TEST REPORT

Product	:	LTE MODULE
Trade mark	:	GlocalMe
Model/Type reference	:	GLMM18A02
Serial Number	:	N/A
Report Number	:	EED32K00246412
FCC ID	:	2AC88-GLMM18A02
Date of Issue	:	Jan. 25, 2019
Test Standards	:	47 CFR Part 2 47 CFR Part 27
Test result	:	PASS

Prepared for:

HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, HongKong

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Tested by: Peter — Peter

Compiled by: Tom-chen — Tom chen

Reviewed by: Max liang — Max Liang

Approved by: Kevin Yang — Kevin yang

Date: Jan. 25, 2019

Check No.:3096318232

2 Version

Version No.	Date	Description
00	Jan. 25, 2019	Original

3 Test Summary

LTE Band 41			
Test Item	**Test Requirement**	**Test method**	**Result**
Conducted output power	Part 2.1046(a) /Part 27.50(h)	TIA-603-E-2016&KDB 971168 D01v03r01	PASS
Effective Radiated Power of Transmitter(ERP)	Part 2.1046(a) / Part 27.50(h)	TIA-603-E-2016&KDB 971168 D01v03r01	PASS
Peak-to-Average Ratio	Part 27.50(d)	KDB 971168 D01v03r01	PASS
99%&26dB Occupied Bandwidth	Part 2.1049(h)	Part 22.917(b) &KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	Part 2.1051/ Part 27.53(m)	Part 22.917(b) &KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	Part 2.1051/ Part 27.53(m)	TIA-603-E-2016&KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	Part 2.1053/ Part 27.53(m)	TIA-603-E-2016&KDB 971168 D01v03r01	PASS
Frequency stability	Part 2.1055/Part 27.54	TIA-603-E-2016&KDB 971168 D01v03r01	PASS

Remark:

The tested samples and the sample information are provided by the client.

Tx: In this whole report Tx (or tx) means Transmitter.
Rx: In this whole report Rx (or rx) means Receiver.
RF: In this whole report RF means Radiated Frequency.
CH: In this whole report CH means channel.
Volt: In this whole report Volt means Voltage.
Temp: In this whole report Temp means Temperature.
Humid: In this whole report Humid means humidity.
Press: In this whole report Press means Pressure.
N/A: In this whole report not application

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5 Test Requirement

5.1 Test setup

5.1.1 For Radiated Emissions test setup

Radiated Emissions setup:

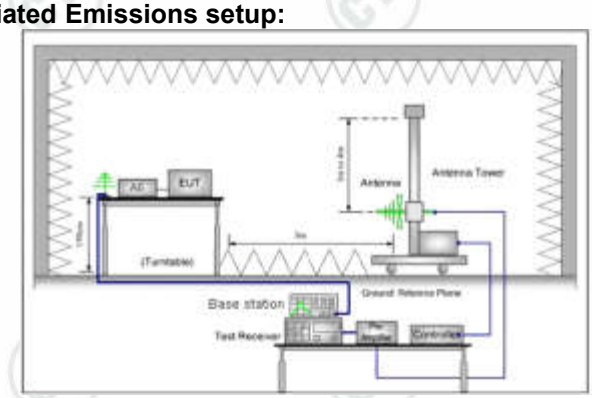


Figure 1.30MHz to 1GHz

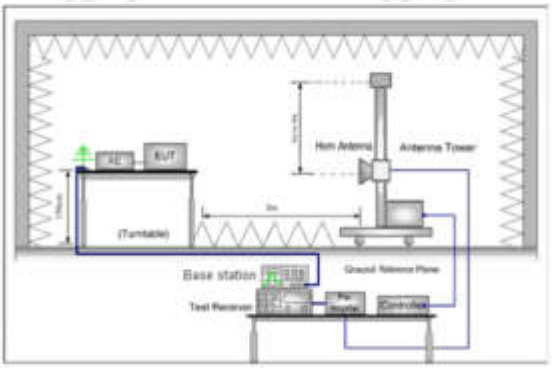


Figure 2. above 1GHz

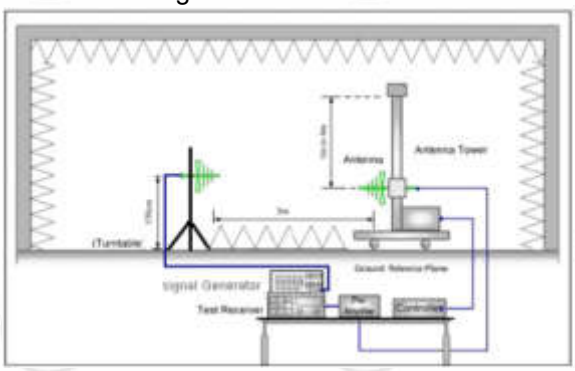


Figure 1. 30MHz to 1GHz

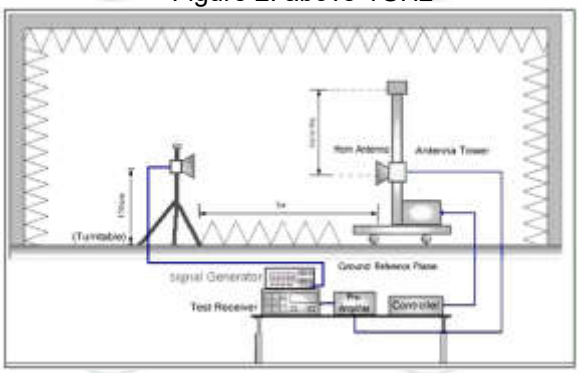


Figure 2. above 1GHz

5.2 Test Environment

Operating Environment:	
Temperature:	23°C
Humidity:	57 % RH
Atmospheric Pressure:	1010mbar

5.3 Test Condition

Test channel:

LTE

Test Mode	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink(MHz)	Number [DL]	Frequency of Downlink(MHz)
LTEband41 Tx: 2535- 2655MHz Rx:2535 - 2655MHz	Low Range	5	40040	2535	40040	2535
		10	40065	2537.5	40065	2537.5
		15	40090	2540	40090	2540
		20	40115	2542.5	40115	2542.5
	Mid Range	5/10/15/20	40620	2593	40620	2593
	High Range	5	41240	2655	41240	2655
		10	41215	2652.5	41215	2652.5
		15	41190	2650	41190	2650
		20	41165	2647.5	41165	2647.5

6 General Information

6.1 Client Information

Applicant:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address of Applicant:	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, HongKong
Manufacturer:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address of Manufacturer:	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, HongKong
Factory:	SHENZHEN CHIHANG TECHNOLOGY CO., LTD
Address of Factory:	1-4/F, Building 5, Detai Industrial Park, Huarong Road, Dalang Street, Longhua, Shenzhen

6.2 General Description of EUT

Product Name:	LTE MODULE
Model No.(EUT):	GLMM18A02
Trade mark:	GlocalMe
EUT Supports Radios application:	4.0 BT Dual mode: 2402MHz to 2480MHz WiFi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz GPS: L1:1559MHz to 1610MHz GSM/GPRS/EGPRS 850: Tx: 824-849MHz, Rx: 869-894MHz GSM/GPRS/EGPRS 1900: Tx: 1850-1910MHz, Rx: 1930-1990MHz WCDMA Band 2: Tx: 1850-1910MHz, Rx: 1930-1990MHz WCDMA Band 4: Tx: 1850-1910MHz, Rx: 2110-2155MHz WCDMA Band 5: Tx: 824- 849MHz, Rx: 869 -894MHz LTE Band 2: Tx: 1850-1910MHz, Rx: 1930-1990MHz LTE Band 4: Tx: 1710-1755 MHz, Rx: 2110-2155 MHz LTE Band 5: Tx: 824-849 MHz, Rx: 869-894MHz LTE Band 7: TX:2500-2570 MHz, Rx: 2620-2690 MHz LTE Band 12: Tx: 699-716 MHz, Rx: 729-746 MHz LTE Band 13: Tx: 777-787 MHz, Rx: 746-756 MHz LTE Band 17: Tx: 704-716 MHz, Rx: 734-746 MHz LTE Band 26: Tx: 814-849 MHz, Rx: 859-894 MHz LTE Band 38: Tx: 2570- 2620MHz, Rx: 2570-2620MHz LTE Band 40: Tx:2305–2315 MHz, Rx:2305–2315MHz Tx:2350–2360 MHz, Rx:2350–2360MHz LTE Band 41: Tx: 2535-2655 MHz, Rx: 2535 -2655 MHz
Power Supply:	DC 3.3V
Firmware version:	GLMM18A01_TSV1.0.000.005.180821_userdebug (manufacturer declare)
Hardware version:	M2_VB (manufacturer declare)
Sample Received Date:	Sep. 10, 2018
Sample tested Date:	Sep. 11, 2018 to Dec. 12, 2018

6.3 Product Specification subjective to this standard

Frequency Band:	LTE Band 41: Tx: 2535 MHz - 2655 MHz, Rx: 2535 MHz - 2655 MHz
Modulation Type:	QPSK, 16QAM
Antenna Type:	External Antenna
Antenna Gain:	-0.5dBi
Test Voltage:	DC 3.3V

6.4 Description of Support Units

The EUT has been tested independently.

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385
No tests were sub-contracted.
FCC Designation No.: CN1164

6.6 Deviation from Standards

None.

6.7 Abnormalities from Standard Conditions

None.

6.8 Other Information Requested by the Customer

None.

6.9 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.3dB (30MHz-1GHz)
		4.5dB (1GHz-12.75GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

7 Equipment List

Communication RF test system					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Spectrum Analyzer	Agilent	E4440A	MY46185649	11-13-2017	11-14-2018
Spectrum Analyzer	Agilent	E4440A	MY46185649	11-14-2018	11-13-2019
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-13-2018	03-12-2019
Signal Generator	Agilent	E4438C	MY45095744	03-13-2018	03-12-2019
Communication test set	Agilent	E5515C	GB47050534	03-16-2018	03-15-2019
Signal Generator	Keysight	E8257D	MY53401106	03-13-2018	03-12-2019
Communication test set	R&S	CMW500	152394	03-16-2018	03-15-2019
High-pass filter	Sinoscite	FL3CX03WG18NM12-0398-002	---	01-10-2018	01-09-2019
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX01CA09CL12-0395-001	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX01CA08CL12-0393-001	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX02CA04CL12-0396-002	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX02CA03CL12-0394-001	---	01-10-2018	01-09-2019
DC Power	Keysight	E3642A	MY54426112	03-13-2018	03-12-2019
DC Power	Keysight	E3642A	MY54426115	03-13-2018	03-12-2019
PC-2	Lenovo	R4960d	---	01-10-2018	01-09-2019
PC-3	Lenovo	R4960d	---	01-10-2018	01-09-2019
RF control unit	JS Tonscend	JS0806-1	158060004	03-13-2018	03-12-2019
DC power Box	JS Tonscend	JS0806-4	158060007	03-13-2018	03-12-2019
LTE Automatic test software	JS Tonscend	JS1120-1	---	03-30-2018	03-29-2019
WCDMA Automatic test software	JS Tonscend	JS1120-3	---	03-30-2018	03-29-2019
GSM Automatic test software	JS Tonscend	JS1120-3	---	03-30-2018	03-29-2019
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	10-11-2017	10-12-2018
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	10-12-2018	10-11-2019

3M Semi/full-anechoic Chamber					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
3M Chamber & Accessory Equipment	TDK	SAC-3	---	06-04-2016	06-03-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-401	10-27-2017	10-28-2018
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-401	10-28-2018	10-27-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	07-30-2018	07-29-2019
Microwave Preamplifier	Agilent	8449B	3008A02425	08-21-2018	08-20-2019
Microwave Preamplifier	Tonscend	EMC051845 SE	980380	01-19-2018	01-18-2019
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	04-25-2018	04-23-2021
Horn Antenna	ETS-LINDGREN	3117	00057410	06-05-2018	06-03-2021
Double ridge horn antenna	A.H.SYSTEMS	SAS-574	6042	06-05-2018	06-04-2021
Pre-amplifier	A.H.SYSTEMS	PAP-1840-60	6041	06-05-2018	06-04-2021
Loop Antenna	ETS	6502	00071730	06-22-2017	06-21-2019
Spectrum Analyzer	R&S	FSP40	100416	05-11-2018	05-10-2019
Receiver	R&S	ESCI	100435	05-25-2018	05-24-2019
Receiver	R&S	ESCI7	100938-003	11-22-2017	11-23-2018
Receiver	R&S	ESCI7	100938-003	11-23-2018	11-22-2019
Multi device Controller	maturo	NCD/070/107 11112	---	01-10-2018	01-09-2019
LISN	schwarzbeck	NNBM8125	81251547	05-11-2018	05-10-2019
LISN	schwarzbeck	NNBM8125	81251548	05-11-2018	05-10-2019
Signal Generator	Agilent	E4438C	MY4509574 4	03-13-2018	03-12-2019
Signal Generator	Keysight	E8257D	MY5340110 6	03-13-2018	03-12-2019
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	10-11-2017	10-12-2018
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	10-12-2018	10-11-2019
Communication test set	Agilent	E5515C	GB4705053 4	03-16-2018	03-15-2019
Cable line	Fulai(7M)	SF106	5219/6A	01-10-2018	01-09-2019
Cable line	Fulai(6M)	SF106	5220/6A	01-10-2018	01-09-2019
Cable line	Fulai(3M)	SF106	5216/6A	01-10-2018	01-09-2019
Cable line	Fulai(3M)	SF106	5217/6A	01-10-2018	01-09-2019
Communication test set	R&S	CMW500	104466	02-05-2018	02-04-2019
High-pass filter	Sinoscite	FL3CX03WG 18NM12-0398-002	---	01-10-2018	01-09-2019
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX01CA0 9CL12-0395-001	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX01CA0 8CL12-0393-001	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX02CA0 4CL12-0396-002	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX02CA0 3CL12-0394-001	---	01-10-2018	01-09-2019

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	PART 22	PART 22 – PUBLIC MOBILE SERVICES Subpart H – Cellular Radiotelephone Service
2	PART 24	PART 24 – PERSONAL COMMUNICATIONS SERVICES Subpart E – Broadband PCS
3	PART 27	PART 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES Subpart C – Technical Standards
3	PART 2	Frequency allocations and radio treaty matters; general rules and regulations
4	TIA-603-E-2016	Land Mobile FM or PM -Communications Equipment -Measurement and Performance Standards
5	KDB971168 D01	KDB971168 D01 Power Meas License Digital Systems v03r01

Test Results List:

Test Requirement	Test method	Test item	Verdict	Note
Part 2.1046(a) /Part 27.50(h)	TIA-603-E-2016& KDB 971168 D01v03r01	Conducted output power	PASS	Appendix A)
Part 2.1046(a) / Part 27.50(h)	TIA-603-E-2016& KDB 971168 D01v03r01	Effective Radiated Power of Transmitter(ERP)	PASS	Appendix A)
Part 27.50(d)	KDB 971168 D01v03r01	Peak-to-Average Ratio	PASS	Appendix B)
Part 2.1049(h)	Part 22.917(b) &KDB 971168 D01v03r01	99% &26dBOccupied Bandwidth	PASS	Appendix C)
Part 2.1051/ Part 27.53(m)	Part 22.917(b) &KDB 971168 D01v03r01	Band Edge at antenna terminals	PASS	Appendix D)
Part 2.1051/ Part 27.53(m)	TIA-603-E-2016& KDB 971168 D01v03r01	Spurious emissions at antenna terminals	PASS	Appendix E)
Part 2.1053/ Part 27.53(m)	TIA-603-E-2016& KDB 971168 D01v03r01	Frequency stability	PASS	Appendix F)
Part 2.1053/ Part 2.1057/ Part 22.917(a)(b)	TIA-603-E-2016& KDB 971168 D01v03r01	Field strength of spurious radiation	PASS	Appendix G)

Appendix A): Conducted Output Power and Effective (Isotropic) Radiated Power

Description of the Conducted Output Power Measurement and ERP/EIRP Measurement:	A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported. According to KDB 412172 D01 Power Approach EIRP = $P_T + G_T - L_C$, ERP = EIRP - 2.15, where P_T = transmitter output power in dBm G_T = gain of the transmitting antenna in dBi L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB
Measurement Procedure:	1. The transmitter output port was connected to the system simulator. 2. Set EUT at maximum power through the system simulator. 3. Select lowest, middle, and highest channels for each band and different modulation. 4. Measure and record the power level from the system simulator.
Limit:	Mode: LTE band 41 Limit: 33dBm

Test Result
Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	23.76	23.26	PASS
		1	12	24.23	23.73	PASS
		1	24	23.71	23.21	PASS
		12	0	22.44	21.94	PASS
		12	6	22.43	21.93	PASS
		12	13	22.45	21.95	PASS
		25	0	22.40	21.90	PASS
	MCH	1	0	23.40	22.90	PASS
		1	12	23.52	23.02	PASS
		1	24	23.17	22.67	PASS
		12	0	21.82	21.32	PASS
		12	6	21.76	21.26	PASS
		12	13	21.83	21.33	PASS
		25	0	21.87	21.37	PASS
	HCH	1	0	22.61	22.11	PASS
		1	12	22.97	22.47	PASS
		1	24	22.36	21.86	PASS
		12	0	21.65	21.15	PASS
		12	6	21.65	21.15	PASS
		12	13	21.65	21.15	PASS
		25	0	21.66	21.16	PASS
16QAM	LCH	1	0	25.25	24.75	PASS
		1	12	25.31	24.81	PASS
		1	24	24.55	24.05	PASS
		12	0	22.42	21.92	PASS
		12	6	22.40	21.90	PASS
		12	13	22.44	21.94	PASS
		25	0	22.23	21.73	PASS
	MCH	1	0	23.79	23.29	PASS
		1	12	24.38	23.88	PASS
		1	24	23.98	23.48	PASS
		12	0	21.87	21.37	PASS
		12	6	21.87	21.37	PASS

