# **Appendix B**

# RF Test Data for 2.4G WIFI (Conducted Measurement)

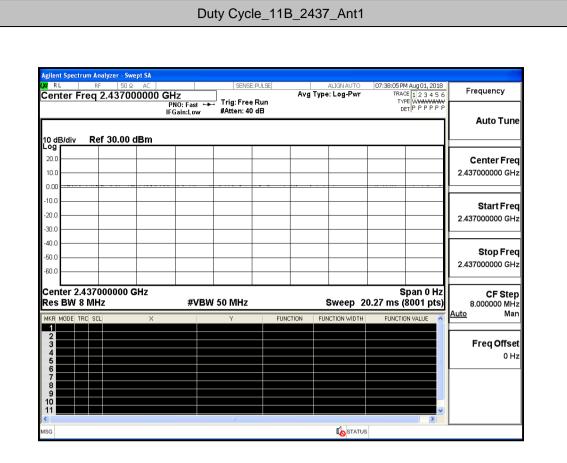
Product Name: Lapbook Trade Mark: Fusion5 Test Model: C60B

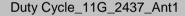
### **Environmental Conditions**

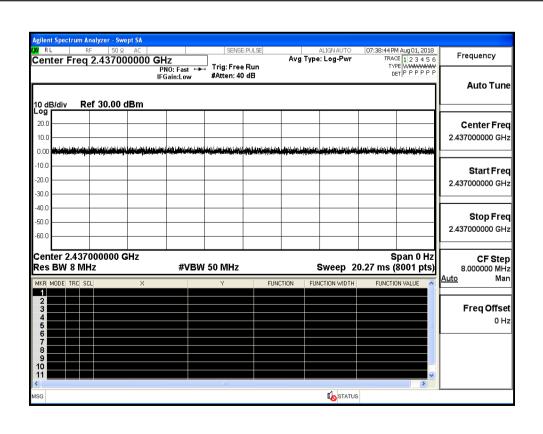
<del>_</del> -						
Temperature:	24.2 ° C					
Relative Humidity:	53.1%					
ATM Pressure:	100.0 kPa					
Test Engineer:	Tom.Liu					
Supervised by:	Jayden.Zhuo					

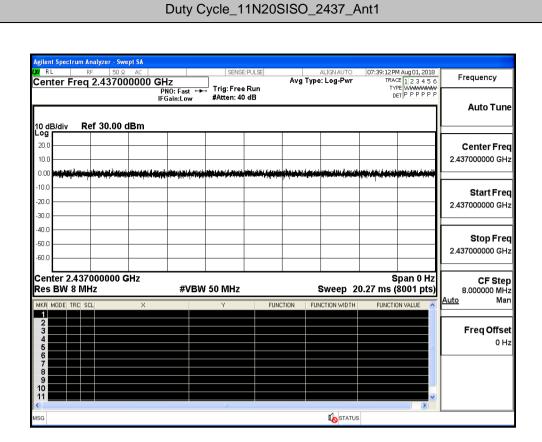
## **B.1 Duty Cycle**

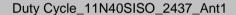
Test Mode	Test Channel	Test Channel Ant Duty Cycle[%]		Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS
11N40SISO	2437	Ant1	100	PASS

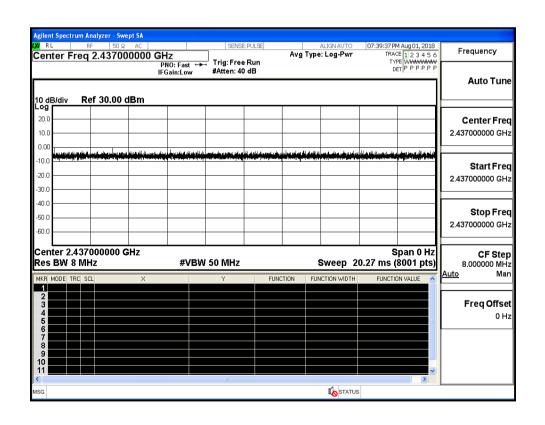










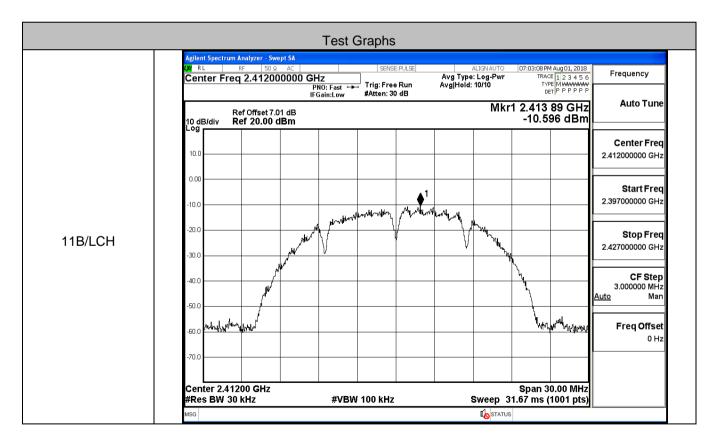


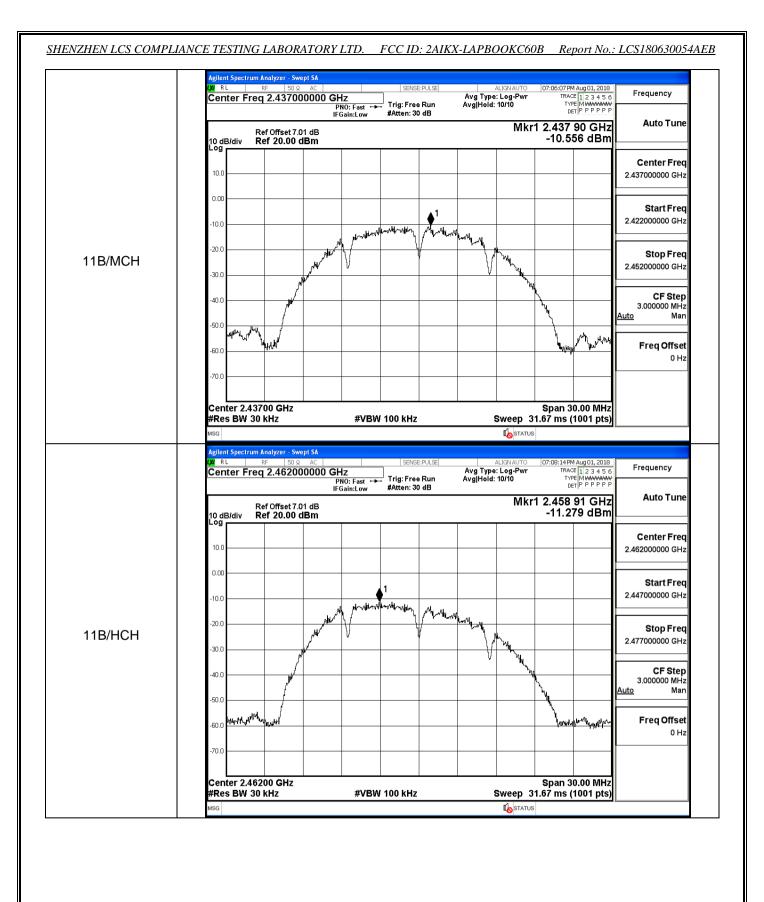
## **B.2 Maximum Peak Conducted Output Power**

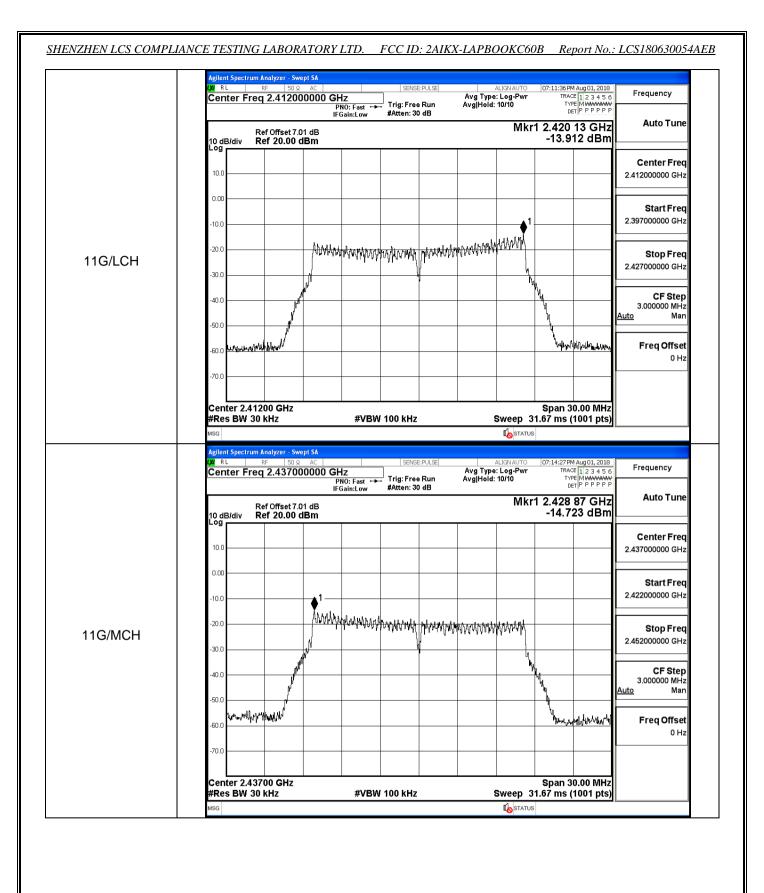
Mode	Channel	Meas.Level Peak [dBm]	Limit [dBm]	Verdict
	LCH	11.48	30	PASS
11B	MCH	11.32	30	PASS
	HCH	11.45	30	PASS
	LCH	12.21	30	PASS
11G	MCH	12.62	30	PASS
	HCH	12.48	30	PASS
	LCH	12.62	30	PASS
11N20SISO	MCH	12.51	30	PASS
	НСН	13.22	30	PASS
	LCH	13.45	30	PASS
11N40SISO	MCH	13.32	30	PASS
	нсн	14.15	30	PASS

