Appendix B

RF Test Data for 5.8G WLAN (Conducted Measurement)

Product Name: Beamink DUO Trade Mark: CVW Test Model: 3062

Environmental Conditions

Temperature:	24.1° C
Relative Humidity:	53.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom Liu
Supervised by:	Jayden Zhuo

B.1 Duty Cycle

Antenna 0

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW(KHz)
11N40	5755	100	0.00	0.01

Antenna 1

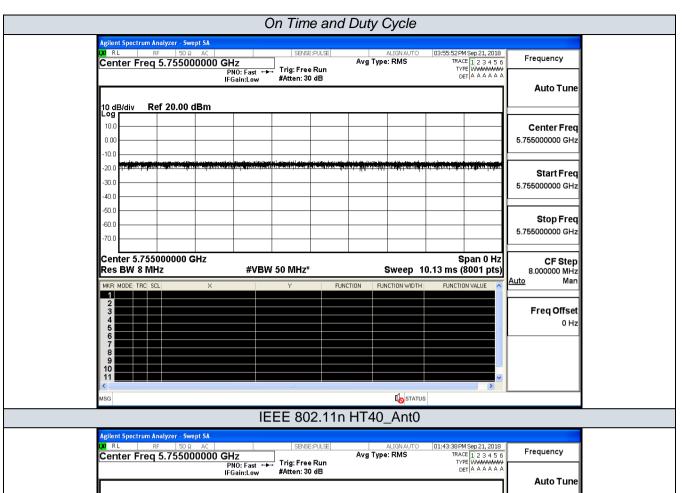
Test Mode	(MHz) (%)		10log(1/x) Factor (dB)	1/B Minimum VBW(KHz)
11N40	5755	100	0.00	0.01

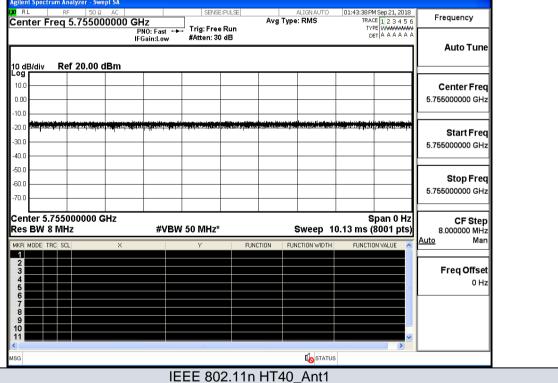
Antenna 2

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW(KHz)
11N40	5755	100	0.00	0.01

Antenna 3

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW(KHz)
11N40	5755	100	0.00	0.01





B.2 Maximum Conduct Output Power

Antenna 0

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
11N40	151	5755	12.41	0	12.41	30
11N4U	159	5795	12.67	0	12.67	30

Antenna 1

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
11N40	151	5755	12.32	0	12.32	30
111140	159	5795	12.29	0	12.29	30

Antenna 2

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
11N40	151	5755	12.32	0	12.32	30
111140	159	5795	12.29	0	12.29	30

Antenna 3

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
11N40	151	5755	12.32	0	12.32	30
111140	159	5795	12.29	0	12.29	30

Antenna 0+Antenna 1+Antenna 2+Antenna 3

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)			Duty Cycle Factor	Report Conducted Power(dBm)				Limit (dBm)			
		,	Ant0	Ant1	Ant2	Ant3	Sum	(dB)	Ant0	Ant1	Ant2	Ant3	Sum	, ,
11N40	151	5755	12.41	12.32	12.32	12.32	18.36	0	12.41	12.32	12.32	12.32	18.36	30.00
111140	159	5795	12.67	12.29	12.29	12.29	18.41	0	12.67	12.29	12.29	12.29	18.41	30.00

B.3 Power Spectral Density

Antenna 0

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/300KHz)	Duty Cycle Factor (dB)	RBW Factor (dB)	Report Power Density (dBm/500KHz)	Limit (dBm/500KHz)
11N40	151	5755	-13.948	0	2.218	-11.730	30
111140	159	5795	-15.221	0	2.218	-13.003	30

Antenna 1

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/300KHz)	Duty Cycle Factor (dB)	RBW Factor (dB)	Report Power Density (dBm/500KHz)	Limit (dBm/500KHz)
11N40	151	5755	-14.719	0	2.218	-12.501	30
111140	159	5795	-14.568	0	2.218	-12.350	30