		12	13	21.87	21.37	PASS
		25	0	21.75	21.25	PASS
	HCH	1	0	22.37	21.87	PASS
		1	12	23.05	22.55	PASS
		1	24	22.74	22.24	PASS
		12	0	21.66	21.16	PASS
		12	6	21.66	21.16	PASS
		12	13	21.66	21.16	PASS
		25	0	21.47	20.97	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	23.87	23.37	PASS
		1	24	23.75	23.25	PASS
		1	49	23.57	23.07	PASS
		25	0	22.20	21.70	PASS
		25	12	22.21	21.71	PASS
		25	25	22.18	21.68	PASS
		50	0	22.24	21.74	PASS
	MCH	1	0	23.23	22.73	PASS
		1	24	23.31	22.81	PASS
		1	49	23.36	22.86	PASS
		25	0	21.61	21.11	PASS
		25	12	21.61	21.11	PASS
		25	25	21.65	21.15	PASS
		50	0	21.58	21.08	PASS
	HCH	1	0	22.91	22.41	PASS
		1	24	23.07	22.57	PASS
		1	49	22.88	22.38	PASS
		25	0	21.47	20.97	PASS
		25	12	21.48	20.98	PASS
		25	25	21.46	20.96	PASS
		50	0	21.48	20.98	PASS
16QAM	LCH	1	0	24.26	23.76	PASS
		1	24	24.23	23.73	PASS
		1	49	24.11	23.61	PASS

		25	0	22.22	21.72	PASS
		25	12	22.22	21.72	PASS
		25	25	22.24	21.74	PASS
		50	0	21.96	21.46	PASS
	MCH	1	0	23.77	23.27	PASS
		1	24	23.71	23.21	PASS
		1	49	23.76	23.26	PASS
		25	0	21.63	21.13	PASS
		25	12	21.63	21.13	PASS
		25	25	21.71	21.21	PASS
		50	0	21.70	21.200	PASS
	HCH	1	0	23.33	22.83	PASS
		1	24	23.44	22.94	PASS
		1	49	23.19	22.69	PASS
		25	0	21.49	20.99	PASS
		25	12	21.49	20.99	PASS
		25	25	21.47	20.97	PASS
		50	0	21.30	20.80	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	23.79	23.29	PASS
		1	37	23.59	23.09	PASS
		1	74	23.43	22.93	PASS
		37	0	22.29	21.79	PASS
		37	18	22.28	21.78	PASS
		37	38	22.27	21.77	PASS
		75	0	22.36	21.86	PASS
	MCH	1	0	23.21	22.71	PASS
		1	37	23.26	22.76	PASS
		1	74	23.26	22.76	PASS
		37	0	21.69	21.19	PASS
		37	18	21.69	21.19	PASS
		37	38	21.69	21.19	PASS
		75	0	21.67	21.17	PASS
	HCH	1	0	23.21	22.71	PASS

		1	37	23.17	22.67	PASS
		1	74	22.67	22.17	PASS
		37	0	21.48	20.98	PASS
		37	18	21.48	20.98	PASS
		37	38	21.48	20.98	PASS
		75	0	21.48	20.98	PASS
16QAM	LCH	1	0	24.78	24.28	PASS
		1	37	24.53	24.03	PASS
		1	74	24.10	23.6	PASS
		37	0	22.39	21.89	PASS
		37	18	22.38	21.88	PASS
		37	38	22.38	21.88	PASS
		75	0	22.12	21.62	PASS
	MCH	1	0	23.71	23.21	PASS
		1	37	23.78	23.28	PASS
		1	74	23.67	23.17	PASS
		37	0	21.69	21.19	PASS
		37	18	21.69	21.19	PASS
		37	38	21.69	21.19	PASS
		75	0	21.43	20.93	PASS
	HCH	1	0	23.36	22.86	PASS
		1	37	23.26	22.76	PASS
		1	74	23.13	22.63	PASS
		37	0	21.48	20.98	PASS
		37	18	21.48	20.98	PASS
		37	38	21.48	20.98	PASS
		75	0	21.26	20.76	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	23.79	23.29	PASS
		1	49	23.60	23.10	PASS
		1	99	23.52	23.02	PASS
		50	0	22.35	21.85	PASS
		50	25	22.34	21.84	PASS
		50	50	22.11	21.61	PASS
		100	0	22.02	21.52	PASS

	MCH	1	0	23.22	22.72	PASS
		1	49	23.46	22.96	PASS
		1	99	23.25	22.75	PASS
		50	0	21.92	21.42	PASS
		50	25	21.90	21.40	PASS
		50	50	21.94	21.44	PASS
		100	0	21.85	21.35	PASS
	HCH	1	0	22.63	22.13	PASS
		1	49	22.54	22.04	PASS
		1	99	22.57	22.07	PASS
		50	0	21.73	21.23	PASS
		50	25	21.73	21.23	PASS
		50	50	21.50	21.00	PASS
		100	0	21.51	21.01	PASS
16QAM	LCH	1	0	24.75	24.25	PASS
		1	49	24.53	24.03	PASS
		1	99	24.04	23.54	PASS
		50	0	22.30	21.8	PASS
		50	25	22.29	21.79	PASS
		50	50	22.11	21.61	PASS
		100	0	21.82	21.32	PASS
	MCH	1	0	23.64	23.14	PASS
		1	49	24.31	23.81	PASS
		1	99	24.74	24.24	PASS
		50	0	21.81	21.31	PASS
		50	25	21.84	21.34	PASS
		50	50	21.86	21.36	PASS
		100	0	21.66	21.16	PASS
	HCH	1	0	23.88	23.38	PASS
		1	49	23.72	23.22	PASS
		1	99	23.71	23.21	PASS
		50	0	21.38	20.88	PASS
		50	25	21.39	20.89	PASS
		50	50	21.36	20.86	PASS
		100	0	21.35	20.85	PASS

Appendix B): Peak-to-Average Ratio

Test Result

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	6.75	<13	PASS
		1	12	6.14	<13	PASS
		1	24	5.59	<13	PASS
		12	0	5.95	<13	PASS
		12	6	5.86	<13	PASS
		12	13	6.01	<13	PASS
		25	0	5.89	<13	PASS
	MCH	1	0	5.08	<13	PASS
		1	12	5.67	<13	PASS
		1	24	5.44	<13	PASS
		12	0	5.83	<13	PASS
		12	6	5.79	<13	PASS
		12	13	5.78	<13	PASS
		25	0	5.68	<13	PASS
	HCH	1	0	5.62	<13	PASS
		1	12	4.49	<13	PASS
		1	24	4.48	<13	PASS
		12	0	5.56	<13	PASS
		12	6	5.56	<13	PASS
		12	13	5.51	<13	PASS
		25	0	5.40	<13	PASS
16QAM	LCH	1	0	5.34	<13	PASS
		1	12	5.06	<13	PASS
		1	24	5.31	<13	PASS
		12	0	6.01	<13	PASS
		12	6	5.98	<13	PASS
		12	13	5.95	<13	PASS
		25	0	6.53	<13	PASS
	MCH	1	0	4.63	<13	PASS
		1	12	5.25	<13	PASS
		1	24	4.91	<13	PASS
		12	0	5.70	<13	PASS
		12	6	5.71	<13	PASS

		12	13	5.75	<13	PASS
		25	0	6.31	<13	PASS
	HCH	1	0	4.72	<13	PASS
		1	12	4.17	<13	PASS
		1	24	4.85	<13	PASS
		12	0	5.42	<13	PASS
		12	6	5.37	<13	PASS
		12	13	5.41	<13	PASS
		25	0	5.85	<13	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	5.74	<13	PASS
		1	24	5.86	<13	PASS
		1	49	6.22	<13	PASS
		25	0	6.03	<13	PASS
		25	12	6.02	<13	PASS
		25	25	6.08	<13	PASS
		50	0	6.04	<13	PASS
	MCH	1	0	5.24	<13	PASS
		1	24	5.10	<13	PASS
		1	49	5.32	<13	PASS
		25	0	5.86	<13	PASS
		25	12	5.86	<13	PASS
		25	25	5.85	<13	PASS
		50	0	5.88	<13	PASS
	HCH	1	0	4.99	<13	PASS
		1	24	4.71	<13	PASS
		1	49	4.85	<13	PASS
		25	0	5.63	<13	PASS
		25	12	5.63	<13	PASS
		25	25	5.53	<13	PASS
		50	0	5.62	<13	PASS
16QAM	LCH	1	0	5.94	<13	PASS
		1	24	6.14	<13	PASS
		1	49	5.65	<13	PASS

		25	0	6.05	<13	PASS
		25	12	6.05	<13	PASS
		25	25	6.07	<13	PASS
		50	0	6.68	<13	PASS
	MCH	1	0	5.43	<13	PASS
		1	24	6.16	<13	PASS
		1	49	5.16	<13	PASS
		25	0	5.83	<13	PASS
		25	12	5.87	<13	PASS
		25	25	5.83	<13	PASS
		50	0	6.46	<13	PASS
	HCH	1	0	5.16	<13	PASS
		1	24	5.10	<13	PASS
		1	49	5.60	<13	PASS
		25	0	5.63	<13	PASS
		25	12	5.63	<13	PASS
		25	25	5.54	<13	PASS
		50	0	6.17	<13	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	5.97	<13	PASS
		1	37	5.68	<13	PASS
		1	74	5.44	<13	PASS
		37	0	6.19	<13	PASS
		37	18	6.22	<13	PASS
		37	38	6.20	<13	PASS
		75	0	6.22	<13	PASS
	MCH	1	0	5.68	<13	PASS
		1	37	5.33	<13	PASS
		1	74	5.12	<13	PASS
		37	0	6.09	<13	PASS
		37	18	6.09	<13	PASS
		37	38	6.08	<13	PASS
		75	0	6.06	<13	PASS
	HCH	1	0	4.89	<13	PASS

		1	37	4.80	<13	PASS
		1	74	4.40	<13	PASS
		37	0	5.89	<13	PASS
		37	18	5.89	<13	PASS
		37	38	5.90	<13	PASS
		75	0	5.92	<13	PASS
16QAM	LCH	1	0	5.68	<13	PASS
		1	37	5.57	<13	PASS
		1	74	5.04	<13	PASS
		37	0	6.24	<13	PASS
		37	18	6.23	<13	PASS
		37	38	6.22	<13	PASS
		75	0	6.65	<13	PASS
	MCH	1	0	5.54	<13	PASS
		1	37	5.86	<13	PASS
		1	74	5.82	<13	PASS
		37	0	6.08	<13	PASS
		37	18	6.08	<13	PASS
		37	38	6.09	<13	PASS
		75	0	6.49	<13	PASS
	HCH	1	0	5.23	<13	PASS
		1	37	5.24	<13	PASS
		1	74	4.86	<13	PASS
		37	0	5.89	<13	PASS
		37	18	5.87	<13	PASS
		37	38	5.89	<13	PASS
		75	0	6.26	<13	PASS

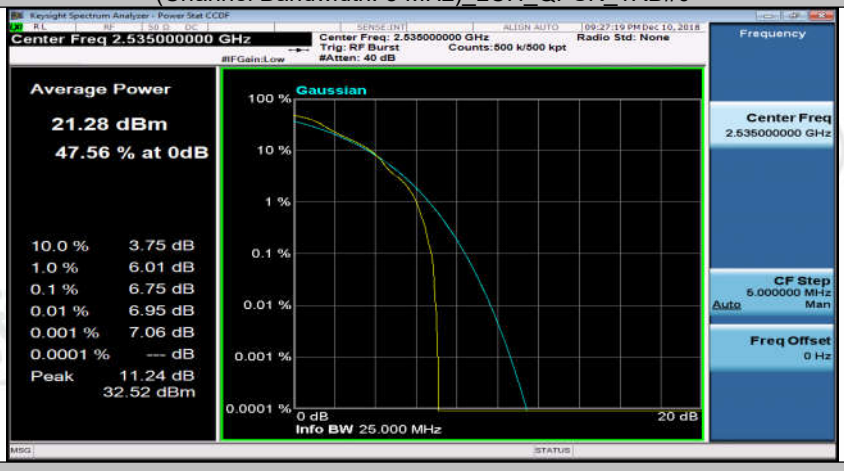
Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	5.63	<13	PASS
		1	49	5.79	<13	PASS
		1	99	5.98	<13	PASS
		50	0	6.05	<13	PASS
		50	25	6.03	<13	PASS
		50	50	6.05	<13	PASS

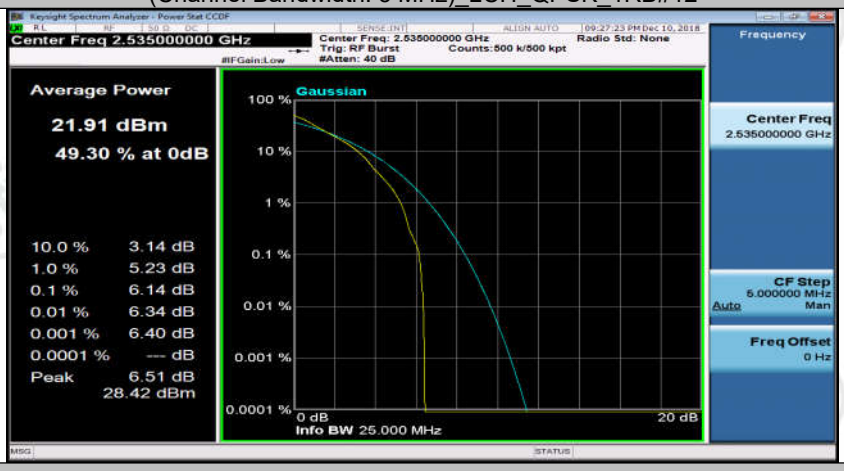
		100	0	5.94	<13	PASS
	MCH	1	0	5.08	<13	PASS
		1	49	5.39	<13	PASS
		1	99	5.27	<13	PASS
		50	0	5.83	<13	PASS
		50	25	5.84	<13	PASS
		50	50	5.86	<13	PASS
		100	0	5.77	<13	PASS
	HCH	1	0	4.98	<13	PASS
		1	49	4.62	<13	PASS
		1	99	5.50	<13	PASS
		50	0	5.71	<13	PASS
		50	25	5.70	<13	PASS
		50	50	5.55	<13	PASS
		100	0	5.64	<13	PASS
16QAM	LCH	1	0	5.06	<13	PASS
		1	49	4.37	<13	PASS
		1	99	5.23	<13	PASS
		50	0	6.66	<13	PASS
		50	25	6.68	<13	PASS
		50	50	6.60	<13	PASS
		100	0	6.62	<13	PASS
	MCH	1	0	4.75	<13	PASS
		1	49	3.74	<13	PASS
		1	99	4.69	<13	PASS
		50	0	6.35	<13	PASS
		50	25	6.36	<13	PASS
		50	50	6.40	<13	PASS
		100	0	6.42	<13	PASS
	HCH	1	0	4.13	<13	PASS
		1	49	4.03	<13	PASS
		1	99	5.29	<13	PASS
		50	0	6.13	<13	PASS
		50	25	6.14	<13	PASS
		50	50	5.93	<13	PASS
		100	0	6.20	<13	PASS

Test Graphs
Channel Bandwidth: 5 MHz

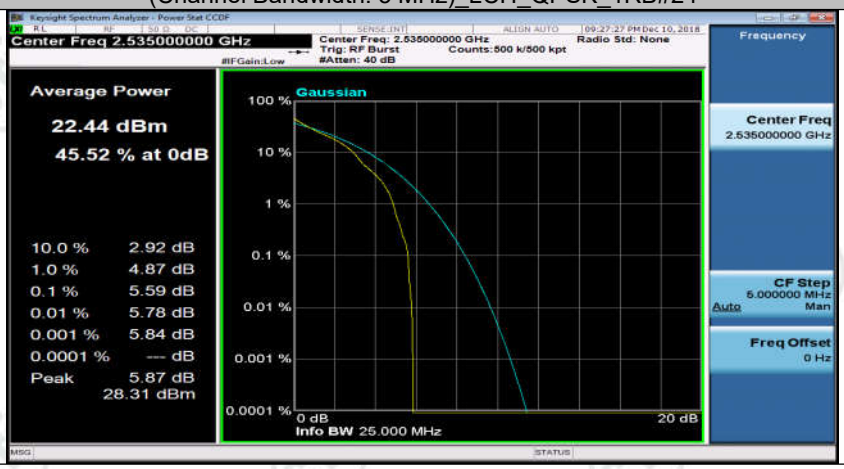
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



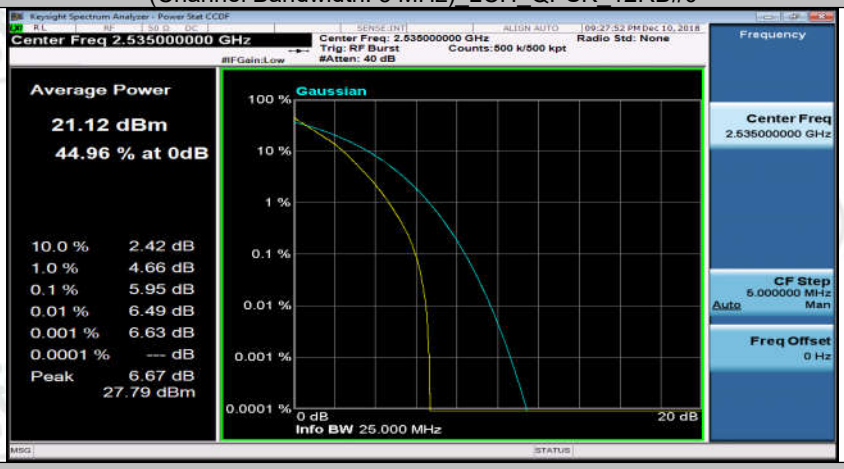
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12



