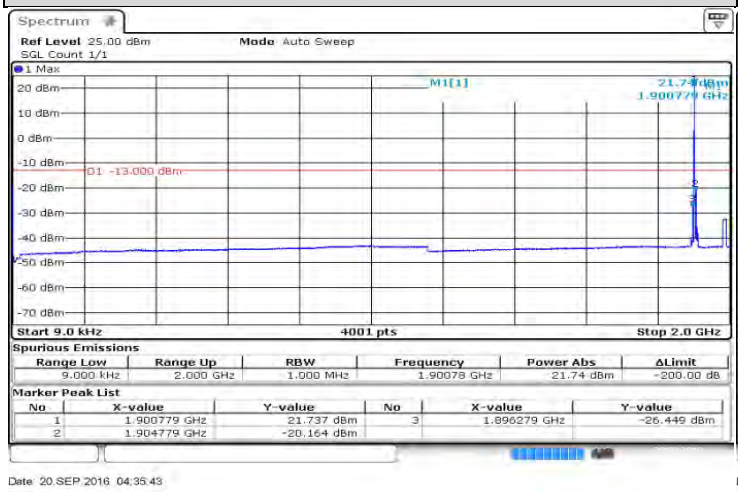
QPSK - Low Freq (1855.0 MHz)	
RB Size =1, RB Offset = 0	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
Date: 20.SEP.2016 03:54:19	Date: 20.SEP.2016 03:55:11
10GHz ~ 20GHz	
	
Date: 20.SEP.2016 03:56:08	

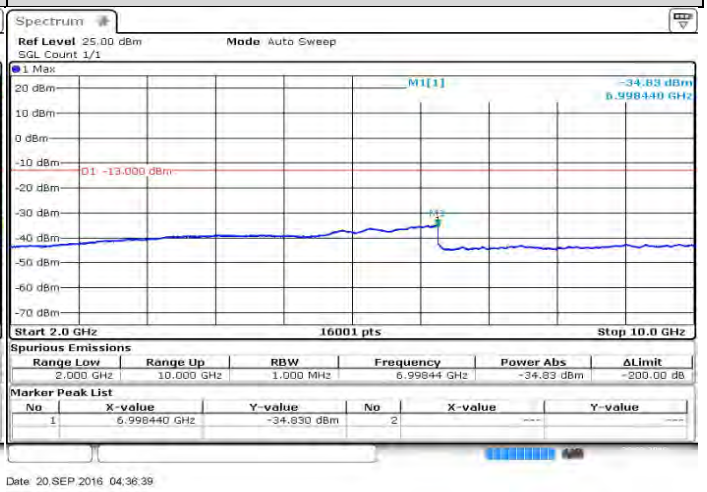
QPSK - Mid Freq (1880.0 MHz)	
RB Size =1, RB Offset = 0	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
Date: 20.SEP.2016 04:14:48	Date: 20.SEP.2016 04:15:43

10GHz ~ 20GHz	

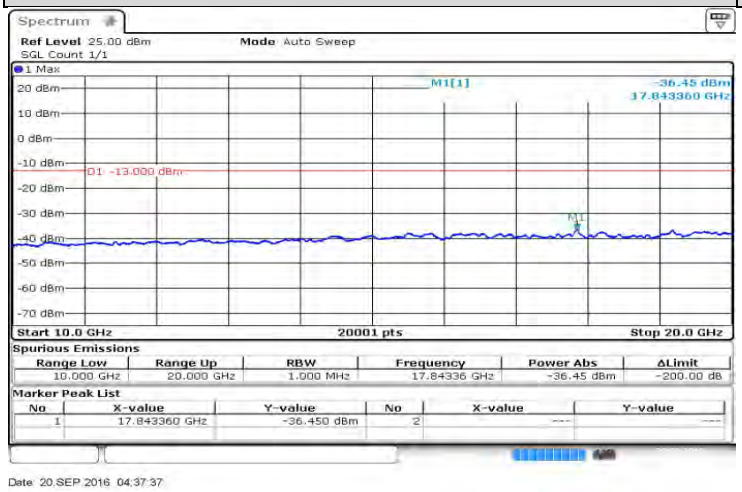


QPSK - High Freq (1905.0 MHz)	
RB Size =1, RB Offset = 0	
9kHz ~ 2GHz	2GHz ~ 10GHz

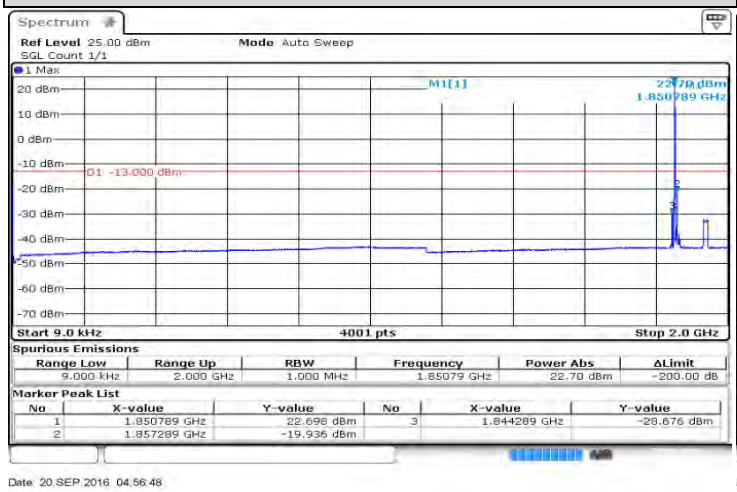
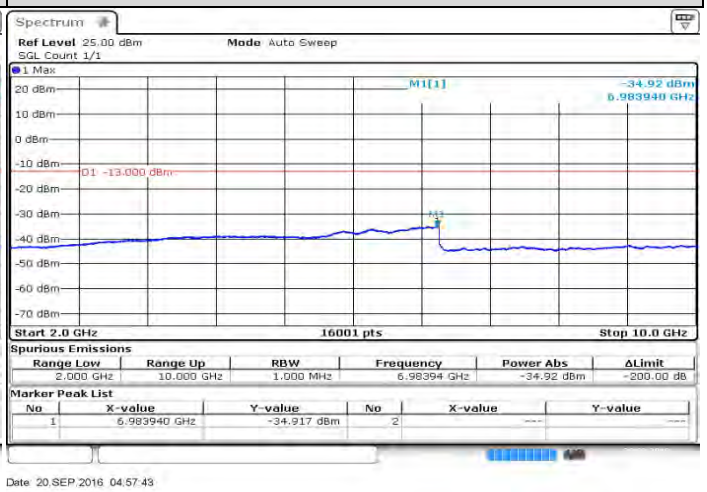
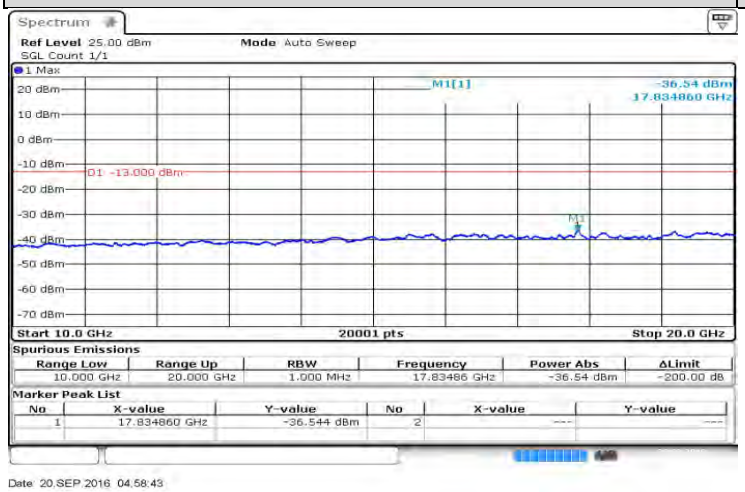


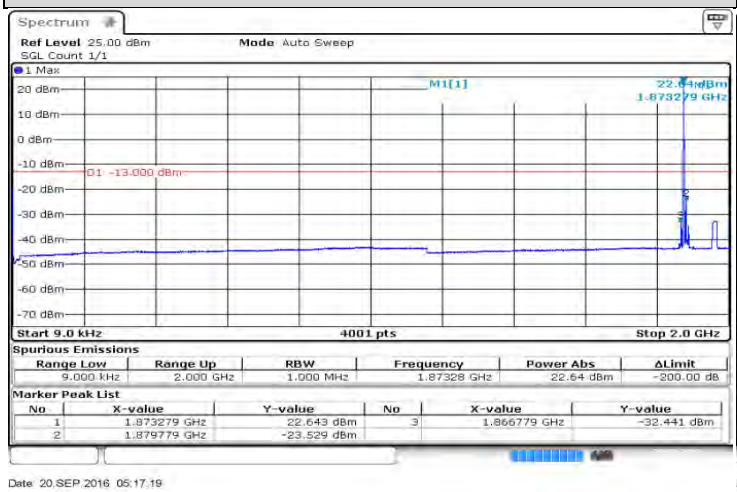
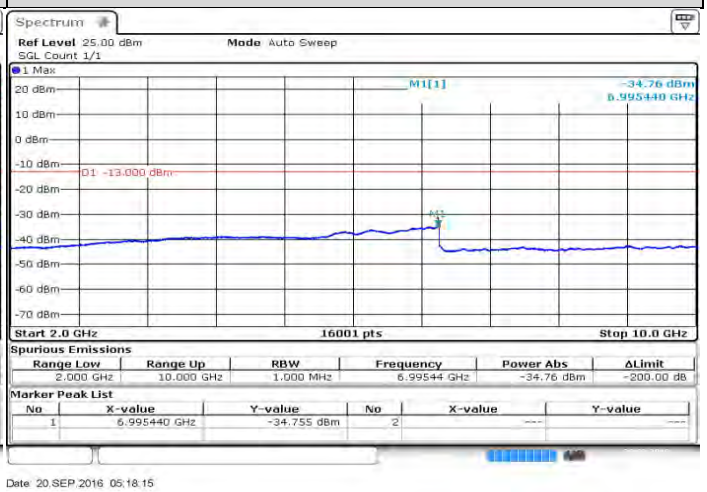


