

<p>MOTOROLA PENANG ADV. COMM. LABORATORY Motorola Solutions Malaysia Sdn Bhd, Plot 2A, Medan Bayan Lepas, Mukim 12 S.W.D, 11900 Bayan Lepas, Penang, Malaysia.</p>	<p>FCC / ISED TEST REPORT Report Revision : Rev.D</p>
<p>Date/s Tested : 05-March-2024 - 27-May-2024 Report Issue Date : 1-June-2024 Manufacturer/Location : Motorola Solutions Malaysia Sdn Bhd Manufacturer Address : Plot 2A, Medan Bayan Lepas, Mukim 12, S.W.D. 11900 Bayan Lepas, Penang, Malaysia Requestor : HOMICIL HARLY Product Type : Hand-held Product Version (PMN) : APX N70 Model Number (HVIN) : H35XDT9PW8AN & H35XDT9PW8AN-H Frequency Band : Refer to section 1.4 Rated / Max RF Output Power : 199.53mW / 252mW Applicant Name : Motorola Solutions Inc Applicant Address : Plot 2A, Medan Bayan Lepas, Mukim 12, S.W.D. 11900 Bayan Lepas, Penang, Malaysia FCC Registrations : 461337 ISED Registrations : MY0001 Firmware Version (FVIN) : D02.75.76 (BP), R02.00.00 (AP)</p> <p>The equipment was tested accordance to the requirement listed below:</p> <p>(LTE Band 17) FCC 47 CFR Part 2 / 27 ISED RSS GEN / 130 PASS</p>	
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REVISION HISTORY

Revision History	Description	Date	Originator
Rev A.	Initial Report	07-March-2024	Awatif Rahman
Rev B.	Update Antenna Gain and ERP data	02-May-2024	Awatif Rahman
Rev C.	Include additional test data (Peak-to-Average Power Ratio, Frequency Stability, Band Edge Conducted Spurious Emission, Conducted Spurious Emission).	27-May-2024	Awatif Rahman
Rev D.	Include additional test data for OBW (26dBc)	31-May-2024	Awatif Rahman

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	022TAB0501
-	RSS-130 4.4	Peak-to-Average Power Ratio	NA	NA	NA
2.1046	RSS-Gen 6.7	Occupied Bandwidth (99%)	Pass	Meet the requirement of limit	022TAB0501
2.1055 27.54	RSS-130 4.3	Frequency Stability	NA	NA	NA
2.1051 27.53(g)	RSS-Gen 6.13 RSS-130 4.6	Band Edge Conducted Spurious Emission	NA	NA	NA
2.1051 27.53(g)	RSS-Gen 6.13 RSS-130 4.6	Conducted Spurious Emissions	NA	NA	NA
2.1053 27.53(g)	RSS-130 4.6	Radiated Spurious Emission	NA	Reference to B12 SR40793-RF-00026 test report	NA
2.1049 27.50(c)(9)(10)	RSS-130 4.4	Effective Radiated Power (ERP)	Pass	Meet the requirement of limit	022TAB0501

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 (RF CONDUCTED TESTS)				
Wideband Radio Communication Tester	CMW500	154550	09-Aug-23	08-Aug-24
Signal Analyzer	FSV40	101431	07-Aug-23	06-Aug-24
Chamber	SH-641	92003150	15-Sep-23	15-Sep-24
Power Supply	6652A	3640A02967	15-Oct-23	15-Oct-24
Test Software	R&S CMWrun			
Version	V.1.9.8			

1.3. General Information

General Description of EUT

Product	ALOHA UHF		
Brand	Motorola Solutions		
Test Model	H35XDT9PW8AN, H35XDT9PW8AN-H		
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	23.557dBm (0.227W)
		Channel Bandwidth 10MHz	23.884dBm (0.245W)
	LTE Band 17 16QAM	Channel Bandwidth 5MHz	22.694dBm (0.186W)
		Channel Bandwidth 10MHz	22.792dBm (0.190W)
Emission Designator	LTE Band 17		QPSK
		Channel Bandwidth 5MHz	4M47G7D
		Channel Bandwidth 10MHz	8M91G7D
Antenna Type	LTE Band 17	Antenna LTE Low Band 704 – 716MHz (-2.9dBi)	
SW Version	D02.75.76 (BP), R02.00.00 (AP)		
HW Version	P2		

Note:

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

Item	Brand	Model or P/N	Specification
Li-Ion Battery	MOTOROLA	PMNN4818A	UL 3650mAH (using RN 2170 Li-Ion cell)

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	154550	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 27

KDB 971168 D01 Power Meas License Digital Systems v03r01

KDB 971168 D02 Misc OOB License Digital Systems v02r01

ANSI C63.26

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

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	710.0	713.5
	10 MHz	23780 ~ 23800	23780	23790	23800	709.0	710.0	711.0

1.5. Test Mode Applicability and Tested Channel Detail

Pre-scan also have been conducted with the accessory devices listed in section table 1.3, only the worst case radiated emission results of the combination test configuration is reported in this report.

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	Modulation	Mode
Conducted RF Output Power	23755 ~ 23825	23755, 23710, 23825	5 MHz	QPSK, 16QAM	As per table 1.6.3
	23780 ~ 23800	23780, 23710, 23800	10 MHz		
Peak-to-Average Power Ratio	23755 ~ 23825	23755, 23710, 23825	5 MHz	QPSK, 16QAM	25 RB / 0 RB Offset
	23780 ~ 23800	23780, 23710, 23800	10 MHz		50 RB / 0 RB Offset
Occupied Bandwidth	23755 ~ 23825	23755, 23710, 23825	5 MHz	QPSK, 16QAM	25 RB / 0 RB Offset
	23780 ~ 23800	23780, 23710, 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, 23710, 23825	5 MHz	QPSK	1 RB / 24 RB Offset
	23780 ~ 23800	23780, 23710, 23800	10 MHz		1 RB / 0 RB Offset
Effective Radiated Power (ERP)	23755 ~ 23825	23755, 23710, 23825	5 MHz	QPSK, 16QAM	As per table 1.6.4
	23780 ~ 23800	23780, 23710, 23800	10 MHz		

NOTE:

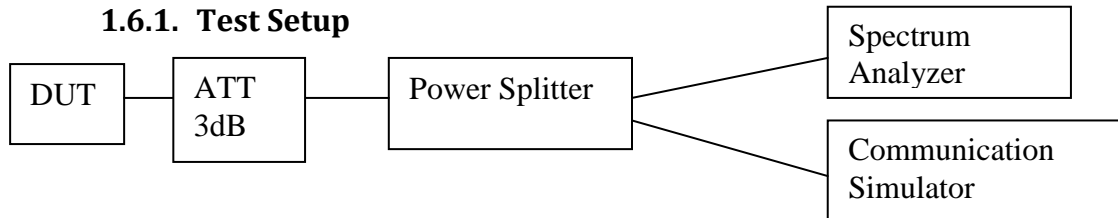
1. The Conducted RF Output Power for QPSK and 16QAM, measured value of QPSK mode is higher than 16QAM mode.
2. The Effective Radiated Power (ERP) was calculated from Conducted RF Output Power in QPSK and 16QAM modulation.
3. The Occupied Bandwidth were performed with full Resource Block which is the worst case.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
Conducted RF Output Power	25°C, 50% RH	7.5 Vdc	Awatif Rahman
Peak-to-Average Power Ratio	25°C, 50% RH	7.5 Vdc	Awatif Rahman
Occupied Bandwidth	25°C, 50% RH	7.5 Vdc	Awatif Rahman
Frequency Stability	-30°C ~ 60°C	7.5 Vdc	Awatif Rahman
Band Edge Conducted Spurious Emission	25°C, 50% RH	7.5 Vdc	Awatif Rahman
Conducted Spurious Emission	25°C, 50% RH	7.5 Vdc	Awatif Rahman
Effective Radiated Power (ERP)	25°C, 50% RH	7.5 Vdc	Awatif Rahman

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. Test 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	23.371	23.256	23.405	22.663	22.337	22.425
	1	13	23.337	23.276	23.308	22.667	22.461	22.477
	1	24	23.557	23.245	23.33	22.694	22.37	22.504
	12	0	22.401	22.357	22.458	21.401	21.332	21.445
	12	6	22.42	22.278	22.477	21.404	21.233	21.521
	12	13	22.398	22.345	22.435	21.409	21.315	21.504
	25	0	22.409	22.423	22.42	21.409	21.417	21.342

