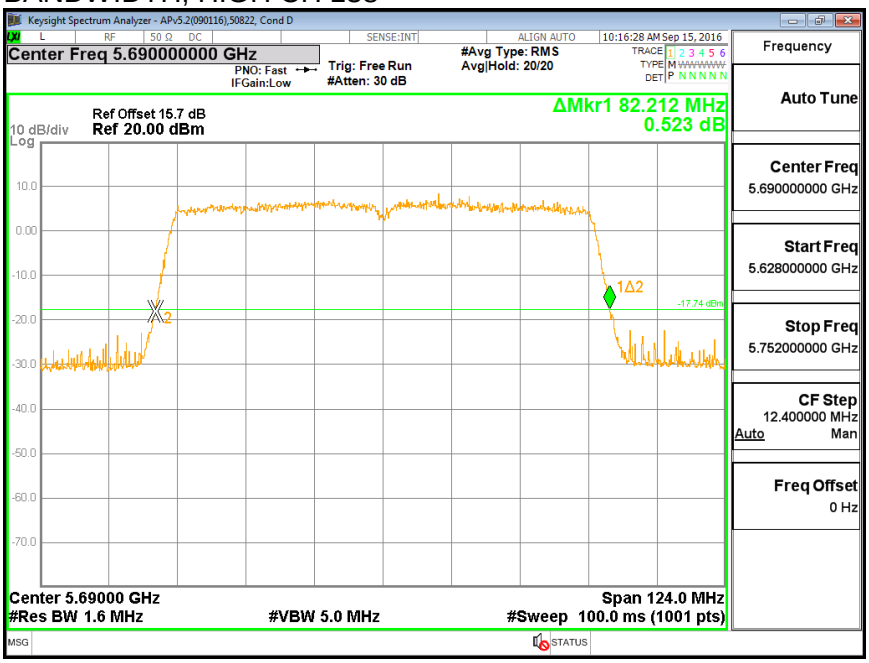
BANDWIDTH, HIGH CH 138



8.105.2. **99% BANDWIDTH**

LIMITS

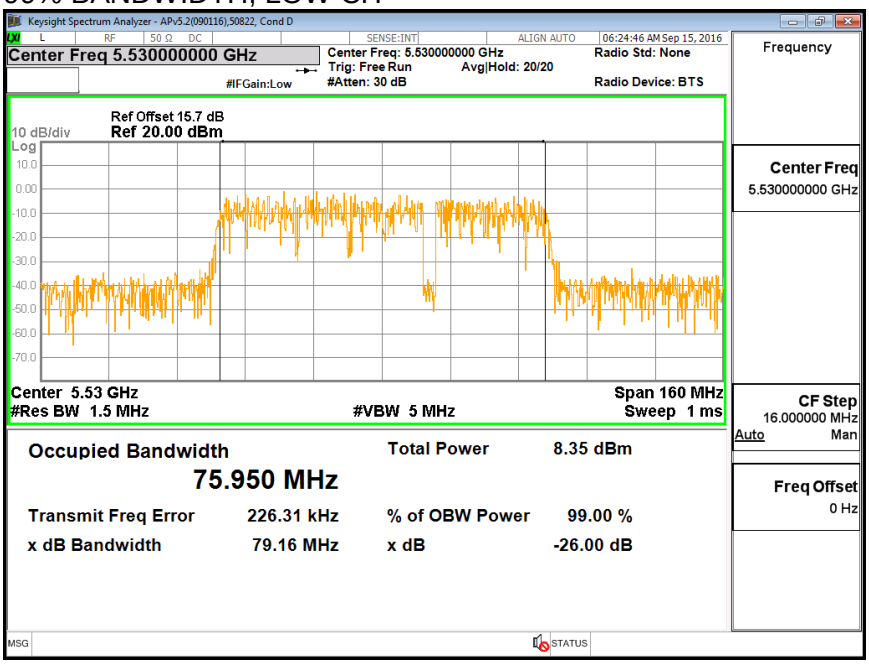
None; for reporting purposes only.

RESULTS

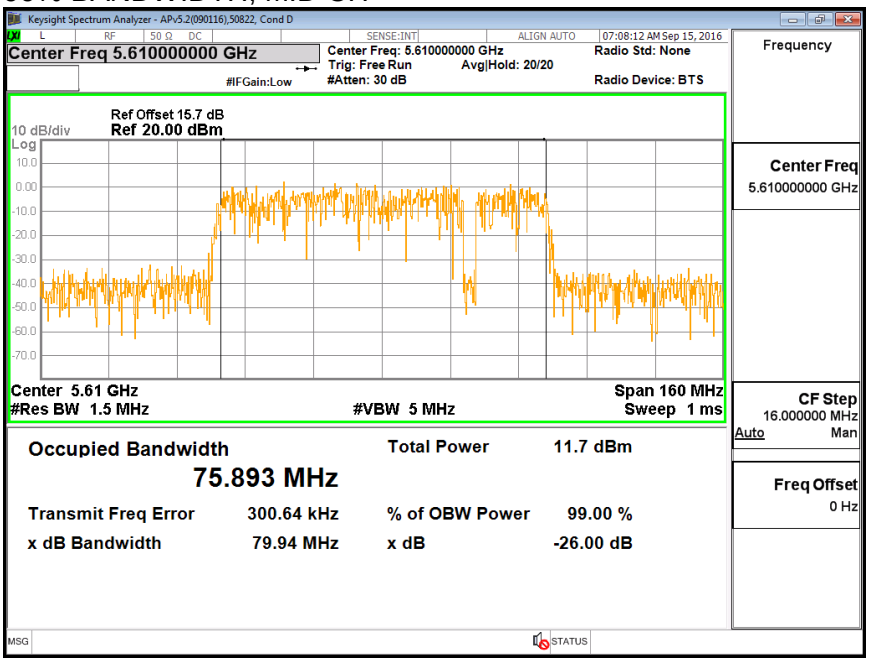
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5530	75.950	75.978	75.985
Mid	5610	75.893	75.901	75.561
High	5690	76.031	75.837	75.695