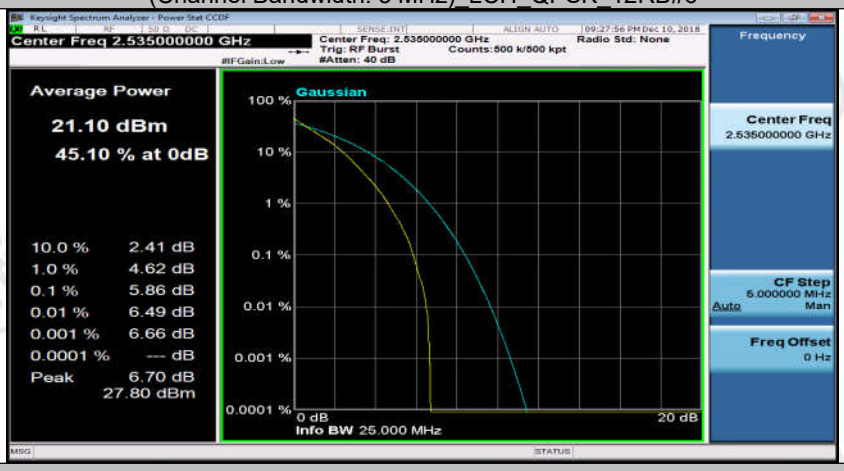
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24



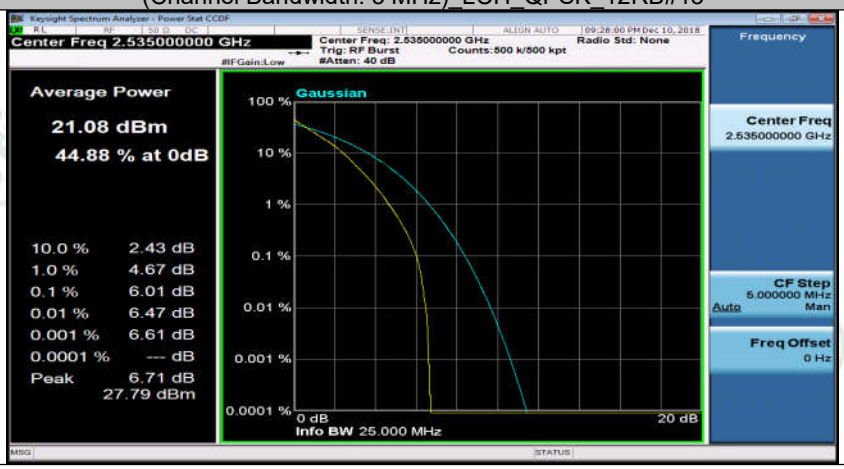
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#0



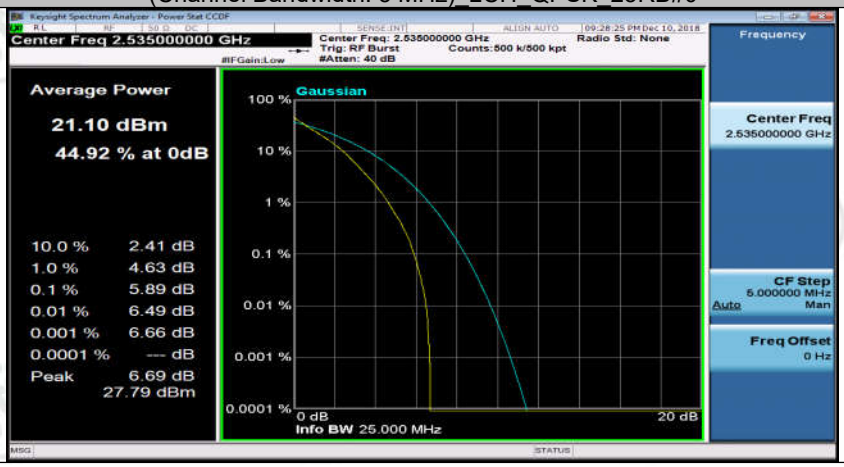
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#6



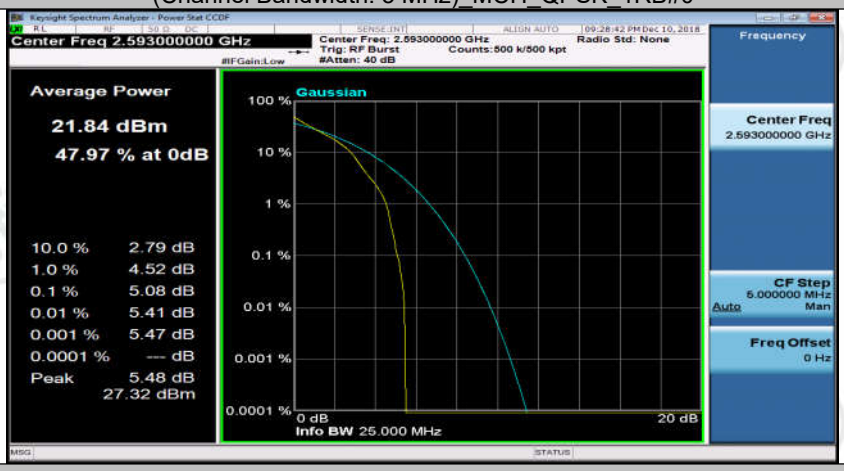
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#13



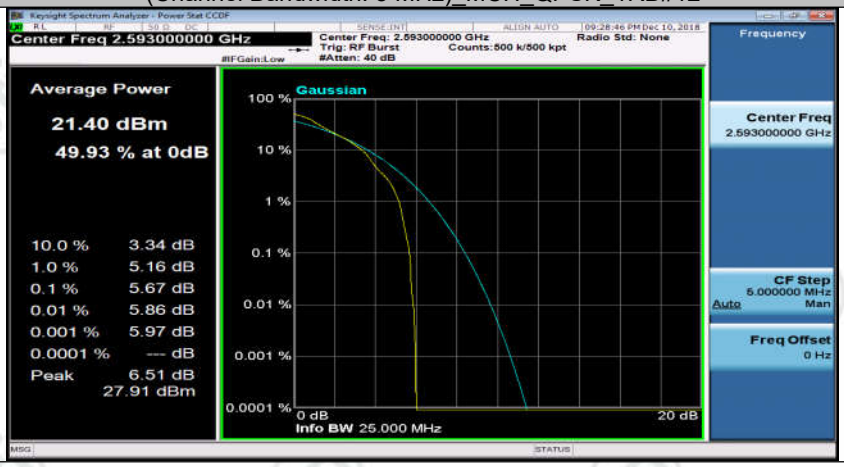
(Channel Bandwidth: 5 MHz)_LCH_QPSK_25RB#0



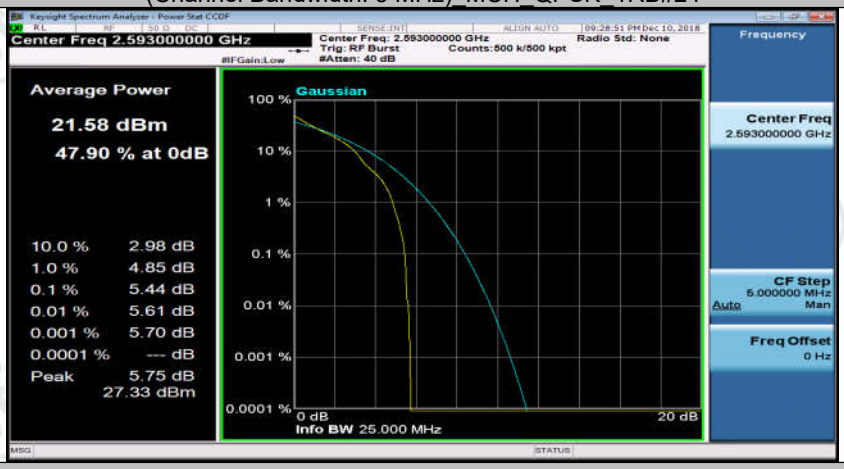
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



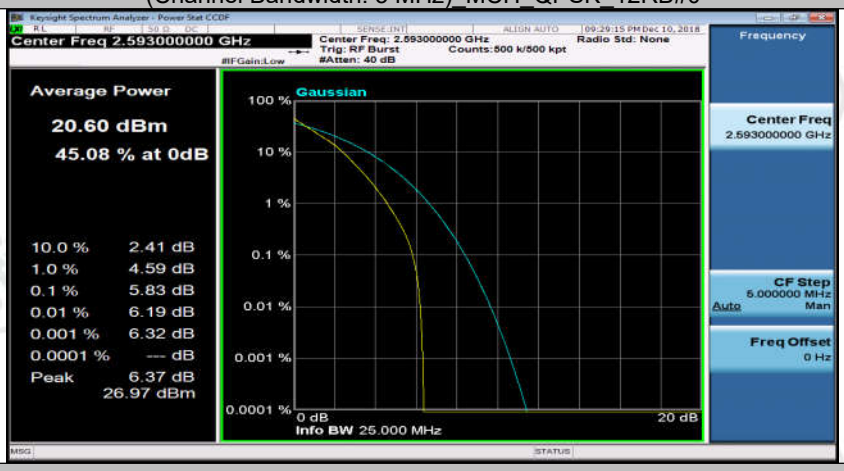
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12



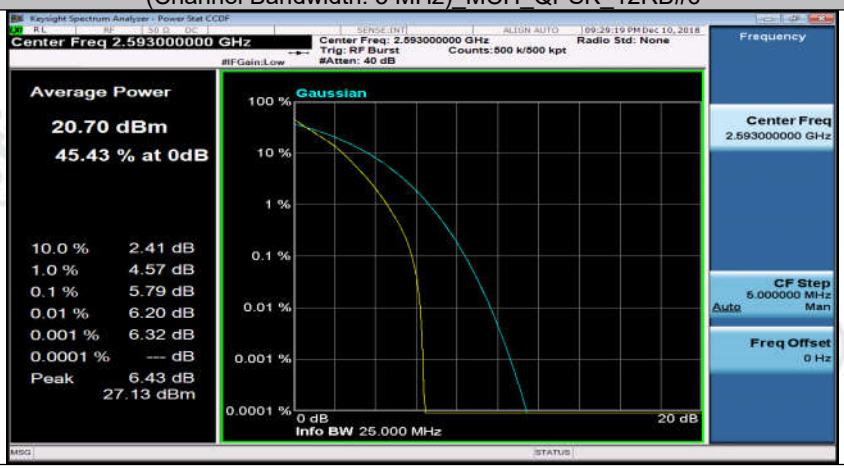
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24



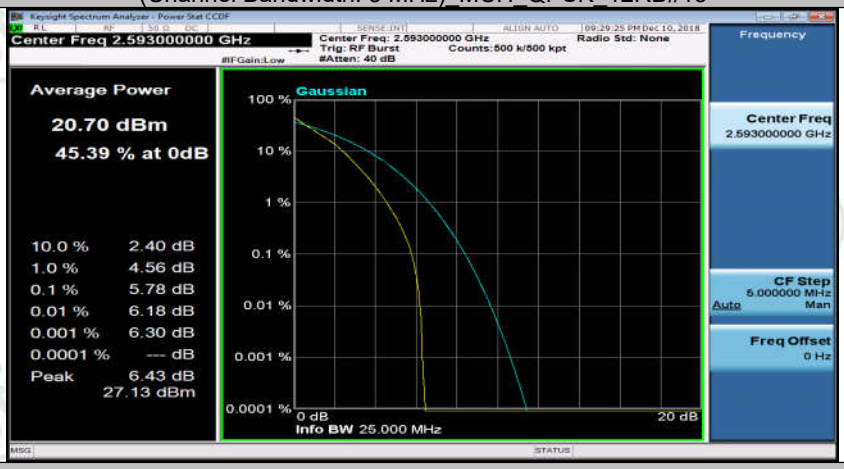
(Channel Bandwidth: 5 MHz)_MCH_QPSK_12RB#0



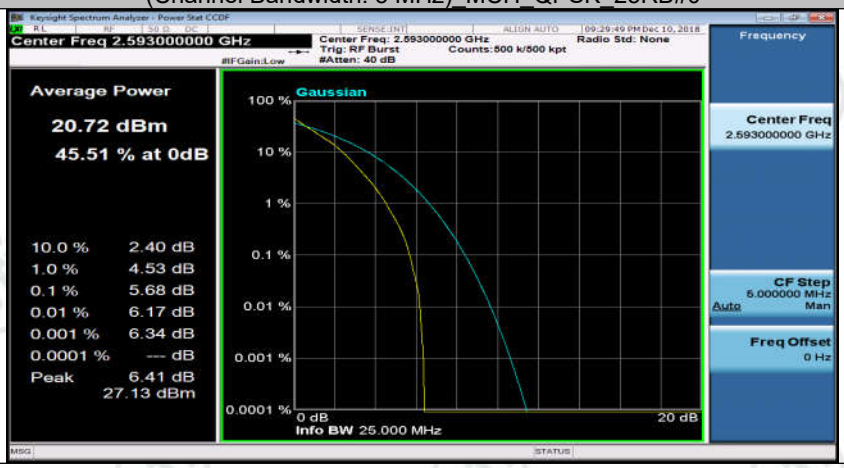
(Channel Bandwidth: 5 MHz)_MCH_QPSK_12RB#6



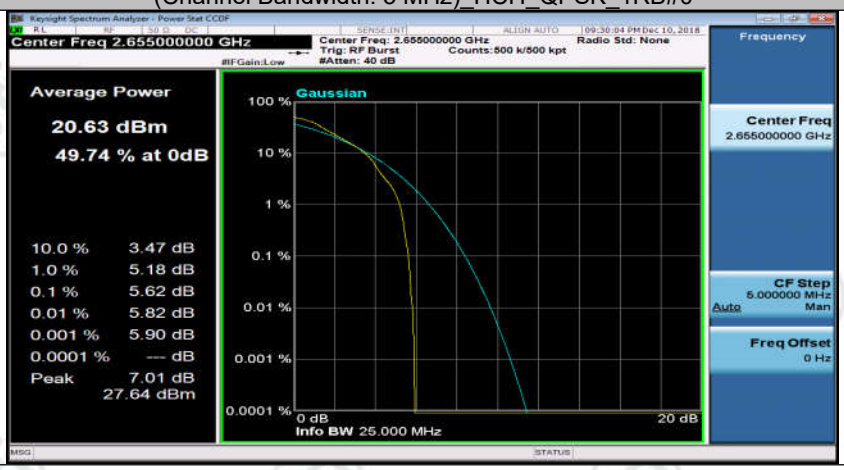
(Channel Bandwidth: 5 MHz)_MCH_QPSK_12RB#13



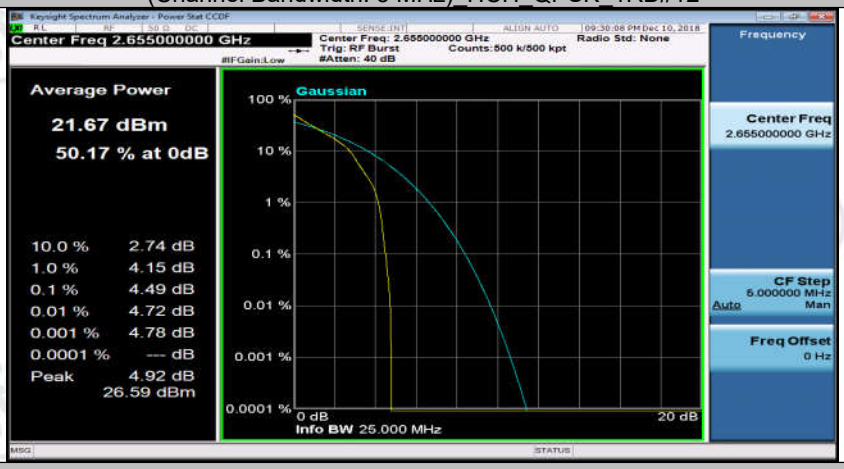
(Channel Bandwidth: 5 MHz)_MCH_QPSK_25RB#0



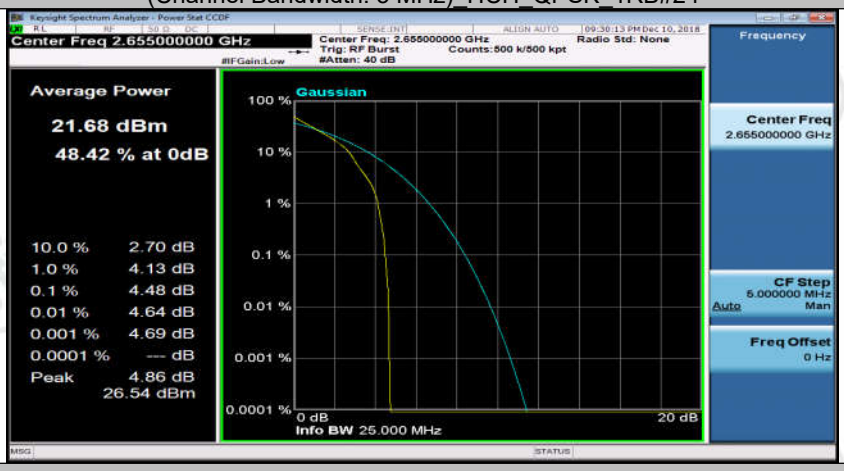
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



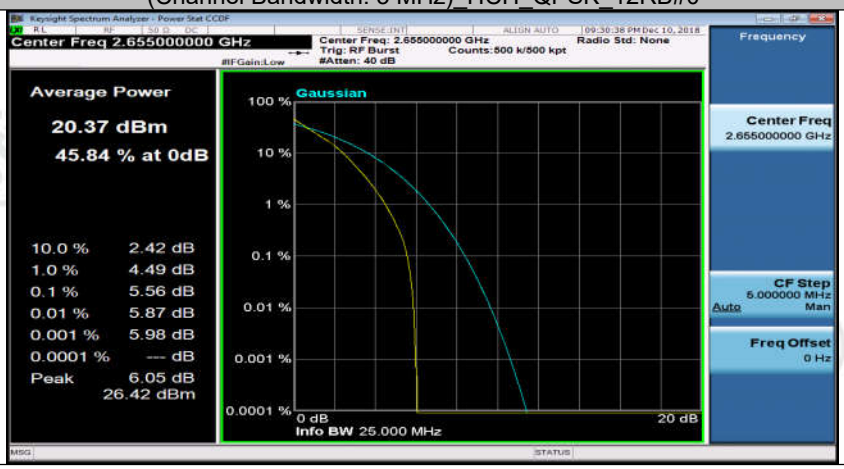
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12