Antenna 2

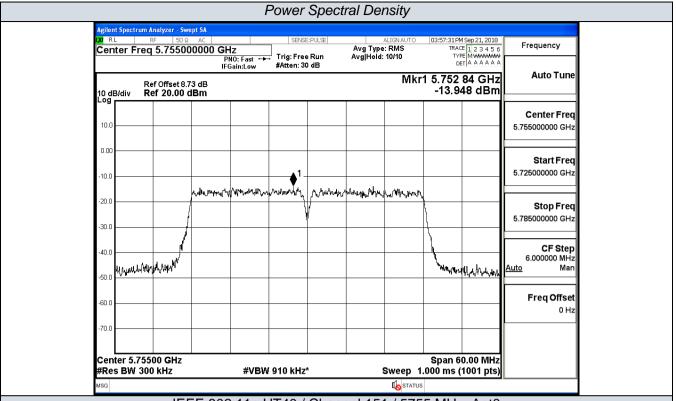
Test Mode	Channel	Frequency (MHz)	Power Density (dBm/300KHz)	Duty Cycle Factor (dB)	RBW Factor (dB)	Report Power Density (dBm/500KHz)	Limit (dBm/500KHz)
11N40	151	5755	-14.163	0	2.218	-11.945	30
111140	159	5795	-14.287	0	2.218	-12.069	30

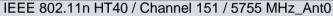
Antenna 3

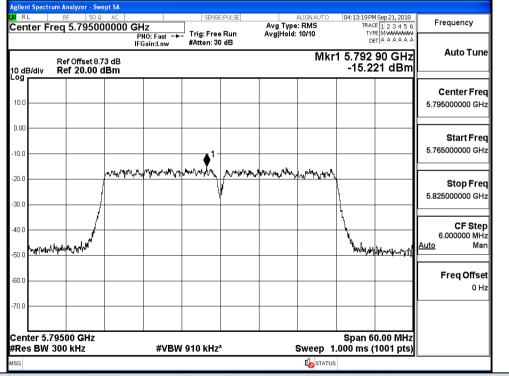
Test Mode	Channel	Frequency (MHz)	Power Density (dBm/300KHz)	Duty Cycle Factor (dB)	RBW Factor (dB)	Report Power Density (dBm/500KHz)	Limit (dBm/500KHz)
11N40	151	5755	-13.179	0	2.218	-10.961	30
111140	159	5795	-13.849	0	2.218	-11.631	30

Antenna 0+Antenna 1+Antenna 2+Antenna 3

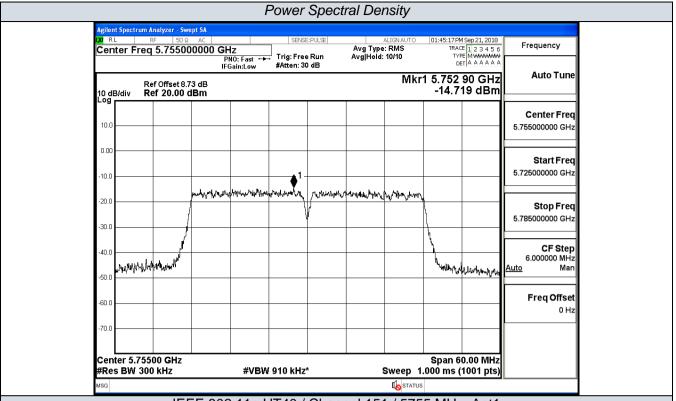
Test Mode	Channel	annel Frequency (MHz)		Repor	Duty Cycle	Limit			
			Ant0	Ant1	Ant2	Ant3	Sum	Factor (dB)	(dBm/500KHz)
11N40	151	5755	-13.948	-14.719	-14.163	-13.179	-7.946	0	24.979
11N40	159	5795	-15.221	-14.568	-14.287	-13.849	-8.432	0	24.979

