

	 MS ISO/IEC 17025 TESTING SMM No. 0825																										
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 / ISED TEST REPORT Report Revision : Rev.A																										
<table><tr><td>Date/s Tested</td><td>: 27-Dec-2018 - 23-Jan-2019</td></tr><tr><td>Manufacturer/Location</td><td>: Motorola Solutions - Schaumburg</td></tr><tr><td>Requestor</td><td>: HOPKINS, SEAN</td></tr><tr><td>Product Type</td><td>: Hand-held</td></tr><tr><td>Product Version (PMN)</td><td>: P1B</td></tr><tr><td>Model Number (HVIN)</td><td>: H55TGT9PW8AN</td></tr><tr><td>Frequency Band</td><td>: Refer to section 1.4</td></tr><tr><td>Applicant Name</td><td>: Motorola Solutions, Inc</td></tr><tr><td>Applicant Address</td><td>: 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322</td></tr><tr><td>FCC Registrations</td><td>: 461337</td></tr><tr><td>ISED Registrations</td><td>: 109AK</td></tr><tr><td>Firmware Version (FVIN)</td><td>: D00.00.31</td></tr></table> The equipment was tested accordance to the requirement listed below: <table><tr><td>(LTE Band 17) FCC 47 CFR Part 2 / 27 ISED RSS GEN Issue 5, April 2018 ISED RSS 130 Issue 1, October 2013</td><td>PASS</td></tr></table> 		Date/s Tested	: 27-Dec-2018 - 23-Jan-2019	Manufacturer/Location	: Motorola Solutions - Schaumburg	Requestor	: HOPKINS, SEAN	Product Type	: Hand-held	Product Version (PMN)	: P1B	Model Number (HVIN)	: H55TGT9PW8AN	Frequency Band	: Refer to section 1.4	Applicant Name	: Motorola Solutions, Inc	Applicant Address	: 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322	FCC Registrations	: 461337	ISED Registrations	: 109AK	Firmware Version (FVIN)	: D00.00.31	(LTE Band 17) FCC 47 CFR Part 2 / 27 ISED RSS GEN Issue 5, April 2018 ISED RSS 130 Issue 1, October 2013	PASS
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Prepared By:  Maheshvaran Rajagopal Technician	Approved By:  Goh Aik Hong Responsible Engineer																										

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REVISION HISTORY

Revision History	Description	Date	Originator
Rev A.	Initial Report	26-Feb-2019	Maheshvaran Rajagopal

1.0. Summary of Test Results

FCC Clause	ISED Clause	Test Item	Results	Remarks	Serial Number Tested
2.1046	RSS-Gen 6.12 RSS-130 4.1	Conducted RF Output Power	Pass	Meet the requirement of limit.	437P1B0011
-	RSS 130 4.4	Peak-to-Average Power Ratio	Pass	Meet the requirement of limit.	437P1B0011
2.1049	RSS-Gen 6.7	Occupied Bandwidth (26dBc, 99%)	Pass	Meet the requirement of limit.	437P1B0011
2.1055 27.54	RSS-130 4.3	Frequency Stability	Pass	Meet the requirement of limit.	437P1B0011
2.1051 27.53(g)	RSS-Gen 6.13 RSS-130 4.6	Band Edge Conducted Spurious Emission	Pass	Meet the requirement of limit.	437P1B0011
2.1051 27.53(g)	RSS-Gen 6.13 RSS-130 4.6	Conducted Spurious Emissions	Pass	Meet the requirement of limit.	437P1B0011
2.1053 27.53(g)	RSS-130 4.6	Radiated Spurious Emission	Not Performed.	Not Performed.	Not Performed.
2.1049 27.50(c)(9)(10)	RSS-130 4.4	Effective Radiated Power (ERP)	Not Performed.	Not Performed.	Not Performed.

1.1. Measurement Uncertainty

Measurement	Frequency	Expanded Uncertainty (k=1.96) (±dB)
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
Broadband ATE 1 (Test Software Version : R&S CMWRun 1.8.9)				
Wideband Radio Communication Tester	CMW500	153174	12-Apr-17	12-Apr-19
Signal Analyzer	FSV40	101431	13-Jul-17	12-Jul-19
Chamber	SH-641	92002651	5-Mar-18	5-Mar-19
Power Supply	6623A	3417A03546	15-Nov-17	15-Nov-19

1.3. General Information

General Description of EUT

Product	Hand-held			
Brand	Motorola Solutions			
Test Model	H55TGT9PW8AN			
Power Supply Rating	7.5 Vdc			
Mode of operation	LTE Band 17			
Modulation Type	QPSK, 16QAM			
Operating Frequency	LTE Band 17	Channel Bandwidth 5MHz	706.5MHz~713.5MHz	
		Channel Bandwidth 10MHz	709.0MHz~711.0MHz	
Max. Conducted RF Output Power	LTE Band 17 QPSK	Channel Bandwidth 5MHz	22.72dBm (0.187W)	
		Channel Bandwidth 3MHz	22.694dBm (0.186W)	
	LTE Band 17 16QAM	Channel Bandwidth 5MHz	22.026dBm (0.159W)	
		Channel Bandwidth 10MHz	22.007dBm (0.156W)	
Emission Designator	LTE Band 17		QPSK	16QAM
		Channel Bandwidth 5MHz	4M48G7D	4M47D7W
		Channel Bandwidth 10MHz	8M91G7D	8M93D7W
Antenna Type	LTE Band 17	Stamped Metal with -3.65dBi gain		
SW Version	D00.00.31			
HW Version	P1B			

Note:

1. The EUT contains following accessory devices and data cable.

Item	Brand	Model or P/N	Specification
DMR Portable Programming Cable	Motorola Solutions	PMKN4012B	-

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	153174	NA

Note:

- 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 27

KDB 971168 D01 Power Meas License Digital Systems v03r01

KDB 971168 D02 Misc OOB License Digital Systems v02r01

ANSI C63.26-2015

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

Deviation from standard

Not applicable as no deviation from standard test method.

1.4. Channel number and frequency info

Band	Bandwidth supported	Available Channel Number	Test Channel Number			Test Channel Frequency (MHz)		
			Low Channel	Mid Channel	High Channel	Low Channel	Mid Channel	High Channel
LTE Band 17	5 MHz	23755 ~ 23825	23755	23790	23825	706.5	710	713.5
	10 MHz	23780 ~ 23800	23780	23790	23800	709	710	711

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 and antenna ports.

The following channel(s) was (were) selected for the final test as listed below:

LTE Band 17

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Uplink Modulation	Mode
Conducted RF Output Power	23755 ~ 23825	23755, 23790, 23825	5 MHz	QPSK, 16QAM	As per table 1.6.2
	23780 ~ 23800	23780, 23790, 23800	10 MHz		
Peak to Average Power Ratio	23755 ~ 23825	23755, 23790, 23825	5 MHz	QPSK, 16QAM	25 RB / 0 RB Offset
	23780 ~ 23800	23780, 23790, 23800	10 MHz		50 RB / 0 RB Offset
Occupied Bandwidth	23755 ~ 23825	23755, 23790, 23825	5 MHz	QPSK, 16QAM	25 RB / 0 RB Offset
	23780 ~ 23800	23780, 23790, 23800	10 MHz		50 RB / 0 RB Offset
Frequency Stability	23755 ~ 23825	23755, 23825	5 MHz	QPSK	25 RB / 0 RB Offset
	23780 ~ 23800	23780, 23800	10 MHz		50 RB / 0 RB Offset
Band Edge Conducted Spurious Emission	23755 ~ 23825	23755, 23825	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
	23780 ~ 23800	23780, 23800	10 MHz		1 RB / 0 RB Offset 1 RB / 49 RB Offset 50 RB / 0 RB Offset
Conducted Spurious Emission	23755 ~ 23825	23755, 23790, 23825	5 MHz	QPSK	1 RB / 0 RB Offset
	23780 ~ 23800	23780, 23790, 23800	10 MHz		1 RB / 0 RB Offset
Radiated Spurious Emission	23755 ~ 23825	23755, 23790, 23825	5 MHz	QPSK	Not Performed.
	23780 ~ 23800	23780, 23790, 23800	10 MHz		
Effective Radiated Power (ERP)	23755 ~ 23825	23755, 23790, 23825	5 MHz	QPSK, 16QAM	Not Performed.
	23780 ~ 23800	23780, 23790, 23800	10 MHz		

NOTE:

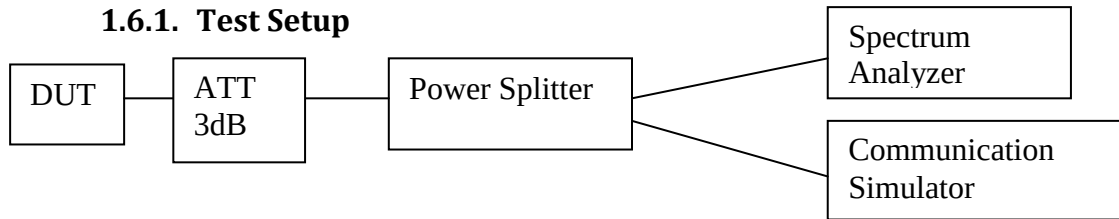
1. The Conducted RF Output Power for QPSK and 16QAM, measured value of QPSK is higher than 16QAM mode. Therefore, only Conducted Spurious Emission had been tested under QPSK modes.
2. Band Edge was performed with 1 and full Resource Block at the lowest and highest operating frequency band.
3. Peak to Average and Occupied Bandwidth were performed with full Resource Block which is the worst case.
4. 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	7.5V DC	Maheshvaran
Peak-to-Average Power Ratio	25°C, 50% RH	7.5V DC	Maheshvaran
Occupied Bandwidth	25°C, 50% RH	7.5V DC	Maheshvaran
Frequency Stability	25°C, 50% RH	7.5V DC	Maheshvaran
Band Edge Conducted Spurious Emission	25°C, 50% RH	7.5V DC	Maheshvaran
Conducted Spurious Emission	25°C, 50% RH	7.5V DC	Maheshvaran
Radiated Spurious Emission	Not Performed.		
Effective Radiated Power (ERP)	Not Performed.		