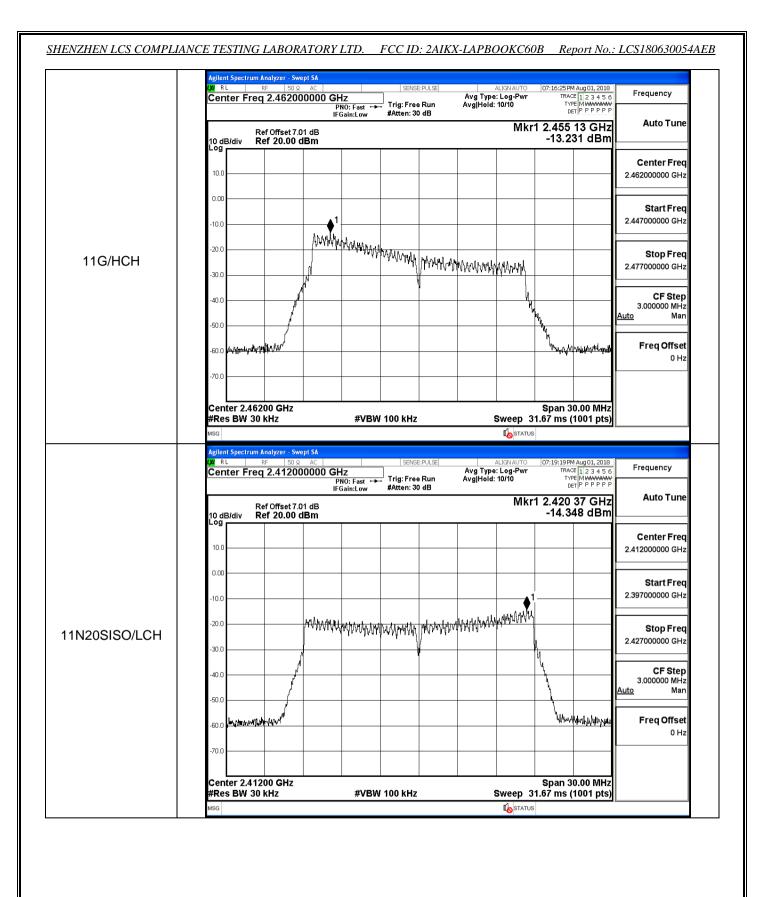
### **B.3 Maximum Power Spectral Density**

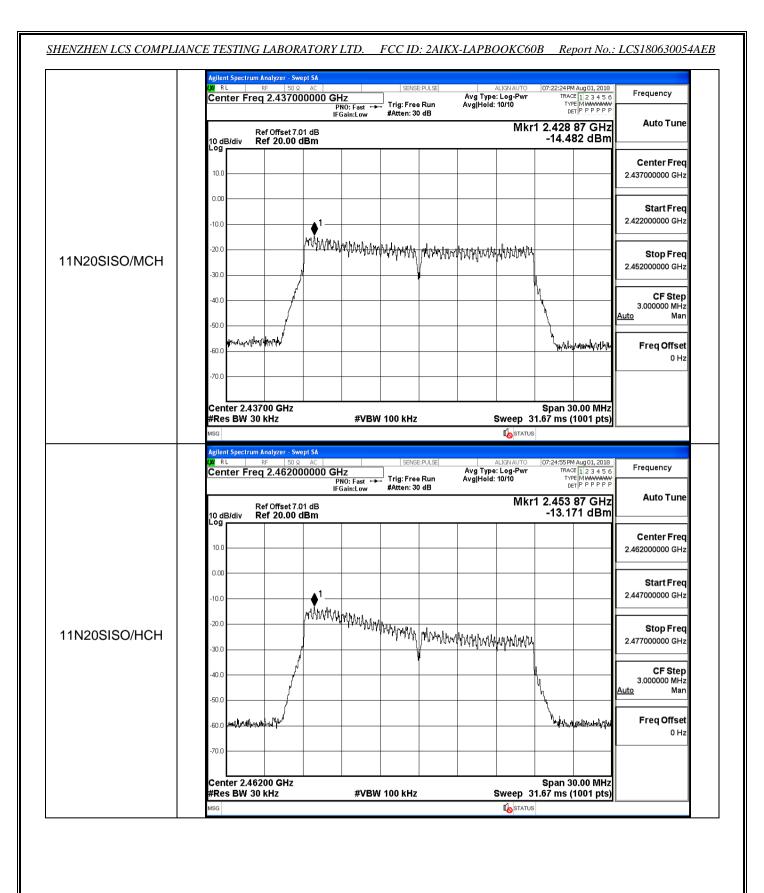
Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
	LCH	-10.596	8	PASS
11B	MCH	-10.556	8	PASS
	HCH	-11.279	8	PASS
	LCH	-13.912	8	PASS
11G	MCH	-14.723	8	PASS
	HCH	-13.231	8	PASS
	LCH	-14.348	8	PASS
11N20SISO	MCH	-14.482	8	PASS
	HCH	-13.171	8	PASS
	LCH	-15.738	8	PASS
11N40SISO	MCH	-17.298	8	PASS
	HCH	-15.494	8	PASS

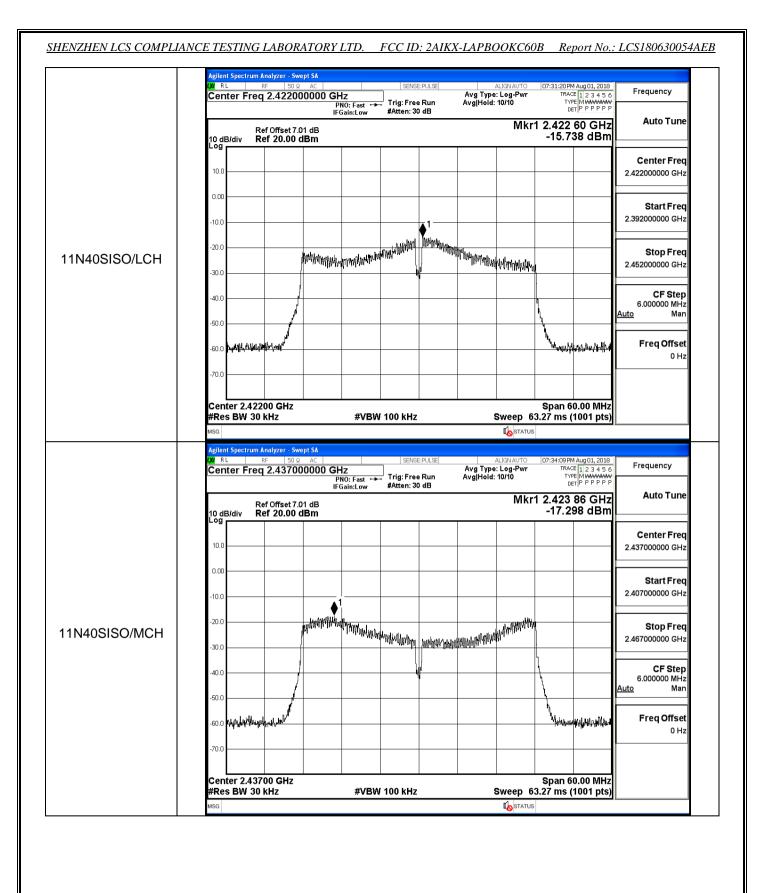




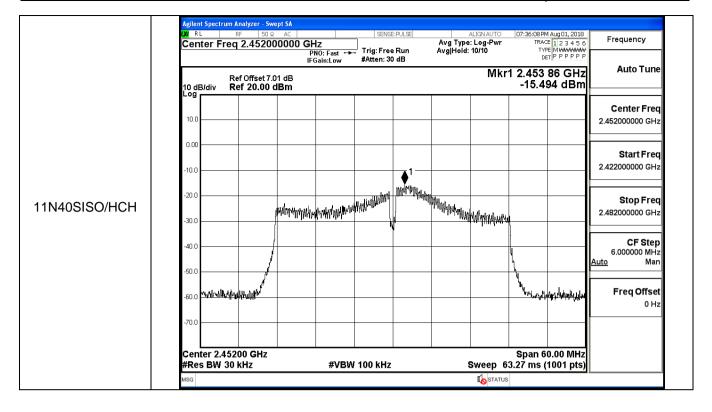






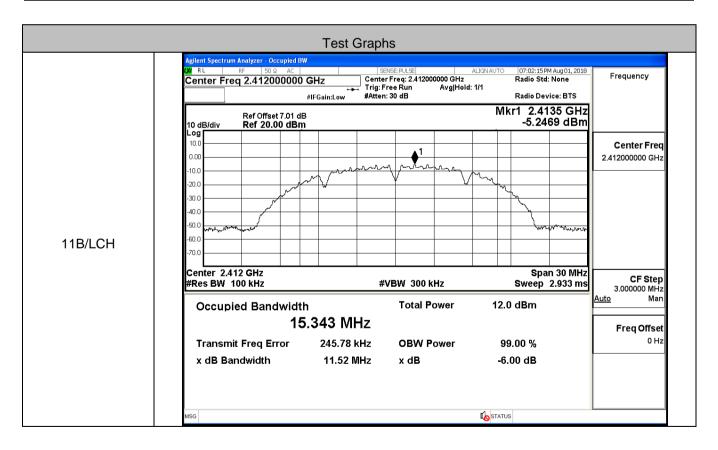


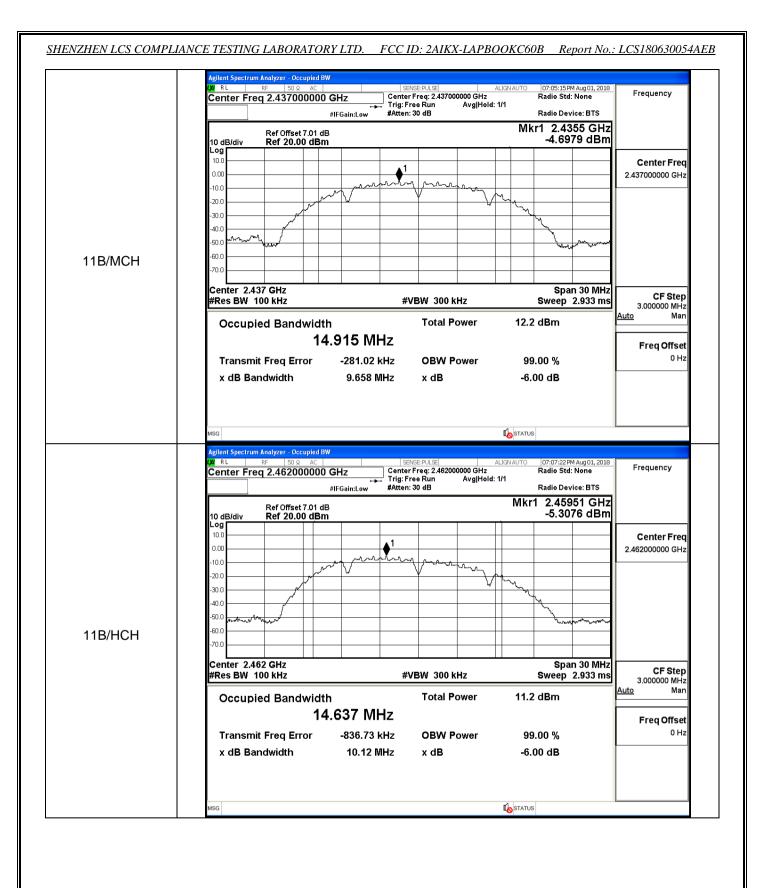
### SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD. FCC ID: 2AIKX-LAPBOOKC60B Report No.: LCS180630054AEB