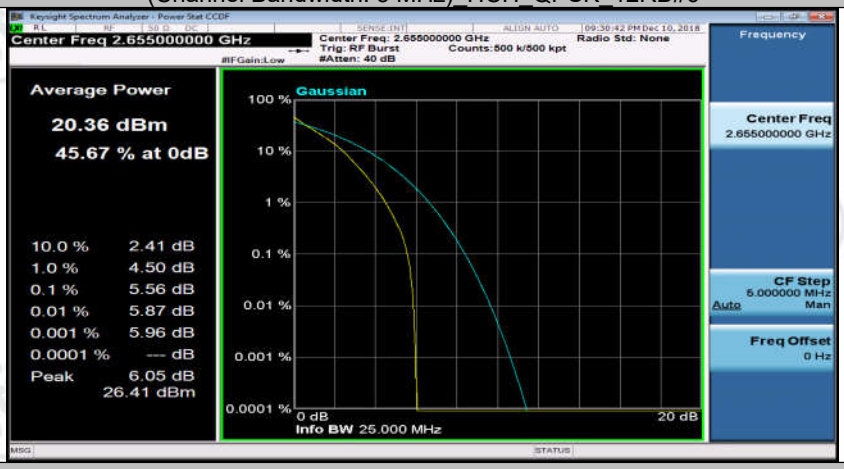
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24



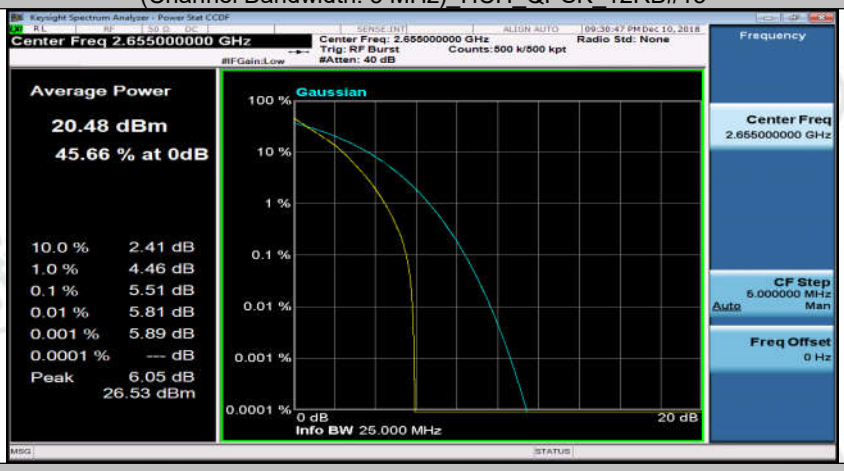
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#0



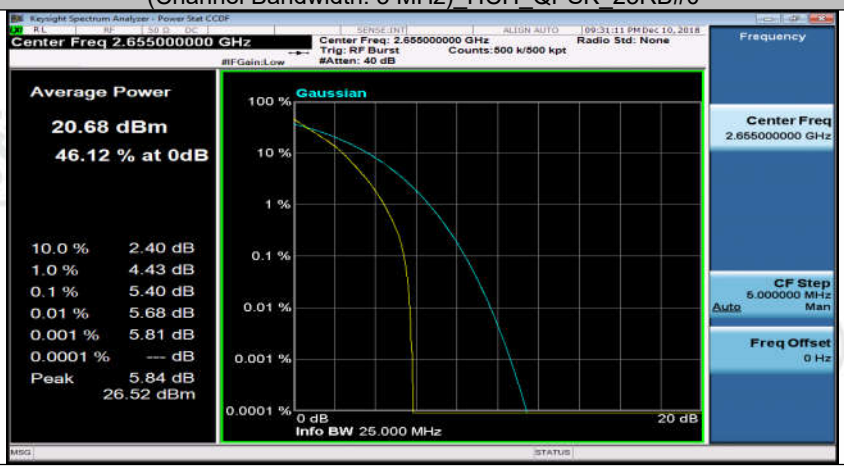
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#6



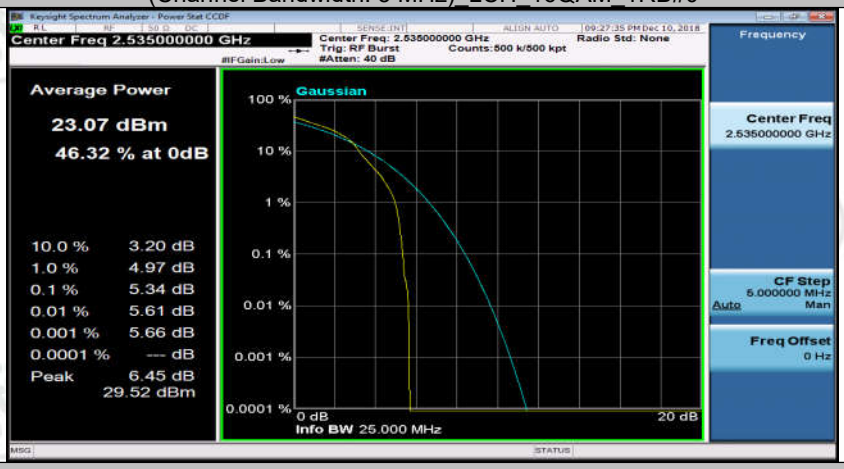
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#13



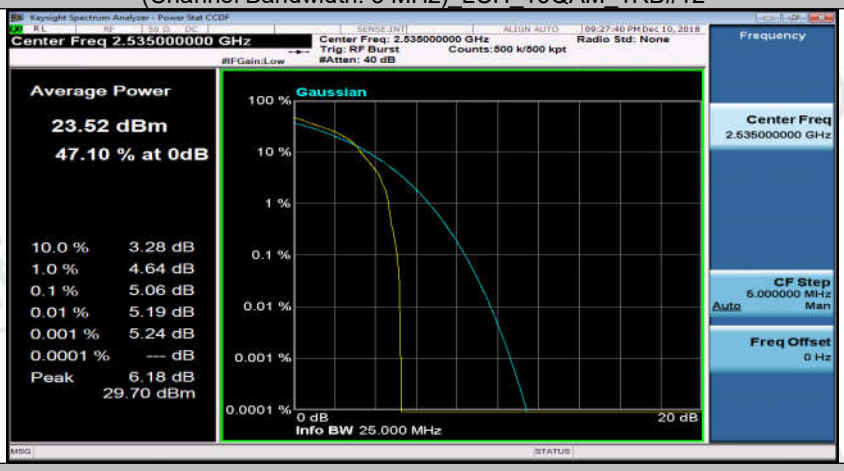
(Channel Bandwidth: 5 MHz)_HCH_QPSK_25RB#0



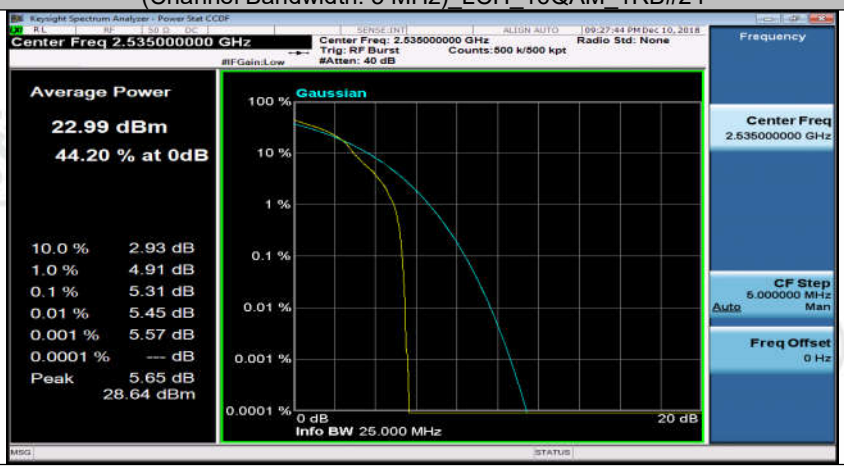
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



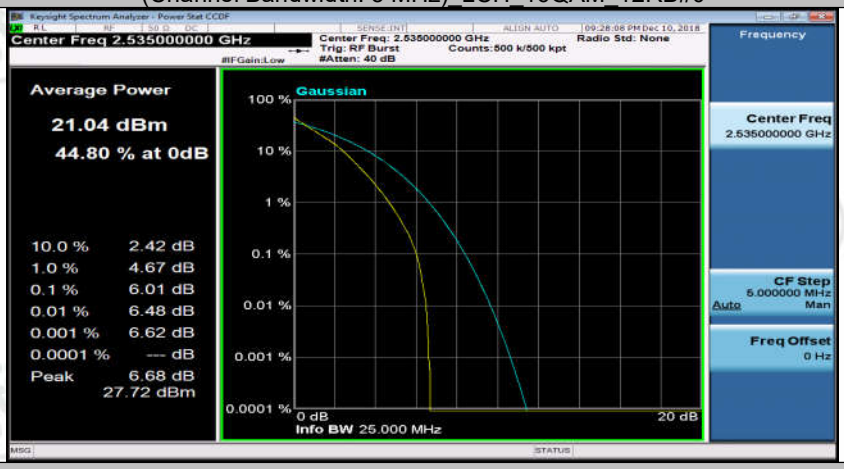
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#0



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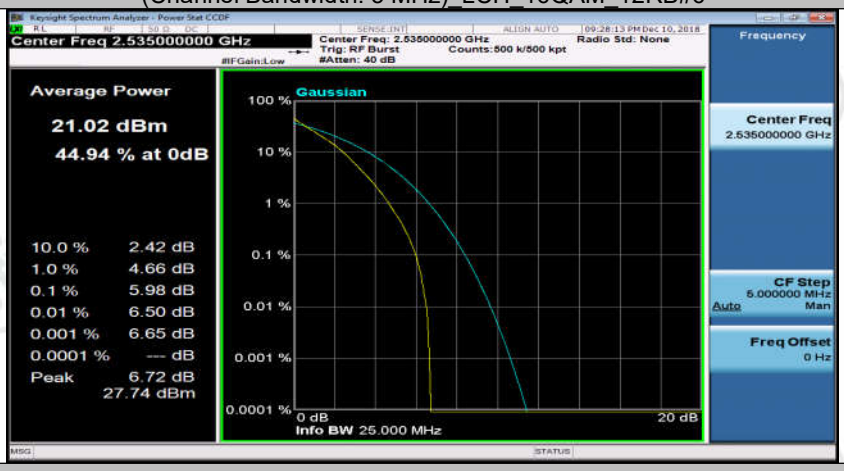
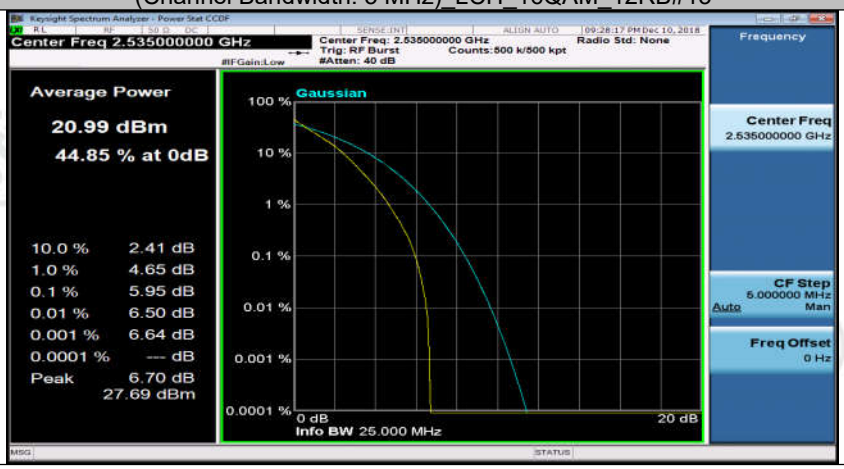
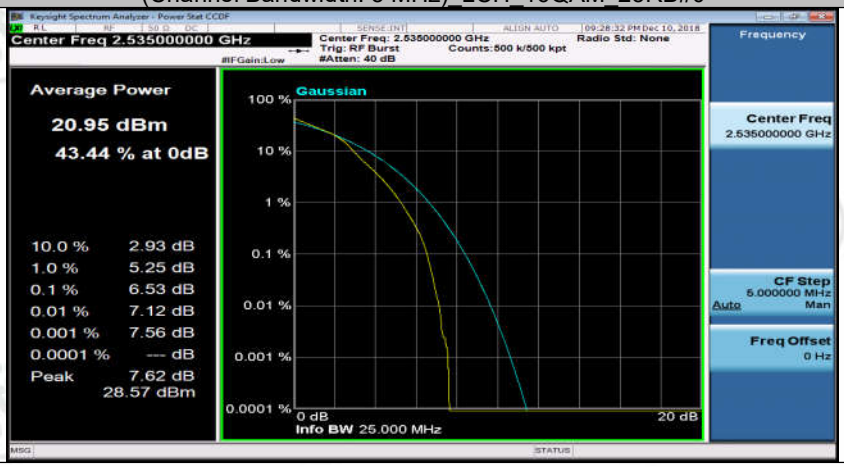


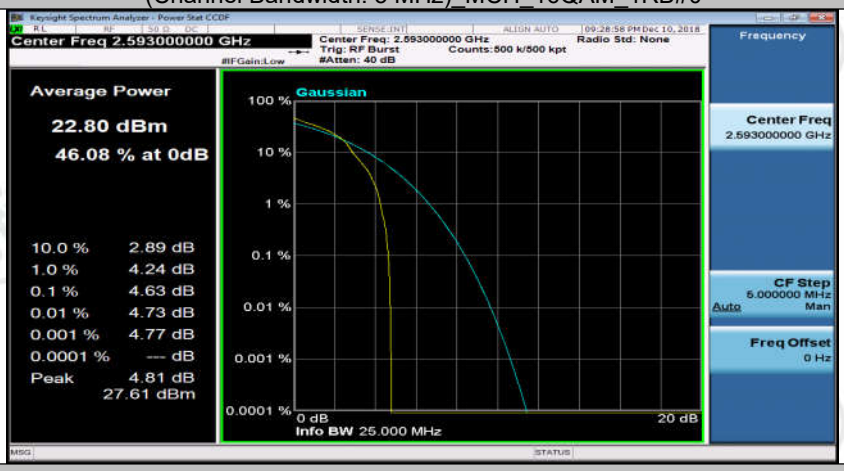
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#13



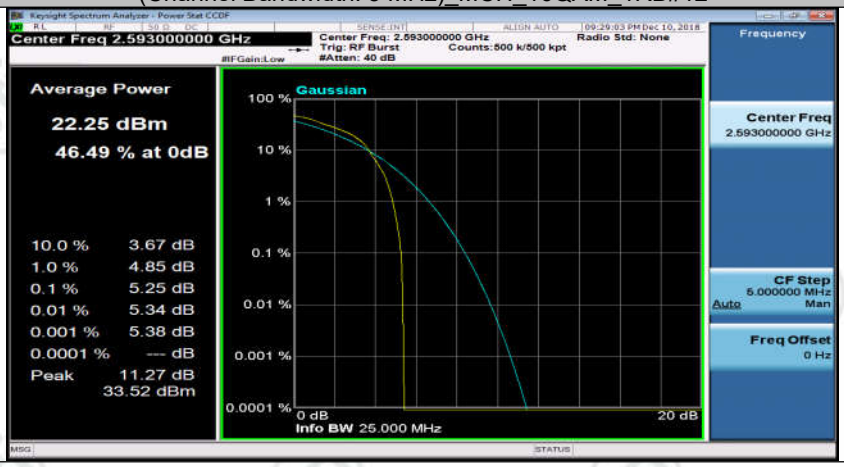
(Channel Bandwidth: 5 MHz)_LCH_16QAM_25RB#0



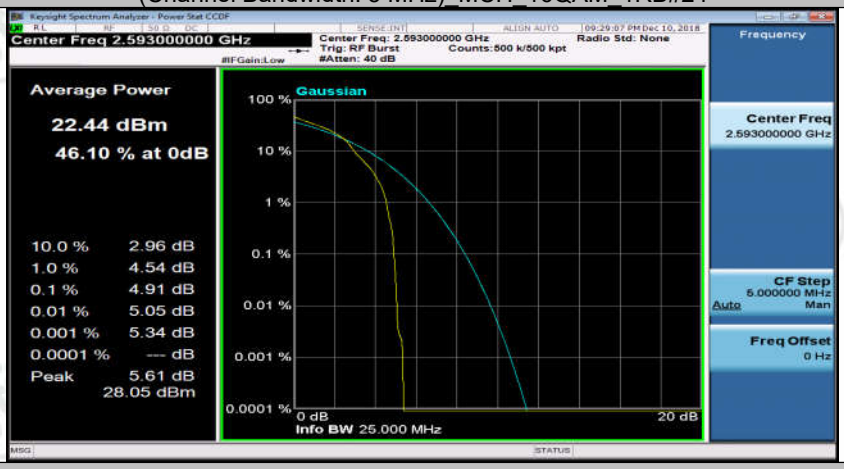
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



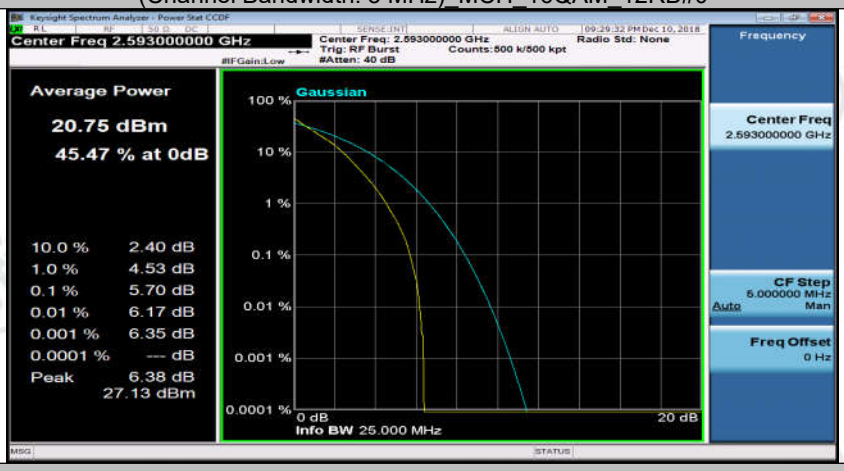
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#0



