CHANNEL	TX Channel 157	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5785	105.9	105.48	/	/	35.14	11.45	46.17	100	345	Peak
5785	99.85	99.43	/	/	35.14	11.45	46.17	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5785	103.39	103.17	/	/	34.94	11.45	46.17	100	345	Peak
5785	97.19	96.97	/	/	34.94	11.45	46.17	100	345	Average

REMARKS:

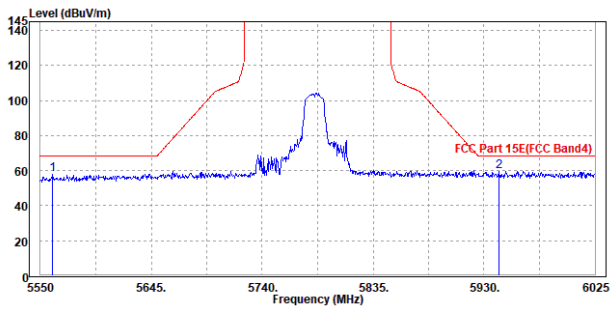
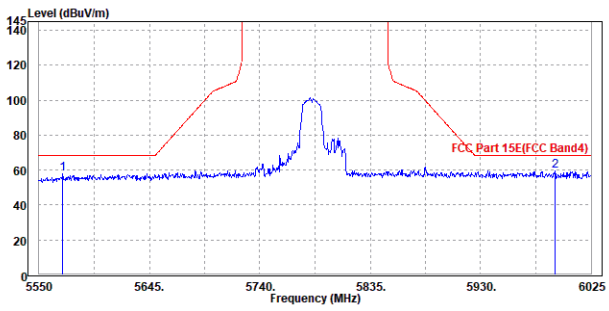
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5785MHz: Fundamental frequency.

OOBE DATA

802.11a

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5560.45	57.85	58.7	68.2	-10.35	34.87	10.51	46.23	202	345	Peak
5942.825	59.72	58.41	68.2	-8.48	35.33	12.11	46.13	202	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5570.425	57.96	58.96	68.2	-10.24	34.68	10.55	46.23	202	345	Peak
5993.65	59.33	57.93	68.2	-8.87	35.19	12.32	46.11	202	345	Peak

CH 157

Horiontal	Vertical
	

CHANNEL	TX Channel 165	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5825	104.78	104.13	/	/	35.19	11.62	46.16	100	345	Peak
5825	98.41	97.76	/	/	35.19	11.62	46.16	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5825	102.68	102.23	/	/	34.99	11.62	46.16	100	348	Peak
5825	96.39	95.94	/	/	34.99	11.62	46.16	100	348	Average

REMARKS:

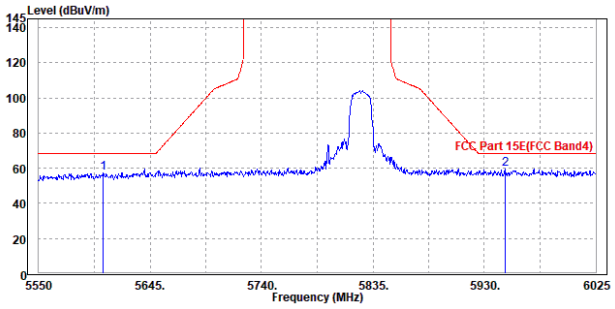
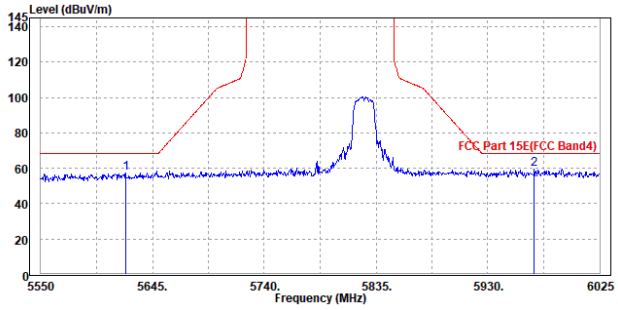
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5825MHz: Fundamental frequency.

OOBE DATA

802.11a

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5604.625	57.21	57.81	68.2	-10.99	34.93	10.69	46.22	200	345	Peak
5948.05	59.68	58.33	68.2	-8.52	35.34	12.13	46.12	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5622.2	57.47	58.17	68.2	-10.73	34.75	10.77	46.22	200	345	Peak
5969.425	59.31	58.05	68.2	-8.89	35.16	12.22	46.12	200	345	Peak

CH 165

Horiontal	Vertical
	

802.11n (20MHz)

CHANNEL	TX Channel 149	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	105.29	105.1	/	/	35.09	11.28	46.18	100	345	Peak
5745	98.99	98.8	/	/	35.09	11.28	46.18	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	100.55	100.56	/	/	34.89	11.28	46.18	102	345	Peak
5745	94.66	94.67	/	/	34.89	11.28	46.18	102	345	Average

REMARKS:

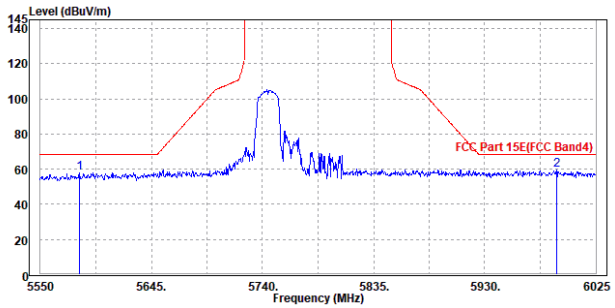
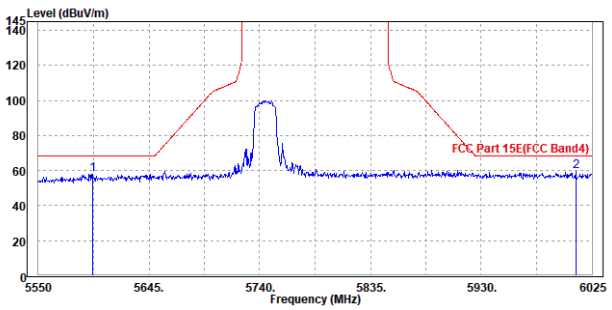
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5745MHz: Fundamental frequency.

OOBE DATA

802.11n (20MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5583.25	58.04	58.77	68.2	-10.16	34.9	10.6	46.23	200	345	Peak
5991.275	59.31	57.72	68.2	-8.89	35.39	12.31	46.11	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5596.55	57.7	58.54	68.2	-10.5	34.72	10.66	46.22	200	345	Peak
6011.225	59.42	57.96	68.2	-8.78	35.21	12.36	46.11	200	345	Peak

CH 149

Horiontal	Vertical
	

CHANNEL	TX Channel 157	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5785	104.68	104.26	/	/	35.14	11.45	46.17	100	345	Peak
5785	98.37	97.95	/	/	35.14	11.45	46.17	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5785	101.59	101.37	/	/	34.94	11.45	46.17	100	348	Peak
5785	95.12	94.9	/	/	34.94	11.45	46.17	100	348	Average

REMARKS:

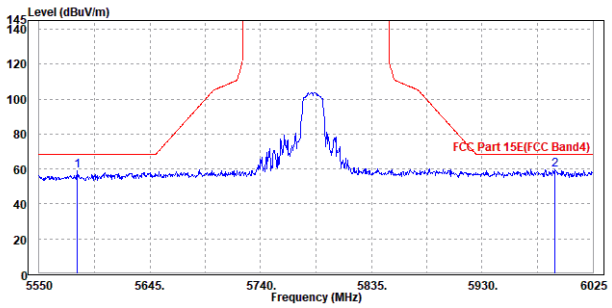
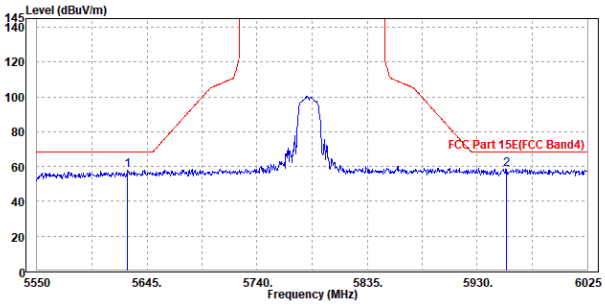
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5785MHz: Fundamental frequency.

OOBE DATA

802.11n (20MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV /m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5582.3	58.89	59.62	68.2	-9.31	34.9	10.6	46.23	200	345	Peak
5992.7	59.37	57.77	68.2	-8.83	35.39	12.32	46.11	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV /m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5628.375	57.95	58.62	68.2	-10.25	34.75	10.79	46.21	202	348	Peak
5955.175	58.57	57.38	68.2	-9.63	35.15	12.16	46.12	202	348	Peak

CH 157

Horiontal	Vertical
	

CHANNEL	TX Channel 165	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5825	103.95	103.3	/	/	35.19	11.62	46.16	100	345	Peak
5825	97.06	96.41	/	/	35.19	11.62	46.16	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5825	101.81	101.36	/	/	34.99	11.62	46.16	100	348	Peak
5825	95.25	94.8	/	/	34.99	11.62	46.16	100	348	Average

REMARKS:

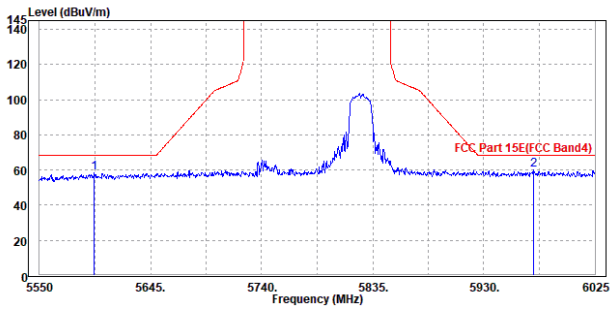
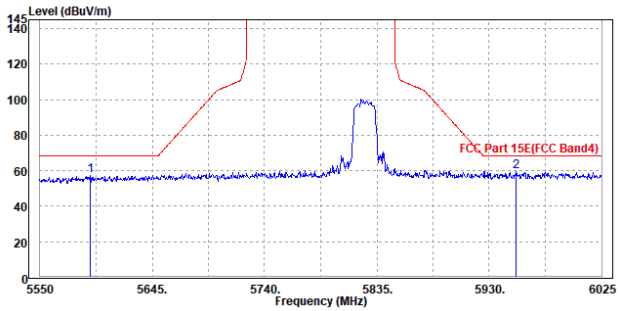
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5825MHz: Fundamental frequency.

OOBE DATA

802.11n (20MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5597.025	58.34	58.98	68.2	-9.86	34.92	10.66	46.22	200	345	Peak
5972.75	60.14	58.65	68.2	-8.06	35.37	12.24	46.12	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5592.75	57.26	58.13	68.2	-10.94	34.71	10.64	46.22	200	345	Peak
5952.8	59.6	58.43	68.2	-8.6	35.14	12.15	46.12	200	345	Peak

CH 165

Horiontal	Vertical
	

802.11n (40MHz)

CHANNEL	TX Channel 151	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5755	101.26	101.01	/	/	35.11	11.32	46.18	100	345	Peak
5755	96.44	96.19	/	/	35.11	11.32	46.18	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5755	96.82	96.77	/	/	34.91	11.32	46.18	100	345	Peak
5755	91.61	91.56	/	/	34.91	11.32	46.18	100	345	Average

REMARKS:

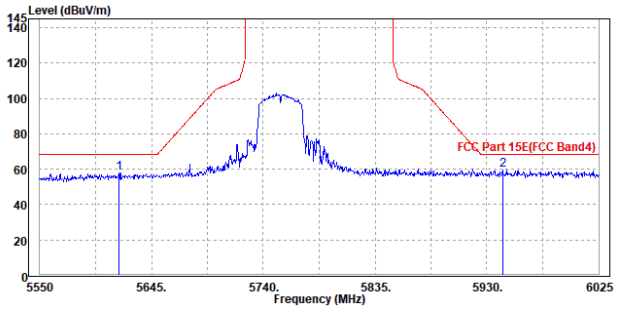
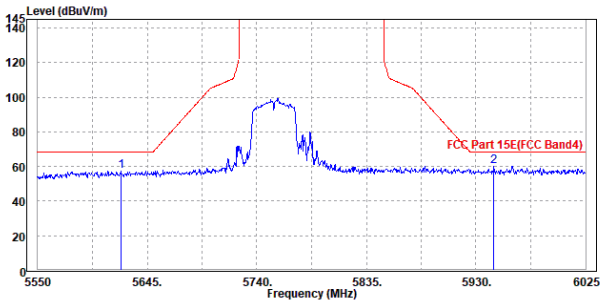
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5755MHz: Fundamental frequency.