### **B.4 6dB Bandwidth**

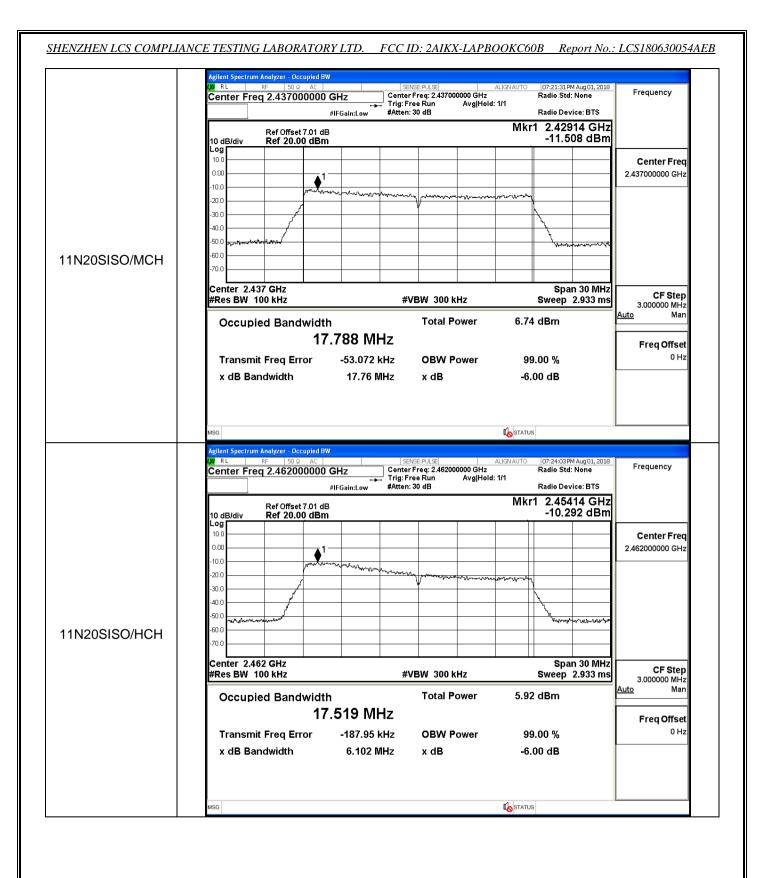
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
	LCH	11.52	≥0.5	PASS
11B	MCH	9.658	≥0.5	PASS
	HCH	10.12	≥0.5	PASS
	LCH	16.55	≥0.5	PASS
11G	MCH	16.57	≥0.5	PASS
	HCH	16.55	≥0.5	PASS
	LCH	17.78	≥0.5	PASS
11N20SISO	MCH	17.76	≥0.5	PASS
	HCH	17.52	≥0.5	PASS
	LCH	35.69	≥0.5	PASS
11N40SISO	MCH	36.46	≥0.5	PASS
	HCH	35.45	≥0.5	PASS





#### SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD. FCC ID: 2AIKX-LAPBOOKC60B Report No.: LCS180630054AEB |07:10:44 PM Aug 01, 2018 Radio Std: None Frequency Center Freq: 2.412000000 GHz Trig: Free Run Avg|Hold: 1/1 Center Freq 2.412000000 GHz Trig: Free Run #Atten: 30 dB #IFGain:Low Radio Device: BTS Mkr1 2.41986 GHz -11.491 dBm Ref Offset 7.01 dB Ref 20.00 dBm 10.0 Center Freq n no 2.412000000 GHz 10 O 11G/LCH Center 2.412 GHz #Res BW 100 kHz Span 30 MHz **CF Step** #VBW 300 kHz Sweep 2.933 ms 3.000000 MHz <u>Auto</u> Man **Total Power** 6.46 dBm Occupied Bandwidth 16.818 MHz Freq Offset 105.27 kHz **Transmit Freq Error OBW Power** 99.00 % 16.55 MHz -6.00 dB x dB Bandwidth x dB STATUS gilent Spectrum Analyzer - Occupied BW 07:13:35PM Aug 01, 2018 Radio Std: None Center Freq: 2.437000000 GHz Trig: Free Run Avg|Hold: 1/1 #Atten: 30 dB Frequency Center Freq 2.437000000 GHz #IFGain:Low Radio Device: BTS Mkr1 2.42902 GHz -12.148 dBm Ref Offset 7.01 dB Ref 20.00 dBm 10 dB/div Center Freq n no 2.437000000 GHz 10.0 11G/MCH Center 2.437 GHz #Res BW 100 kHz Span 30 MHz **CF Step** #VBW 300 kHz Sweep 2.933 ms 3.000000 MHz Man **Total Power** 6.59 dBm Occupied Bandwidth 16.905 MHz Freq Offset -207.16 kHz **OBW Power** 99.00 % **Transmit Freq Error** 16.57 MHz -6.00 dB x dB Bandwidth x dB STATUS

#### SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD. FCC ID: 2AIKX-LAPBOOKC60B Report No.: LCS180630054AEB 07:15:33 PM Aug 01, 2018 Radio Std: None Frequency Center Freq: 2.462000000 GHz Trig: Free Run Avg|Hold: 1/1 Center Freq 2.462000000 GHz Trig: Free Run #Atten: 30 dB #IFGain:Low Radio Device: BTS Mkr1 2.45513 GHz -10.735 dBm Ref Offset 7.01 dB Ref 20.00 dBm 10.0 Center Freq n no 2.462000000 GHz 10 O variation of the state of the s 11G/HCH Center 2.462 GHz #Res BW 100 kHz Span 30 MHz **CF Step** #VBW 300 kHz Sweep 2.933 ms 3.000000 MHz Man **Total Power** 5.58 dBm Occupied Bandwidth 16.550 MHz Freq Offset -302.60 kHz **Transmit Freq Error OBW Power** 99.00 % 6.225 MHz -6.00 dB x dB Bandwidth x dB STATUS gilent Spectrum Analyzer - Occupied BW 07:18:27 PM Aug 01, 2018 Radio Std: None Center Freq: 2.412000000 GHz Trig: Free Run Avg|Hold: 1/1 #Atten: 30 dB Frequency Center Freq 2.412000000 GHz #IFGain:Low Radio Device: BTS Mkr1 2.42037 GHz -10.829 dBm Ref Offset 7.01 dB Ref 20.00 dBm 10 dB/div Center Freq n no 2.412000000 GHz 10.0 11N20SISO/LCH Center 2.412 GHz #Res BW 100 kHz Span 30 MHz **CF Step** #VBW 300 kHz Sweep 2.933 ms 3.000000 MHz Man **Total Power** 6.48 dBm Occupied Bandwidth 17.860 MHz Freq Offset 62.443 kHz **OBW Power** 99.00 % **Transmit Freq Error** 17.78 MHz -6.00 dB x dB Bandwidth x dB STATUS



#### SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD. FCC ID: 2AIKX-LAPBOOKC60B Report No.: LCS180630054AEB 07:30:27 PM Aug 01, 2018 Radio Std: None Frequency Center Freq: 2.422000000 GHz Trig: Free Run Avg|Hold: 1/1 Center Freq 2.422000000 GHz Trig: Free Run #Atten: 30 dB #IFGain:Low Radio Device: BTS Mkr1 2.42416 GHz -12.041 dBm Ref Offset 7.01 dB Ref 20.00 dBm 10.0 Center Freq n no 2.422000000 GHz 10 O 11N40SISO/LCH Center 2.422 GHz #Res BW 100 kHz Span 60 MHz **CF Step** #VBW 300 kHz Sweep 5.8 ms 6.000000 MHz Man **Total Power** 7.28 dBm Occupied Bandwidth 35.690 MHz Freq Offset -198.99 kHz **Transmit Freq Error OBW Power** 99.00 % 13.21 MHz -6.00 dB x dB Bandwidth x dB STATUS gilent Spectrum Analyzer - Occupied BW 07:33:17 PM Aug 01, 2018 Radio Std: None Center Freq: 2.437000000 GHz Trig: Free Run Avg|Hold: 1/1 #Atten: 30 dB Frequency Center Freq 2.437000000 GHz #IFGain:Low Radio Device: BTS 2.42266 GHz -14.179 dBm Mkr1 Ref Offset 7.01 dB Ref 20.00 dBm 10 dB/div Center Freq n no 2.437000000 GHz 10.0 howward 11N40SISO/MCH Center 2.437 GHz #Res BW 100 kHz Span 60 MHz **CF Step** 6.000000 MHz #VBW 300 kHz Sweep 5.8 ms Man **Total Power** 6.35 dBm Occupied Bandwidth 36.291 MHz Freq Offset 51.044 kHz **OBW Power** 99.00 % **Transmit Freq Error** 36.46 MHz -6.00 dB x dB Bandwidth x dB STATUS

#### SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD. FCC ID: 2AIKX-LAPBOOKC60B Report No.: LCS180630054AEB 07:35:16 PM Aug 01, 2018 Radio Std: None | SENSE:PULSE| ALIGH | Center Freq: 2.452000000 GHz | Trig: Free Run Avg|Hold: 1/1 | #Atten: 30 dB Frequency Center Freq 2.452000000 GHz Radio Device: BTS #IFGain:Low Mkr1 2.4541 GHz -11.699 dBm Ref Offset 7.01 dB Ref 20.00 dBm 10.0 Center Freq n no 2.452000000 GHz 10 O 11N40SISO/HCH Center 2.452 GHz #Res BW 100 kHz Span 60 MHz **CF Step** 6.000000 MHz #VBW 300 kHz Sweep 5.8 ms Man Total Power 6.51 dBm Occupied Bandwidth 35.456 MHz Freq Offset

