Appendix D: Test Data for E-UTRA Band 5

Product Name: Smart Phone Test Model: Eluga Ray 810

Environmental Conditions

Temperature:	22.8 ° C
Relative Humidity:	53.9%
ATM Pressure:	100.0 kPa
Test Engineer:	Wang Chuang
Supervised by:	Tom Liu

D.1 Conducted Output Power

<SIM1>

Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)									
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict			
wouldtion	Channel	Size	Offset	QPSK	16QAM	Verdict			
		1	0	23.75	22.88	PASS			
		1	3	23.77	22.99	PASS			
		1	5	23.75	22.82	PASS			
	LCH	3	0	23.60	22.78	PASS			
		3	2	23.76	22.86	PASS			
		3	3	23.70	22.69	PASS			
		6	0	22.71	21.72	PASS			
		1	0	23.14	22.50	PASS			
		1	3	23.04	22.09	PASS			
QPSK /		1	5	23.03	21.96	PASS			
16QAM	MCH	3	0	23.08	22.19	PASS			
IOQAIVI		3	2	22.96	21.89	PASS			
		3	3	23.01	22.18	PASS			
		6	0	22.07	21.04	PASS			
		1	0	23.19	22.97	PASS			
		1	3	23.58	22.72	PASS			
		1	5	23.15	22.83	PASS			
	НСН	3	0	23.37	22.63	PASS			
		3	2	23.39	22.64	PASS			
		3	3	23.39	22.60	PASS			
		6	0	22.45	21.56	PASS			

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		Conducte	d Output Po	wer Test Result (Channel Ban	dwidth: 3 MHz)		
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Vardiat	
wooulation	Channel	Size	Offset	QPSK	16QAM	Verdict	
		1	0	23.69	23.11	PASS	
		1	7	23.58	22.73	PASS	
		1	14	23.60	22.80	PASS	
	LCH	8	0	22.80	21.85	PASS	
		8	4	22.74	21.82	PASS	
		8	7	22.63	21.76	PASS	
		15	0	22.69	21.74	PASS	
		1	0	22.79	22.18	PASS	
	МСН		1	7	22.51	21.73	PASS
QPSK /		1	14	22.71	22.15	PASS	
16QAM		8	0	22.30	21.22	PASS	
IOQAIVI		8	4	22.08	21.15	PASS	
		8	7	22.19	21.17	PASS	
		15	0	22.08	21.08	PASS	
		1	0	23.29	22.40	PASS	
		1	7	23.20	22.30	PASS	
		1	14	23.47	22.59	PASS	
	НСН	8	0	22.33	21.46	PASS	
		8	4	22.55	21.50	PASS	
		8	7	22.54	21.38	PASS	
		15	0	22.46	21.52	PASS	

		Conducte	d Output Pov	wer Test Result (Channel Ban	dwidth: 5 MHz)		
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Vordiot	
wooulation	Channel	Size	Offset	QPSK	16QAM	Verdict	
		1	0	23.78	23.10	PASS	
		1	12	23.52	22.87	PASS	
		1	24	23.49	22.76	PASS	
	LCH	12	0	22.78	21.90	PASS	
		12	6	22.72	21.83	PASS	
		12	13	22.55	21.75	PASS	
		25	0	22.68	21.72	PASS	
		1	0	22.95	22.21	PASS	
	МСН		1	12	22.41	22.00	PASS
QPSK /		1	24	22.47	21.48	PASS	
16QAM		12	0	22.05	21.17	PASS	
TOQAIVI		12	6	22.06	21.14	PASS	
		12	13	22.09	21.26	PASS	
		25	0	22.16	21.03	PASS	
		1	0	23.29	22.33	PASS	
		1	12	23.46	22.48	PASS	
		1	24	23.10	21.93	PASS	
	НСН	12	0	22.27	21.25	PASS	
		12	6	22.47	21.37	PASS	
		12	13	22.55	21.39	PASS	
		25	0	22.47	21.48	PASS	

	Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)									
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict				
wooulation	Channel	Size	Offset	QPSK	16QAM	verdict				
		1	0	23.54	22.84	PASS				
		1	24	23.47	22.81	PASS				
		1	49	23.33	22.82	PASS				
	LCH	25	0	22.80	21.84	PASS				
		25	12	22.65	21.71	PASS				
		25	25	22.54	21.55	PASS				
		50	0	22.85	21.74	PASS				
		1	0	23.28	22.54	PASS				
	МСН	1	24	22.79	22.14	PASS				
QPSK /		1	49	22.61	21.01	PASS				
16QAM		25	0	22.06	21.21	PASS				
TOQAIN		25	12	22.05	20.98	PASS				
		25	25	22.11	21.33	PASS				
		50	0	22.10	21.21	PASS				
		1	0	23.19	22.46	PASS				
		1	24	23.00	22.47	PASS				
		1	49	22.87	22.30	PASS				
	НСН	25	0	22.19	21.26	PASS				
		25	12	22.33	21.29	PASS				
		25	25	22.41	21.58	PASS				
		50	0	22.36	21.41	PASS				

		Conducted	I Output Pow	ver Test Result (Channel Band	lwidth: 1.4 MHz)		
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict	
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict	
		1	0	23.73	22.65	PASS	
		1	3	23.74	22.75	PASS	
		1	5	23.71	22.58	PASS	
	LCH	3	0	23.57	22.52	PASS	
		3	2	23.74	22.62	PASS	
		3	3	23.69	22.44	PASS	
		6	0	22.67	21.48	PASS	
		1	0	23.12	22.25	PASS	
	МСН		1	3	23.02	21.84	PASS
ODCK /		1	5	23.00	21.72	PASS	
QPSK / 16QAM		3	0	23.06	21.94	PASS	
IOQAIVI		3	2	22.95	21.63	PASS	
		3	3	22.97	21.94	PASS	
		6	0	22.23	21.01	PASS	
		1	0	23.16	22.71	PASS	
		1	3	23.56	22.50	PASS	
		1	5	23.10	22.58	PASS	
	НСН	3	0	23.33	22.41	PASS	
		3	2	23.37	22.39	PASS	
		3	3	23.35	22.37	PASS	
		6	0	22.41	21.33	PASS	

<SIM2>

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		Conducte	d Output Po	wer Test Result (Channel Ban	dwidth: 3 MHz)		
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict	
wouldtion	Channel	Size	Offset	QPSK	16QAM	Verdici	
		1	0	23.67	22.88	PASS	
		1	7	23.54	22.49	PASS	
		1	14	23.58	22.56	PASS	
	LCH	8	0	22.77	21.62	PASS	
		8	4	22.71	21.59	PASS	
		8	7	22.61	21.54	PASS	
		15	0	22.64	21.50	PASS	
		1	0	22.76	21.94	PASS	
	МСН		1	7	22.46	21.49	PASS
QPSK /			1	14	22.67	21.93	PASS
16QAM		8	0	22.27	21.15	PASS	
TOQAIN		8	4	22.26	21.13	PASS	
		8	7	22.25	21.12	PASS	
		15	0	22.24	21.03	PASS	
		1	0	23.25	22.18	PASS	
		1	7	23.17	22.07	PASS	
		1	14	23.45	22.34	PASS	
	НСН	8	0	22.29	21.24	PASS	
		8	4	22.51	21.25	PASS	
		8	7	22.51	21.13	PASS	
		15	0	22.42	21.26	PASS	

		Conducte	d Output Pov	ver Test Result (Channel Ban	dwidth: 5 MHz)		
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Vordiot	
wooulation	Channel	Size	Offset	QPSK	16QAM	Verdict	
		1	0	23.76	22.84	PASS	
		1	12	23.49	22.63	PASS	
		1	24	23.45	22.54	PASS	
	LCH	12	0	22.76	21.65	PASS	
		12	6	22.67	21.59	PASS	
		12	13	22.51	21.50	PASS	
		25	0	22.64	21.50	PASS	
		1	0	22.93	21.98	PASS	
	МСН		1	12	22.40	21.76	PASS
QPSK /		1	24	22.45	21.25	PASS	
16QAM		12	0	22.11	21.12	PASS	
TOQAIN		12	6	22.11	21.11	PASS	
		12	13	22.06	21.01	PASS	
		25	0	22.11	20.78	PASS	
		1	0	23.28	22.08	PASS	
		1	12	23.45	22.26	PASS	
		1	24	23.09	21.70	PASS	
	HCH	12	0	22.23	21.02	PASS	
		12	6	22.44	21.13	PASS	
		12	13	22.52	21.16	PASS	
		25	0	22.45	21.26	PASS	

	Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)									
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict				
wooulation	Channel	Size	Offset	QPSK	16QAM	verdict				
		1	0	23.53	22.59	PASS				
		1	24	23.45	22.57	PASS				
		1	49	23.29	22.57	PASS				
	LCH	25	0	22.77	21.59	PASS				
		25	12	22.61	21.48	PASS				
		25	25	22.52	21.29	PASS				
		50	0	22.84	21.49	PASS				
		1	0	23.24	22.31	PASS				
	МСН	1	24	22.74	21.91	PASS				
QPSK /		1	49	22.18	21.07	PASS				
16QAM		25	0	22.13	21.08	PASS				
TOQAIN		25	12	22.16	21.14	PASS				
		25	25	22.07	21.09	PASS				
		50	0	22.16	21.06	PASS				
		1	0	23.17	22.21	PASS				
		1	24	22.97	22.21	PASS				
		1	49	22.85	22.06	PASS				
	HCH	25	0	22.16	21.03	PASS				
		25	12	22.31	21.07	PASS				
		25	25	22.39	21.36	PASS				
		50	0	22.34	21.19	PASS				

	Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)								
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict					
Modulation	Channel	[dB]	[dB]	Verdict					
	LCH	4.91	<13	PASS					
QPSK	MCH	4.37	<13	PASS					
	НСН	4.32	<13	PASS					
	LCH	5.71	<13	PASS					
16QAM	MCH	5.2	<13	PASS					
	НСН	5.08	<13	PASS					

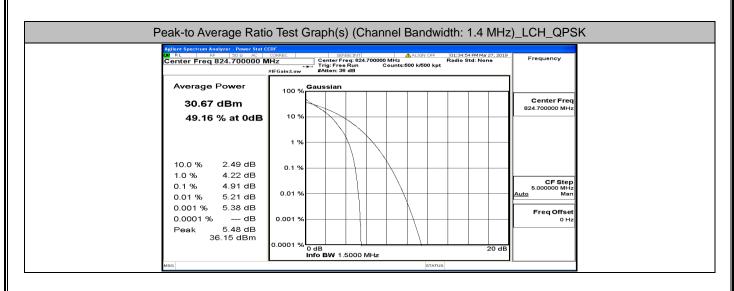
D.2 Peak-to-Average Ratio

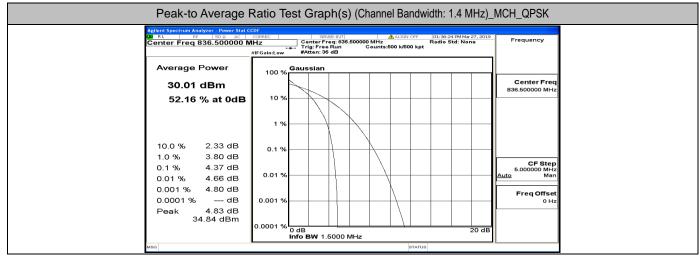
	Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)								
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict					
Modulation	Channer	[dB]	[dB]	Verdict					
	LCH	5.08	<13	PASS					
QPSK	MCH	4.58	<13	PASS					
	HCH	4.54	<13	PASS					
	LCH	5.94	<13	PASS					
16QAM	MCH	5.39	<13	PASS					
	HCH	5.26	<13	PASS					

	Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)								
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict					
MODULATION	Channel	[dB]	[dB]	Verdict					
	LCH	5.14	<13	PASS					
QPSK	MCH	4.53	<13	PASS					
	НСН	4.51	<13	PASS					
	LCH	5.9	<13	PASS					
16QAM	MCH	5.3	<13	PASS					
	НСН	5.29	<13	PASS					

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)					
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict	
Modulation		[dB]	[dB]	Verdict	
QPSK	LCH	5.25	<13	PASS	
	MCH	4.81	<13	PASS	
	НСН	4.81	<13	PASS	
16QAM	LCH	5.97	<13	PASS	
	MCH	5.53	<13	PASS	
	НСН	5.56	<13	PASS	

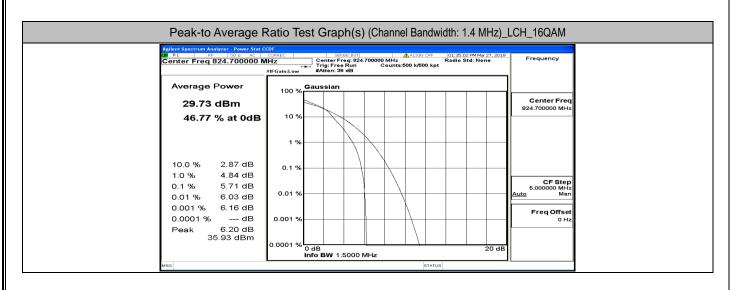
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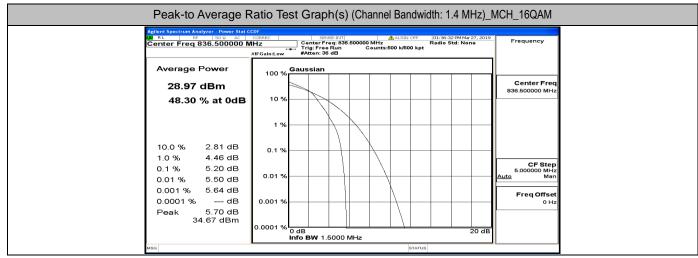




Peak-to Average	Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)	_HCH_QPSK		
LXI RL RF 50 Ω AC	00 RL RF 500 AC CORREC SERVERNT ALL ALL ALL ALL ALL ALL ALL ALL ALL AL			
30.48 dBm 52.30 % at 0dB	100 % Gaussian	Center Freq 848.300000 MHz		
10.0 % 2.35 dB 1.0 % 3.77 dB	0.1 %			
0.1 % 4.32 dB 0.01 % 4.54 dB 0.001 % 4.65 dB	0.01 %	CF Step 5.000000 MHz Auto Man		
0.0001 % dB Peak 4.68 dB 35.16 dBm	0.001 %	Freq Offset 0 Hz		
мва	0.000 H /a 0 dB 20 dB Info BW 1.5000 MHz	s		

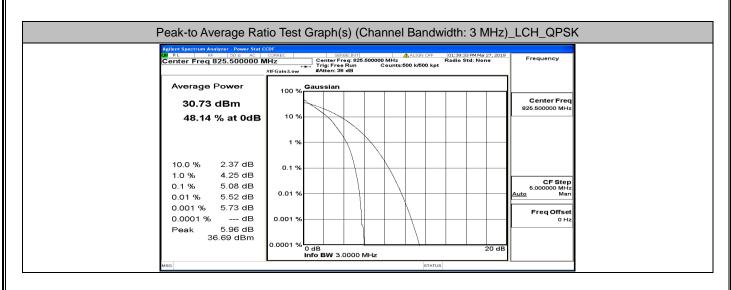
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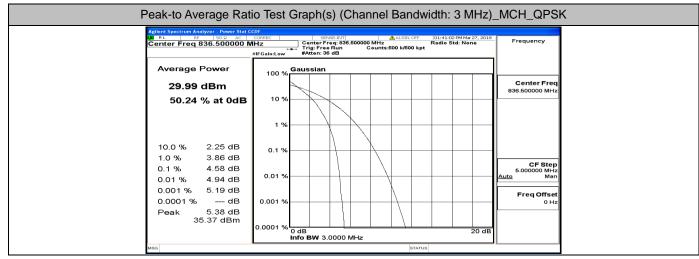




	Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_	HCH_16QAM		
Center Freq 848.300000 M	Adlent Spectrum Analyzer - Dower Stat CODF OW RL RF 500 AC CORREC SERVETINI ALION OFF 0138801PM14w27, 2019 Center Freq 848.300000 MHz Radio Std: None #IFGaln:Low #Atten: 36 dB			
Average Power 29.54 dBm	100 %	Center Freq 848.300000 MHz		
48.19 % at 0dB	10%			
10.0 % 2.77 dB 1.0 % 4.39 dB	0.1 %			
0.1 % 5.08 dB 0.01 % 5.33 dB 0.001 % 5.47 dB	0.01 %	CF Step 5.000000 MHz <u>Auto</u> Man		
0.0001 % dB Peak 5.53 dB	0.001 %	Freq Offset 0 Hz		
ма	0.0001 % 0 dB 20 dB Info BW 1.5000 MHz			

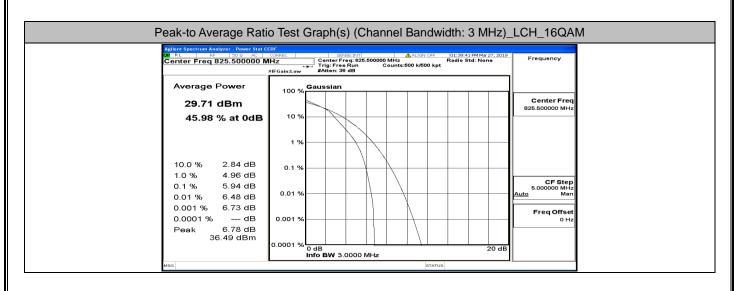
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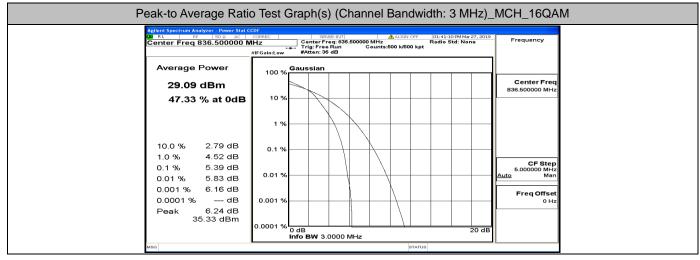




Peak-to Average Ra	CONFECT CENTER 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Center Freq 847.500000	MHz Center Freq: 847 500000 MHz Radio Std: None Frequency HIFGain:Low #Atten: 36 d5
Average Power 30.53 dBm	100 % Center Freq 847.500000 MHz
50.16 % at 0dB	
10.0 % 2.25 dB 1.0 % 3.82 dB	0.1 %
0.1 % 4.54 dB 0.01 % 4.94 dB	0.01 %
0.001 % 5.10 dB 0.0001 % dB Peak 5.36 dB	0.001 %
35.89 dBm	0.0001 % 0 dB 20 dB 20 dB 10 m m m m m m m m m m m m m m m m m m

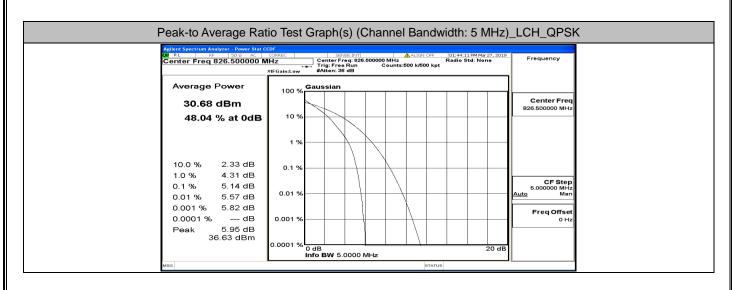
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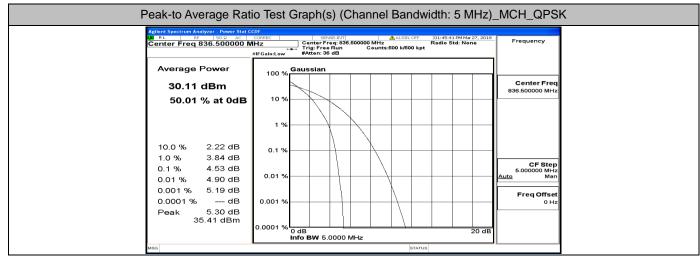




Agilent Spectrum Analyzer - Power Stat C 20 RL RF SO Q AC	CORREC SENSE:INT ALIGN OFF 01:42:39 PM Mar 27, 2019	HCH_16QAM		
	Center Freg 847.500000 MHz #FGain:Low Center Freg: 847.50000 MHz Radio Std: None #Gain:Low Gaussian Center Store Ket Radio Std: None #Gain:Low Gaussian Center Freg: 847.5000 MHz Radio Std: None #Gaussian Center Freg: 847.5000 MHz Radio Std: None			
29.57 dBm 47.78 % at 0dB	10 %	Center Freq 847.500000 MHz		
10.0 % 2.75 dB 1.0 % 4.43 dB	0.1 %			
0.1 % 5.26 dB 0.01 % 5.63 dB 0.001 % 5.86 dB	0.01 %	CF Step 5.00000 MHz <u>Auto</u> Man		
0.0001 % dB Peak 6.08 dB 35 65 dBm	0.001 %	Freq Offset 0 Hz		
мва	Info BW 3.0000 MHz			

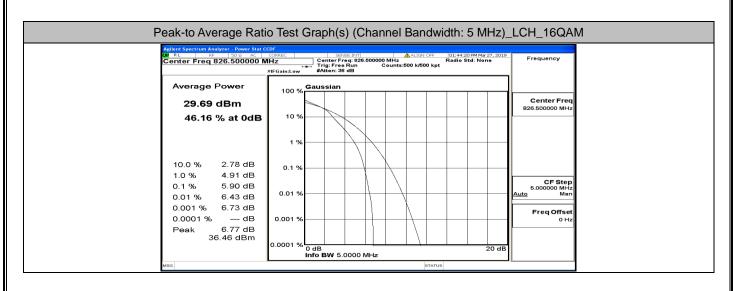
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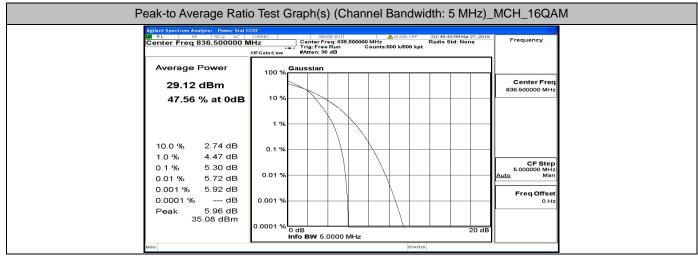




Peak-to Average R	CONDEC
Center Freq 846.50000	MHZ Center Freq: 946,500000 MHz Radio Std: None Frequency #IF Gaint.ow #Atten: 36 dB
Average Power 30.55 dBm	a 10 % Gaussian Center Freq B46.50000 MHz
50.90 % at 0df	
10.0 % 2.20 dB 1.0 % 3.82 dB	0.1 %
0.1 % 4.51 dB 0.01 % 4.89 dB	0.01 %
0.001 % 5.11 dB 0.0001 % dB Peak 5.16 dB	0.001 % Freq Offset
35.71 dBm	0.0001 % 0 dB 20 dB 20 dB 10 for BW 5.0000 MHz 10 10 10 10 10 10 10 10 10 10 10 10 10