OOBE DATA

802.11n (40MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5617.45	58.02	58.55	68.2	-10.18	34.94	10.75	46.22	200	345	Peak
5943.3	59.51	58.2	68.2	-8.69	35.33	12.11	46.13	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5622.2	57.26	57.96	68.2	-10.94	34.75	10.77	46.22	200	345	Peak
5945.675	60.17	59.05	68.2	-8.03	35.13	12.12	46.13	200	345	Peak

CH 151

Horiontal	Vertical
	

CHANNEL	TX Channel 159	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5795	100.68	100.21	/	/	35.15	11.49	46.17	100	345	Peak
5795	95.56	95.09	/	/	35.15	11.49	46.17	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5795	97.89	97.62	/	/	34.95	11.49	46.17	100	348	Peak
5795	93.17	92.9	/	/	34.95	11.49	46.17	100	348	Average

REMARKS:

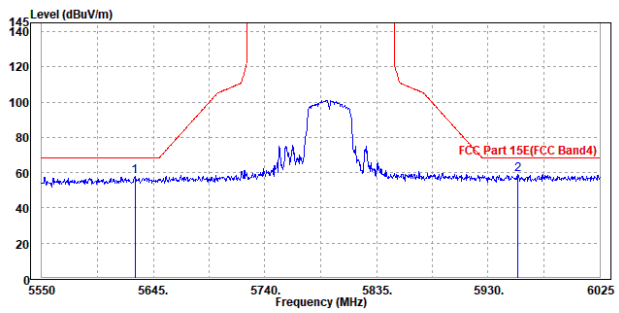
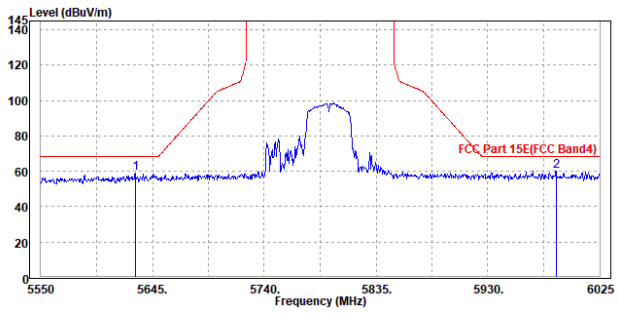
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5795MHz: Fundamental frequency.

OOBE DATA

802.11n (40MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5629.325	57.66	58.11	68.2	-10.54	34.96	10.8	46.21	200	345	Peak
5955.175	59.09	57.7	68.2	-9.11	35.35	12.16	46.12	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5630.275	59.03	59.68	68.2	-9.17	34.76	10.8	46.21	200	345	Peak
5987.95	60.08	58.7	68.2	-8.12	35.19	12.3	46.11	200	345	Peak

CH 159

Horiontal	Vertical
	

802.11ac (20MHz)

CHANNEL	TX Channel 149	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	104.29	104.1	/	/	35.09	11.28	46.18	100	345	Peak
5745	98.12	97.93	/	/	35.09	11.28	46.18	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	99.86	99.87	/	/	34.89	11.28	46.18	102	345	Peak
5745	93.64	93.65	/	/	34.89	11.28	46.18	102	345	Average

REMARKS:

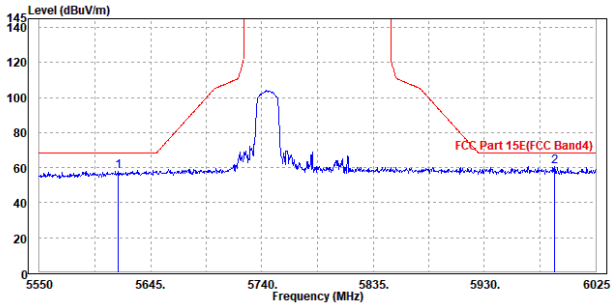
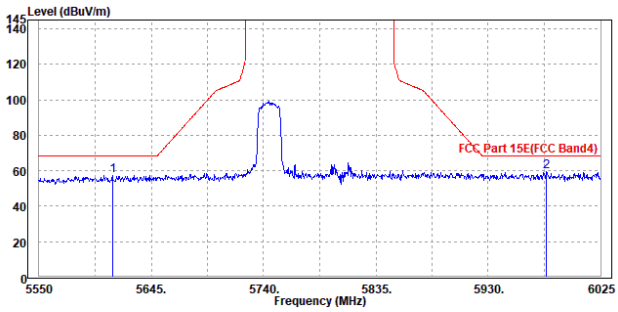
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5745MHz: Fundamental frequency.

OOBE DATA

802.11ac (20MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5616.975	57.84	58.37	68.2	-10.36	34.94	10.75	46.22	200	345	Peak
5989.85	60.67	59.08	68.2	-7.53	35.39	12.31	46.11	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5612.225	57.6	58.36	68.2	-10.6	34.73	10.73	46.22	200	345	Peak
5979.4	59.35	58.03	68.2	-8.85	35.18	12.26	46.12	200	345	Peak

CH 149

Horiontal	Vertical
	

CHANNEL	TX Channel 157	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5785	103.9	103.48	/	/	35.14	11.45	46.17	100	345	Peak
5785	97.52	97.1	/	/	35.14	11.45	46.17	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5785	101.27	101.05	/	/	34.94	11.45	46.17	100	345	Peak
5785	94.65	94.43	/	/	34.94	11.45	46.17	100	345	Average

REMARKS:

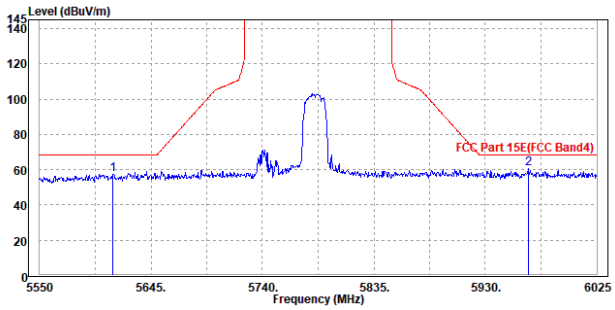
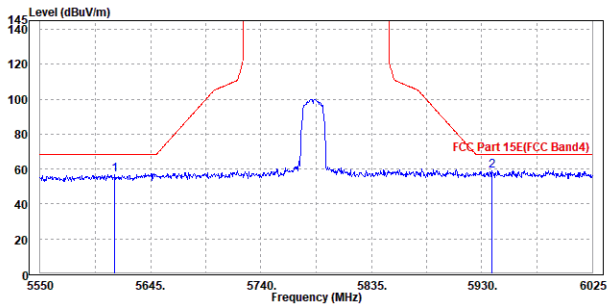
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5785MHz: Fundamental frequency.

OOBE DATA

802.11ac (20MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV /m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5612.7	57.58	58.13	68.2	-10.62	34.94	10.73	46.22	200	345	Peak
5966.575	60.45	59	68.2	-7.75	35.36	12.21	46.12	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV /m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5614.125	56.61	57.36	68.2	-11.59	34.74	10.73	46.22	200	345	Peak
5939.025	59.12	58.03	68.2	-9.08	35.13	12.09	46.13	200	345	Peak

CH 157

Horiontal	Vertical
	

CHANNEL	TX Channel 165	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5825	103.01	102.36	/	/	35.19	11.62	46.16	100	345	Peak
5825	95.92	95.27	/	/	35.19	11.62	46.16	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5825	100.81	100.36	/	/	34.99	11.62	46.16	100	348	Peak
5825	94.05	93.6	/	/	34.99	11.62	46.16	100	348	Average

REMARKS:

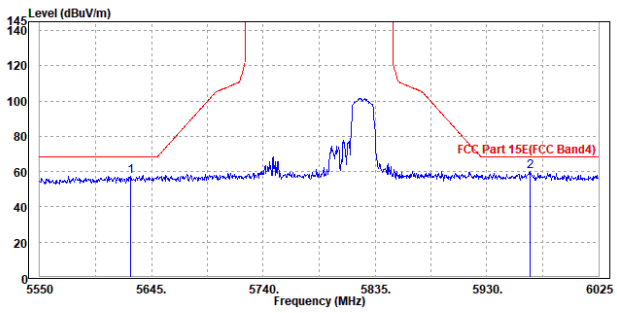
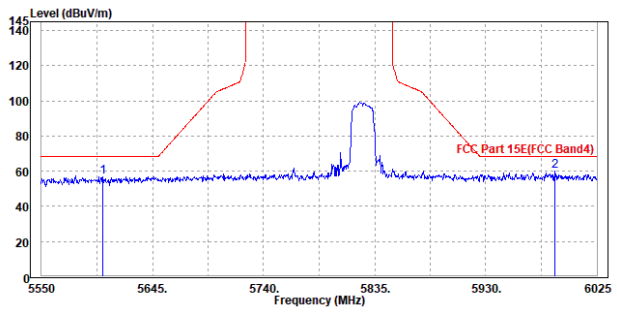
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5825MHz: Fundamental frequency.

OOBE DATA

802.11ac (20MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5626.95	57.58	58.05	68.2	-10.62	34.95	10.79	46.21	200	345	Peak
5967.05	60.06	58.61	68.2	-8.14	35.36	12.21	46.12	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5602.25	56.89	57.71	68.2	-11.31	34.72	10.68	46.22	200	345	Peak
5989.375	60.03	58.64	68.2	-8.17	35.19	12.31	46.11	200	345	Peak

CH 165

Horiontal	Vertical
	

802.11ac (40MHz)

CHANNEL	TX Channel 151	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5755	98.61	98.36	/	/	35.11	11.32	46.18	100	345	Peak
5755	94.65	94.4	/	/	35.11	11.32	46.18	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5755	94.57	94.52	/	/	34.91	11.32	46.18	100	345	Peak
5755	90.2	90.15	/	/	34.91	11.32	46.18	100	345	Average

REMARKS:

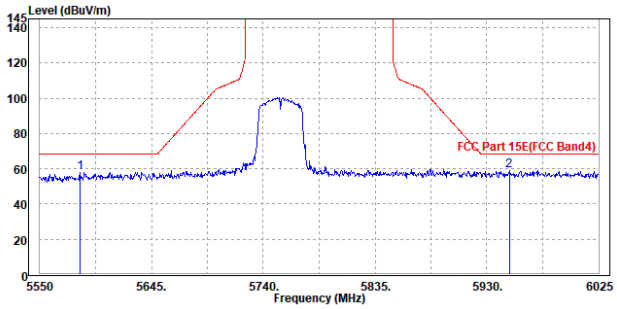
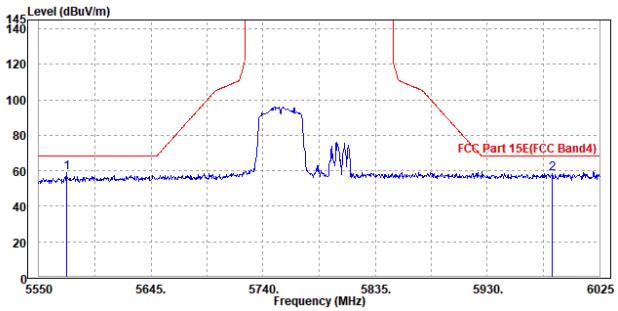
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5755MHz: Fundamental frequency.