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. Limits

FCC: Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

ISED: The e.i.r.p. shall not exceed 50 watts for mobile equipment or for outdoor fixed subscriber equipment, nor shall it exceed 5 watts for portable equipment or for indoor fixed subscriber equipment.

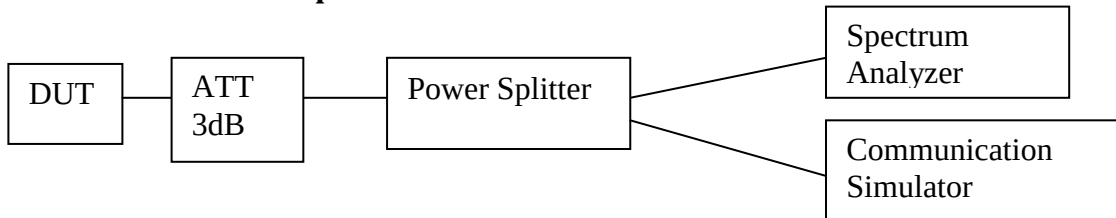
1.6.3. Conducted RF Output Power – LTE Band 17 (704-716MHz)

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
			23755	23790	23825	23755	23790	23825
			706.5MHz	710.0MHz	713.5MHz	706.5MHz	710.0MHz	713.5MHz
Band 17 / 5MHz	1	0	22.72	22.621	22.532	22.026	21.765	21.582
	1	13	22.704	22.653	22.55	22.013	21.777	21.606
	1	24	22.63	22.557	22.493	21.939	21.712	21.534
	12	0	21.702	21.648	21.608	20.762	20.66	20.696
	12	6	21.683	21.653	21.601	20.779	20.663	20.678
	12	13	21.638	21.623	21.549	20.725	20.627	20.611
	25	0	21.672	21.649	21.581	20.761	20.707	20.643

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
			23780	23790	23800	23780	23790	23800
			709.0MHz	710.0MHz	711.0MHz	709.0MHz	710.0MHz	711.0MHz
Band 17 / 10MHz	1	0	22.694	22.65	22.584	21.71	21.816	22.007
	1	25	22.628	22.553	22.515	21.661	21.716	21.923
	1	49	22.572	22.503	22.494	21.589	21.684	21.862
	25	0	21.664	21.666	21.646	20.785	20.793	20.78
	25	13	21.665	21.668	21.657	20.805	20.813	20.778
	25	25	21.62	21.625	21.614	20.762	20.762	20.722
	50	0	21.649	21.654	21.621	20.768	20.704	20.754

1.7. Peak-to-Average Power Ratio

1.7.1. Test Setup



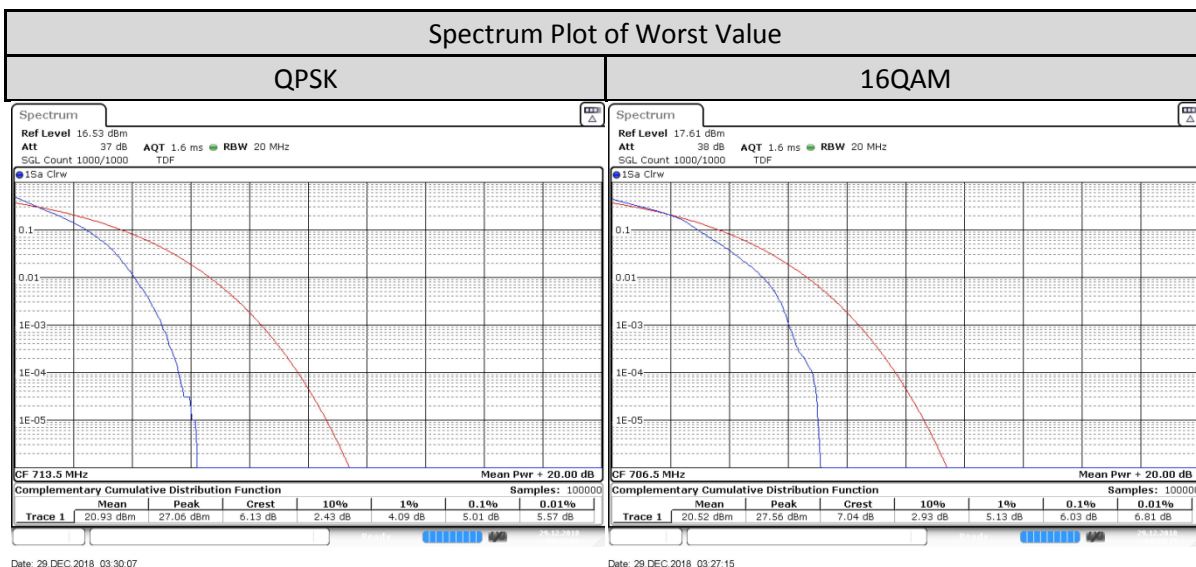
1. The DUT transmitter output port was connected to communication simulator with above setup.
2. Path loss for the measurement included.
3. Set DUT to transmit maximum power through communication simulator
4. Set the CCDF (Complementary Cumulative Distribution Function) option in the spectrum analyzer.
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

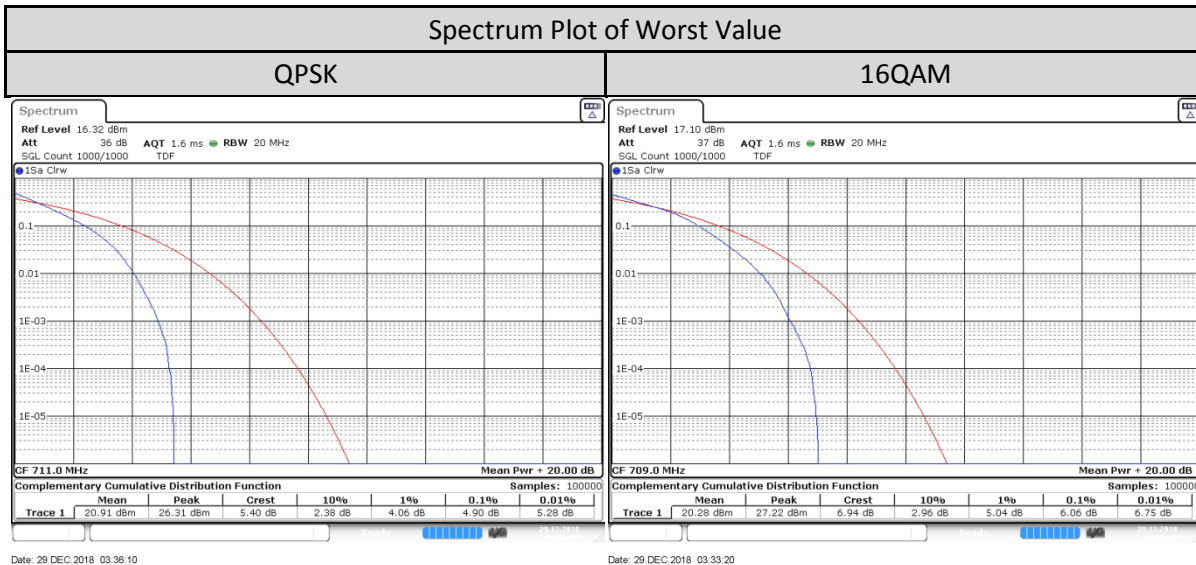
In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

1.7.3. Peak-to-Average Power Ratio - LTE Band 17 (704-716MHz)

LTE Band/BW/RB Size/RB Offset	Channel Number	Tx Frequency	Peak To Average (dB)	
			QPSK Modulation	16QAM Modulation
Band 17/5MHz/25/0	Low CH 23755	706.5 MHz	4.899	6.029
	Mid CH 23790	710 MHz	4.928	6.029
	High CH 23825	713.5 MHz	5.014	5.971

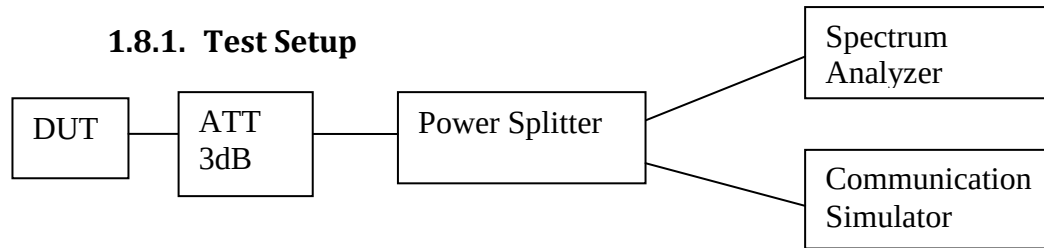


LTE Band/BW/RB Size/RB Offset	Channel Number	Tx Frequency	Peak To Average (dB)	
			QPSK Modulation	16QAM Modulation
Band 17/10MHz/50/0	Low CH 23780	709 MHz	4.754	6.058
	Mid CH 23790	710 MHz	4.841	6
	High CH 23800	711 MHz	4.899	6.029