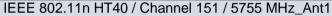


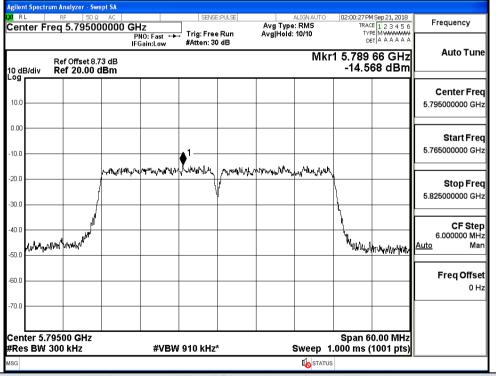




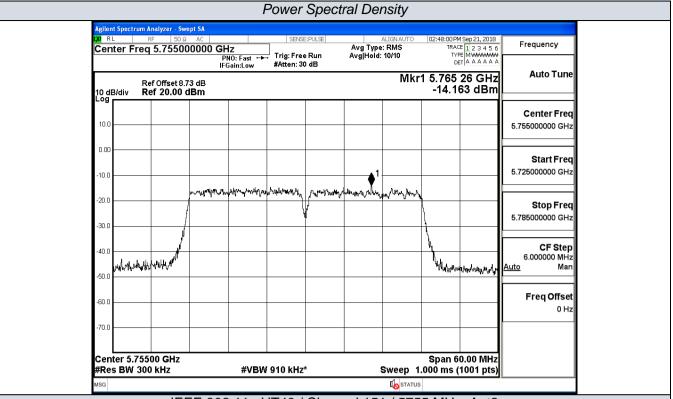
IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant0

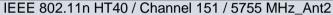


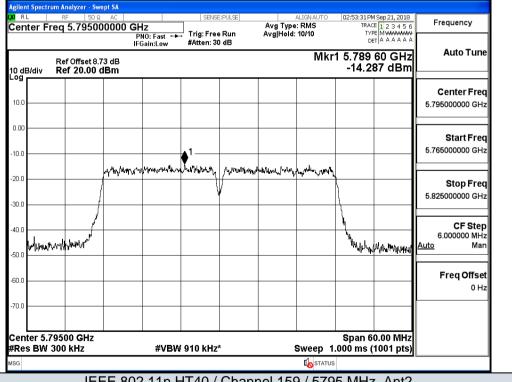


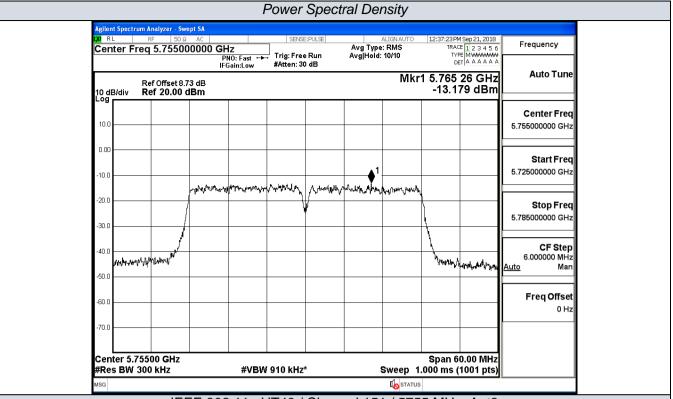


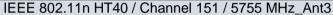
IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant1

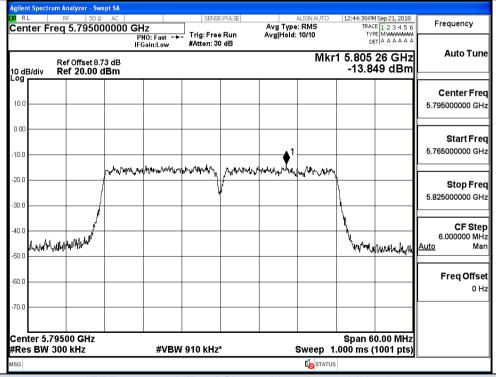












IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant3

B.4 Emission Bandwidth

Antenna 0

Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
11N40	151	5755	36.53	>=0.5
111140	159	5795	36.54	>=0.5