OOBE DATA

802.11ac (40MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5584.675	57.82	58.54	68.2	-10.38	34.9	10.61	46.23	200	345	Peak
5949	58.99	57.63	68.2	-9.21	35.34	12.14	46.12	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5573.275	59.13	60.11	68.2	-9.07	34.69	10.56	46.23	200	345	Peak
5985.1	58.37	57.01	68.2	-9.83	35.18	12.29	46.11	200	345	Peak

CH 151

Horiontal	Vertical
	

CHANNEL	TX Channel 159	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5795	98.66	98.19	/	/	35.15	11.49	46.17	100	345	Peak
5795	93.62	93.15	/	/	35.15	11.49	46.17	100	345	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5795	95.67	95.4	/	/	34.95	11.49	46.17	100	345	Peak
5795	90.99	90.72	/	/	34.95	11.49	46.17	100	345	Average

REMARKS:

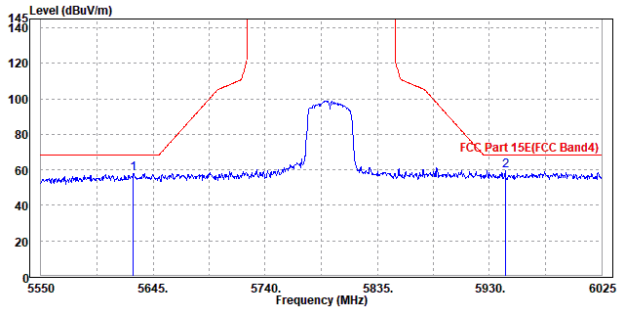
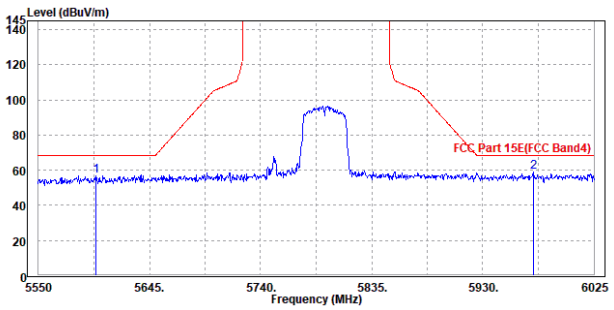
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5795MHz: Fundamental frequency.

OOBE DATA

802.11ac (40MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5628.375	57.89	58.36	68.2	-10.31	34.95	10.79	46.21	200	345	Peak
5943.3	59.4	58.09	68.2	-8.8	35.33	12.11	46.13	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5599.4	56.85	57.68	68.2	-11.35	34.72	10.67	46.22	200	345	Peak
5973.225	58.73	57.44	68.2	-9.47	35.17	12.24	46.12	200	345	Peak

CH 159

Horiontal	Vertical
	

802.11ac (80MHz)

CHANNEL	TX Channel 155	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5775	95.32	94.95	/	/	35.13	11.41	46.17	100	345	Peak
5775	90.84	90.47	/	/	35.13	11.41	46.17	100	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5775	91.69	91.52	/	/	34.93	11.41	46.17	100	345	Peak
5775	87.62	87.45	/	/	34.93	11.41	46.17	100	345	Average

REMARKS:

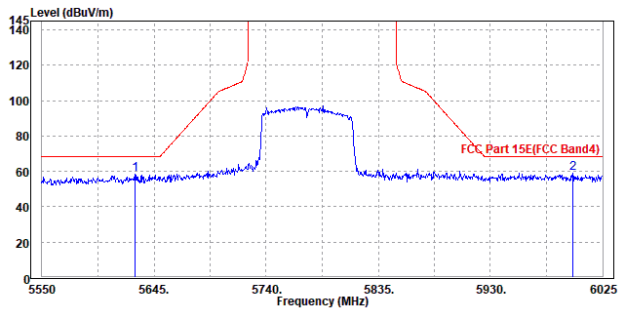
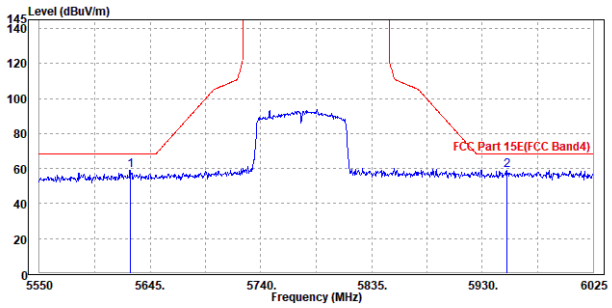
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5775MHz: Fundamental frequency.

OOBE DATA

802.11ac (80MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5628.85	58.45	58.91	68.2	-9.75	34.95	10.8	46.21	200	345	Peak
5999.825	59.24	57.6	68.2	-8.96	35.4	12.35	46.11	200	345	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5627.9	58.9	59.57	68.2	-9.3	34.75	10.79	46.21	200	345	Peak
5950.9	58.82	57.66	68.2	-9.38	35.14	12.14	46.12	200	345	Peak

CH 155

Horiontal	Vertical
	

3.2 OUT OF BAND EMISSION MEASUREMENT

3.2.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

	APPLICABLE TO	EIRP LIMIT (dBm/MHz)
OUT OF THE RESTRICTED BANDS	15.407(b)(1)	-27
	15.407(b)(2)	
	15.407(b)(3)	
	15.407(b)(4)	See note

NOTE:

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 03,21	Jun. 02,22
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Jun. 03,21	Jun. 02,22

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in RF OVEN ROOM.
3. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

3.2.3 TEST PROCEDURES

a. Cheak the calibration of the measurement instrument using either an internal calibrator or a known signal from an external generator.

b. The resolution bandwidth is set to 1MHzThe Video bandwidth is set to ≥1MHz, report the peak value out of oprating band.

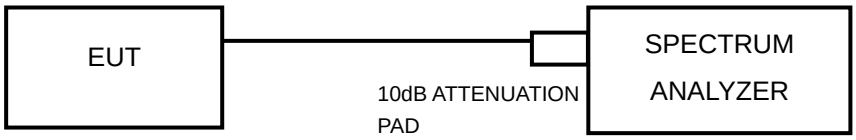
c. Repeat above procedures until all frequencies measured wre complete.

NOTE: All modes of operation were investigated and the worst-case emissions are reported,antenna gain was added into the test result.

3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

3.2.5 TEST SETUP



3.2.6 EUT OPERATING CONDITION

a. Set the EUT under full load condition and placed them on a testing table.

b. Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.

c. The necessary accessories enable the EUT in full functions.

3.2.7 TEST RESULTS

Please Refer to Appendix A Of this test report.

3.3 CONDUCTED EMISSION MEASUREMENT

3.3.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.3.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	101900	Mar. 03,21	Mar. 02,22
EMC32 test software	Rohde&Schwarz	EMC32	NA	NA	NA
LISN network	Rohde&Schwarz	ENV216	101922	Feb. 25,21	Feb. 24,22

NOTE:
1. The test was performed in CE shielded room.
2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

3.3.3 TEST PROCEDURES

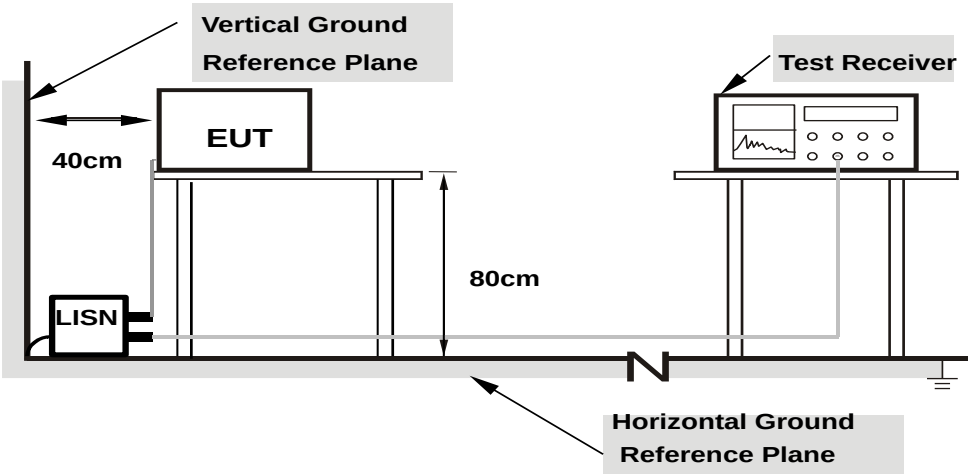
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.3.4 DEVIATION FROM TEST STANDARD

No deviation.

3.3.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.3.6 EUT OPERATING CONDITIONS

Same as 3.1.6.

3.3.7 TEST RESULTS

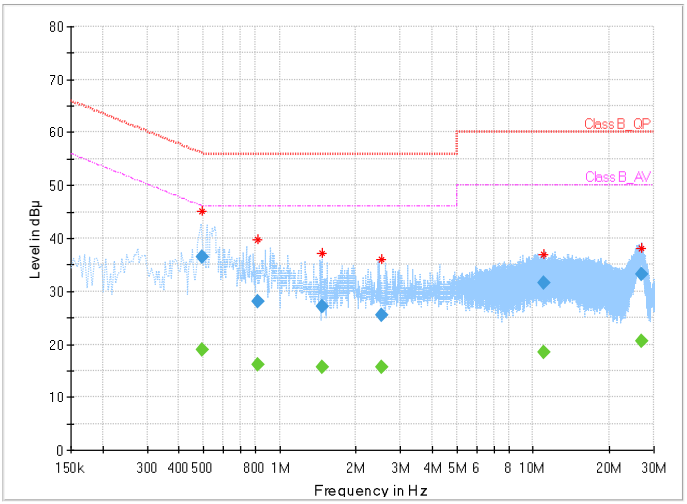
CONDUCTED WORST-CASE DATA :

Frequency Range	150KHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	26deg. C, 51%RH
Tested By	Carl xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.492000	---	18.91	46.13	27.22	L1	ON	9.7
0.492000	36.48	---	56.13	19.65	L1	ON	9.7
0.824000	---	16.21	46.00	29.79	L1	ON	9.7
0.824000	28.09	---	56.00	27.91	L1	ON	9.7
1.476000	---	15.69	46.00	30.31	L1	ON	9.7
1.476000	27.08	---	56.00	28.92	L1	ON	9.7
2.536000	---	15.57	46.00	30.43	L1	ON	9.7
2.536000	25.40	---	56.00	30.60	L1	ON	9.7
11.008000	---	18.56	50.00	31.44	L1	ON	9.8
11.008000	31.49	---	60.00	28.51	L1	ON	9.8
26.824000	---	20.62	50.00	29.38	L1	ON	9.8
26.824000	33.24	---	60.00	26.76	L1	ON	9.8

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Limit value - Emission level
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.

