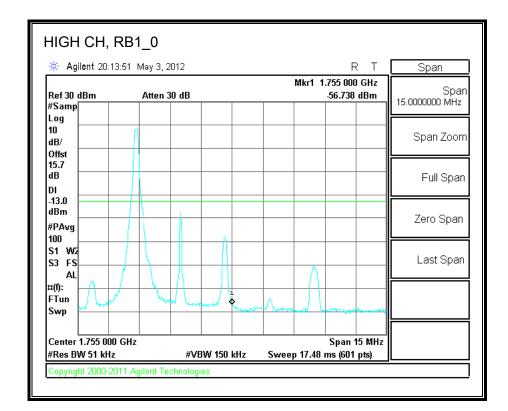
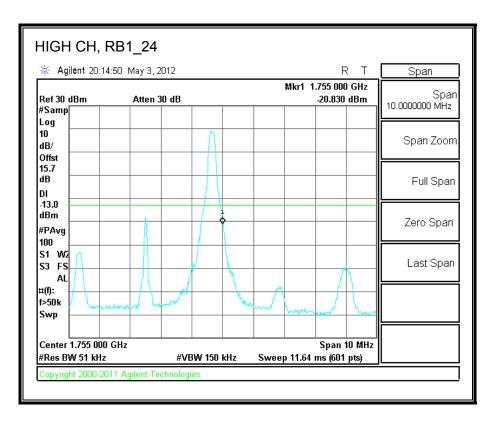
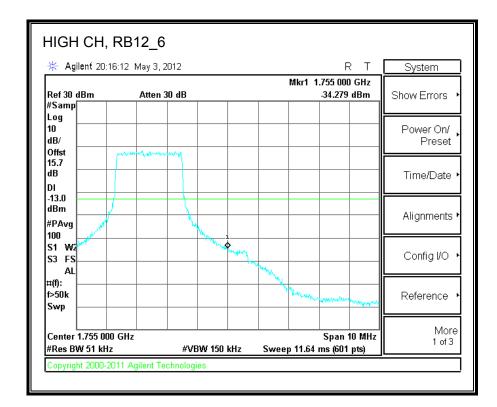


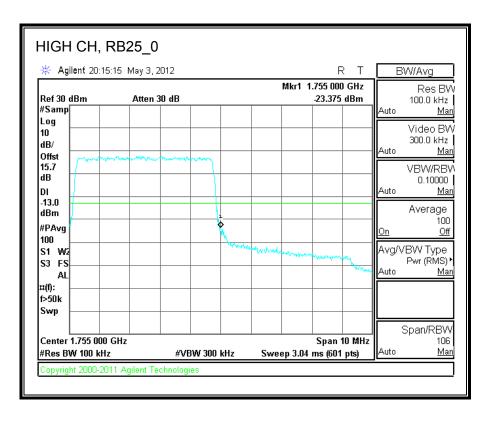
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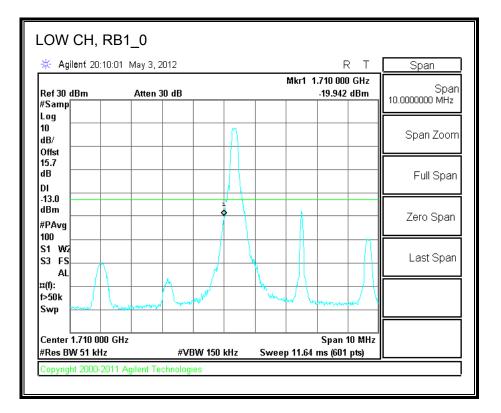
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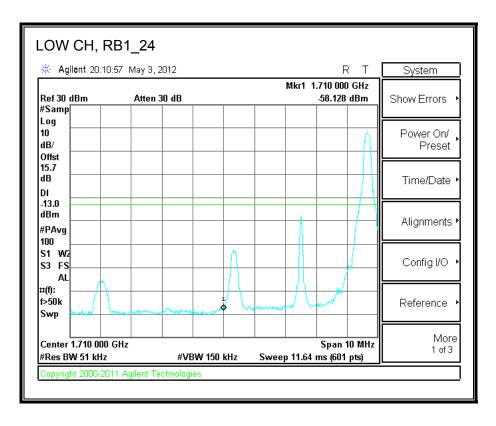




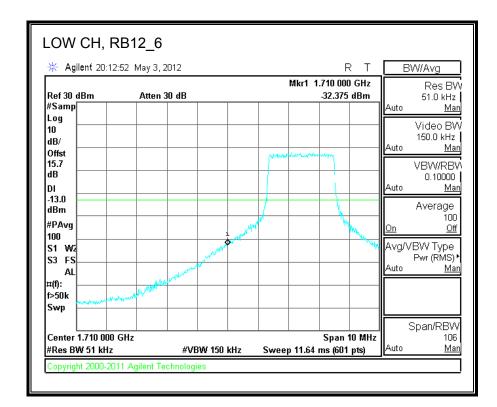
Page 116 of 342

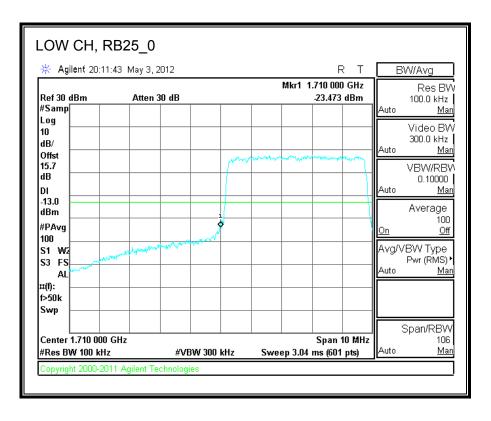
### <u>16QAM</u>



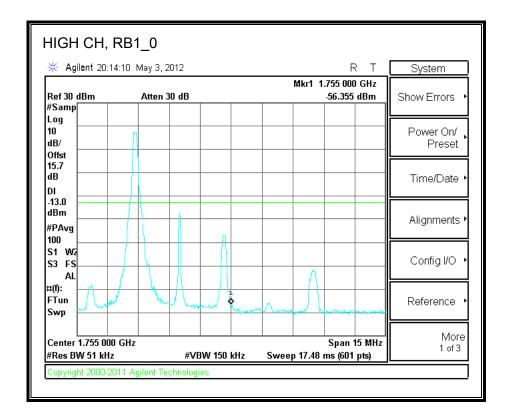


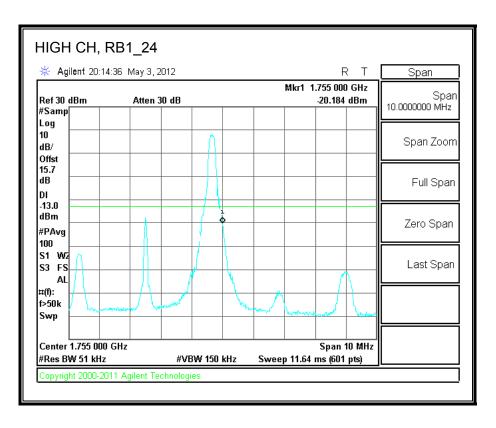
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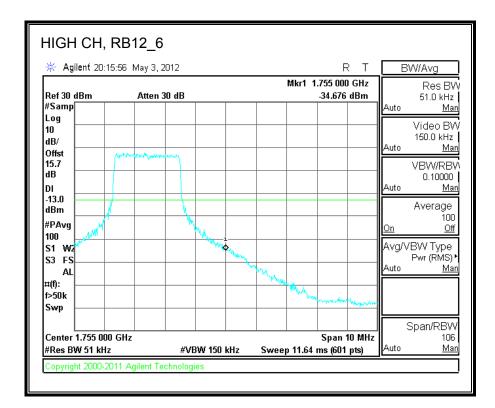


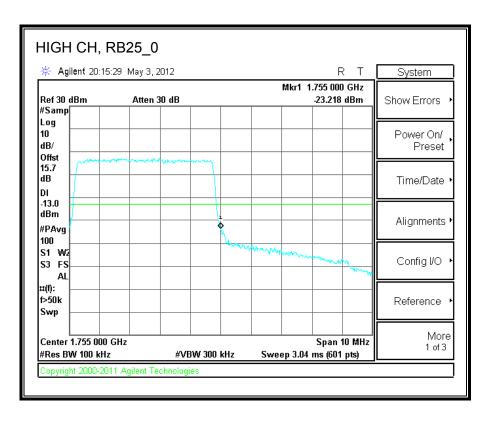
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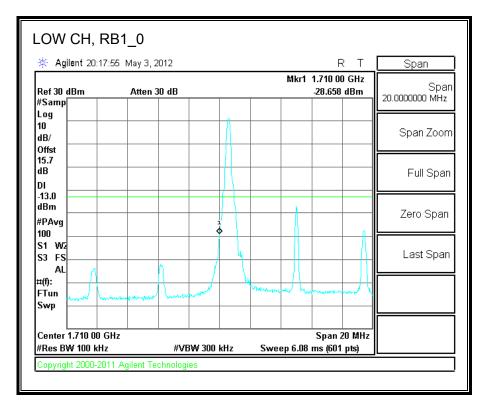


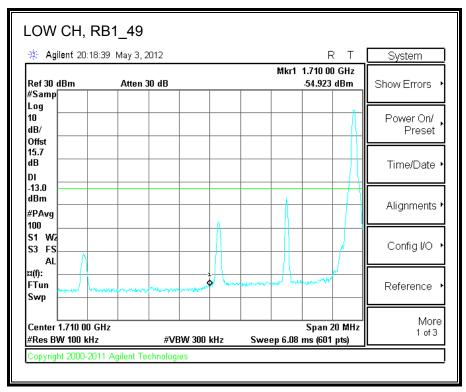


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# LTE, Band 4 (10.0MHz BAND WIDTH )

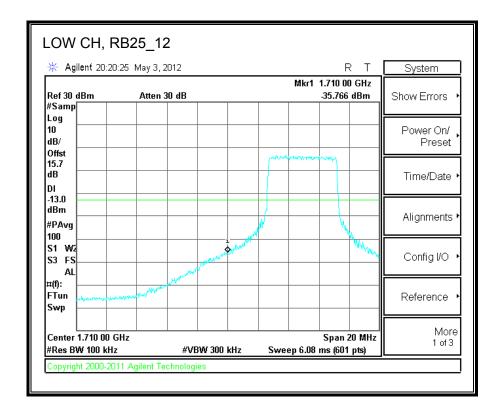
### <u>QPSK</u>

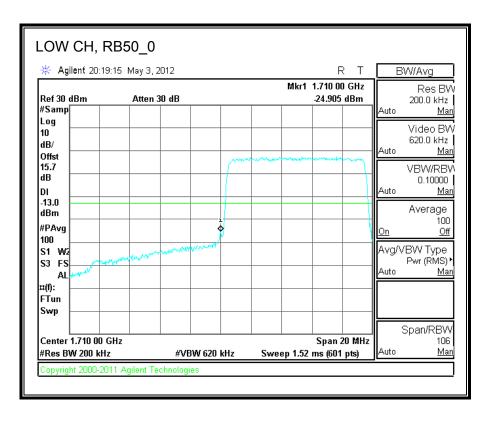




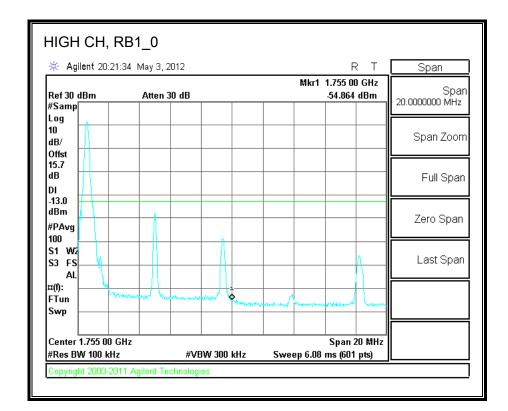
# Page 121 of 342

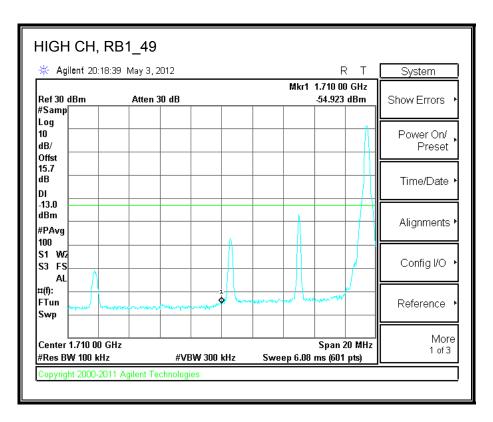
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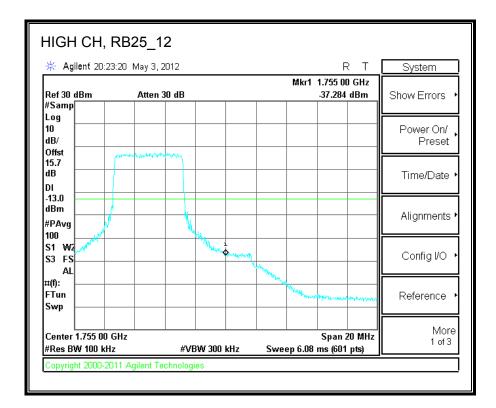


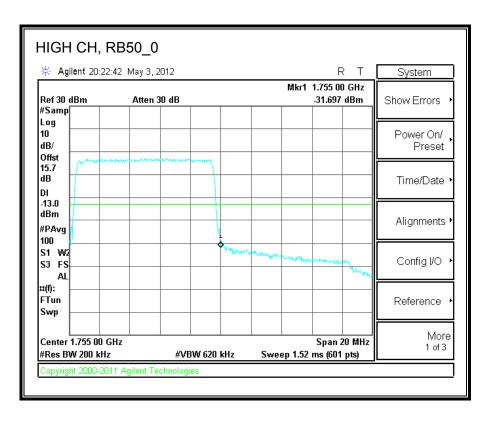
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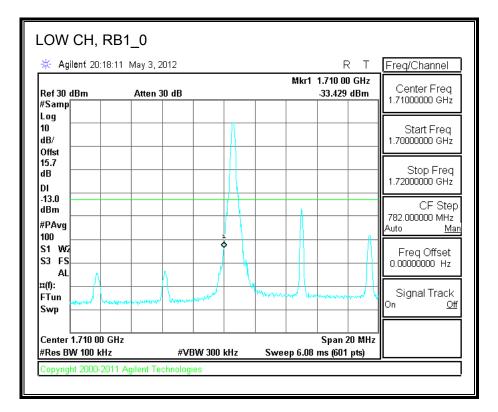
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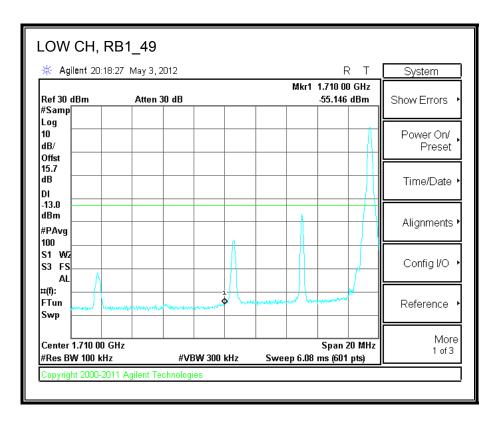




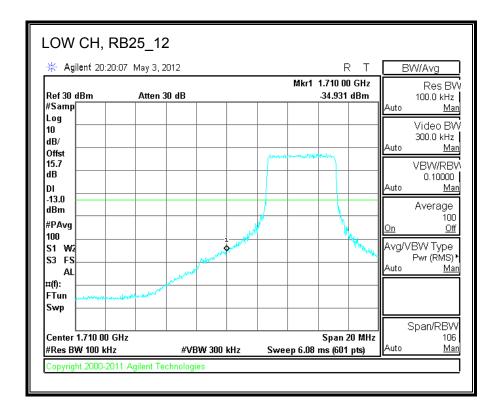
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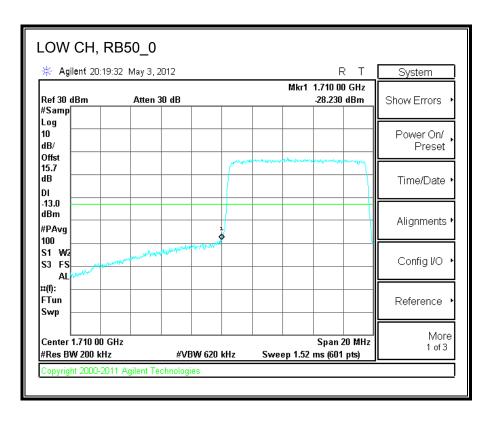
### <u>16QAM</u>



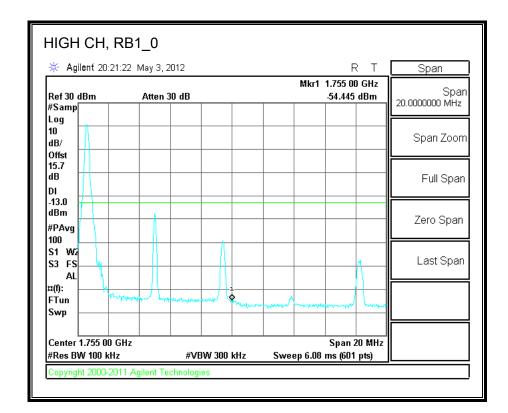


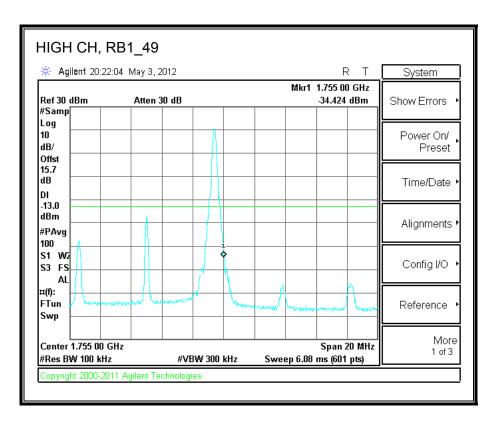
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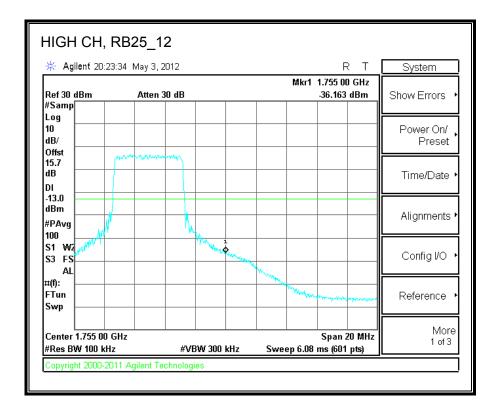