10GHz ~ 20GHz	

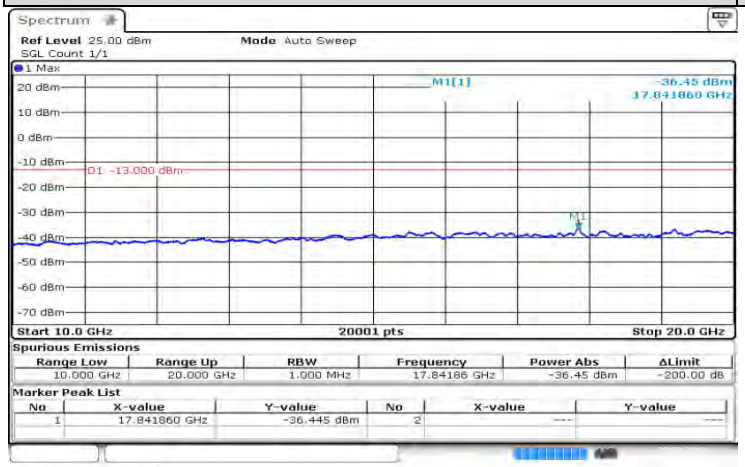


15MHz

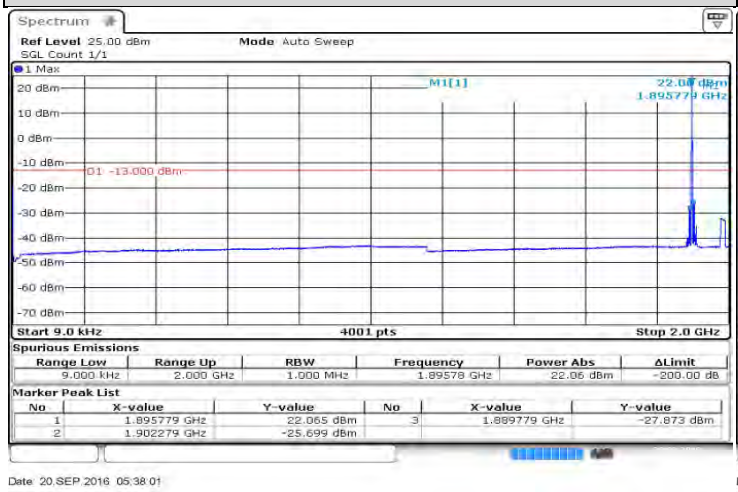
QPSK - Low Freq (1857.5 MHz)	
RB Size =1, RB Offset = 0	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
Date: 20.SEP.2016 04:56:48	Date: 20.SEP.2016 04:57:43
10GHz ~ 20GHz	
	
Date: 20.SEP.2016 04:58:43	

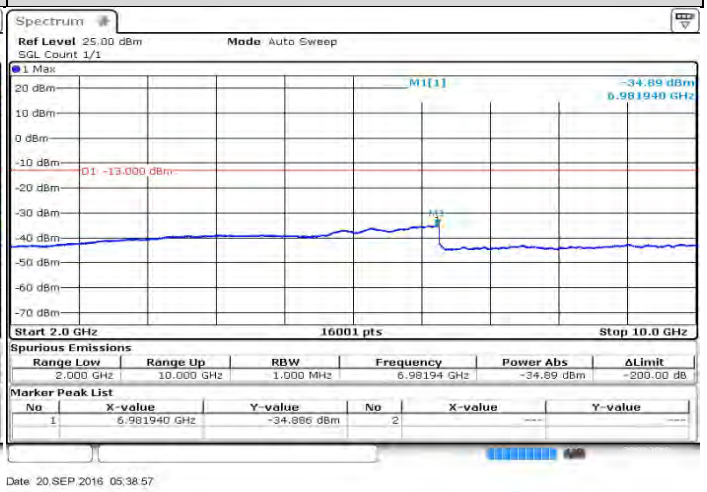
QPSK - Mid Freq (1880.0 MHz)	
RB Size =1, RB Offset = 0	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
Date: 20.SEP.2016 05:17:19	Date: 20.SEP.2016 05:18:15

10GHz ~ 20GHz	

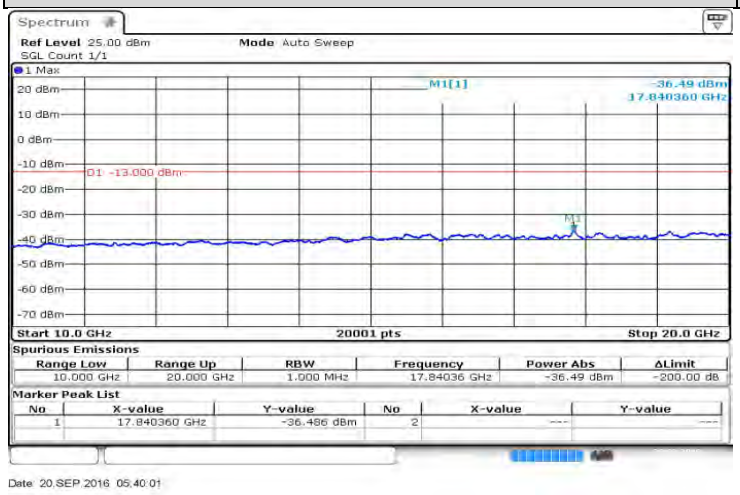


QPSK - High Freq (1902.5 MHz)	
RB Size =1, RB Offset = 0	
9kHz ~ 2GHz	2GHz ~ 10GHz

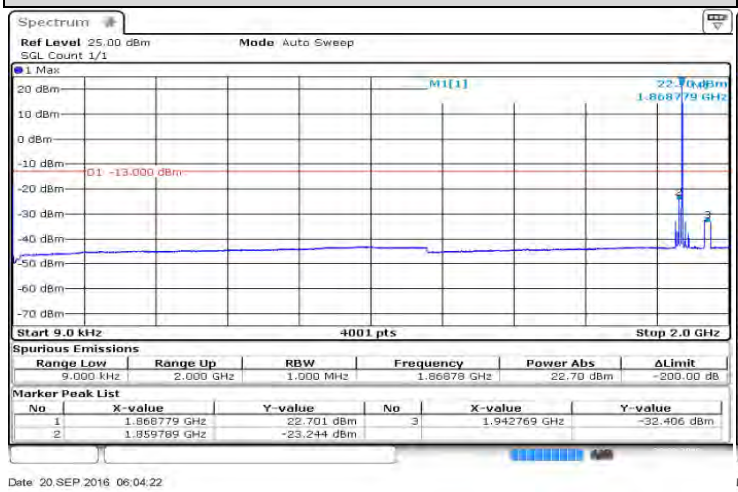
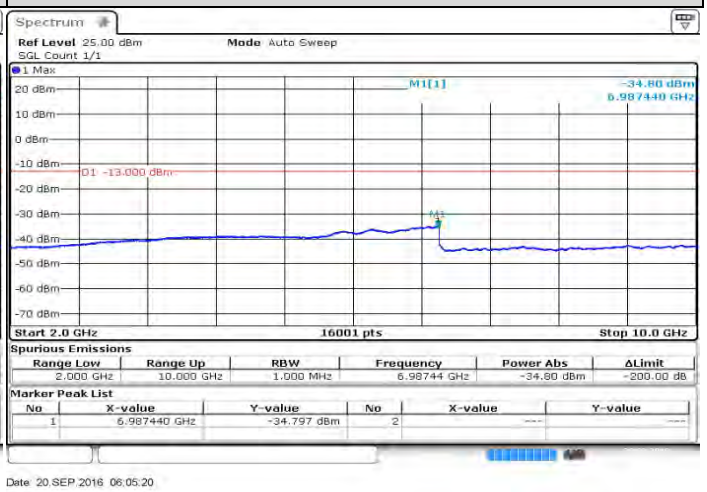
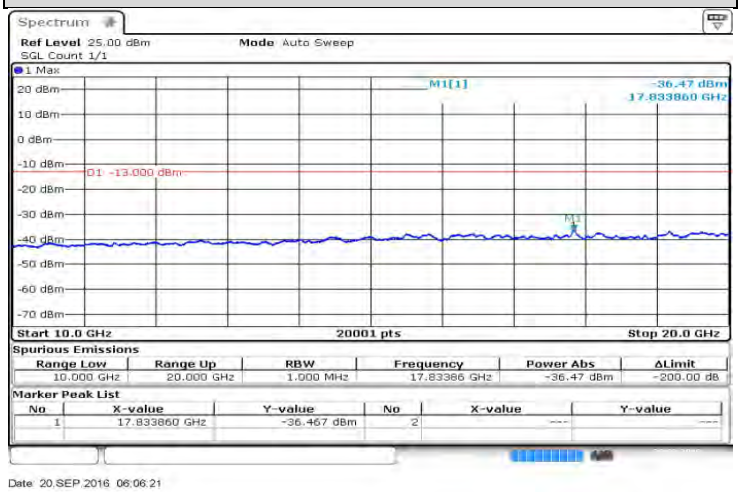


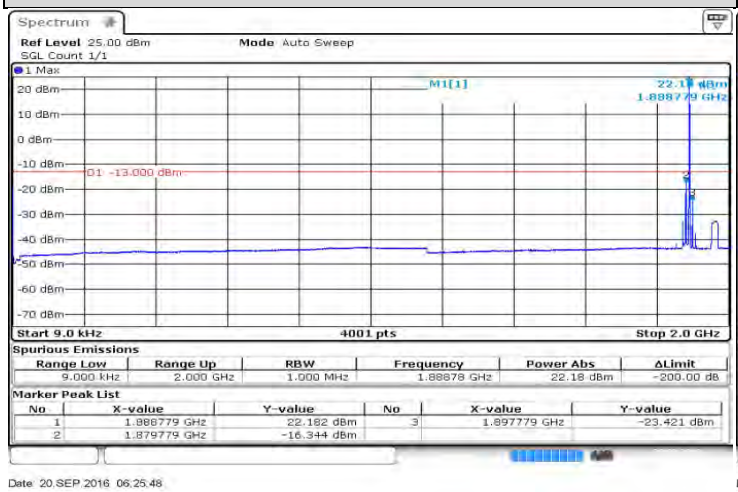
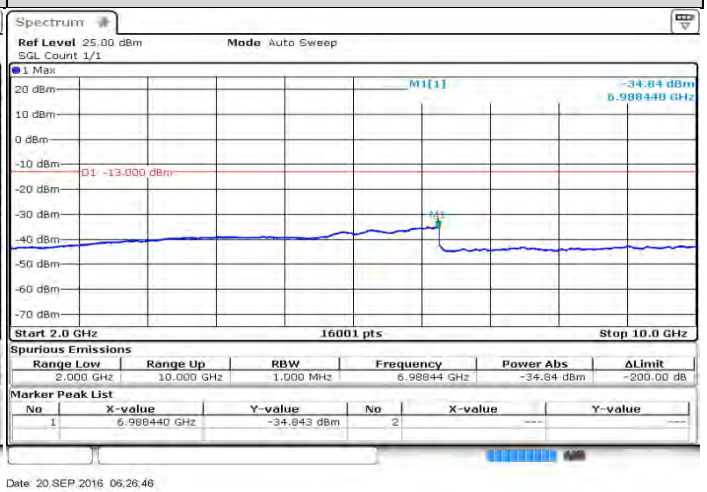