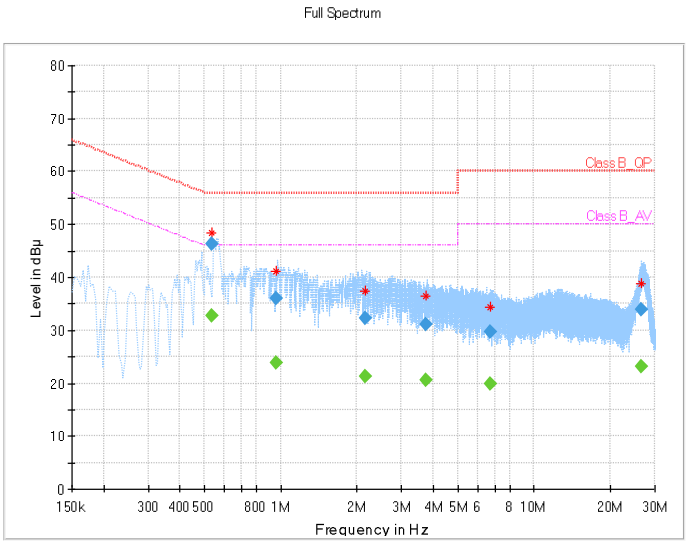
Full Spectrum



Frequency Range	150KHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	26deg. C, 51%RH
Tested By	Carl xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.532000	---	32.64	46.00	13.36	N	ON	9.7
0.532000	46.25	---	56.00	9.75	N	ON	9.7
0.960000	---	23.94	46.00	22.06	N	ON	9.7
0.960000	35.96	---	56.00	20.04	N	ON	9.7
2.162000	---	21.29	46.00	24.71	N	ON	9.8
2.162000	32.18	---	56.00	23.82	N	ON	9.8
3.764000	---	20.70	46.00	25.30	N	ON	9.8
3.764000	31.09	---	56.00	24.91	N	ON	9.8
6.752000	---	19.93	50.00	30.07	N	ON	9.8
6.752000	29.62	---	60.00	30.38	N	ON	9.8
26.472000	---	23.10	50.00	26.90	N	ON	9.9
26.472000	33.97	---	60.00	26.03	N	ON	9.9

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Limit value - Emission level
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



3.4 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

3.4.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

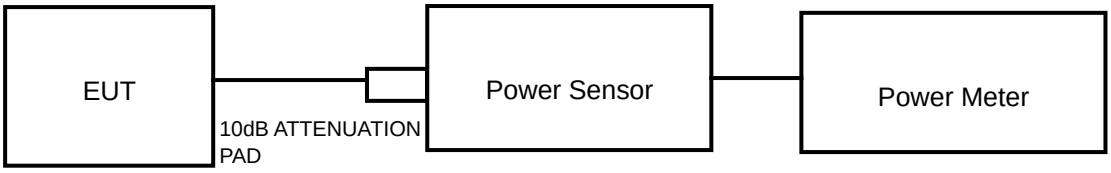
Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Client devices	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

NOTE: Where B is the 26dB emission bandwidth in MHz.

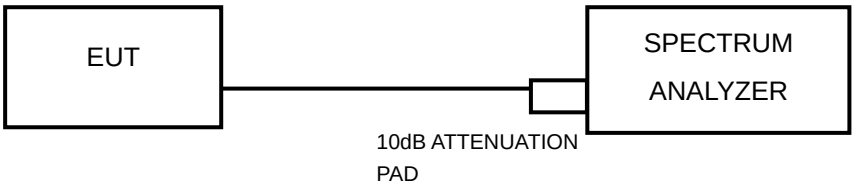
3.4.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT

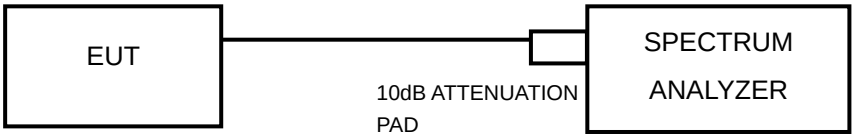
802.11a, 802.11n/ac (20MHz), 802.11n/ac (40/80MHz) TEST CONFIGURATION



11ac TEST CONFIGURATION



FOR 26dB BANDWIDTH



3.4.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Meter	ANRITSU	ML2495A	1506002	Feb. 25,21	Feb. 24,22
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510322	Apr. 26,21	Apr. 25,22
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Feb. 25,21	Feb. 24,22
Power Sensor	ANRITSU	MA2411B	1339352	Feb. 25,21	Feb. 24,22

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in RF Oven room.

3.4.4 TEST PROCEDURE

FOR POWER MEASUREMENT

For 802.11a, 802.11n (20MHz), 802.11n (40MHz)

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

For 802.11ac (80MHz)

1. Measure the duty cycle, x, of the transmitter output signal as described in II.B.
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
3. Set RBW = 1 MHz.
4. Set VBW ≥ 3 MHz.
5. Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
6. Sweep time = auto.
7. Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
8. Do not use sweep triggering. Allow the sweep to “free run.”
9. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
10. Add 10 log (1/x), where x is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add 10 log (1/0.25) = 6 dB if the duty cycle is 25%.

FOR 99 PERCENT OCCUPIED BANDWIDTH

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

FOR 26dB BANDWIDTH

1) Set RBW = approximately 1% of the emission bandwidth.
2) Set the VBW > RBW.
3) Detector = Peak.
4) Trace mode = max hold.
5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

FOR 6dB BANDWIDTH

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

3.4.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

3.4.7 TEST RESULTS

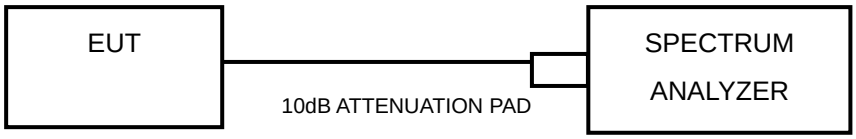
Please Refer to Appendix A Of this test report.

3.5 MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

3.5.1 LIMITS OF MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Client devices	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

3.5.2 TEST SETUP



3.5.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

3.5.4 TEST PROCEDURES

Using method SA-2

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission).
7) Record the max value

3.5.5 DEVIATION FROM TEST STANDARD

No deviation.

3.5.6 EUT OPERATING CONDITIONS

Same as 3.1.6.

3.5.7 TEST RESULTS

Please Refer to Appendix A Of this test report.

4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

6 Appendix A

Appendix A: 5G RLAN

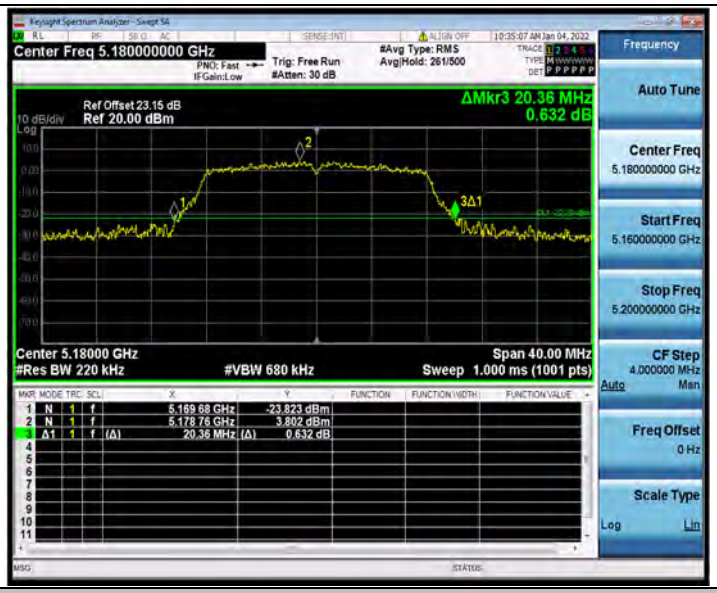
Emission Bandwidth

Test Result

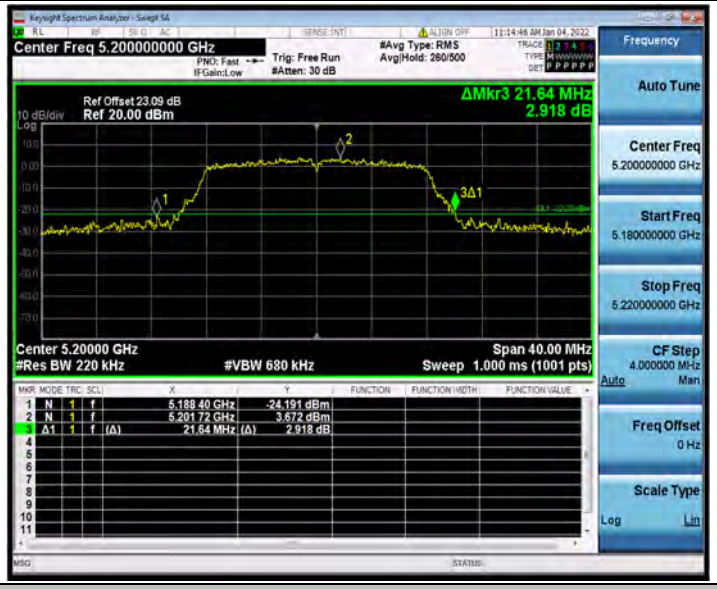
TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	20.360	5169.680	5190.040	---	PASS
		5200	21.640	5188.400	5210.040	---	PASS
		5240	25.520	5226.200	5251.720	---	PASS
		5260	20.000	5250.040	5270.040	---	PASS
		5280	19.800	5270.120	5289.920	---	PASS
		5320	20.160	5309.880	5330.040	---	PASS
		5500	23.400	5486.760	5510.160	---	PASS
		5580	20.840	5569.880	5590.720	---	PASS
		5700	25.680	5688.320	5714.000	---	PASS
		5745	24.120	5733.280	5757.400	---	PASS
		5785	24.560	5773.360	5797.920	---	PASS
		5825	28.160	5810.080	5838.240	---	PASS
11N20SISO	Ant1	5180	21.640	5168.520	5190.160	---	PASS
		5200	21.880	5188.360	5210.240	---	PASS
		5240	22.520	5228.400	5250.920	---	PASS
		5260	21.280	5249.640	5270.920	---	PASS
		5280	20.200	5269.920	5290.120	---	PASS
		5320	22.200	5308.160	5330.360	---	PASS
		5500	20.120	5490.000	5510.120	---	PASS
		5580	21.960	5569.360	5591.320	---	PASS
		5700	24.280	5687.200	5711.480	---	PASS
		5745	25.000	5731.280	5756.280	---	PASS
		5785	24.280	5772.120	5796.400	---	PASS
		5825	24.960	5813.200	5838.160	---	PASS
11N40SISO	Ant1	5190	65.440	5158.720	5224.160	---	PASS
		5230	55.760	5198.400	5254.160	---	PASS
		5270	50.320	5249.600	5299.920	---	PASS
		5310	40.720	5289.520	5330.240	---	PASS
		5510	62.160	5478.960	5541.120	---	PASS
		5550	66.960	5517.360	5584.320	---	PASS
		5670	63.840	5637.600	5701.440	---	PASS
		5755	65.360	5722.280	5787.640	---	PASS
		5795	63.040	5761.320	5824.360	---	PASS
11AC20SISO	Ant1	5180	20.280	5169.880	5190.160	---	PASS

		5200	20.280	5189.920	5210.200	---	PASS
		5240	20.160	5229.840	5250.000	---	PASS
		5260	20.200	5249.880	5270.080	---	PASS
		5280	20.200	5269.920	5290.120	---	PASS
		5320	20.400	5309.680	5330.080	---	PASS
		5500	20.240	5489.840	5510.080	---	PASS
		5580	21.880	5569.760	5591.640	---	PASS
		5700	21.280	5689.680	5710.960	---	PASS
		5745	20.360	5734.880	5755.240	---	PASS
		5785	20.120	5775.000	5795.120	---	PASS
		5825	21.640	5813.600	5835.240	---	PASS
11AC40SISO	Ant1	5190	41.120	5169.440	5210.560	---	PASS
		5230	40.240	5209.840	5250.080	---	PASS
		5270	40.720	5249.600	5290.320	---	PASS
		5310	41.200	5289.200	5330.400	---	PASS
		5510	41.280	5489.440	5530.720	---	PASS
		5550	40.960	5529.440	5570.400	---	PASS
		5670	51.840	5649.600	5701.440	---	PASS
		5755	40.800	5734.440	5775.240	---	PASS
		5795	40.720	5774.760	5815.480	---	PASS
11AC80SISO	Ant1	5210	80.960	5169.520	5250.480	---	PASS
		5290	81.120	5249.520	5330.640	---	PASS
		5530	100.000	5470.800	5570.800	---	PASS
		5610	84.000	5566.640	5650.640	---	PASS
		5775	104.640	5721.560	5826.200	---	PASS