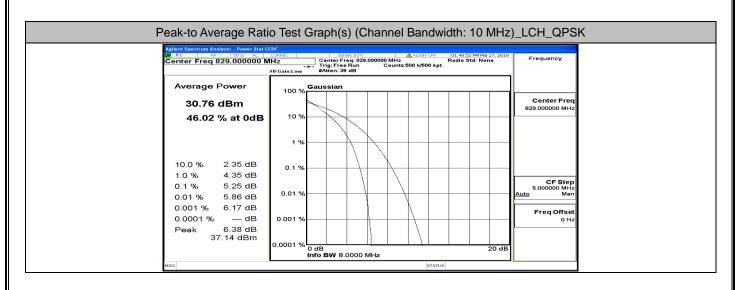
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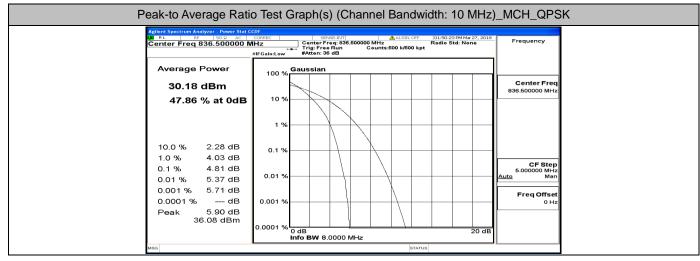




Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QA						
041 RL RF 900 AC Center Freq 846.500000 N		Frequency				
Average Power 29.51 dBm	100 % Gaussian	Center Freq 846.500000 MHz				
48.11 % at 0dB	10 %					
10.0 % 2.72 dB 1.0 % 4.49 dB	0.1 %					
0.1 % 5.29 dB 0.01 % 5.69 dB 0.001 % 6.06 dB	0.01 %	CF Step 5.000000 MHz <u>Suto</u> Man				
0.0001 % dB Peak 6.36 dB 35 87 dBm	0.001 %	Freq Offset 0 Hz				
ма	0.0001 % 0 dB 20 dB Info BW 5.0000 MHz					

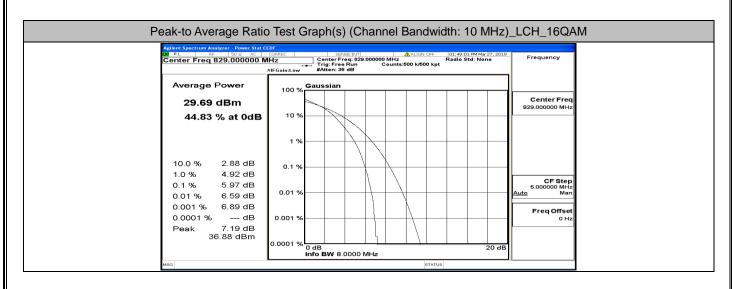
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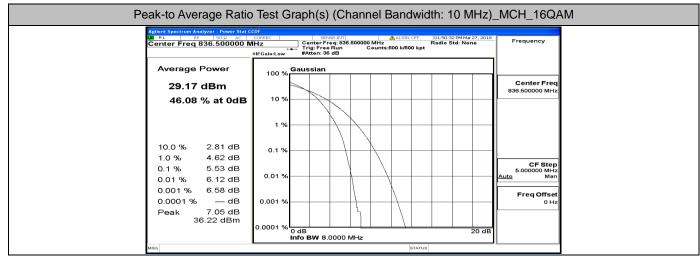




Peak-to Average Rat	o Test Graph(s) (Channel Bandwidth: 10 MH	z)_HCH_QPSK		
Center Freq 844.000000				
Average Power 30.37 dBm	100 % Gaussian	Center Freq 844.000000 MHz		
49.28 % at 0dB	10%			
10.0 % 2.20 dB 1.0 % 4.01 dB	0.1 %			
0.1 % 4.81 dB 0.01 % 5.30 dB	0.01 %	CF Step 5.000000 MHz <u>Auto</u> Man		
0.001 % 5.50 dB 0.0001 % dB Peak 5.60 dB	0.001 %	Freq Offset 0 Hz		
35.97 dBm	0.0001 % 0 dB 20 m info BW 8.0000 MHz 20 m	в		

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Peak-to Average Ratio	
Center Freq 844.000000 N	HIZ Center Freq: 84.000000 MHz Radio Std: None #IF Gain:Low #Atten: 36 dB
Average Power 29.35 dBm	100 % Gaussian 100 % Center Freq 844.000000 MHz
47.25 % at 0dB	1 %
10.0 % 2.83 dB 1.0 % 4.68 dB	0.1 %
0.1 % 5.56 dB 0.01 % 6.20 dB 0.001 % 6.46 dB	0.01 %
0.001 % 0.46 dB 0.0001 % dB Peak 6.69 dB 36.04 dBm	0.001 %
36.04 dBm	0.0001 % 0 dB 20 dB 20 dB 20 dB

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EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
Modulation		(MHz)	(MHz)	Verdict	
	LCH	1.0761	1.242	PASS	
QPSK	MCH	1.0780	1.247	PASS	
	НСН	1.0801	1.281	PASS	
16QAM	LCH	1.0807	1.243	PASS	
	MCH	1.0789	1.231	PASS	
	HCH	1.0785	1.257	PASS	

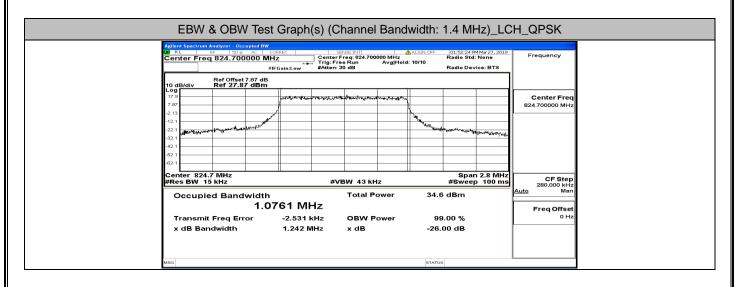
EBW & OBW Test Result (Channel Bandwidth: 3 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
MODULATION		(MHz)	(MHz)	Verdict	
	LCH	2.6824	2.891	PASS	
QPSK	MCH	2.6819	2.894	PASS	
	HCH	2.6862	2.926	PASS	
16QAM	LCH	2.6856	2.912	PASS	
	MCH	2.6861	2.890	PASS	
	HCH	2.6877	2.955	PASS	

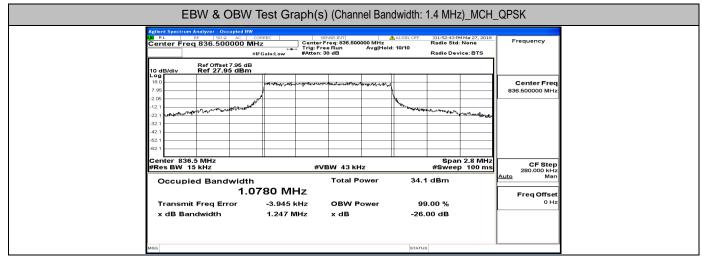
	EBW & OBW T	est Result (Channel Ban	dwidth: 5 MHz)	
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
	LCH	4.4821	4.850	PASS
QPSK	MCH	4.4804	4.789	PASS
	HCH	4.4722	4.798	PASS
	LCH	4.4725	4.843	PASS
16QAM	MCH	4.4686	4.828	PASS
	HCH	4.4755	4.870	PASS

	EBW & OBW Te	est Result (Channel Band	dwidth: 10 MHz)	
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation	Channel	(MHz)	(MHz)	Verdict
	LCH	8.9619	9.464	PASS
QPSK	MCH	8.9170	9.502	PASS
	HCH	8.9069	9.436	PASS
	LCH	8.9613	9.474	PASS
16QAM	MCH	8.9236	9.395	PASS
	HCH	8.9218	9.424	PASS