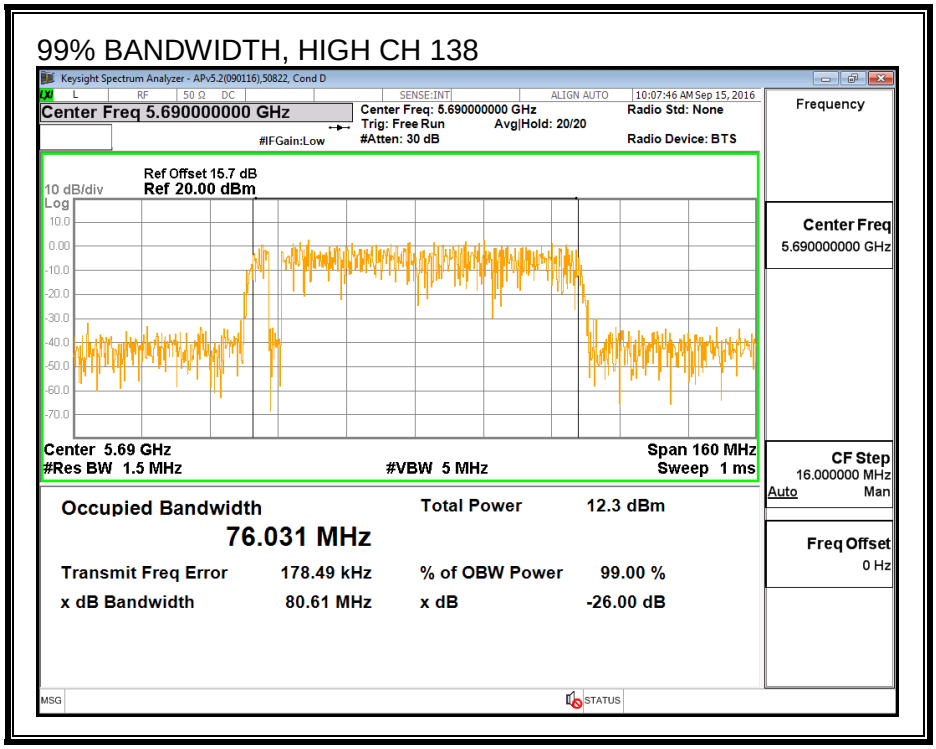
99% BANDWIDTH, CHAIN 0

99% BANDWIDTH, LOW CH

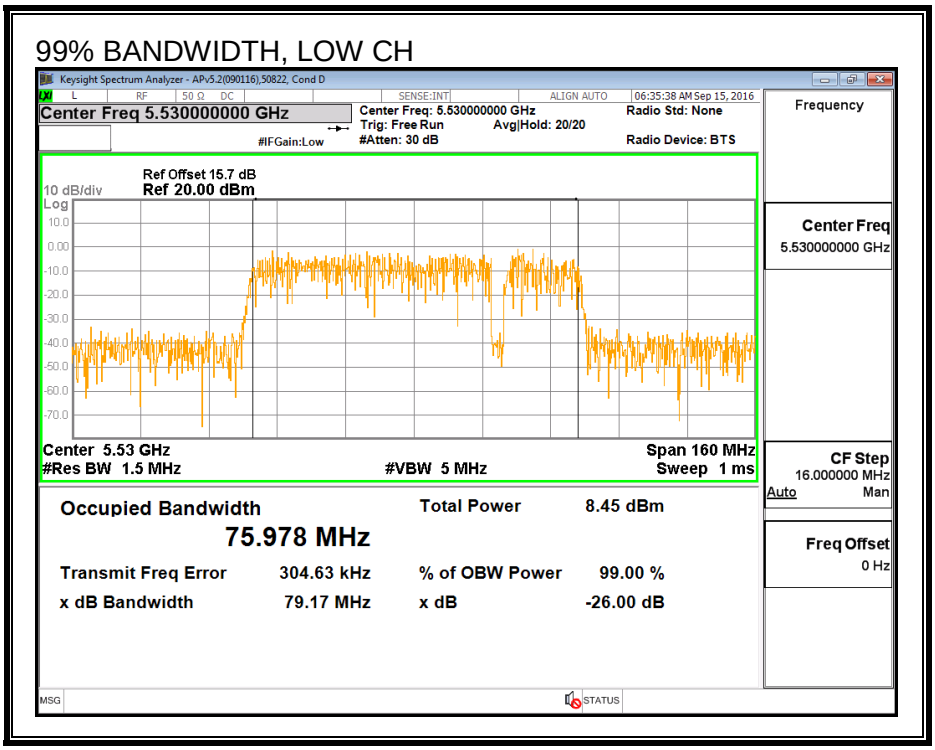


99% BANDWIDTH, MID CH

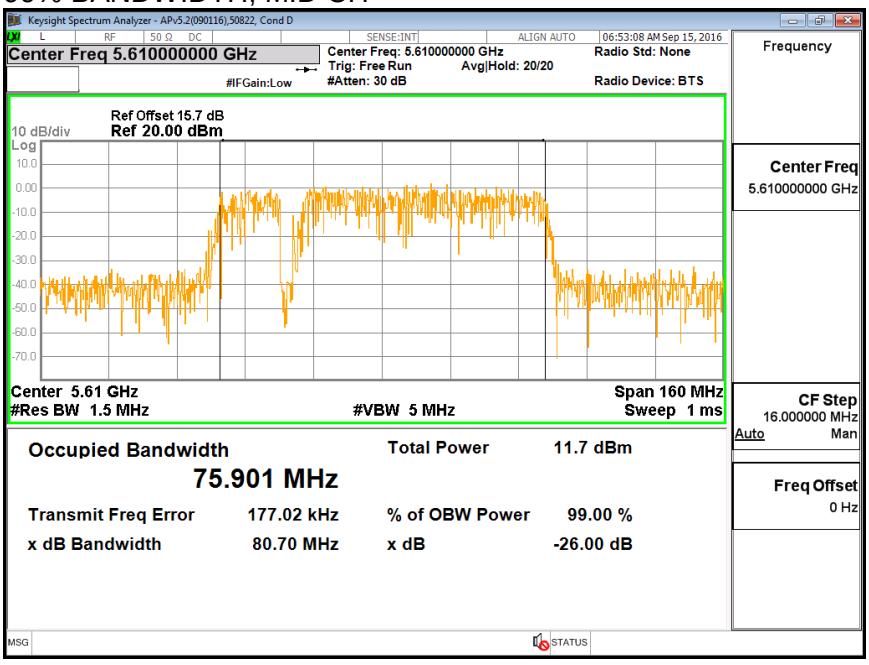




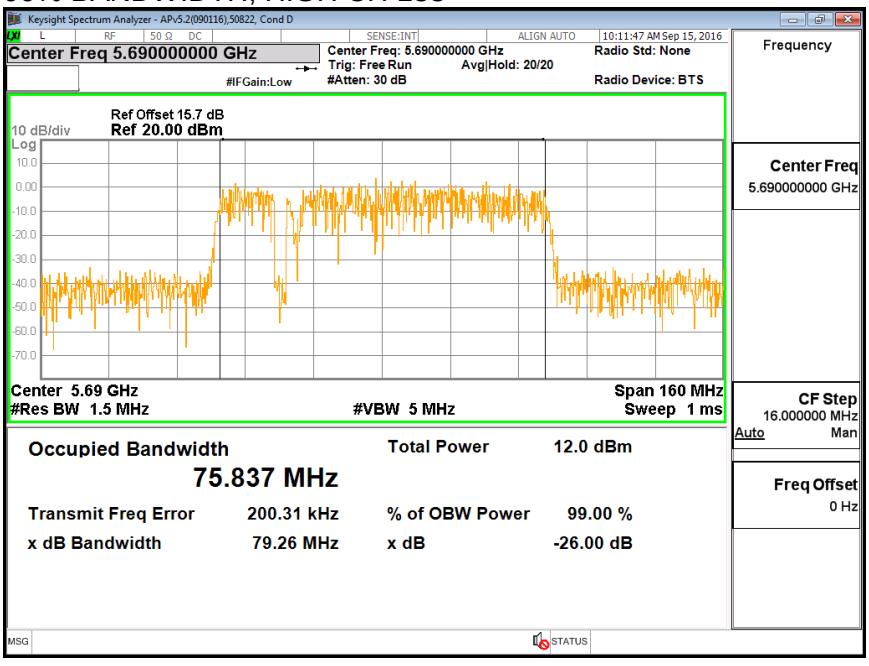
99% BANDWIDTH, CHAIN 1



99% BANDWIDTH, MID CH

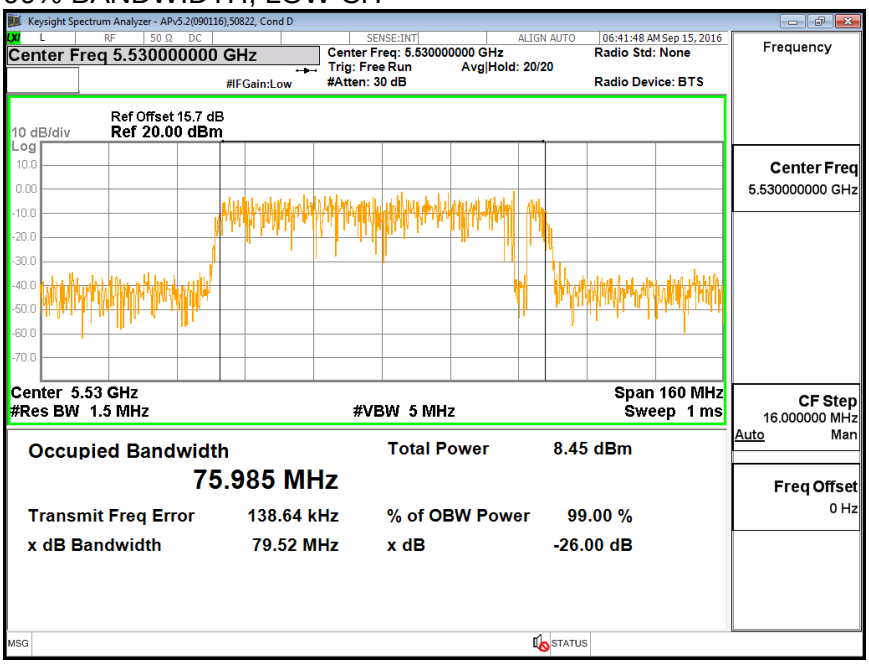


99% BANDWIDTH, HIGH CH 138

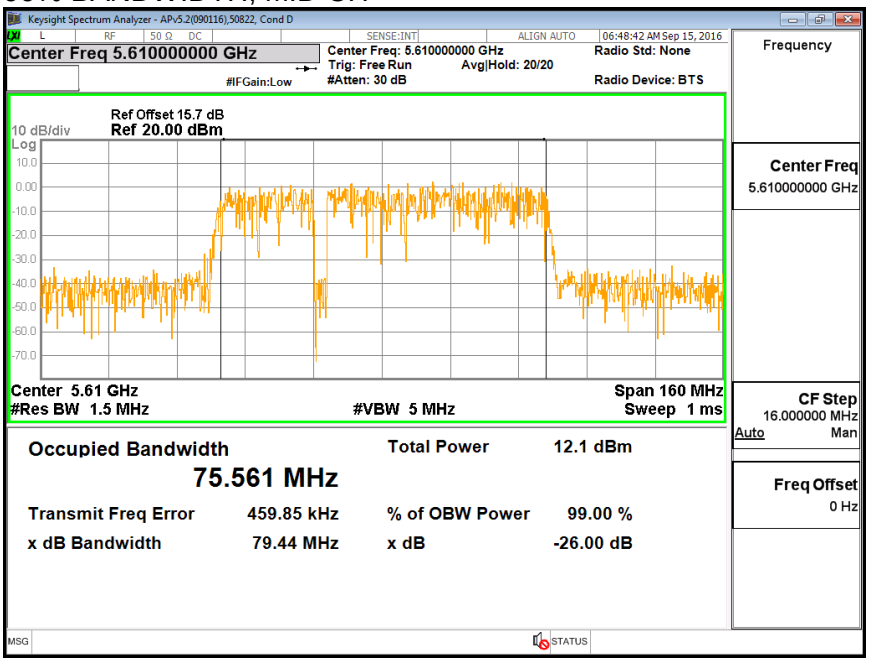


99% BANDWIDTH, CHAIN 2

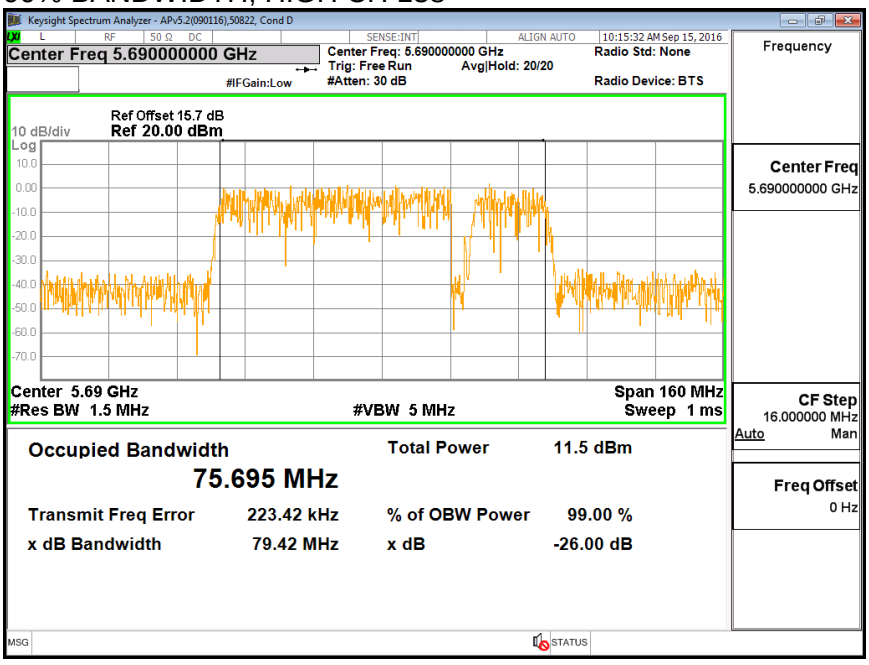
99% BANDWIDTH, LOW CH



99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH 138



8.105.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	44366	Date:	9/14/16

Average Power Results

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Chain 2 Power (dBm)	Total Power (dBm)
Low	5530	8.28	8.46	8.46	13.17
Mid	5610	12.07	12.14	12.11	16.88
High	5690	12.13	12.12	12.15	16.90

8.105.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-247 (6.2.3) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
4.90	7.40	5.20	10.68

RESULTS

ID:	44366	Date:	9/14/16

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	82.75	75.950	10.68	10.68	24.00	6.32
High	5610	82.46	75.561	10.68	10.68	24.00	6.32

Duty Cycle CF (dB)	0.62	Included in Calculations of Corr'd PSD

Output Power Results

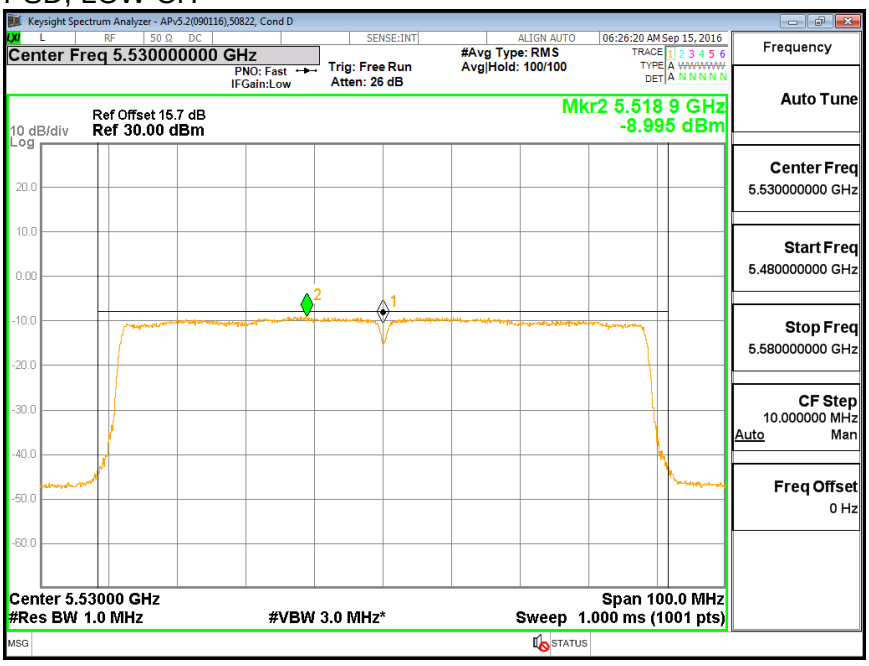
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	8.28	8.46	8.46	13.17	24.00	-10.83
High	5610	12.07	12.14	12.11	16.88	24.00	-7.12