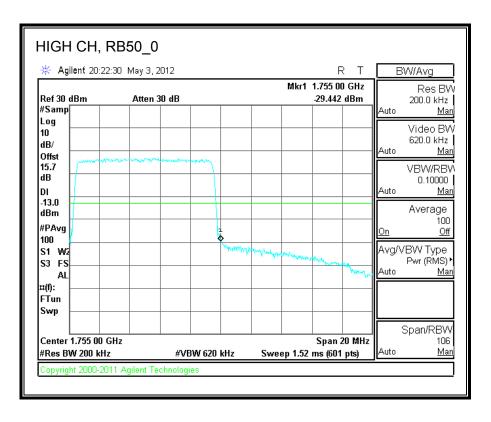
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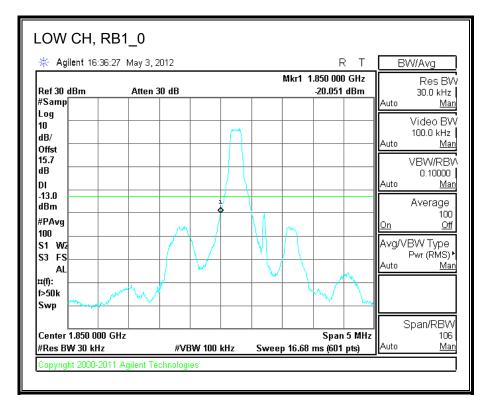


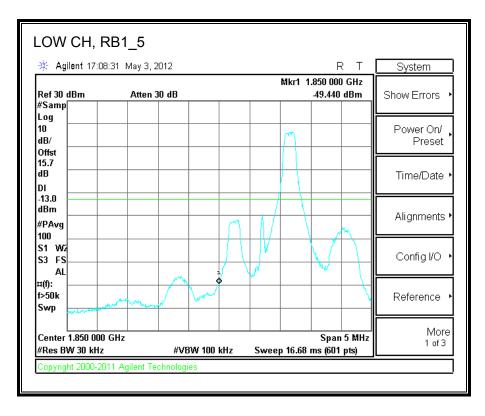


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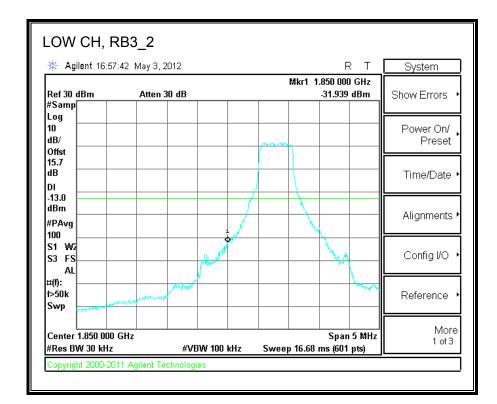
### LTE, Band 2 (1.4MHz BAND WIDTH )

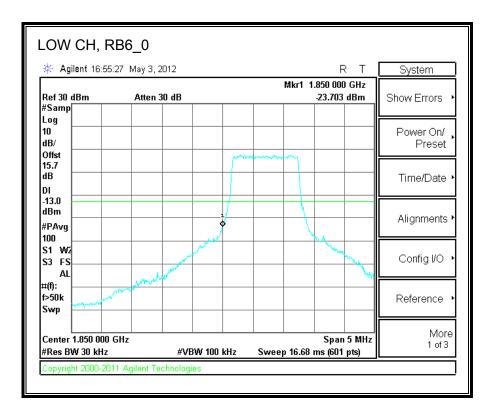
## <u>QPSK</u>



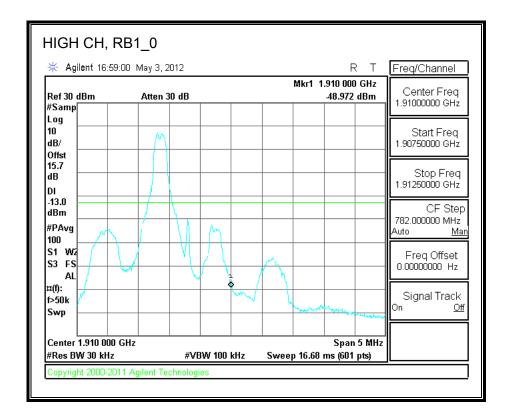


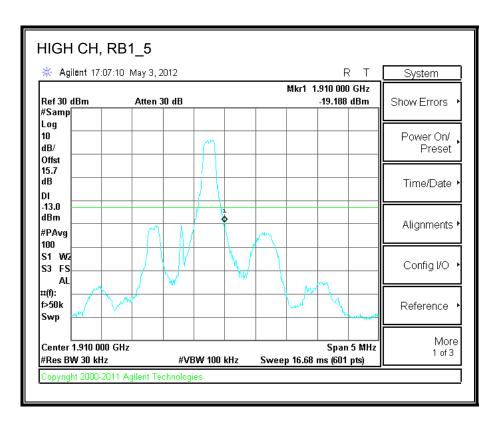
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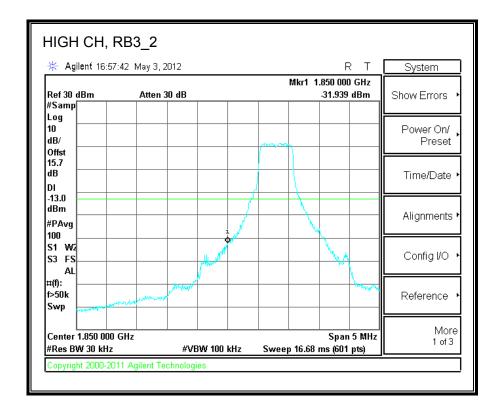


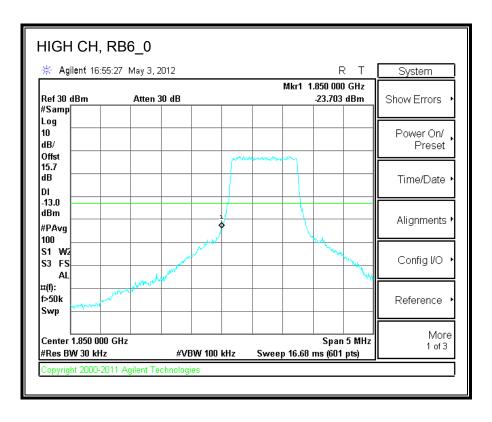
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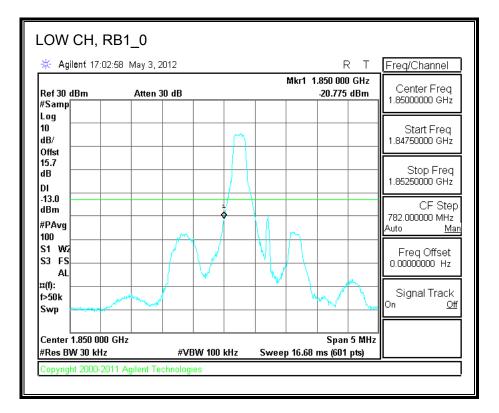
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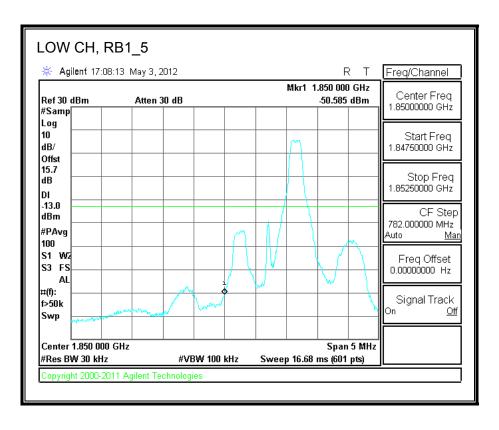




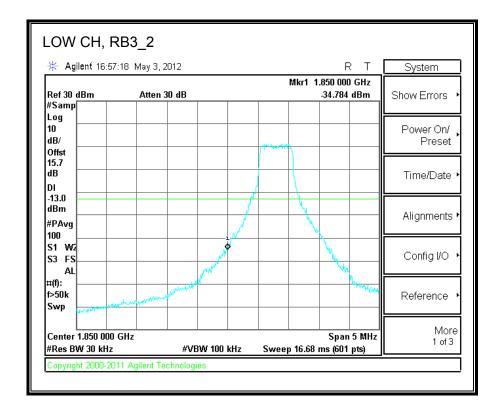
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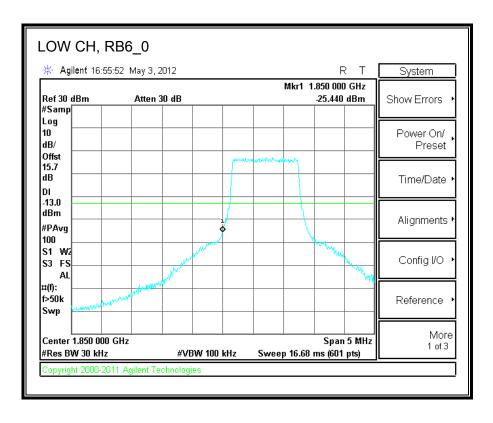
### <u>16QAM</u>



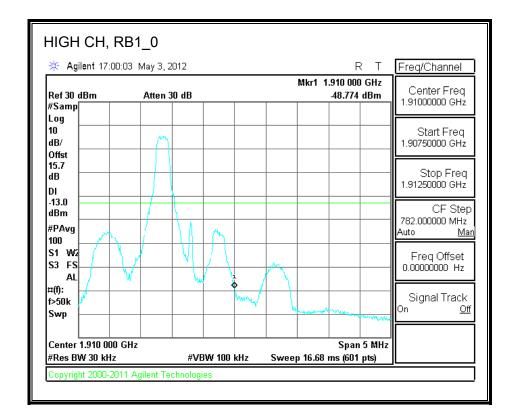


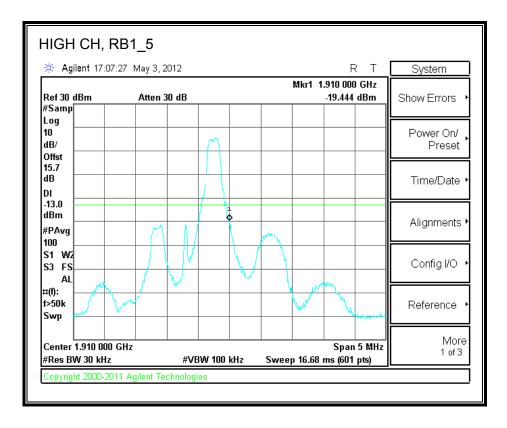
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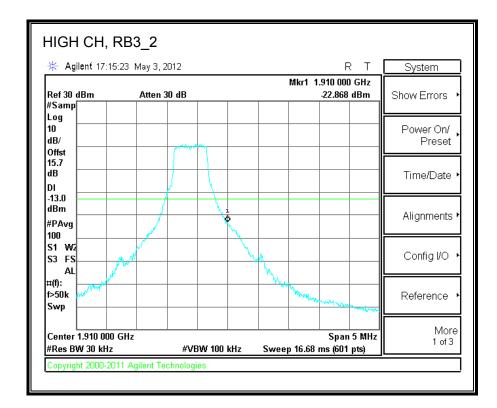


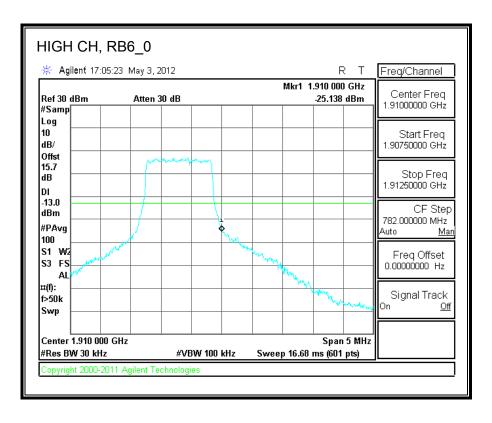
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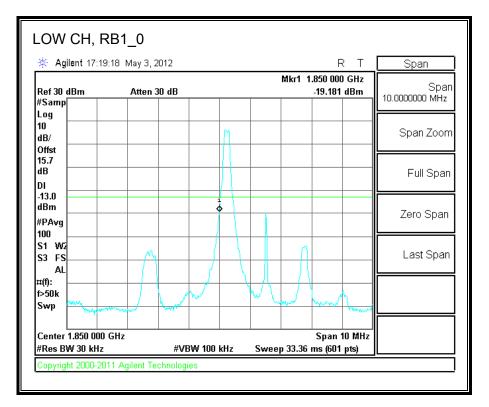


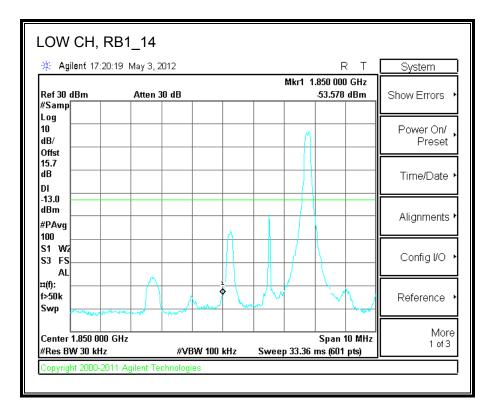


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# LTE, Band 2 (3.0MHz BAND WIDTH )

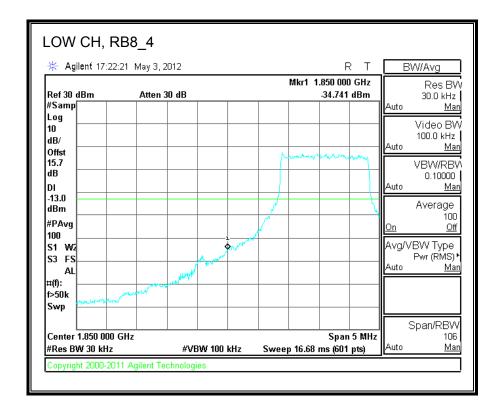
## <u>QPSK</u>

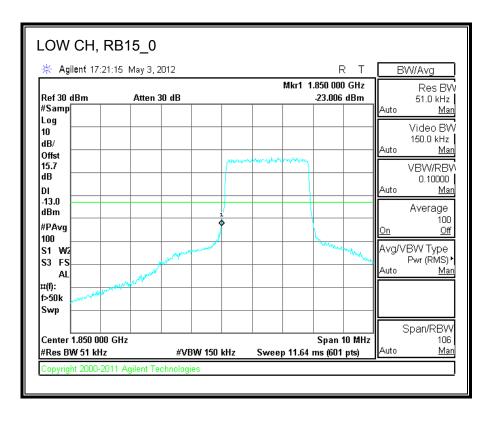




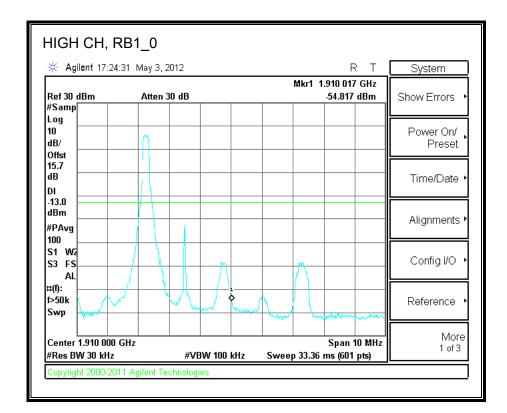
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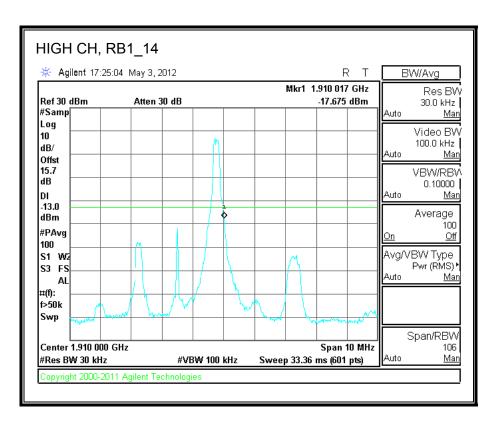
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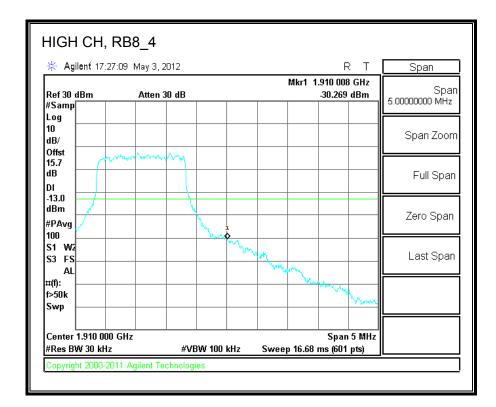


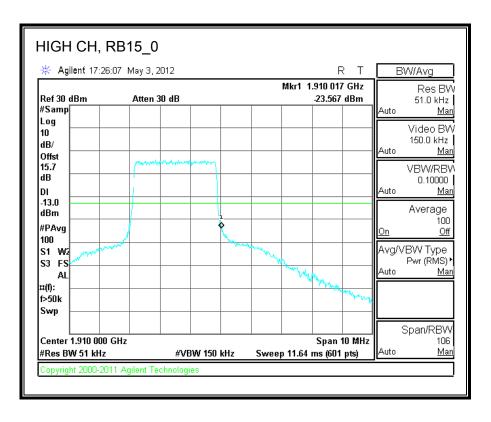
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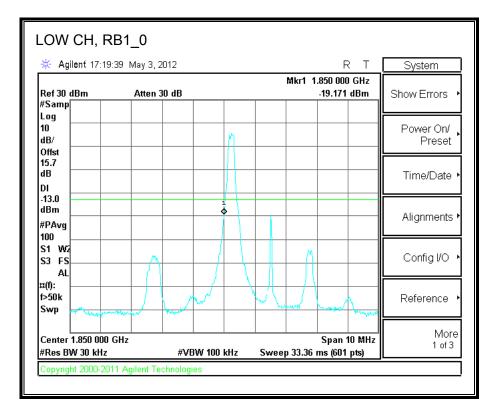
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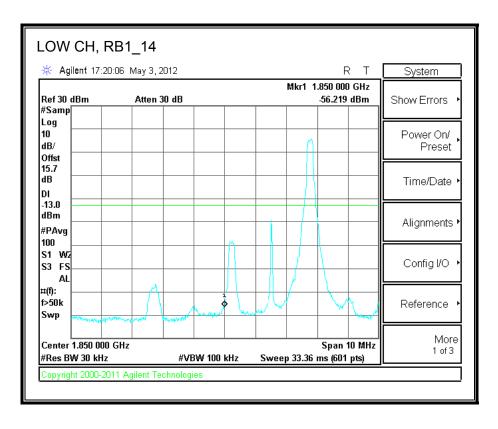




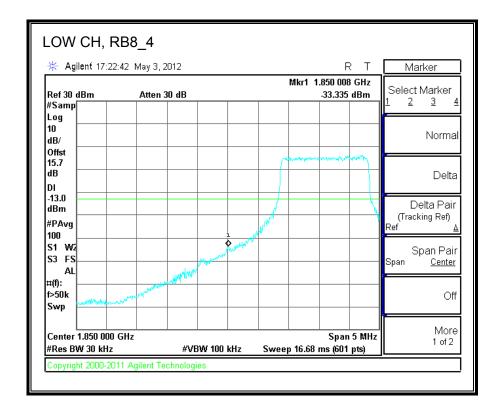
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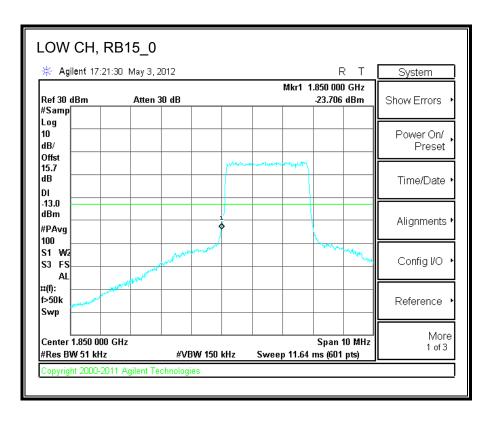
### <u>16QAM</u>