10GHz ~ 20GHz	

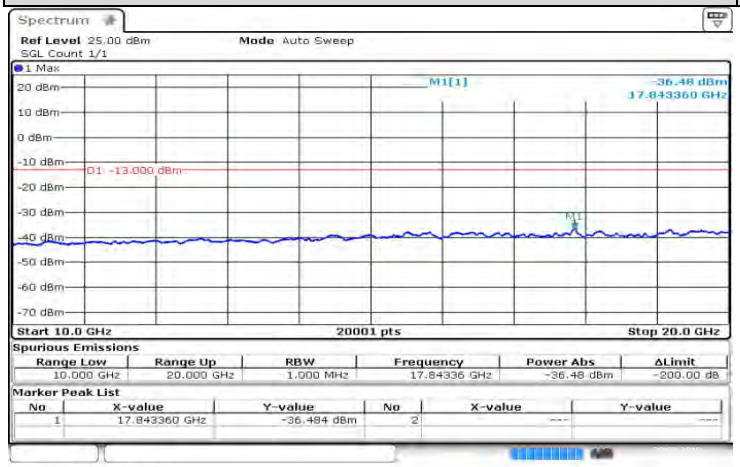


20MHz

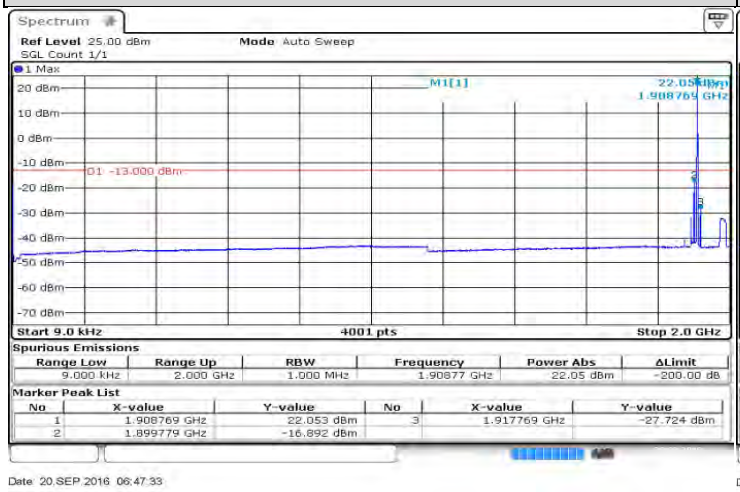
QPSK - Low Freq (1860.0 MHz)	
RB Size =1, RB Offset = 99	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
Date: 20.SEP.2016 06:04:22	Date: 20.SEP.2016 06:05:20
10GHz ~ 20GHz	
	
Date: 20.SEP.2016 06:06:21	

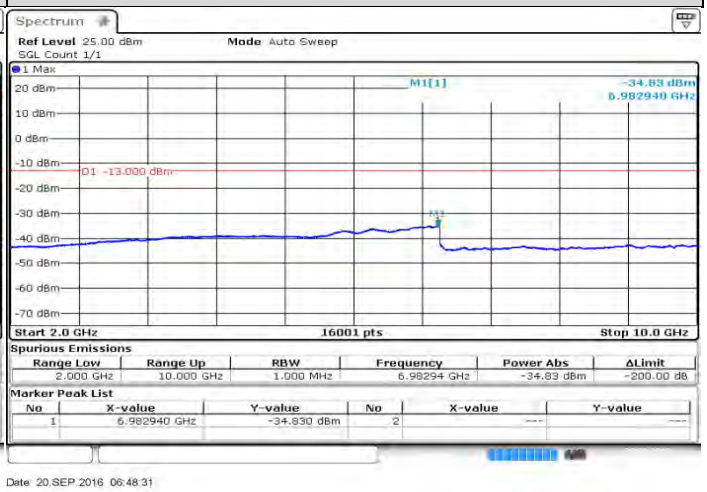
QPSK - Mid Freq (1880.0 MHz)	
RB Size =1, RB Offset = 99	
9kHz ~ 2GHz	2GHz ~ 10GHz
	
Date: 20.SEP.2016 06:25:48	Date: 20.SEP.2016 06:26:46

10GHz ~ 20GHz	

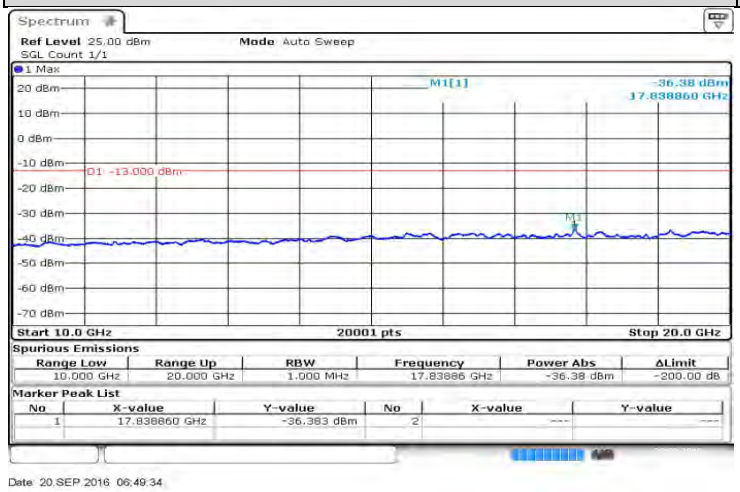


QPSK - High Freq (1900.0 MHz)	
RB Size =1, RB Offset = 99	
9kHz ~ 2GHz	2GHz ~ 10GHz



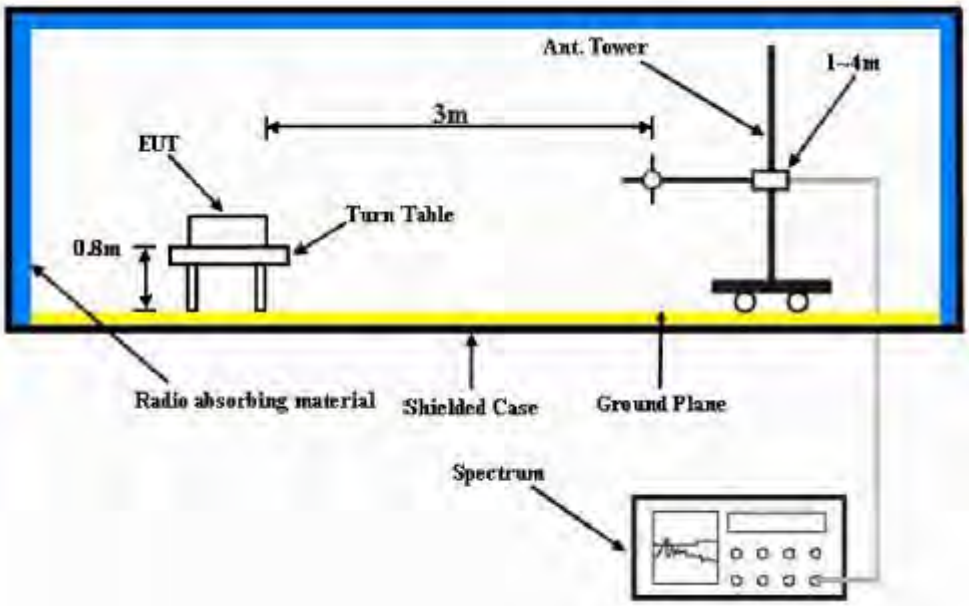


10GHz ~ 20GHz	



1.5. Radiated Spurious Emission

1.5.1. Test Setup



1) The spectrum setting for scanning Radiated Emission below 1 GHz is RBW = 100 kHz, VBW = 300 kHz and above 1 GHz is RBW = 1MHz, VBW = 3MHz. Detector mode is positive peak.

2) In the semi-anechoic chamber, setup as illustrated above the EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

3) The substitution antenna is substituted for EUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.

4) Final Radiated Spurious Emission = “Read Value” + Measured substitution value.

1.5.2. Test Limit

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 $\log_{10}$ (P) dB. The emission limit equal to -13dBm.

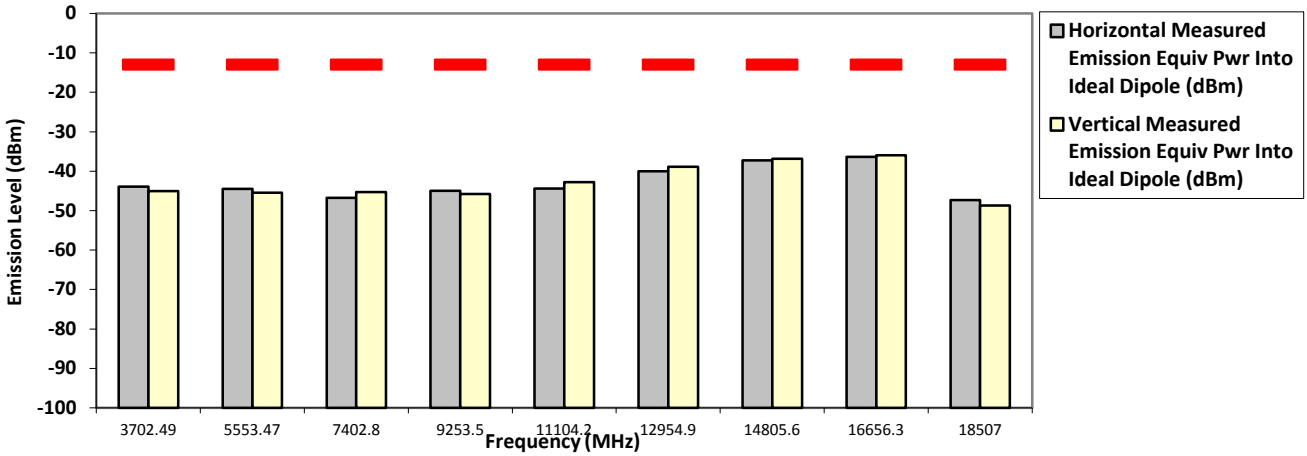
1.5.3. Radiated Spurious Emission – LTE Band 2 (1850-1910MHz)

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 171PRQ1569** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1850.700000 MHz **Bandwidth 1.4MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3702.4900	-13.0000	-43.9200 *	-45.0200 *
5553.4700	-13.0000	-44.5100 *	-45.4200 *
7402.8000	-13.0000	-46.7592 **	-45.2810 **
9253.5000	-13.0000	-45.0075 **	-45.7732 **
11104.2000	-13.0000	-44.3829 **	-42.7976 **
12954.9000	-13.0000	-40.0435 **	-38.8646 **
14805.6000	-13.0000	-37.2383 **	-36.8181 **
16656.3000	-13.0000	-36.3633 **	-35.9867 **
18507.0000	-13.0000	-47.3186 **	-48.6996 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Sun, Sep 25, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 23.8 Hum(%RH): 69