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FCC ID: 2APTIS62E81

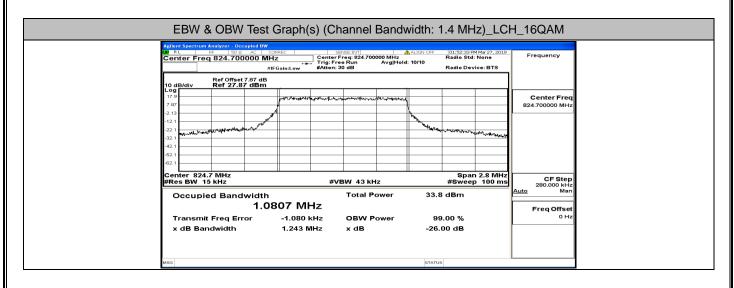


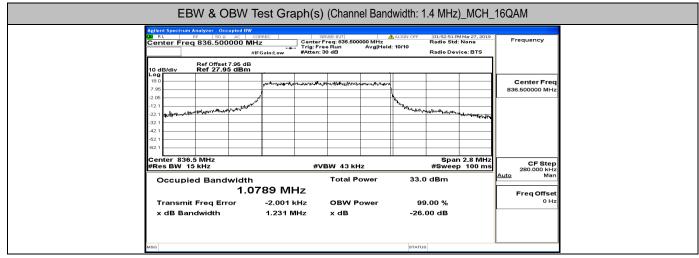


02 RL RF 50 Ω AC C Center Freq 848.300000 MH	HZ Center Trig: Fr	Freq: 848.300000 MHz ee Run Avg Hold	ALIGN OFF 01:53:00 PM Mar Radio Std: Noi I: 10/10	ne Frequency
# Ref Offset 7.95 dB 10 dB/div Ref 27.95 dBm	IFGain:Low #Atten:	30 dB	Radio Device:	BTS
18.0	durman har	สมกระสม <i>า</i> สามารสมสุการและการศาสตร์		Center Freq 848.300000 MHz
2.205 -12.1 -22.1 -22.1 -32.1 -22.1			han the strend had not make the strend had	19-944. Julia
¹⁰²¹ ^{-62.1} Center 848.3 MHz #Res BW 15 kHz	#\	/BW 43 kHz	Span 2. #Sweep 1	00 ms 280.000 kHz
Occupied Bandwidth 1.0	801 MHz	Total Power	34.5 dBm	Auto Man Freq Offset
Transmit Freq Error x dB Bandwidth	-3.398 kHz 1.281 MHz	OBW Power x dB	99.00 % -26.00 dB	0 Hz

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FCC ID: 2APTIS62E81

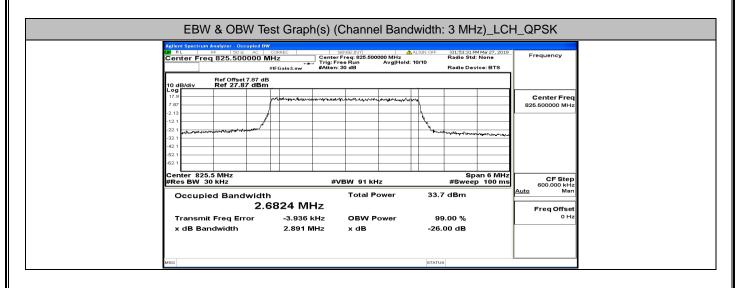


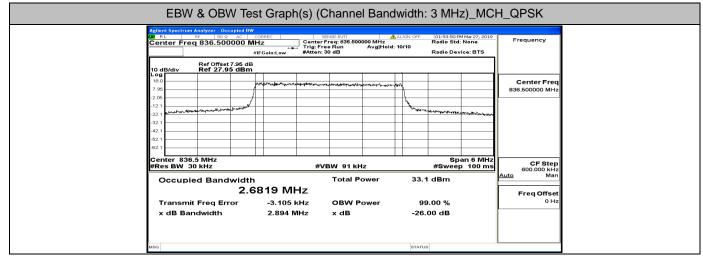


Agilent Spectrum Analyzer - Occupied BW		ENSE:INT	dwidth: 1.4 MHz)_HCH	e I
Center Freq 848.300000 Mi		Freq: 848.300000 MHz se Run Avg Hold	Radio Std: None	Frequency
Ref Offset 7.95 dB 10 dB/div Ref 27.95 dBm Log				
18.0	hander man	undergody, er yet hill all all all and an and a specific that all all all all all all all all all a		Center Freq 848.300000 MHz
-12.1 -22.1 -22.1 -22.1			An miner specar manual tigen	-
-42:1				
Center 848.3 MHz #Res BW 15 kHz	#\	BW 43 kHz	Span 2.8 MH #Sweep 100 m	CF Step
Occupied Bandwidth		Total Power	33.5 dBm	280.000 kHz Auto Man
1.U Transmit Freq Error	785 MHz -878 Hz	OBW Power	99.00 %	Freq Offset 0 Hz
x dB Bandwidth	1.257 MHz	x dB	-26.00 dB	

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FCC ID: 2APTIS62E81

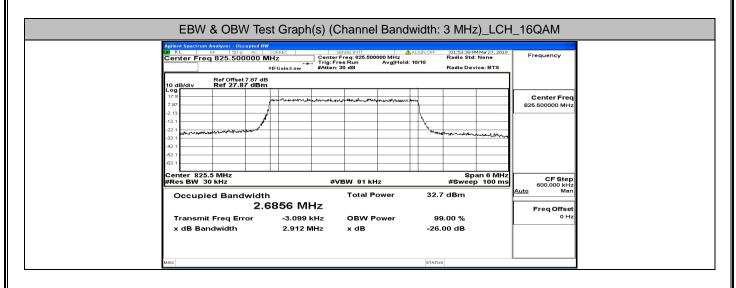


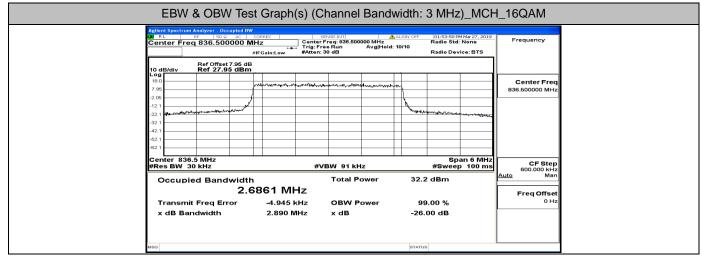


Tig: Free Run Avgited: 10/10 Ref Offset 7.96 dB Log 10 dB/div Ref 27.95 dBm 205 Image: Colspan="2">Center Free 205 Image: Colspan="2">Center 847.5 MHz PRes BW 30 KHz #VBW 91 KHz #Sweep 100 ms Coccupied Bandwidth Total Power 33.6 dBm 206 Ec6862 MHz Free Offsee	Agilent Spectrum Analyzer - Occupied BW LXI RF 50 Ω AC			IGN OFF 01:54:07 PM Mar 27, 20 Radio Std: None	Frequency
10 Beldviv Ref 27.95 dBm Log Center Free 130 Center Free 140 Center Free 150 Center Free 121 Span 6 MHz Free BW 30 KHz Span 6 MHz Mar Mar Occupied Bandwidth Total Power 33.6 dBm Luto <thcenter< th=""> <thcenter free<="" th=""> <th< td=""><td></td><td>Trig: Fre</td><td>e Run Avg Hold: 10</td><td>/10</td><td></td></th<></thcenter></thcenter<>		Trig: Fre	e Run Avg Hold: 10	/10	
Log Center Free 7.95 Center Free 205 Center Free 121 Center Stars 21 Center Stars 21 Center Stars 21 Span 6 MHz 21 Span 6 MHz Center Stars Span 6 MHz WRes BW 30 kHz #VBW 91 kHz #Span 6 MHz Ccupied Bandwidth Total Power 33.6 dBm 2.68862 MHz Freq Offset Transmit Freq Error -3.361 kHz OBW Power 99.00 %					
205 1	Log				Center Freq
121 1	7.95		a destruction of the production of	1	847.500000 MHz
201 1	-12.1			www.	
42.1	*ee. 1			and a second sec	<u>*4</u>
621 Center 847.5 MHz Span 6 MHz Ørener 847.5 MHz #VBW 91 kHz Span 6 MHz Ørener 847.5 MHz #VBW 91 kHz #Sweep 100 ms Ørener 847.5 MHz #VBW 91 kHz #Sweep 100 ms Ørener 847.5 MHz #VBW 91 kHz #Sweep 100 ms Ørener 847.5 MHz #VBW 91 kHz #Sweep 100 ms Ørener 847.5 MHz Total Power 33.6 dBm Ørener 847.5 MHz Transmit Freq Error -3.361 kHz Ørener 99.00 % Ørener 99.00 % Ordz					
Center 847.5 MHz Span 6 MHz #Res BW 30 kHz #VBW 91 kHz #Sweep 100 ms Occupied Bandwidth Total Power 33.6 dBm 2.6862 MHz Freq Offset Transmit Freq Error -3.361 kHz OBW Power 99.00 %					
#Res BW 30 kHz #VBW 91 kHz #Sweep 100 ms CC Step 0 COUNT Occupied Bandwidth Total Power 33.6 dBm Auto Man 2.6862 MHz Freq Offset Freq Offset 0Hz				Span 6 M	12
Occupied Bandwidth Total Power 33.6 dBm 2.6862 MHz Freq Offset Transmit Freq Error -3.361 kHz OBW Power 99.00 % 0 Hz		#VI	3W 91 kHz		ns 600.000 kHz
Transmit Freq Error -3.361 kHz OBW Power 99.00 %			Total Power	33.6 dBm	Auto Man
					0 Hz