Antenna 1

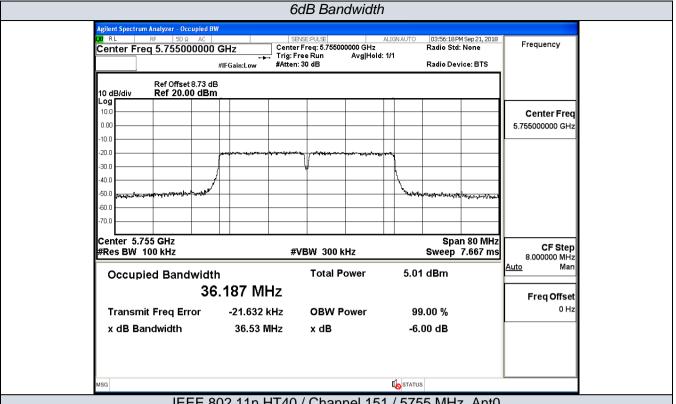
Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
11N40	151	5755	36.57	>=0.5
111140	159	5795	36.57	>=0.5

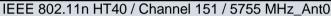
Antenna 2

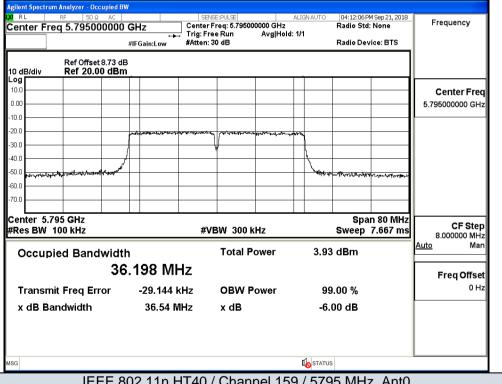
Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
11N40	151	5755	36.53	>=0.5
111140	159	5795	36.55	>=0.5

Antenna 3

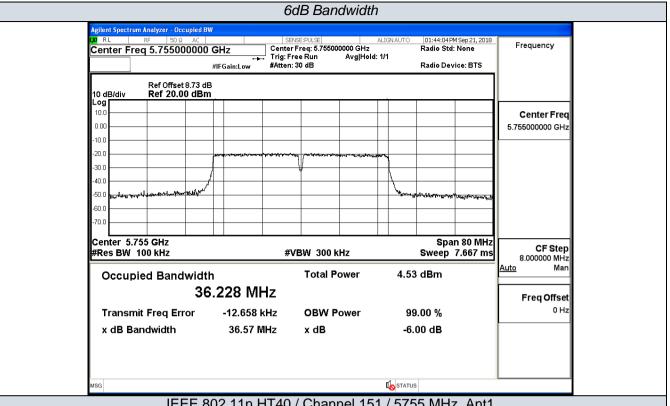
Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
11N40	151	5755	36.56	>=0.5
	159	5795	36.65	>=0.5