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	23.589	23.551	23.884	22.787	22.666	22.792
	1	25	23.37	23.31	23.345	22.685	22.287	22.373
	1	49	23.563	23.482	23.767	22.759	22.671	22.577
	25	0	22.39	22.375	22.418	21.421	21.48	21.523
	25	13	22.419	22.402	22.4	21.468	21.531	21.49
	25	25	22.384	22.271	22.376	21.435	21.354	21.412
	50	0	22.405	22.455	22.437	21.412	21.414	21.445

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

ERP (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	18.321	18.206	18.355	17.613	17.287	17.375
	1	13	18.287	18.226	18.258	17.617	17.411	17.427
	1	24	18.507	18.195	18.28	17.644	17.32	17.454
	12	0	17.351	17.307	17.408	16.351	16.282	16.395
	12	6	17.37	17.228	17.427	16.354	16.183	16.471
	12	13	17.348	17.295	17.385	16.359	16.265	16.454
	25	0	17.359	17.373	17.37	16.359	16.367	16.292

ERP (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	18.539	18.501	18.834	17.737	17.616	17.742
	1	25	18.32	18.26	18.295	17.635	17.237	17.323
	1	49	18.513	18.432	18.717	17.709	17.621	17.527
	25	0	17.34	17.325	17.368	16.371	16.43	16.473
	25	13	17.369	17.352	17.35	16.418	16.481	16.44
	25	25	17.334	17.221	17.326	16.385	16.304	16.362
	50	0	17.355	17.405	17.387	16.362	16.364	16.395

The maximum ERP/EIRP from the measured RF output power is given in Equation as follows:

$$\mathbf{EIRP = P_{Meas} + G_T}$$

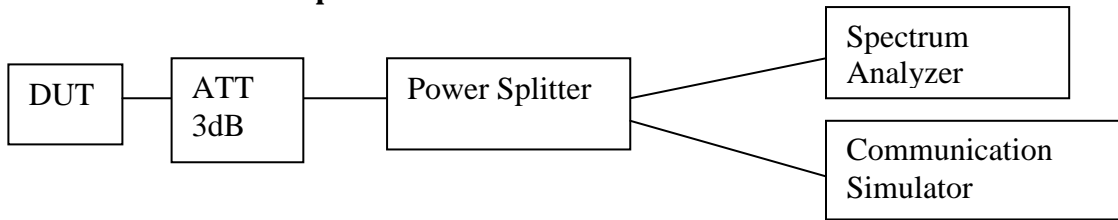
$$\mathbf{ERP = EIRP - 2.15}$$

Where, ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (Expressed in the same units as P_{Meas}, e.g., dBm)

P_{Meas} measured transmitter output power, in dBm
 G_T gain of the transmitting antenna, in dBi (EIRP)

1.7. Peak-to-Average Power Ratio

1.7.1. Test Setup



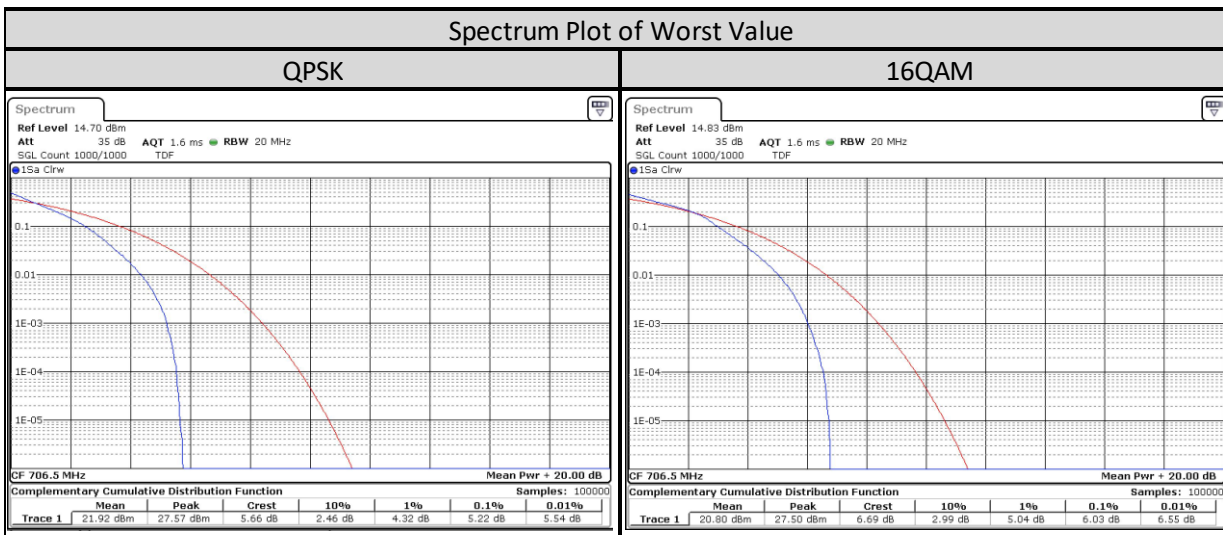
1. The DUT transmitter output port was connected to communication simulator with above setup.
2. Path loss for the measurement included.
3. Set DUT to transmit maximum power through communication simulator
4. Set the CCDF (Complementary Cumulative Distribution Function) option in the spectrum analyzer.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

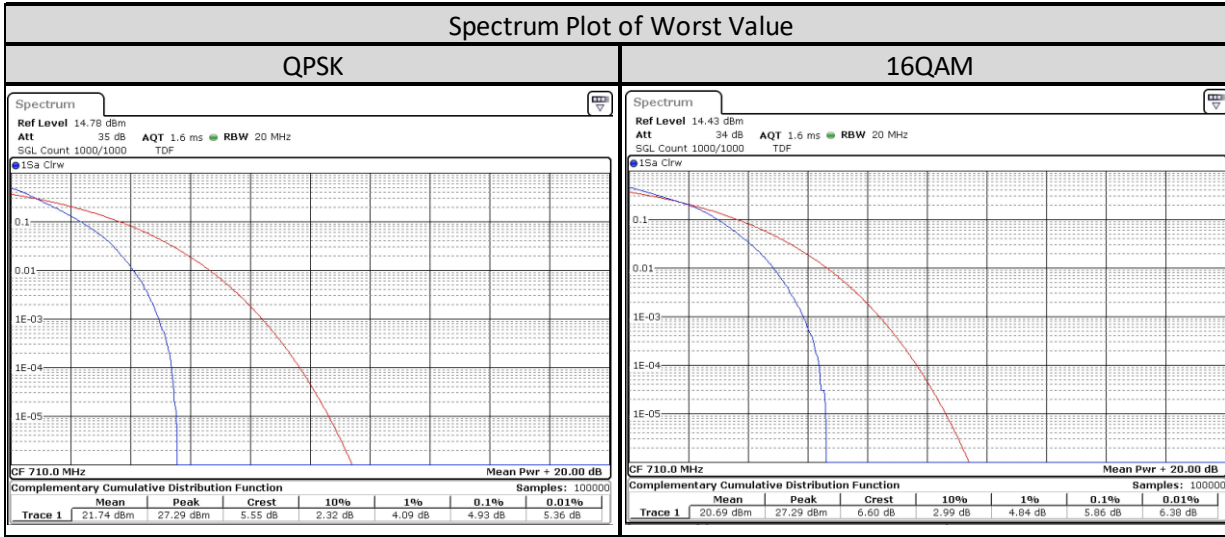
In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

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	5.217	6.029
	Mid CH 23790	710 MHz	4.928	5.855
	High CH 23825	713.5 MHz	4.899	5.71

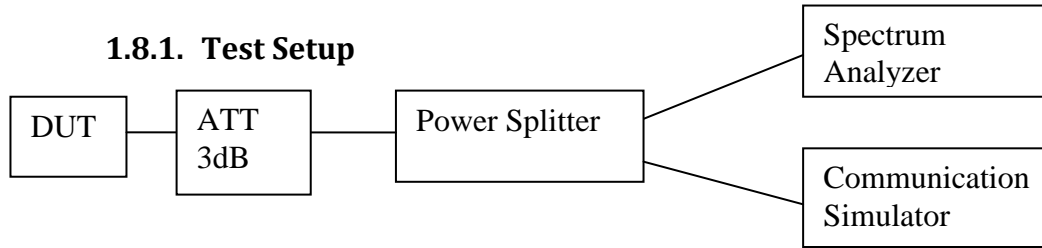


LTE Band/BW/RB Size/RB Offset	Channel Number	Tx Frequency	Peak To Average (dB)	
			QPSK Modulation	16QAM Modulation
Band 17/10MHz/50/0	Low CH 23780	709 MHz	4.87	5.71
	Mid CH 23790	710 MHz	4.928	5.855
	High CH 23800	711 MHz	4.812	5.826