1.8. Occupied Bandwidth

1.8.1. Test Setup



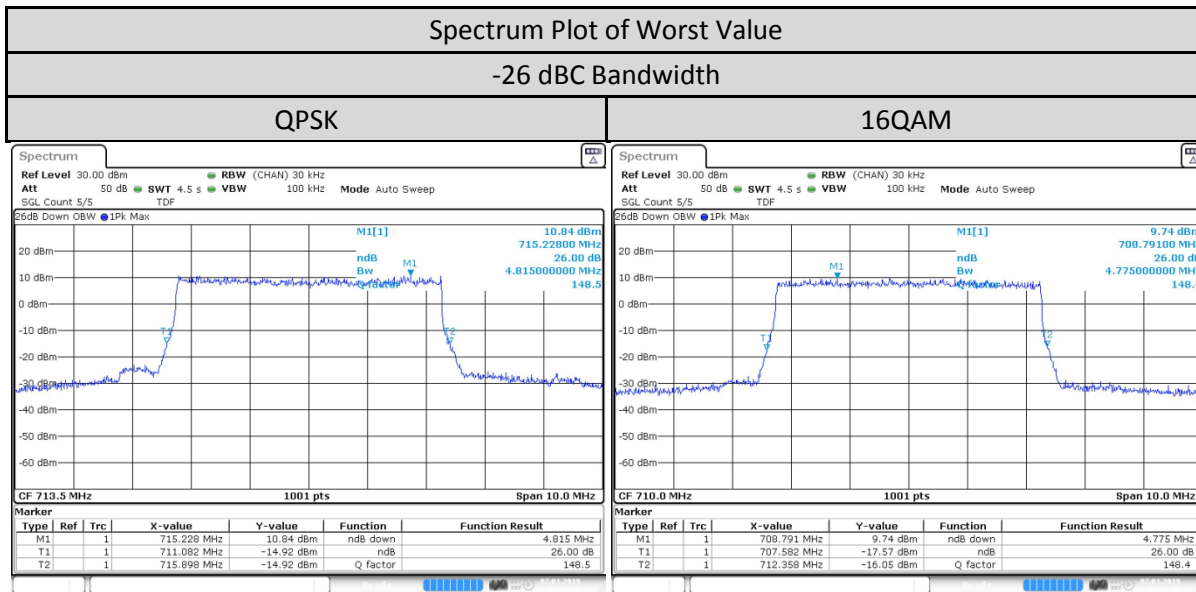
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) For LTE measurement, set DUT to transmit maximum power & full RB size through communication simulator.
- 4) For LTE measurement, set DUT to transmit maximum 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.

1.8.2. Test Limit

For measurement 99% of occupied bandwidth that is required by FCC 2.1049 and RSS Gen 6.6.

1.8.3. Occupied Bandwidth - LTE Band 17 (704-716MHz)

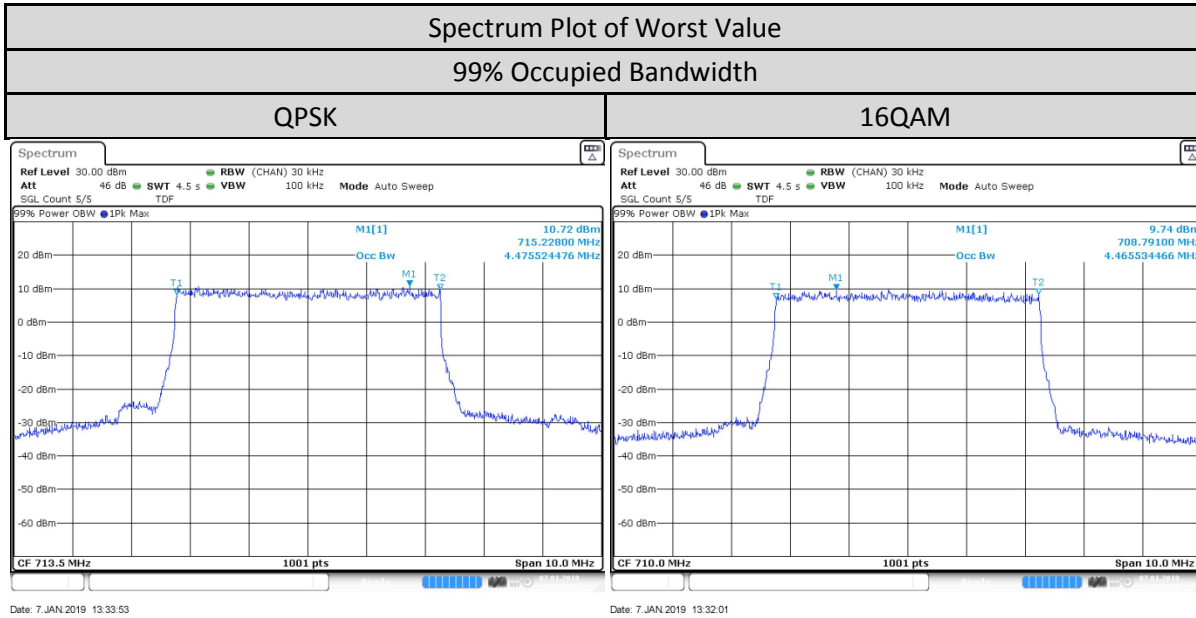
LTE Band/BW/RB Size/RB Offset	Channel Number	Tx Frequency	-26 dBc Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 17/5MHz/25/0	Low CH 23755	706.5 MHz	4.725	4.705
	Mid CH 23790	710 MHz	4.755	4.775
	High CH 23825	713.5 MHz	4.815	4.745