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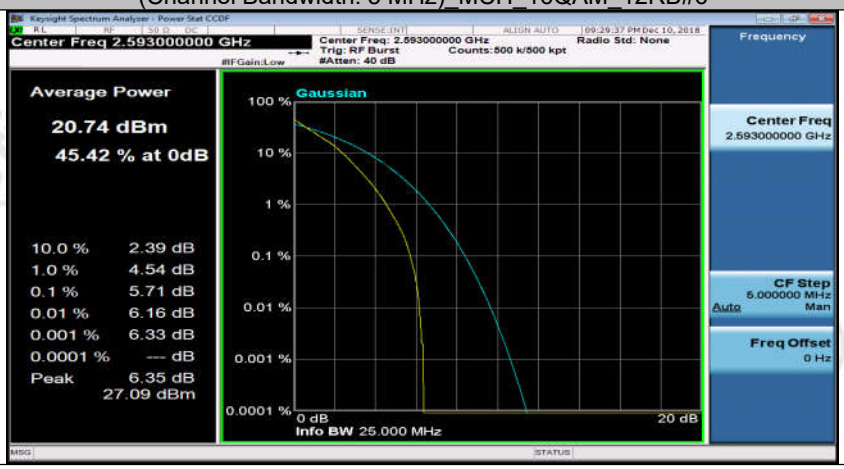
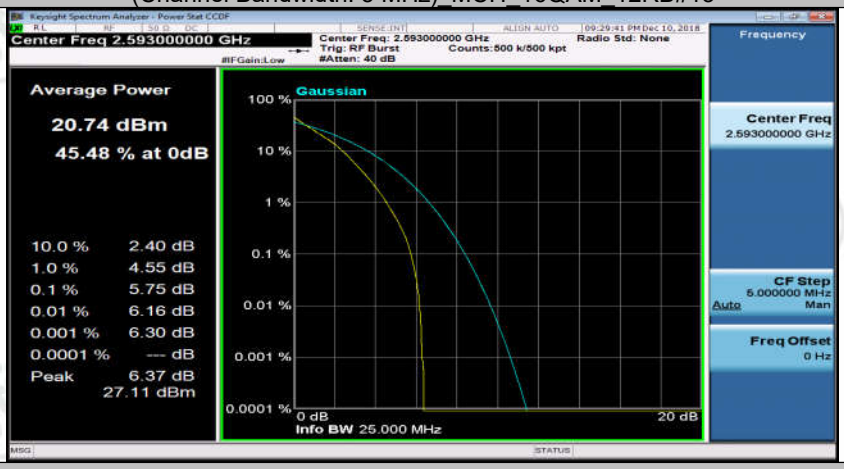
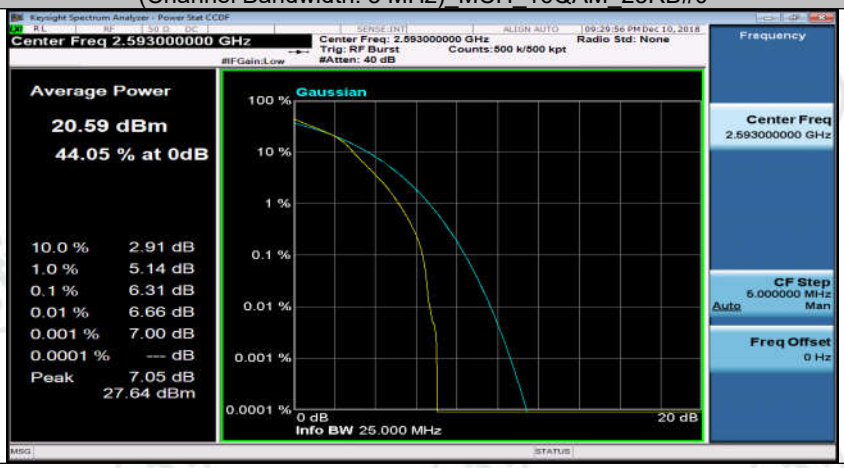


(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#13



(Channel Bandwidth: 5 MHz)_MCH_16QAM_25RB#0



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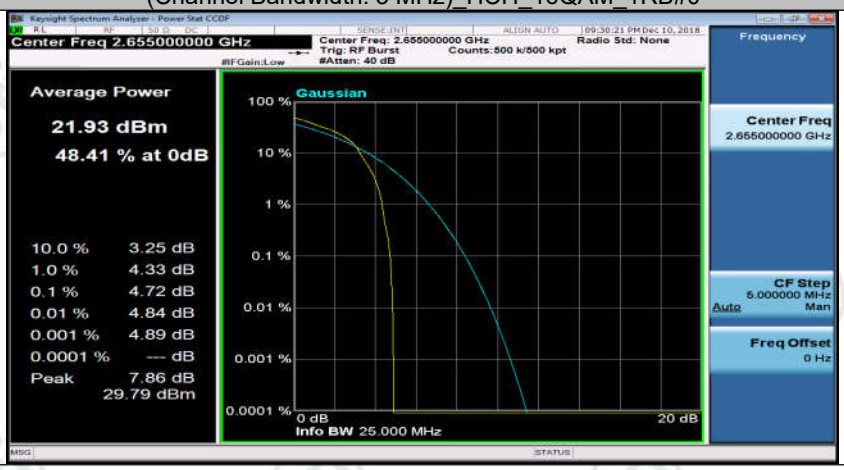
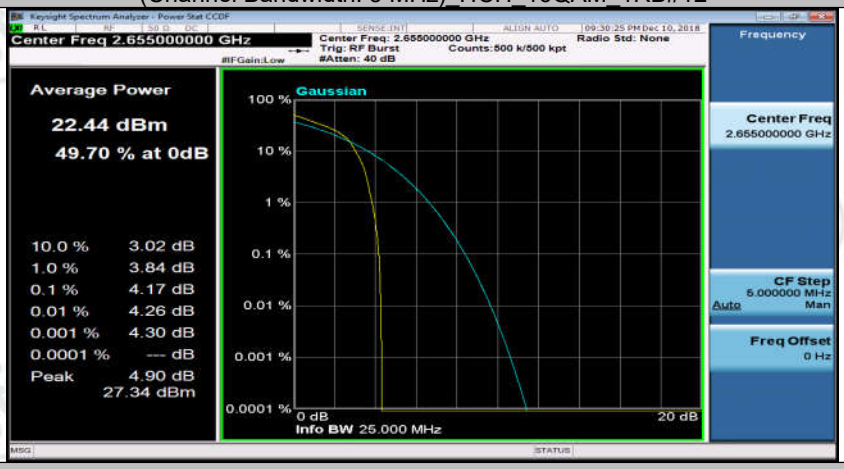
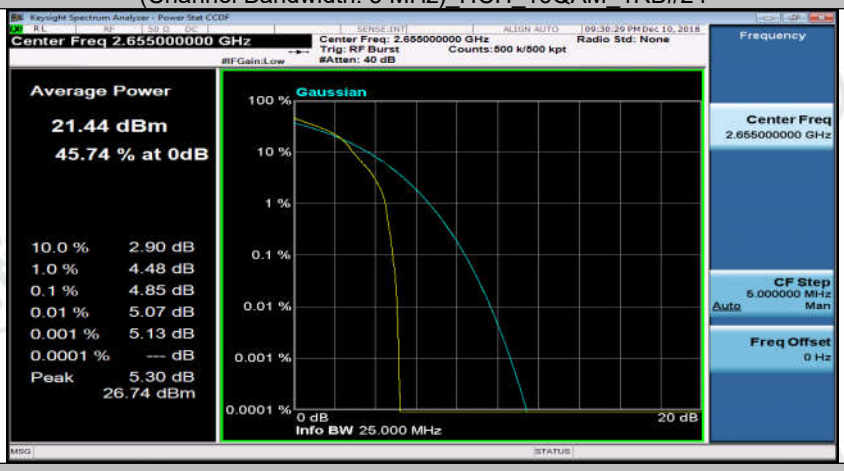


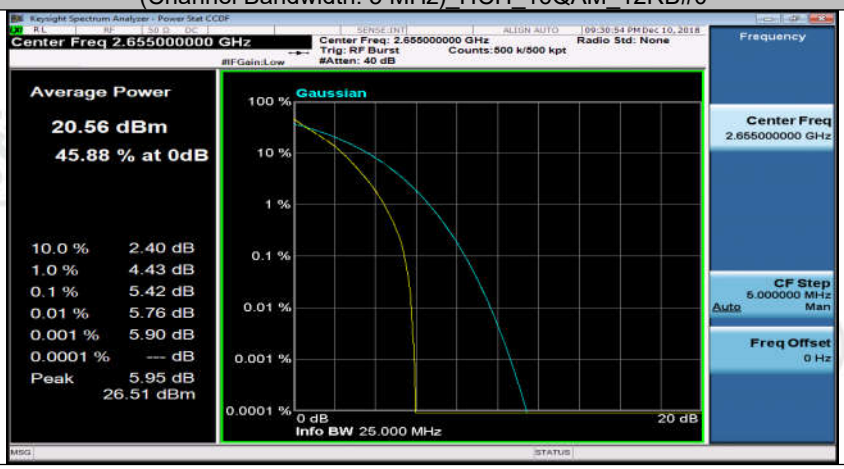
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12



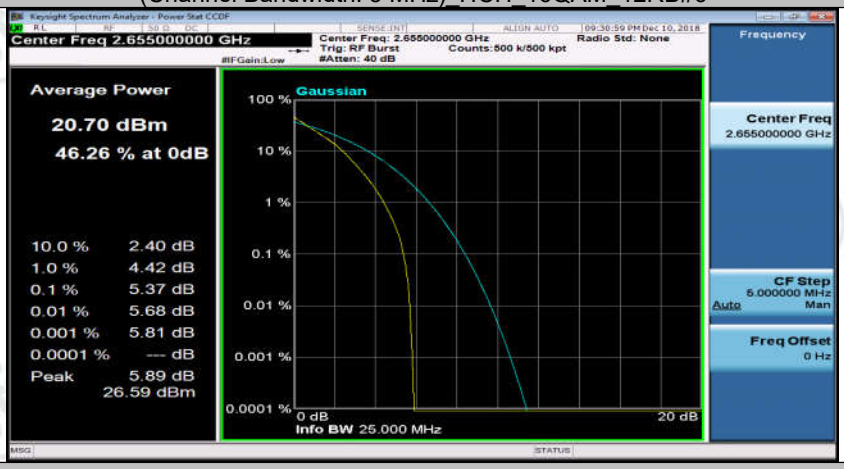
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24



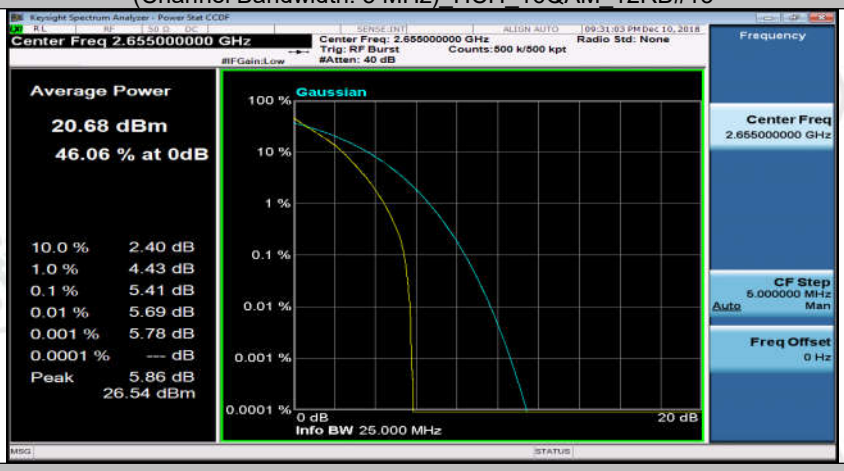
(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#0



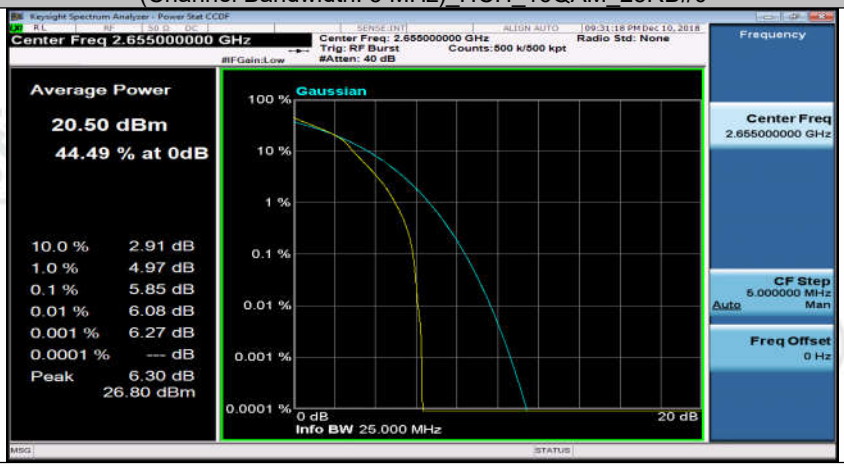
(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#6



(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#13

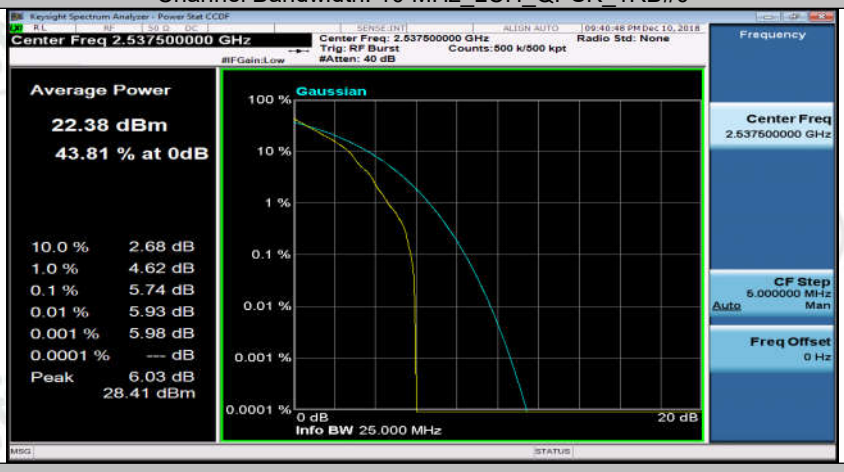


(Channel Bandwidth: 5 MHz)_HCH_16QAM_25RB#0

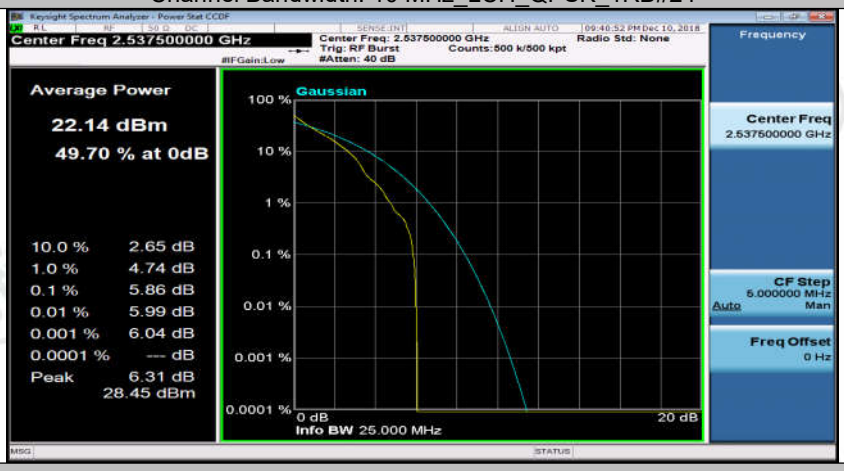


Channel Bandwidth: 10 MHz

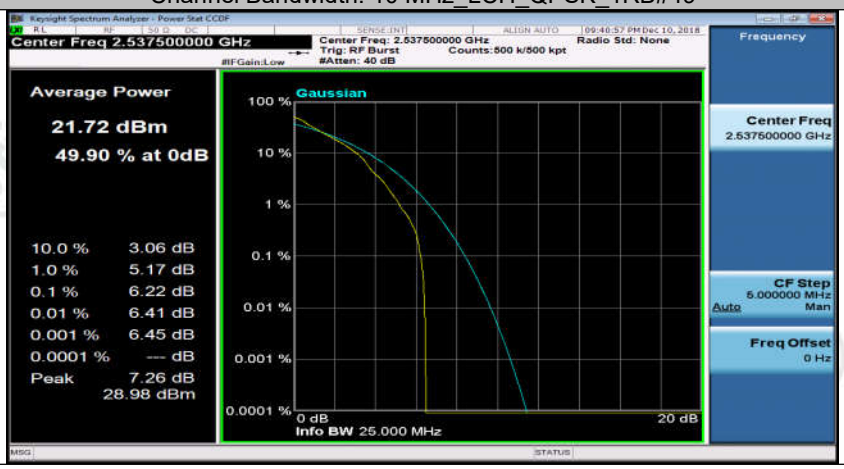
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24



Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49



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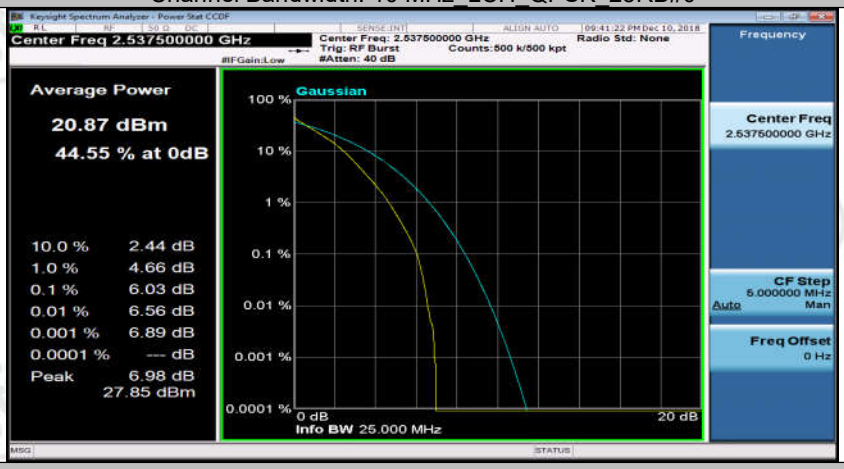