PSD Results

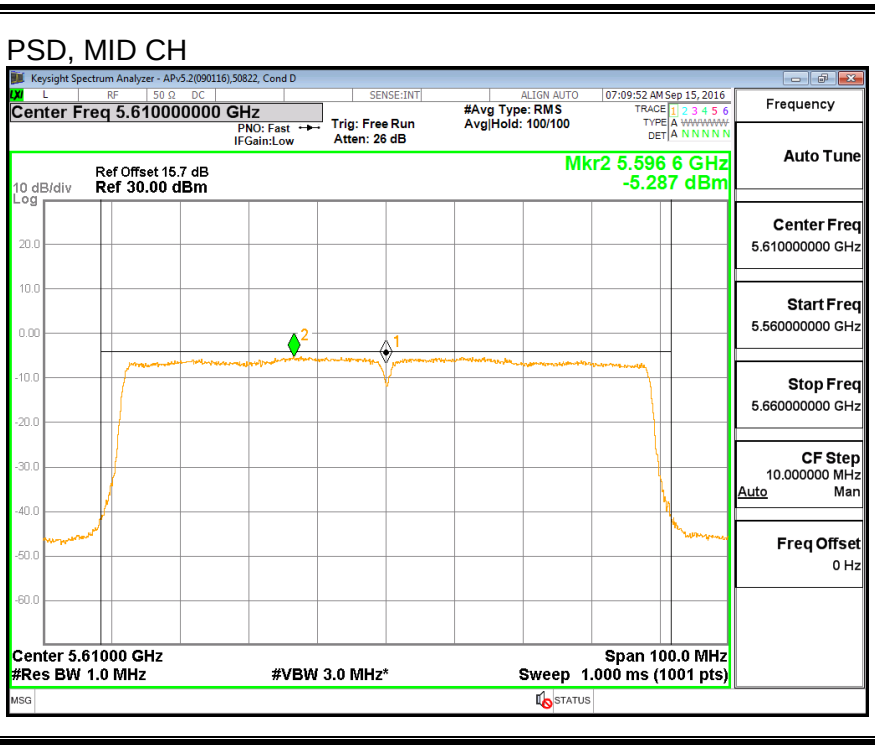
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	-9.00	-8.93	-8.82	-3.52	6.32	-9.84
High	5610	-5.29	-5.19	-5.14	0.19	6.32	-6.13

PSD, CHAIN 0

PSD, LOW CH

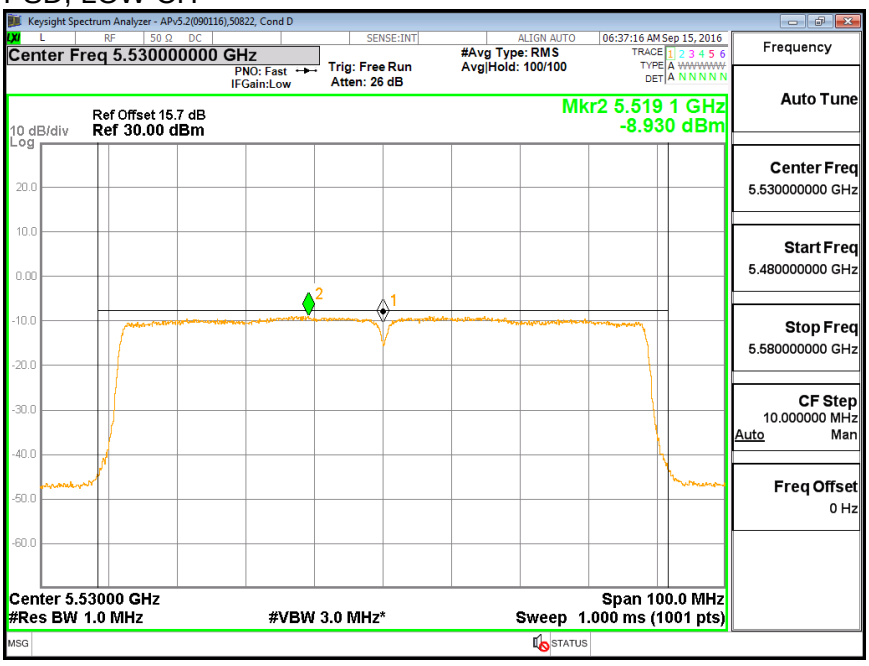


PSD, MID CH

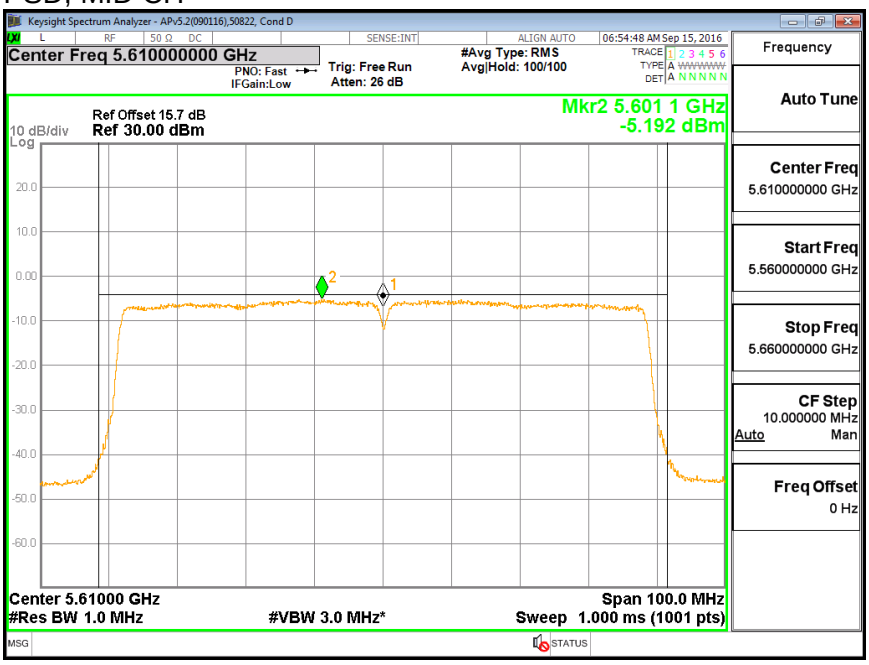


PSD, CHAIN 1

PSD, LOW CH

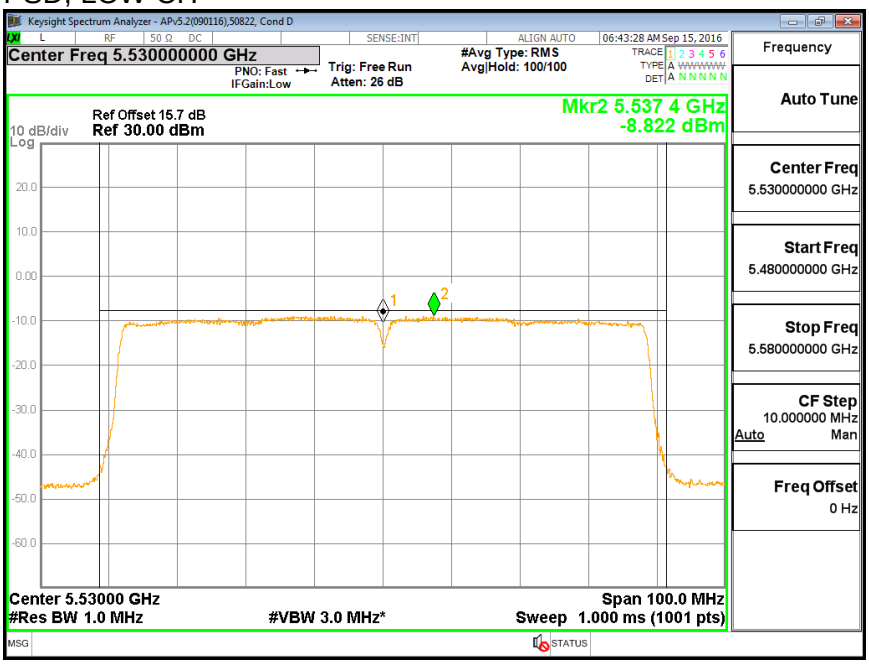


PSD, MID CH

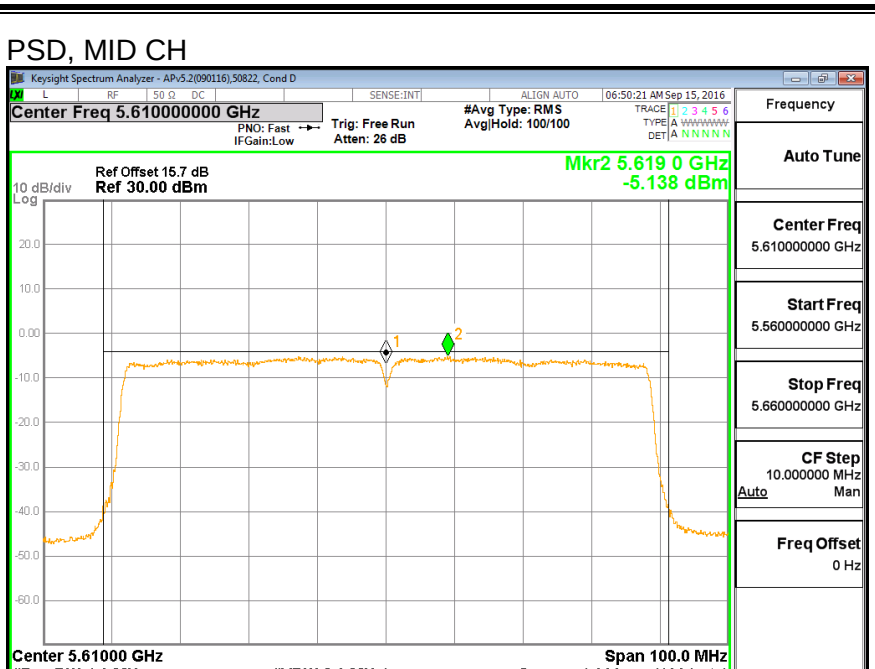


PSD, CHAIN 2

PSD, LOW CH



PSD, MID CH



8.105.5. STRADDLE CHANNEL 138 RESULTS (FCC)

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	76.11	10.68	10.68	19.32	6.32

Duty Cycle CF (dB)	0.62	Included in Calculations of Corr'd Power & PSD

Output Power Results

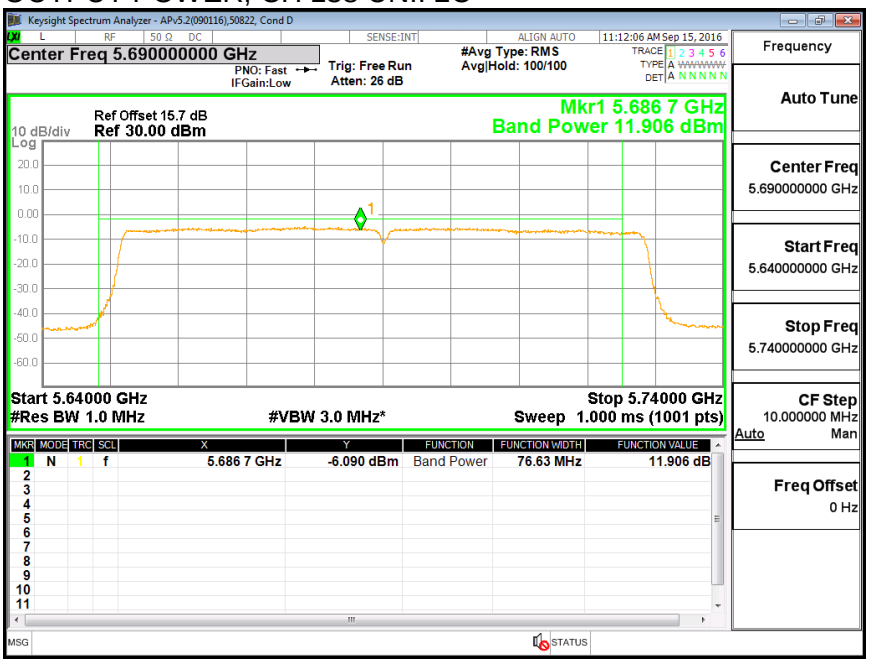
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	11.91	11.90	11.94	17.31	19.32	-2.01