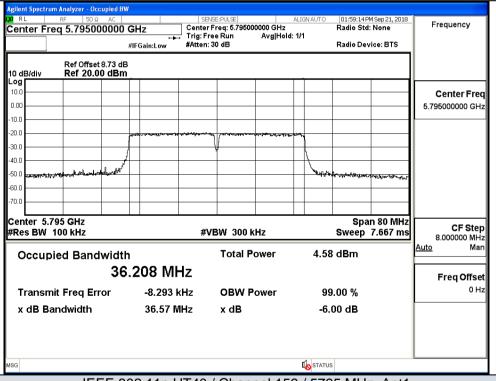


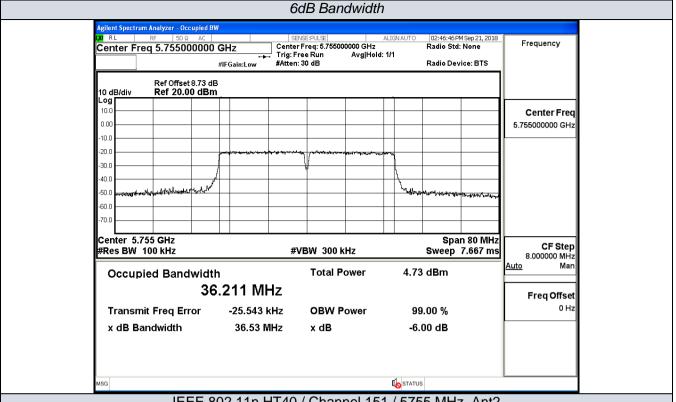


IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant0

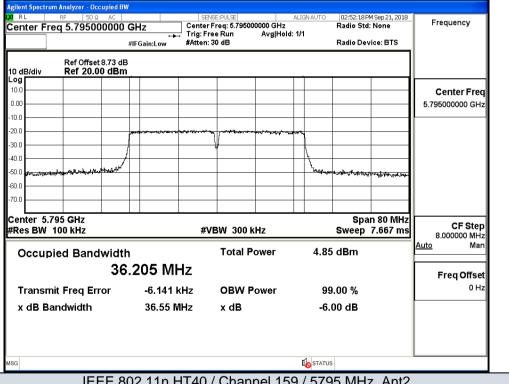


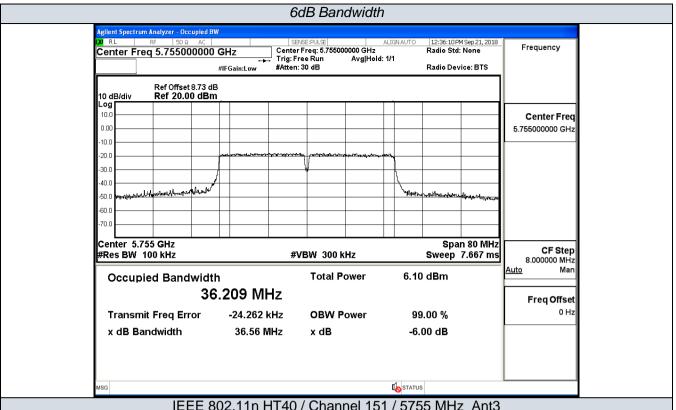
IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant1

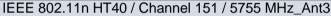


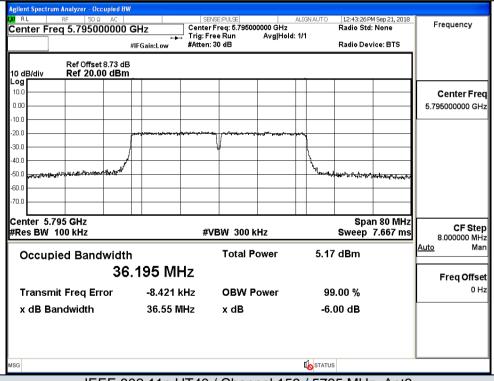


IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant2









IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant3

B.5 Undesirable Emissions Measurement

Antenna 0

Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
		5650.0	-60.765	5.00	-55.765	Peak	-27.0
	151	5700.0	-57.706	5.00	-52.706	Peak	10.0
		5720.0	-55.614	5.00	-50.614	Peak	15.6
11N40		5725.0	-52.560	5.00	-47.560	Peak	27.0
111140		5850.0	-57.629	5.00	-52.629	Peak	27.0
	159	5855.0	-56.823	5.00	-51.823	Peak	15.6
		5875.0	-58.629	5.00	-53.629	Peak	10.0
		5925.0	-60.509	5.00	-55.509	Peak	-27.0

Antenna 1

Antoma							
Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
		5650.0	-59.598	5.00	-54.598	Peak	-27.0
	151	5700.0	-57.913	5.00	-52.913	Peak	10.0
		5720.0	-53.449	5.00	-48.449	Peak	15.6
11N40		5725.0	-53.930	5.00	-48.930	Peak	27.0
111140		5850.0	-55.629	5.00	-50.629	Peak	27.0
	159	5855.0	-54.887	5.00	-49.887	Peak	15.6
		5875.0	-57.937	5.00	-52.937	Peak	10.0
		5925.0	-55.629	5.00	-50.629	Peak	-27.0

Antenna 2

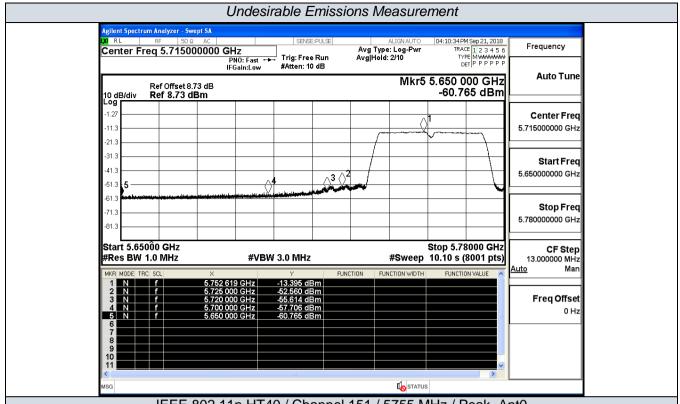
Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
		5650.0	-60.251	5.00	-55.251	Peak	-27.0
	151	5700.0	-58.741	5.00	-53.741	Peak	10.0
		5720.0	-55.561	5.00	-50.561	Peak	15.6
11N40		5725.0	-53.381	5.00	-48.381	Peak	27.0
111140		5850.0	-55.992	5.00	-50.992	Peak	27.0
	159	5855.0	-55.037	5.00	-50.037	Peak	15.6
	139	5875.0	-58.102	5.00	-53.102	Peak	10.0
		5925.0	-59.227	5.00	-54.227	Peak	-27.0