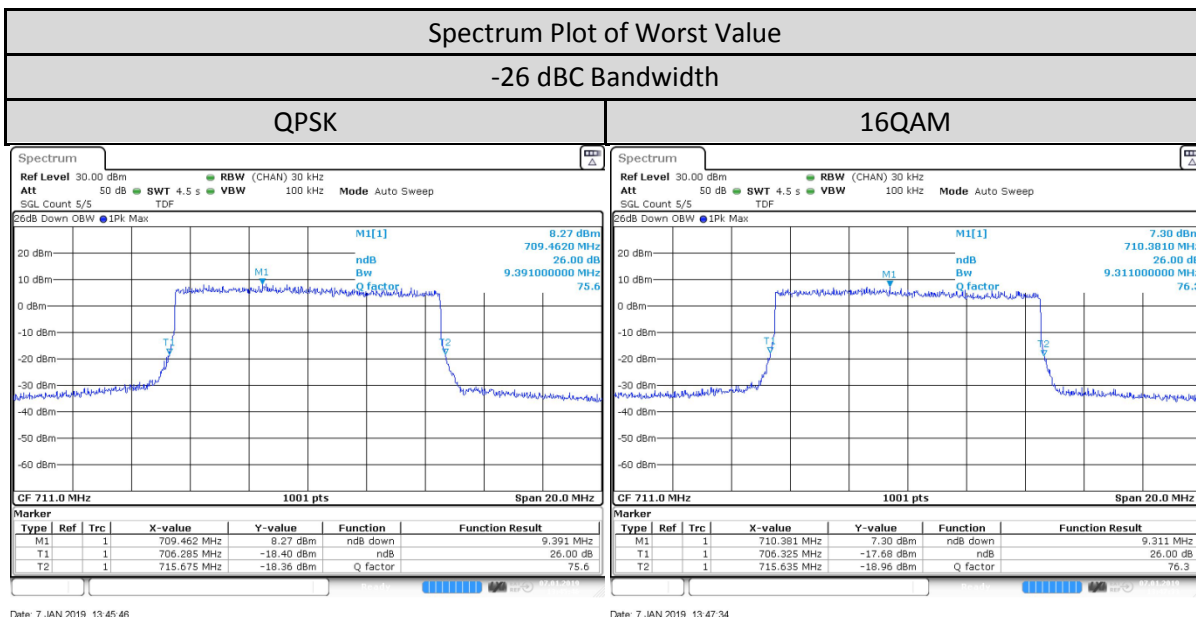
Date: 7 JAN 2019 13:34:25

Date: 7 JAN 2019 13:32:33

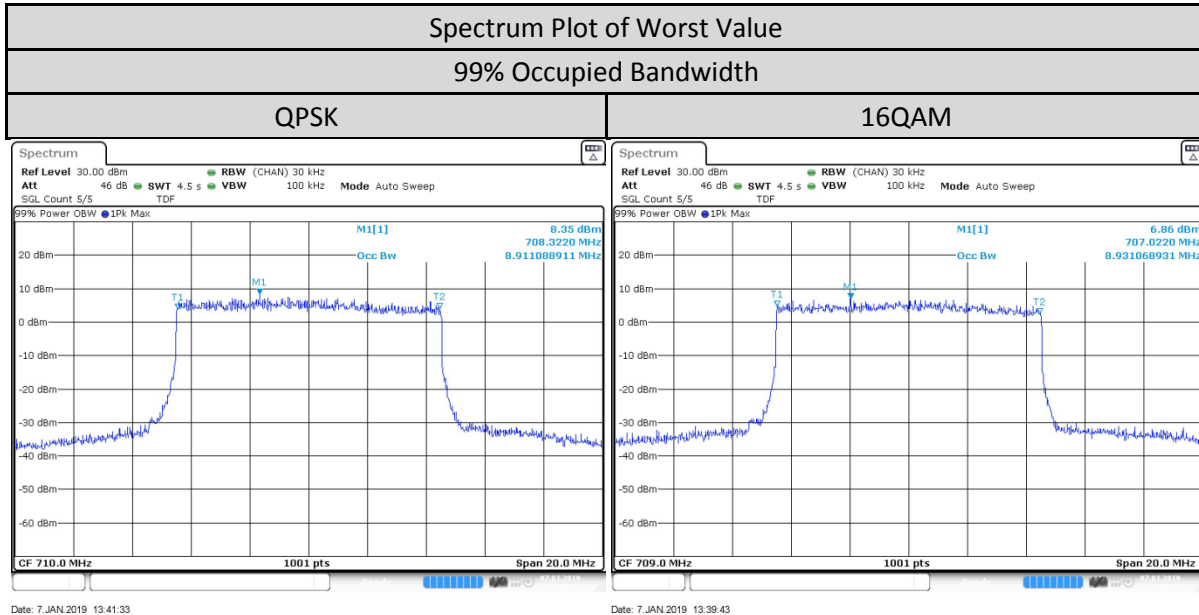
LTE Band/BW/RB Size/RB Offset	Channel Number	Tx Frequency	99% Occupied Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 17/5MHz/25/0	Low CH 23755	706.5 MHz	4.456	4.456
	Mid CH 23790	710 MHz	4.466	4.466
	High CH 23825	713.5 MHz	4.476	4.466



LTE Band/BW/RB Size/RB Offset	Channel Number	Tx Frequency	-26 dBc Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 17/10MHz/50/0	Low CH 23780	709 MHz	9.271	9.291
	Mid CH 23790	710 MHz	9.331	9.231
	High CH 23800	711 MHz	9.391	9.311

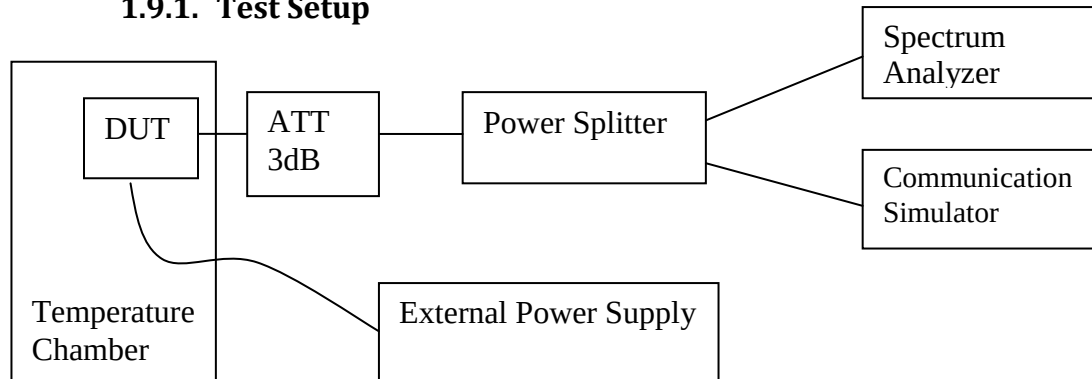


LTE Band/BW/RB Size/RB Offset	Channel Number	Tx Frequency	99% Occupied Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 17/10MHz/50/0	Low CH 23780	709 MHz	8.891	8.931
	Mid CH 23790	710 MHz	8.911	8.911
	High CH 23800	711 MHz	8.911	8.931



1.9. Frequency Stability

1.9.1. 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 -30 ~ 50 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.

1.9.2. Test Limit

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

1.9.3. Frequency Stability - LTE Band 17 (704-716MHz)

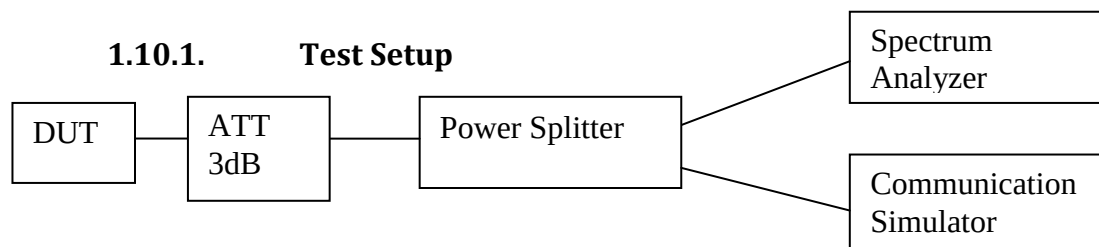
Band	Temp (Deg C)	Frequency Error VS Temperature			
		Channel Bandwidth: 5 MHz			
		Low Channel		High Channel	
		706.5MHz		713.5MHz	
		Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
LTE Band 17	50	706.500004	0.005528	713.499991	-0.012892
	40	706.499993	-0.009314	713.500007	0.009183
	30	706.500006	0.008018	713.499992	-0.010987
	20	706.500006	0.009152	713.500004	0.005473
	10	706.500006	0.008828	713.499996	-0.006095
	0	706.500007	0.010549	713.499993	-0.010325
	-10	706.500006	0.009071	713.499993	-0.009483
	-20	706.500006	0.008605	713.499994	-0.00806
	-30	706.500009	0.01225	713.499996	-0.004972

Band	Voltage (V)	Frequency Error VS Voltage			
		Channel Bandwidth: 5 MHz			
		Low Channel		High Channel	
		706.5MHz		713.5MHz	
LTE Band 17		Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
	9	706.500006	0.009031	713.499991	-0.013112
	7.5	706.500006	0.00899	713.499991	-0.012711
	6	706.499994	-0.008464	713.500005	0.006977

Band	Temp (Deg C)	Frequency Error VS Temperature			
		Channel Bandwidth: 10 MHz			
		Low Channel		High Channel	
		709MHz		711MHz	
LTE Band 17		Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
	50	708.999992	-0.011702	711.000007	0.009597
	40	708.999989	-0.015334	711.000007	0.009839
	30	708.999991	-0.012227	711.000007	0.009295
	20	708.999993	-0.010391	711.000006	0.009094
	10	708.999993	-0.009947	711.000007	0.009597
	0	708.999992	-0.010653	710.999993	-0.009154
	-10	708.999994	-0.008777	711.000007	0.0101
	-20	708.999993	-0.010229	711.000005	0.006418
	-30	708.999992	-0.011137	711.000008	0.011066

Band	Voltage (V)	Frequency Error VS Voltage			
		Channel Bandwidth: 10 MHz			
		Low Channel		High Channel	
		709MHz		711MHz	
LTE Band 17		Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
	9	708.999991	-0.01257	711.000007	0.009356
	7.5	708.99999	-0.013942	711.000005	0.006338
	6	708.999993	-0.010512	710.999993	-0.009778