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-5.01	-5.19	-5.07	0.30	6.32	-6.02

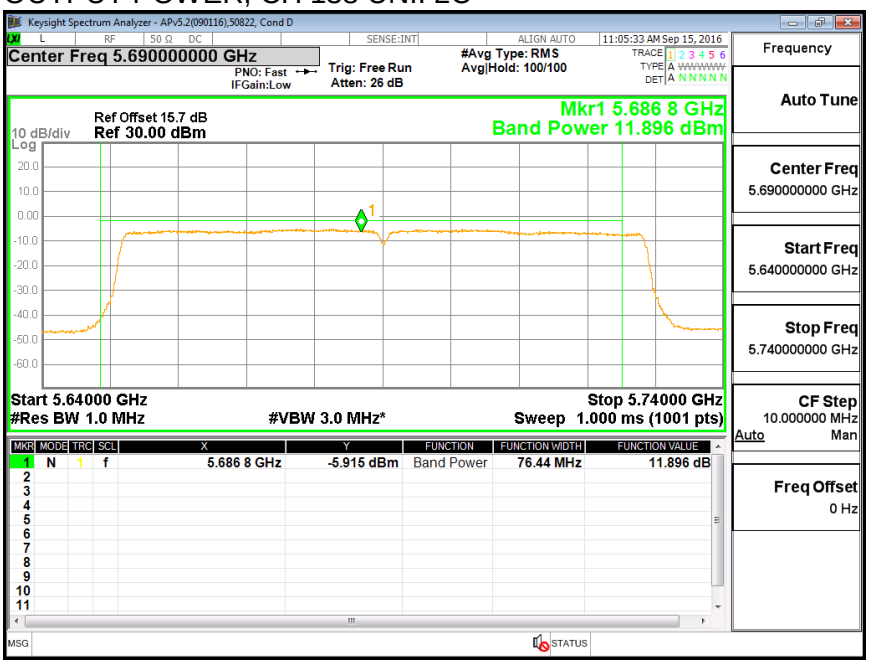
OUTPUT POWER, CHAIN 0

OUTPUT POWER, CH 138 UNII 2C



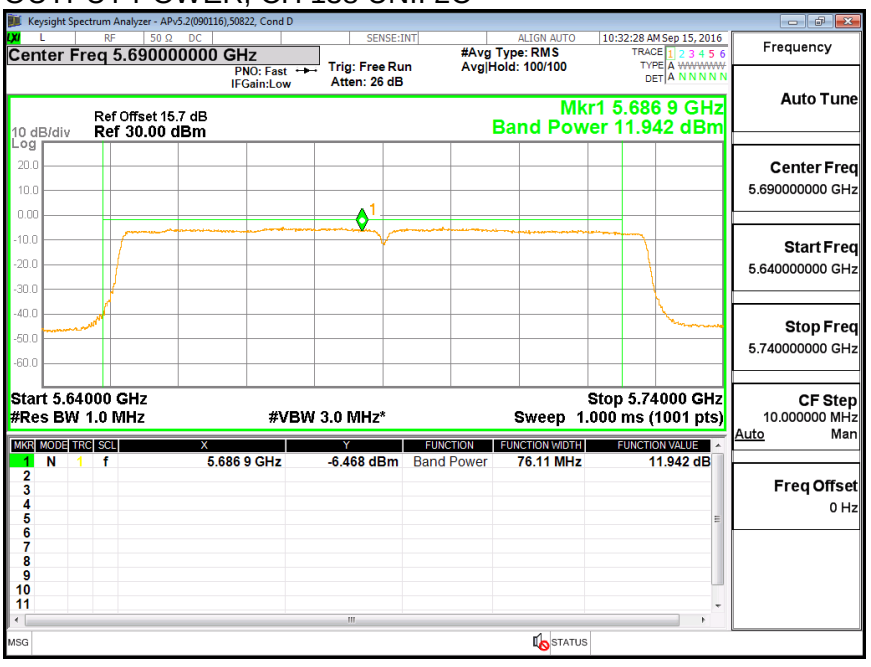
OUTPUT POWER, CHAIN 1

OUTPUT POWER, CH 138 UNII 2C



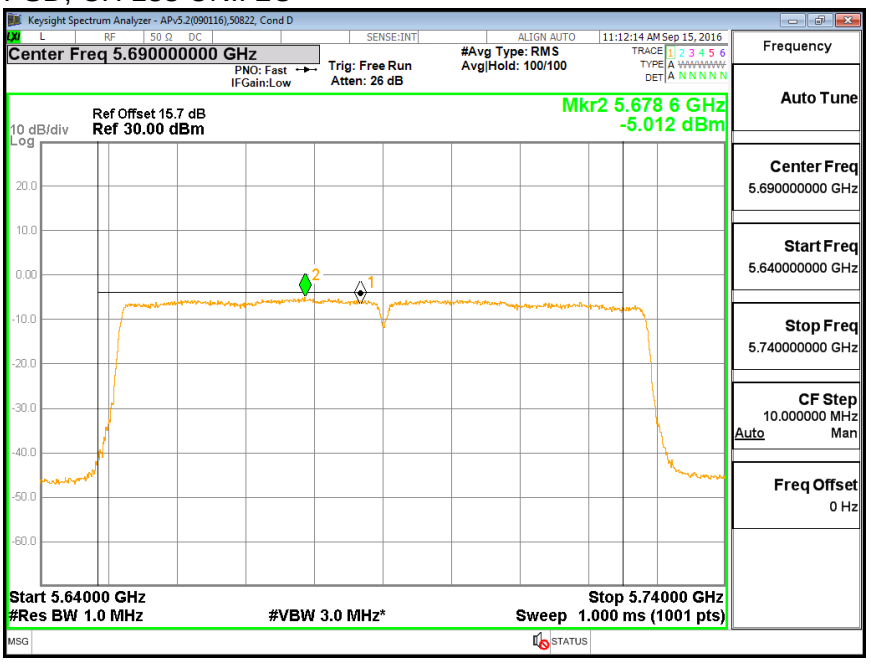
OUTPUT POWER, CHAIN 2

OUTPUT POWER, CH 138 UNII 2C

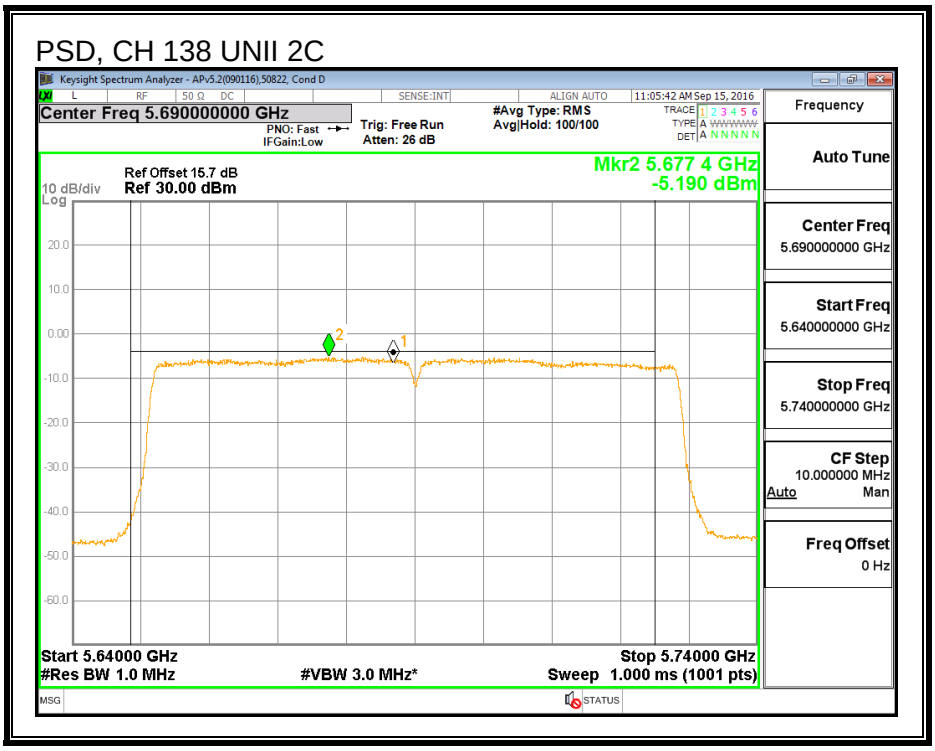


PSD, CHAIN 0

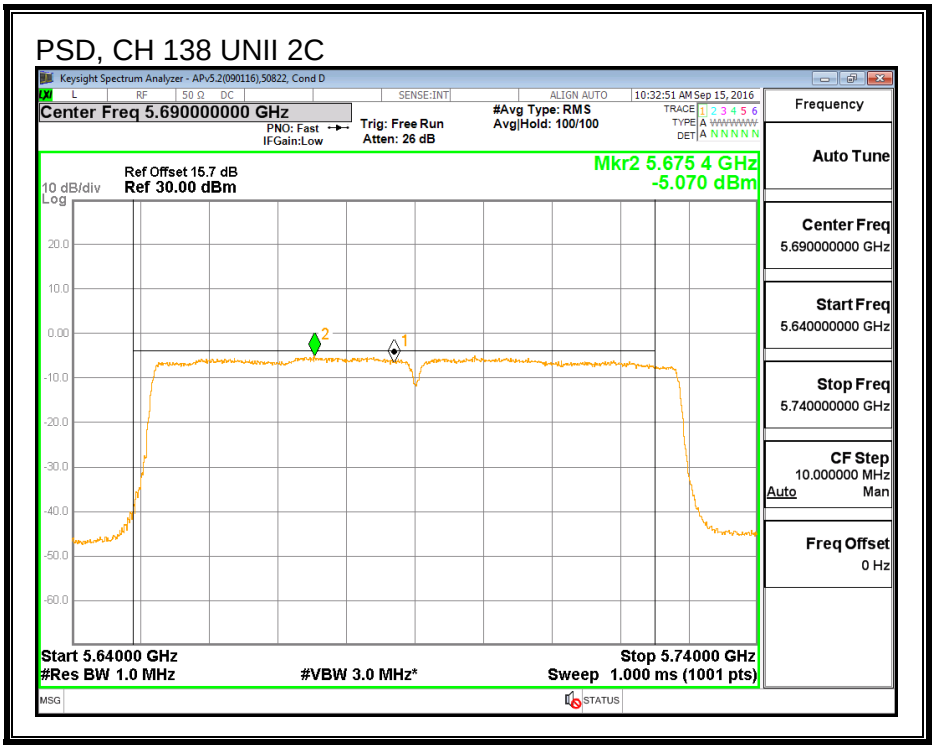
PSD, CH 138 UNII 2C



PSD, CHAIN 1



PSD, CHAIN 2



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	6.11	10.68	10.68	25.32	25.32