Test Graphs



11A_Ant1_5180



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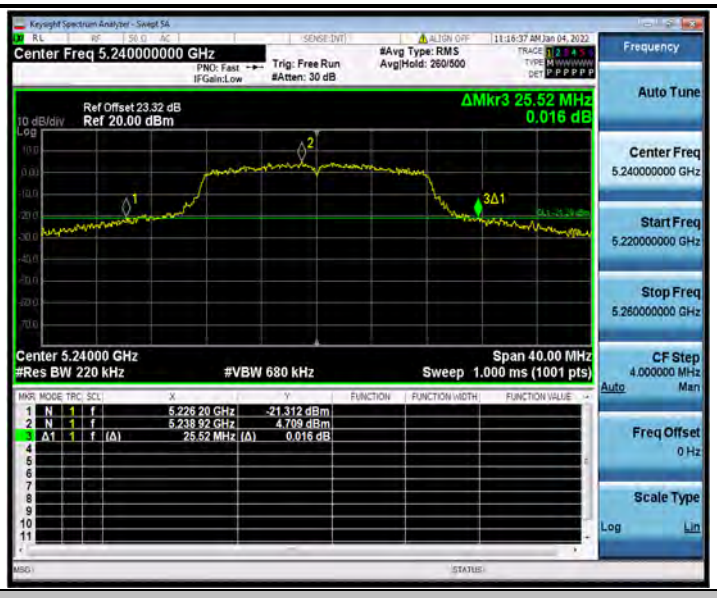

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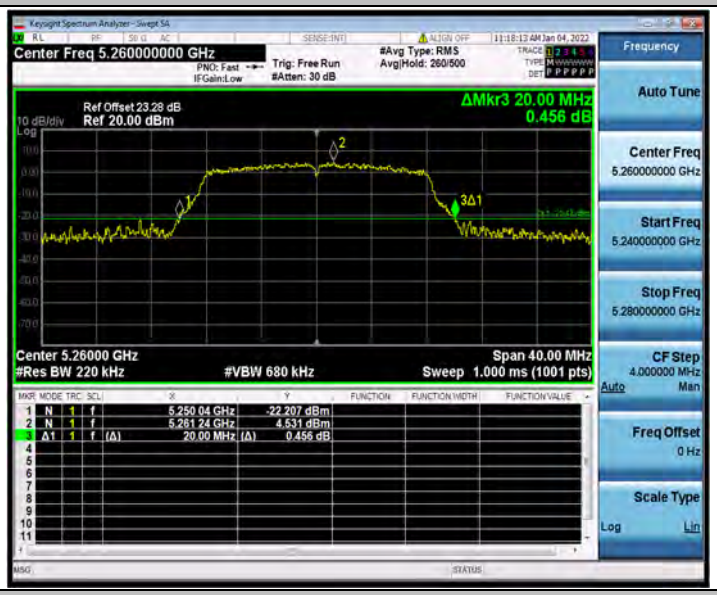

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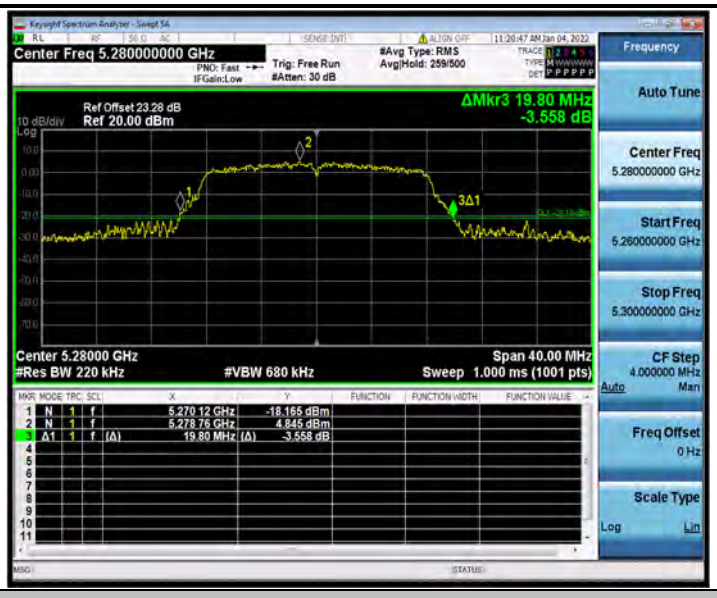

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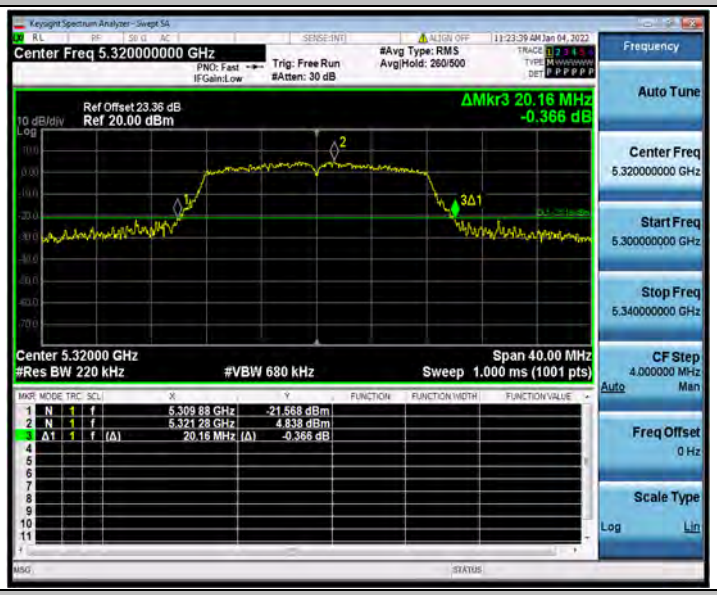

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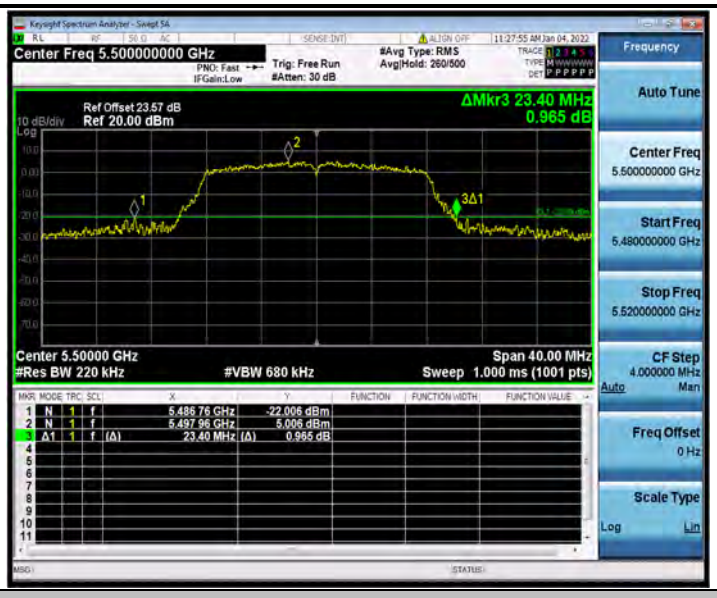

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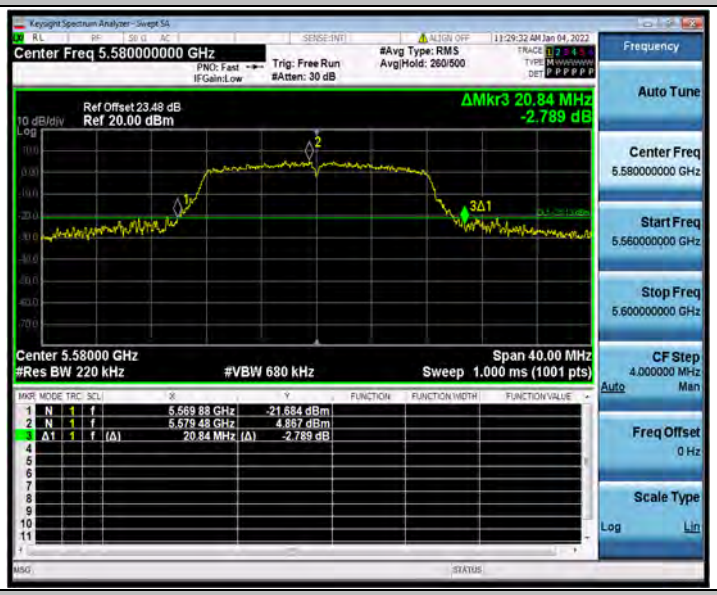
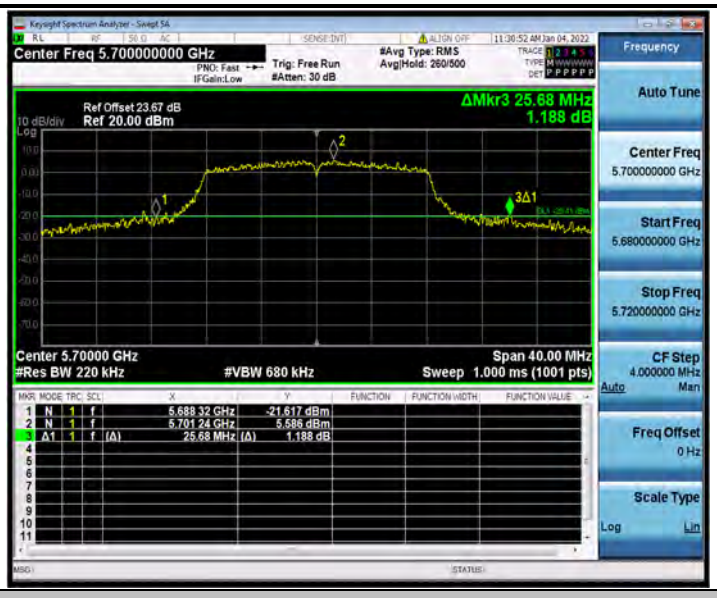
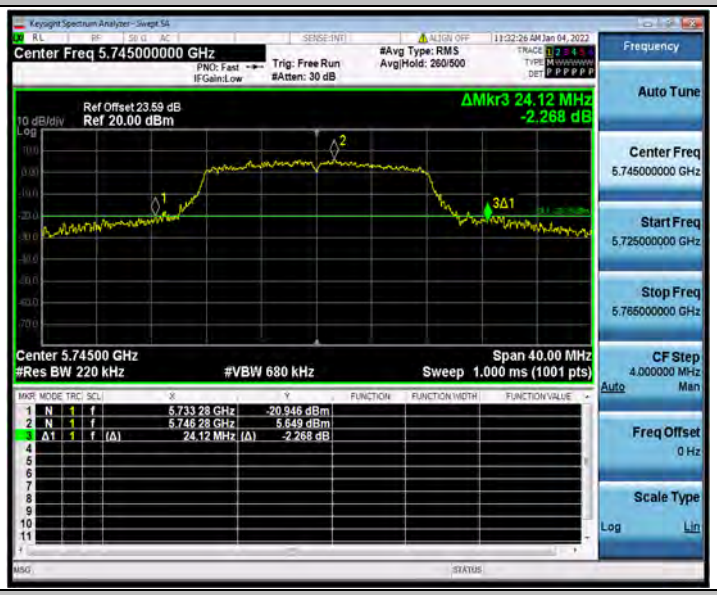