1.10. Band Edge Conducted Spurious Emission

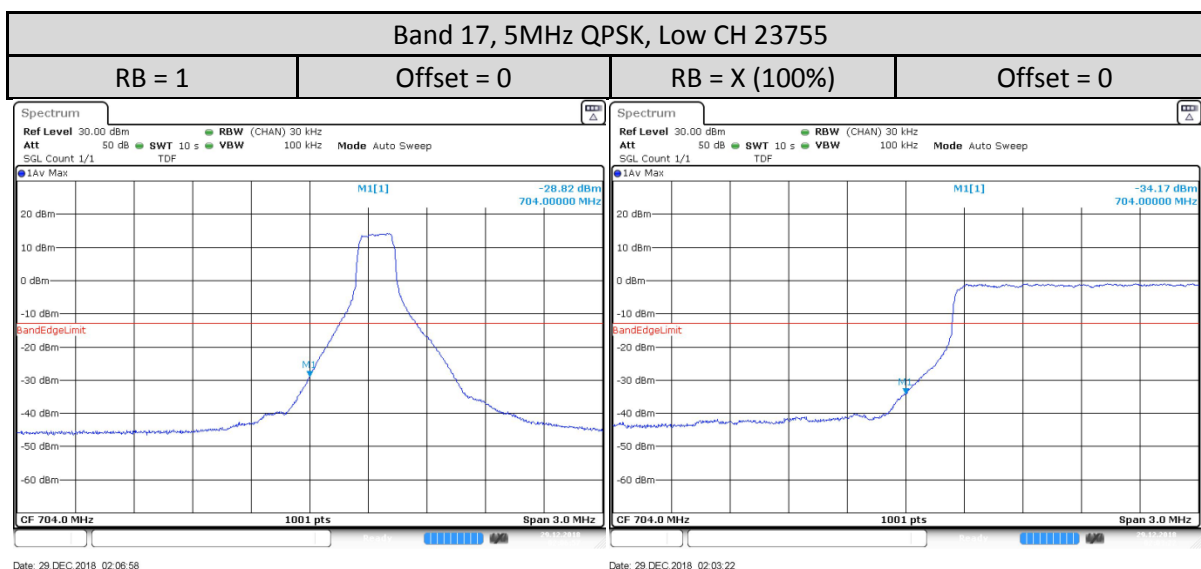


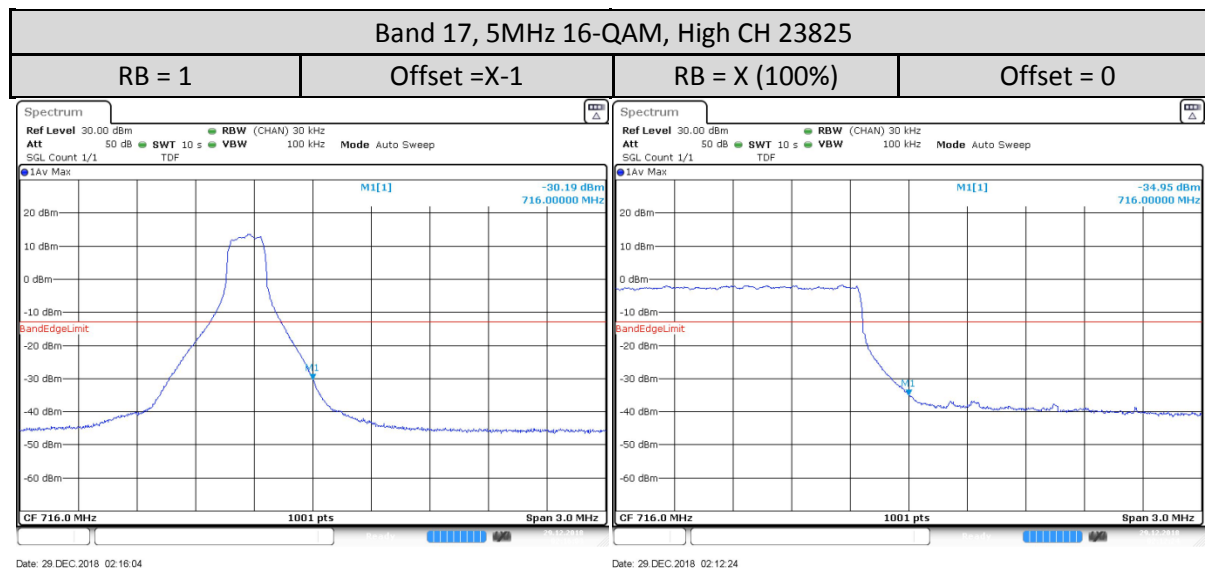
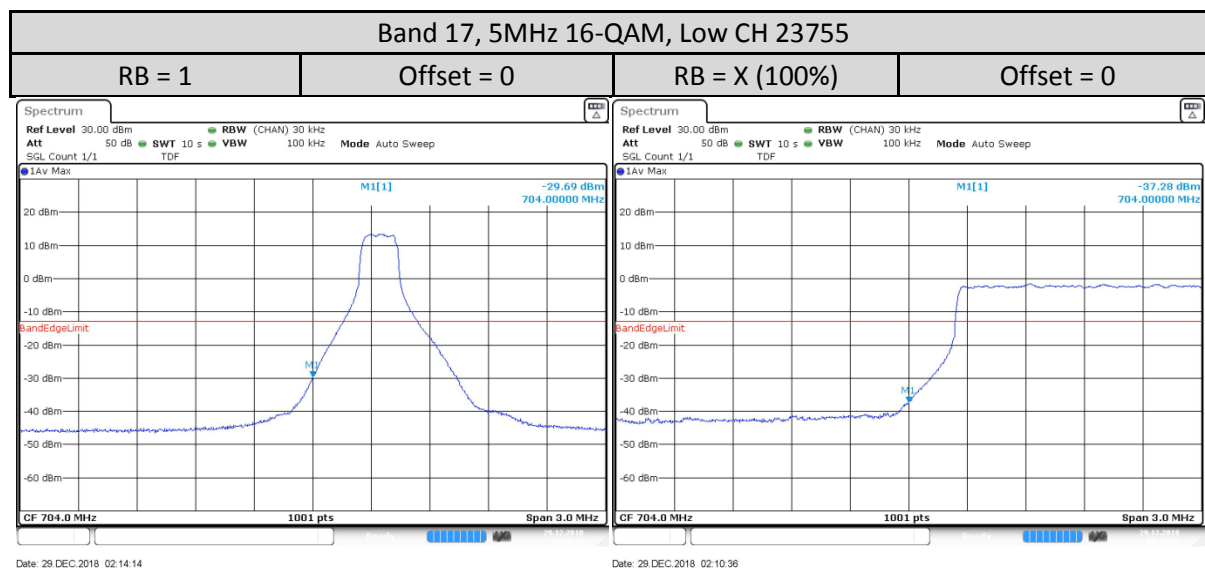
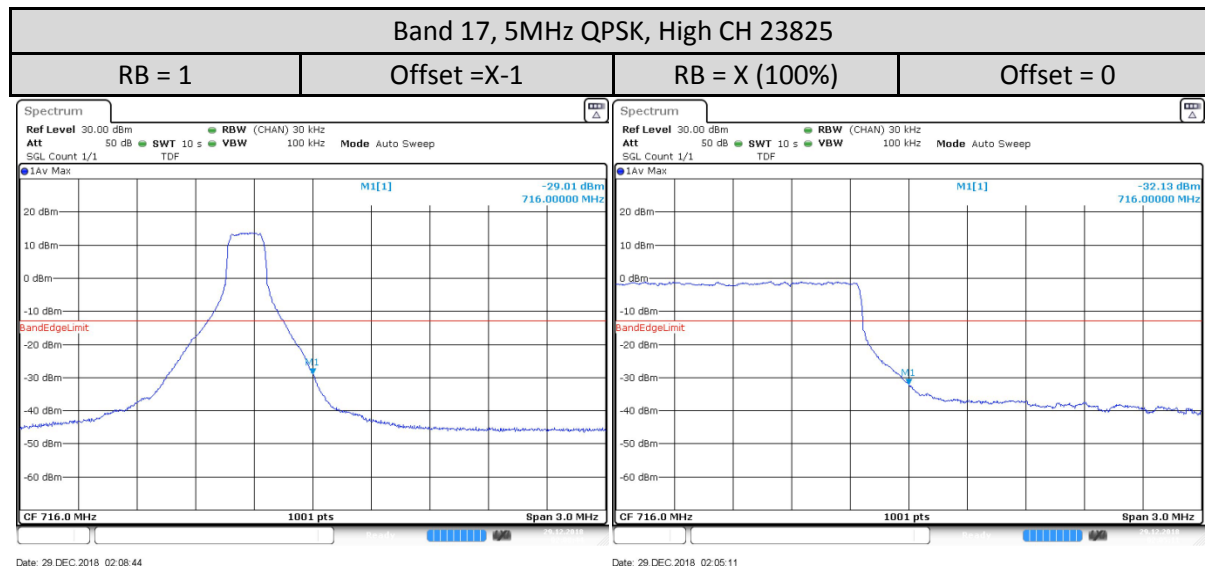
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) Set DUT to transmit maximum power through communication simulator.
- 4) The band edges of lowest and highest channels with the highest RF powers were measured.
- 5) The center frequency of spectrum is the band edge frequency, span is 3MHz, RBW is 30kHz and VBW is at least 3 times of RBW.
- 6) Record the maximum trace plot into the test report.