1.8. Occupied Bandwidth

1.8.1. Test Setup



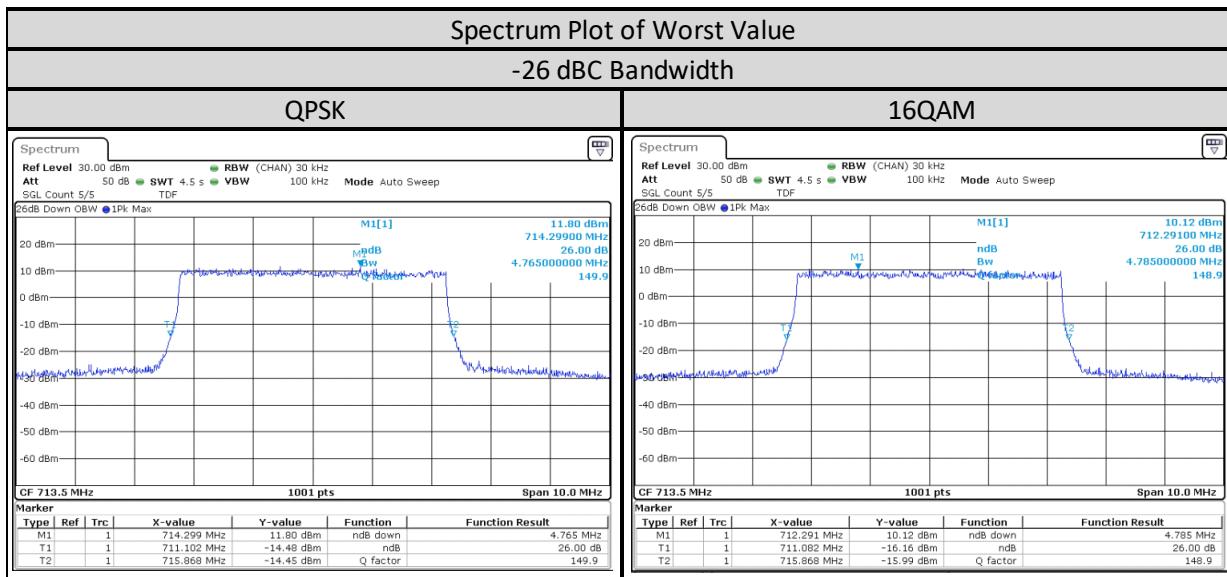
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) For LTE measurement, set DUT to transmit maximum power & full RB size through communication simulator.
- 4) For LTE measurement, set DUT to transmit maximum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

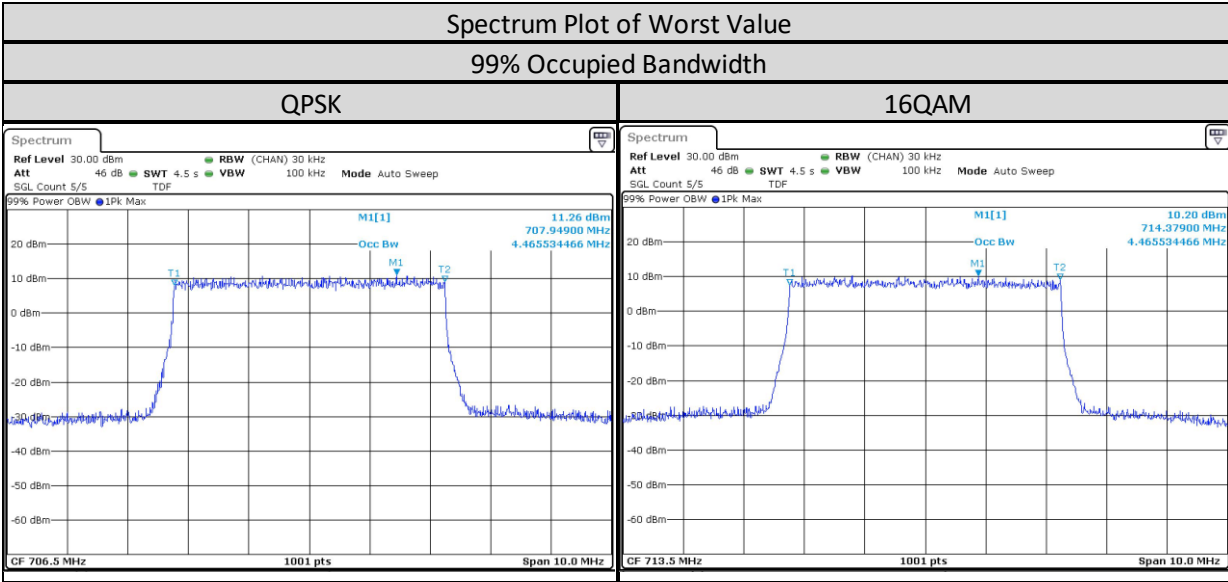
For measurement 99% of occupied bandwidth that is required by FCC 2.1046 and RSS Gen 6.7.

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

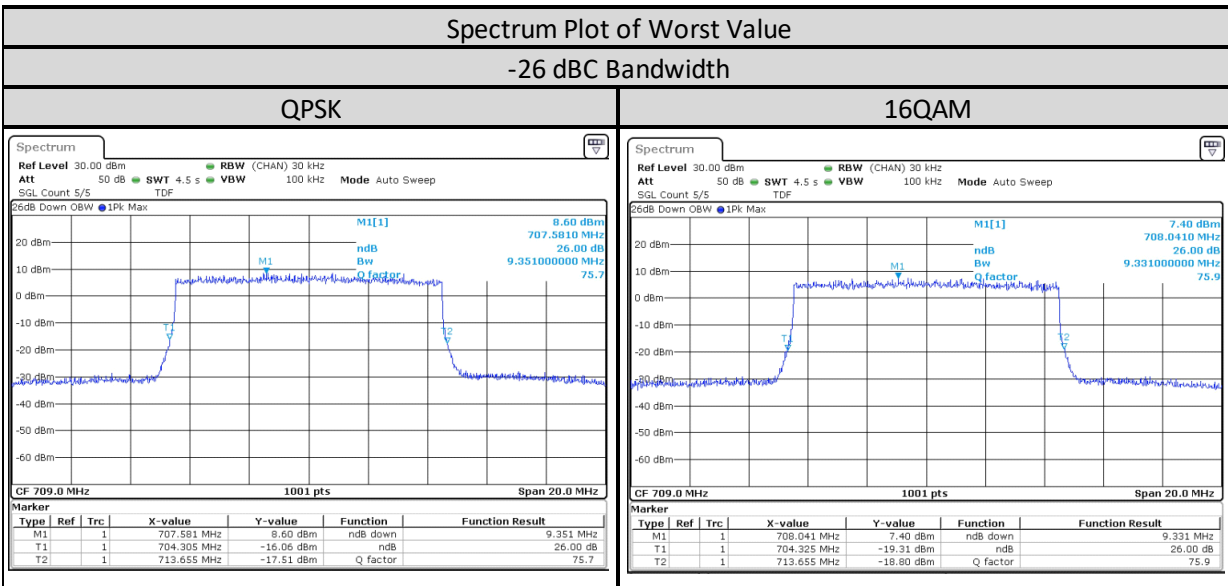
LTE Band/BW/RB Size/RB Offset	Channel Number	Tx Frequency	-26 dBc Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 17/5MHz/25/0	Low CH 23755	706.5 MHz	4.755	4.725
	Mid CH 23790	710 MHz	4.745	4.735
	High CH 23825	713.5 MHz	4.765	4.785