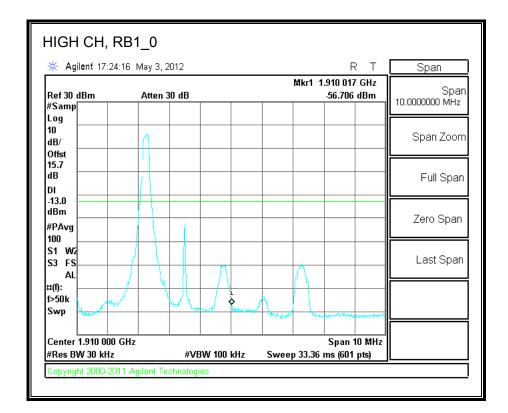


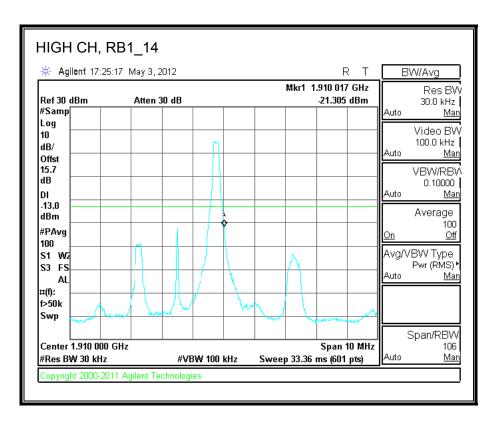
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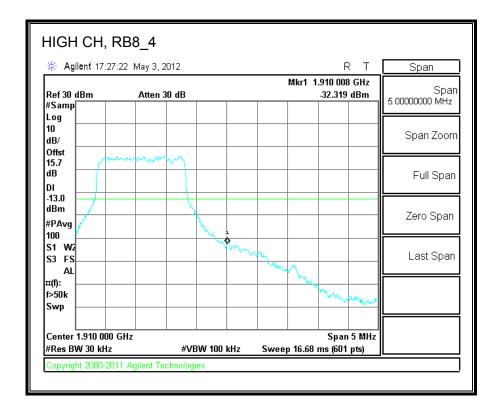


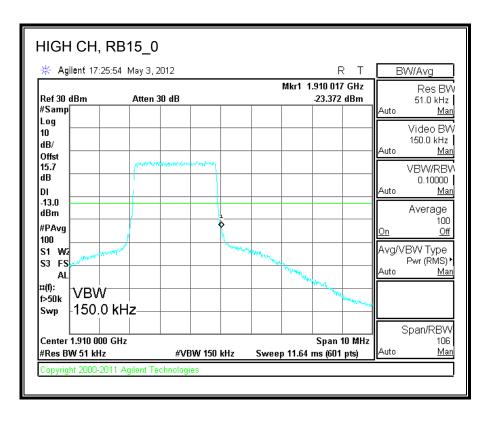
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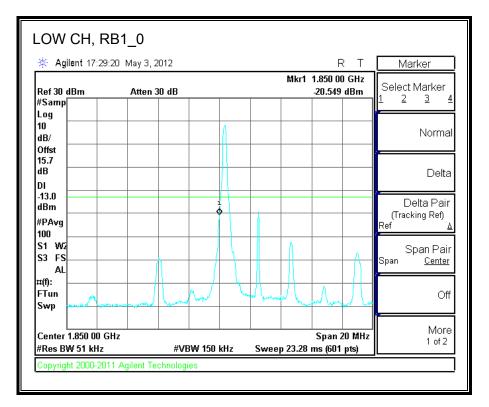


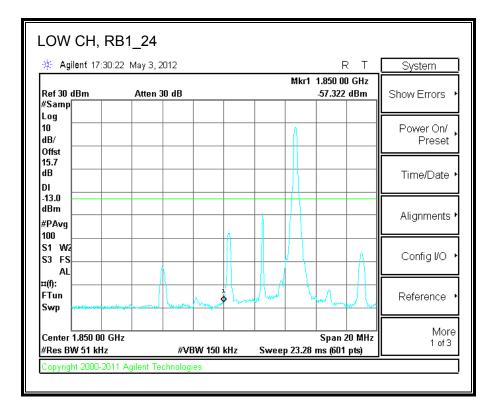


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# LTE, Band 2 (5.0MHz BAND WIDTH )

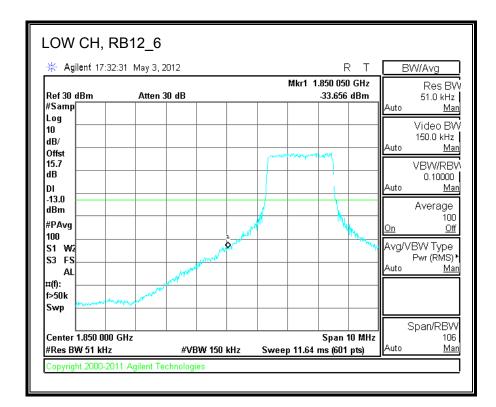
## <u>QPSK</u>

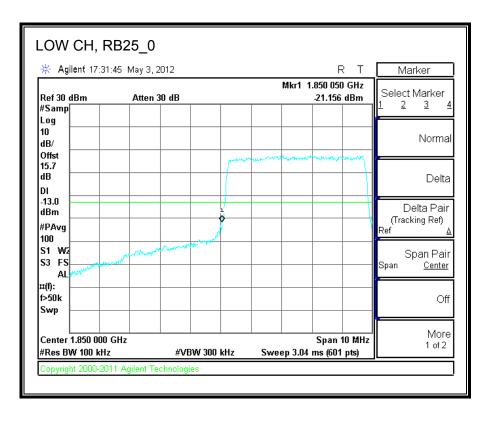




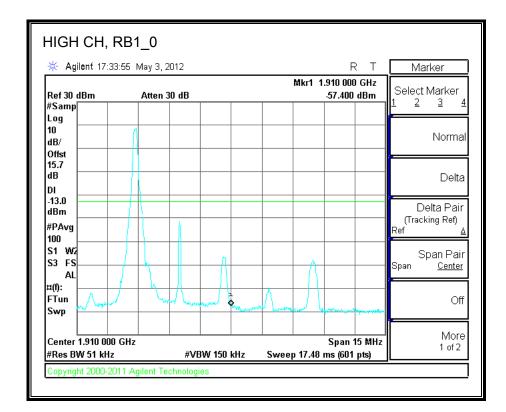
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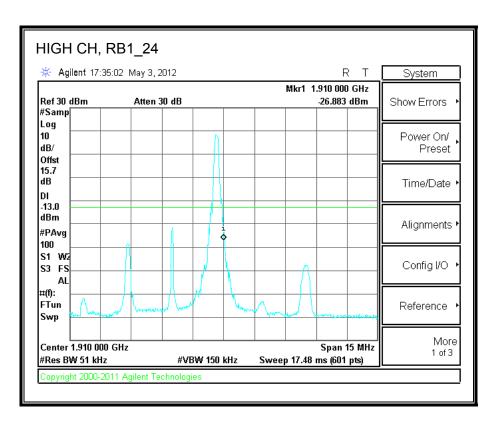
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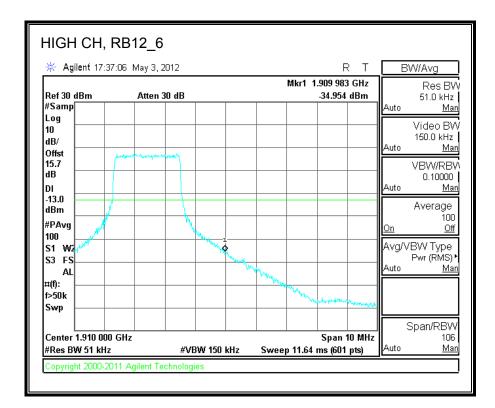


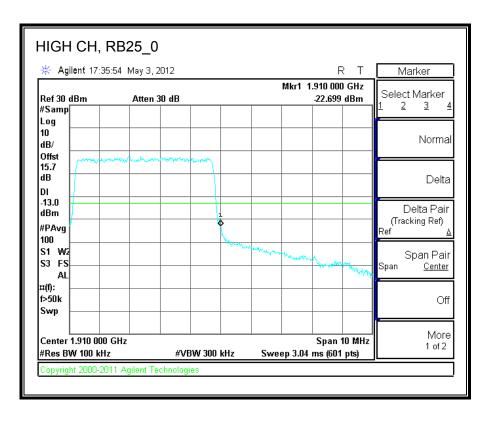
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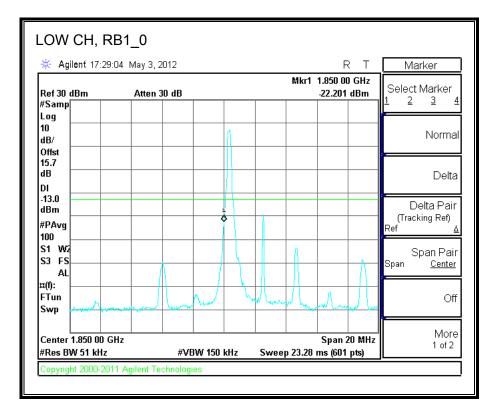
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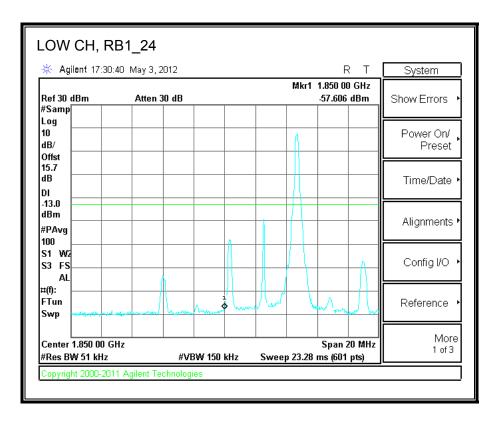




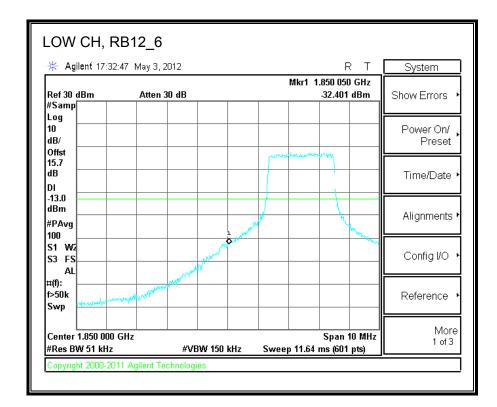
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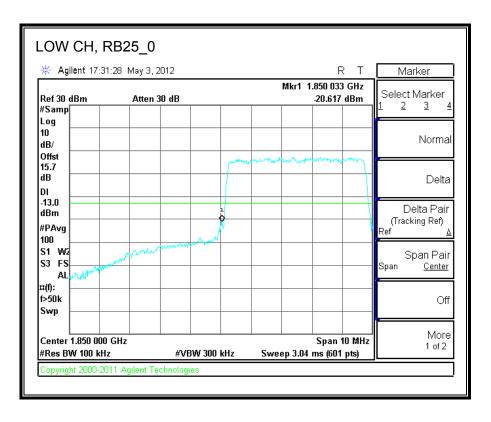
### <u>16QAM</u>



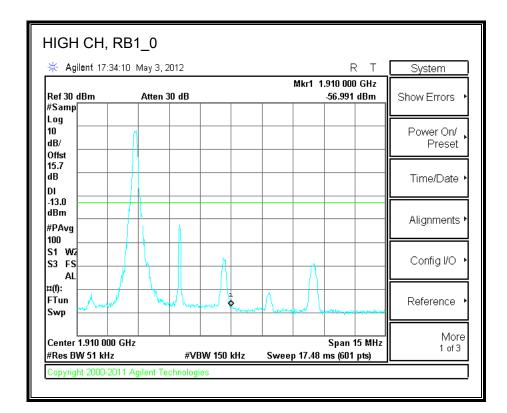


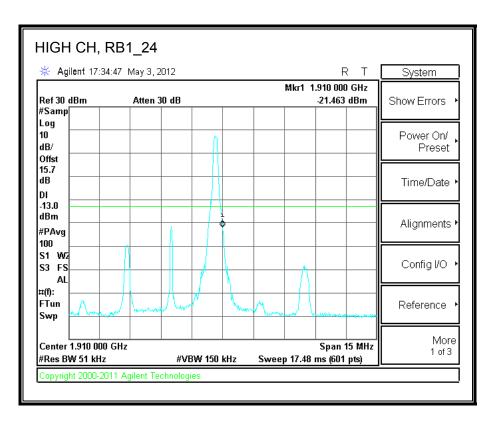
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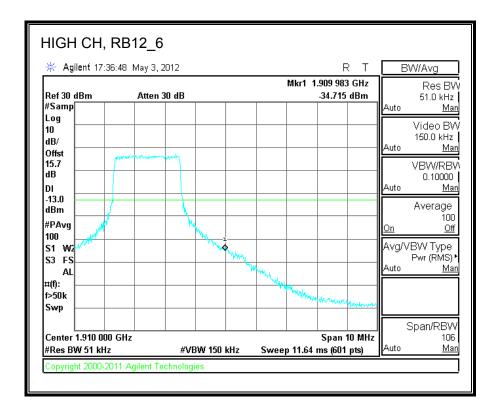


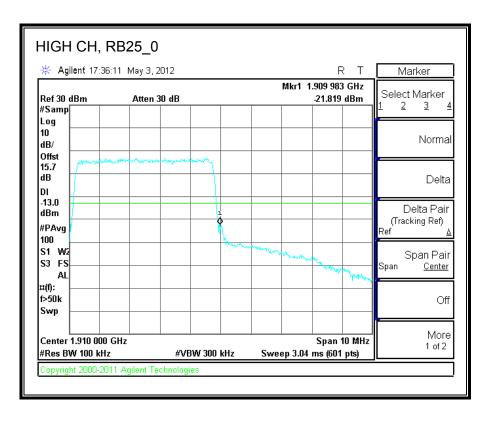
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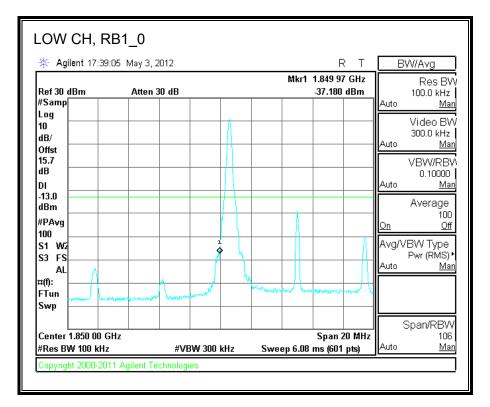


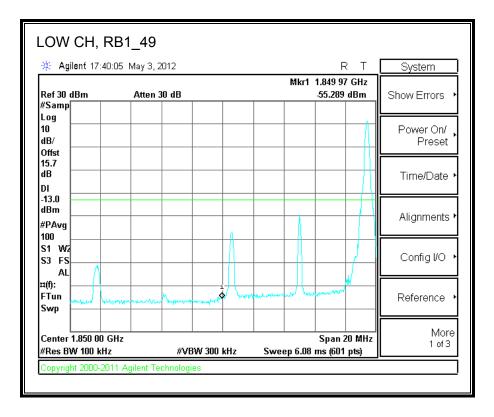


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# LTE, Band 2 (10.0MHz BAND WIDTH )

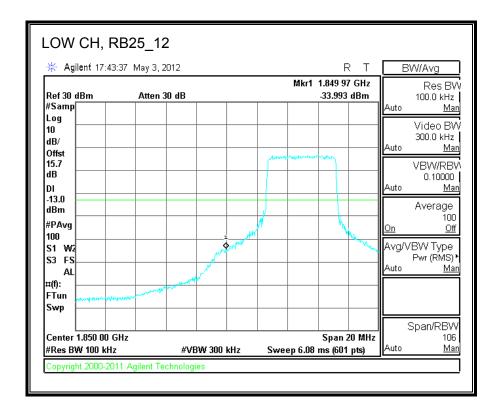
### <u>QPSK</u>

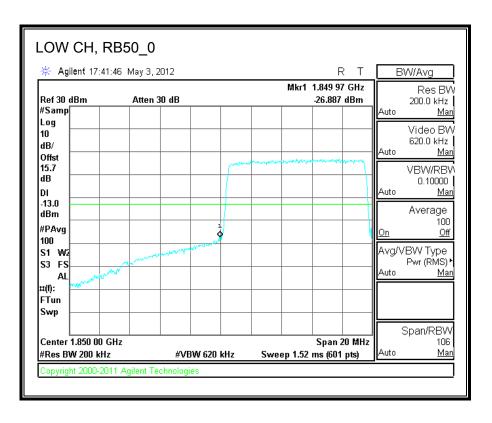




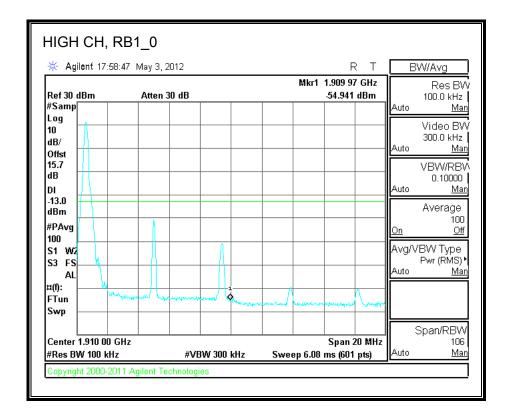
# Page 153 of 342

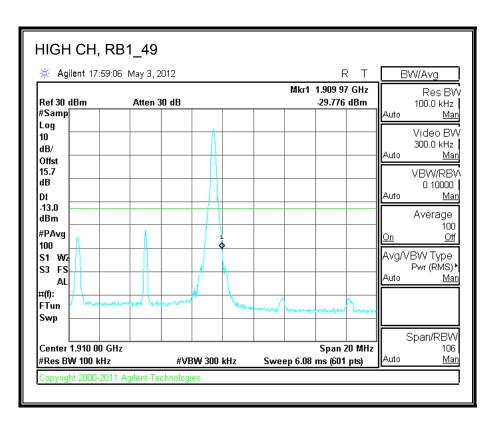
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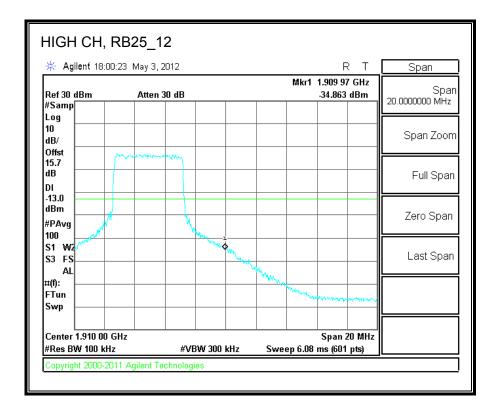