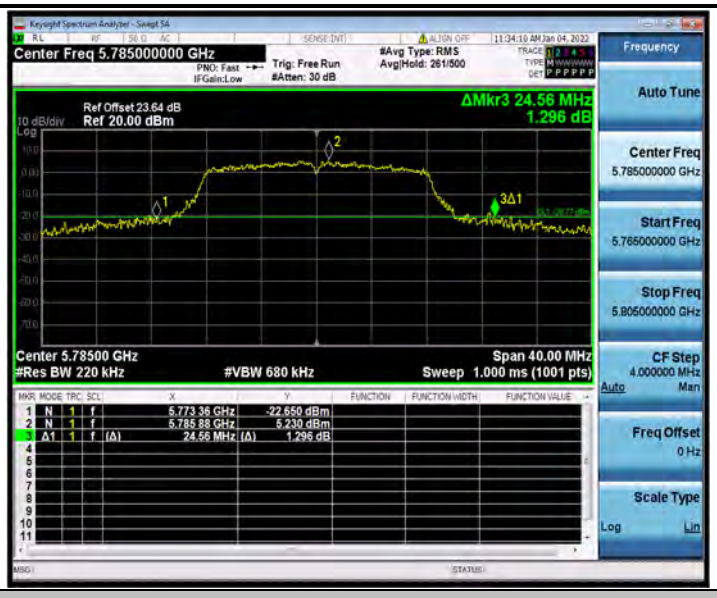
11A_Ant1_5580



11A_Ant1_5700



11A_Ant1_5745



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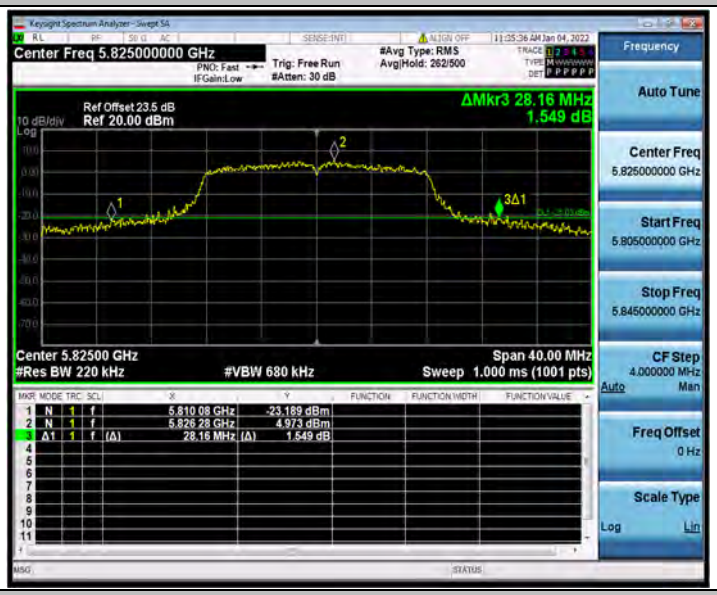

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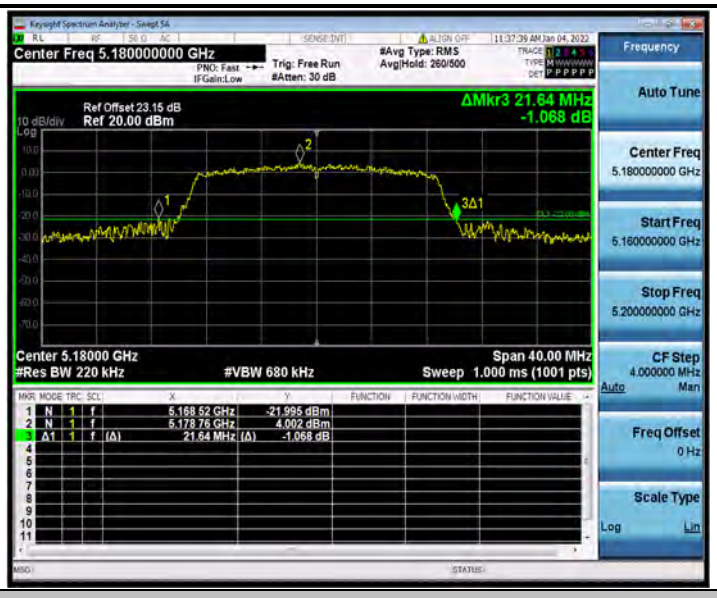

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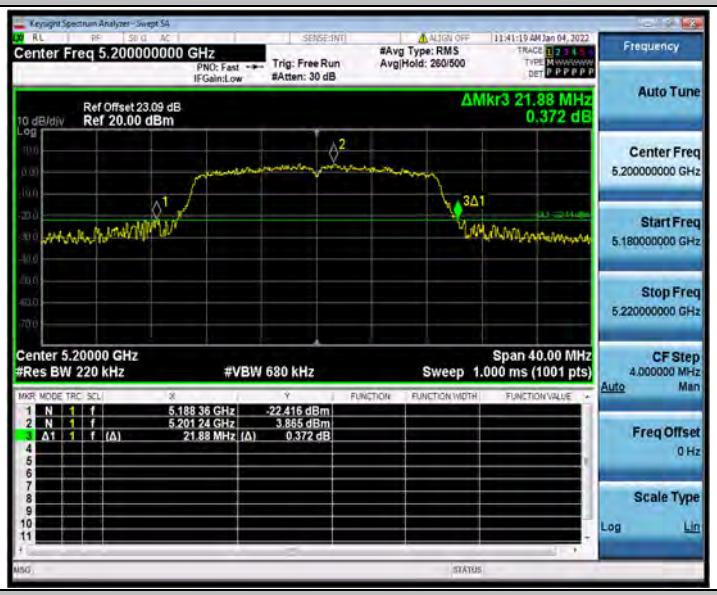

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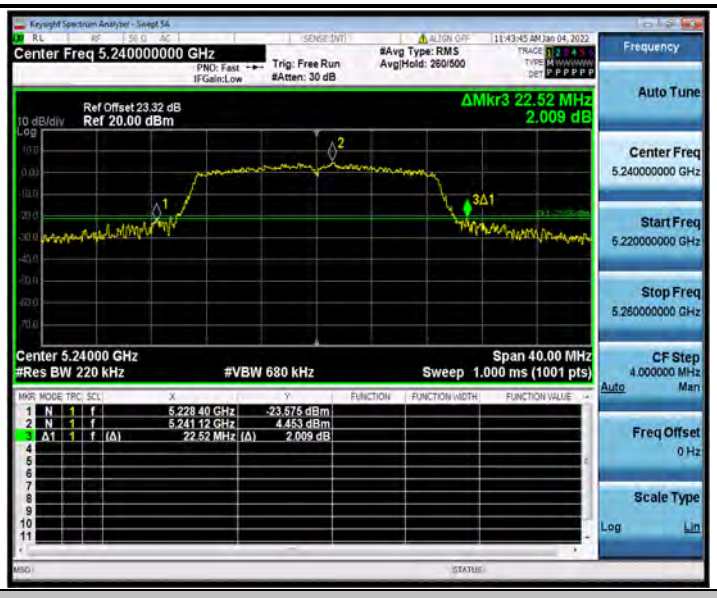

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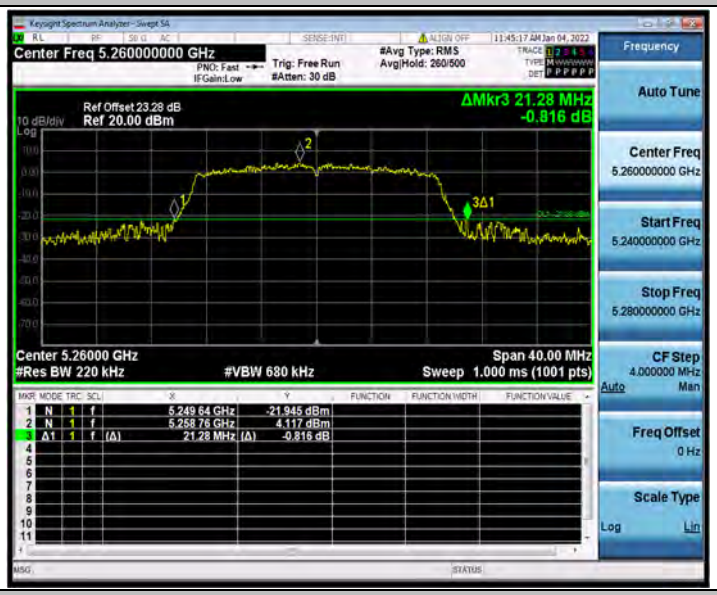

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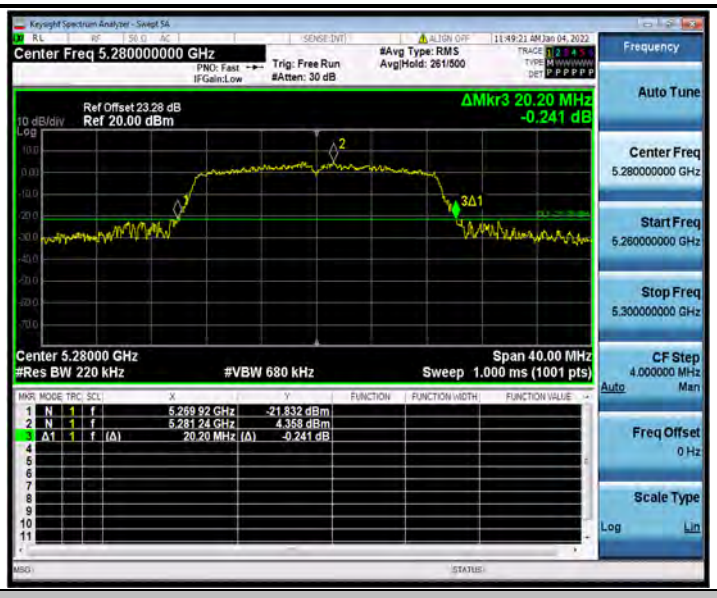

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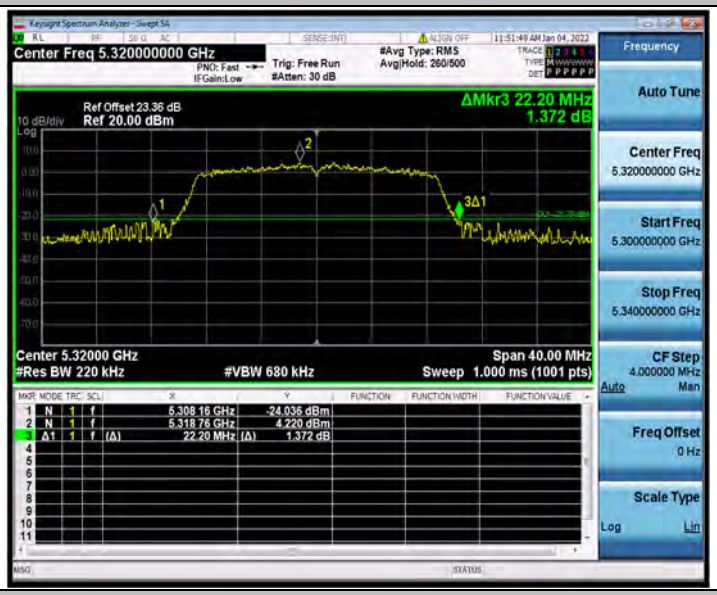

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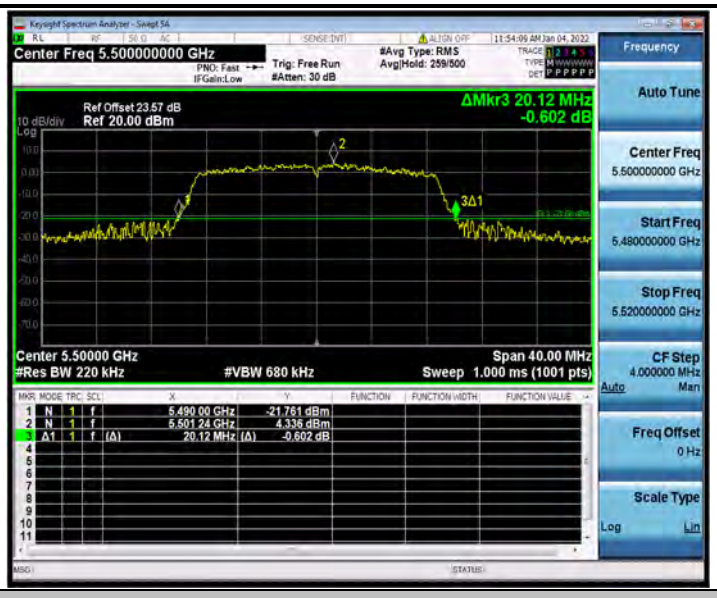