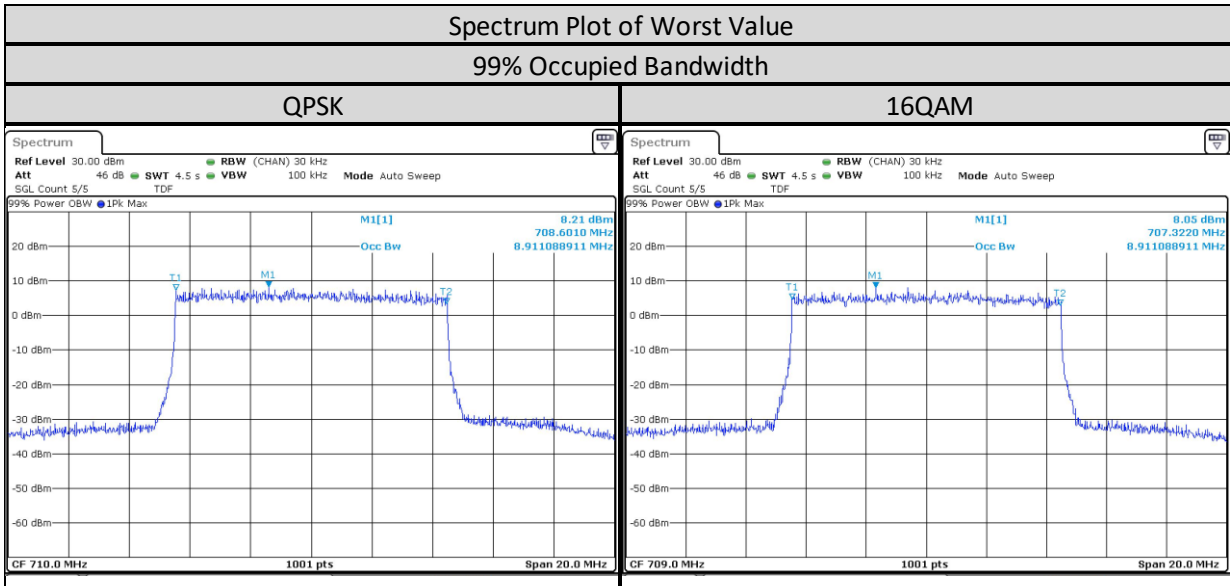
LTE Band/BW/RB Size/RB Offset	Channel Number	Tx Frequency	99% Occupied Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 17/5MHz/25/0	Low CH 23755	706.5 MHz	4.466	4.456
	Mid CH 23790	710 MHz	4.456	4.456
	High CH 23825	713.5 MHz	4.466	4.466



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	9.351	9.331
	Mid CH 23790	710 MHz	9.311	9.271
	High CH 23800	711 MHz	9.291	9.271

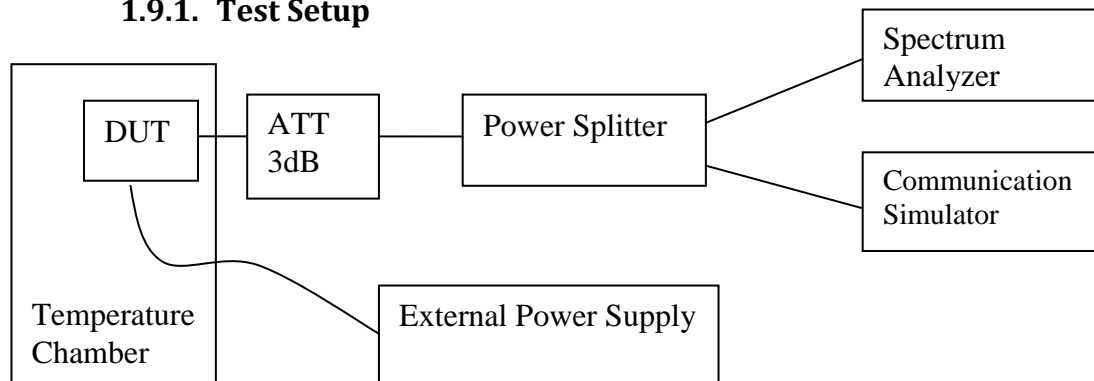


LTE Band/BW/RB Size/RB Offset	Channel Number	Tx Frequency	99% Occupied Bandwidth (MHz)	
			QPSK Modulation	16QAM Modulation
Band 17/10MHz/50/0	Low CH 23780	709 MHz	8.891	8.911
	Mid CH 23790	710 MHz	8.911	8.911
	High CH 23800	711 MHz	8.911	8.911



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 ~ 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.

1.9.2. Test Limit

As per manufacturer declared product operating at -30 to 60 deg C with spec of +/- 0.1ppm.

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

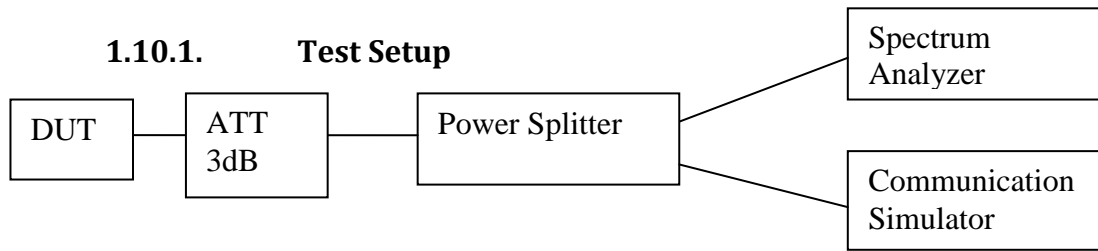
Band	Temp (Deg C)	Frequency Error VS Temperature			
		Channel Bandwidth: 5 MHz			
		Low Channel		High Channel	
		706.5MHz		713.5MHz	
		Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
LTE Band 17	60	706.499995	-0.007067	713.500004	0.006255
	50	706.500004	0.006257	713.500004	0.005794
	40	706.500006	0.00814	713.500004	0.005814
	30	706.500003	0.00494	713.500005	0.006696
	20	706.500004	0.00573	713.500005	0.007358
	10	706.499997	-0.004819	713.500005	0.006716
	0	706.499996	-0.005669	713.500007	0.009503
	-10	706.500004	0.00573	713.500008	0.011588
	-20	706.500005	0.007046	713.500006	0.008962
	-30	706.500011	-0.009861	713.500054	0.006937

Band	Voltage (V)	Frequency Error VS Voltage			
		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	9	706.500005	-0.00571	713.500008	0.00397
	7.5	706.500005	0.008686	713.500054	0.007559
	6	706.500005	0.006763	713.500006	-0.005453

Band	Temp (Deg C)	Frequency Error VS Temperature			
		Channel Bandwidth: 10 MHz			
		Low Channel		High Channel	
		709MHz		711MHz	
		Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
LTE Band 17	60	708.999997	-0.00454	710.999996	-0.005171
	50	709.000005	0.006638	710.999996	-0.00511
	40	709.000004	0.006053	710.999997	-0.004245
	30	708.999996	-0.005286	710.999995	-0.006499
	20	709.000004	0.005649	710.999995	-0.006358
	10	709.000003	0.004136	710.999987	-0.018913
	0	708.999983	-0.024091	711.000004	0.005855
	-10	709.000011	0.015011	711.000004	0.005251
	-20	709.000004	0.005427	711.000003	0.004044
	-30	709.000255	0.005427	711.000036	0.005955

Band	Voltage (V)	Frequency Error VS Voltage			
		Channel Bandwidth: 10 MHz			
		Low Channel		High Channel	
		709MHz		711MHz	
		Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
LTE Band 17	9	709.000004	-0.004741	711.000004	-0.004205
	7.5	709.000255	0.005145	711.000004	-0.00499
	6	709.000255	-0.005044	711.000003	-0.006016

1.10. Band Edge Conducted Spurious Emission



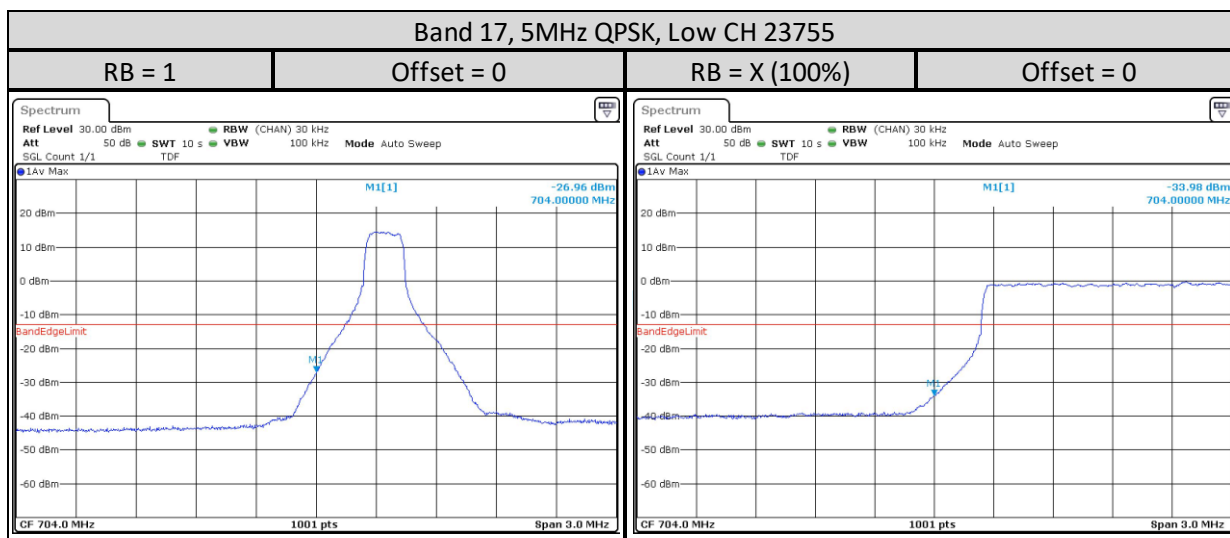
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) Set DUT to transmit maximum power through communication simulator.
- 4) The band edges of lowest and highest channels with the highest RF powers were measured.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