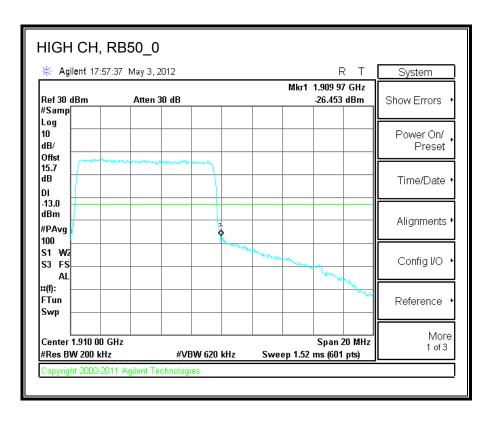
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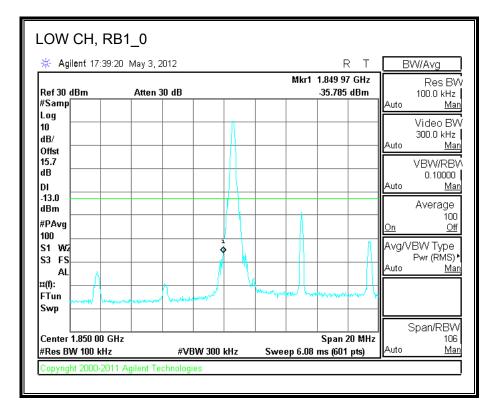
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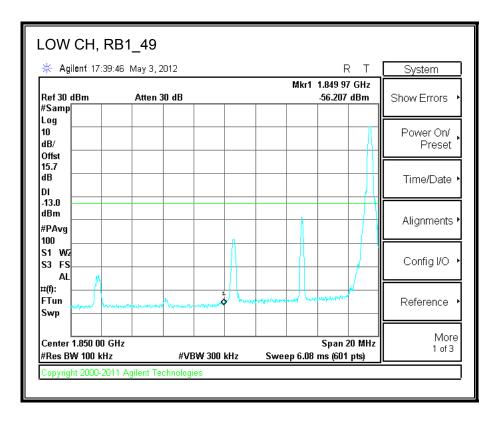




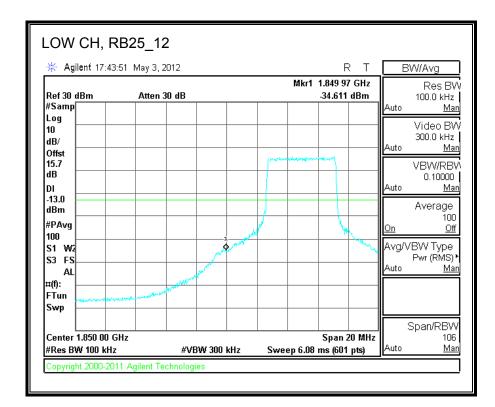
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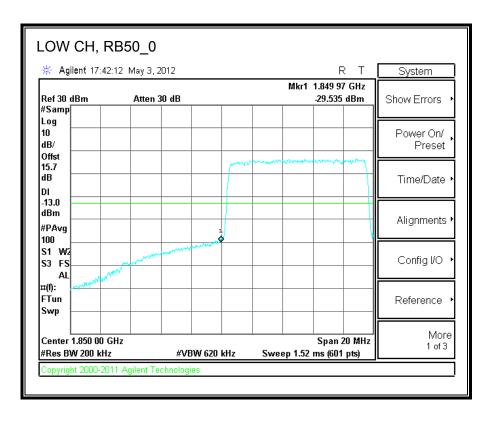
#### <u>16QAM</u>



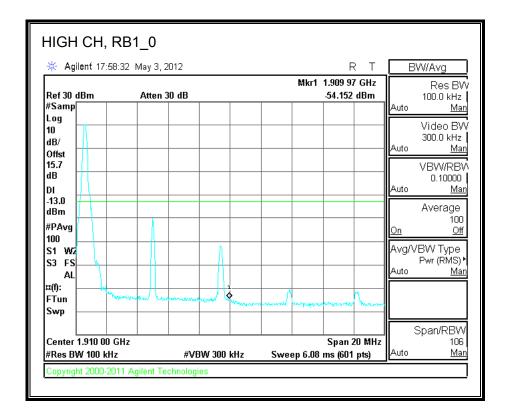


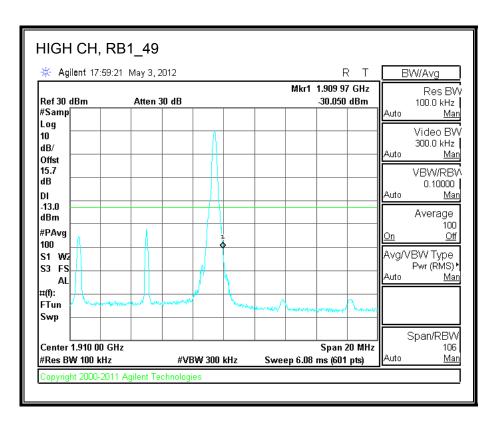
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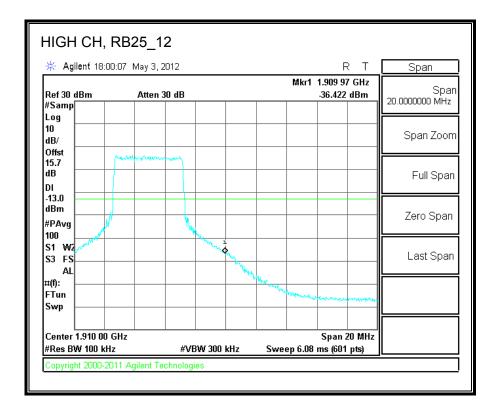


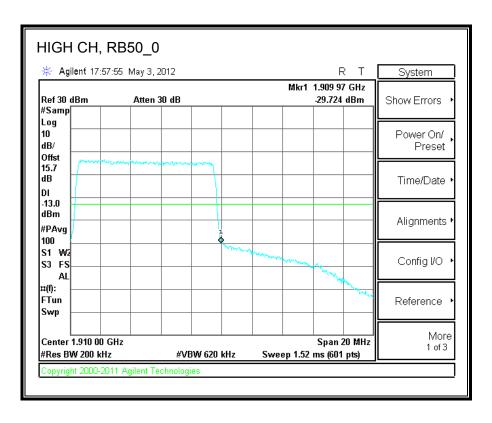
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# 8.3. OUT OF BAND EMISSIONS

# RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53

# LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

# TEST PROCEDURE

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

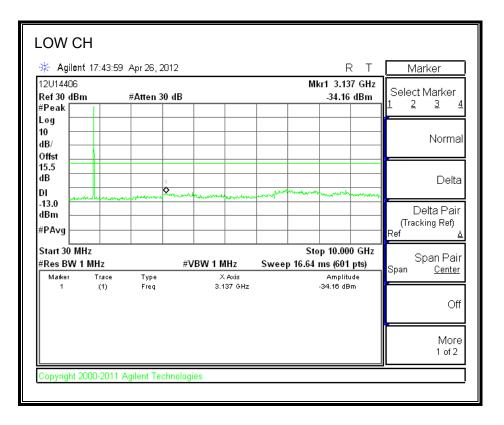
### MODES TESTED

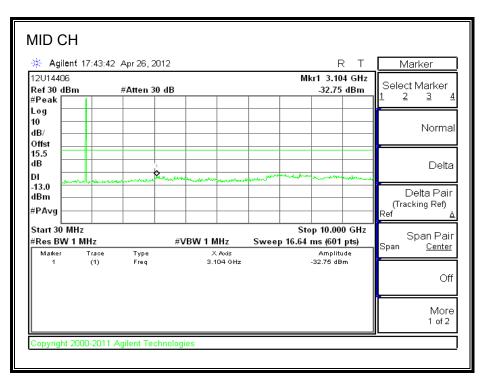
- CDMA 2000 1xRTT, RC1 SO2.
- CDMA 2000 EVDO REV. A
- LTE Band 2 and 4

### **RESULTS**

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#### 1xRTT 850 BAND





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FAX: (510) 661-0888

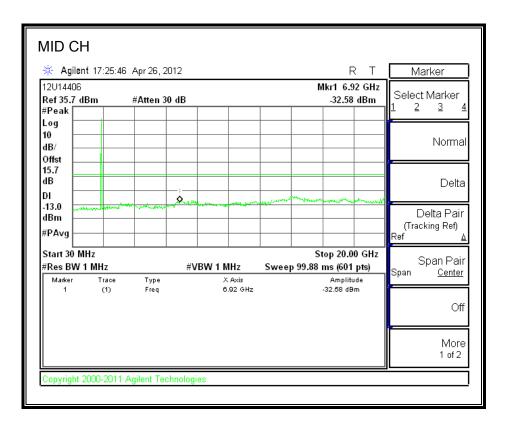
* Agilent 17:43:16 Apr 26, 2012							Marker			
12U14406 Ref 30 dBr	n	#Atten 30	dB			Mk	ur1 2.12 -34.93	24 GHz 5 dBm	Select Mar	
#Peak									1 <u>4</u> 4	
Log 10									Marker Tr	
dB/										асе 2
Offst										=
15.5									Read	lout
dB		1							Frequ	
-13.0	mound	- Parmar	man mander		inman	alinguter	a mare	theman		
-13.0 dBm									Marker T	able
#PAvg									On	anie 0
#FAVg									<u></u>	
Start 30 M							p 10.00			
#Res BW 1			#VBW 1		Swee	o 16.64 i			Marker Al	l Off
Marker 1	Trace (1)	Type Freg		X Axis .124 GHz			Amplite -34.93 dB			
	0	ried	2	124 082			-34.83 00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
										Mor
										2 of 2

Page 163 of 342 COMPLIANCE CERTIFICATION SERVICES (UL CCS) FORM NO: CCSUP4031B 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000

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### 1xRTT 1900 BAND

	nt 17:26:00	Apr 26, 201	2				F		Mar	ker
12U14406 Ref 35.7 d #Peak	Bm	#Atten 30	IB			N	lkr1 7.0 -32.00		Select N 1 2	Marker <u>3</u> 4
#Peak Log 10 — dB/ — Offst										Normal
15.7 dB DI			1 \$			New and the second	Almak, Marce	(marine and a		Delta
-13.0	and and a second and a									lta Pair ng Ref) ≜
Start 30 M #Res BW			#VBW 1	MHz	Swee	St 99.88	top 20.0 ms (601		Sp Span	an Pair <sub>Center</sub>
Marker 1	Trace (1)	Type Freq		X Axis 7.09 GHz			Amplitu -32.00 dB			Off
										More 1 of 2

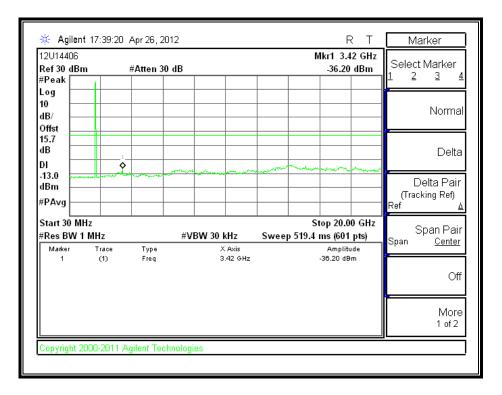


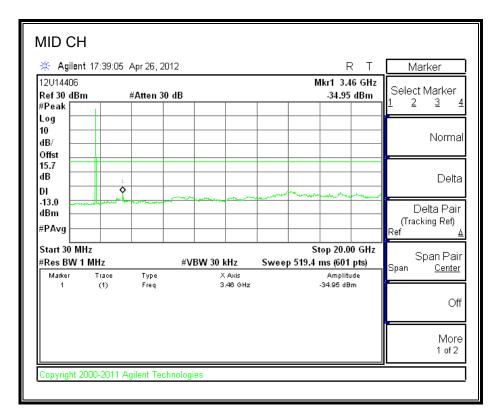
Page 164 of 342

Agiler 12U14406	n 1r.20.2r	Apr 26, 20	12			R Akr1 3.8		Mark	.ei
Ref 35.7 d	Bm	#Atten 30						Select Marker	
#Peak								1 2	3 4
Log   10   dB/									Norma
Offst 15.7 dB									Delta
DI -13.0	have advert	•	man and	all marked and a second	page and man	un	~~~~	Delt	ta Pair
#PAvg								(Trackin Ref	
Start 30 M #Res BW			#VBW 1 N	IHz Sw	S eep 99.88	top 20.00 ms (601		Spa Span	an Pair Center
Marker 1	Trace (1)	Type Freq		Axis .82 GHz		Amplitu -32.10 dBi		Opan	<u></u>
	~~		-						Off
									More 1 of 2

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#### 1xRTT 1700 BAND





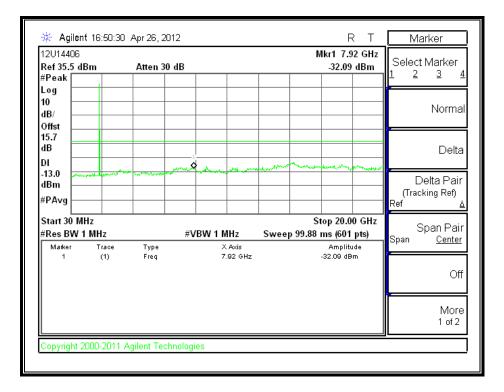
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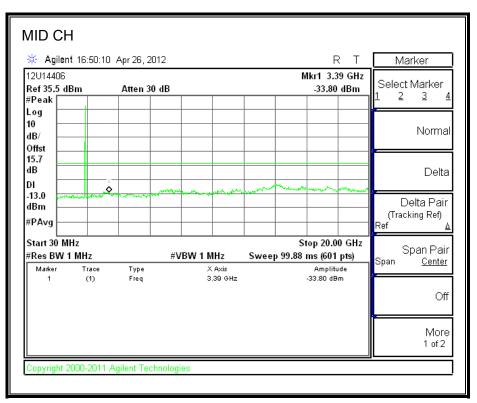
		Apr 26, 20					F		Marker	
12U14406 Ref 30 dBn	n	#Atten 30 dB				I	4.59 Wkr1		Select Marker	
#Peak									1 4 9	
Log 10										
dB/									Norm	
Offst										
15.7										
dB	1			_					Delt	
DI -13.0	- I - X				maran	mane	mar	m	-	
dBm —				_					Delta Pai	
#PAvg —				_					(Tracking Ref) Ref	
Start 30 Mł #Res BW 1			#VBW 30	) kHz	Swee		top 20.0 ms (601		Span Pa	
Marker	Trace	Туре		X Axis	0.000		Amplitu		Span <u>Cente</u>	
1	(1)	Freq		3.49 GHz			-34.59 dB	'm		
									0	
									Mor 1 of 2	

COMPLIANCE CERTIFICATION SERVICES (UL CCS) FORM NO: CCSUP4031B 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888 This report shall not be reproduced except in full, without the written approval of UL.CCS.

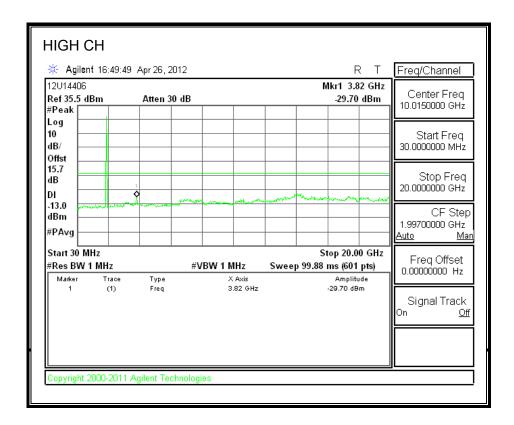
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# EVDO REV A.1900 BAND



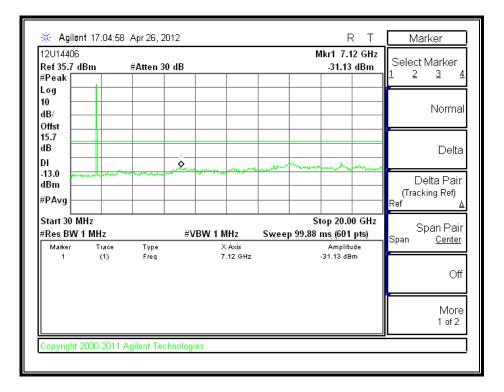


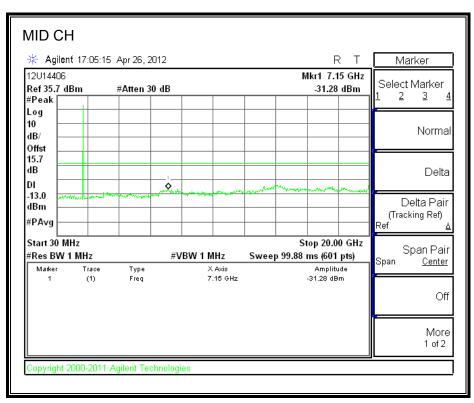
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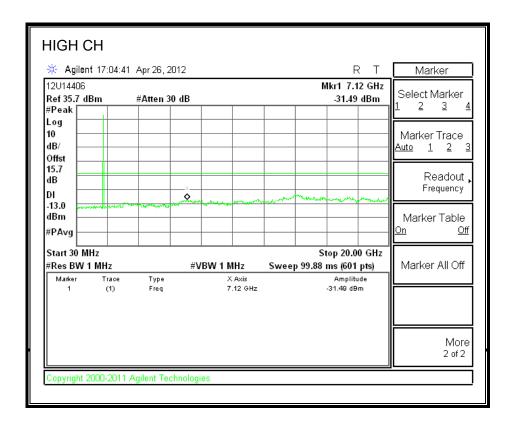
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# EVDO REV A.1700 BAND





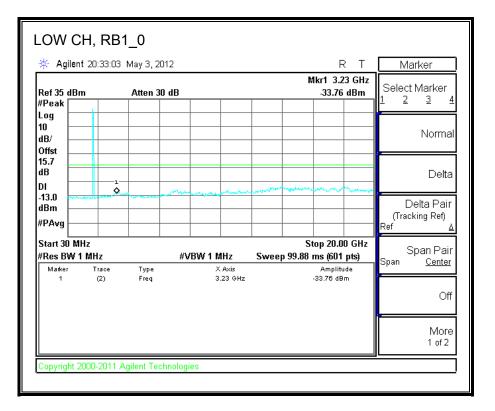
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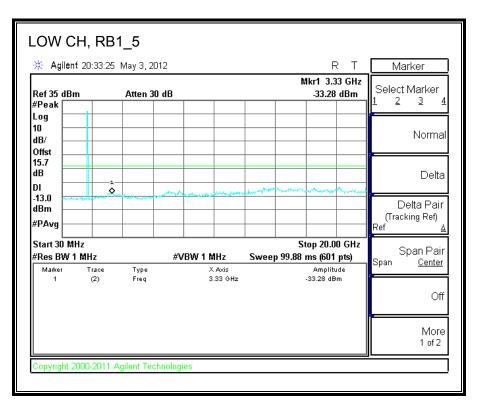