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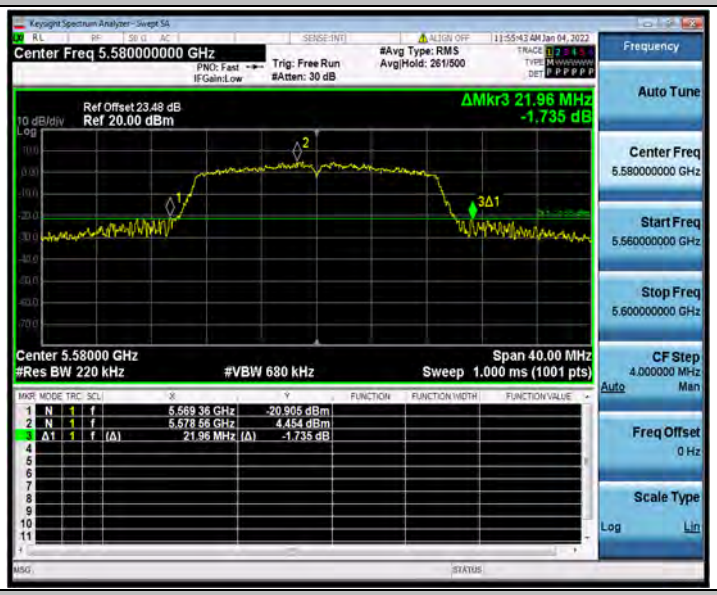

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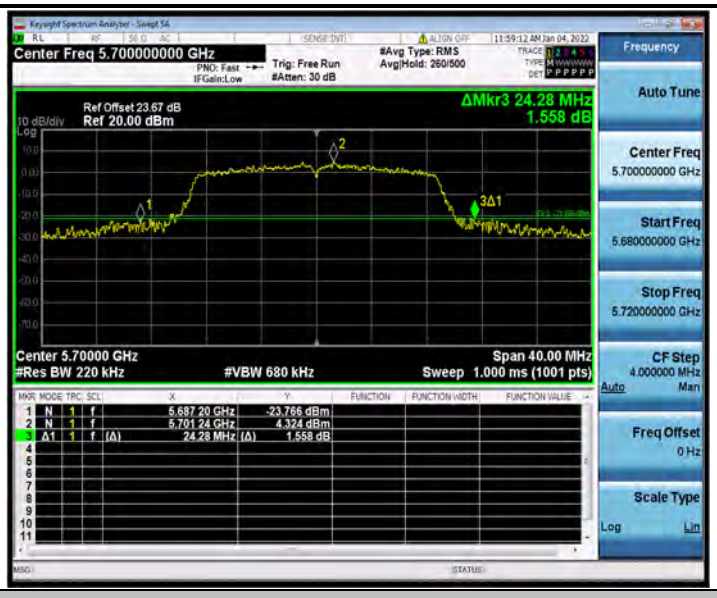

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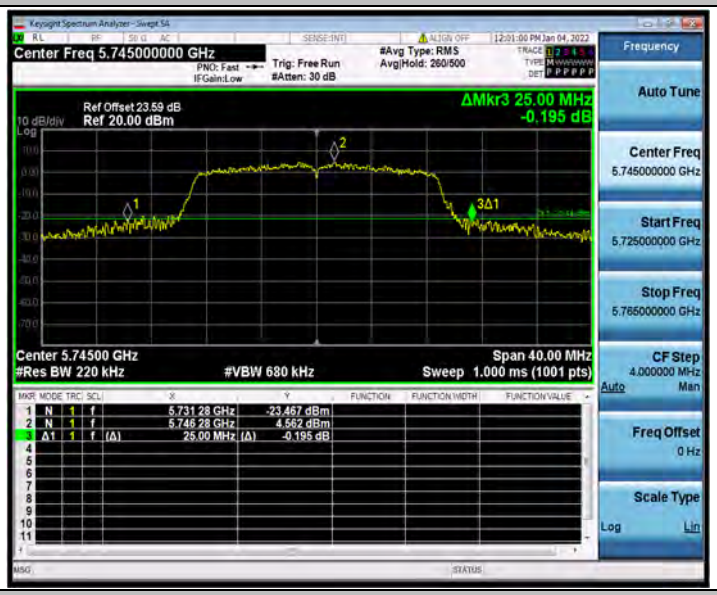

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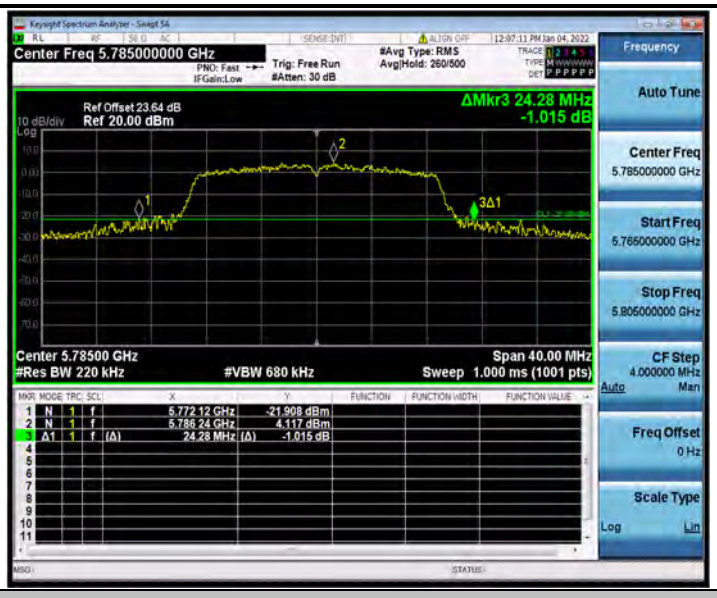

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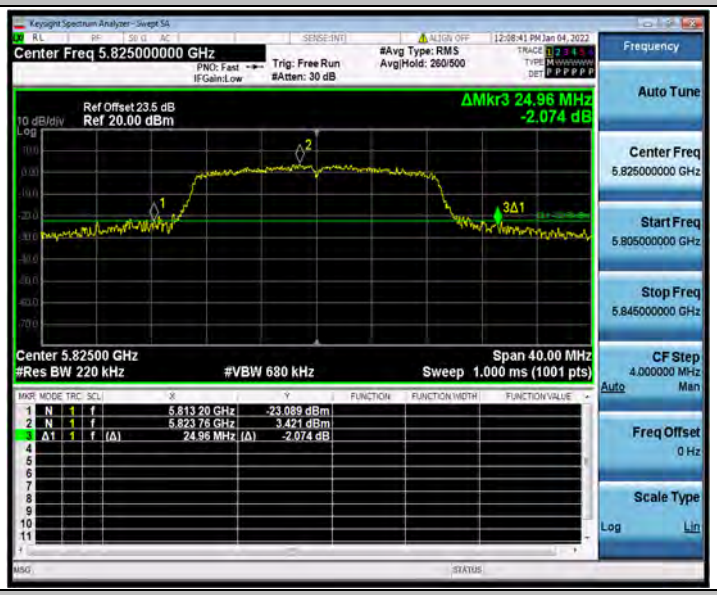

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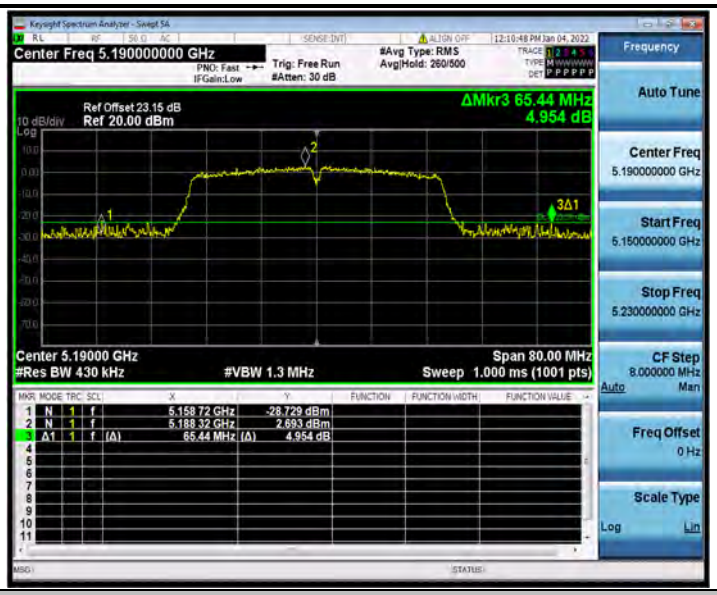

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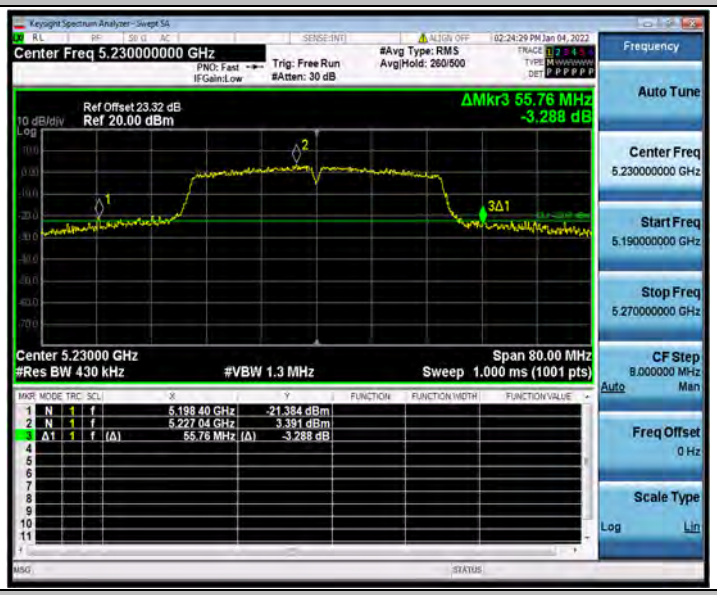

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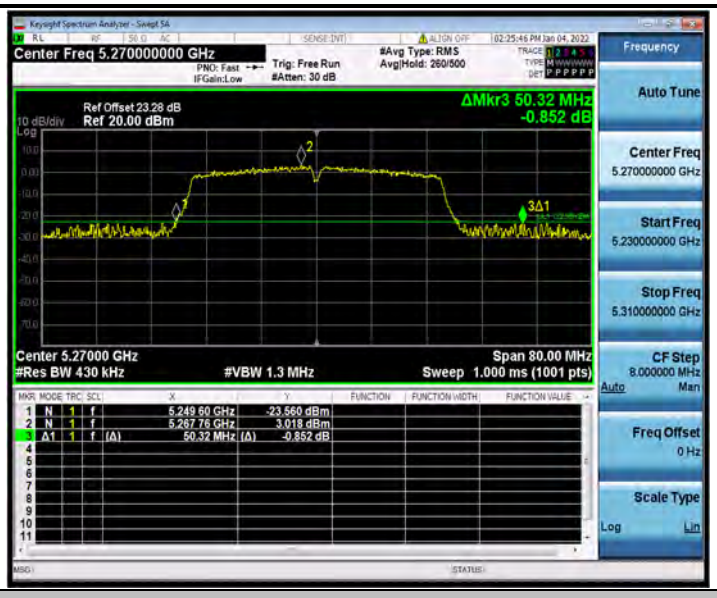

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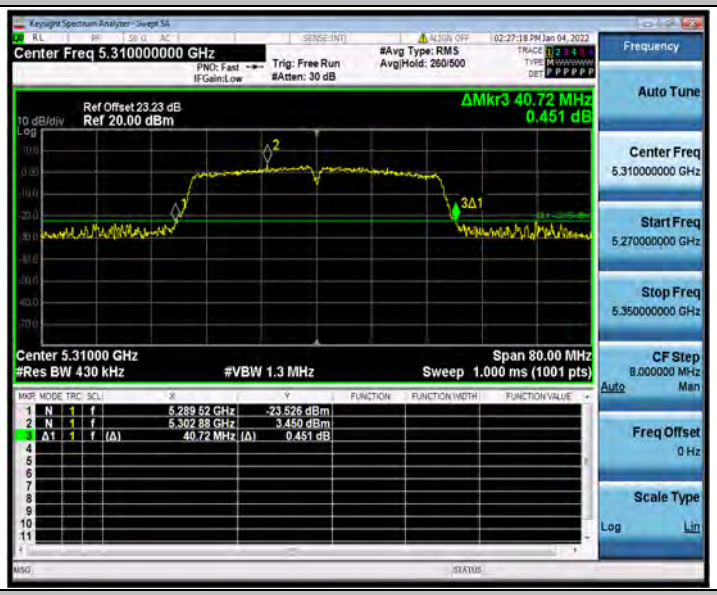