System MU: 5.01 dB

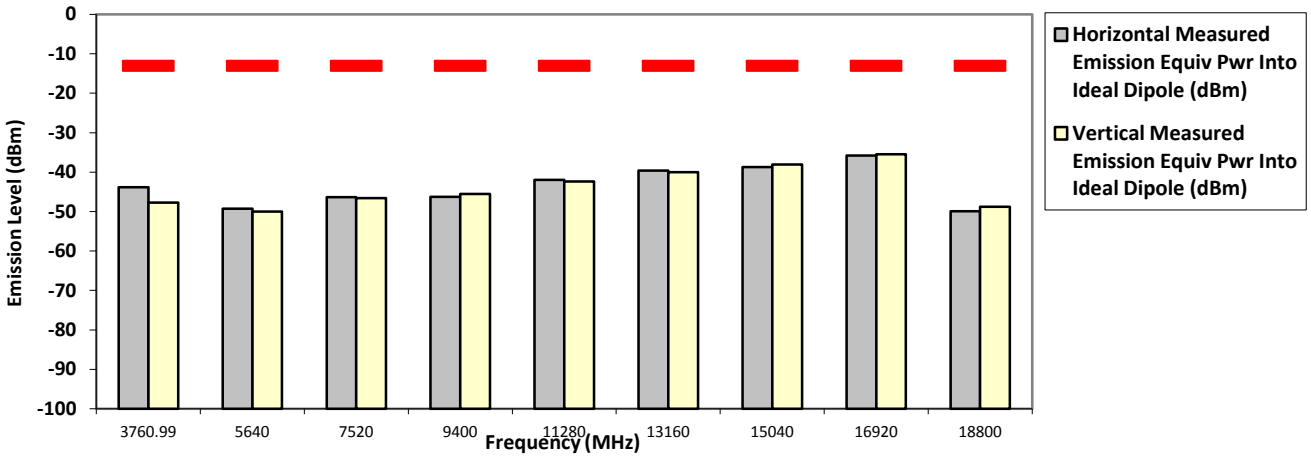
Remarks:	Passed Results	**Marginal Results**	**Failed Results**

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 171PRQ1569** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1880.000000 MHz **Bandwidth 1.4MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3760.9900	-13.0000	-43.8200 *	-47.7300 *
5640.0000	-13.0000	-49.3101 **	-49.9724 **
7520.0000	-13.0000	-46.3834 **	-46.6236 **
9400.0000	-13.0000	-46.2957 **	-45.5382 **
11280.0000	-13.0000	-41.9836 **	-42.4023 **
13160.0000	-13.0000	-39.6524 **	-40.0509 **
15040.0000	-13.0000	-38.6831 **	-38.0986 **
16920.0000	-13.0000	-35.8064 **	-35.4511 **
18800.0000	-13.0000	-49.8955 **	-48.7871 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Sun, Sep 25, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 23.8 Hum(%RH): 69

System MU: 5.01 dB

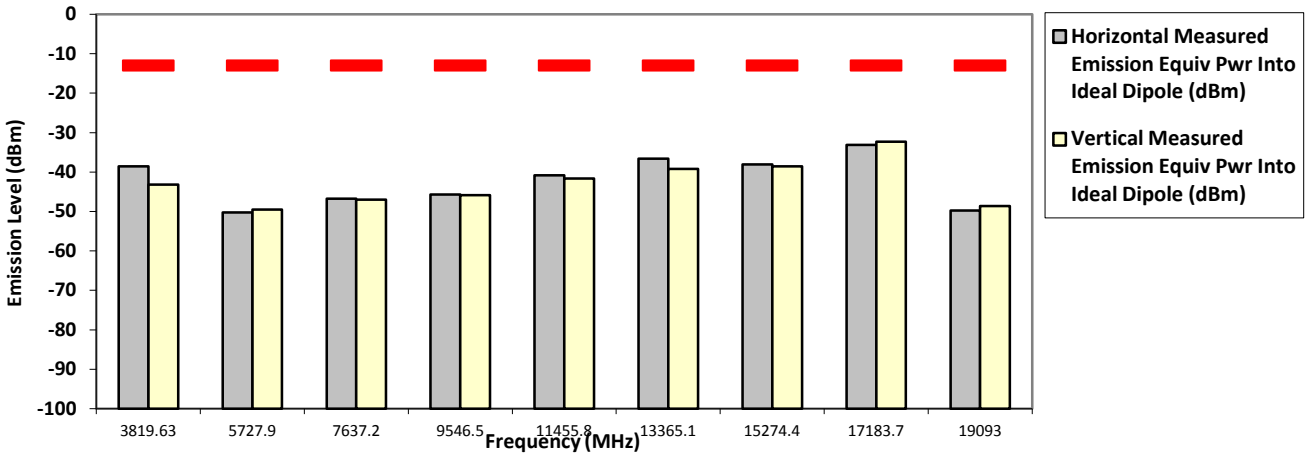
Remarks:	Passed Results	Marginal Results	Failed Results

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 627TSR0661** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1909.300000 MHz **Bandwidth 1.4MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3819.6300	-13.0000	-38.5600 *	-43.2000 *
5727.9000	-13.0000	-50.2712 **	-49.4961 **
7637.2000	-13.0000	-46.7602 **	-46.9771 **
9546.5000	-13.0000	-45.7291 **	-45.9011 **
11455.8000	-13.0000	-40.8442 **	-41.6707 **
13365.1000	-13.0000	-36.6330 **	-39.2196 **
15274.4000	-13.0000	-38.0310 **	-38.5496 **
17183.7000	-13.0000	-33.1561 **	-32.2749 **
19093.0000	-13.0000	-49.7215 **	-48.5977 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Fri, Sep 30, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 24.7 Hum(%RH): 69.2

System MU: 5.01 dB

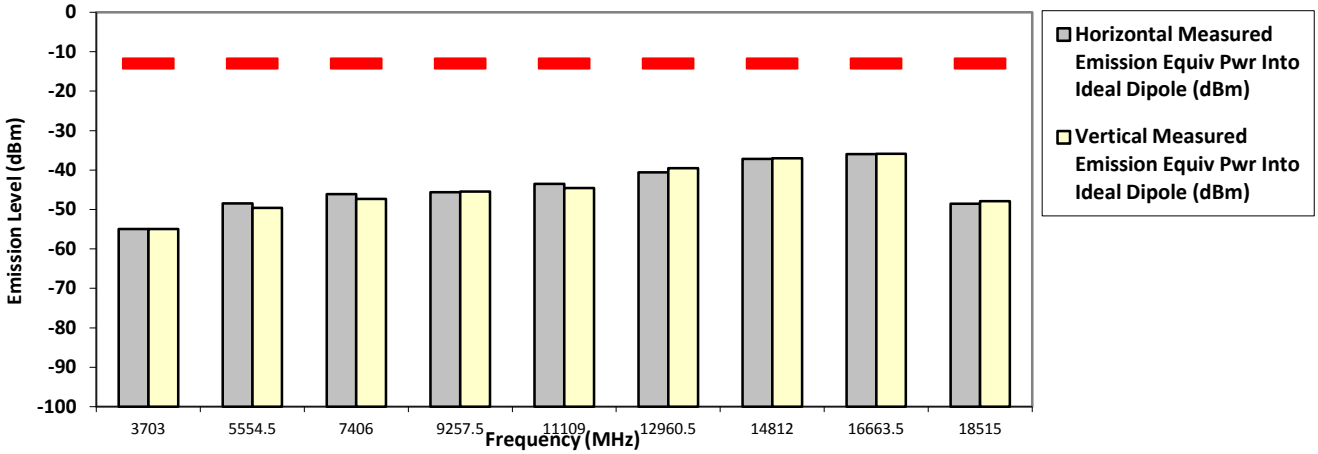
Remarks:	Passed Results	**Marginal Results**	**Failed Results**

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 627TSR0661** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1851.500000 MHz **Bandwidth 3MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3703.0000	-13.0000	-54.9669 **	-54.9706 **
5554.5000	-13.0000	-48.4454 **	-49.5583 **
7406.0000	-13.0000	-46.1315 **	-47.3338 **
9257.5000	-13.0000	-45.5952 **	-45.4305 **
11109.0000	-13.0000	-43.4975 **	-44.5613 **
12960.5000	-13.0000	-40.5997 **	-39.5230 **
14812.0000	-13.0000	-37.2078 **	-37.0420 **
16663.5000	-13.0000	-35.9451 **	-35.8728 **
18515.0000	-13.0000	-48.5644 **	-47.9182 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Fri, Sep 30, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 24.7 Hum(%RH): 69.2

System MU: 5.01 dB

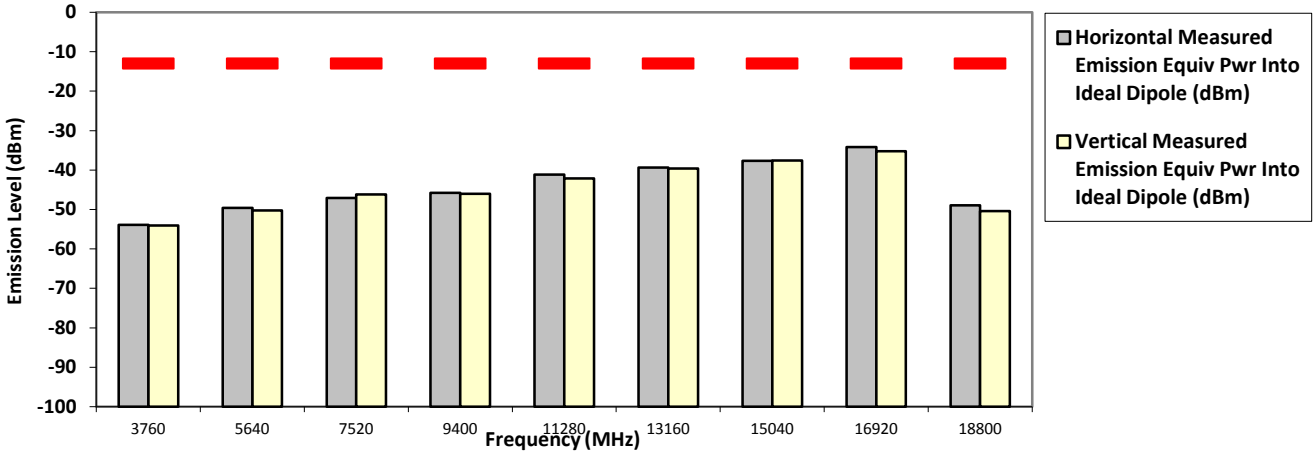
Remarks:	Passed Results	Marginal Results	Failed Results

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 627TSR0661** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1880.000000 MHz **Bandwidth 3MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3760.0000	-13.0000	-53.8600 **	-54.0510 **
5640.0000	-13.0000	-49.6009 **	-50.2174 **
7520.0000	-13.0000	-47.0871 **	-46.2230 **
9400.0000	-13.0000	-45.7709 **	-45.9847 **
11280.0000	-13.0000	-41.1722 **	-42.1373 **
13160.0000	-13.0000	-39.3568 **	-39.5831 **
15040.0000	-13.0000	-37.6408 **	-37.6033 **
16920.0000	-13.0000	-34.1961 **	-35.2696 **
18800.0000	-13.0000	-48.9232 **	-50.3718 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Fri, Sep 30, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 24.7 Hum(%RH): 69.2