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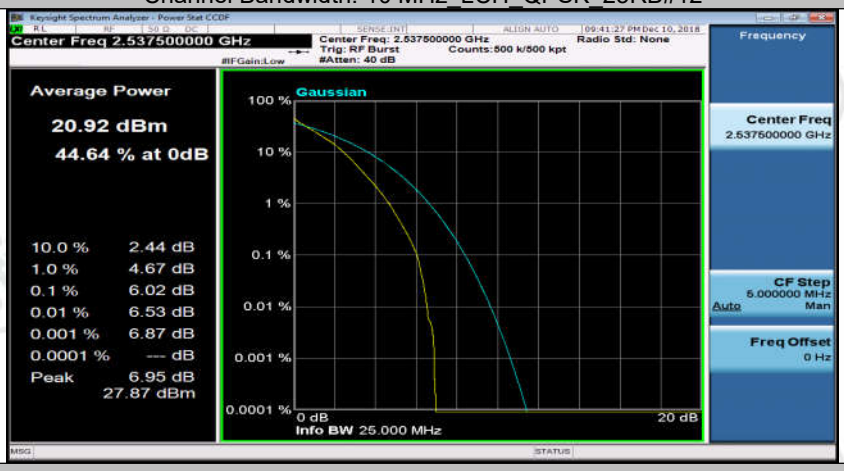

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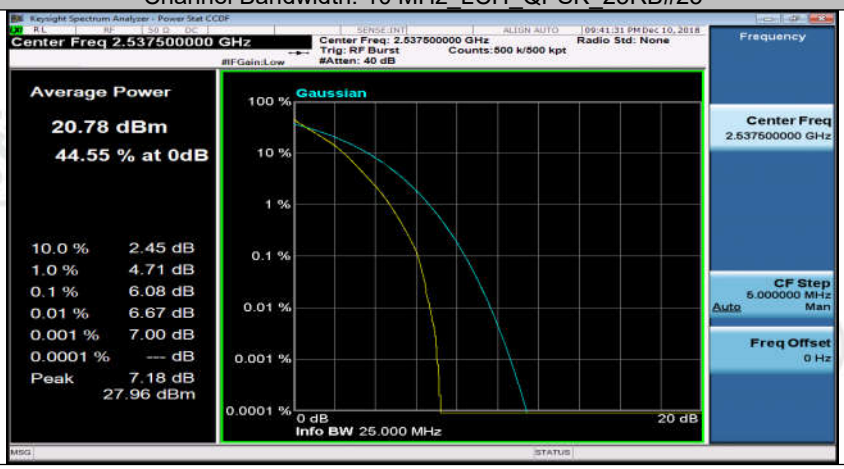
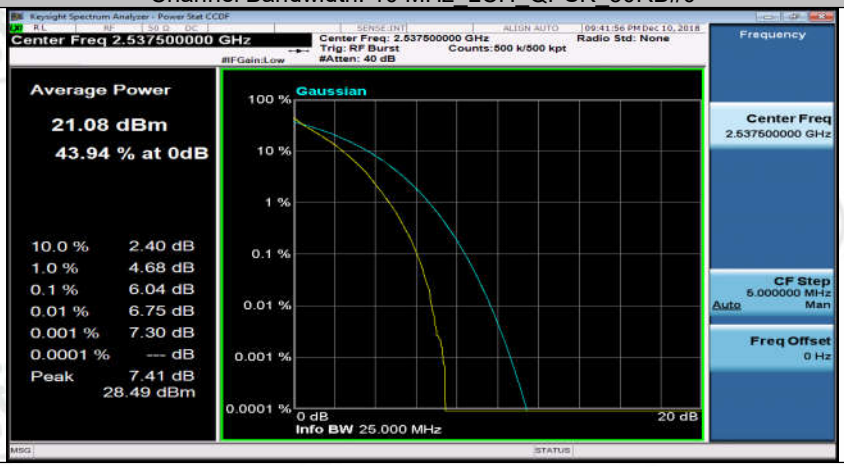
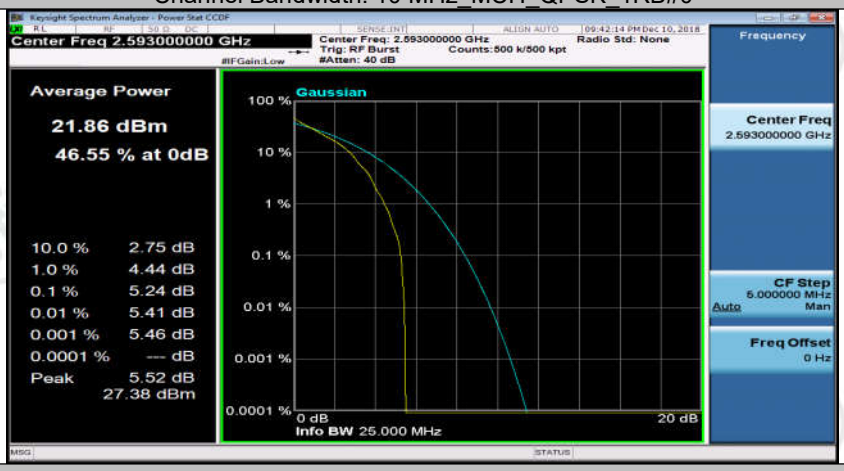


Channel Bandwidth: 10 MHz_LCH_QPSK_50RB#0



Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



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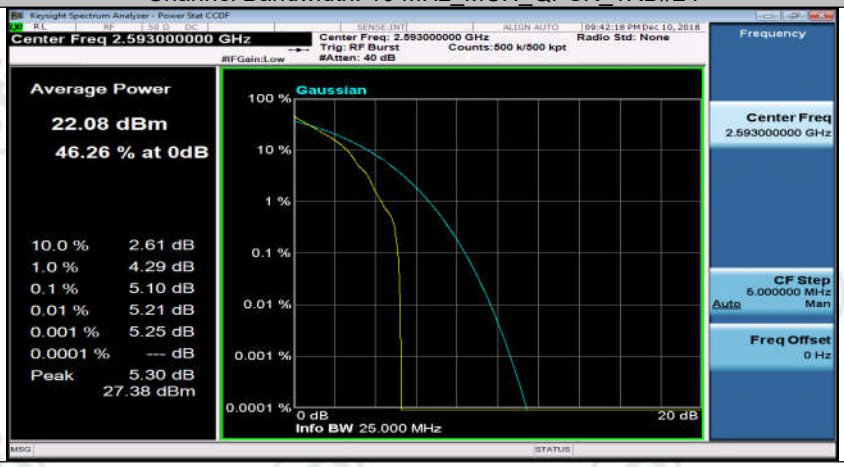
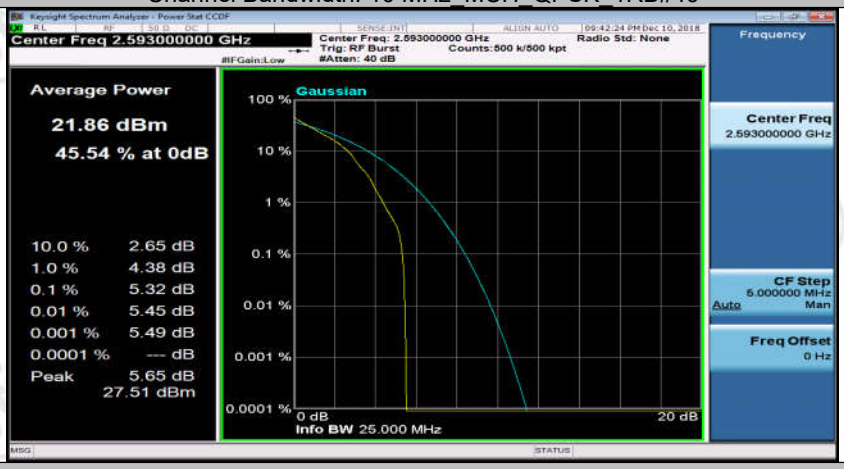
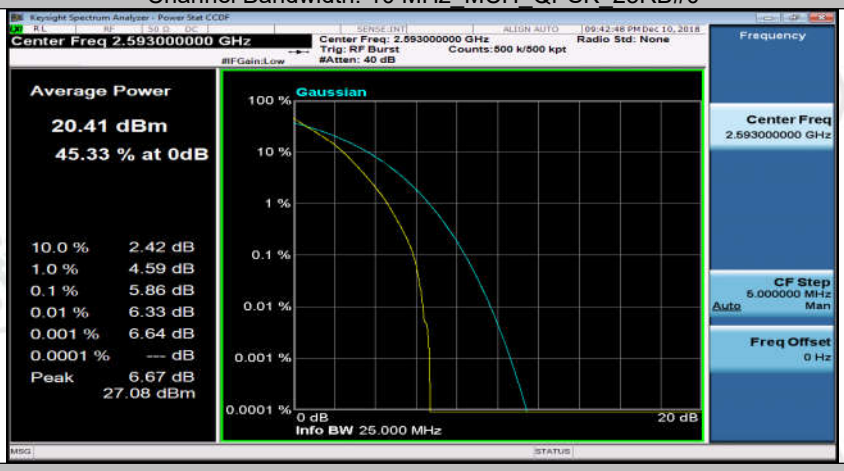


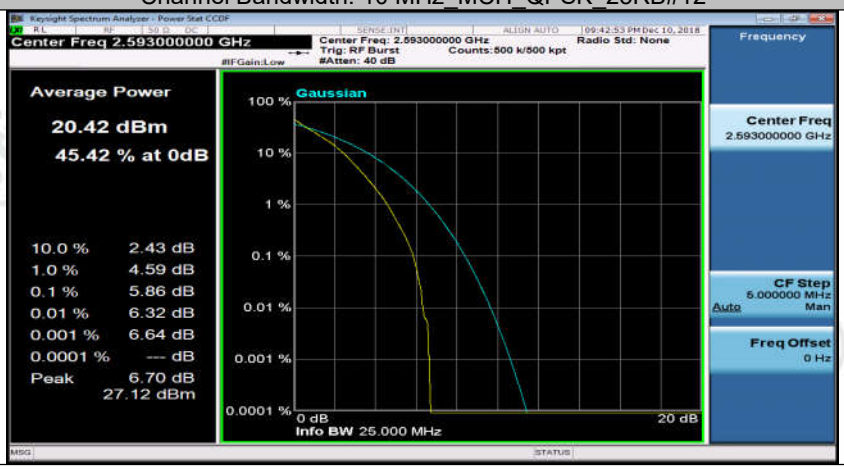
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49



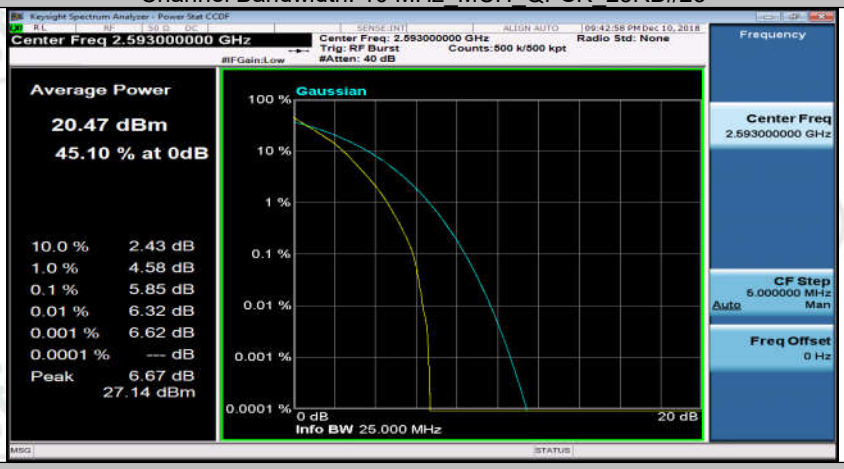
Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#0



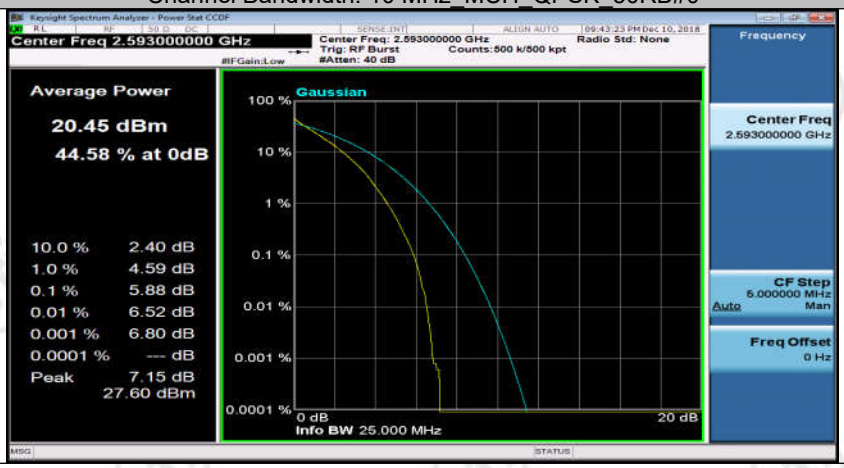
Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#12



Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#25



Channel Bandwidth: 10 MHz_MCH_QPSK_50RB#0



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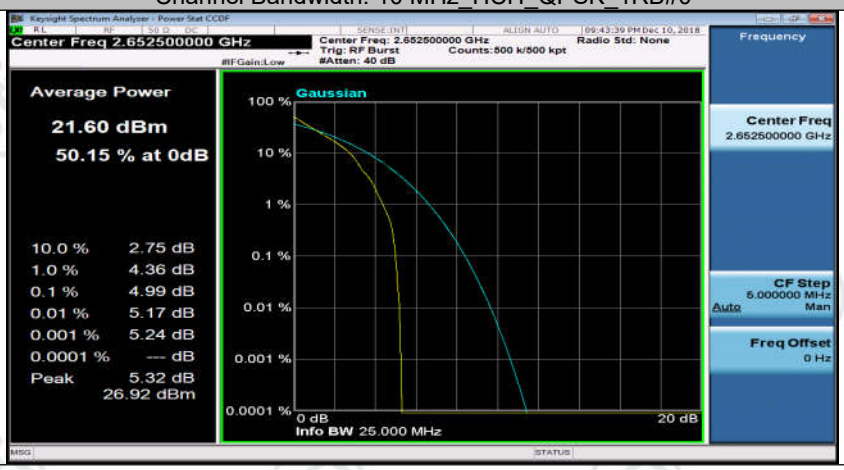
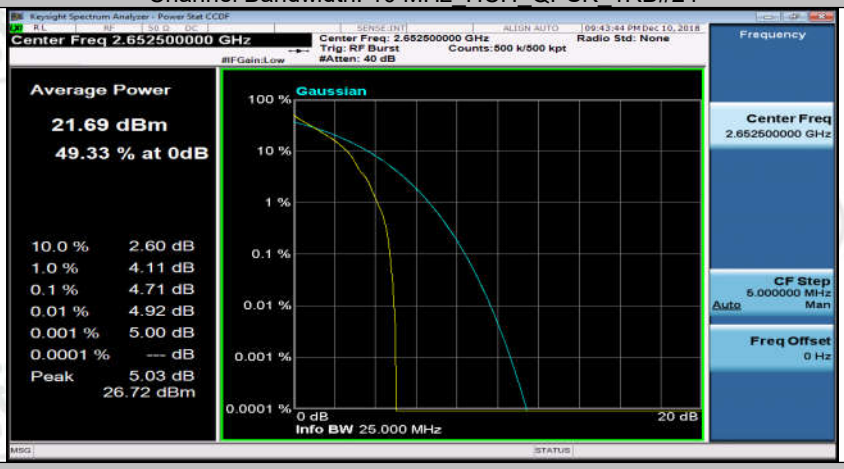
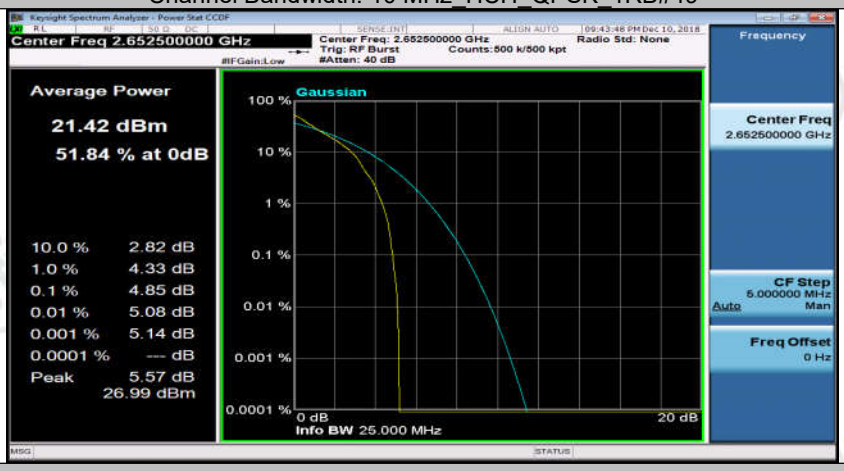