-198.37 kHz

9.825 MHz

Transmit Freq Error x dB Bandwidth

**OBW Power** 

x dB

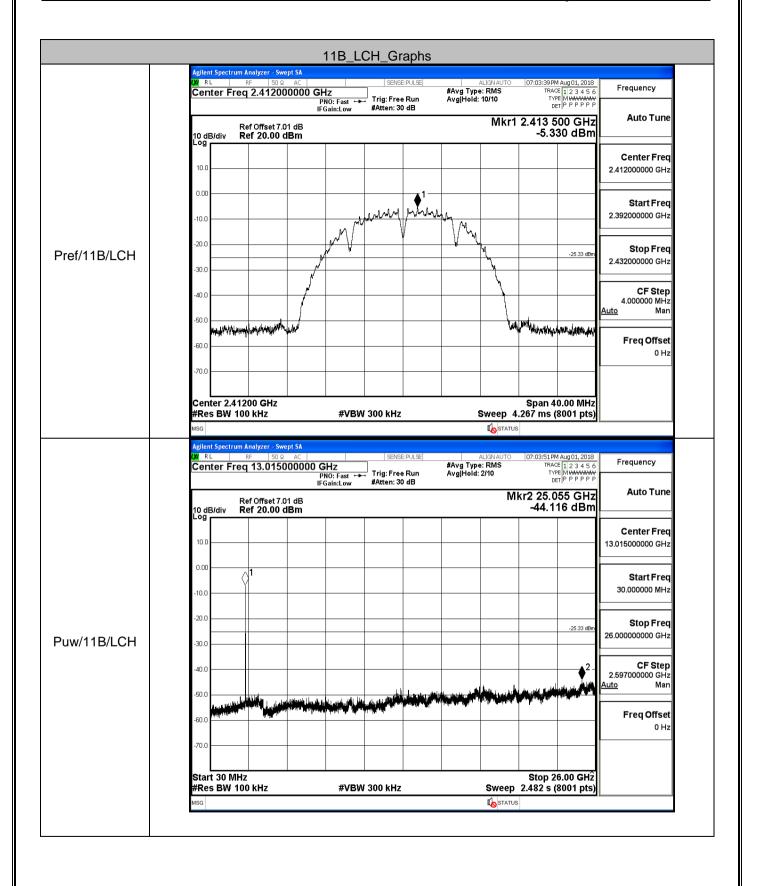
99.00 %

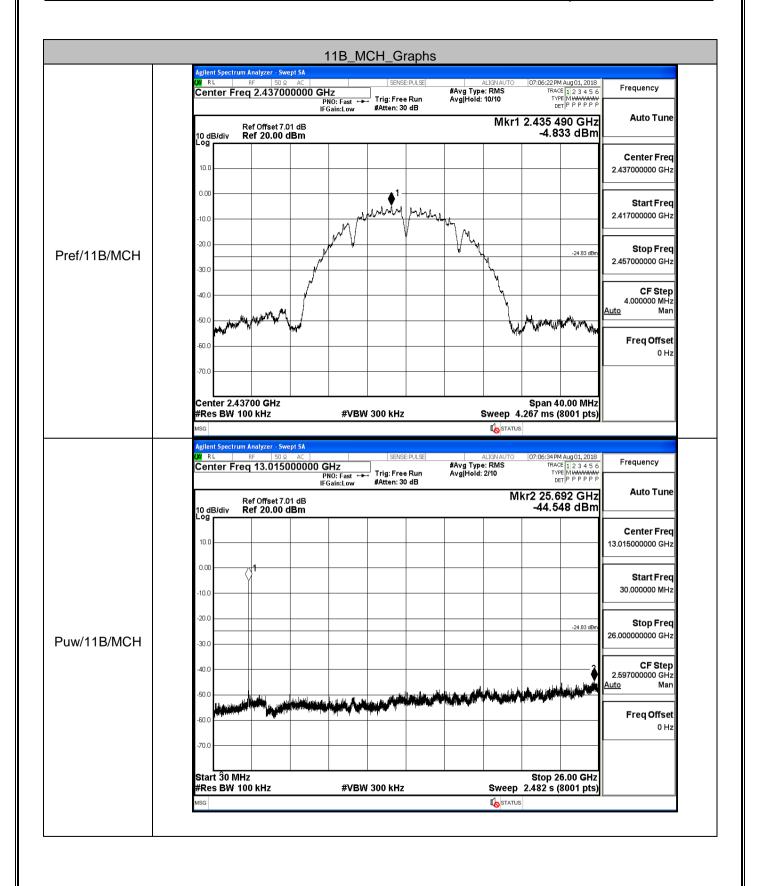
-6.00 dB

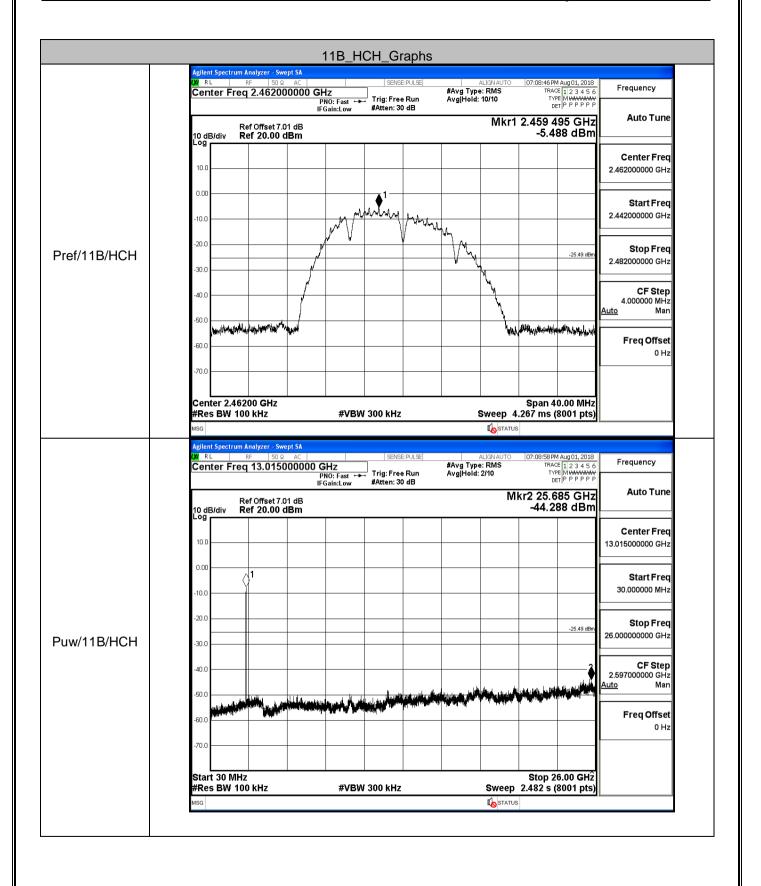
STATUS

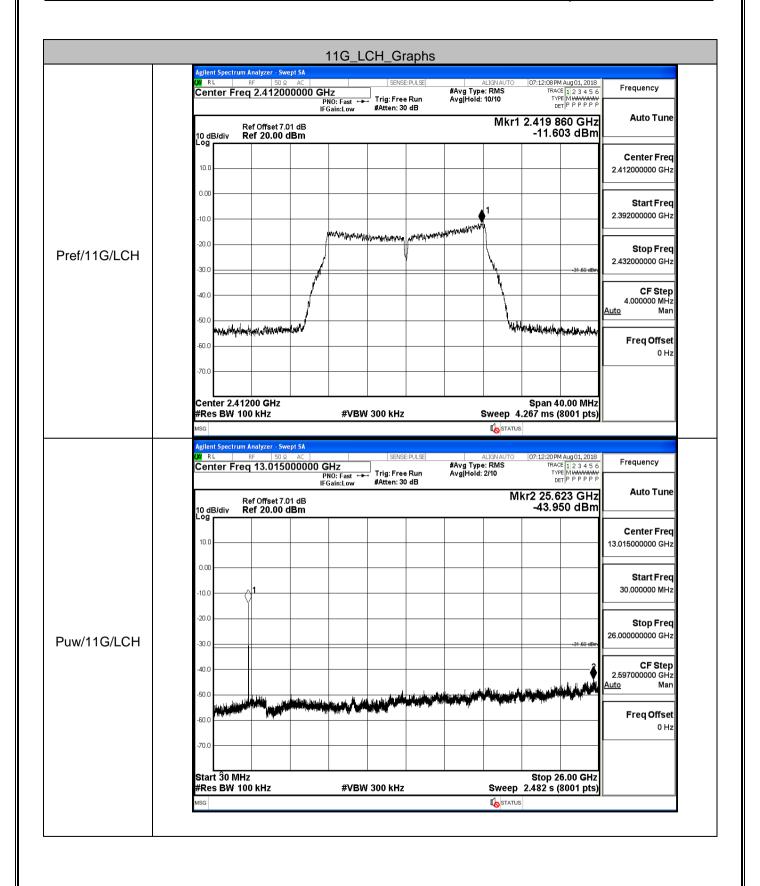
## **B.5 RF Conducted Spurious Emissions**

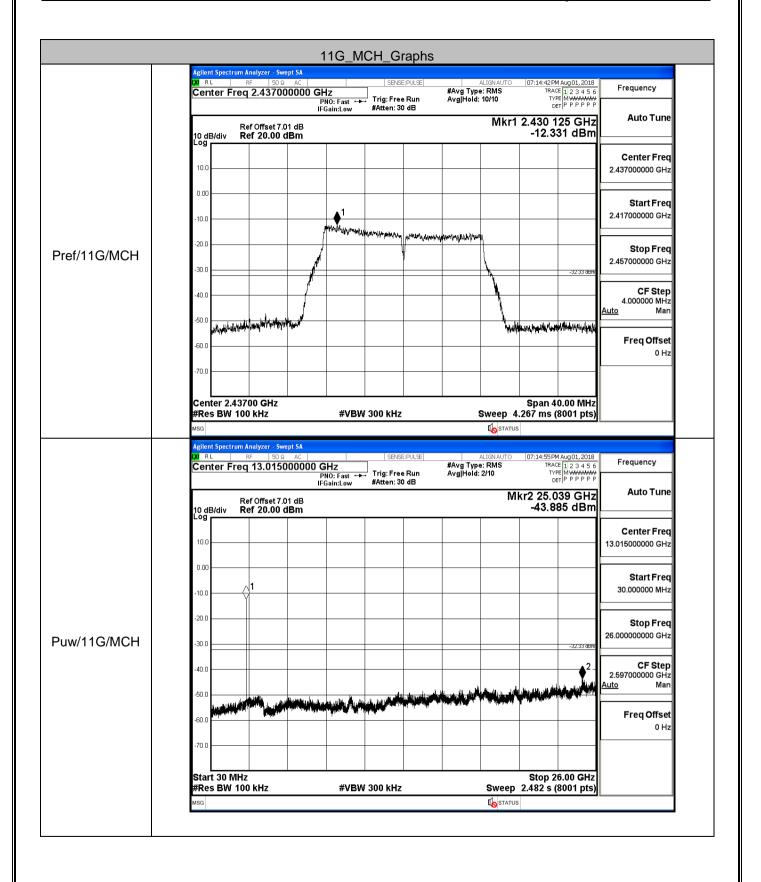
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
	LCH	-5.33	-44.116	-25.330	PASS
11B	MCH	-4.833	-44.729	-24.833	PASS
	HCH	-5.488	-44.288	-25.488	PASS
	LCH	-11.603	-43.950	-31.603	PASS
11G	MCH	-12.331	-43.885	-32.331	PASS
	HCH	-10.933	-44.429	-30.933	PASS
	LCH	-11.012	-42.411	-31.012	PASS
11N20	MCH	-11.842	-44.255	-31.842	PASS
SISO	НСН	-10.303	-44.219	-30.303	PASS
448145	LCH	-11.883	-44.349	-31.883	PASS
11N40	MCH	-14.27	-44.626	-34.270	PASS
SISO	НСН	-11.877	-45.123	-31.877	PASS