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FCC ID: 2APTIS62E81

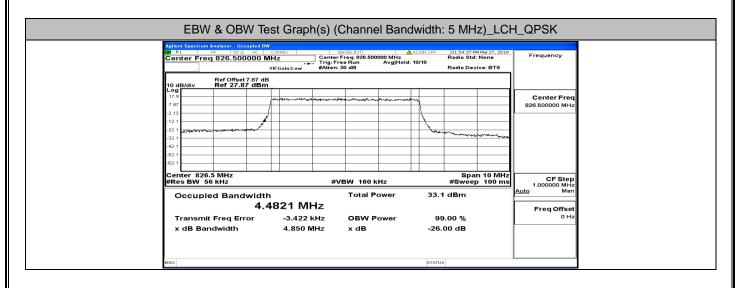


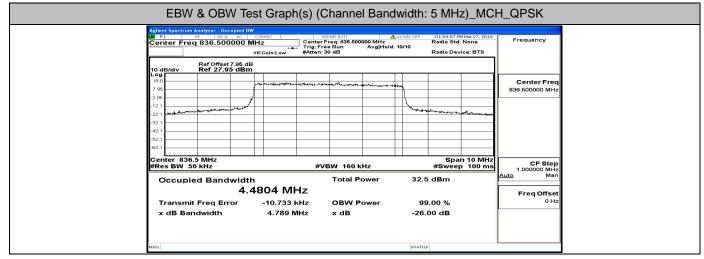


Agilent Spectrum Analyzer - Occupi IX RL RF 50 Q A Center Freq 847.50000			Center F Trig: Fre #Atten: 3	NSE:INT req: 847.500 e Run 0 dB	Avg Hold:	ALIGN OFF	01:54:16 P Radio Std Radio Dev		Frequency
Ref Offset 7.9									
18.0 7.95	~	****	Astronome	وحاسيه والمراري والمراجع		~			Center Freq 847.500000 MHz
-2.05 -12.1 -22.1 -32.1	mark					have and	nay harring and a start	k.n	
-42.1									
Center 847.5 MHz #Res BW 30 kHz			#VE	3W/91 kH	z			an 6 MHz p 100 ms	CF Step 600.000 kHz
Occupied Bandw		77 МН	z	Total P	ower	32	.5 dBm		Auto Man Freq Offset
Transmit Freq Error x dB Bandwidth		-1.722 kl 2.955 Mi		OBW P x dB	ower		9.00 % 3.00 dB		0 Hz

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FCC ID: 2APTIS62E81

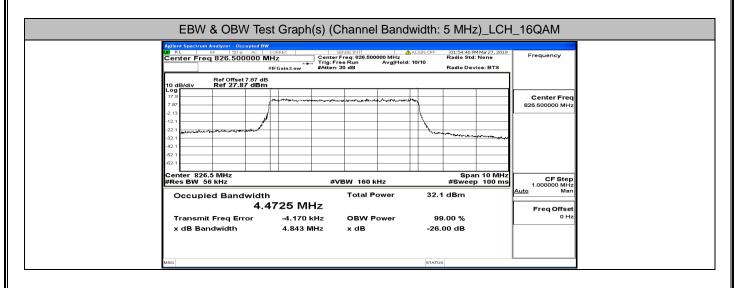


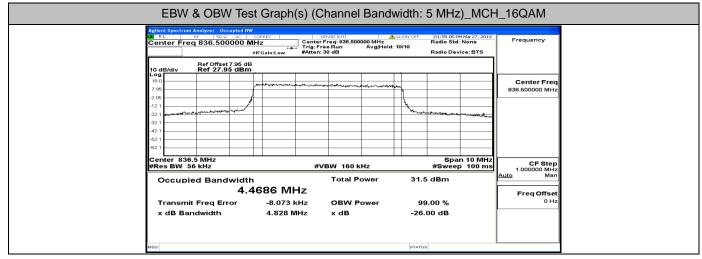


Agilent Spectrum Analyzer - Occupied I ΔΜ RL RF 50 Ω AC Center Freq 846.500000 C C C C	CORR		SENSE:INT		IGN OFF	01:55:14 PM	Mar 27, 2019	Frequency
Center Freq 840.500000		Tri	g: Free Run ten: 30 dB	Avg Hold: 10	/10	Radio Dev		
Ref Offset 7.95 d 10 dB/div Ref 27.95 dB								
18.0		angine alicense to serve the serve	and make the state of a set of the	- Alton your and a				Center Freq
-2.05	1				l			846.500000 MHz
-12.1	4				haven	-hone-		
-22.1 ggman (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)							and the property of the second pro-	
-42.1								
-62.1								
Center 846.5 MHz			#1/PW 460				n 10 MHz	CF Step
#Res BW 56 kHz			#VBW 160 I		22.0	#Sweep	o 100 ms	1.000000 MHz <u>Auto</u> Man
Occupied Bandwid		22 MHz	Total F	ower	32.8	авт		
Transmit Freg Error		-5.522 kHz	OBW F	ower	99	.00 %		Freq Offset 0 Hz
x dB Bandwidth		4.798 MHz	x dB			00 dB		

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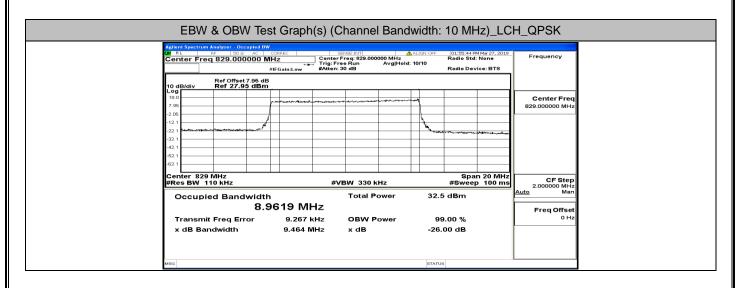
FCC ID: 2APTIS62E81

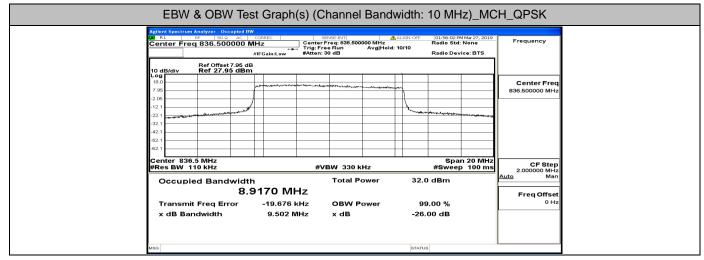




224 RL RF 50Ω AC C Center Freq 846.500000 MH #1		req: 846.500000 MHz e Run Avg Hold: 1	LIGN OFF 01:55:24 PM Mar 27, 201 Radio Std: None 0/10 Radio Device: BTS	Frequency
Ref Offset 7.95 dB 10 dB/div Ref 27.95 dBm 18.0 7.95	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			Center Fred 846.500000 MHz
-2.05 -12.1 -22.1 -32.1			the second second second	
-42.1 -62.1 -62.1 Center 846.5 MHz			Span 10 MH	
#Res BW 56 kHz Occupied Bandwidth	#ve 755 MHz	3W 160 kHz Total Power	#Sweep 100 m 31.8 dBm	CF Step 1.000000 MHz <u>Auto</u> Man Freq Offset
Transmit Freq Error x dB Bandwidth	-9.585 kHz 4.870 MHz	OBW Power x dB	99.00 % -26.00 dB	0 Hz