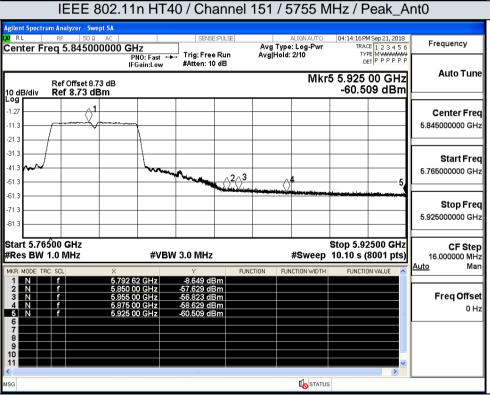
Antenna 3

Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
		5650.0	-61.120	5.00	-55.251	Peak	-27.0
	151	5700.0	-60.478	5.00	-53.741	Peak	10.0
		5720.0	-54.596	5.00	-50.561	Peak	15.6
11N40		5725.0	-55.620	5.00	-48.381	Peak	27.0
111140		5850.0	-55.788	5.00	-50.992	Peak	27.0
	159	5855.0	-56.153	5.00	-50.037	Peak	15.6
	139	5875.0	-57.083	5.00	-53.102	Peak	10.0
		5925.0	-59.887	5.00	-54.227	Peak	-27.0

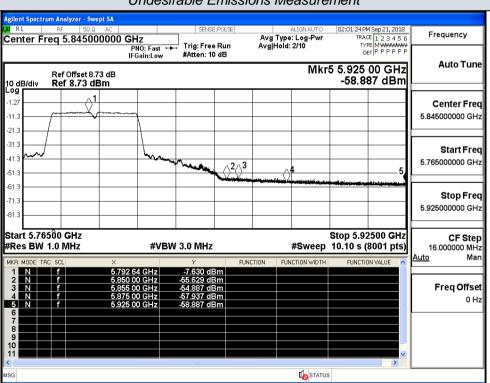
Antenna 0+Antenna 1+ Antenna 2+Antenna 3

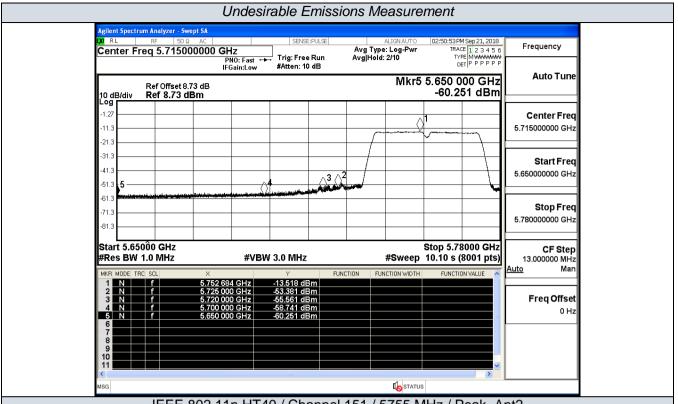
Test Mode	Channel	Frequency (MHz)		Conducted Power (dBm)					EIRP	Detector	Limit (dBm/MHz)
			Ant0	Ant1	Ant2	Ant3	Sum	(dBi)	(dBm/MHz)		(ubili/ivinz)
		650.05	-60.765	-59.598	-60.251	-61.120	-54.375	11.021	-43.354	Peak	-27.0
	151	5700.0	-57.706	-57.913	-58.741	-60.478	-52.561	11.021	-41.540	Peak	10.0
		5720.0	-55.614	-53.449	-55.561	-54.596	-48.692	11.021	-37.671	Peak	15.6
11N40		5725.0	-52.560	-53.930	-53.381	-55.620	-47.715	11.021	-36.694	Peak	27.0
111140		5850.0	-57.629	-55.629	-55.992	-55.788	-50.170	11.021	-39.149	Peak	27.0
	159	5855.0	-56.823	-54.887	-55.037	-56.153	-49.632	11.021	-38.611	Peak	15.6
	139	5875.0	-58.629	-57.937	-58.102	-57.083	-51.881	11.021	-40.860	Peak	10.0
		5925.0	-60.509	-55.629	-59.227	-59.887	-52.331	11.021	-41.310	Peak	-27.0