System MU: 5.01 dB

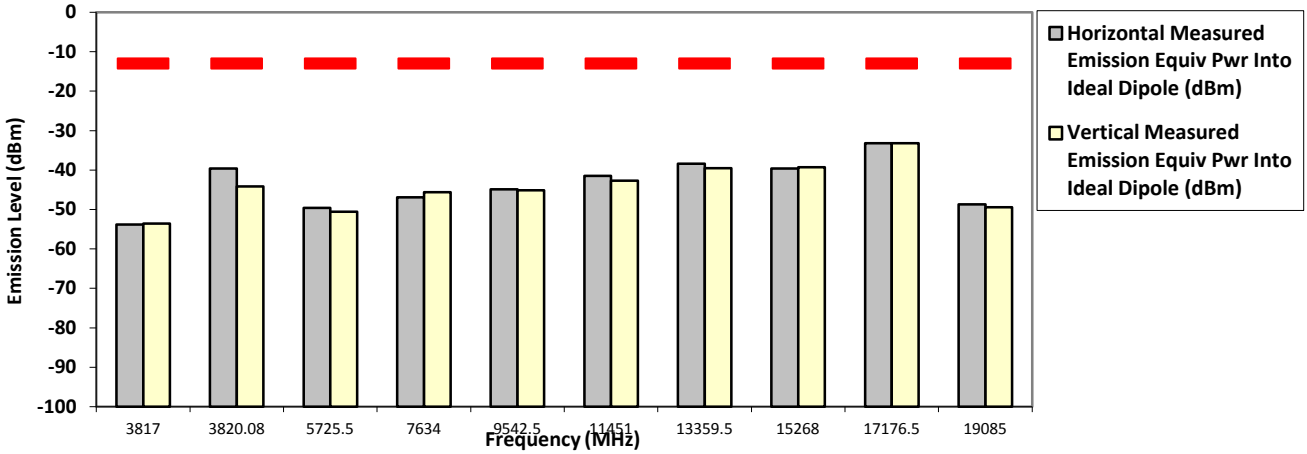
Remarks:	Passed Results	Marginal Results	Failed Results

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 627TSR0661** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1908.500000 MHz **Bandwidth 3MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3817.0000	-13.0000	-53.8082 **	-53.5626 **
3820.0800	-13.0000	-39.6400 *	-44.1500 *
5725.5000	-13.0000	-49.6168 **	-50.5997 **
7634.0000	-13.0000	-46.9422 **	-45.5813 **
9542.5000	-13.0000	-44.8566 **	-45.1129 **
11451.0000	-13.0000	-41.5189 **	-42.6914 **
13359.5000	-13.0000	-38.3829 **	-39.5214 **
15268.0000	-13.0000	-39.6405 **	-39.2488 **
17176.5000	-13.0000	-33.1643 **	-33.1688 **
19085.0000	-13.0000	-48.7405 **	-49.4156 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Fri, Sep 30, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 24.7 Hum(%RH): 69.2

System MU: 5.01 dB

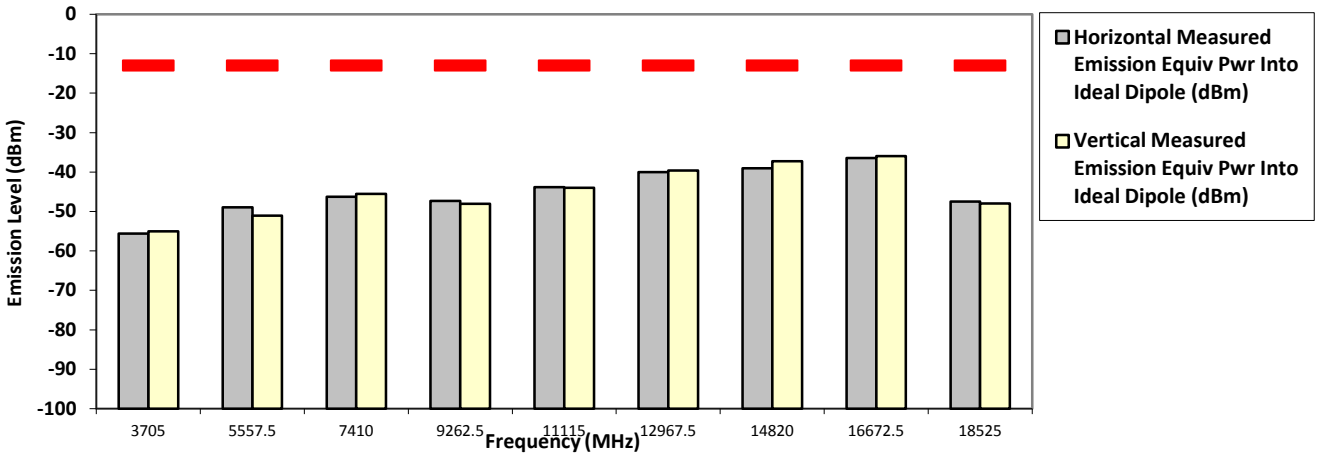
Remarks:	Passed Results	**Marginal Results**	**Failed Results**

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 627TSR0661** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1852.500000 MHz **Bandwidth 5MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3705.0000	-13.0000	-55.6069 **	-55.0412 **
5557.5000	-13.0000	-48.9729 **	-51.0206 **
7410.0000	-13.0000	-46.2794 **	-45.5566 **
9262.5000	-13.0000	-47.3539 **	-48.0572 **
11115.0000	-13.0000	-43.7943 **	-44.0205 **
12967.5000	-13.0000	-39.9987 **	-39.5921 **
14820.0000	-13.0000	-39.0282 **	-37.2263 **
16672.5000	-13.0000	-36.4278 **	-35.9291 **
18525.0000	-13.0000	-47.4519 **	-47.9387 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Fri, Sep 30, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 24.7 Hum(%RH): 69.2

System MU: 5.01 dB

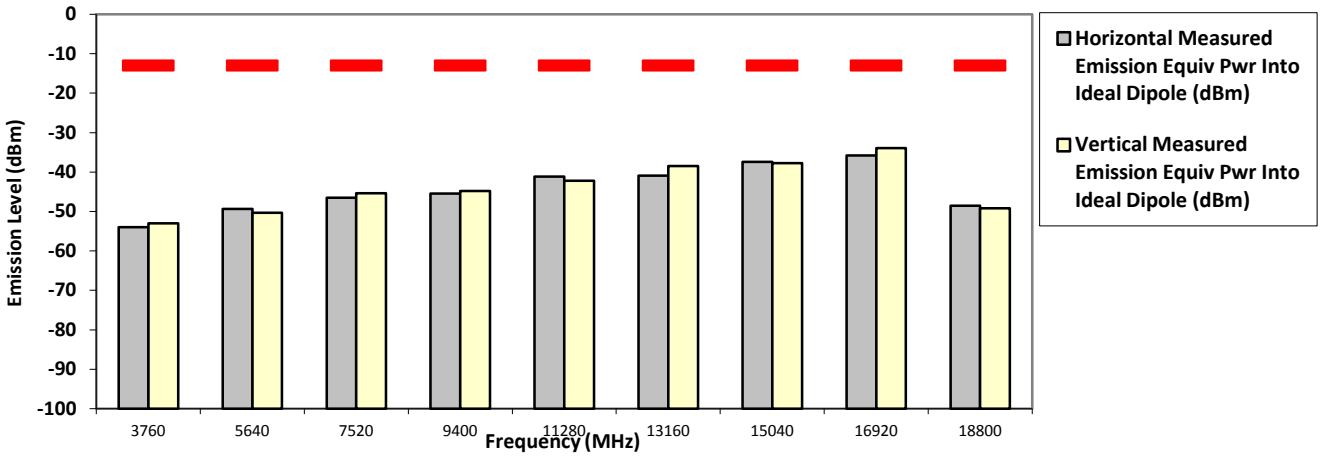
Remarks:	Passed Results	Marginal Results	Failed Results

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 627TSR0661** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1880.000000 MHz **Bandwidth 5MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3760.0000	-13.0000	-53.9639 **	-52.9689 **
5640.0000	-13.0000	-49.3787 **	-50.3119 **
7520.0000	-13.0000	-46.5306 **	-45.3579 **
9400.0000	-13.0000	-45.4404 **	-44.7984 **
11280.0000	-13.0000	-41.1255 **	-42.1743 **
13160.0000	-13.0000	-40.9458 **	-38.4718 **
15040.0000	-13.0000	-37.4439 **	-37.7362 **
16920.0000	-13.0000	-35.8037 **	-33.9004 **
18800.0000	-13.0000	-48.5468 **	-49.1574 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Fri, Sep 30, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 24.7 Hum(%RH): 69.2

System MU: 5.01 dB

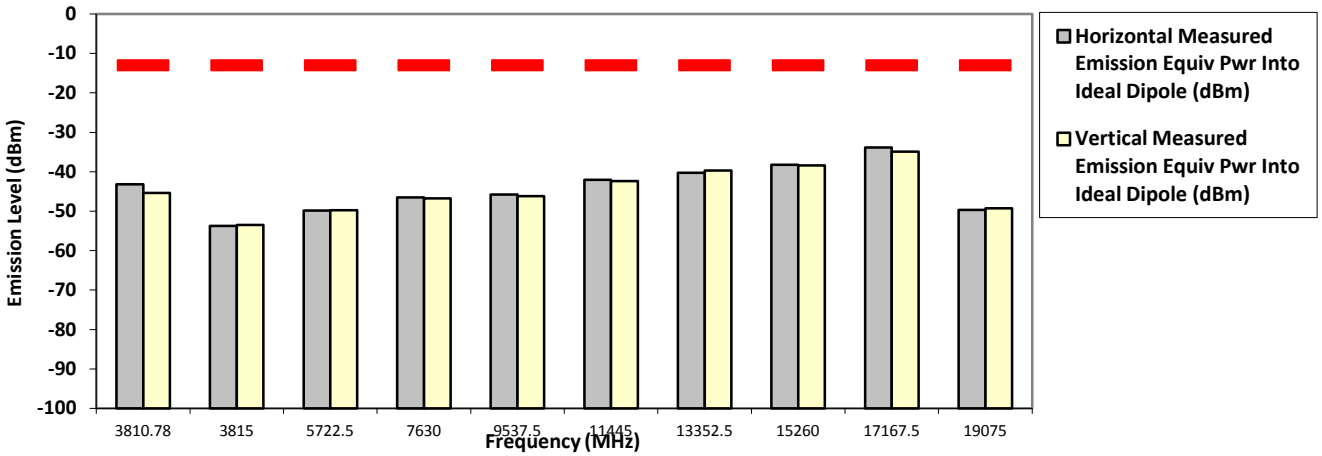
Remarks:	Passed Results	**Marginal Results**	**Failed Results**