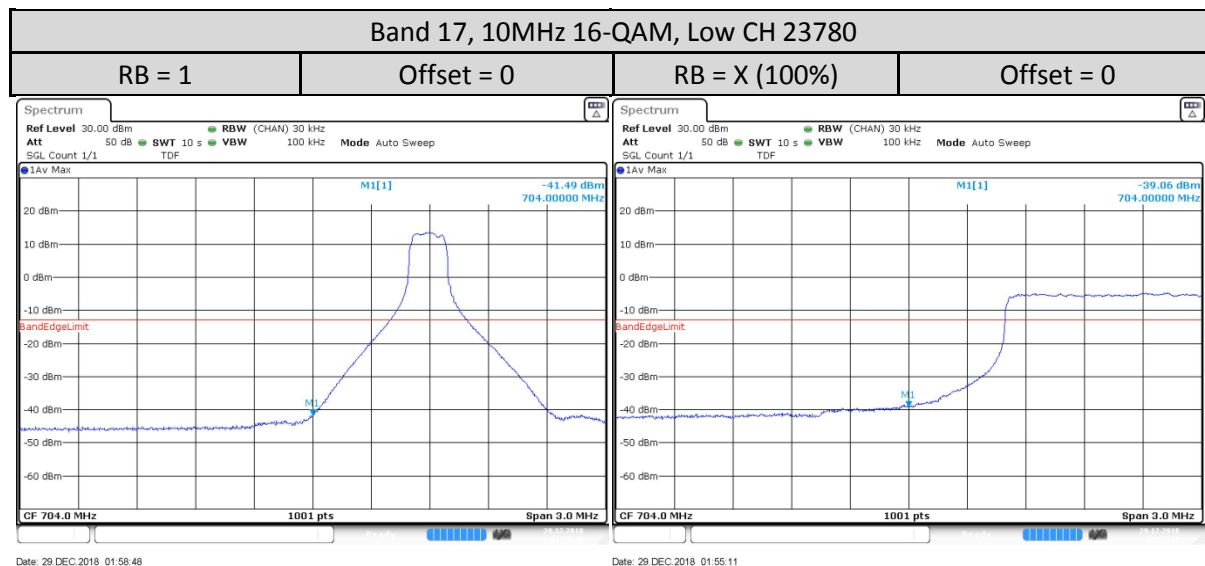
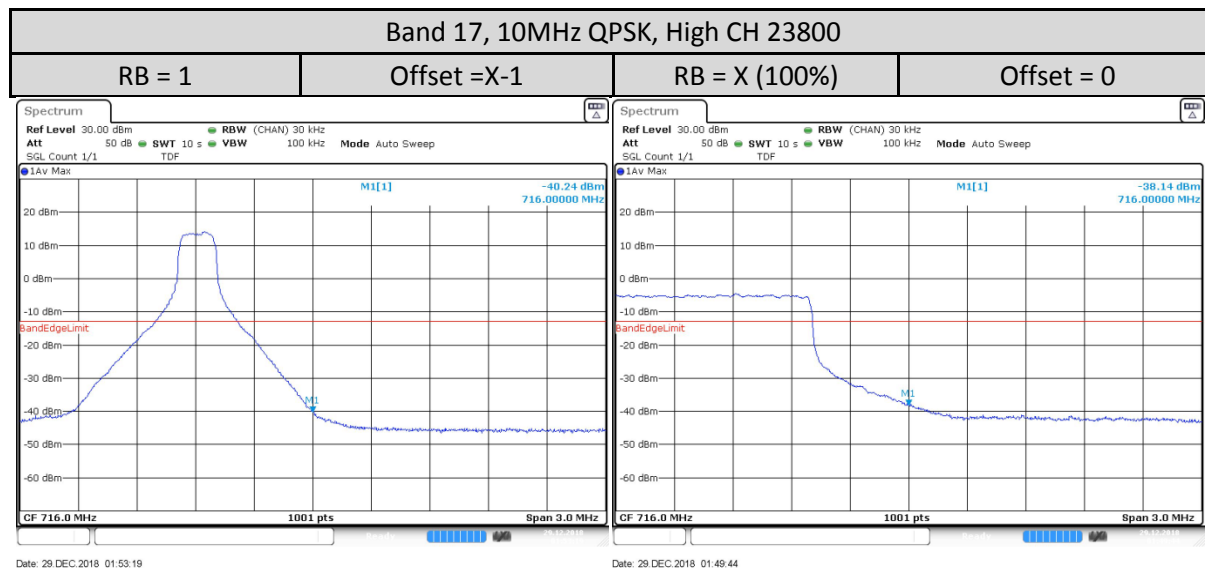
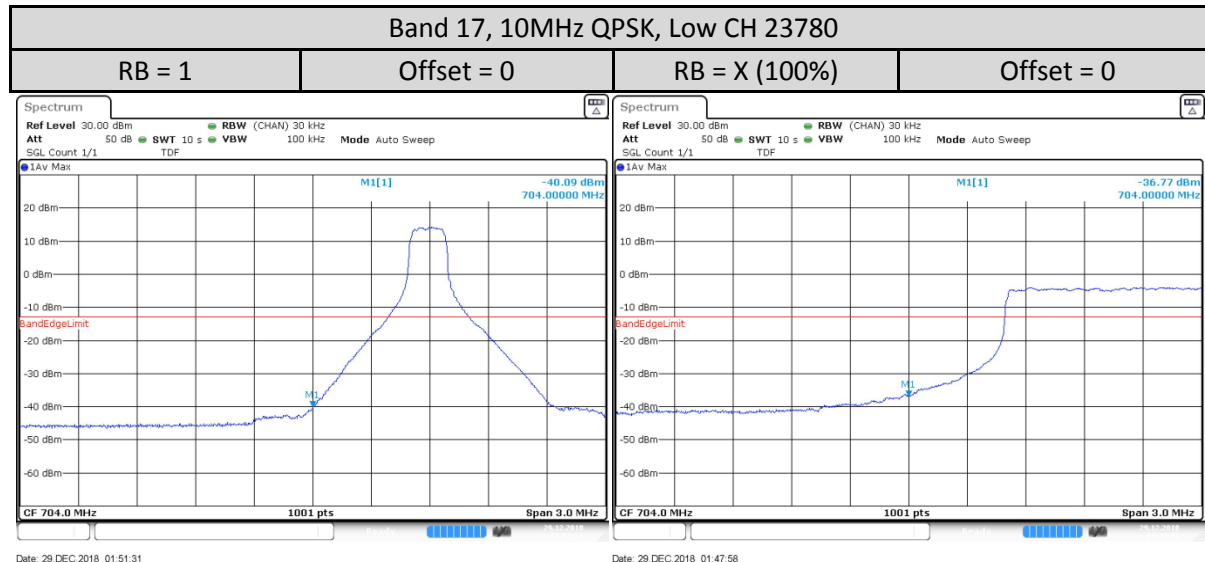
1.10.2. Test Limit

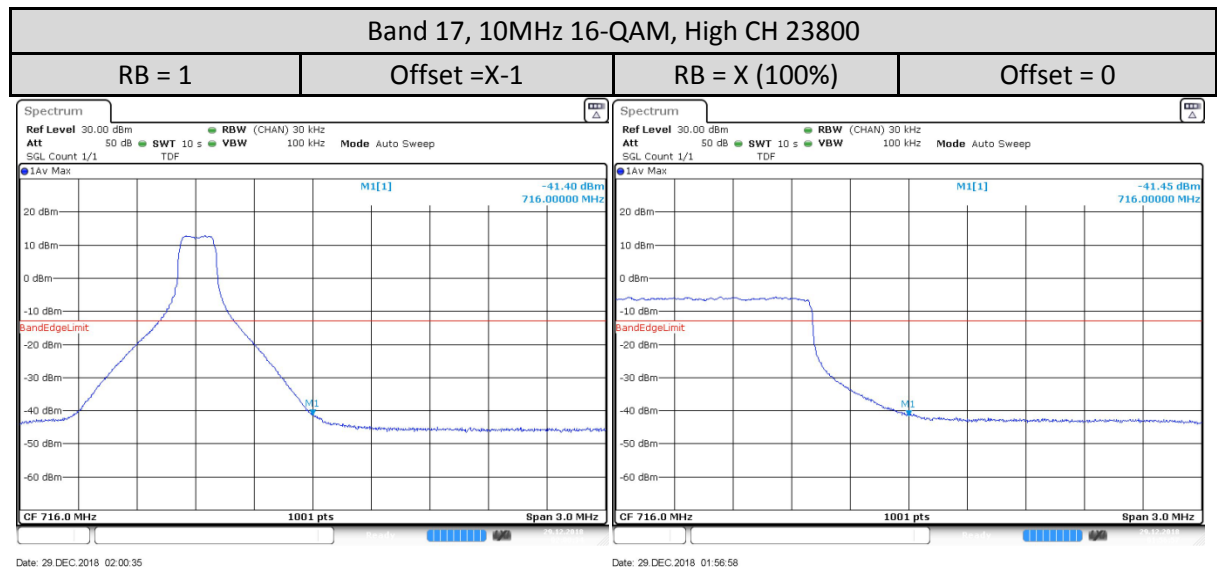
For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