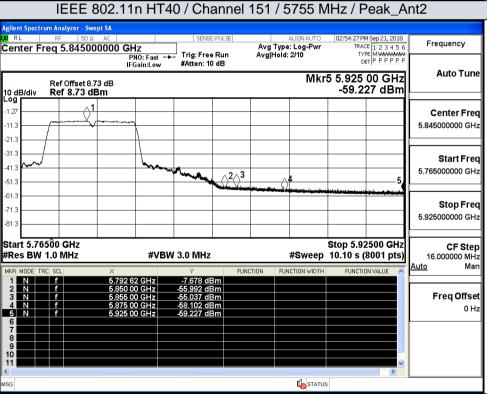




Undesirable Emissions Measurement gilent Spectrum Analyzer - Swept SA RL | RF | 50Ω AC | Center Freq 5.715000000 GHz ALIGNAUTO 04:26:57 PM Sep 21, 2018 Avg Type: Log-Pwr TRACE | 1 2 3 4 5 6 Avg|Hold: 2/10 TYPE | MWWWWWW DET | P P P P P P P Frequency PNO: Fast → Trig: Free Run IFGain:Low #Atten: 10 dB **Auto Tune** Mkr5 5.650 000 GHz Ref Offset 8.73 dB Ref 8.73 dBm -59.598 dBm 10 dB/div Log .1 27 Center Freq 5.715000000 GHz 31.3 Start Freq 41 3 5.650000000 GHz -51.3 61.3 Stop Freq 5.780000000 GHz Start 5.65000 GHz Stop 5.78000 GHz **CF Step** 13.000000 MHz #Sweep 10.10 s (8001 pts) #Res BW 1.0 MHz **#VBW 3.0 MHz** Man <u>Auto</u> FUNCTION WIDTH Freq Offset 0 Hz STATUS Undesirable Emissions Measurement

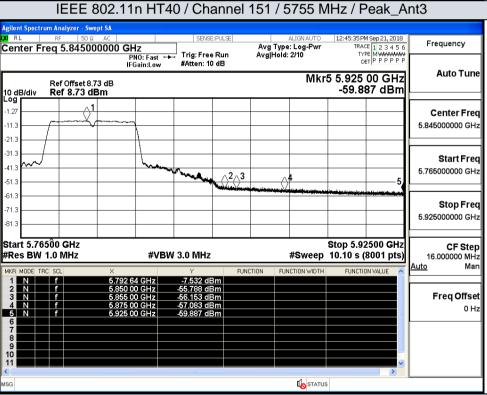






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Undesirable Emissions Measurement RL | RF | 50Ω AC | Center Freq 5.715000000 GHz ALIGN AUTO 12:40:28 PM Sep 21, 2018 Avg Type: Log-Pwr TRACE | 1 2 3 4 5 6 Avg|Hold: 2/10 TypE | MWWWWWW DET | P P P P P P P Frequency PNO: Fast → Trig: Free Run IFGain:Low #Atten: 10 dB **Auto Tune** Mkr5 5.650 000 GHz Ref Offset 8.73 dB Ref 8.73 dBm -61.210 dBm 10 dB/div Log .1 27 Center Freq 5.715000000 GHz 31.3 Start Freq 41 3 5.650000000 GHz ∆³ ∆2 51.3 61.3 Stop Freq 5.780000000 GHz Start 5.65000 GHz Stop 5.78000 GHz **CF Step** 13.000000 MHz #Sweep 10.10 s (8001 pts) #Res BW 1.0 MHz **#VBW 3.0 MHz** <u>Auto</u> FUNCTION WIDTH Freq Offset 0 Hz STATUS



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