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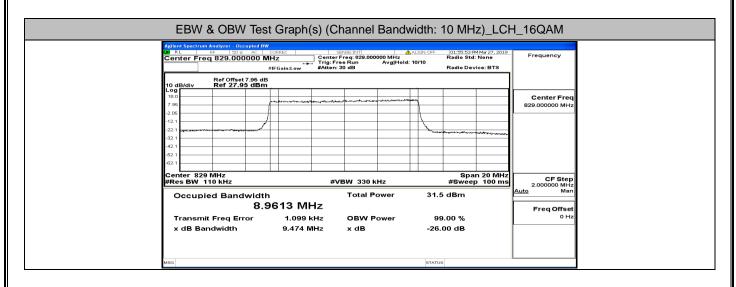


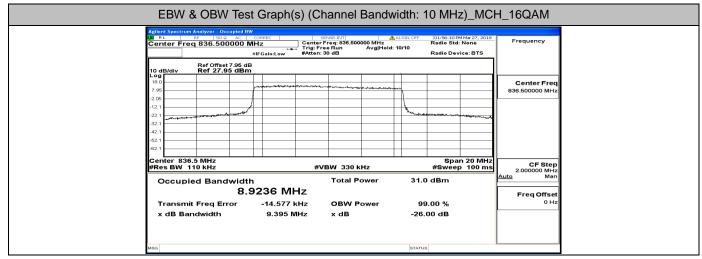


M RL RF 50 Ω AC Center Freq 844.000000 M	/Hz ç	SENSE:INT enter Freq: 844.000000 MHz rig: Free Run Avg Hol Atten: 30 dB	ALIGN OFF 01:56:19 PM Mar 2 Radio Std: None d: 10/10 Radio Device: B	Frequency
Ref Offset 7.95 dE 10 dB/div Ref 27.95 dBm	3			
18.0 7.95		.ge,d=de==19711-949-0-19-19-1-1-19-19-19-19-19-19-19-19-19-19	*****	Center Freq 844.000000 MHz
-2.05 -12.1 -22.1	/		- Annonementered	
-32.1				
-62.1 Center 844 MHz			Span 20	MHZ
#Res BW 110 kHz		#VBW 330 kHz	#Sweep 10	0 ms 2.000000 MHz
Occupied Bandwidti 8.9	י 9069 MHz	Total Power	32.2 dBm	Auto Man Freq Offset
Transmit Freq Error x dB Bandwidth	-1.656 kHz 9.436 MHz		99.00 % -26.00 dB	0 Hz

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FCC ID: 2APTIS62E81

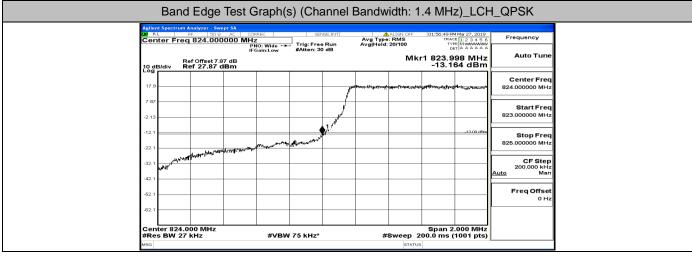


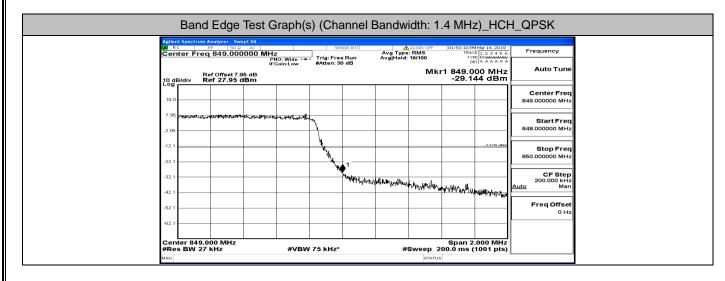


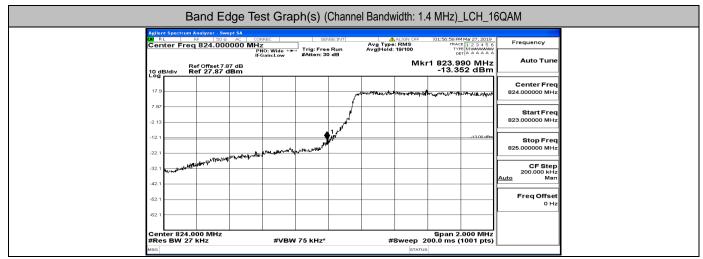
Cente	1	Analyzer - Occ RF 50 ຊ 1 844.000	AC			SENSE:INT rFreq: 844.000 ree Run		LIGN OFF	01:56:28 P Radio Std	M Mar 27, 2019 : None	Frequency
				FGain:Low	#Atten	: 30 dB	Avginoid.	0/10	Radio Dev	/ice: BTS	
10 dB/c Log	div	Ref Offset Ref 27.9	7.95 dB 5 dBm								
18.0 7.95			ļ.,	and the second s				~			Center Freq 844.000000 MHz
-2.05								1			
-22.1	···دىنەيتوغىرىدىر	an a	ama					- Charman		Charles - A many of	
-42.1											
-62.1											
	r 844 I BW 11				#	VBW 3301	(Hz		Spa #Swee	n 20 MHz p 100 ms	CF Step 2.000000 MHz
Oc	cupie	d Band	width			Total P	ower	31.3	3 dBm		Auto Man
				218 M							Freq Offset
		Freq Err dwidth	or	68 9.424	0 Hz MHz	OBW P x dB	ower		9.00 % 00 dB		0 Hz

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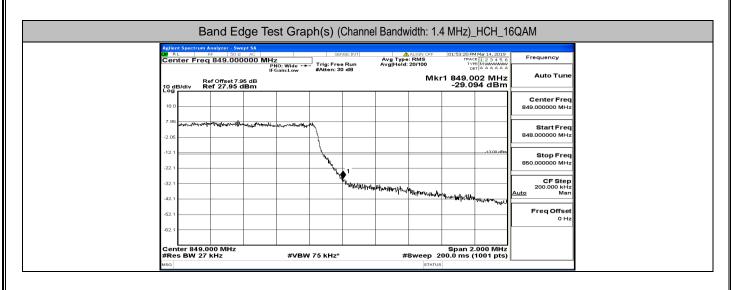
D.4 Band Edge

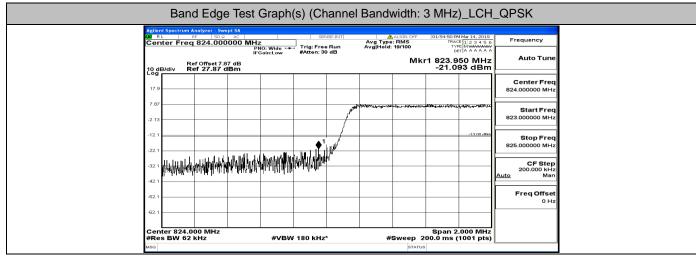






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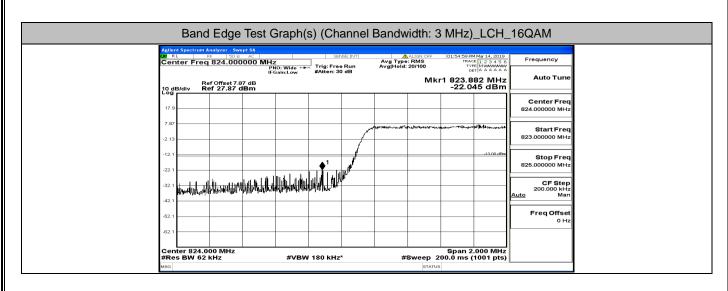