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 627TSR0661** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1907.500000 MHz **Bandwidth 5MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3810.7800	-13.0000	-43.2100 *	-45.3600 *
5722.5000	-13.0000	-49.8712 **	-49.7824 **
7630.0000	-13.0000	-46.5288 **	-46.7720 **
9537.5000	-13.0000	-45.7909 **	-46.1949 **
11445.0000	-13.0000	-42.0156 **	-42.3975 **
13352.5000	-13.0000	-40.2422 **	-39.6568 **
15260.0000	-13.0000	-38.2409 **	-38.4176 **
17167.5000	-13.0000	-33.8673 **	-34.8977 **
19075.0000	-13.0000	-49.7026 **	-49.3042 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Fri, Sep 30, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 24.7 Hum(%RH): 69.2

System MU: 5.01 dB

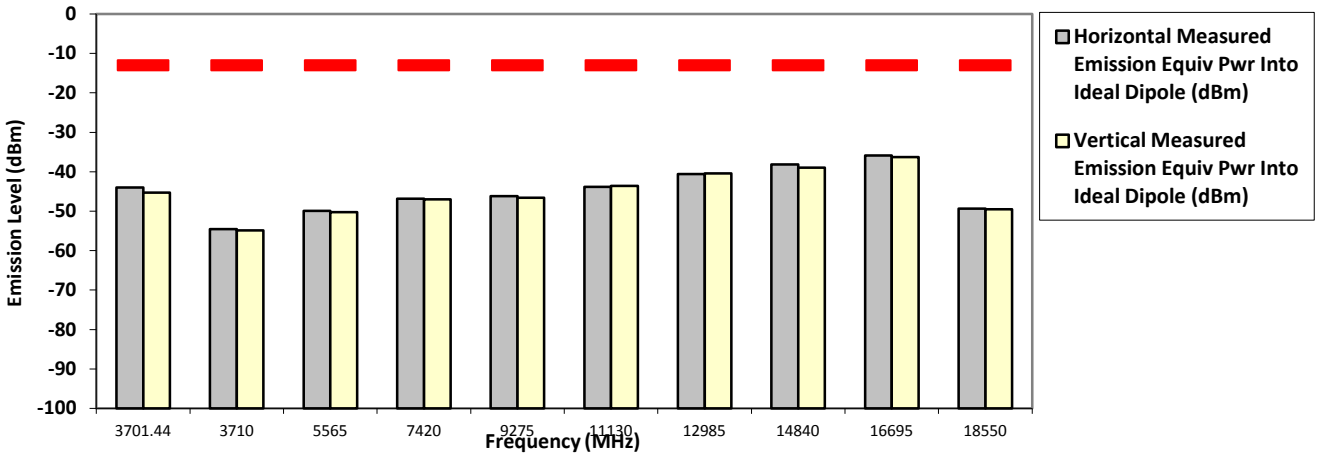
Remarks:	Passed Results	**Marginal Results**	**Failed Results**

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 171PRQ1569** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1855.000000 MHz **Bandwidth 10MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3701.4400	-13.0000	-44.0000 *	-45.2800 *
5565.0000	-13.0000	-49.9486 **	-50.2597 **
7420.0000	-13.0000	-46.8743 **	-46.9877 **
9275.0000	-13.0000	-46.2152 **	-46.6237 **
11130.0000	-13.0000	-43.8263 **	-43.6264 **
12985.0000	-13.0000	-40.6183 **	-40.4575 **
14840.0000	-13.0000	-38.1128 **	-38.9823 **
16695.0000	-13.0000	-35.8403 **	-36.2620 **
18550.0000	-13.0000	-49.3599 **	-49.5397 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Sun, Sep 25, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 23.8 Hum(%RH): 69

System MU: 5.01 dB

Remarks:

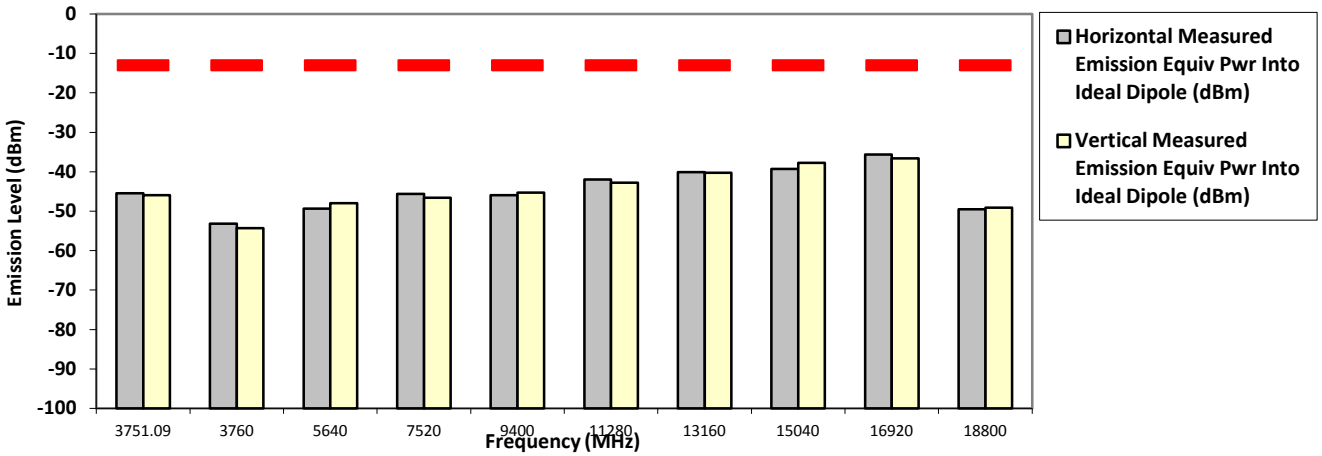
Passed Results	Marginal Results	Failed Results

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 171PRQ1569** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1880.000000 MHz **Bandwidth 10MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3751.0900	-13.0000	-45.4800 *	-45.9400 *
5640.0000	-13.0000	-49.3130 **	-47.9983 **
7520.0000	-13.0000	-45.6501 **	-46.5611 **
9400.0000	-13.0000	-45.9238 **	-45.2658 **
11280.0000	-13.0000	-41.9554 **	-42.7829 **
13160.0000	-13.0000	-40.1075 **	-40.2520 **
15040.0000	-13.0000	-39.2962 **	-37.7404 **
16920.0000	-13.0000	-35.6597 **	-36.5776 **
18800.0000	-13.0000	-49.5252 **	-49.1439 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Sun, Sep 25, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 23.8 Hum(%RH): 69

System MU: 5.01 dB

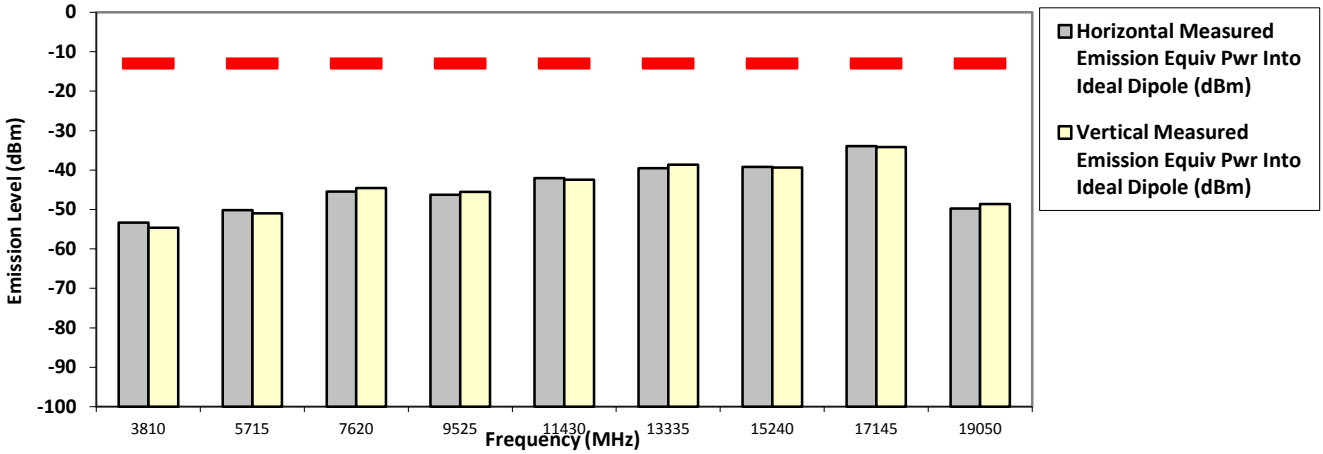
Remarks:	Passed Results	**Marginal Results**	**Failed Results**

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 171PRQ1569** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1905.000000 MHz **Bandwidth 10MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3810.0000	-13.0000	-53.2996 **	-54.6011 **
5715.0000	-13.0000	-50.1239 **	-50.9541 **
7620.0000	-13.0000	-45.4461 **	-44.5647 **
9525.0000	-13.0000	-46.2990 **	-45.5608 **
11430.0000	-13.0000	-42.0370 **	-42.4566 **
13335.0000	-13.0000	-39.4903 **	-38.6556 **
15240.0000	-13.0000	-39.2298 **	-39.3460 **
17145.0000	-13.0000	-33.9109 **	-34.1915 **
19050.0000	-13.0000	-49.7950 **	-48.6604 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Sun, Sep 25, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 23.8 Hum(%RH): 69

System MU: 5.01 dB

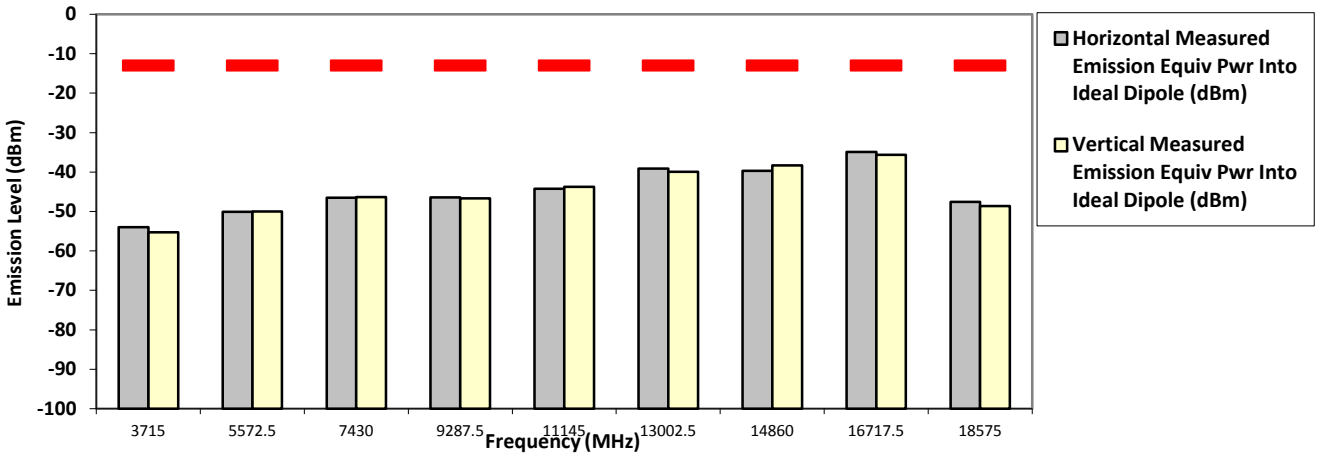
Remarks:	Passed Results	Marginal Results	Failed Results