Duty Cycle CF (dB)	0.62	Included in Calculations of Corr'd Power & PSD

Output Power Results

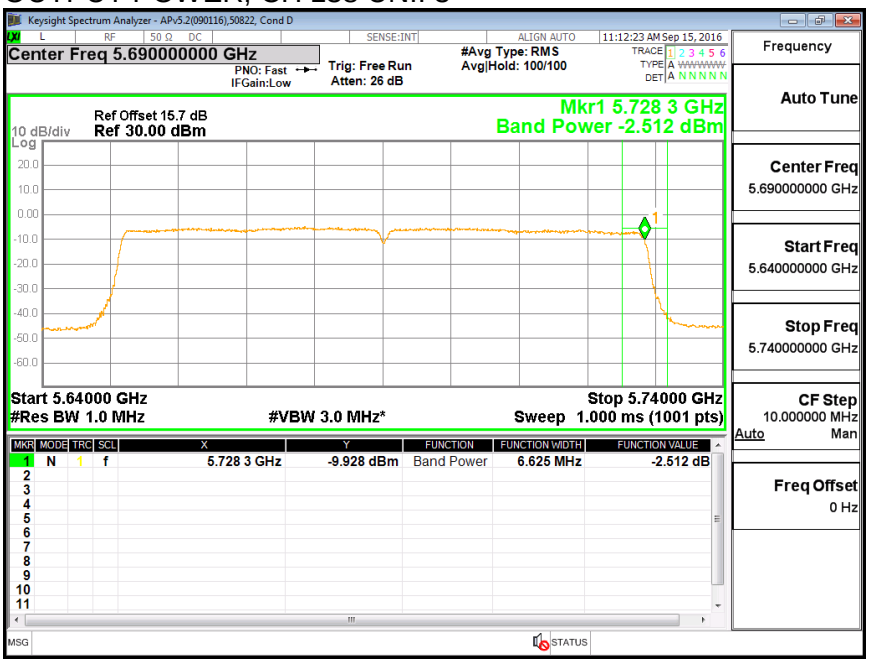
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	-2.51	-2.46	-2.62	2.86	25.32	-22.46

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-10.00	-9.75	-10.00	-4.52	25.32	-29.84

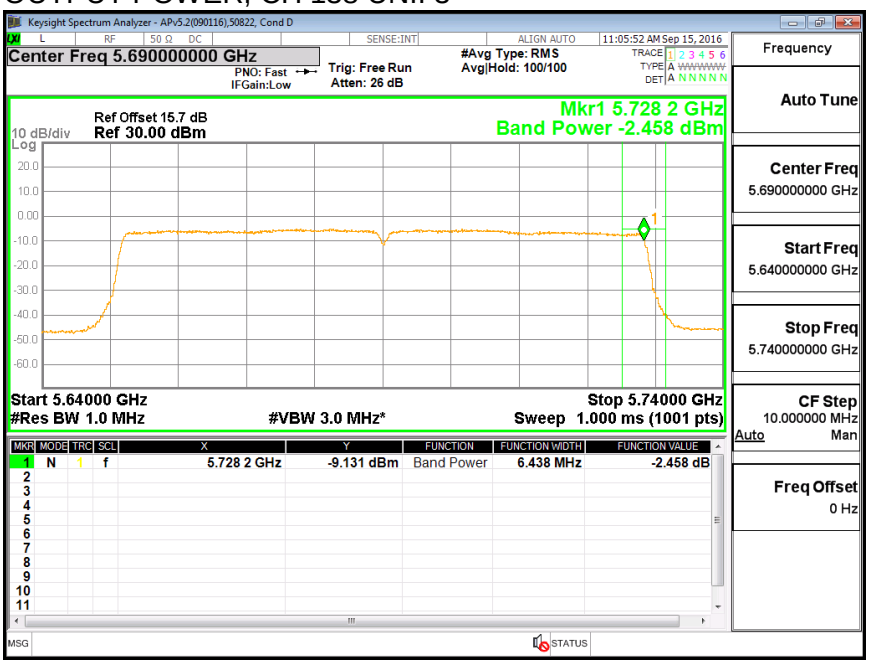
OUTPUT POWER, CHAIN 0

OUTPUT POWER, CH 138 UNII 3



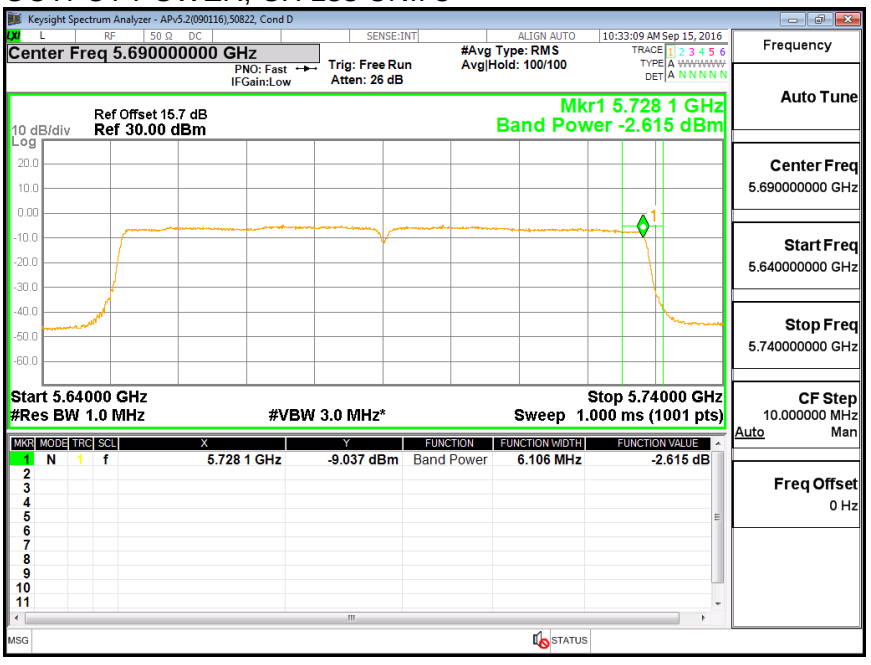
OUTPUT POWER, CHAIN 1

OUTPUT POWER, CH 138 UNII 3



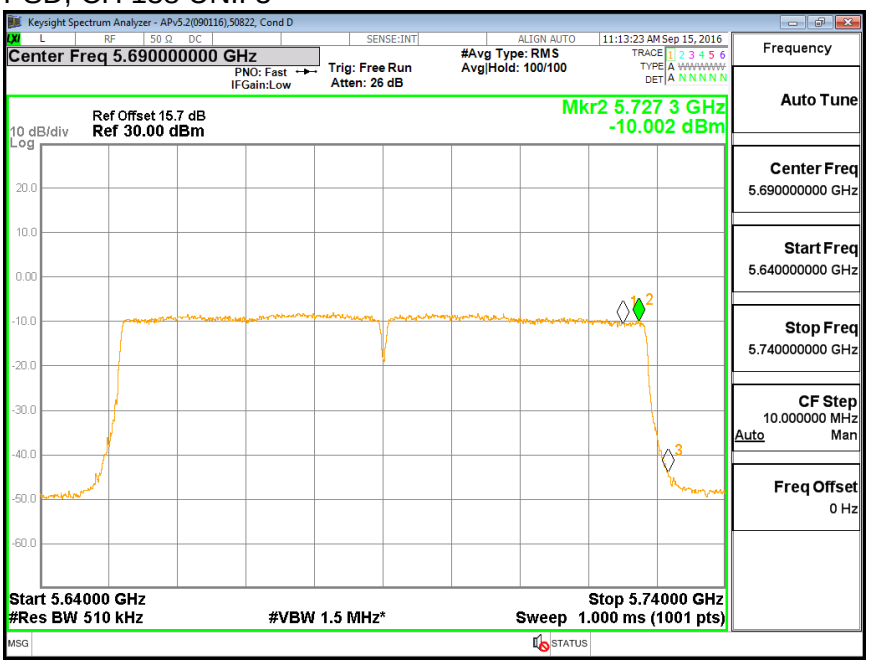
OUTPUT POWER, CHAIN 2

OUTPUT POWER, CH 138 UNII 3



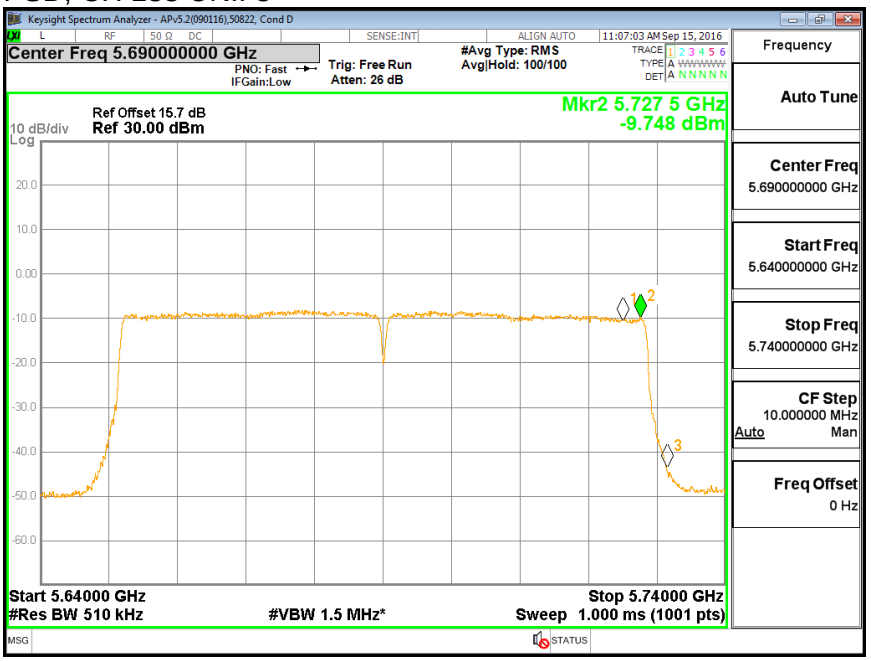
PSD, CHAIN 0

PSD, CH 138 UNII 3



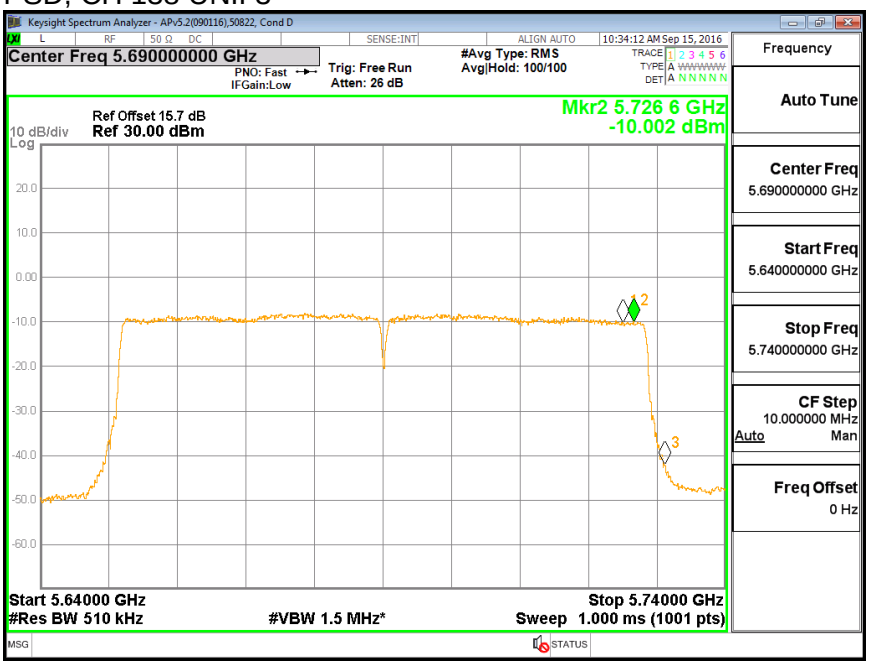
PSD, CHAIN 1

PSD, CH 138 UNII 3



PSD, CHAIN 2

PSD, CH 138 UNII 3



8.105.6. STRADDLE CHANNEL 138 RESULTS (IC)

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	72.850	10.68	10.68	19.32	6.32