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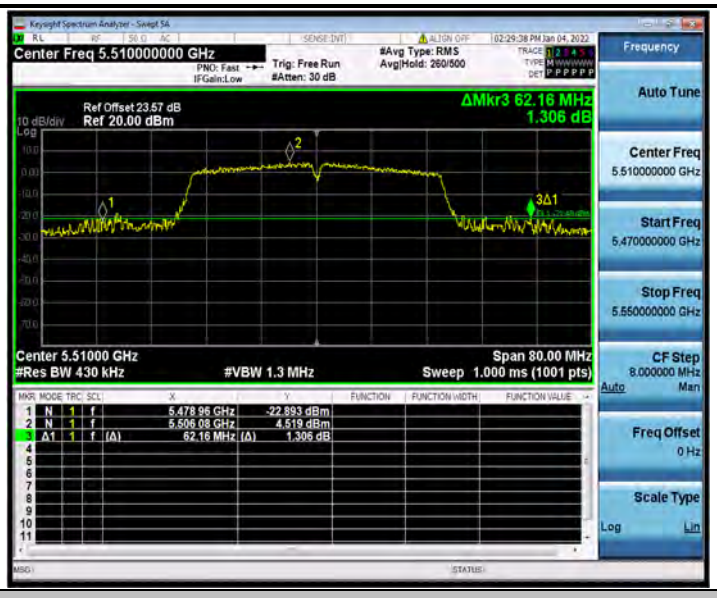

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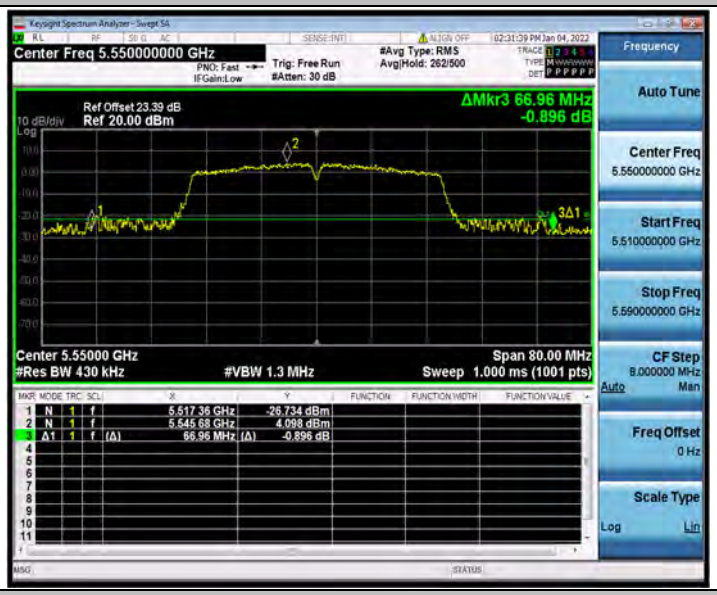

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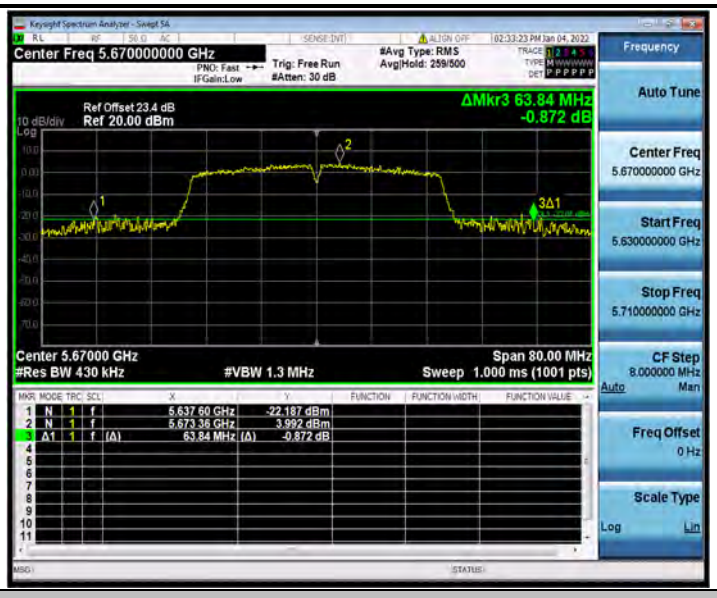

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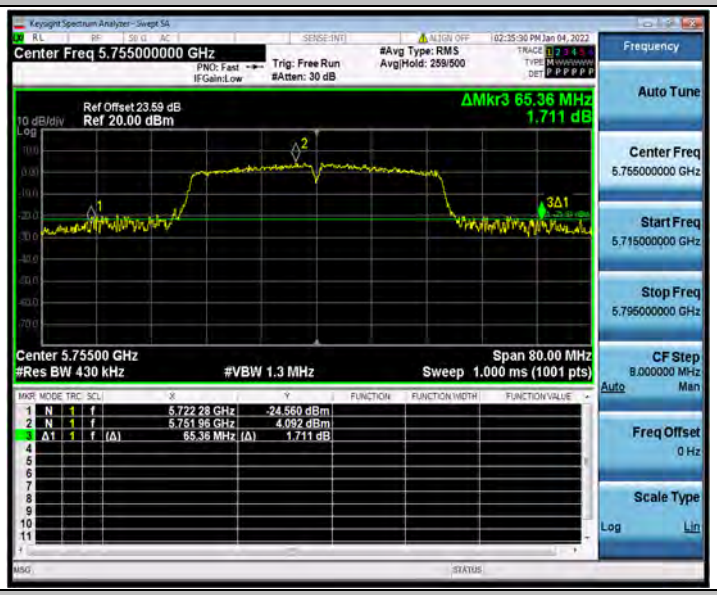

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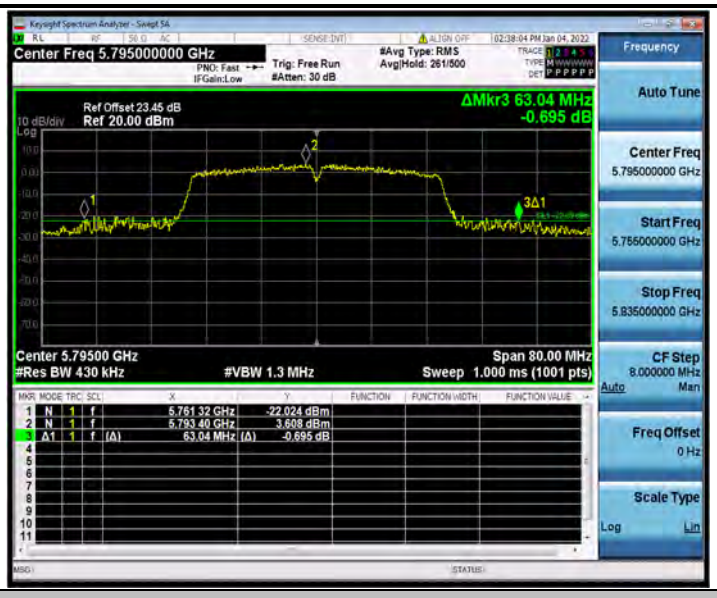

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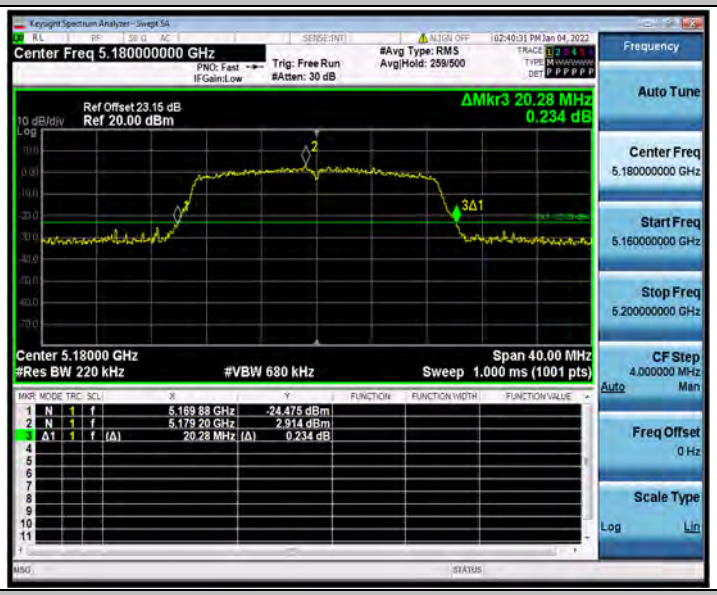

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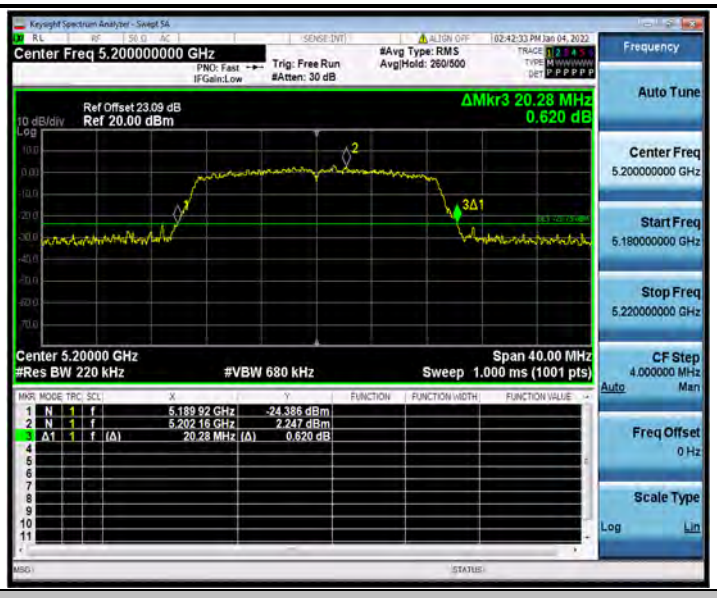

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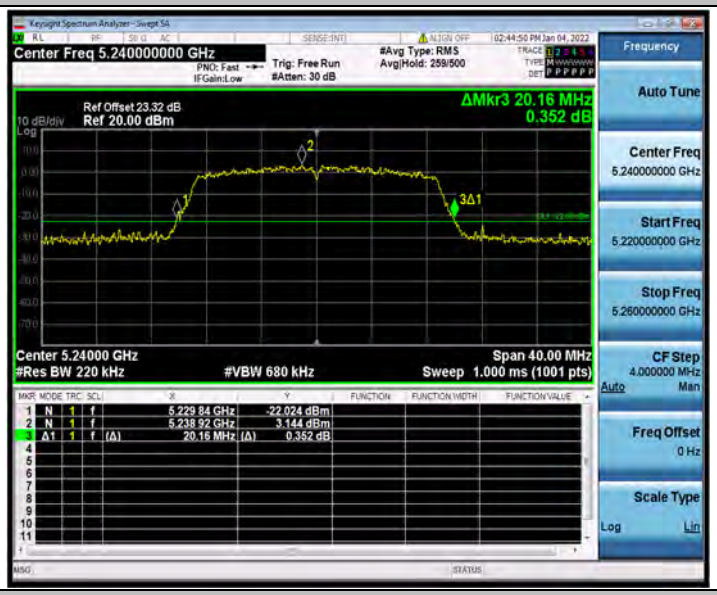

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