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 171PRQ1569** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1857.500000 MHz **Bandwidth 15MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3715.0000	-13.0000	-53.9516 **	-55.2444 **
5572.5000	-13.0000	-50.0638 **	-49.9648 **
7430.0000	-13.0000	-46.4887 **	-46.3376 **
9287.5000	-13.0000	-46.4218 **	-46.6944 **
11145.0000	-13.0000	-44.2760 **	-43.7885 **
13002.5000	-13.0000	-39.1227 **	-39.9406 **
14860.0000	-13.0000	-39.7257 **	-38.2964 **
16717.5000	-13.0000	-34.8984 **	-35.6432 **
18575.0000	-13.0000	-47.5359 **	-48.5968 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Sun, Sep 25, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 23.8 Hum(%RH): 69

System MU: 5.01 dB

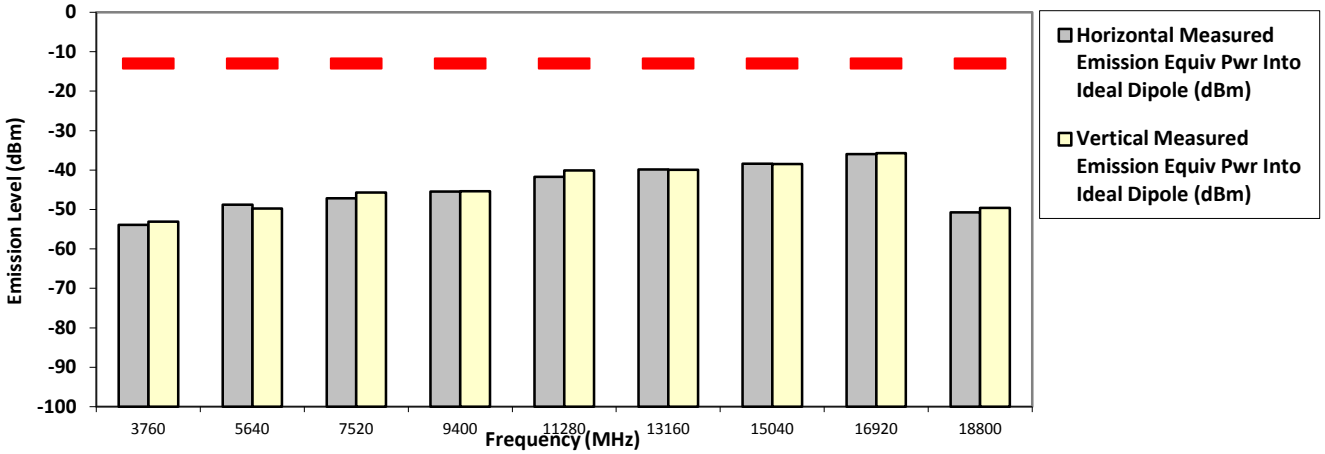
Remarks:	Passed Results	Marginal Results	Failed Results

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 171PRQ1569** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1880.000000 MHz **Bandwidth 15MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3760.0000	-13.0000	-53.8970 **	-53.1157 **
5640.0000	-13.0000	-48.8037 **	-49.7457 **
7520.0000	-13.0000	-47.1847 **	-45.7192 **
9400.0000	-13.0000	-45.4218 **	-45.3872 **
11280.0000	-13.0000	-41.7181 **	-40.1272 **
13160.0000	-13.0000	-39.8773 **	-39.9762 **
15040.0000	-13.0000	-38.4231 **	-38.4373 **
16920.0000	-13.0000	-35.9233 **	-35.7462 **
18800.0000	-13.0000	-50.7346 **	-49.5708 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Sun, Sep 25, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 23.8 Hum(%RH): 69

System MU: 5.01 dB

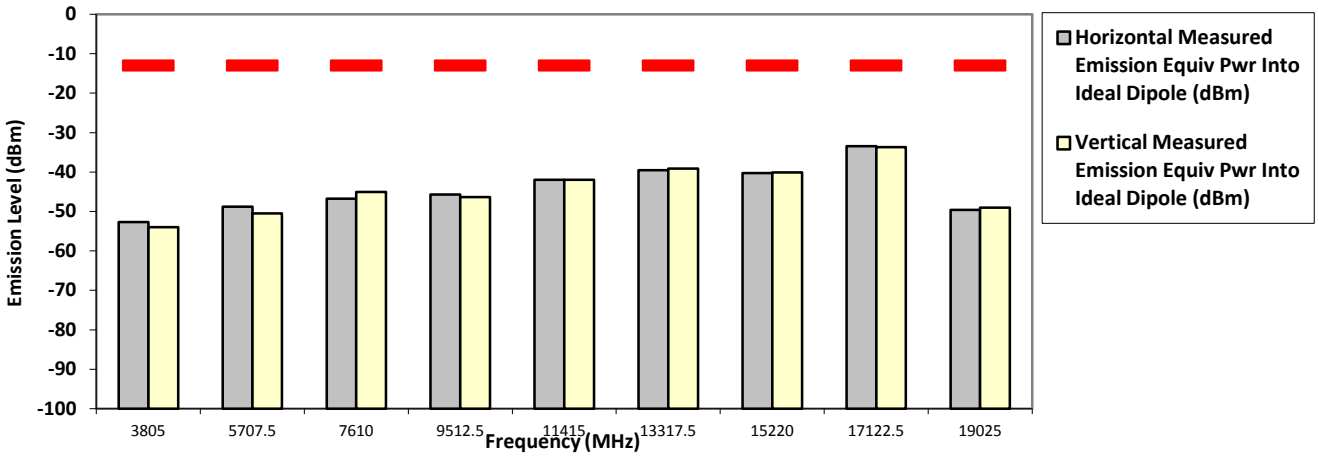
Remarks:	Passed Results	**Marginal Results**	**Failed Results**

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 171PRQ1569** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1902.500000 MHz **Bandwidth 15MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3805.0000	-13.0000	-52.7167 **	-54.0111 **
5707.5000	-13.0000	-48.7435 **	-50.4985 **
7610.0000	-13.0000	-46.7843 **	-45.0869 **
9512.5000	-13.0000	-45.6924 **	-46.3755 **
11415.0000	-13.0000	-41.9466 **	-41.9473 **
13317.5000	-13.0000	-39.5094 **	-39.0920 **
15220.0000	-13.0000	-40.2467 **	-40.0796 **
17122.5000	-13.0000	-33.4031 **	-33.6614 **
19025.0000	-13.0000	-49.5566 **	-49.0193 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Sun, Sep 25, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 23.8 Hum(%RH): 69

System MU: 5.01 dB

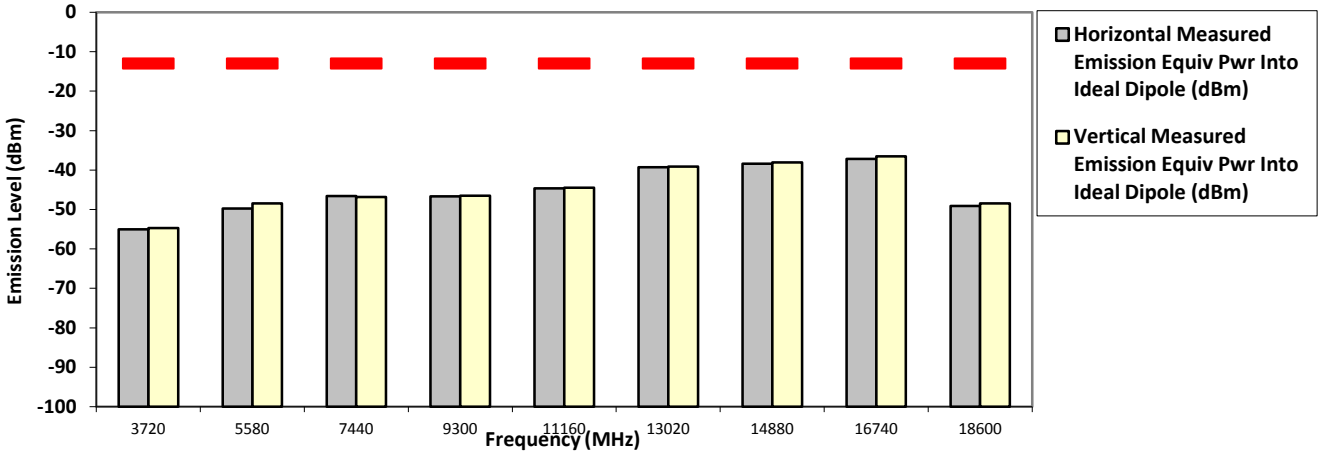
Remarks:	Passed Results	Marginal Results	Failed Results

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 171PRQ1569** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1860.000000 MHz **Bandwidth 20MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3720.0000	-13.0000	-55.0053 **	-54.7374 **
5580.0000	-13.0000	-49.7723 **	-48.4220 **
7440.0000	-13.0000	-46.5745 **	-46.8525 **
9300.0000	-13.0000	-46.6526 **	-46.4741 **
11160.0000	-13.0000	-44.6773 **	-44.5079 **
13020.0000	-13.0000	-39.2638 **	-39.0984 **
14880.0000	-13.0000	-38.3884 **	-38.0698 **
16740.0000	-13.0000	-37.1860 **	-36.5169 **
18600.0000	-13.0000	-49.1285 **	-48.4860 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Sun, Sep 25, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 23.8 Hum(%RH): 69