1.10.3. Band Edge Conducted Spurious Emission – LTE Band 17 (704-716MHz)



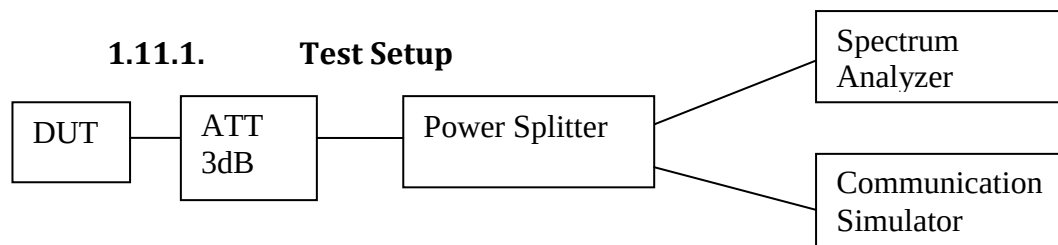






1.11. Conducted Spurious Emission

1.11.1. Test Setup



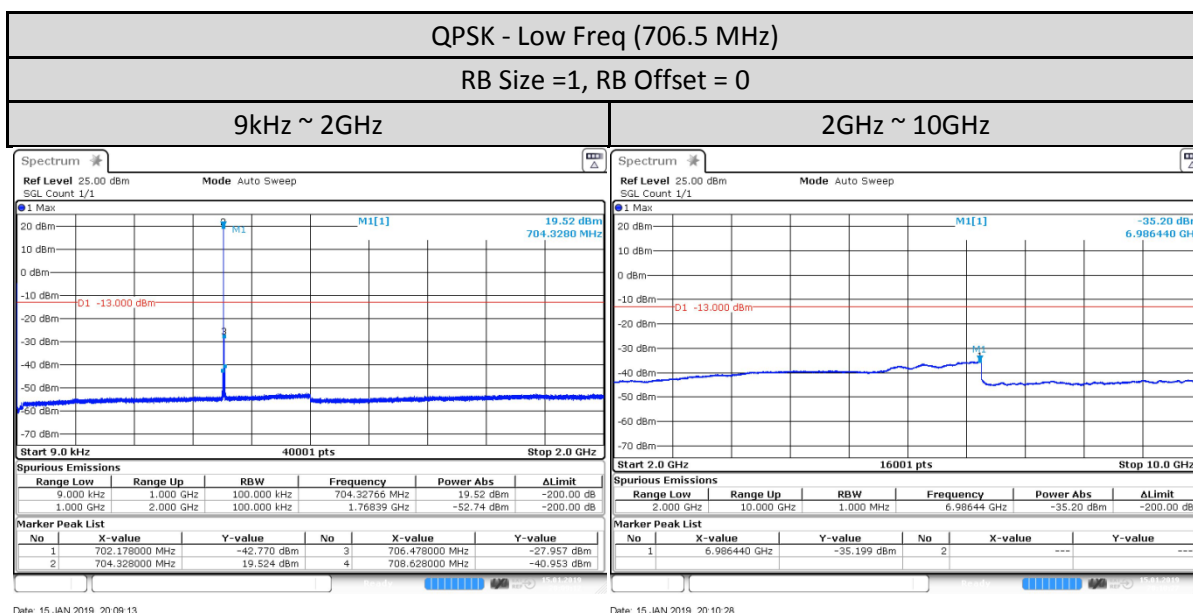
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) Set DUT to transmit maximum power through communication simulator.
- 4) Spectrum Analyzer setting, RBW = 100 kHz or greater, VBW = 3*RBW.
- 5) The spurious emission of lowest, middle and highest channels with the highest RF powers were measured.
- 6) Record the maximum trace plot into the test report.

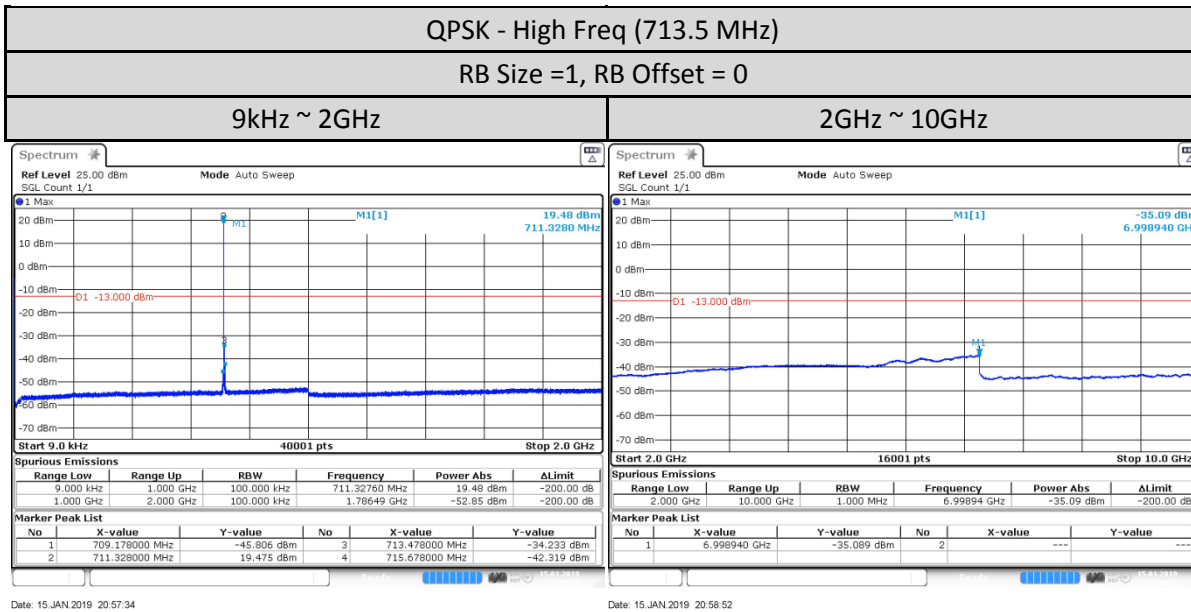
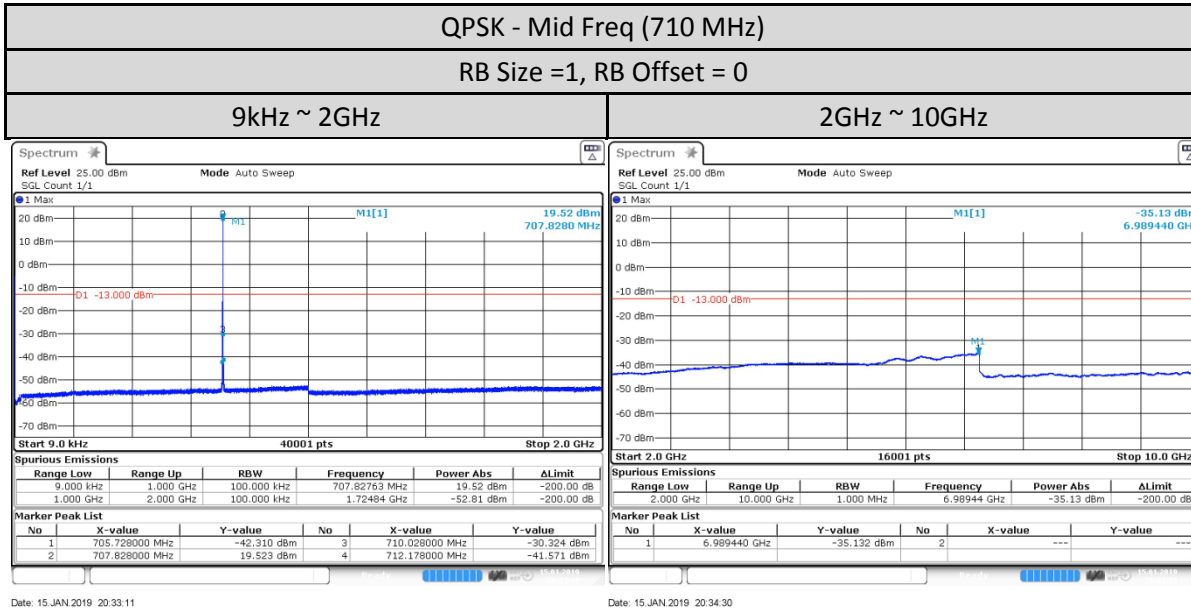
1.11.2. Test Limit

For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

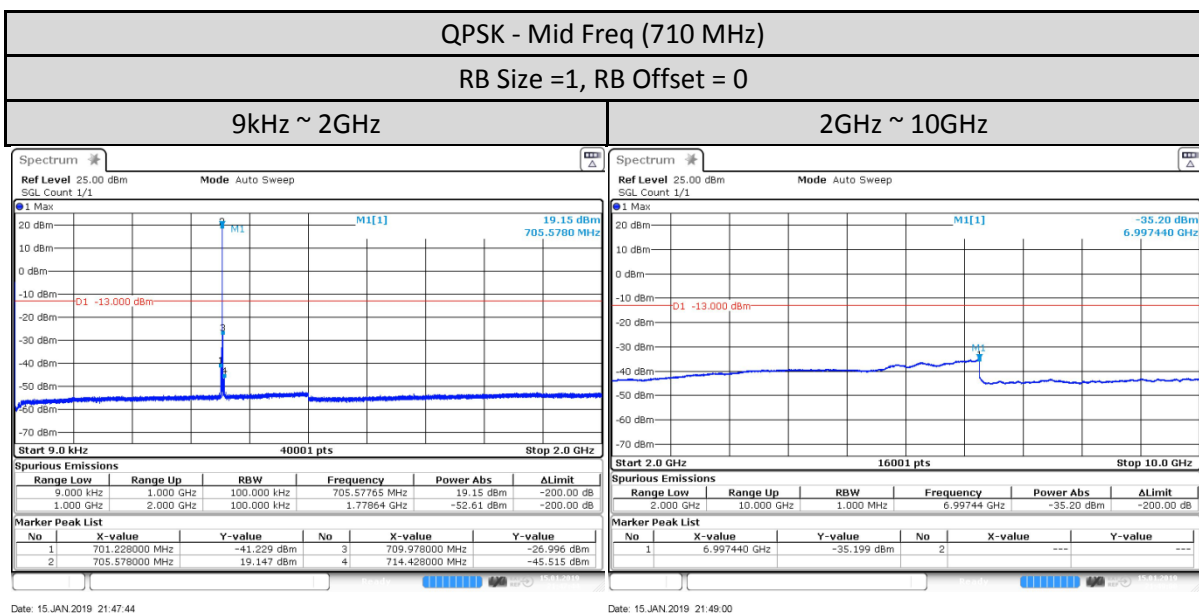
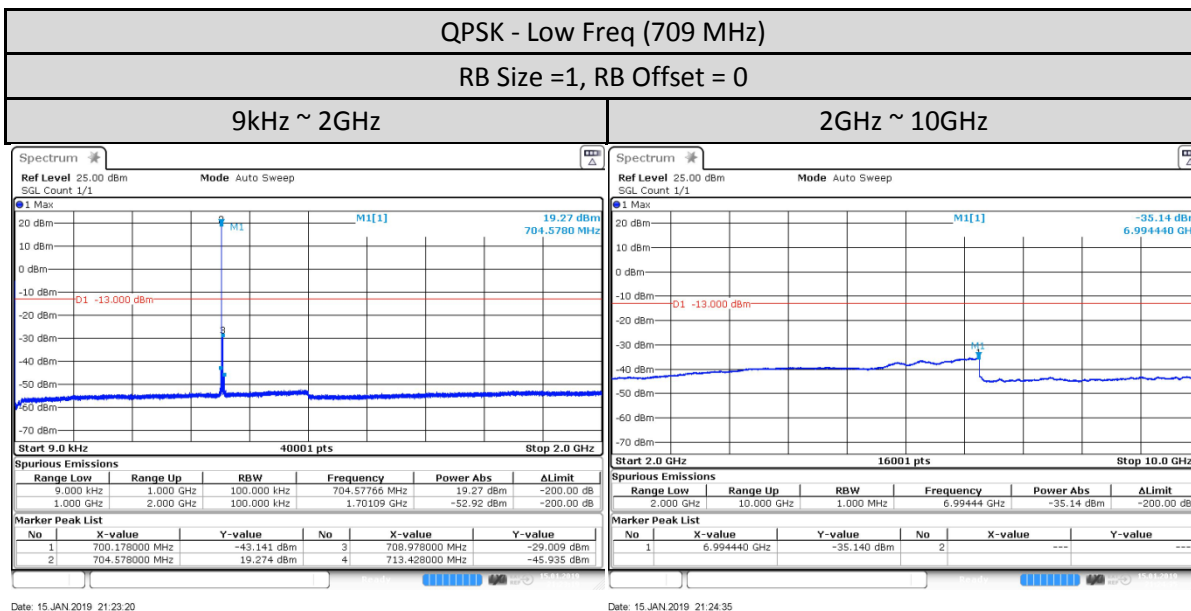
1.11.3. Conducted Spurious Emissions - LTE Band 17 (704-716MHz)