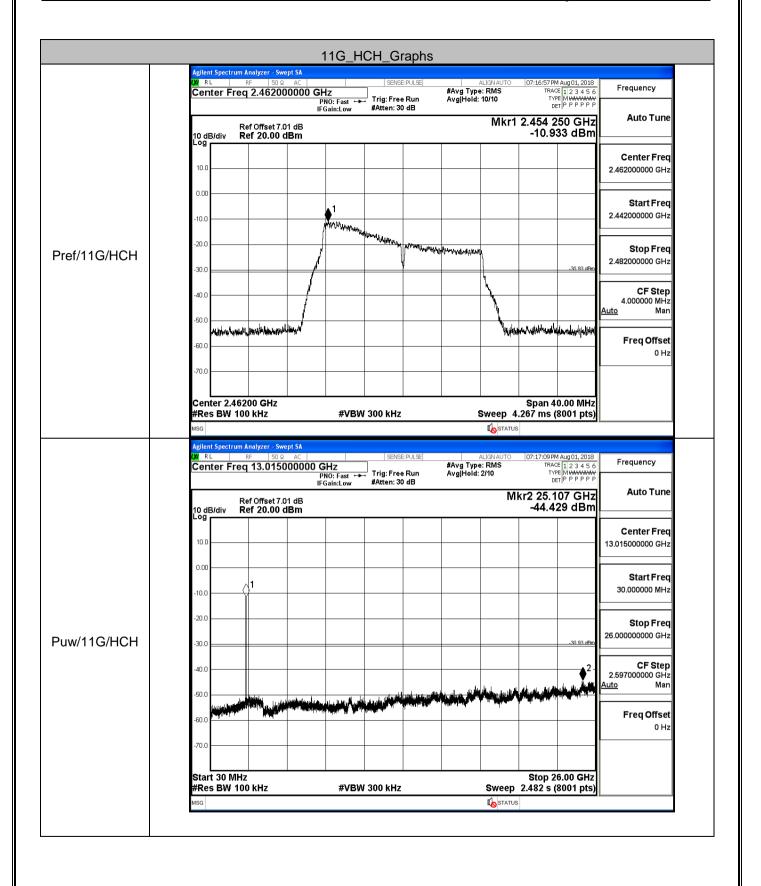


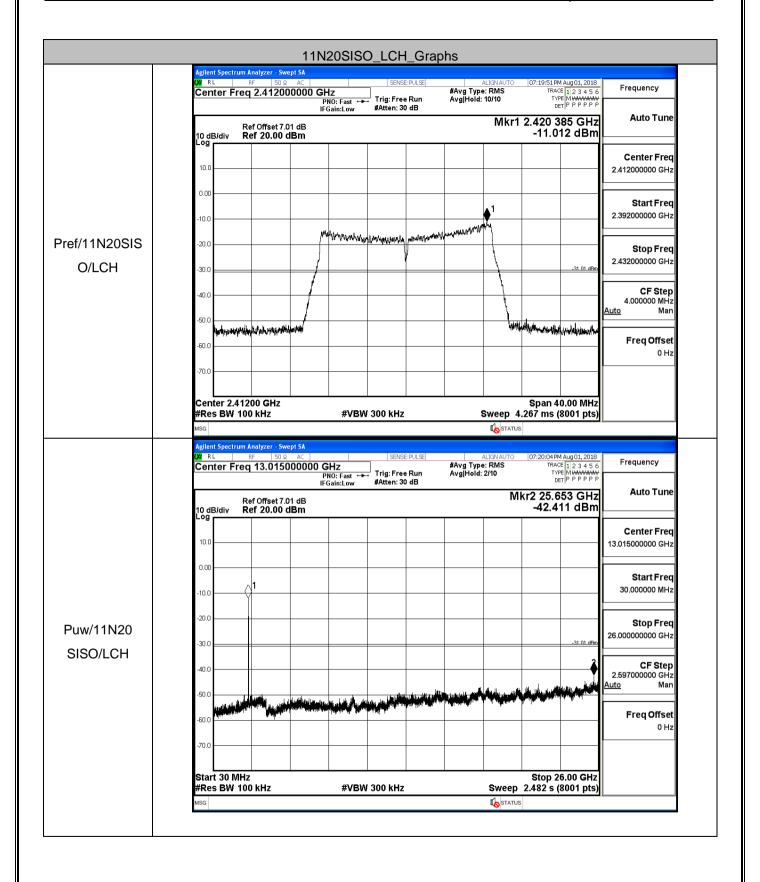


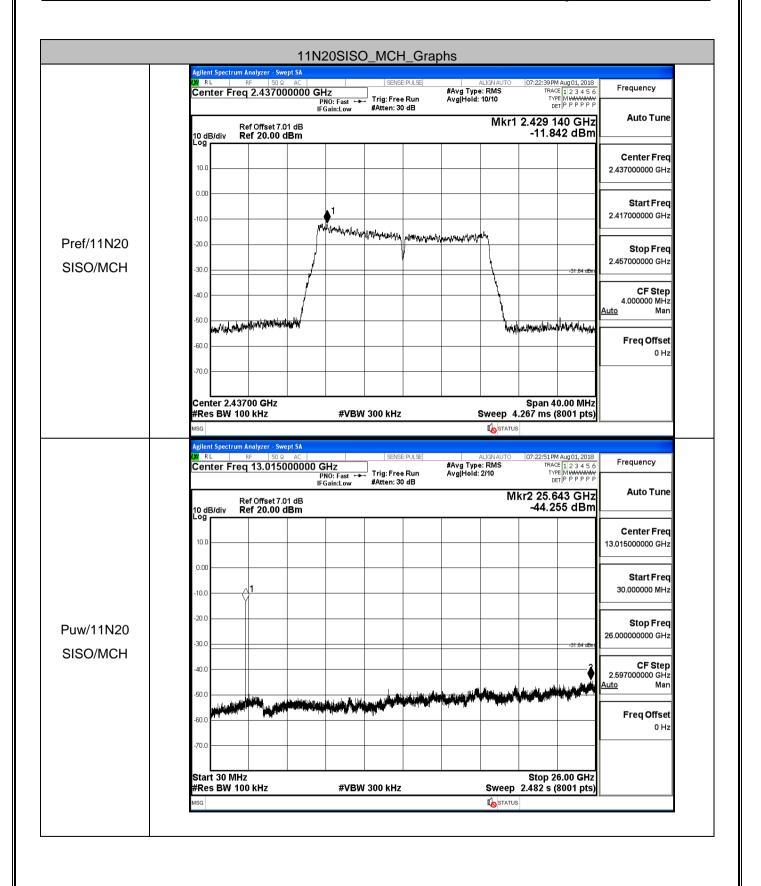


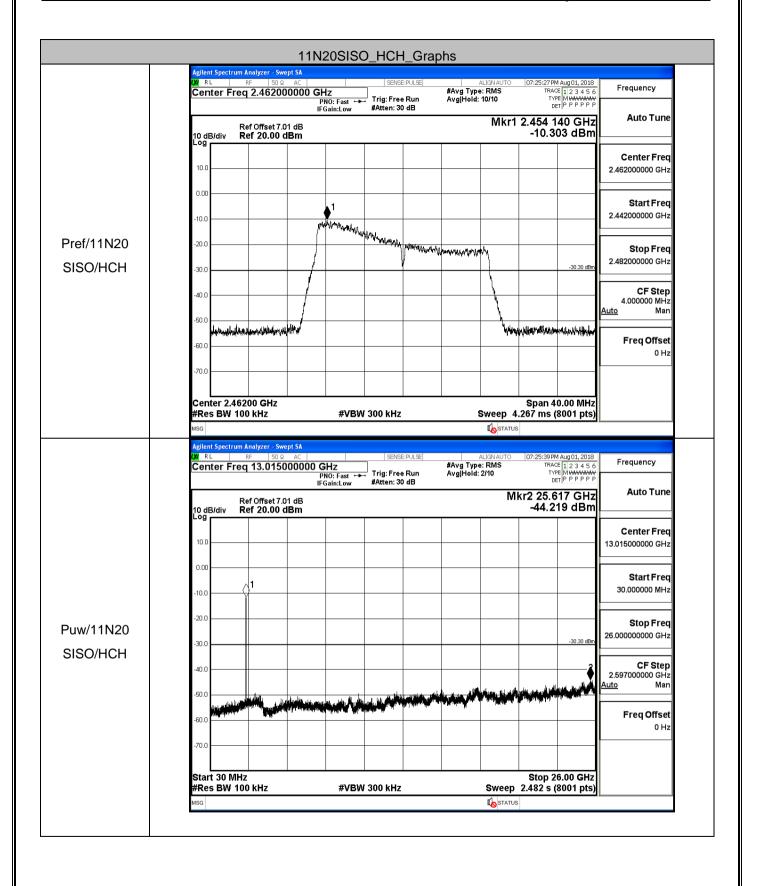


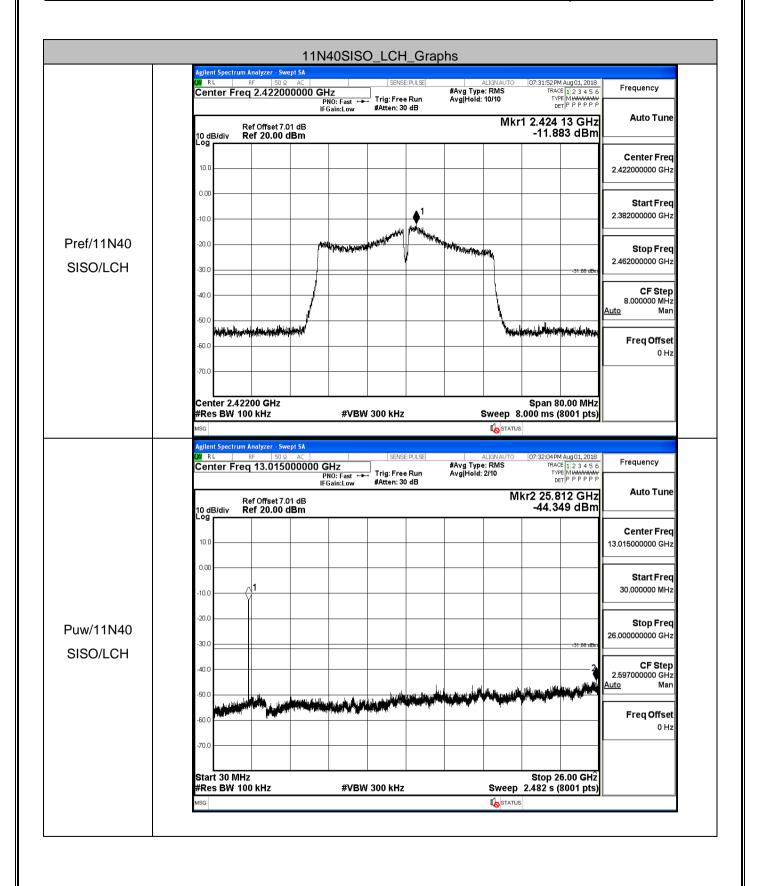


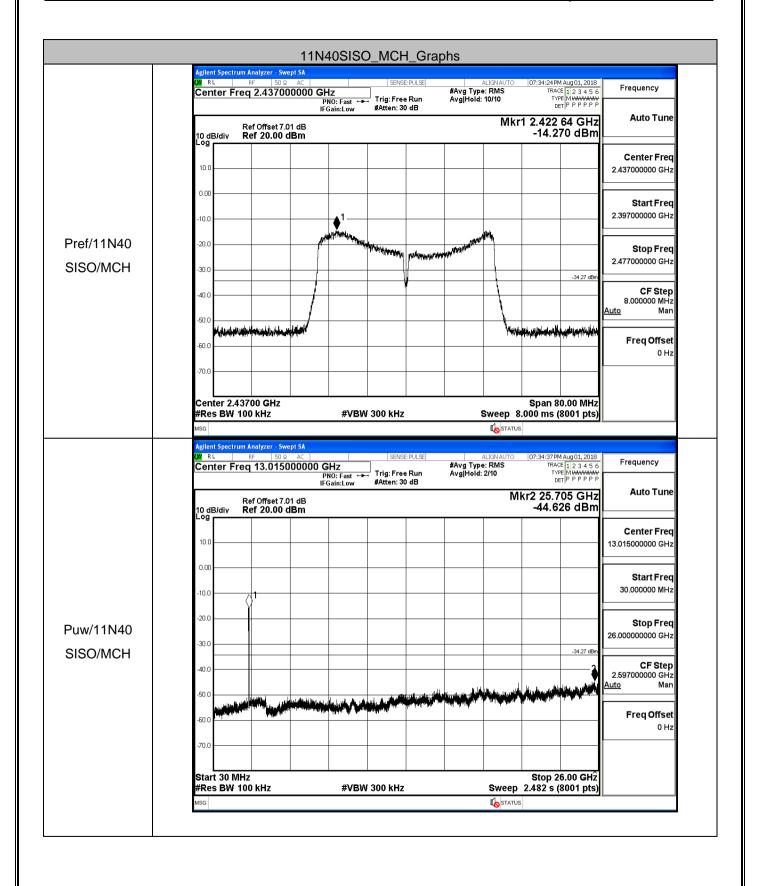


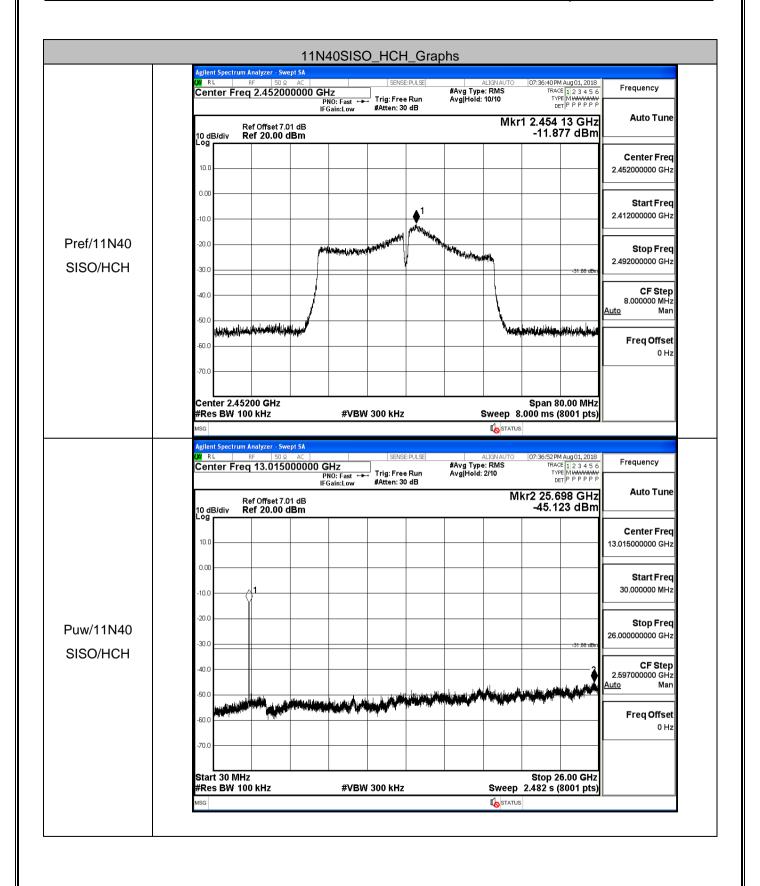






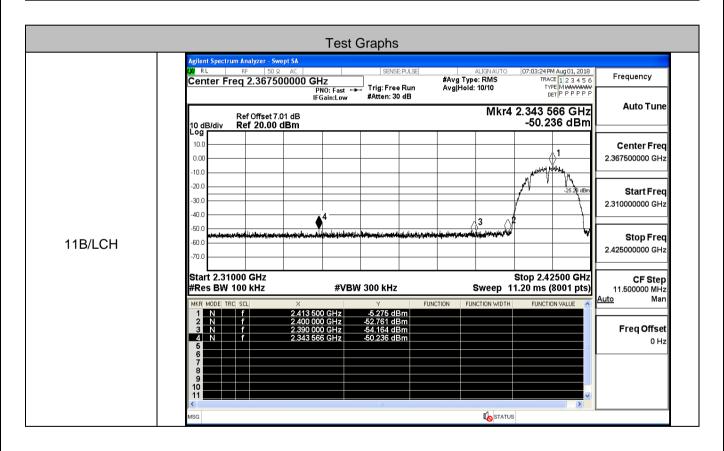


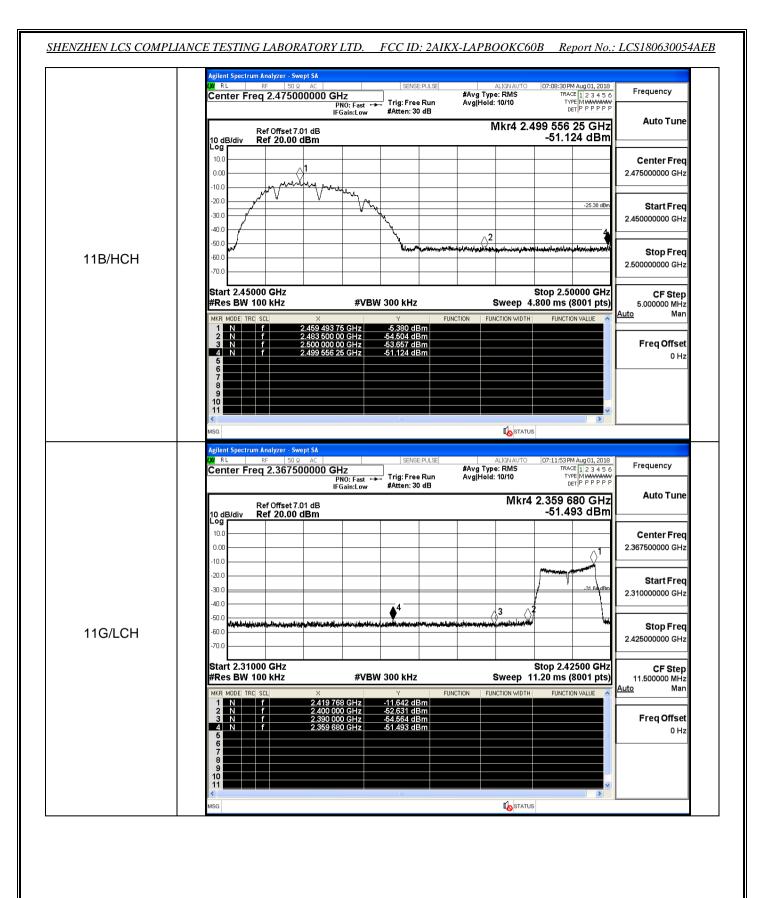


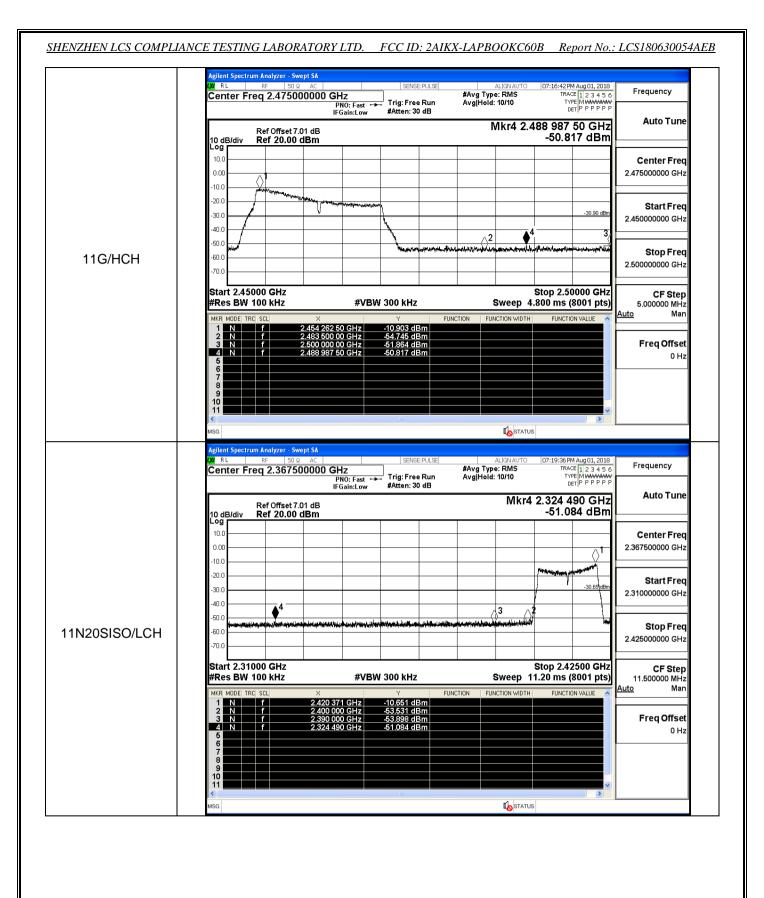


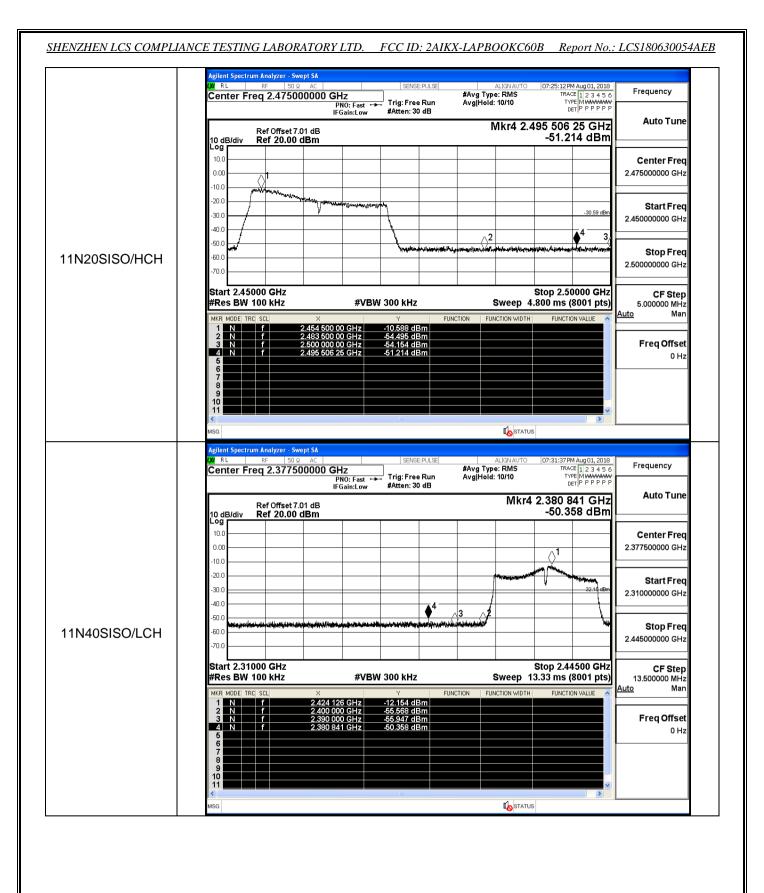
### **B.6 Band-edge for RF Conducted Emissions**

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
	LCH	-5.275	-50.236	-25.28	PASS
11B	HCH	-5.380	-51.124	-25.38	PASS
	LCH	-11.642	-51.493	-31.64	PASS
11G	HCH	-10.903	-50.817	-30.9	PASS
	LCH	-10.651	-51.084	-30.65	PASS
11N20SISO	HCH	-10.588	-51.214	-30.59	PASS
	LCH	-12.154	-50.358	-32.15	PASS
11N40SISO	HCH	-11.812	-51.679	-31.81	PASS

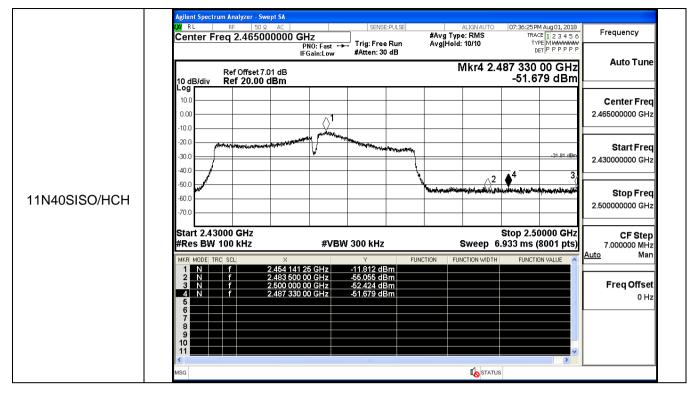






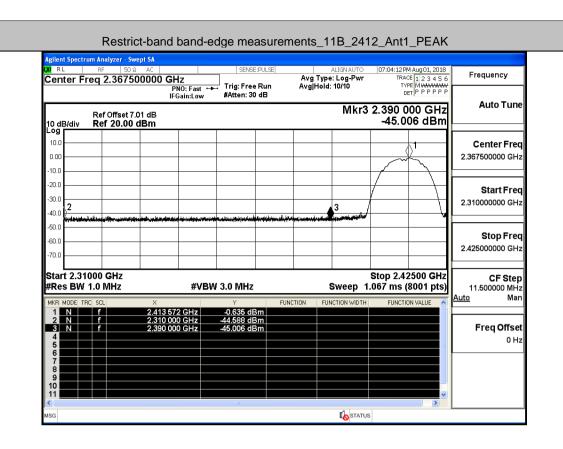


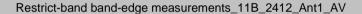
## SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD. FCC ID: 2AIKX-LAPBOOKC60B Report No.: LCS180630054AEB

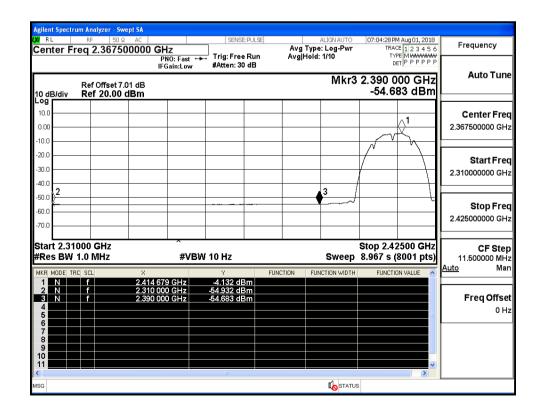


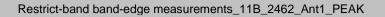
# **B.7 Restrict-band band-edge measurements**

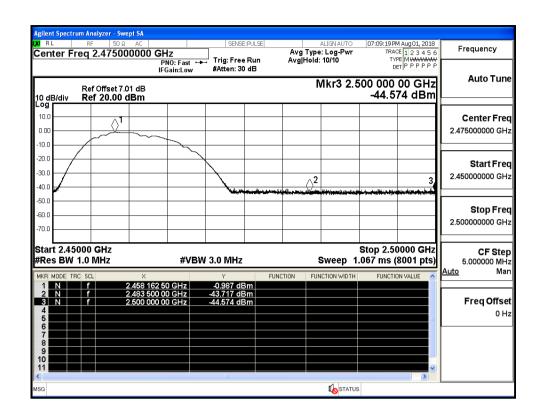
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
	2412	Ant1	2310.0	-44.59	2.0	0	52.67	PEAK	74	PASS
	2412	Ant1	2310.0	-54.93	2.0	0	42.33	AV	54	PASS
	2412	Ant1	2390.0	-45.01	2.0	0	52.25	PEAK	74	PASS
11B	2412	Ant1	2390.0	-54.68	2.0	0	42.57	AV	54	PASS
IID	2462	Ant1	2483.5	-43.72	2.0	0	53.54	PEAK	74	PASS
	2462	Ant1	2483.5	-54.53	2.0	0	42.73	AV	54	PASS
	2462	Ant1	2500.0	-44.57	2.0	0	52.68	PEAK	74	PASS
	2462	Ant1	2500.0	-54.37	2.0	0	42.89	AV	54	PASS
	2412	Ant1	2310.0	-44.14	2.0	0	53.12	PEAK	74	PASS
	2412	Ant1	2310.0	-54.97	2.0	0	42.29	AV	54	PASS
	2412	Ant1	2390.0	-44.32	2.0	0	52.94	PEAK	74	PASS
11G	2412	Ant1	2390.0	-54.69	2.0	0	42.56	AV	54	PASS