Duty Cycle CF (dB)	0.62	Included in Calculations of Corr'd Power & PSD

Output Power Results

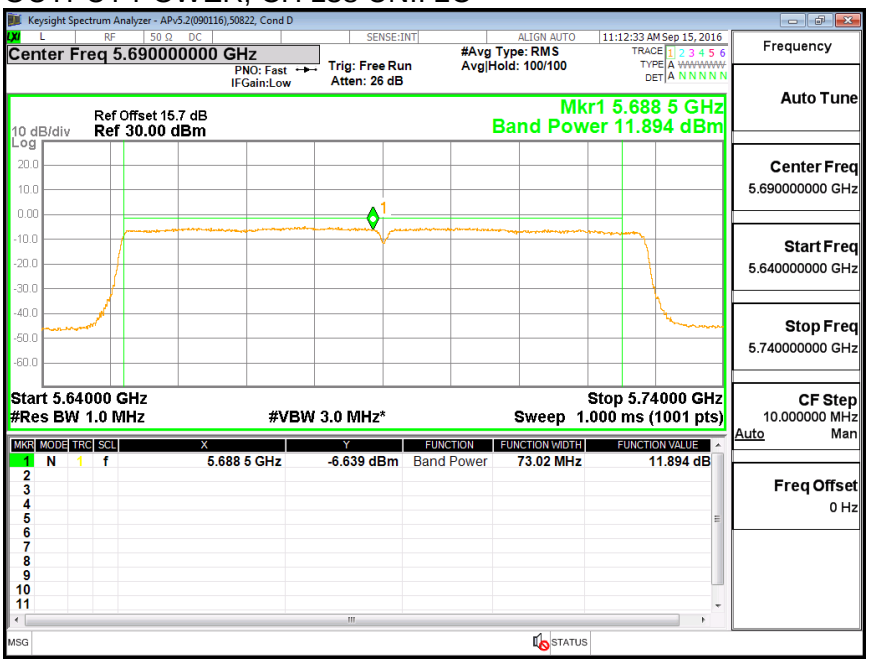
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	11.89	11.88	11.92	17.29	19.32	-2.03

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-5.01	-5.19	-5.07	0.30	6.32	-6.02