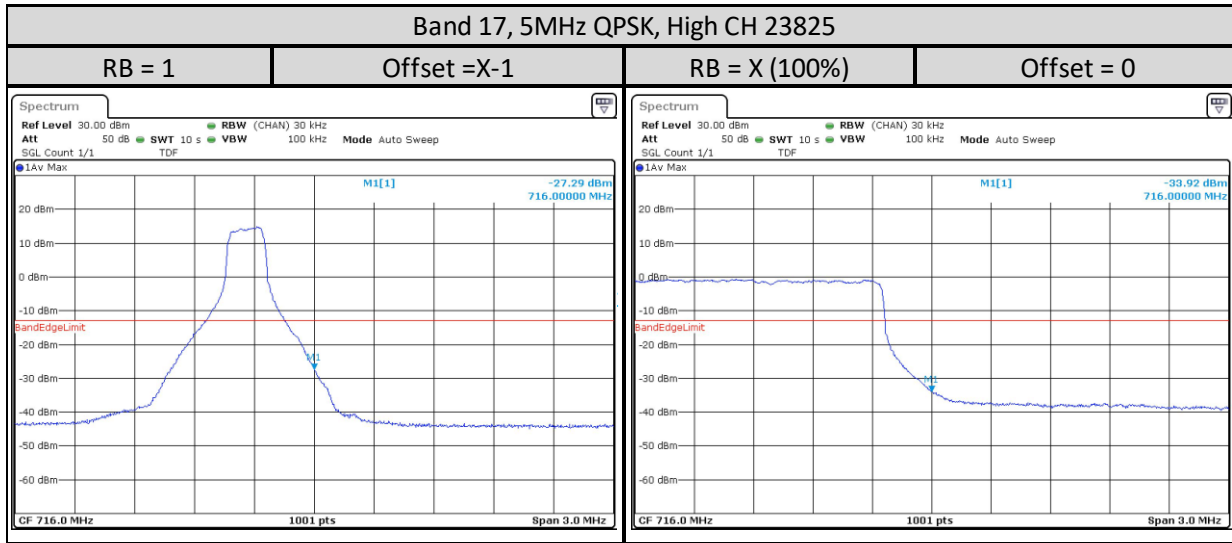
1.10.2. Test Limit

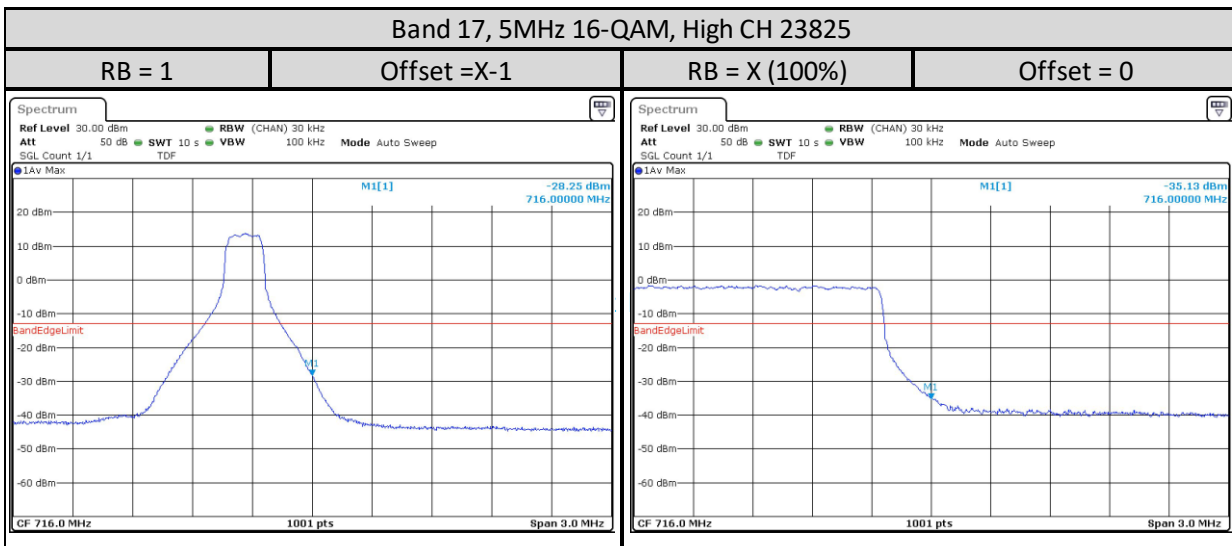
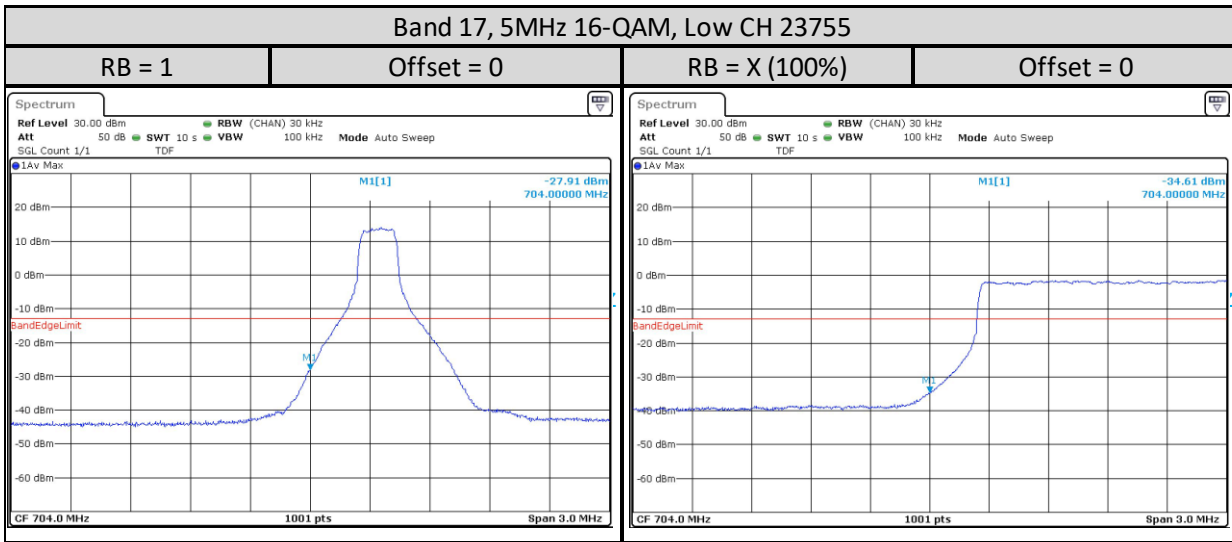
For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with 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)