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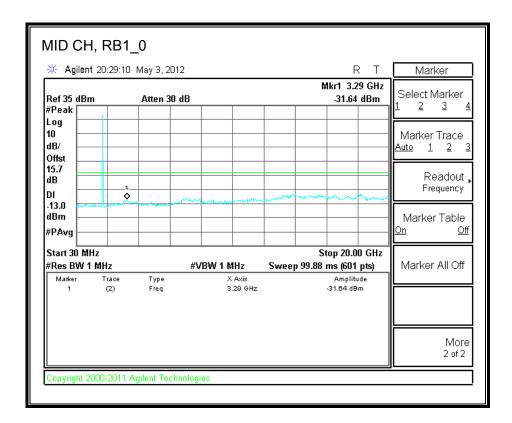
# LTE, Band 4 (1.4MHz BAND WIDTH )

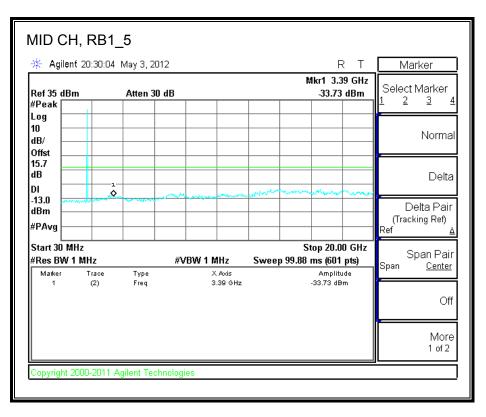
### <u>QPSK</u>



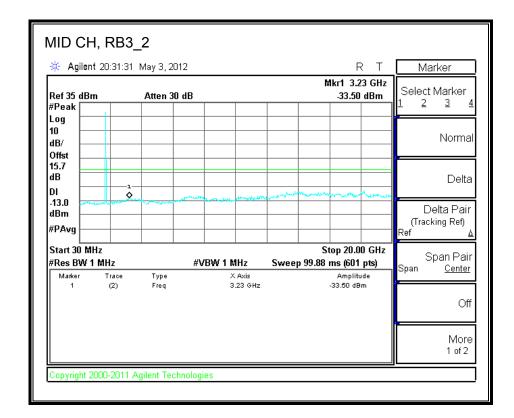


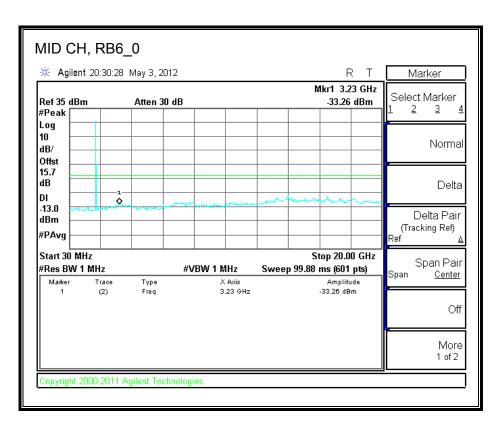
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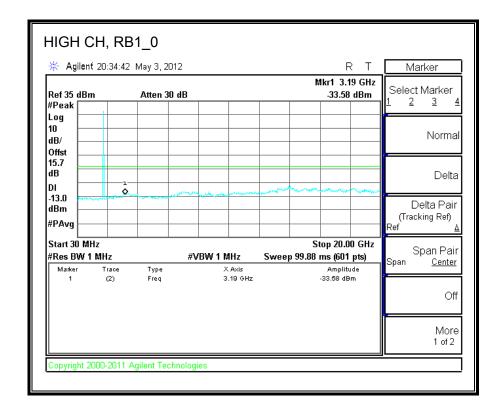


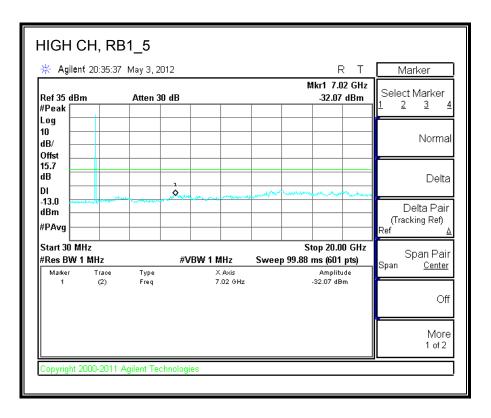
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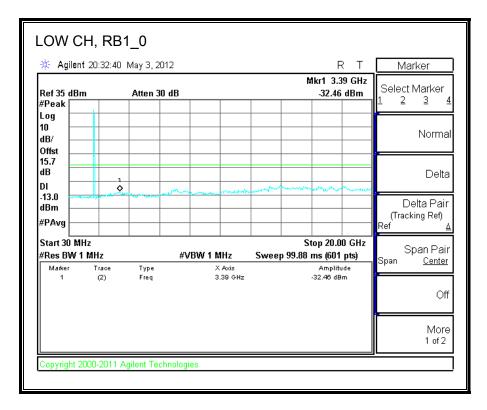
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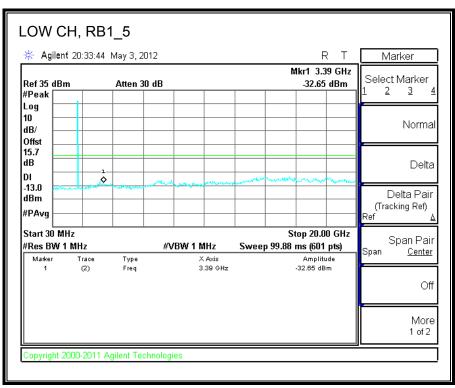




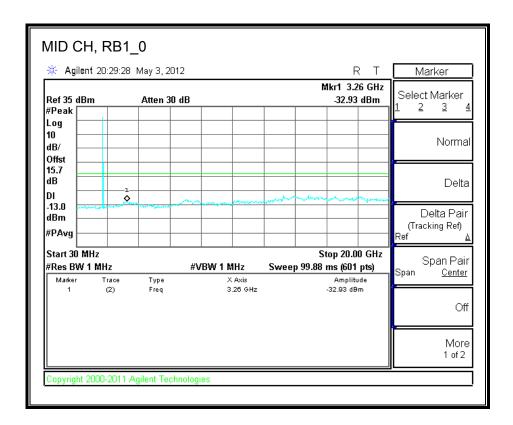
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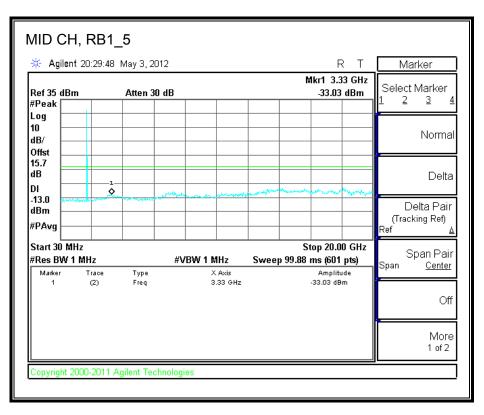
#### <u>16QAM</u>



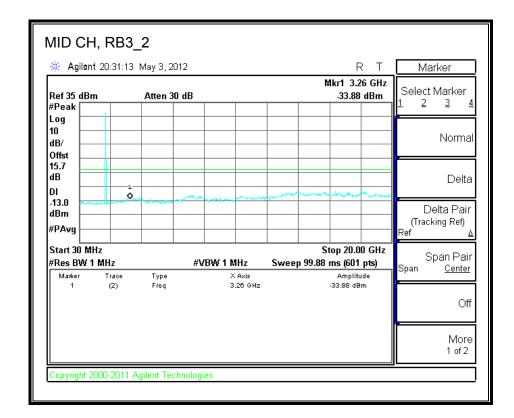


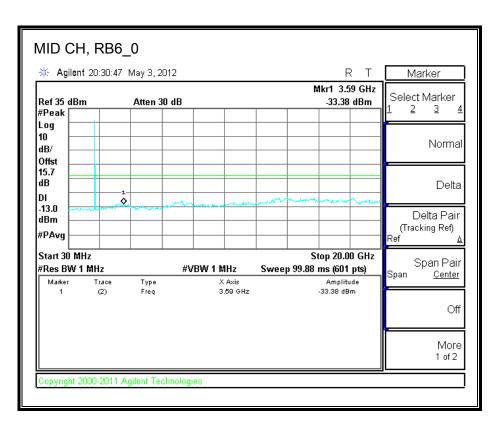
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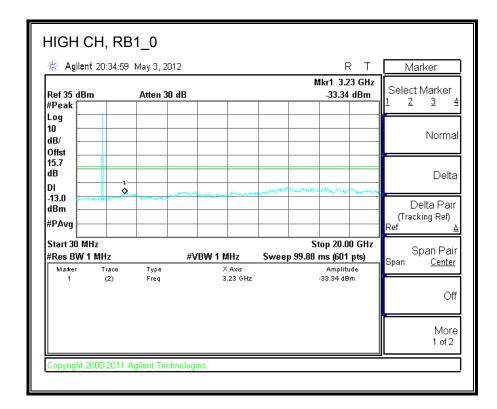


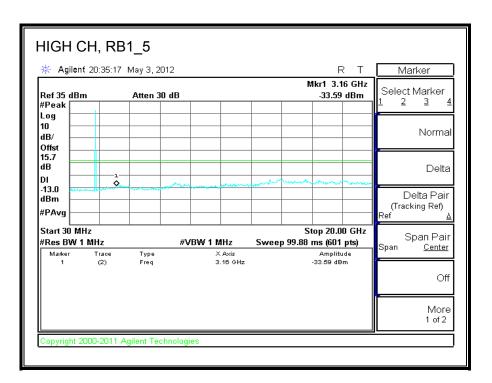
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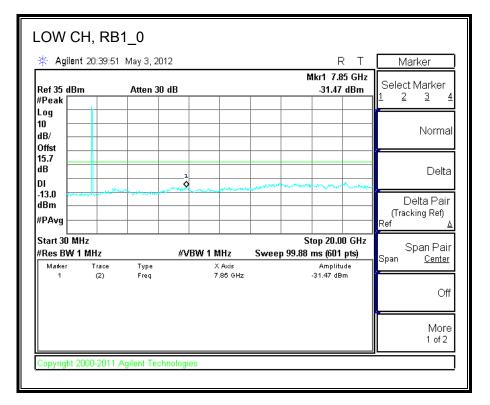


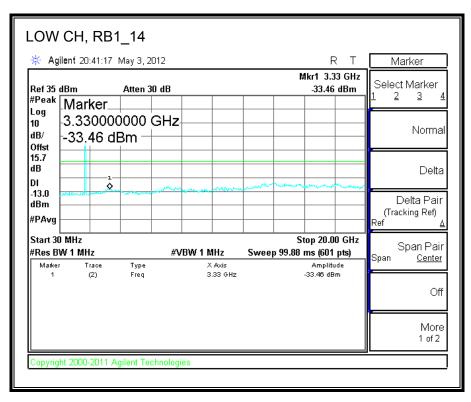


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### LTE, Band 4 (3.0MHz BAND WIDTH )

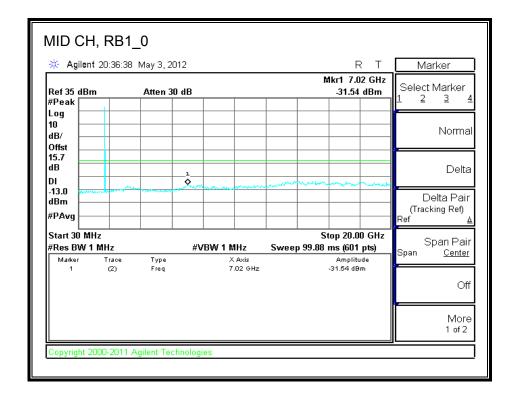
### <u>QPSK</u>

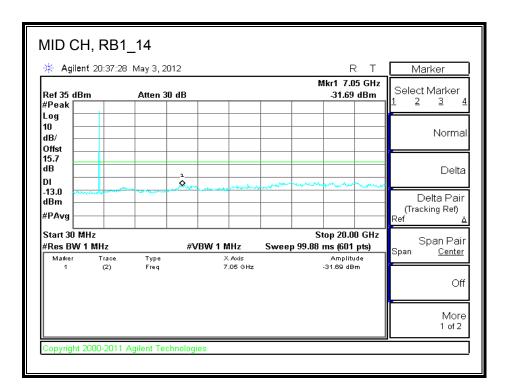




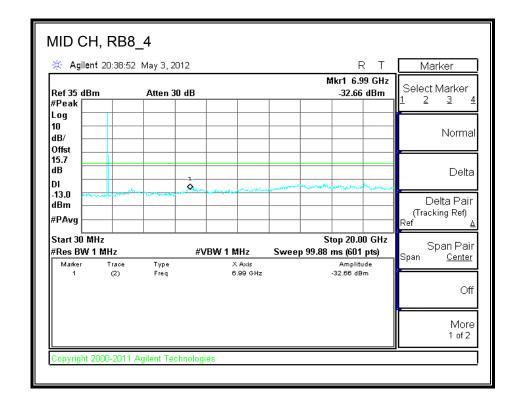
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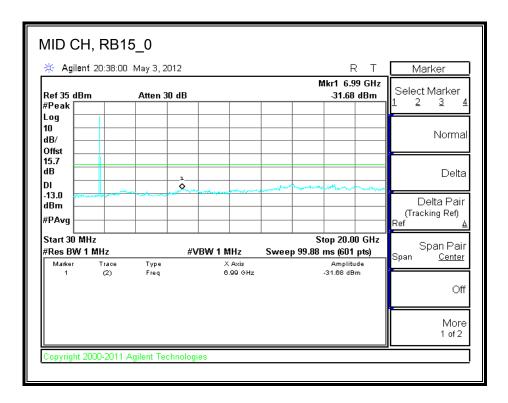
COMPLIANCE CERTIFICATION SERVICES (UL CCS)FORM NO: CCSUP4031B47173 BENICIA STREET, FREMONT, CA 94538, USATEL: (510) 771-1000FAX: (510) 661-0888This report shall not be reproduced except in full, without the written approval of UL.CCS.



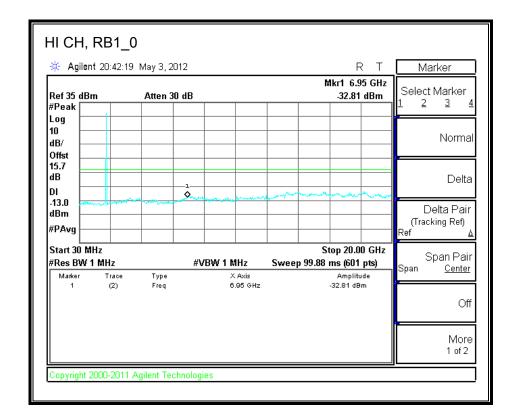


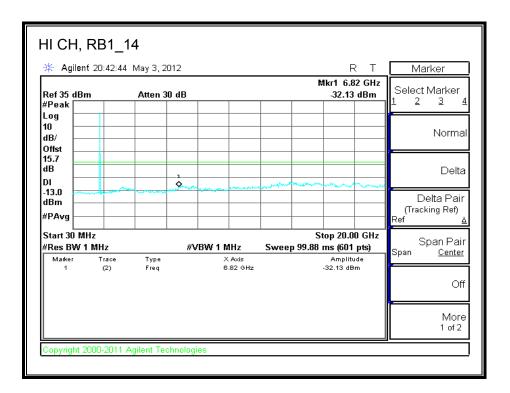
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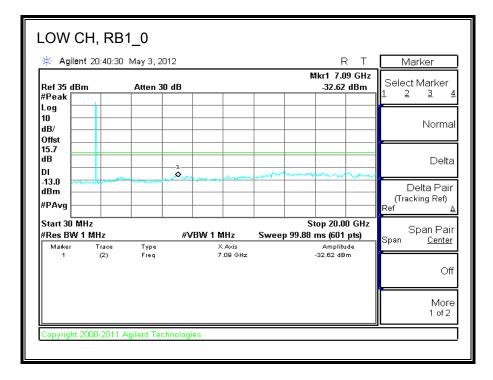
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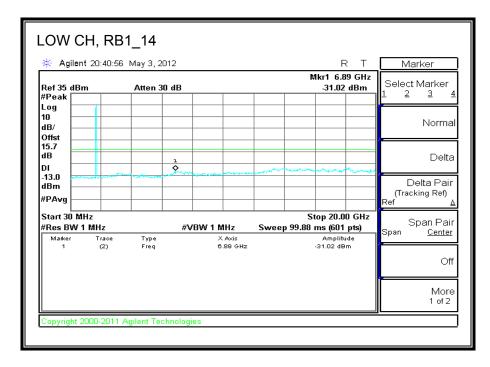




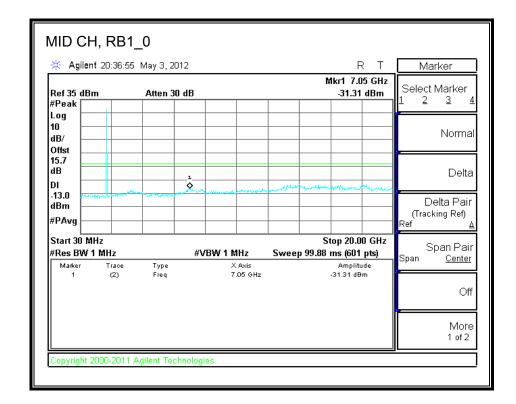
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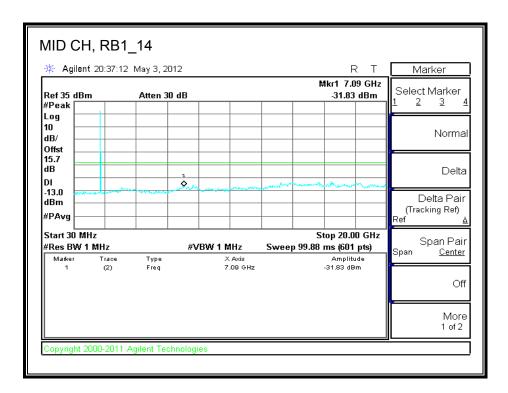
#### 16QAM