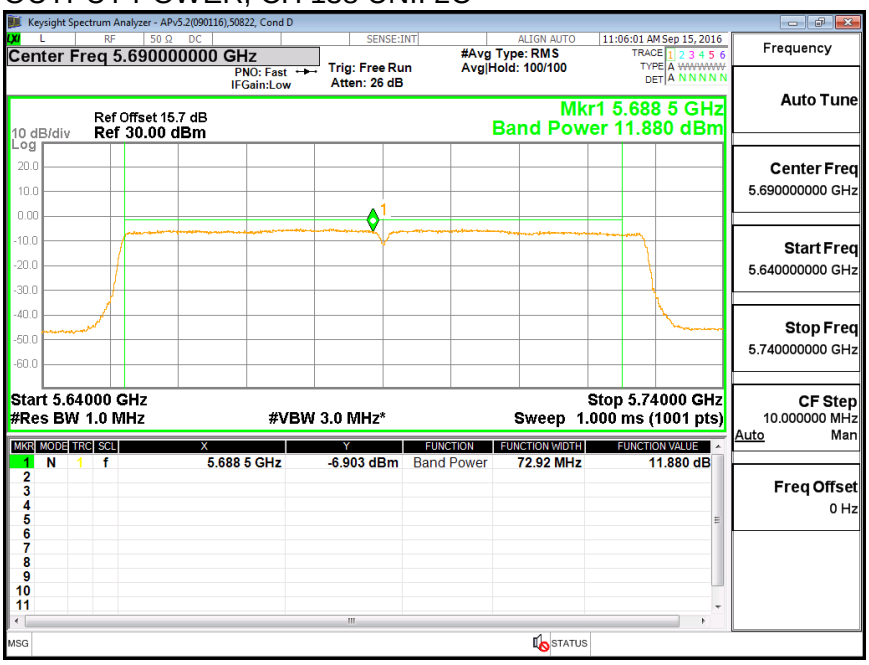
OUTPUT POWER, CHAIN 0

OUTPUT POWER, CH 138 UNII 2C

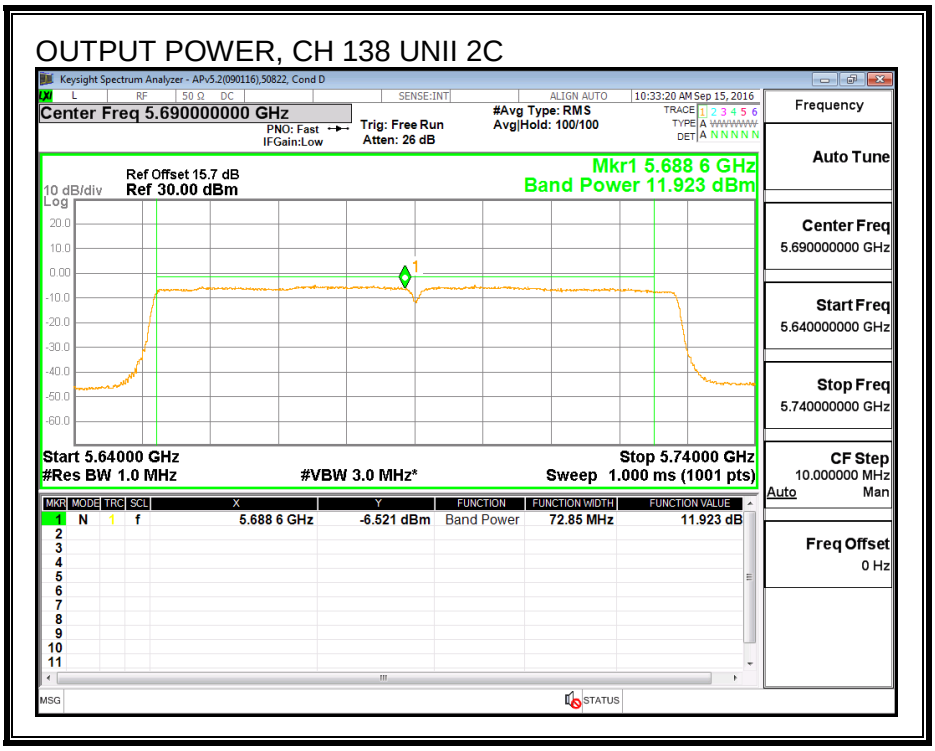


OUTPUT POWER, CHAIN 1

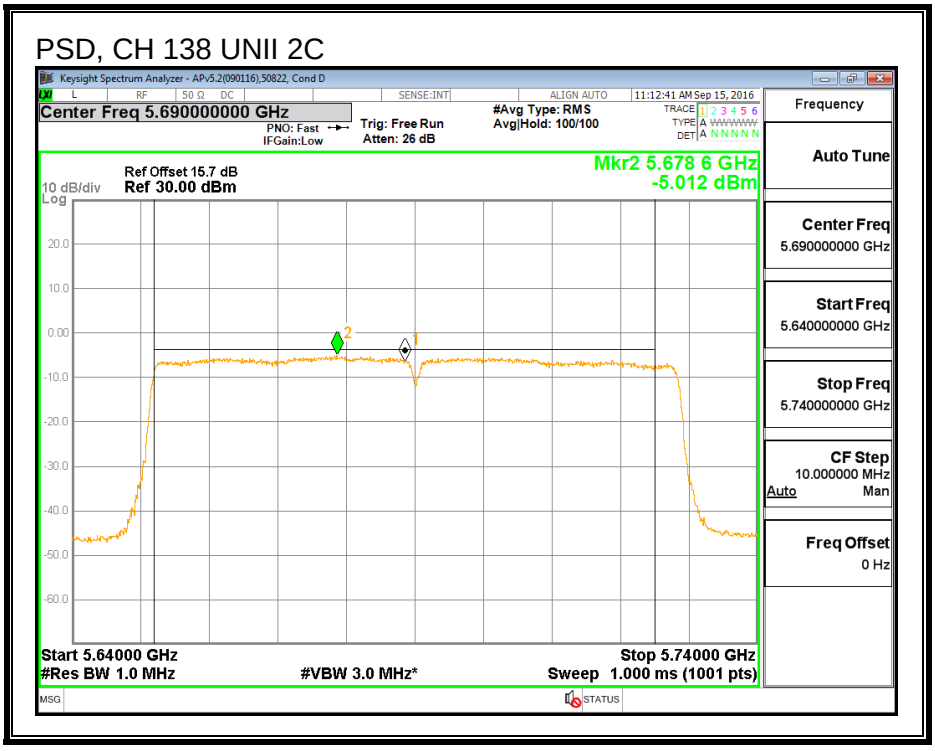
OUTPUT POWER, CH 138 UNII 2C



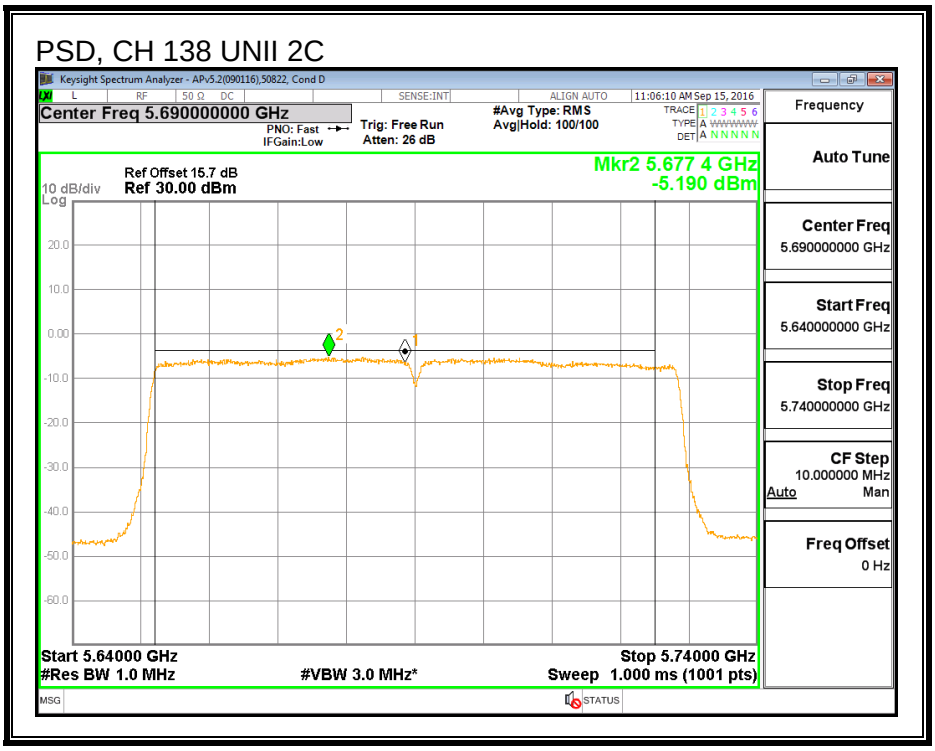
OUTPUT POWER, CHAIN 2



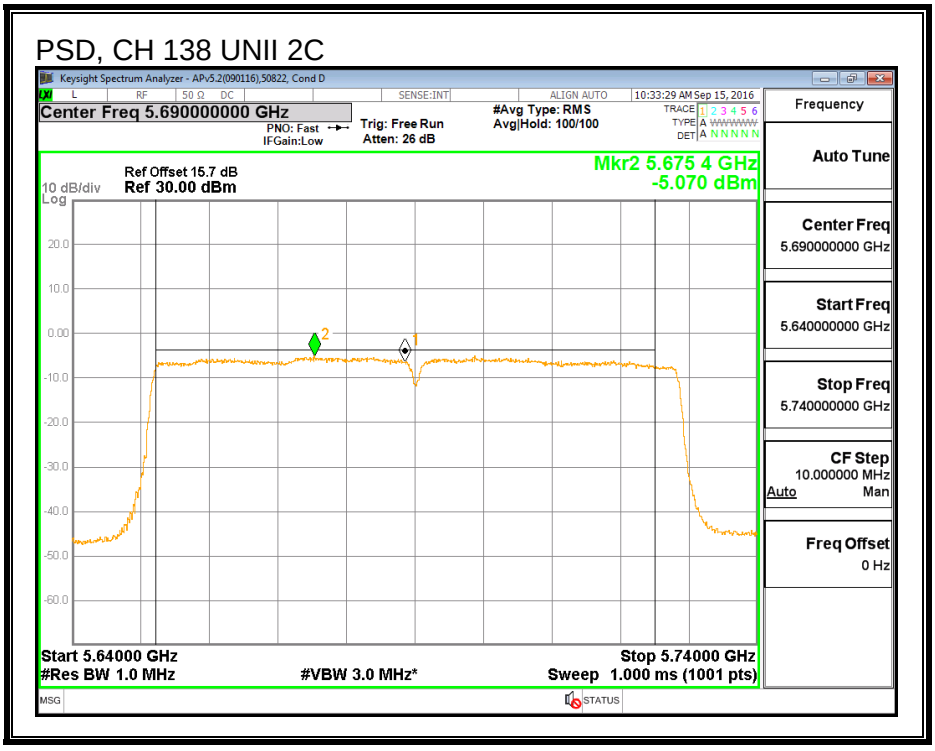
PSD, CHAIN 0



PSD, CHAIN 1



PSD, CHAIN 2



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	2.848	10.68	10.68	25.32	25.32

Duty Cycle CF (dB)	0.62	Included in Calculations of Corr'd Power & PSD

Output Power Results

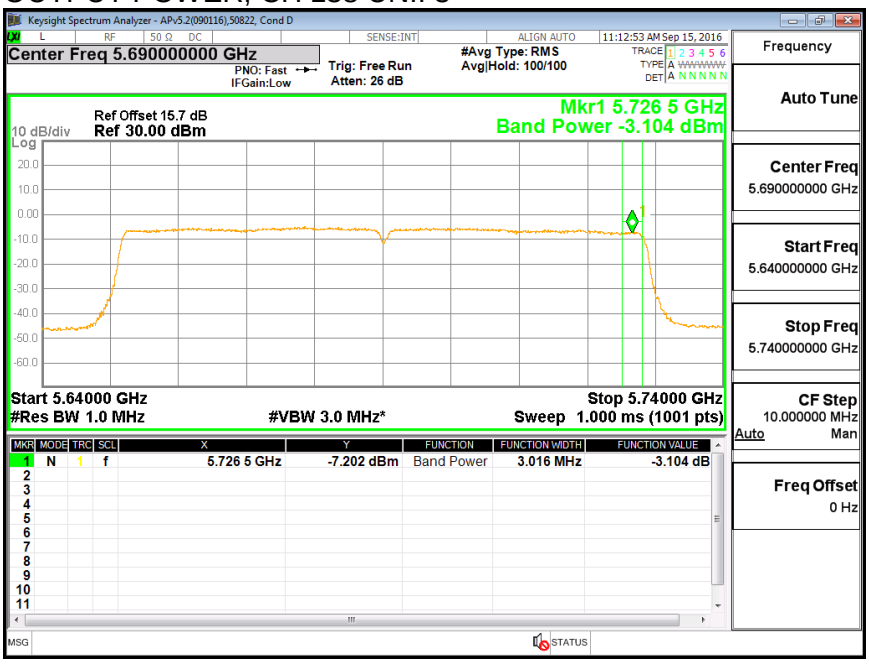
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	-3.10	-3.20	-3.49	2.13	25.32	-23.19

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-10.00	-9.75	-10.00	-4.52	25.32	-29.84