System MU: 5.01 dB

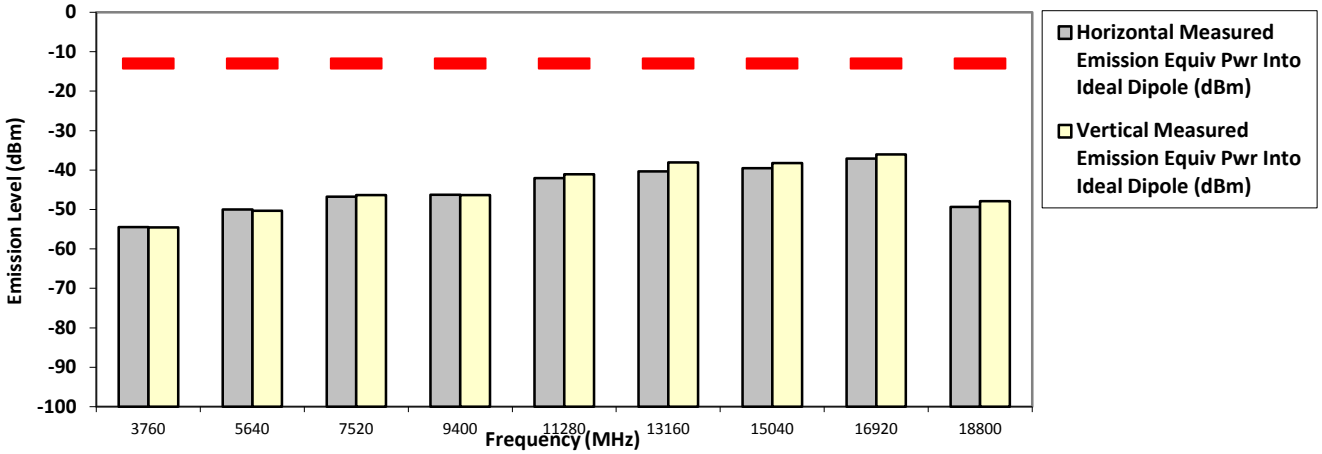
Remarks:	Passed Results	Marginal Results	Failed Results

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 171PRQ1569** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1880.000000 MHz **Bandwidth 20MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3760.0000	-13.0000	-54.4487 **	-54.5726 **
5640.0000	-13.0000	-49.9833 **	-50.3575 **
7520.0000	-13.0000	-46.7807 **	-46.3495 **
9400.0000	-13.0000	-46.2651 **	-46.3643 **
11280.0000	-13.0000	-42.0281 **	-41.1132 **
13160.0000	-13.0000	-40.3374 **	-38.0310 **
15040.0000	-13.0000	-39.5214 **	-38.2360 **
16920.0000	-13.0000	-37.1143 **	-36.0539 **
18800.0000	-13.0000	-49.3118 **	-47.8622 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Sun, Sep 25, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 23.8 Hum(%RH): 69

System MU: 5.01 dB

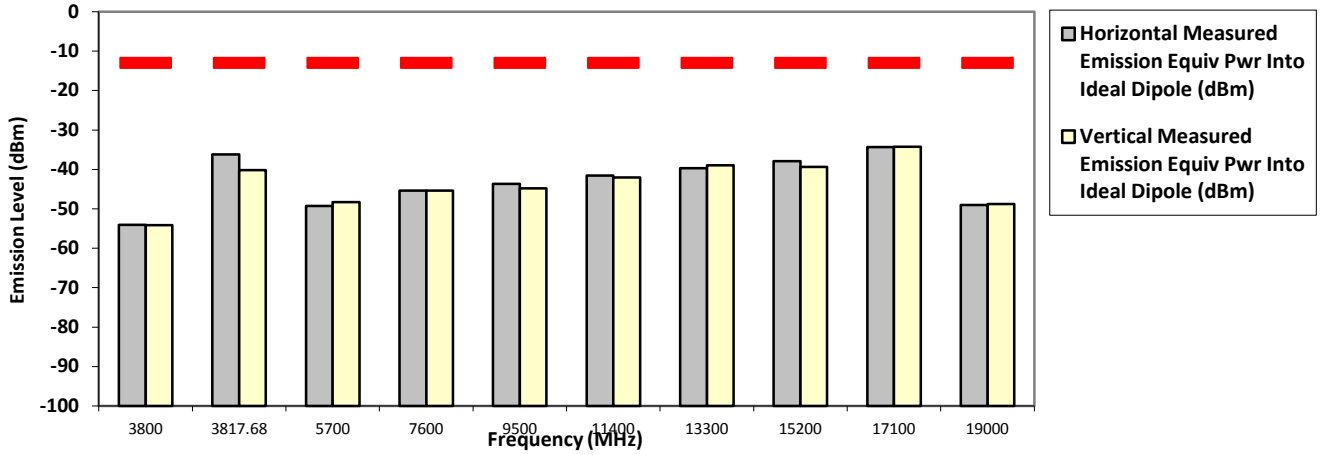
Remarks:	Passed Results	Marginal Results	Failed Results

LINK MODE RADIATED SPURIOUS EMISSIONS:

Model #: LEX L10i **S/N: 627TSR0661** **SR:03360-EMC-00114**
Battery Part No: PMNN4472A **Accy Part No: 3360-HKTN4009A-1, 3360-CB000262A01-1**
Test Mode: TX LTE (Band 2)
1900.000000 MHz **Bandwidth 20MHz** **0.251 Watt(s) /Max Power**

Frequency (MHz)	Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
3817.6800	-13.0000	-36.2000 *	-40.2000 *
5700.0000	-13.0000	-49.3003 **	-48.2728 **
7600.0000	-13.0000	-45.3829 **	-45.3585 **
9500.0000	-13.0000	-43.6750 **	-44.8011 **
11400.0000	-13.0000	-41.5285 **	-42.0127 **
13300.0000	-13.0000	-39.7230 **	-38.9338 **
15200.0000	-13.0000	-37.9323 **	-39.4085 **
17100.0000	-13.0000	-34.2971 **	-34.2567 **
19000.0000	-13.0000	-49.0548 **	-48.7642 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603D document.
Motorola Penang EMC Lab - Test Performed by: Qawiman&Nazrin **Fri, Sep 30, 2016**
FCC Registration: 772092 **Industry Canada: 109AK**
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 24.7 Hum(%RH): 69.2

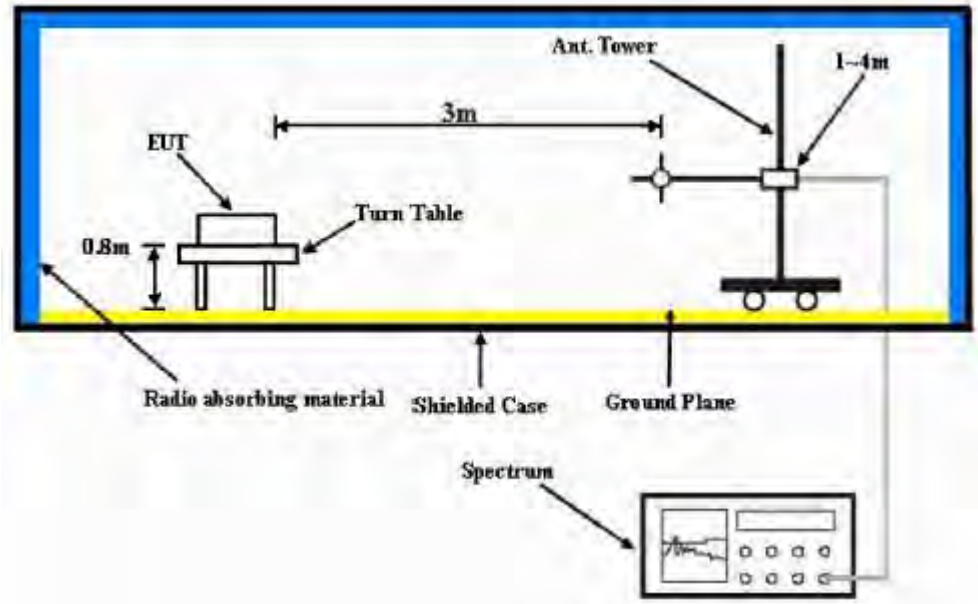
System MU: 5.01 dB

Remarks:

Passed Results	**Marginal Results**	**Failed Results**

1.6. Equivalent Isotropically Radiated Power (EIRP)

1.6.1. Test Setup



1) The spectrum setting for Equivalent Isotropically Radiated Power (EIRP) is RBW = 100 kHz, VBW = 300 kHz. Detector Mode is RMS.

2) In the semi-anechoic chamber, setup as illustrated above the EUT placed on the 0.8m height of Turn Table, rotated the table 45 degree each interval to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power for each degree interval. The “Read Value” is the spectrum reading of maximum power value.

3) The substitution antenna is substituted for EUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the Measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.

4) EIRP = “Read Value” + Measured substitution value + 2.15.

1.6.2. Test Limit

Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

1.6.3. Equivalent Isotropically Radiated Power (EIRP) - LTE Band 2 (1850-1910MHz)

Band 2, 1.4MHz QPSK, Mid CH 18900	
RB = 1	Offset = 5

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 1.4 MHz **Modulation: QPSK**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1880.0000	19.00	16.85
Vert.	1880.0000	14.88	12.73

Band 2, 3MHz QPSK, Mid CH 18900	
RB = 1	Offset = 14

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 3 MHz **Modulation: QPSK**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1880.0000	20.86	18.71
Vert.	1880.0000	16.51	14.36

Band 2, 5MHz QPSK, Mid CH 18900	
RB = 1	Offset = 0

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 5 MHz **Modulation: QPSK**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1880.0000	20.70	14.93
Vert.	1880.0000	12.92	10.77

Band 2, 10MHz QPSK, Mid CH 18900	
RB = 1	Offset = 0

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 10 MHz **Modulation: QPSK**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1880.0000	21.90	19.75
Vert.	1880.0000	13.81	11.66

Band 2, 15MHz QPSK, Mid CH 18900	
RB = 1	Offset = 0

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 15 MHz **Modulation: QPSK**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1880.0000	21.98	19.83
Vert.	1880.0000	15.61	13.46

Band 2, 20MHz QPSK, Low CH 18700	
RB = 1	Offset = 99

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 20 MHz **Modulation: QPSK**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1860.0000	21.84	19.69
Vert.	1860.0000	14.70	12.55

Band 2, 1.4MHz 16QAM, Mid CH 18900	
RB = 1	Offset = 5

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 1.4 MHz **Modulation: 16QAM**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1880.0000	19.67	17.52
Vert.	1880.0000	15.17	13.02

Band 2, 3MHz 16QAM, Mid CH 18900	
RB = 1	Offset = 14

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 3 MHz **Modulation: 16QAM**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1880.0000	19.54	17.39
Vert.	1880.0000	16.41	14.26

Band 2, 5MHz 16QAM, Mid CH 18900	
RB = 1	Offset = 0

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 5 MHz **Modulation: 16QAM**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1880.0000	17.43	15.28
Vert.	1880.0000	16.08	13.93

Band 2, 10MHz 16QAM, Mid CH 18900	
RB = 1	Offset = 0

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 10 MHz **Modulation: 16QAM**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1880.0000	18.72	16.57
Vert.	1880.0000	14.00	11.85

Band 2, 15MHz 16QAM, High CH 18900	
RB = 1	Offset = 0

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 15 MHz **Modulation: 16QAM**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1880.0000	17.08	14.93
Vert.	1880.0000	15.06	12.91

Band 2, 20MHz 16QAM, Low CH 18700	
RB = 1	Offset = 99

EIRP/ERP

S/N: 171PRQ1569 **Tx Power: 0.251 Watts**
Bandwidth: 20 MHz **Modulation: 16QAM**
Accessory: 3360-HKTN4009A-1, 3360-CB000262A01-1

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	1860.0000	21.26	19.11
Vert.	1860.0000	14.36	12.21