110	2462	Ant1	2483.5	-43.87	2.0	0	53.39	PEAK	74	PASS
	2462	Ant1	2483.5	-54.44	2.0	0	42.82	AV	54	PASS
	2462	Ant1	2500.0	-43.83	2.0	0	53.43	PEAK	74	PASS
	2462	Ant1	2500.0	-54.34	2.0	0	42.92	AV	54	PASS
	2412	Ant1	2310.0	-44.32	2.0	0	52.93	PEAK	74	PASS
	2412	Ant1	2310.0	-54.92	2.0	0	42.34	AV	54	PASS
	2412	Ant1	2390.0	-44.60	2.0	0	52.66	PEAK	74	PASS
11N20	2412	Ant1	2390.0	-54.69	2.0	0	42.57	AV	54	PASS
SISO	2462	Ant1	2483.5	-43.96	2.0	0	53.30	PEAK	74	PASS
	2462	Ant1	2483.5	-54.46	2.0	0	42.79	AV	54	PASS
	2462	Ant1	2500.0	-42.89	2.0	0	54.37	PEAK	74	PASS
	2462	Ant1	2500.0	-54.35	2.0	0	42.91	AV	54	PASS
	2422	Ant1	2310.0	-43.90	2.0	0	53.36	PEAK	74	PASS
	2422	Ant1	2310.0	-54.95	2.0	0	42.31	AV	54	PASS
	2422	Ant1	2390.0	-44.75	2.0	0	52.50	PEAK	74	PASS
11N40	2422	Ant1	2390.0	-54.67	2.0	0	42.59	AV	54	PASS
SISO	2452	Ant1	2483.5	-44.48	2.0	0	52.78	PEAK	74	PASS
	2452	Ant1	2483.5	-54.50	2.0	0	42.76	AV	54	PASS
	2452	Ant1	2500.0	-44.08	2.0	0	53.17	PEAK	74	PASS
	2452	Ant1	2500.0	-54.33	2.0	0	42.92	AV	54	PASS