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24



Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49



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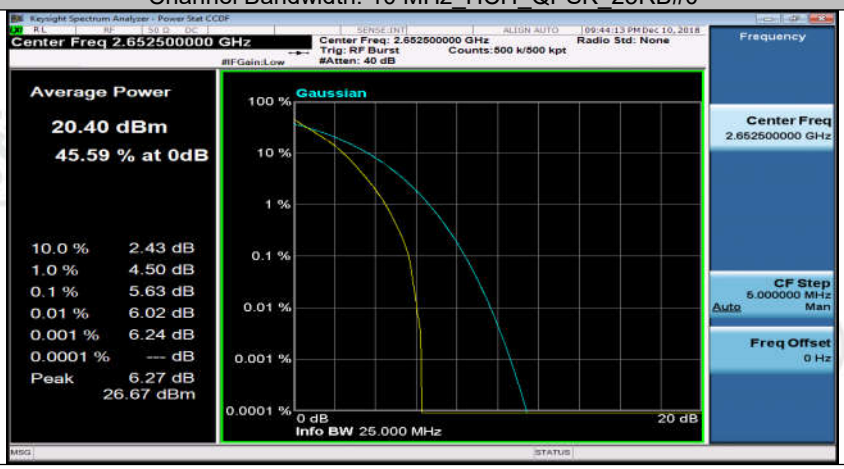
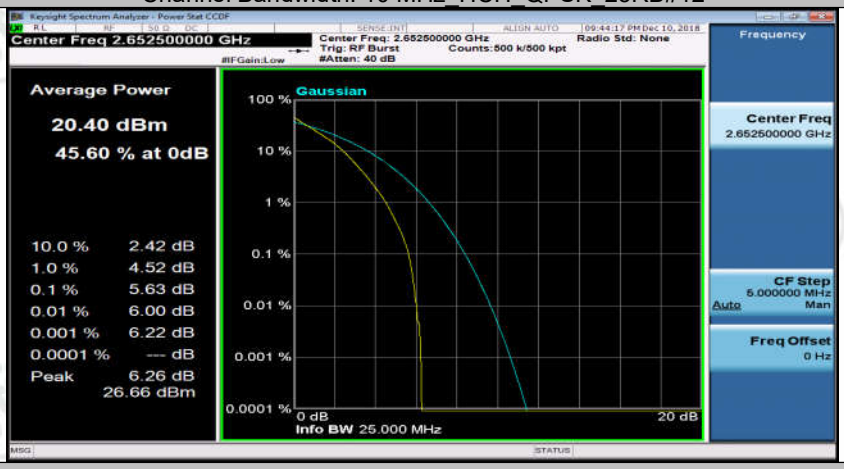


Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#12



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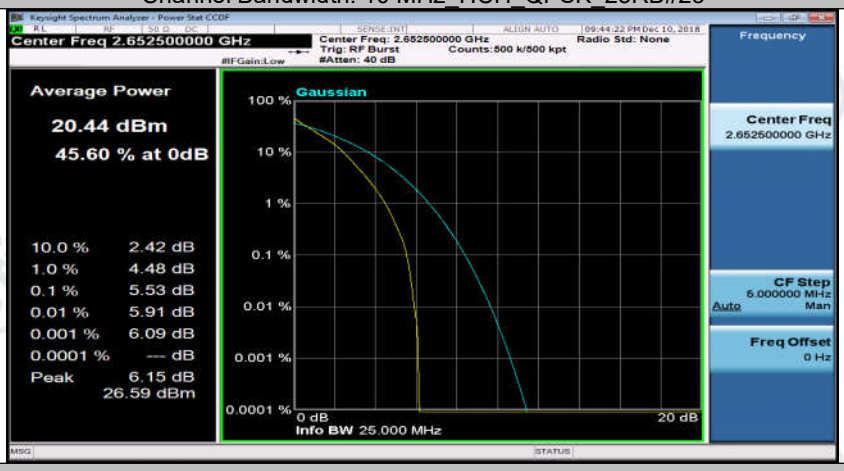
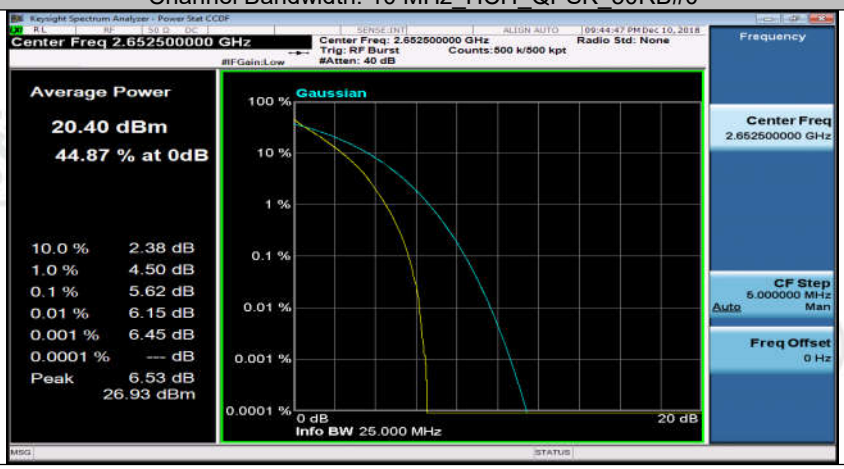
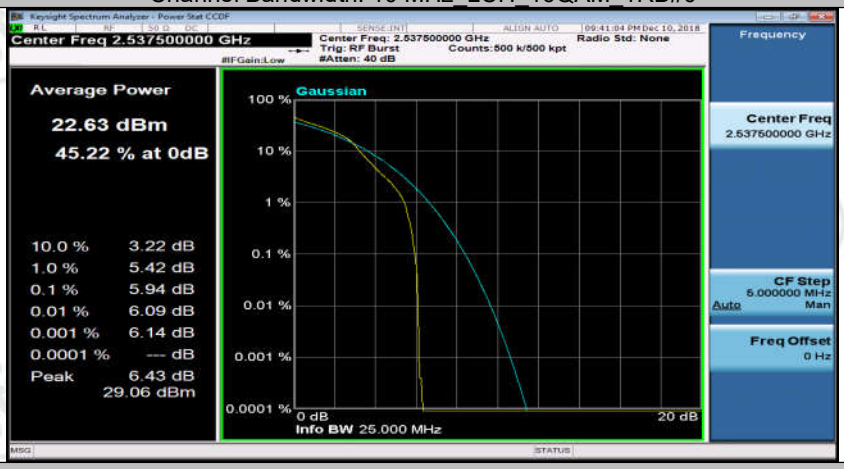


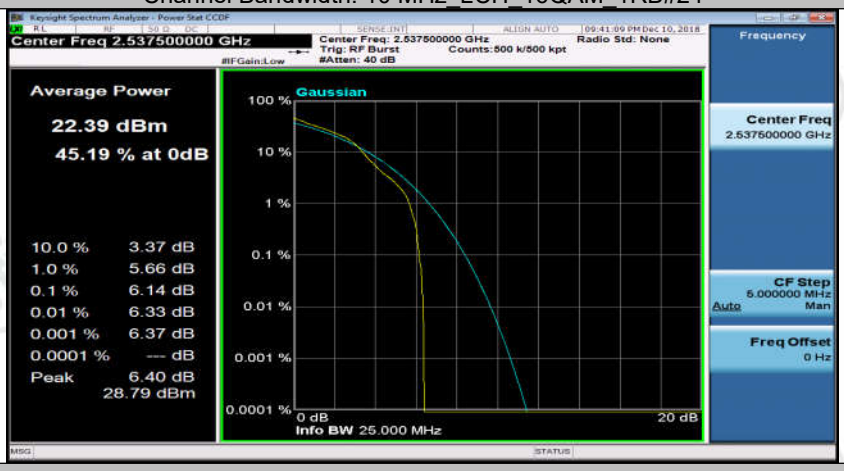
Channel Bandwidth: 10 MHz_HCH_QPSK_50RB#0



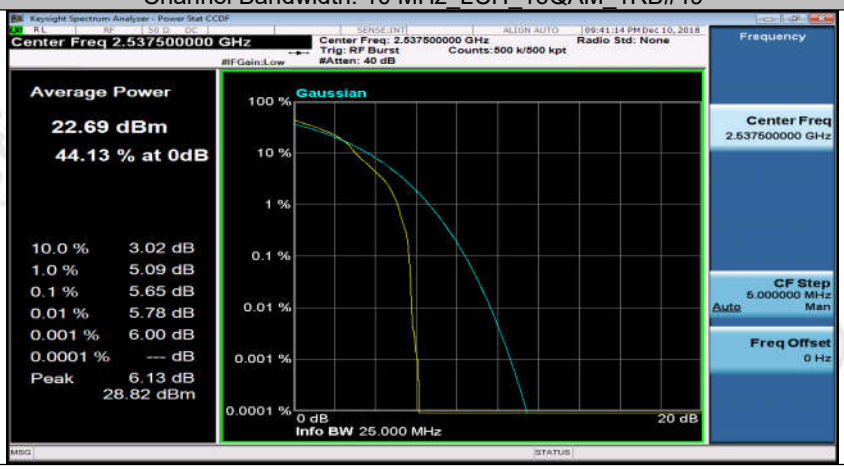
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24



Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49



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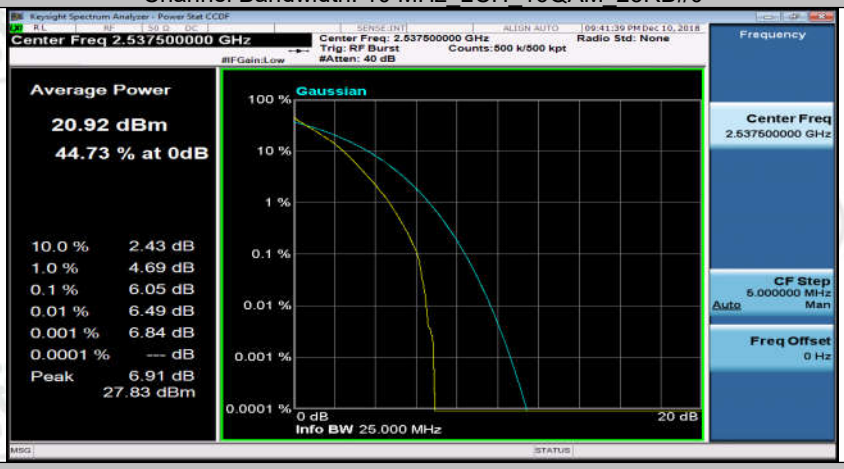
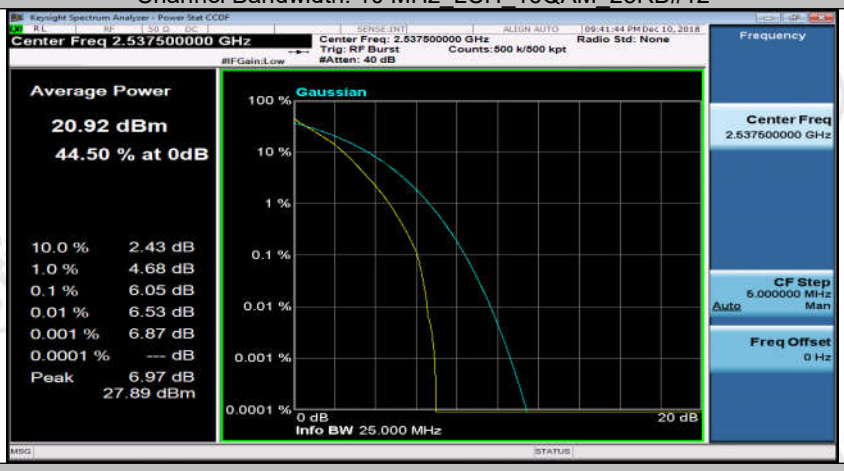
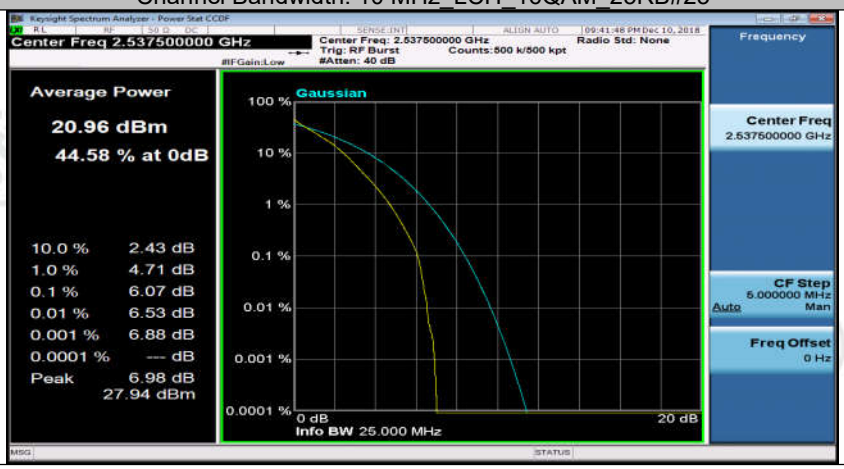


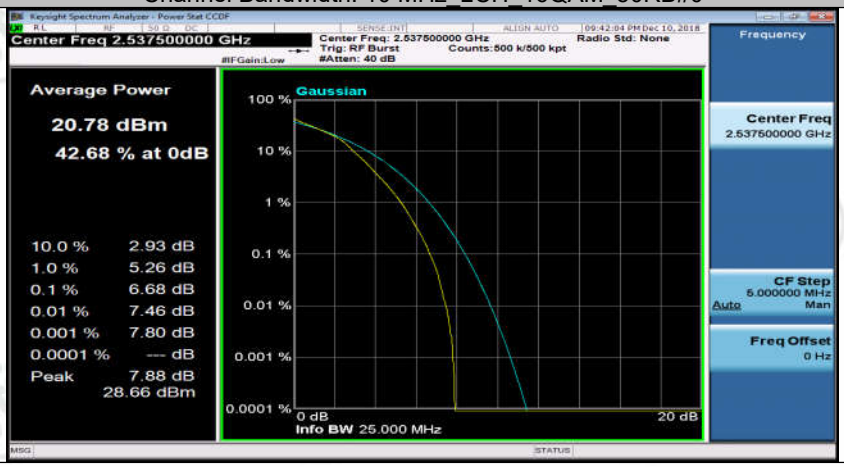
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#12



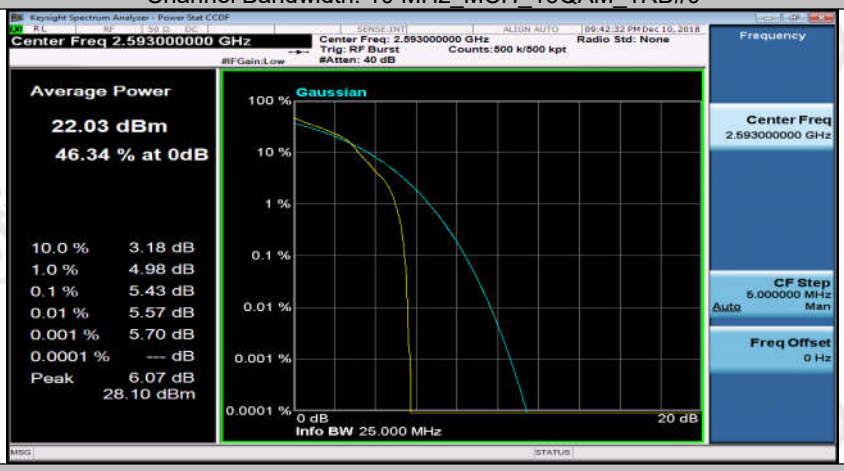
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#25



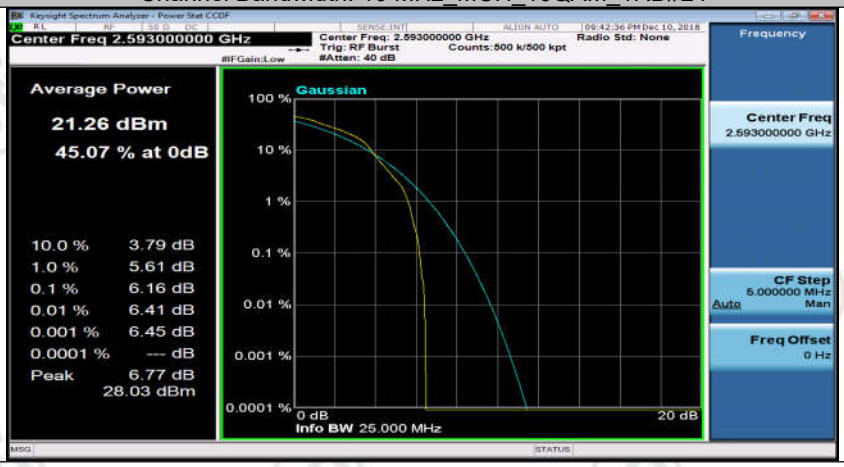
Channel Bandwidth: 10 MHz_LCH_16QAM_50RB#0



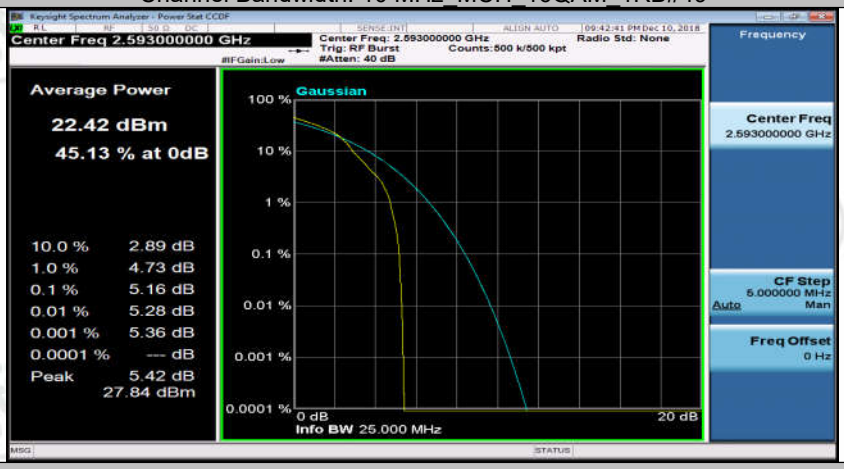
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