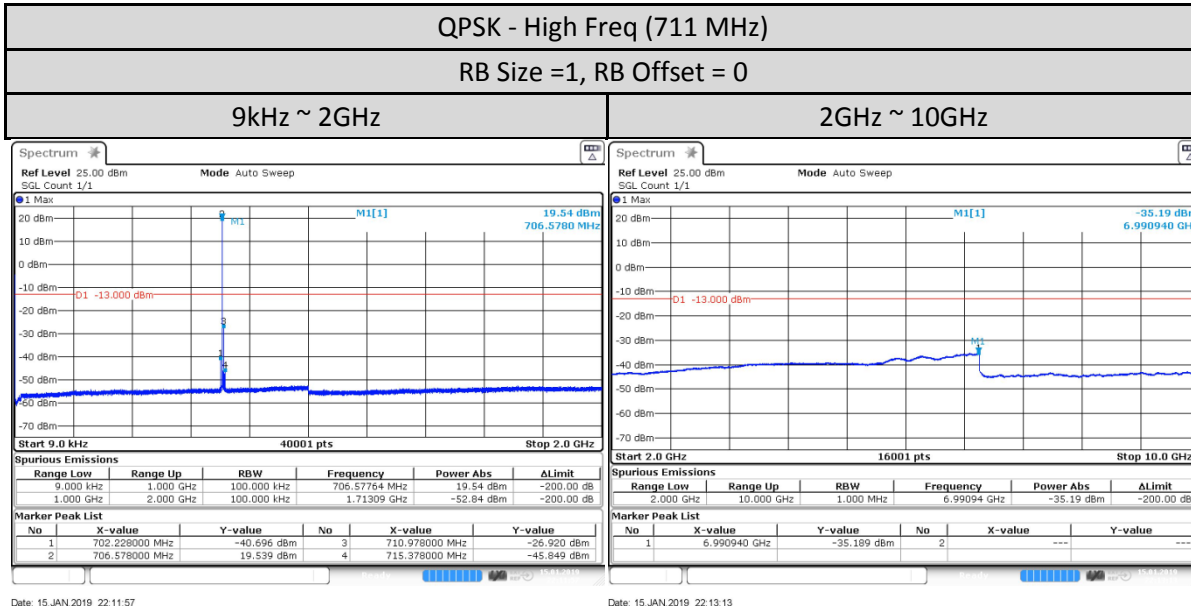
5MHz





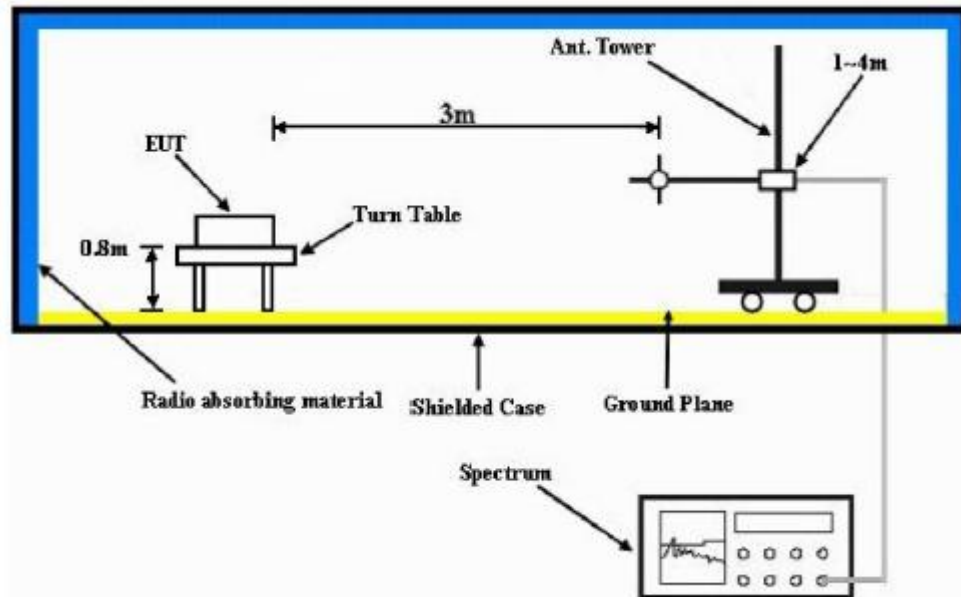
10MHz





1.12. Radiated Spurious Emission

1.12.1. 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 Turn Table at 0.8m height for below 1Ghz measurement and at 1.5m height for above 1GHz measurement, 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.

1.12.2. Test Limit

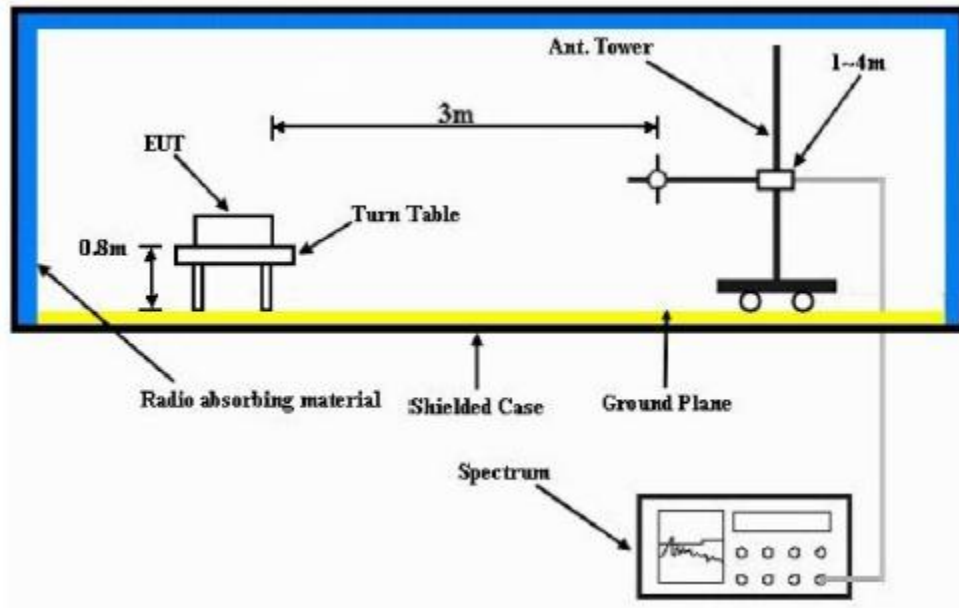
For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

1.12.3. Radiated Spurious Emission – LTE Band 17 (704-716MHz)

Not Performed.

1.13. Effective Radiated Power (ERP)

1.13.1. Test Setup



- 1) All measurements were done at low, middle and high operational frequency range. RBW is 1% to 5% of OBW, VBW is 3*RBW. Detector mode is RMS.
- 2) In the semi-anechoic chamber, setup as illustrated above the EUT placed on the Turn Table at 0.8m height for below 1Ghz measurement and at 1.5m height for above 1GHz measurement, 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) $ERP = \text{“Read Value”} + \text{Measured substitution value.}$

1.13.2. Test Limit

The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw). Power is given in terms of effective radiated power (ERP).

1.13.3. Effective Radiated Power (ERP) - LTE Band 17 (704-716MHz)

Not Performed.

--End of Test Report--