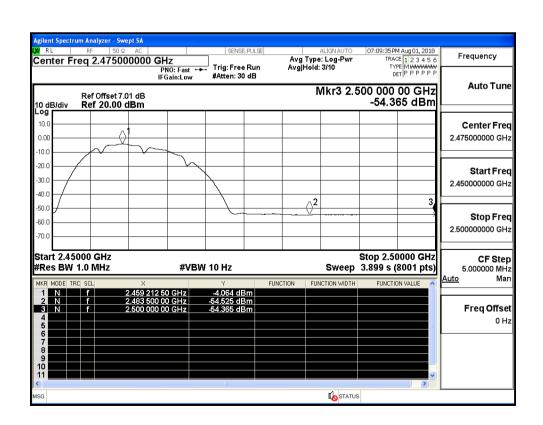


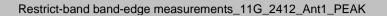


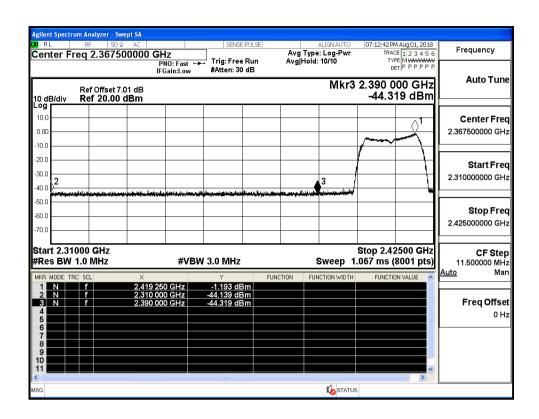




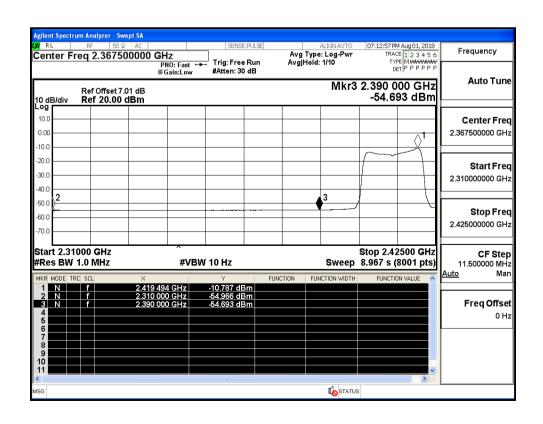
### Restrict-band band-edge measurements\_11B\_2462\_Ant1\_AV

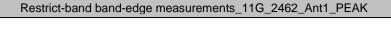


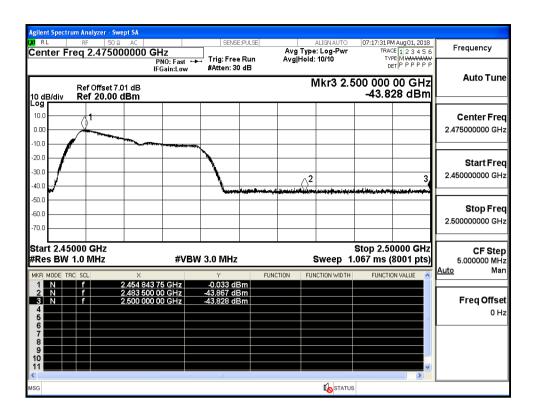




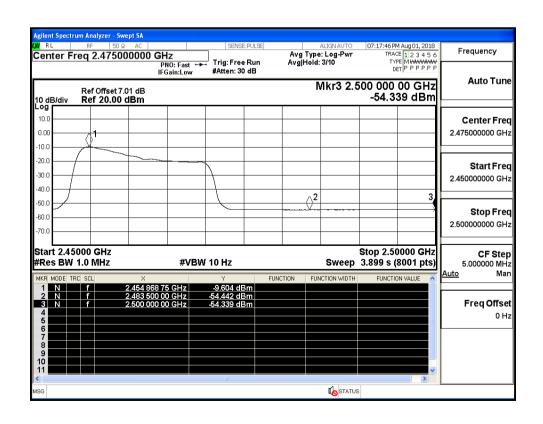
### Restrict-band band-edge measurements\_11G\_2412\_Ant1\_AV

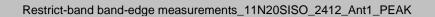


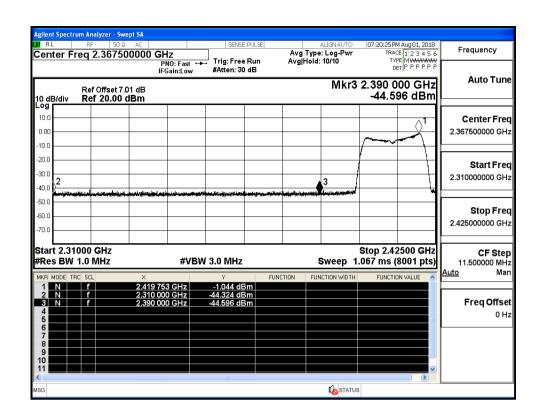




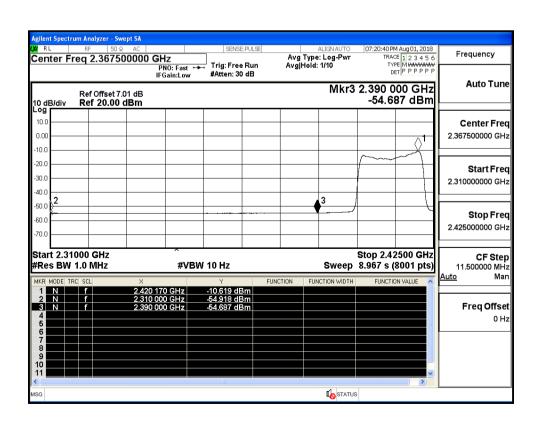
### Restrict-band band-edge measurements\_11G\_2462\_Ant1\_AV

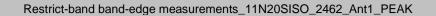


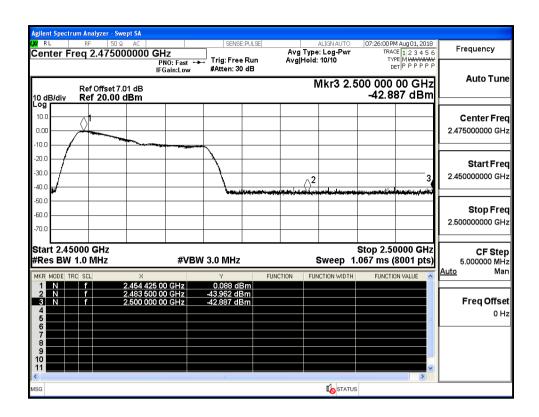




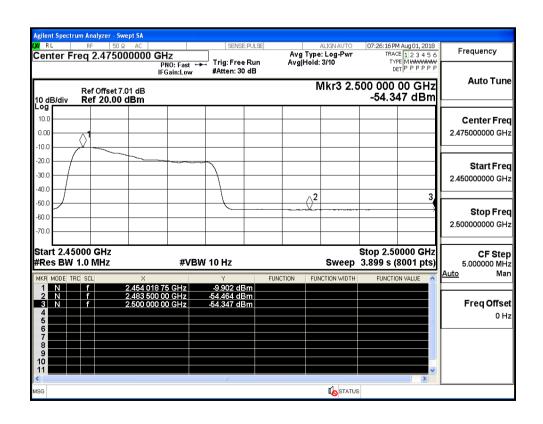
### Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_AV

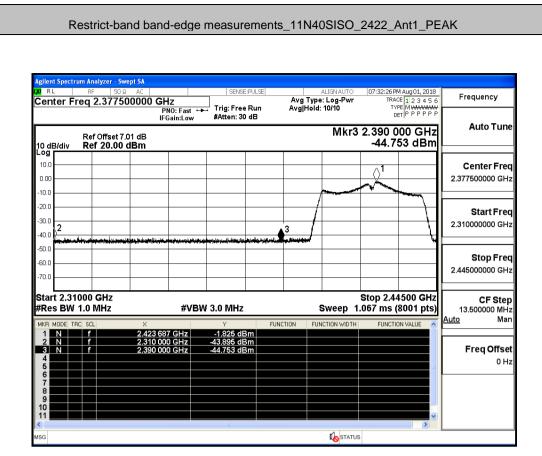


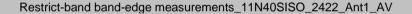


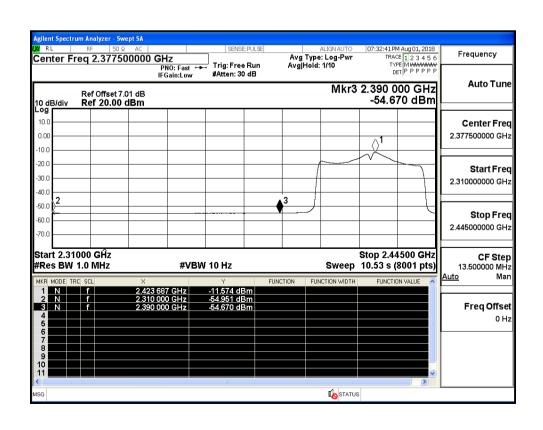


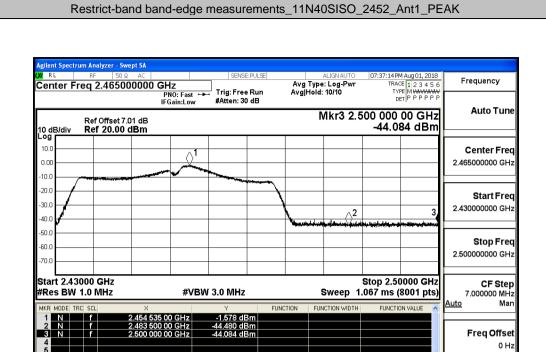
### Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_AV











### Restrict-band band-edge measurements\_11N40SISO\_2452\_Ant1\_AV

STATUS