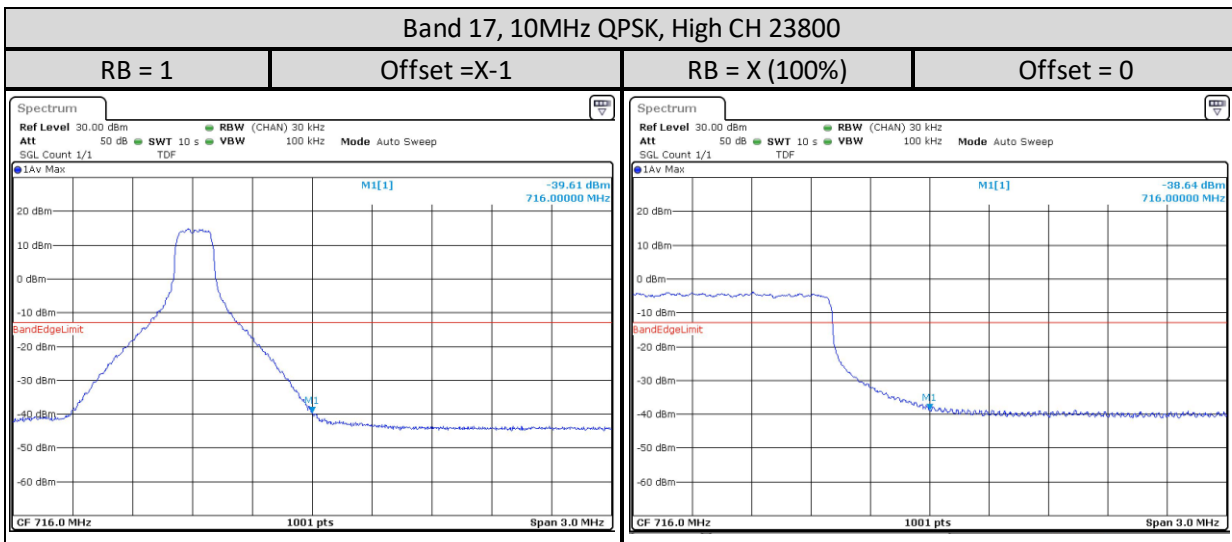
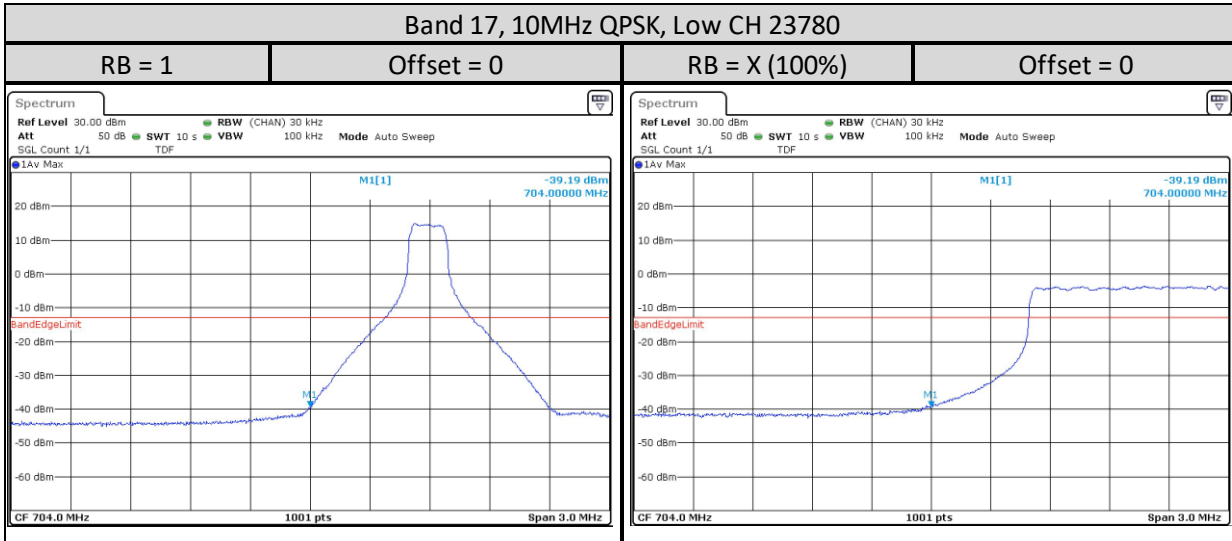
5MHz

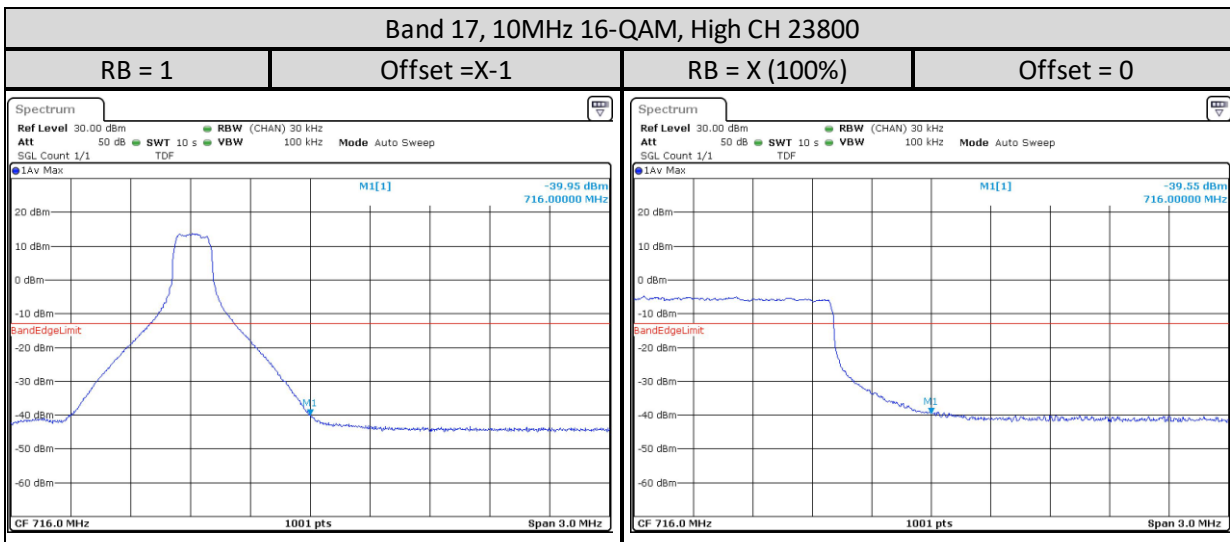
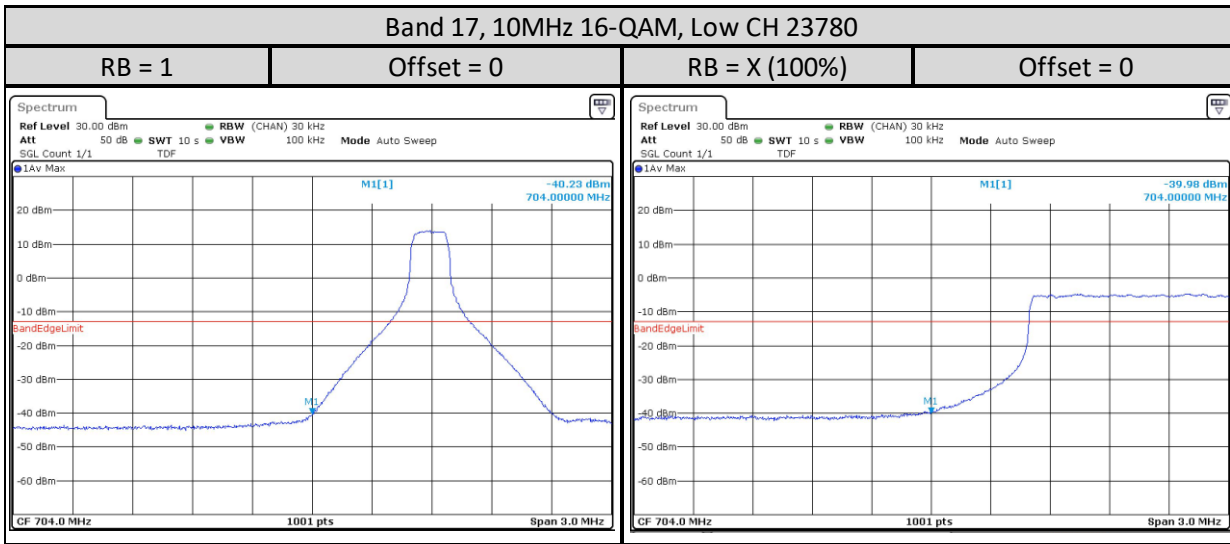