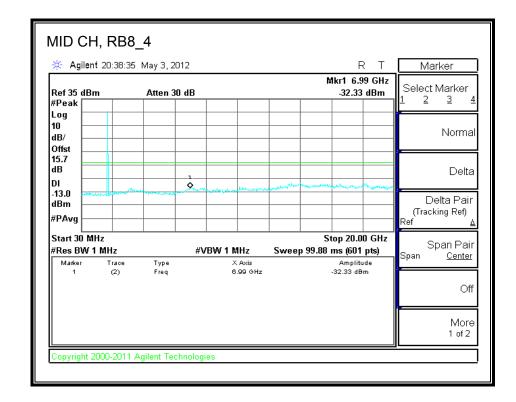


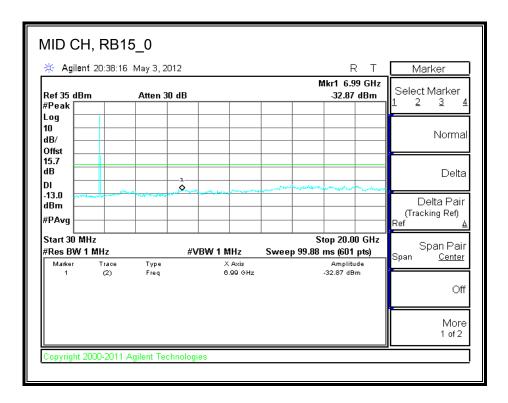
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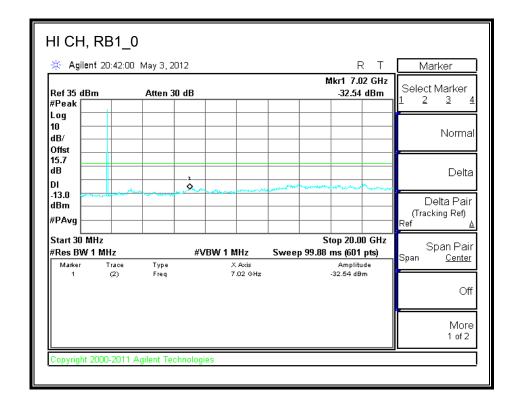


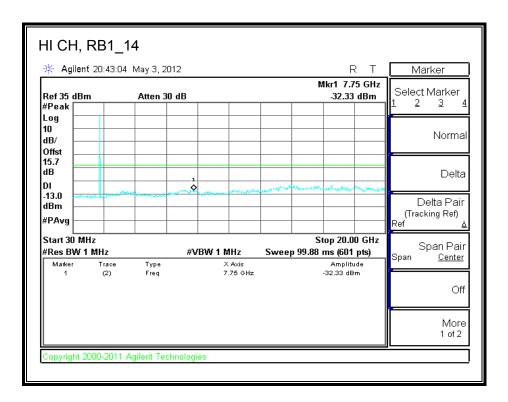
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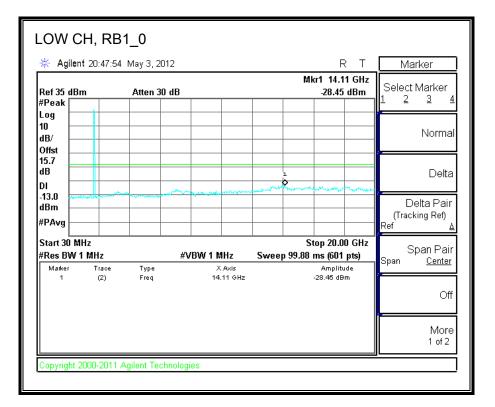


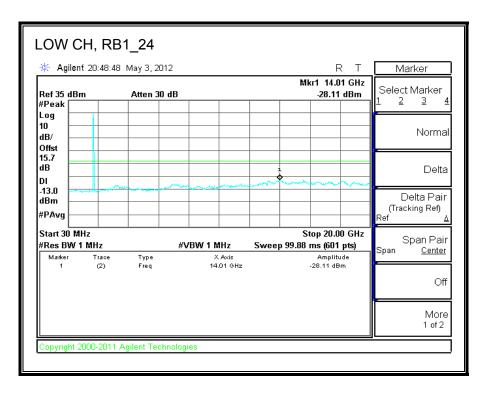


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# LTE, Band 4 (5.0MHz BAND WIDTH )

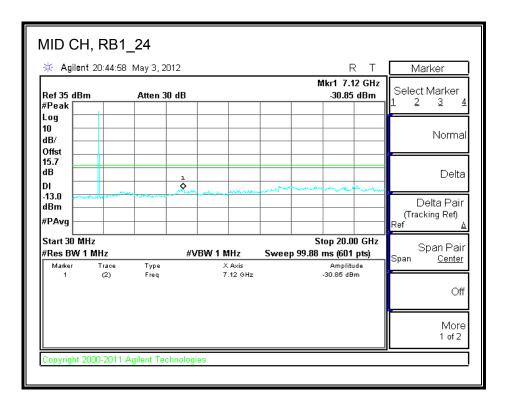
## <u>QPSK</u>



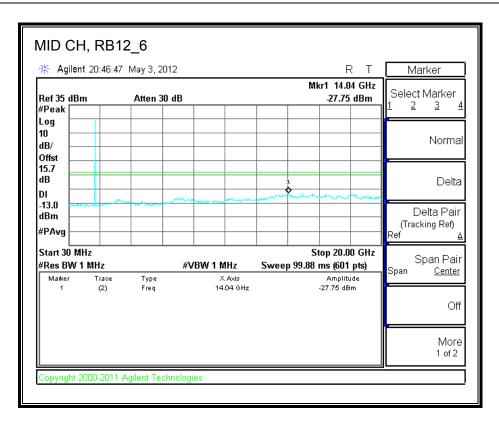


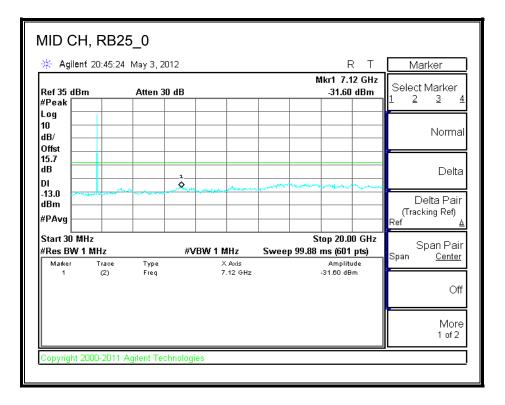
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🔆 Agilent 2	0:44:03	May 3, 2	012						<del>к т</del>	<u> </u>	arker
Ref 35 dBm										Selec 1 2	t Marker
#Peak Log										<u> </u>	2 :
10											Norma
Offst											
15.7 dB											Delta
DI	. h		2 •		annen	mono	man	- Margan and	and the second		
-13.0 dBm	Para ing	100 Mar 100									Delta Pair
#PAvg										(Trai Ref	cking Ref) 4
Start 30 MHz #Res BW 1 M	H7		#\/	'BW 1 N	447	Swoo	St p 99.88 i	top 20.0 ms <i>(</i> 601			Span Pair
	Trace (2)	Type Freq	H V	×	(Axis .15 GHz	34466		Ampliti -32.16 dB	ude	Span	<u>Center</u>
	(2)	rieq		,	.15 0H2			-32.10 08	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Off
											More 1 of 2



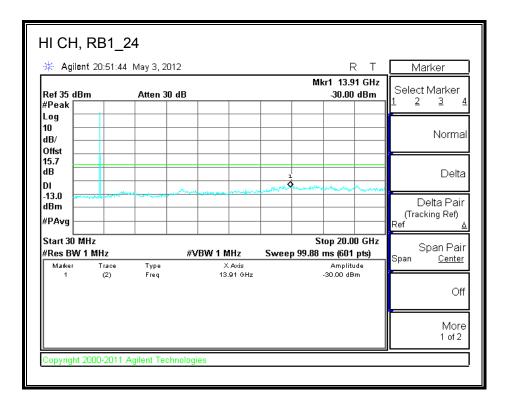
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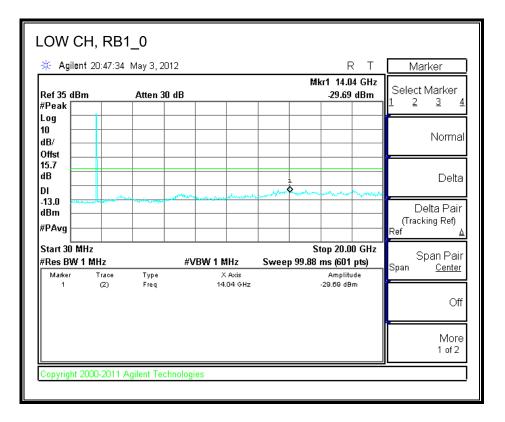
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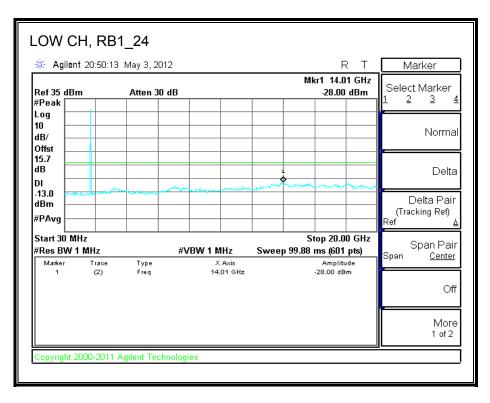
Ref 35 dBm #Peak		Atten 30	dB			13.91 GHz -29.27 dBm	Select Marker	
Log 10 dB/ Offst							Norma	
15.7 dB DI					1 9		Delta	
-13.0							Delta Pair (Tracking Ref) Ref <u>/</u>	
Start 30 MH #Res BW 1 I	_		#VBW 1 N	AHz Swo	Sto eep 99.88 m	p 20.00 GHz s (601 pts)	Span Pair Span <u>Center</u>	
Marker 1	Trace (2)	Type Freq		( Axis .91 GHz		Amplitude 9.27 dBm	Off	
							More 1 of 2	



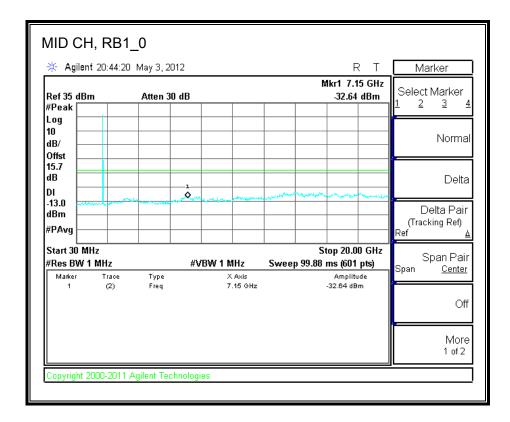
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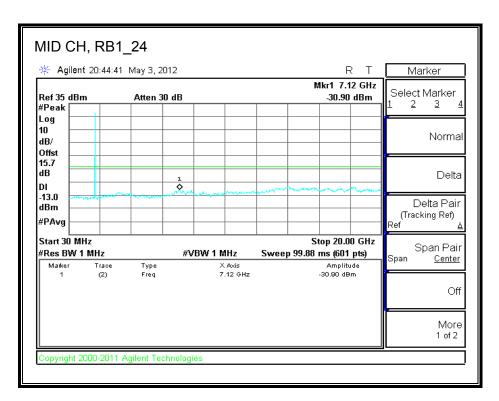
#### <u>16QAM</u>



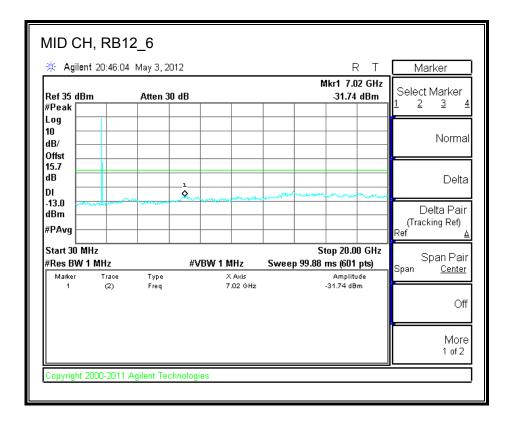


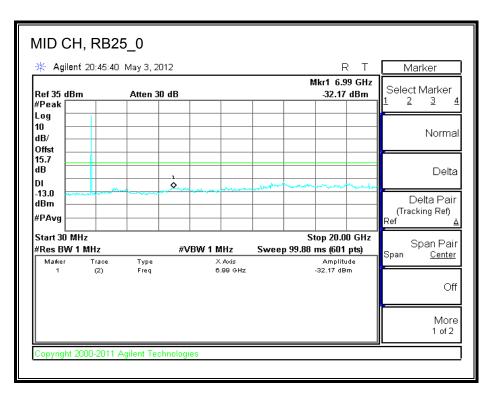
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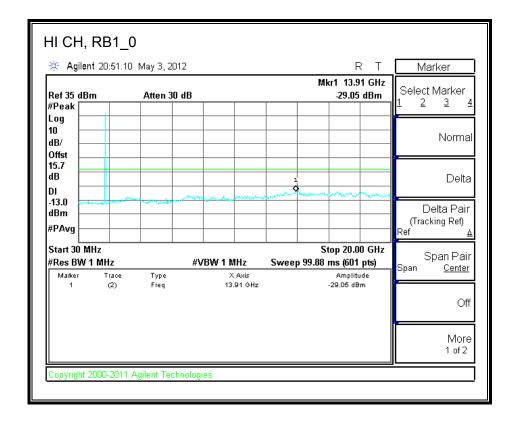


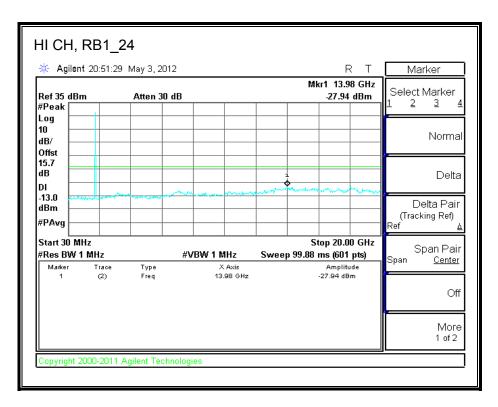
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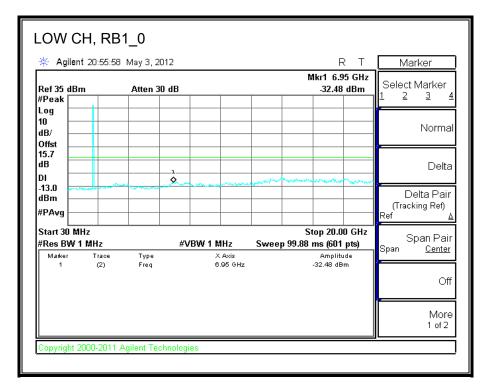


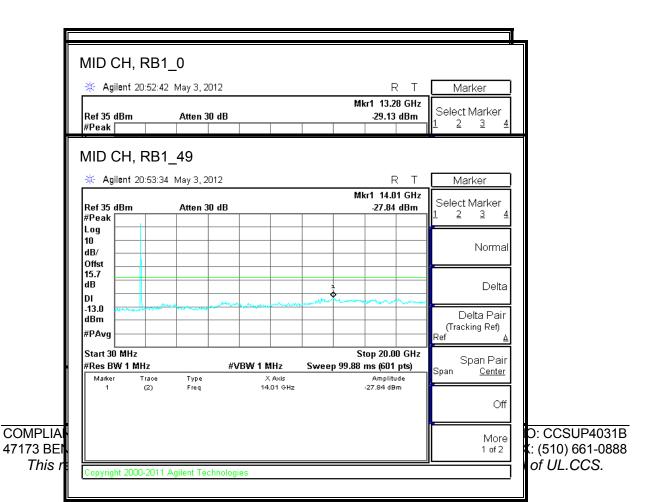


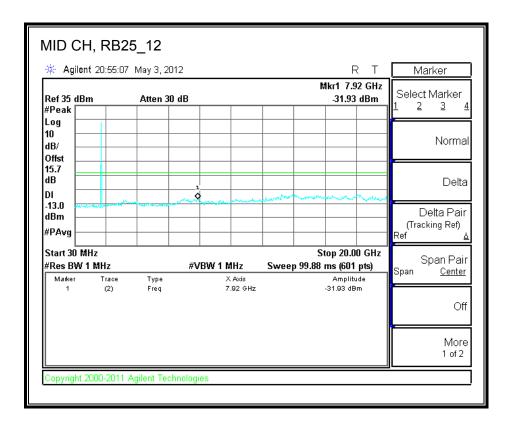
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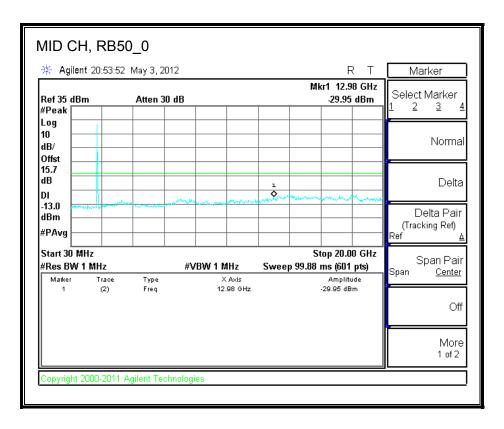
# LTE, Band 4 (10.0MHz BAND WIDTH )

## <u>QPSK</u>



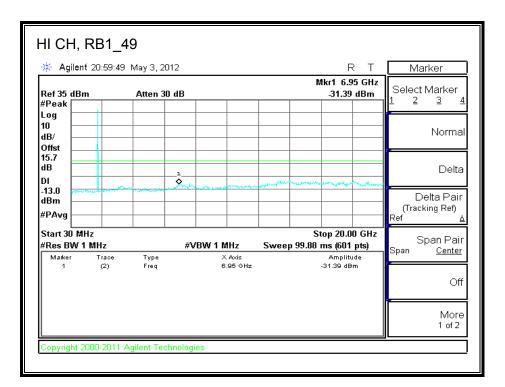






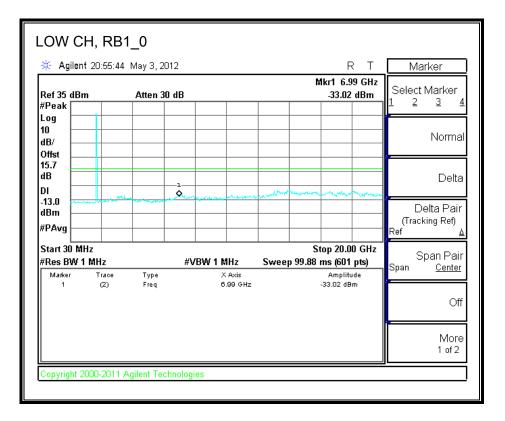
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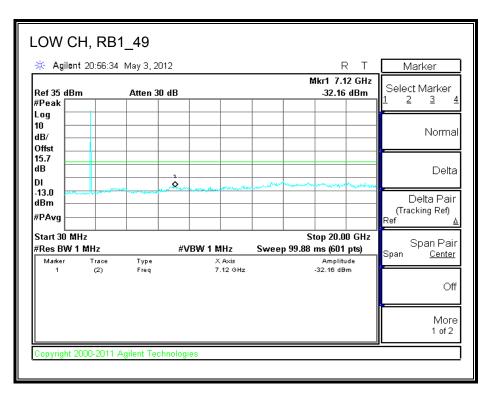
🔆 Agiler	nt 20:58:53								<u>२</u> т	Marker	
Ref 35 dB	m	Atten 30 dB							39 GHz IdBm	Select Marker	
#Peak										1 2 3	
Log											
10										Norma	
dB/ — Offst —											
15.7											
dB										Delta	
ы ⊢			1					- day	<b>1111111111111</b>	Doib	
-13.0	- new low may man		- Marine	- Artest arth	weter of the		(		California (	Dalta Dai	
dBm										Delta Pai (Tracking Ref)	
#PAvg —										Ref	
Start 30 M											
Start 30 M #Res BW			<b>417D</b> 1	N 1 MHz	<b>c</b> .			op 20.0 ms (601		Span Pai	
Marker	Trace	Type	#VD			weep	99.00	Ampliti		Span <u>Cente</u>	
1	(2)	Freq		6.89				-32.00 dB		-	
										01	
										UI UI	
										Mor	
									I	1 of 2	