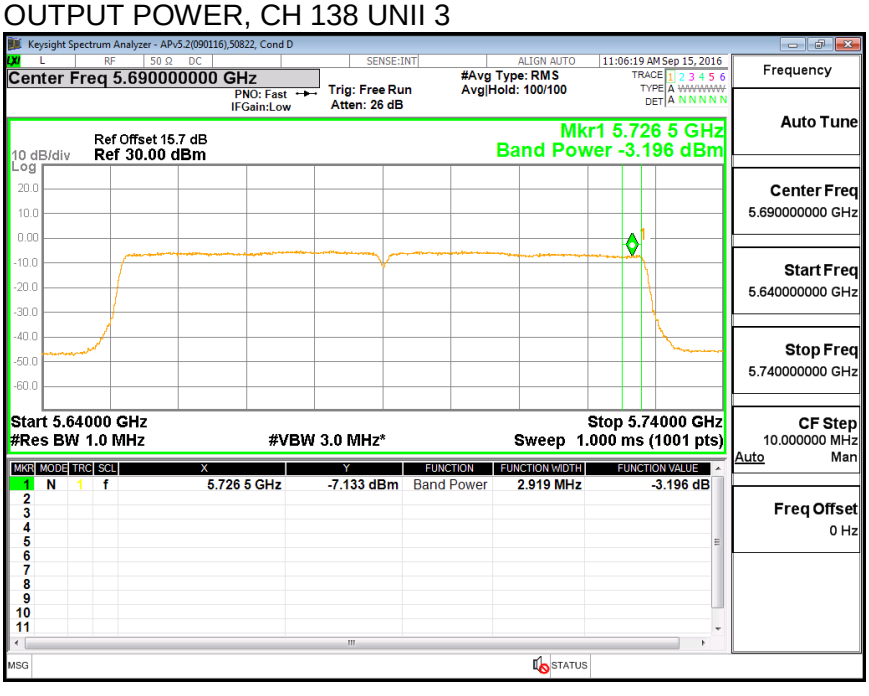
OUTPUT POWER, CHAIN 0

OUTPUT POWER, CH 138 UNII 3



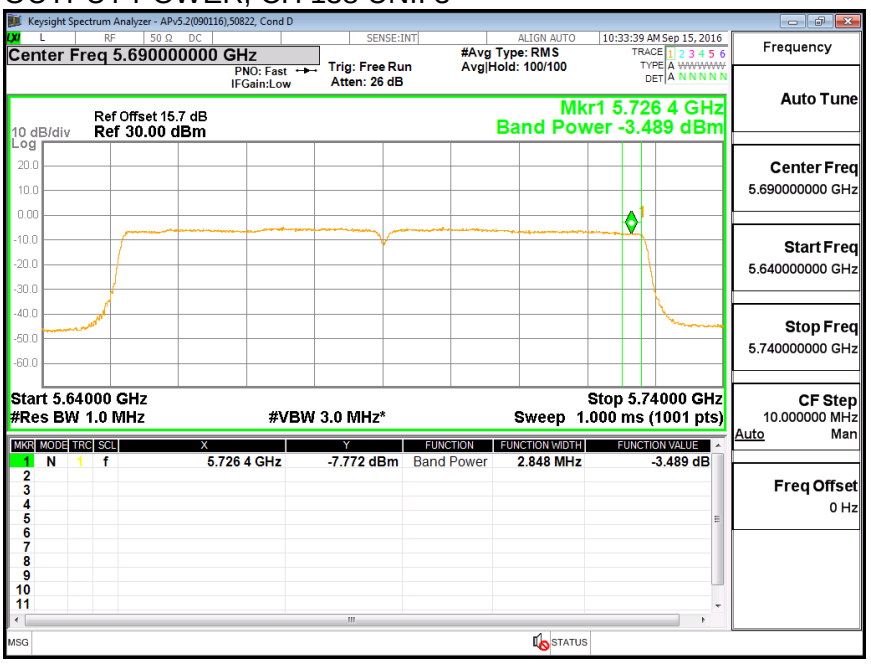
OUTPUT POWER, CHAIN 1

OUTPUT POWER, CH 138 UNII 3



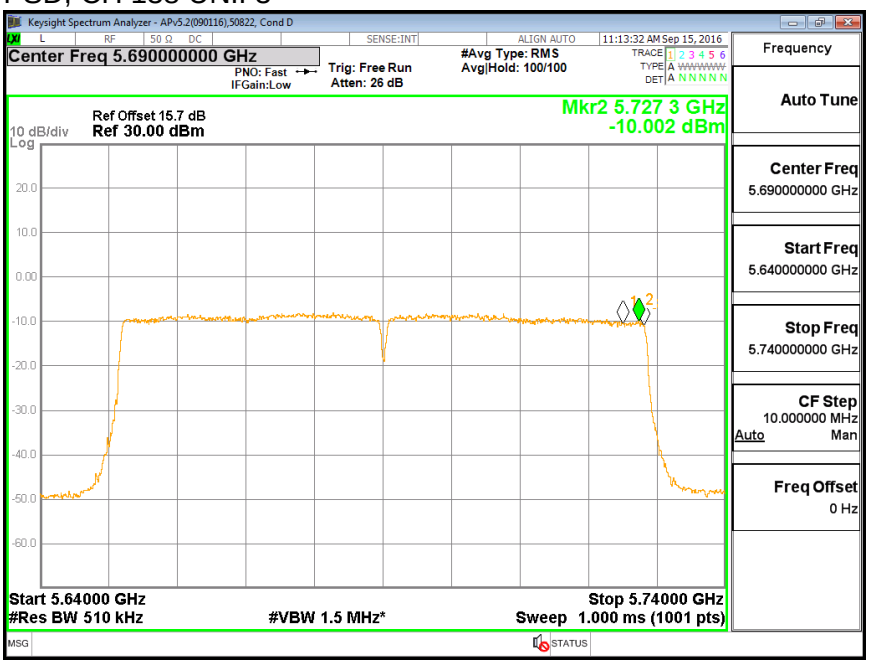
OUTPUT POWER, CHAIN 2

OUTPUT POWER, CH 138 UNII 3

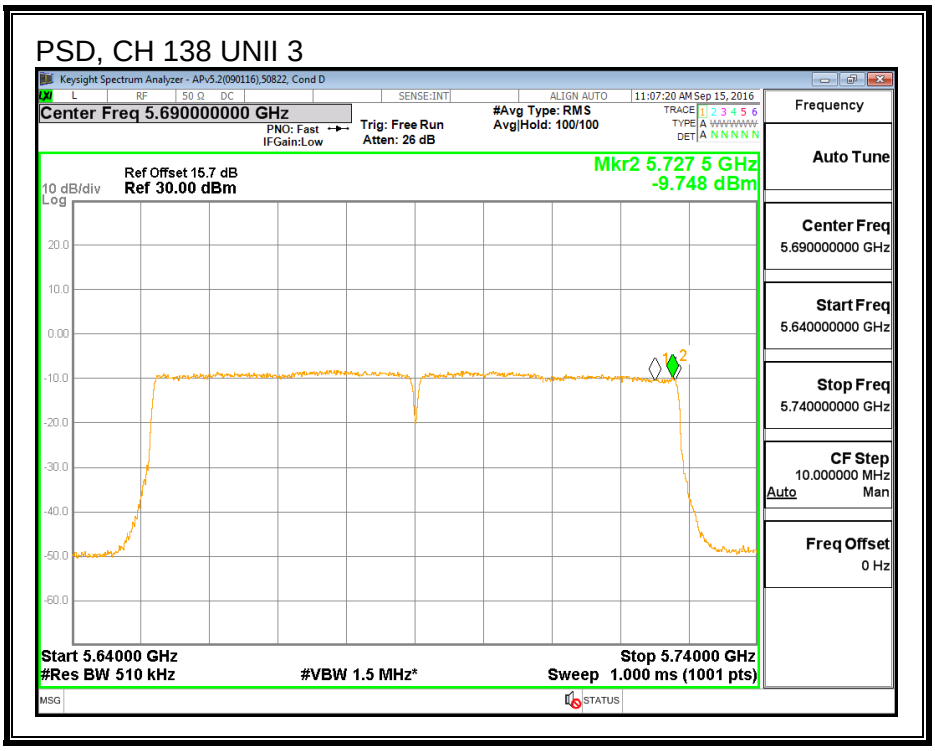


PSD, CHAIN 0

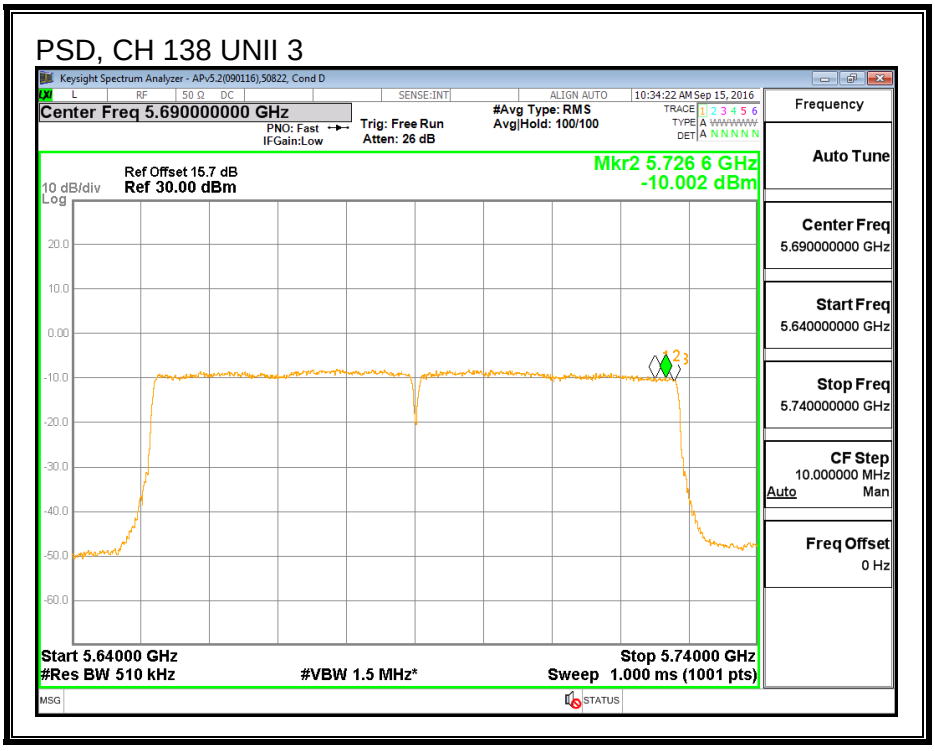
PSD, CH 138 UNII 3



PSD, CHAIN 1



PSD, CHAIN 2



8.105.7. **6 dB BANDWIDTH**

LIMITS

FCC §15.407 (e)

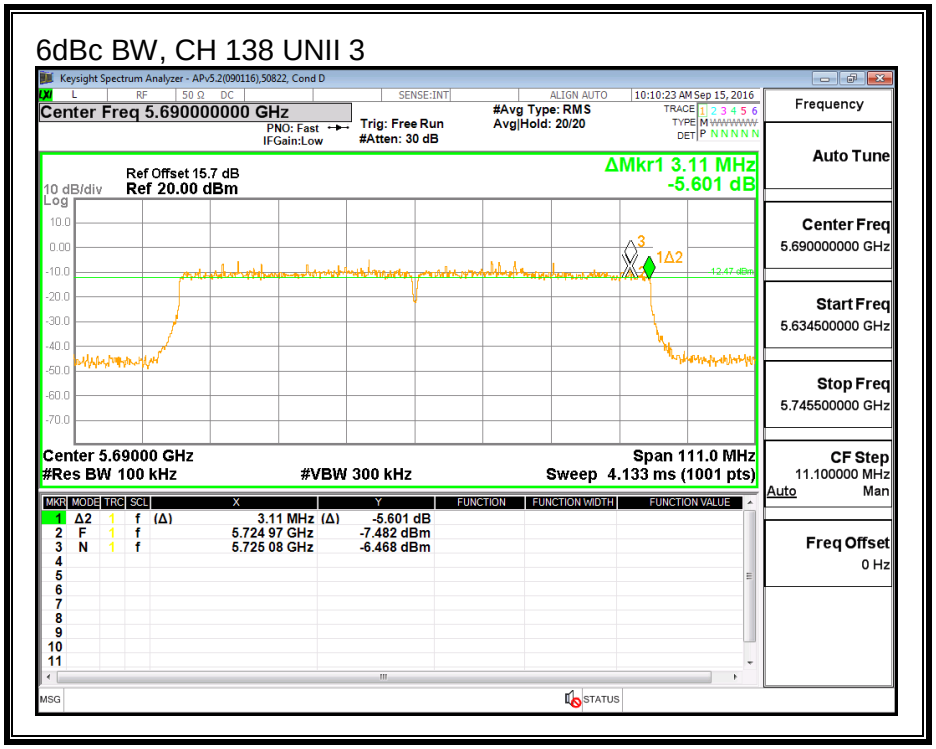
IC RSS-247 (6.2.4) (1)

The minimum 6 dB bandwidth shall be at least 500 kHz.

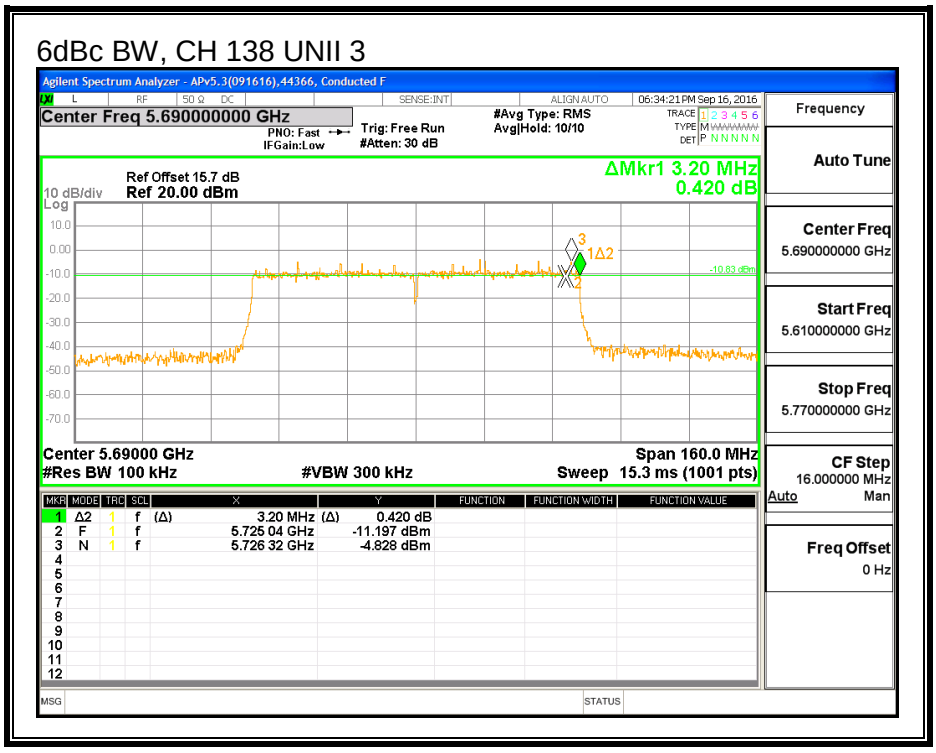
RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	6 dB BW Chain 2 (MHz)
High	5690	3.11	3.20	3.19

CHAIN 0

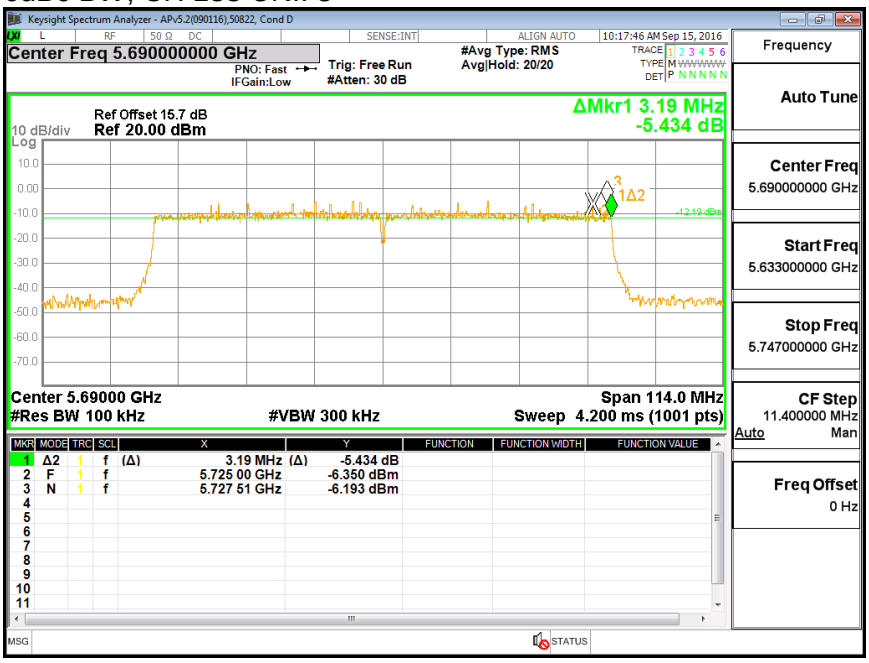


CHAIN 1



CHAIN 2

6dBc BW, CH 138 UNII 3



END OF REPORT