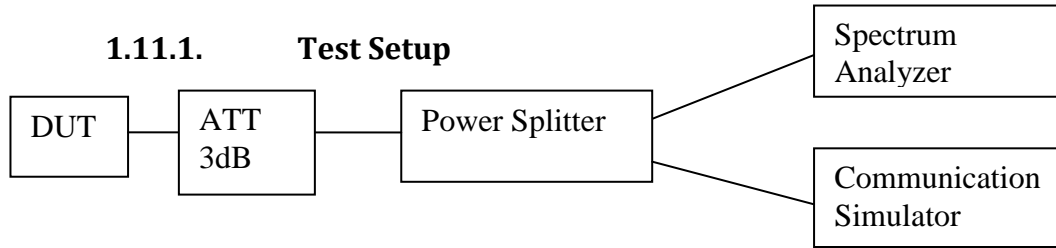
10MHz





1.11. Conducted Spurious Emission

1.11.1. Test Setup



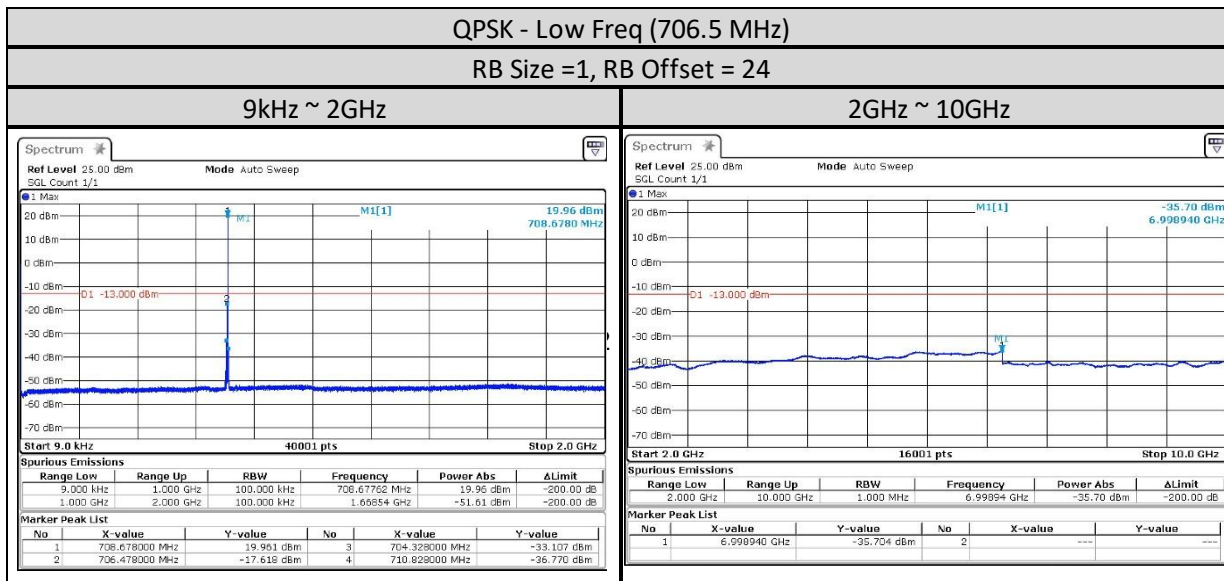
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) Set DUT to transmit maximum power through communication simulator.
- 4) Spectrum Analyzer setting, RBW = 1 MHz, VBW = 3 MHz.
- 5) The spurious emission of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

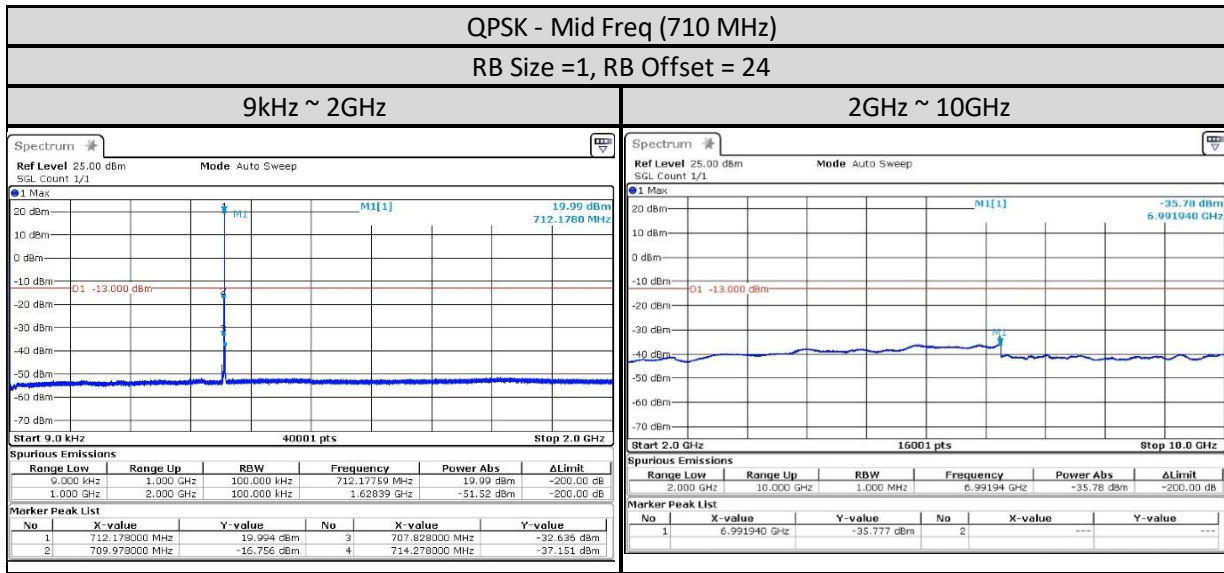
1.11.2. Test Limit

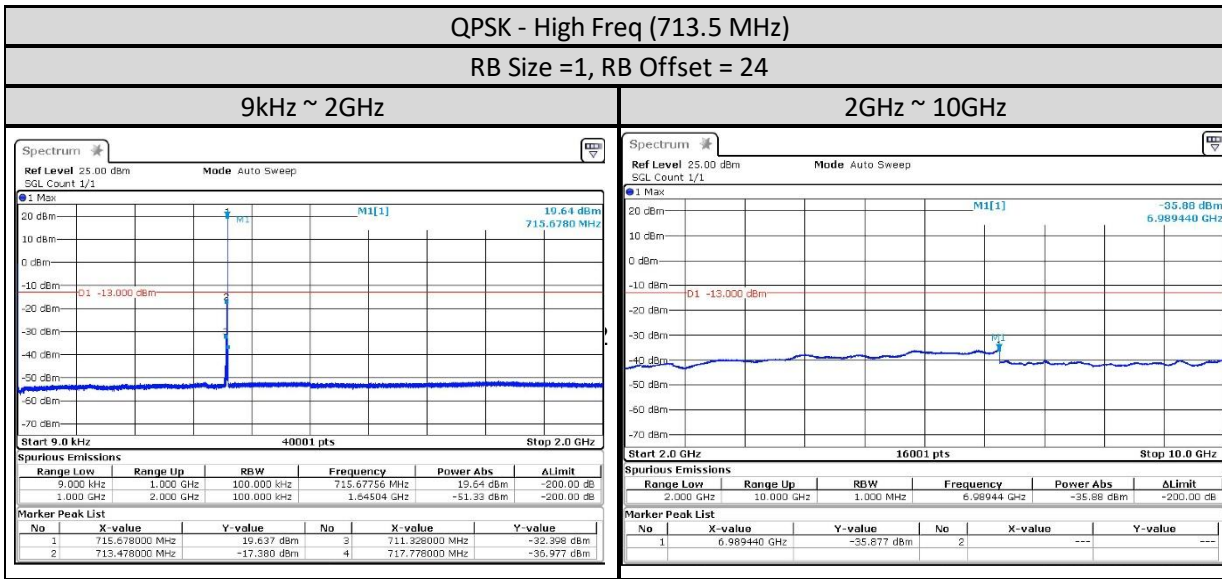
For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with 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)