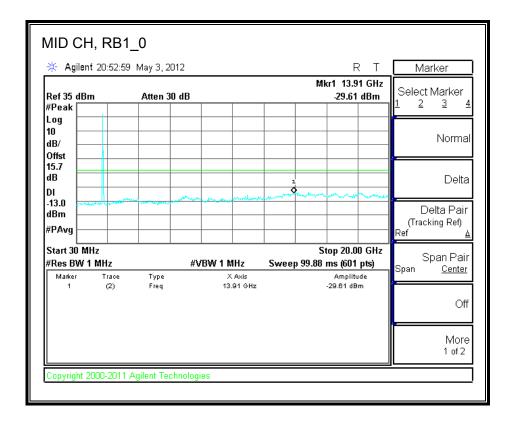
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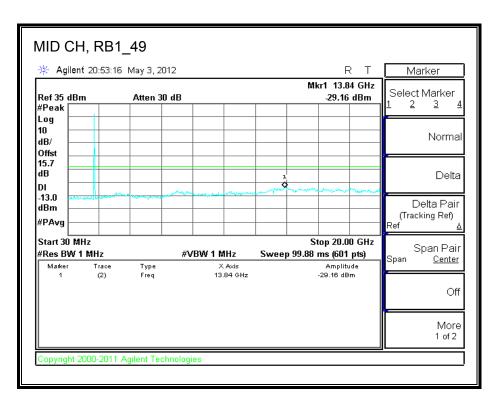
#### <u>16QAM</u>



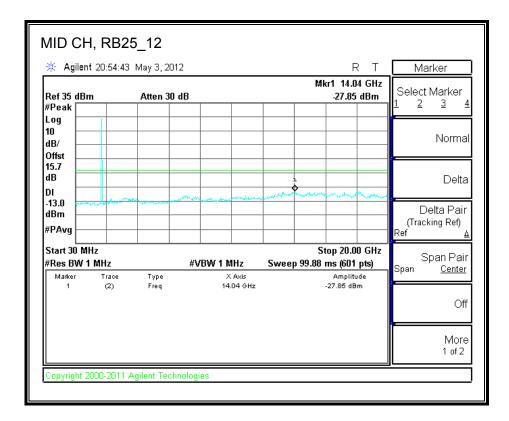


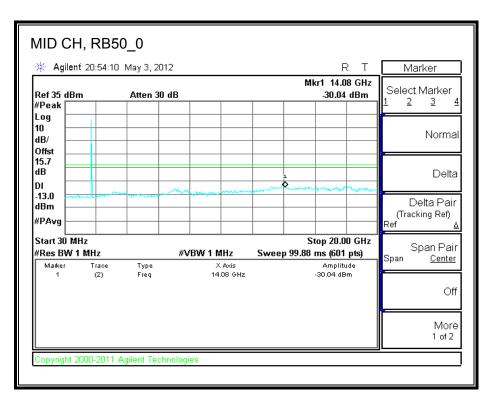
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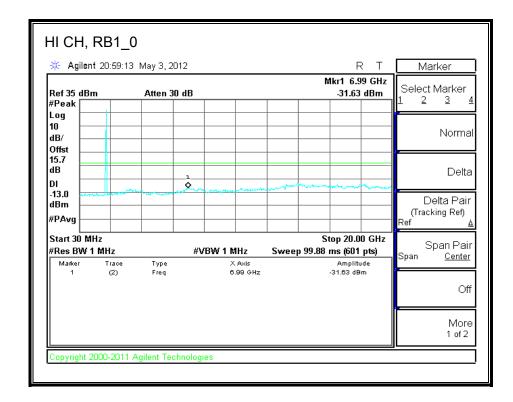


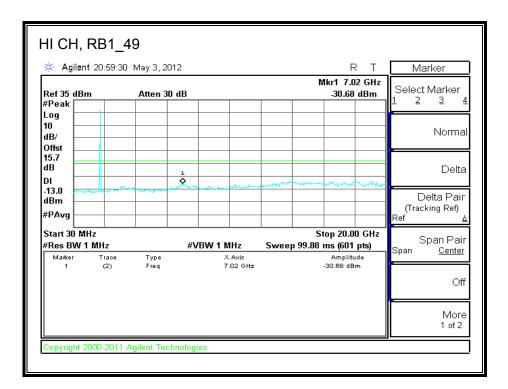
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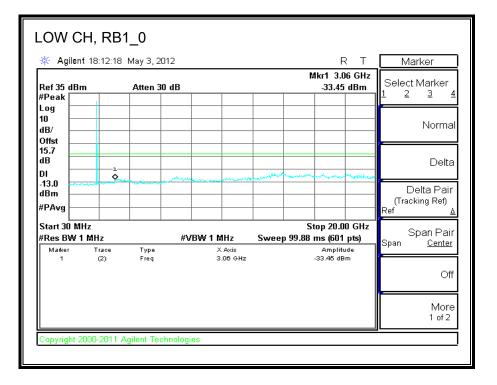


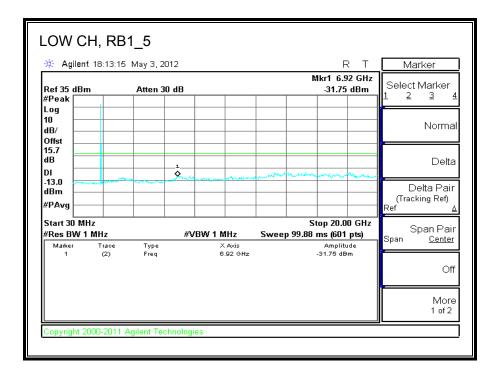


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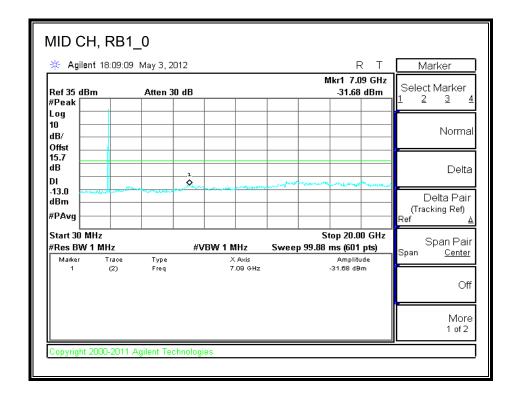
### LTE, Band 2 (1.4MHz BAND WIDTH)

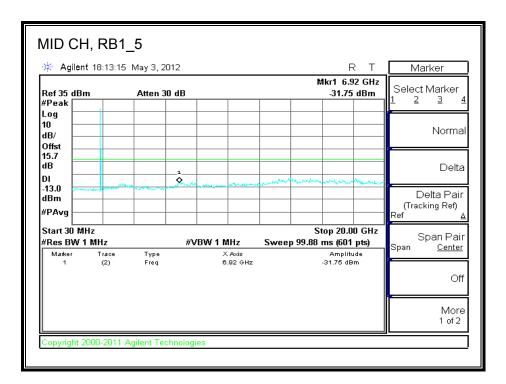
### <u>QPSK</u>





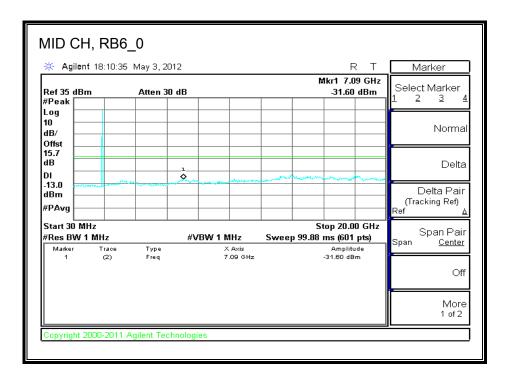
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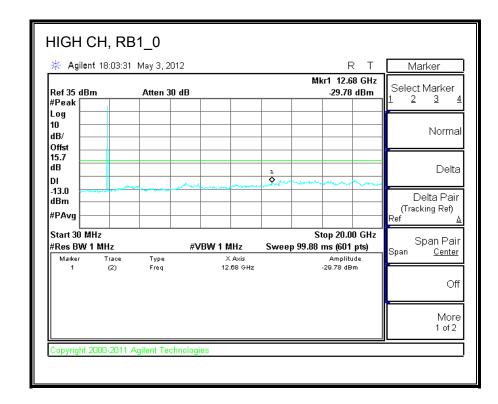


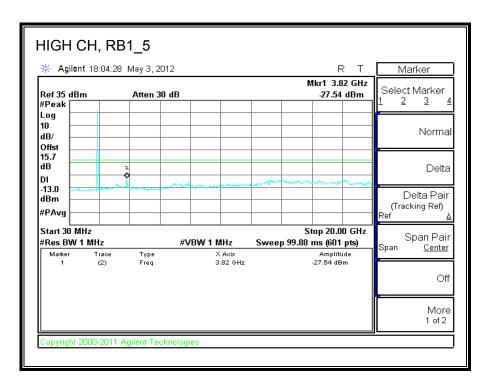
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						ľu	/kr1 3.2		Select Marker
Ref 35 dBr #Peak	n	Atten 30	dB			1	3 dBm	1 2 3	
		++							
10 -		+							N
dB/ —									Norm
Offst					-				
15.7 dB		++					<u> </u>		
	ıı_								Delt
DI -13.0	<u> </u>		ser mark	manun	montral	-	and a start of the	moder	
dBm	turk de la								Delta Pa
#PAvg —									(Tracking Ref)
									Ref
Start 30 M							top 20.0		Span Pa
#Res BW 1			#VBW	1 MHz	Swee	p 99.88			Span <u>Cente</u>
Marker 1	Trace (2)	Type Freq		X Axis 3.29 GHz			Amplit -32.13 dE		
	~~/			0.20 0			-02.10		
									0
									Mo
1									1 of 2



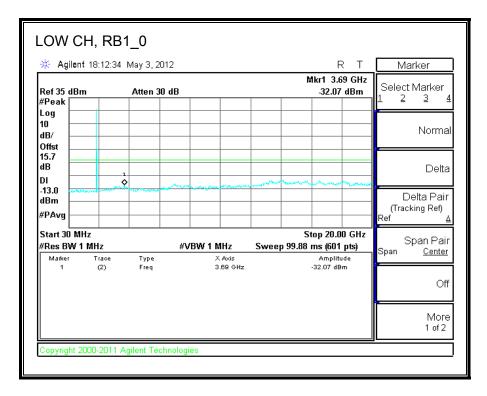
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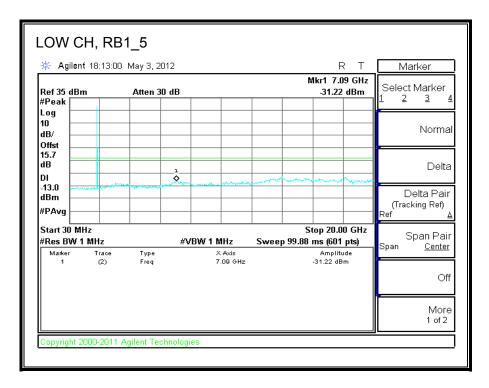




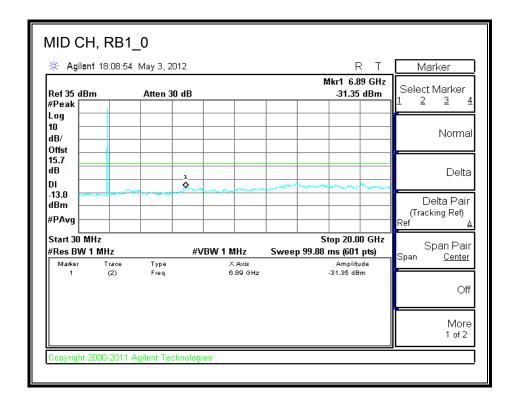
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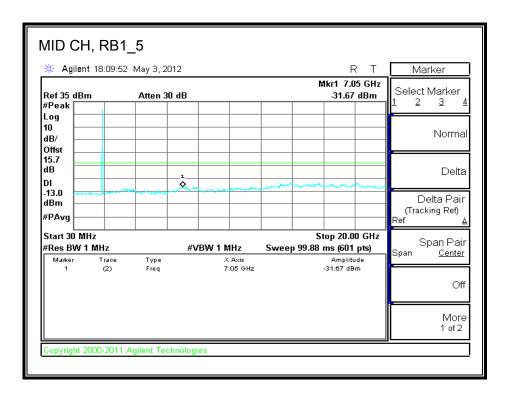
#### <u>16QAM</u>



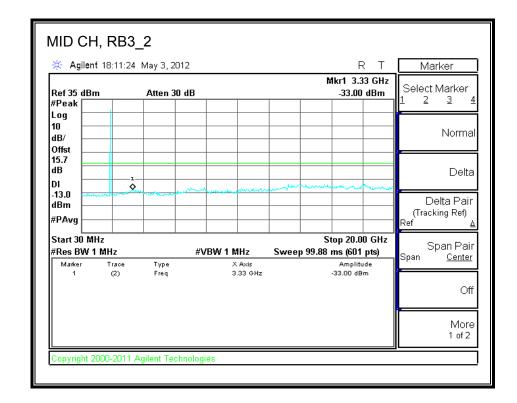


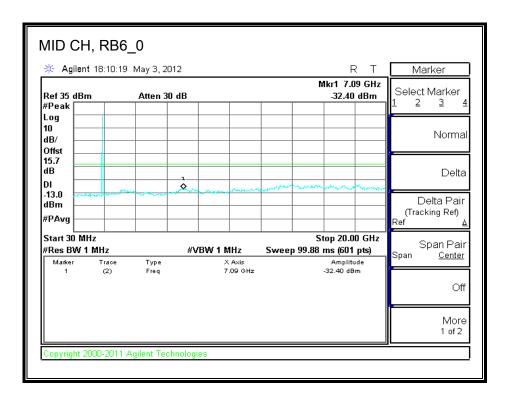
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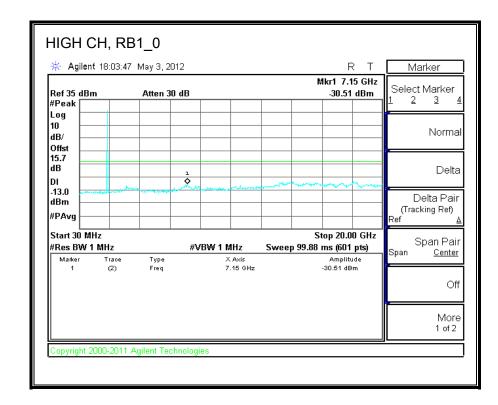


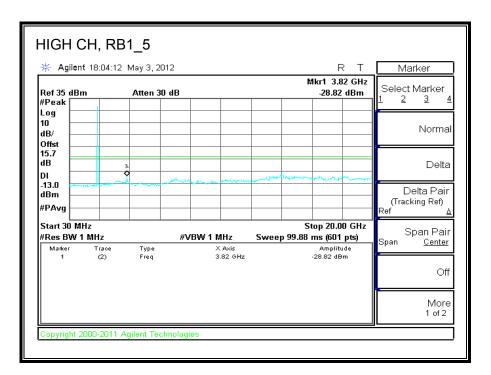
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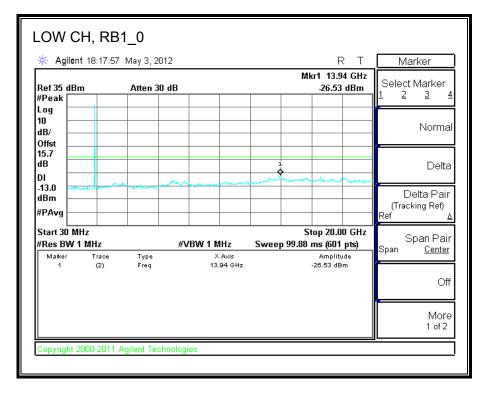


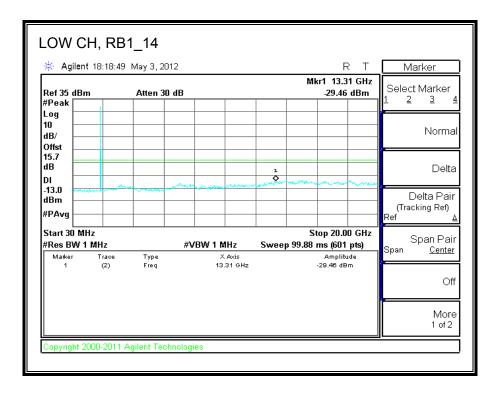


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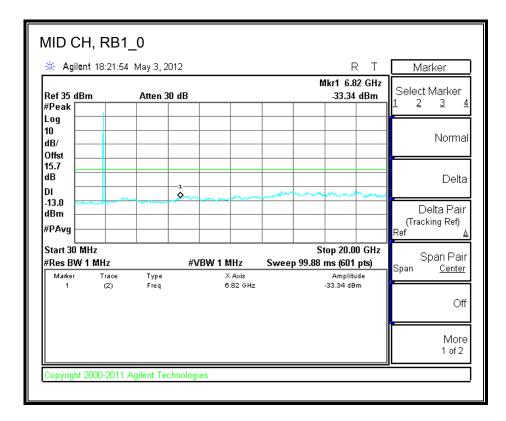
# LTE, Band 2 (3.0MHz BAND WIDTH )

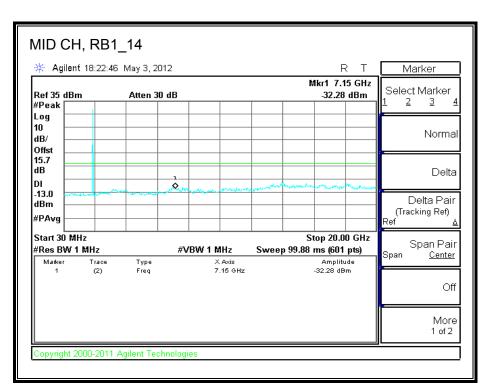
### <u>QPSK</u>



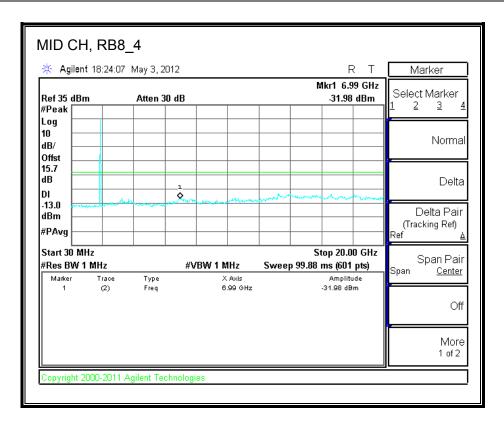


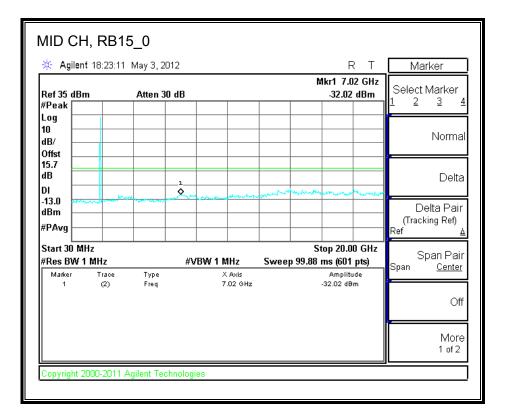
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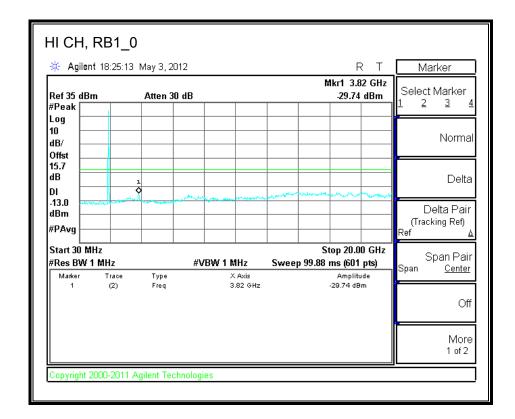