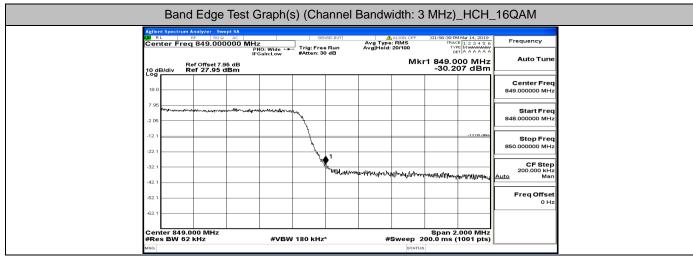
Agilent Spectrum Analyzer - Swep		ALIGN OFF 01:56:29 PM M	ar 14, 2019
Center Freq 849.0000		Avg Type: RMS TRACE 1 n Avg Hold: 20/100 Type h	23456 Frequency
Ref Offset 7.95	5 dB	Mkr1 849.004 -29.625	4 MHz Auto Tune
18.0			Center Freq 849.000000 MHz
7.95	Velaskaus minera and and a second		Start Freq 848.000000 MHz
-12.1			Stop Freq
-22.1			850.00000 MHz
-32.1		*กษฐานตา (************************************	CFStep 200.000 kHz 에바가해새 <u>Auto</u> Man
-52.1			Freq Offset 0 Hz
-62.1			

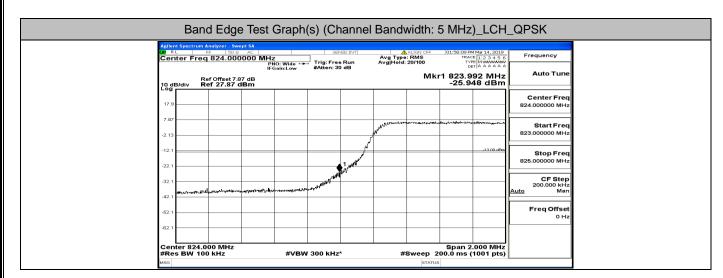
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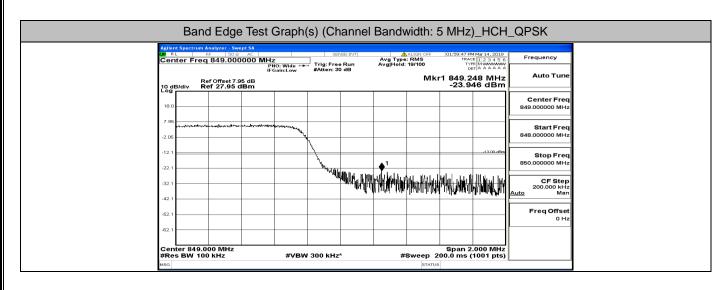


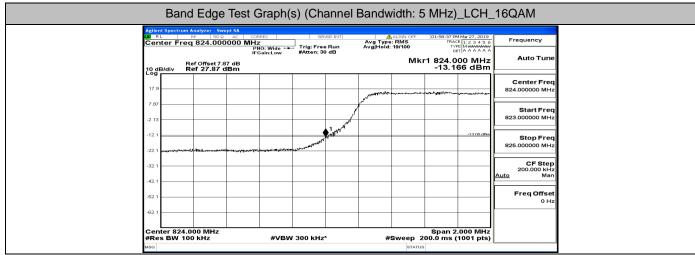


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FCC ID: 2APTIS62E81

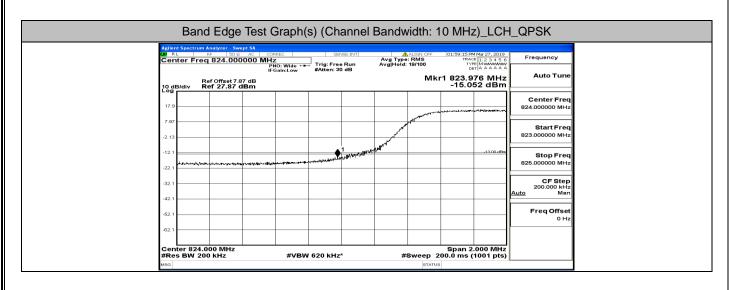
SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD.

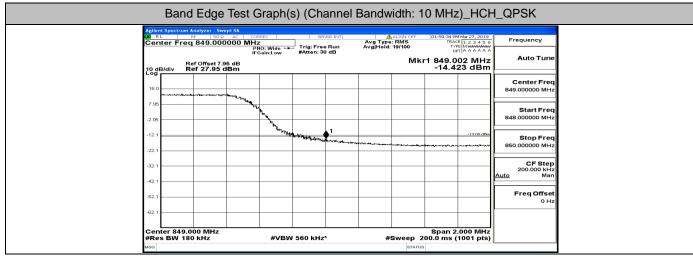




Agile		d Edge		Graph(s) (Ch	annel	Bandw	idth: 5	MHz)	_HCH_	_16QAM
LXI R	L	RF 50 :				NSE:INT	Avg Type Avg Hold:	ALIGN OFF : RMS 19/100	01:58:55 PA TRAC TYF DE	1 Mar 27, 2019 E 1 2 3 4 5 6 E MWWWWWW T A A A A A A	Frequency
10 d Log	B/div	Ref Offset 7 Ref 27.95	95 dB	Sam.Low				Mkr		02 MHz 56 dBm	Auto Tune
18.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	- 2000 1 Sec. 6 3 - 50	an name and Mona								Center Freq 849.000000 MHz
-2.05				~~~~	N						Start Freq 848.000000 MHz
-12.1					N. Horan	1				-13.00 dBm	Stop Freq
-22.1							*****	***********	halikee-soul	-479-979 (199-97-97)	850.000000 MHz
-32.1											CF Step 200.000 kHz <u>Auto</u> Man
-52.1											Freq Offset 0 Hz
-62.1											
		.000 MHz 10 kHz		#VBW	/ 330 kHz	*	#	Sweep 2		.000 MHz 1001 pts)	

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				Graph(s	s) (Cha	annel	Bandwi	dth: 1	0 MHz)_LCH	_16QAM
LXI RI	L	RF 54	DQ AC			e Run	Avg Type Avg Hold:	ALIGN OFF : RMS 19/100	TRAC	1 Mar 27, 2019 E 1 2 3 4 5 6 E MWWWWWW T A A A A A A	Frequency
10 de	3/div	Ref Offset Ref 27.8	7.87 dB 7 dBm	irgain:Luw	#ritten: o			Mk	r1 823.9 -16.4	98 MHz 44 dBm	Auto Tune
17.9								******		······································	Center Freq 824.000000 MHz
-2.13								and the second second			Start Freq 823.000000 MHz
-12.1						1 100.0000	real and the second			-13.00 dBm	Stop Freq 825.000000 MHz
-22.1					e-ele-delydad are .						CF Step
-42.1			_								200.000 kHz <u>Auto</u> Man
-52.1											Freq Offset 0 Hz
Cen		4.000 MHz								.000 MHz	
#Res	sвw	200 kHz		#VBV	/ 620 kHz	*	#	Sweep 2	00.0 ms (1001 pts)	

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 Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM
OM RL BF 50.9 AC COMPEC SENSE:INT Add ANIO OFF 01159435MMar27,2019 Frequency Center Freq 849,000000 MHz Fried String Free Run Avg Type: RMS Trace (2.3.4.5.6) Frequency PR0_MIde → Fright String String Run Avg Heid: 19/100 Trace (2.3.4.5.6) Frequency
Ref Offset 7.95 dB Mkr1 849.000 MHz Auto Tune 10 dB/dlv Ref 27.95 dB - 17.017 dBm
180 Center Freq 180 Base Center Freq 180 Base Center Freq 180 Base Center Freq
7.95 2.05
-12.1
-32.1 CF Step 200.000 kHz
42.1
-62.1

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