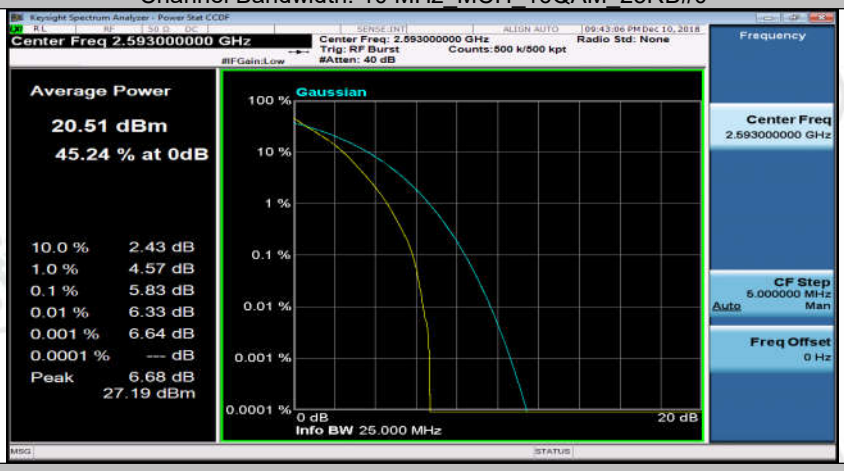
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24



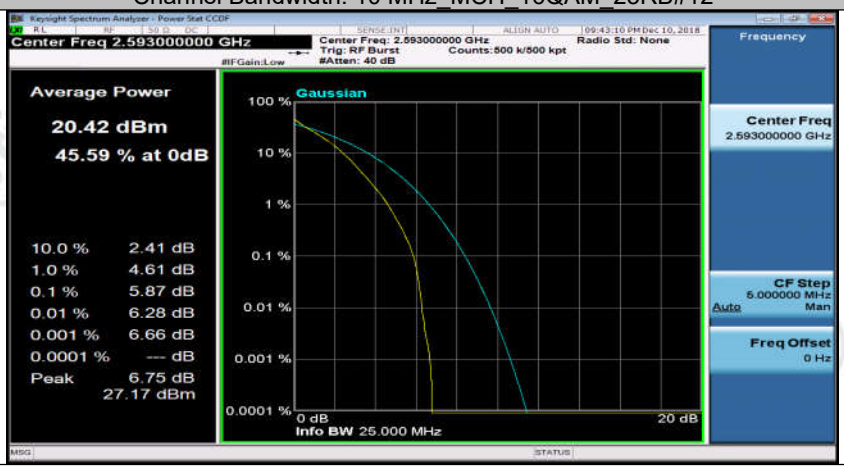
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49



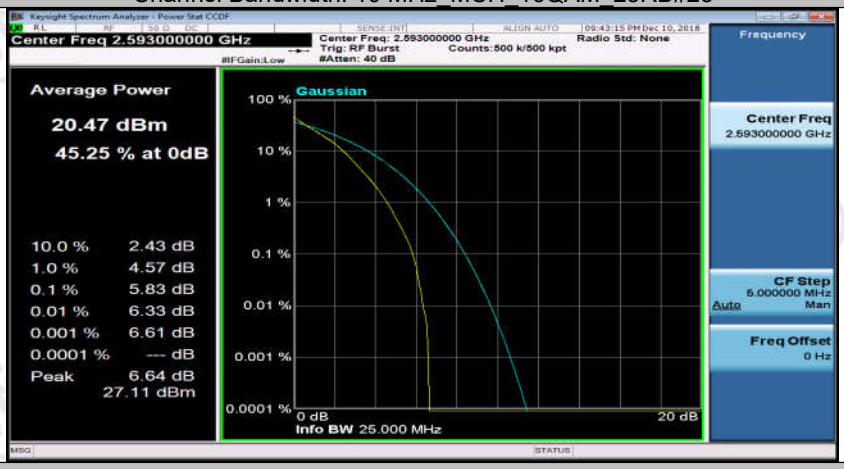
Channel Bandwidth: 10 MHz_MCH_16QAM_25RB#0



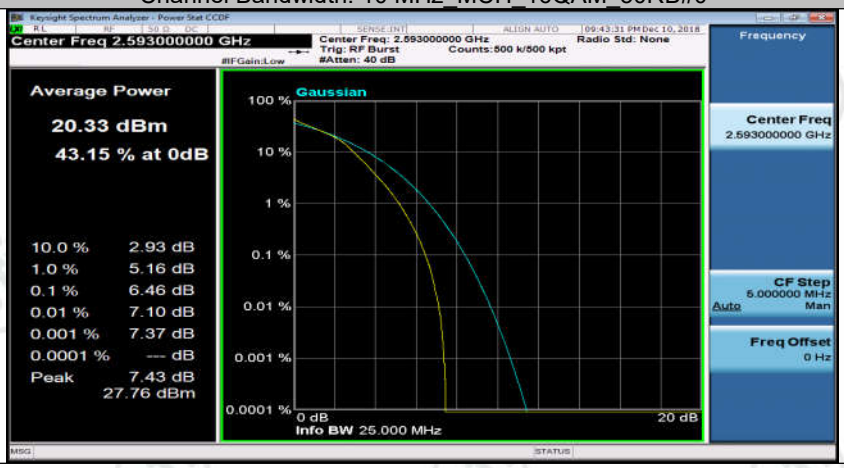
Channel Bandwidth: 10 MHz_MCH_16QAM_25RB#12



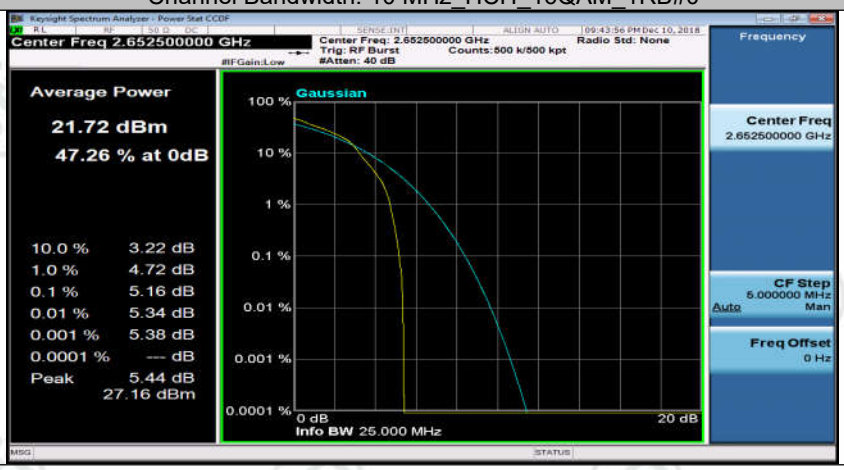
Channel Bandwidth: 10 MHz_MCH_16QAM_25RB#25



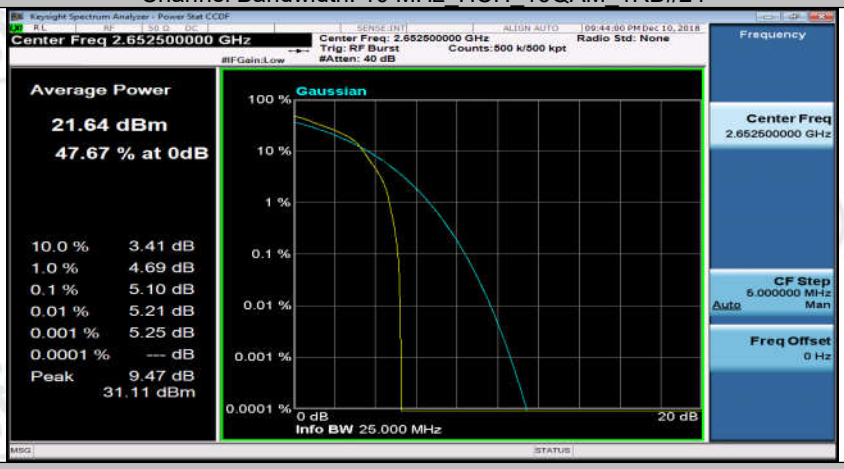
Channel Bandwidth: 10 MHz_MCH_16QAM_50RB#0



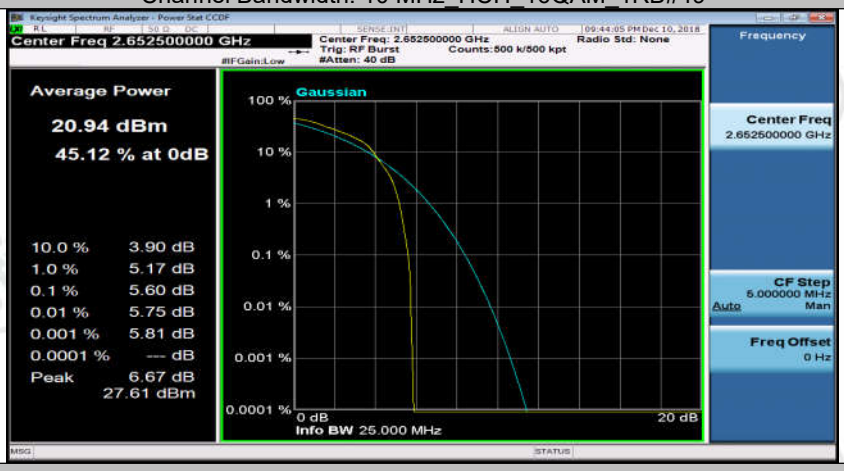
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



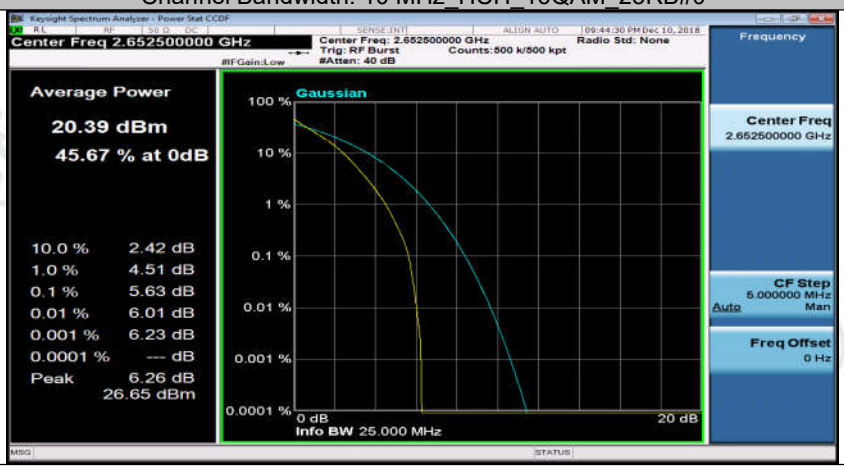
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24



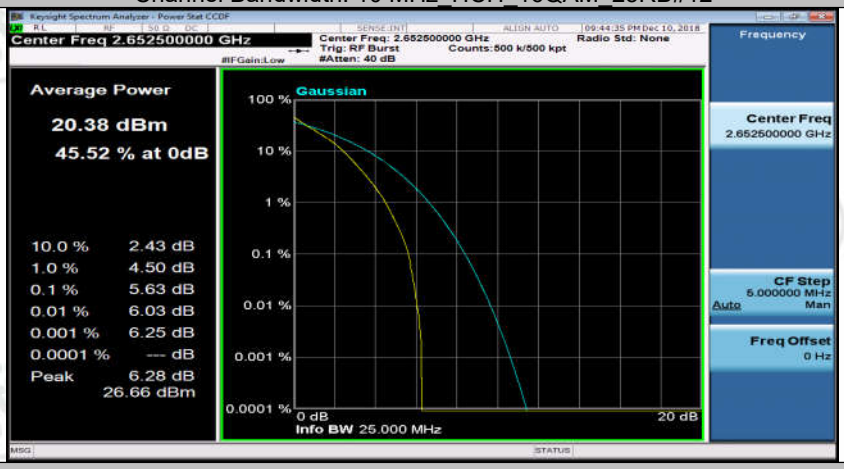
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49



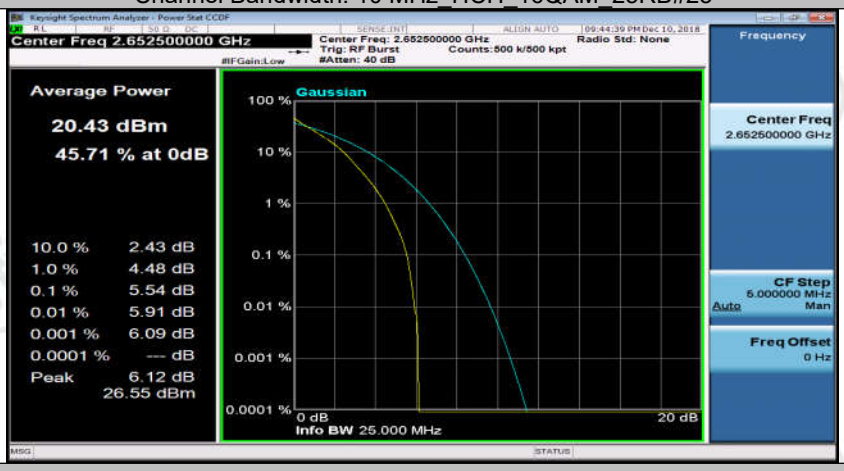
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#0



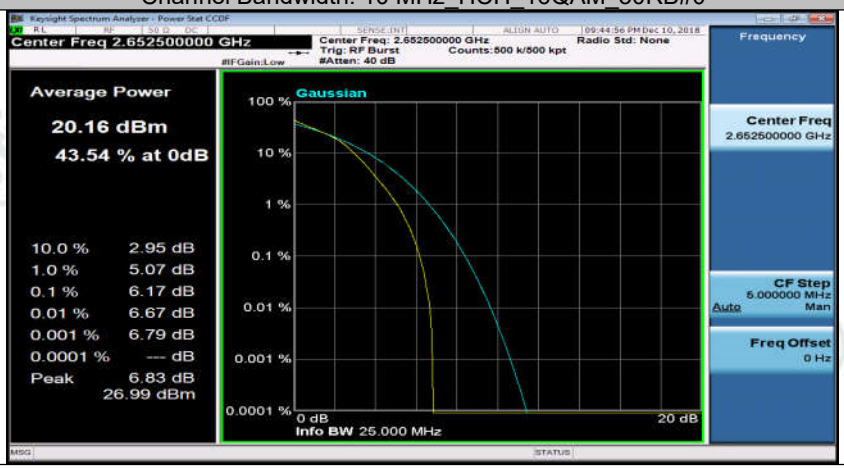
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#12



Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#25

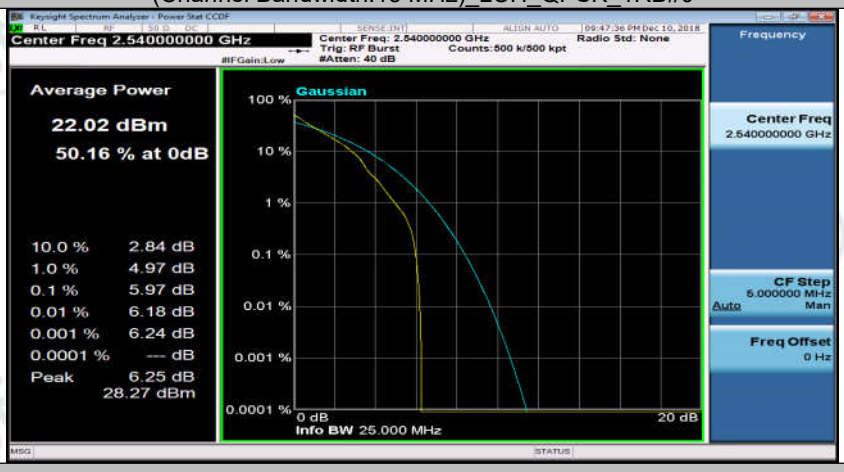


Channel Bandwidth: 10 MHz_HCH_16QAM_50RB#0

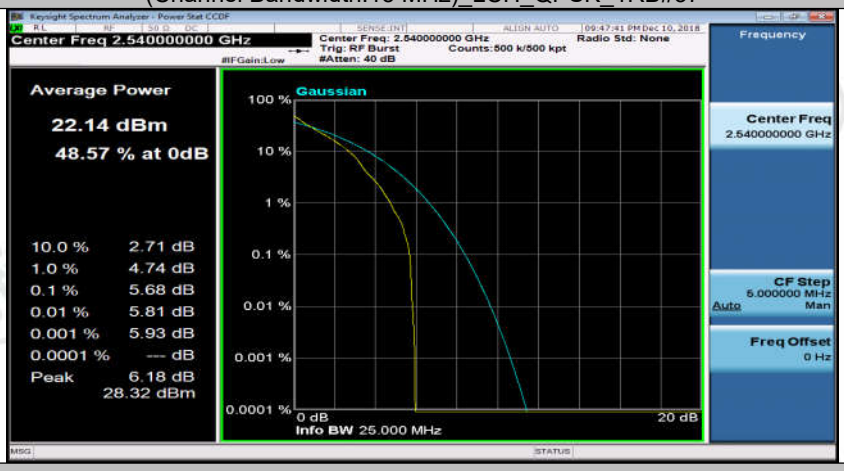
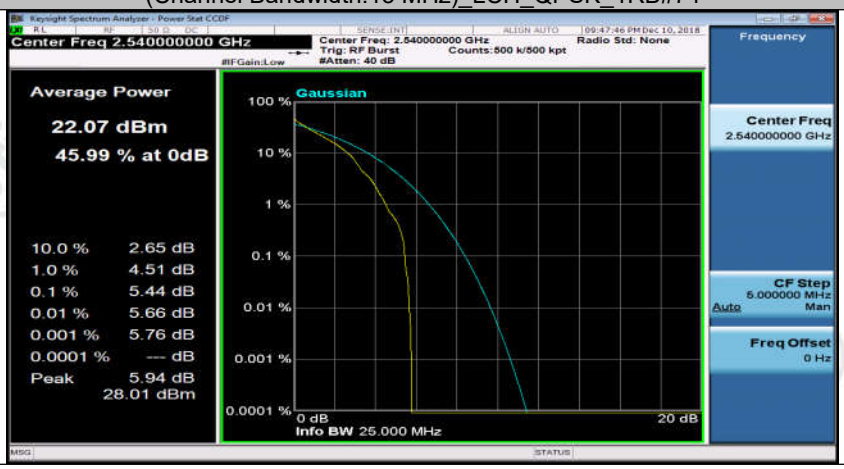


Channel Bandwidth: 15 MHz

(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#37



(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#74