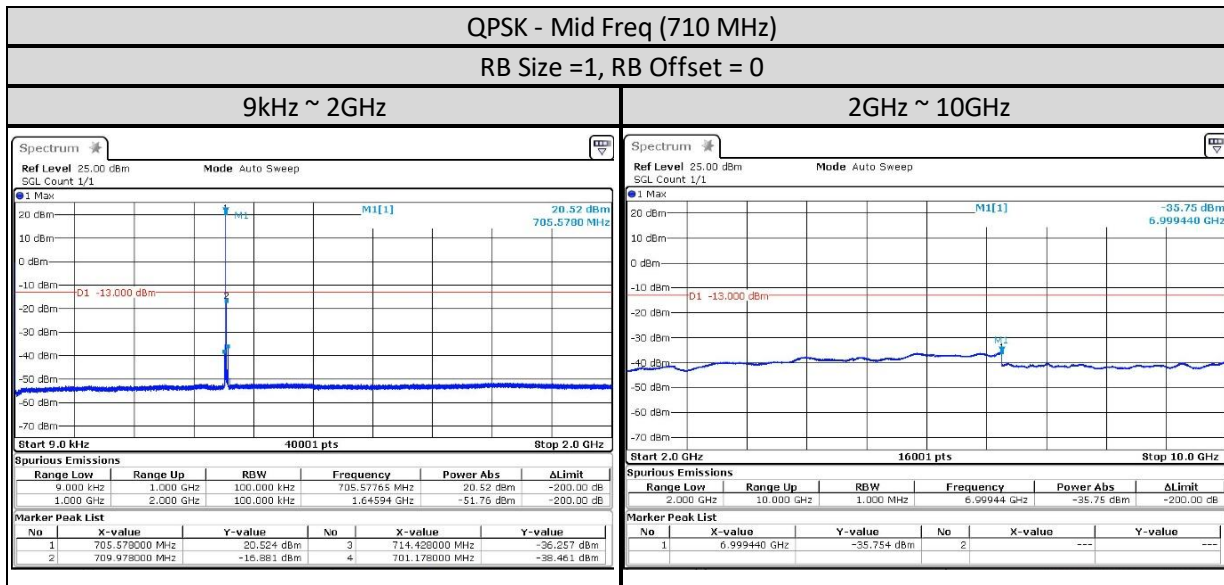
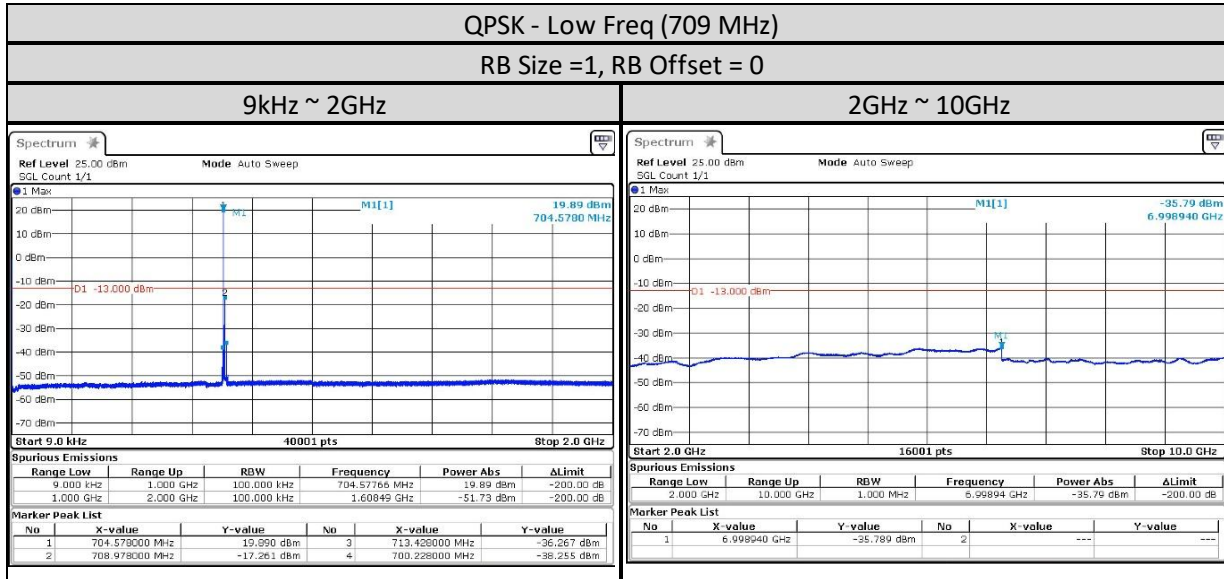
5MHz

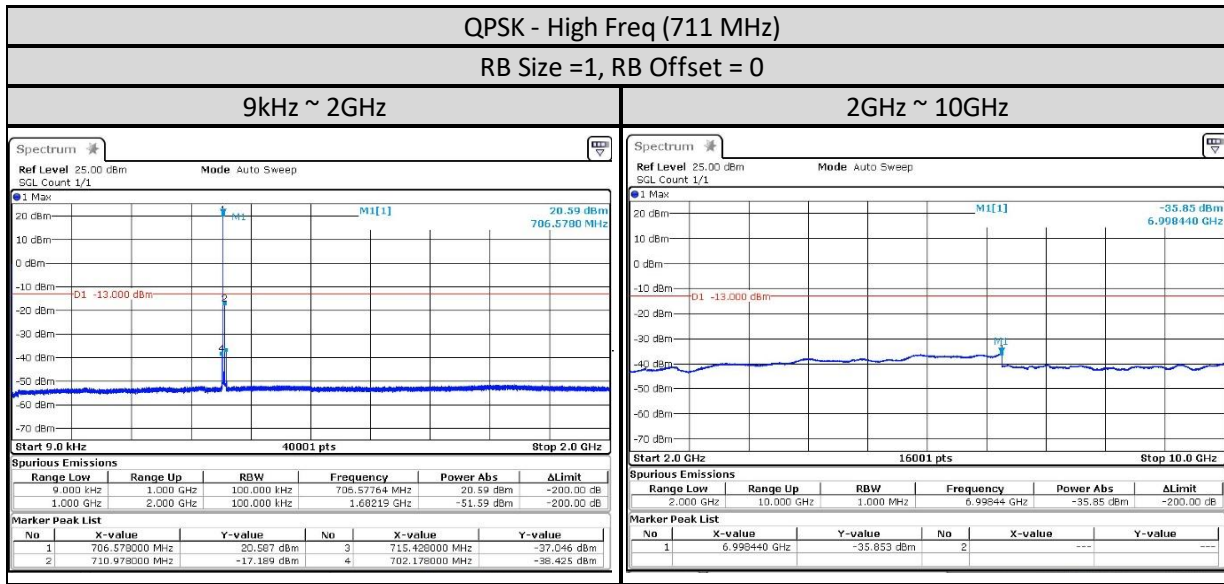






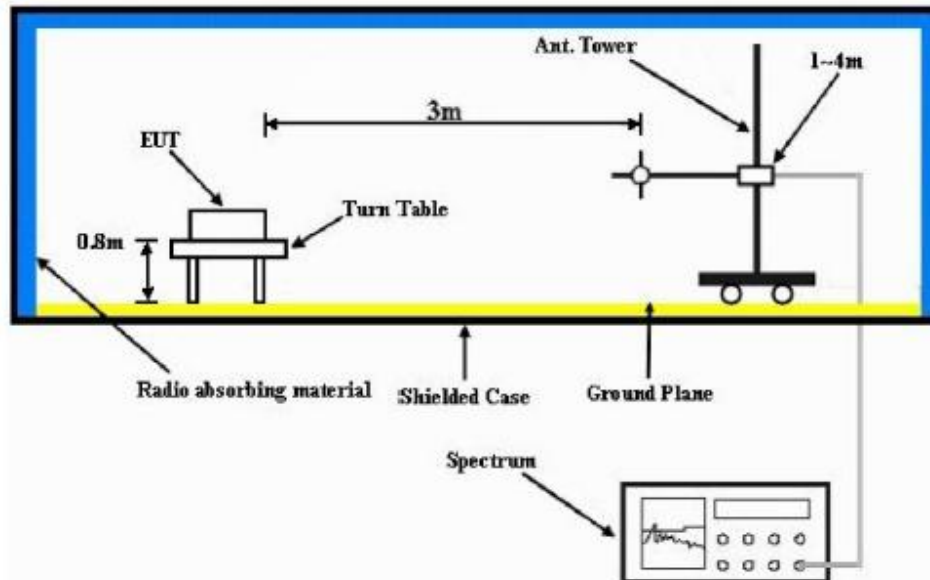
10MHz





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

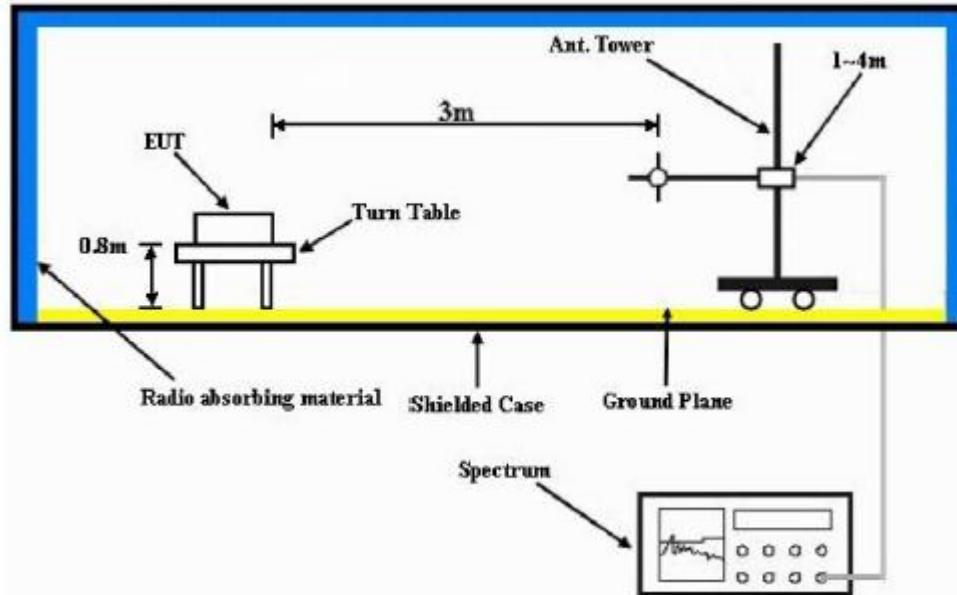
For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with 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) 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 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) $EIRP = \text{“Read Value”} + \text{Measured substitution value.}$

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)

[Refer to 1.6.4 / Not Performed.](#)

--End of Test Report--