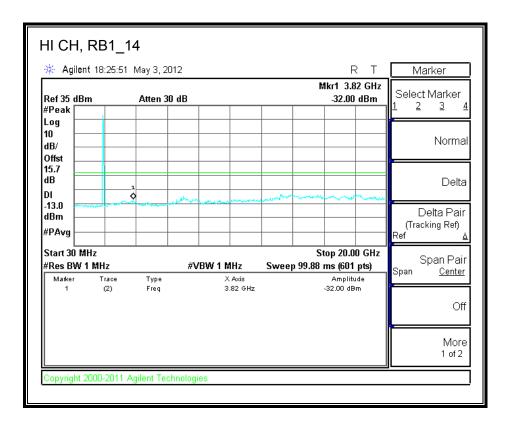
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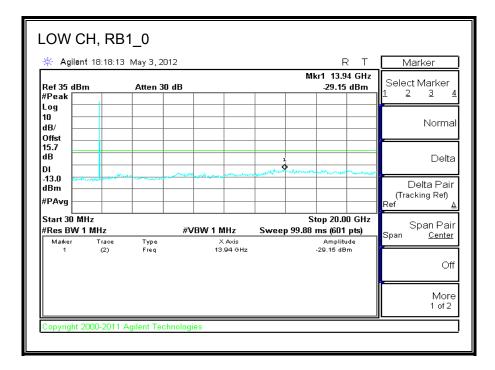
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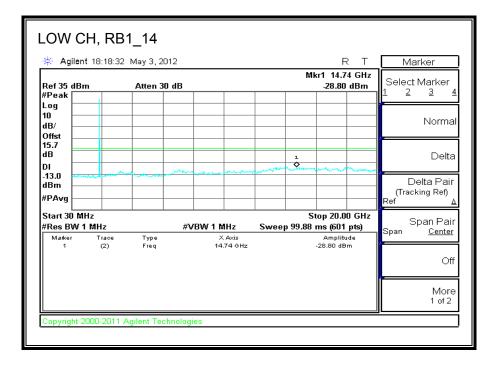




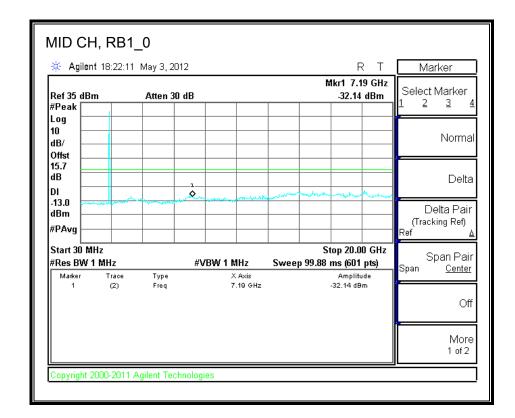
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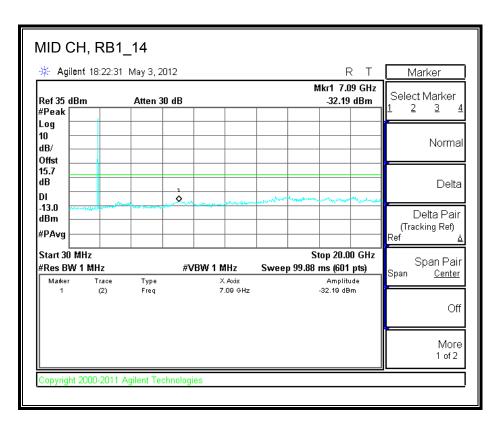
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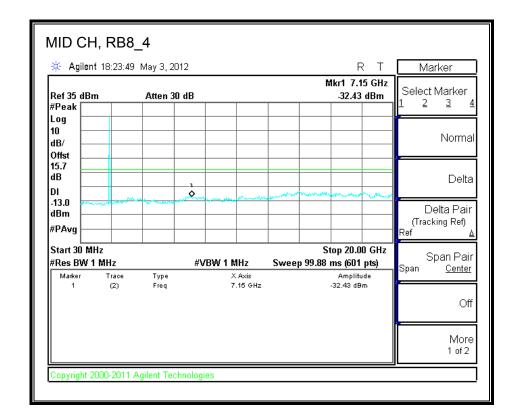


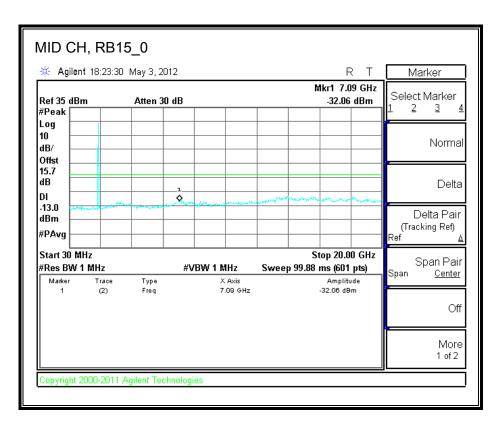
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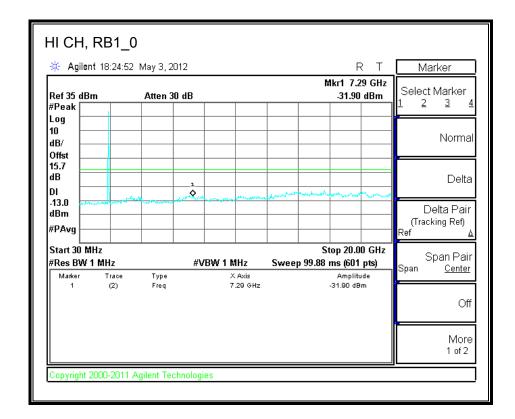


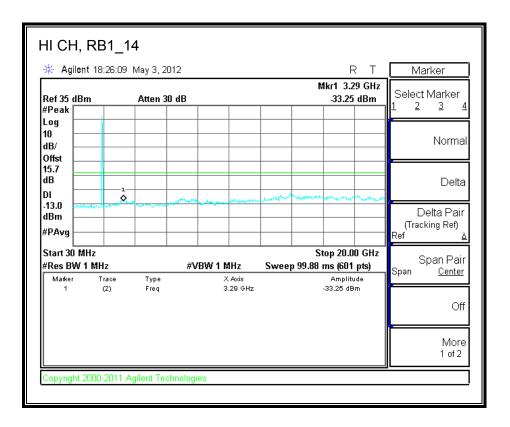
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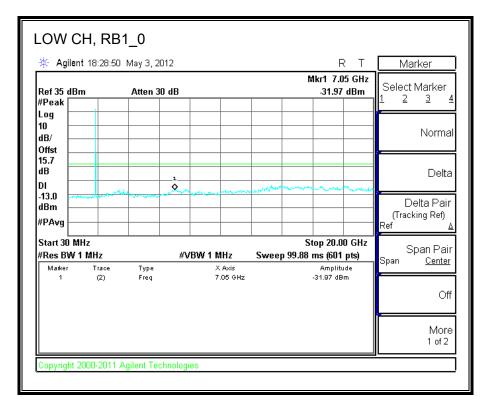


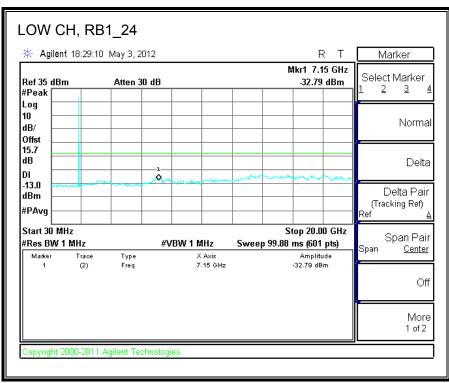


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# LTE, Band 2 (5.0MHz BAND WIDTH )

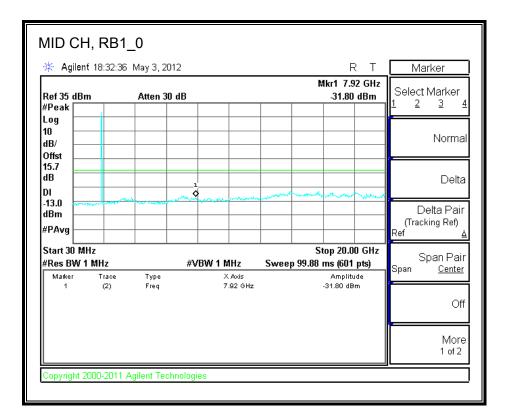
### <u>QPSK</u>

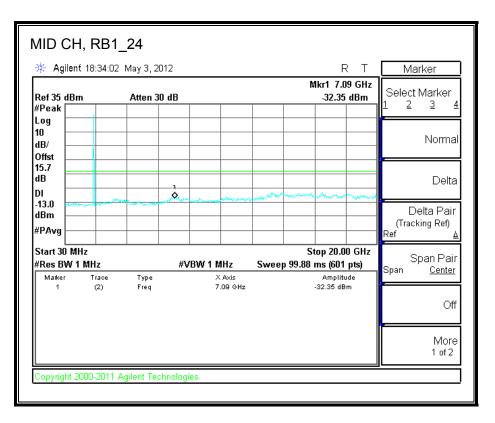




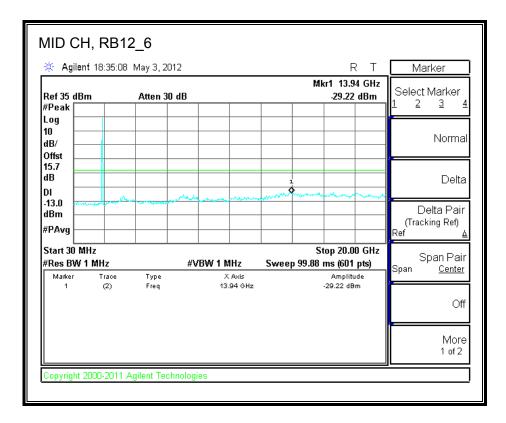
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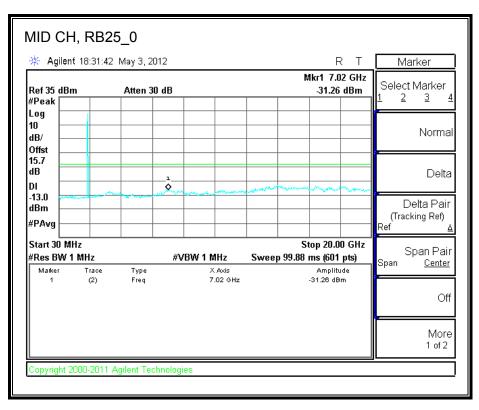
COMPLIANCE CERTIFICATION SERVICES (UL CCS)FORM NO: CCSUP4031B47173 BENICIA STREET, FREMONT, CA 94538, USATEL: (510) 771-1000FAX: (510) 661-0888This report shall not be reproduced except in full, without the written approval of UL.CCS.



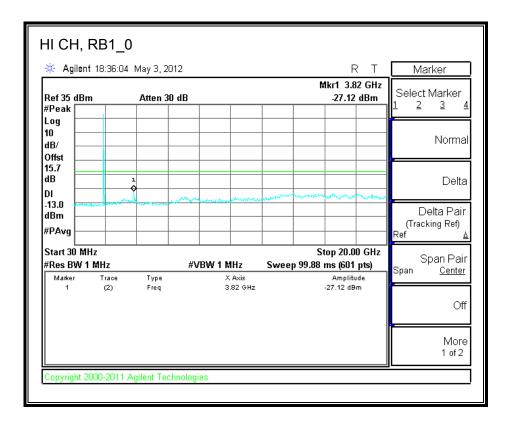


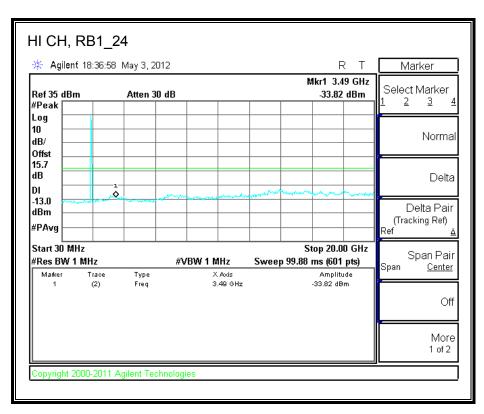
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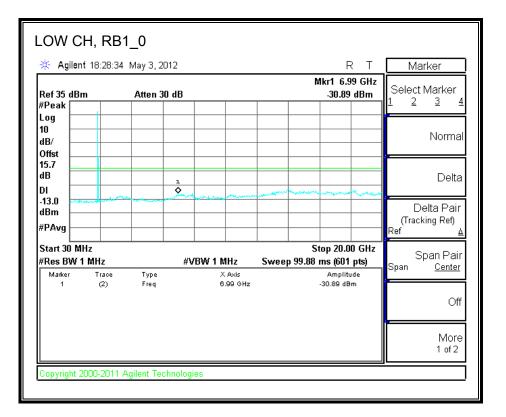
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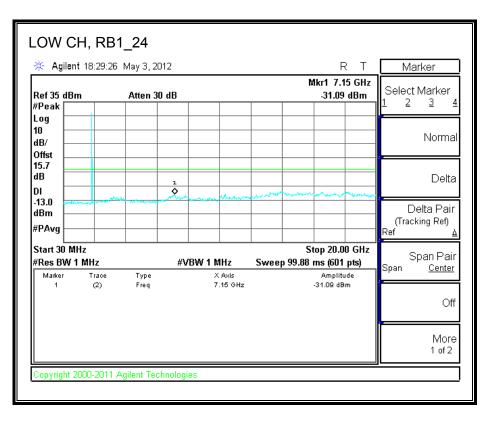




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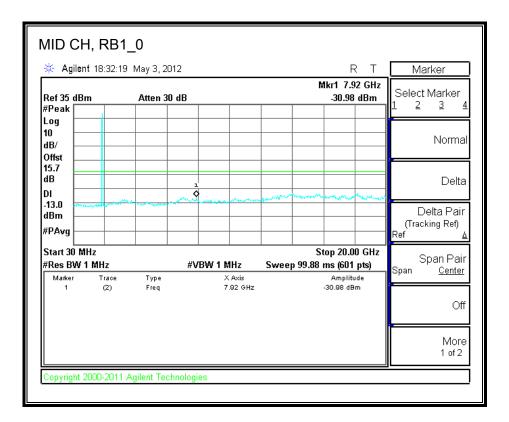
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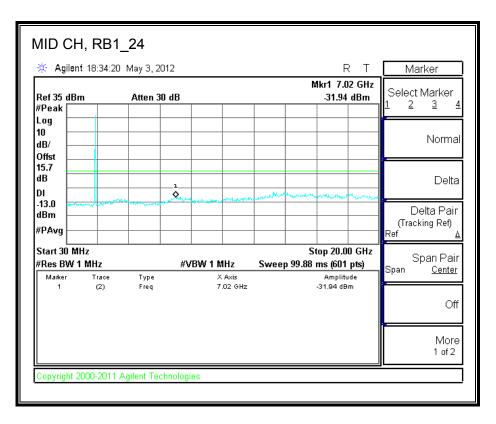




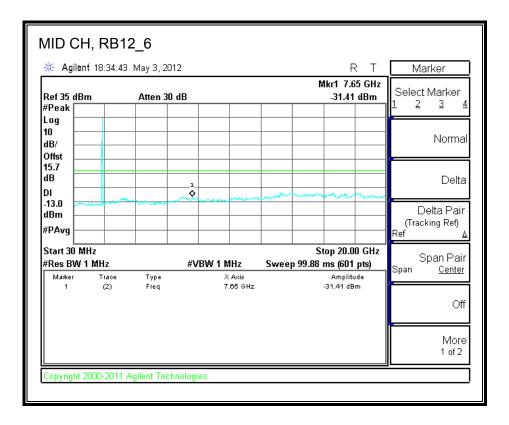
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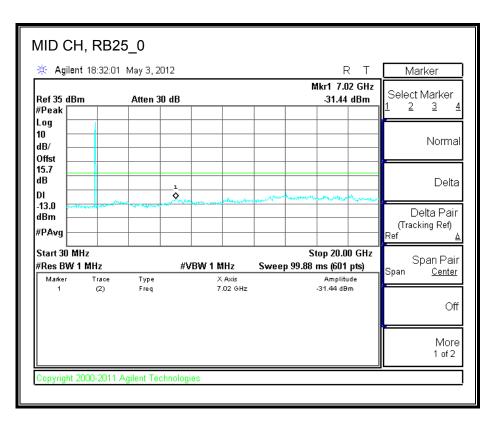
COMPLIANCE CERTIFICATION SERVICES (UL CCS)FORM NO: CCSUP4031B47173 BENICIA STREET, FREMONT, CA 94538, USATEL: (510) 771-1000FAX: (510) 661-0888This report shall not be reproduced except in full, without the written approval of UL.CCS.



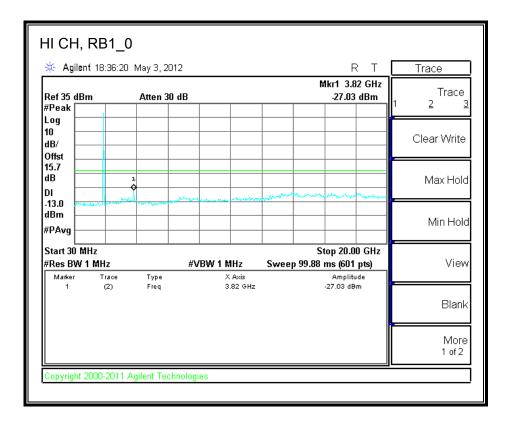


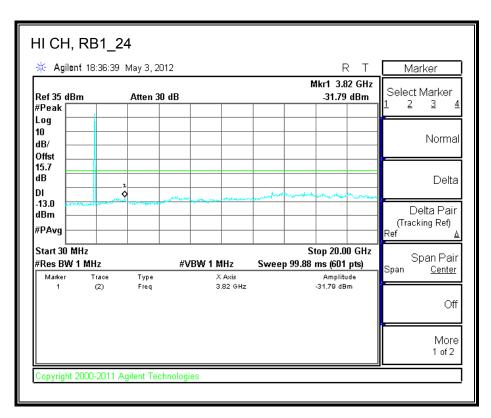
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