Appendix B

RF Test Data for 5.8G WIFI (Conducted Measurement)

Product Name: PRO Z

Test Model: 7118+3118

Environmental Conditions

Temperature:	21.1° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

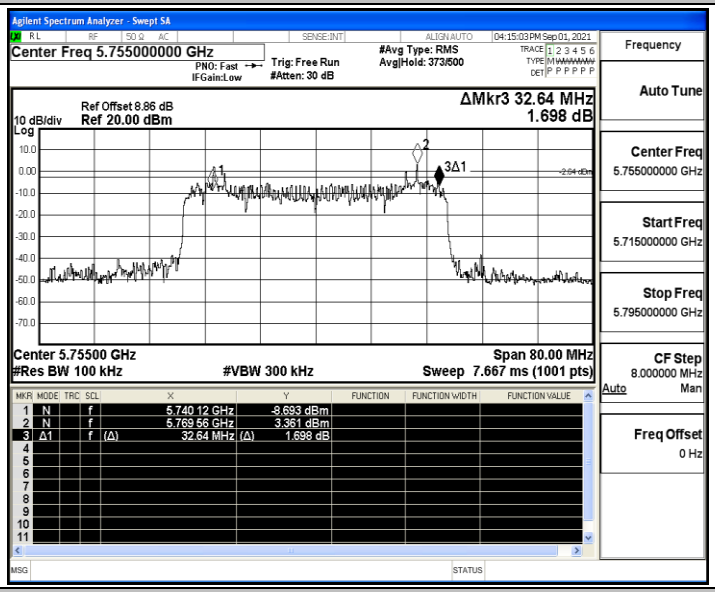
B.1 6dB Bandwidth

Test Result

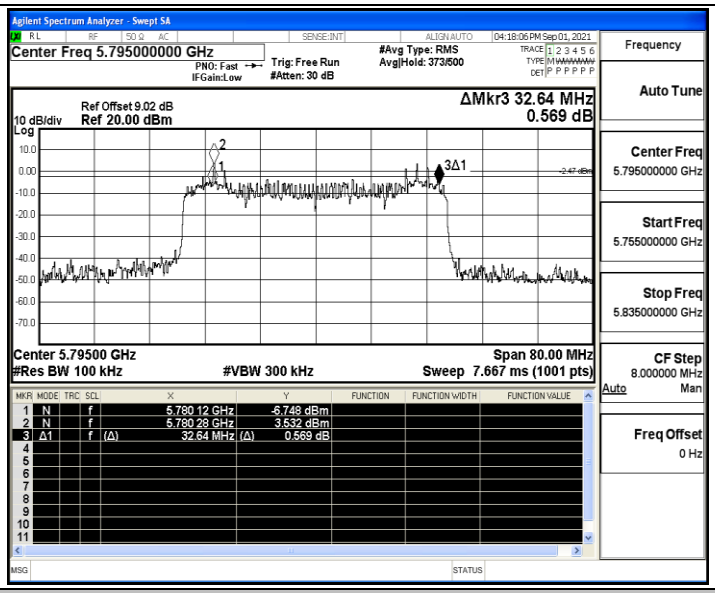
Modulation Mode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
OFDM	Ant1	5755	32.640	5740.120	5772.760	0.5	PASS
		5795	32.640	5780.120	5812.760	0.5	PASS
OFDM	Ant2	5755	35.520	5737.160	5772.680	0.5	PASS
		5795	34.080	5778.680	5812.760	0.5	PASS

Test Graphs

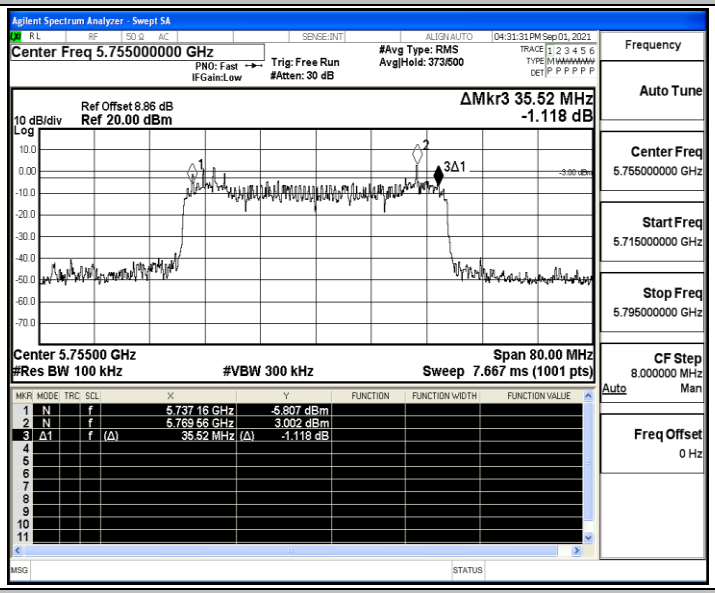
Ant1_5755



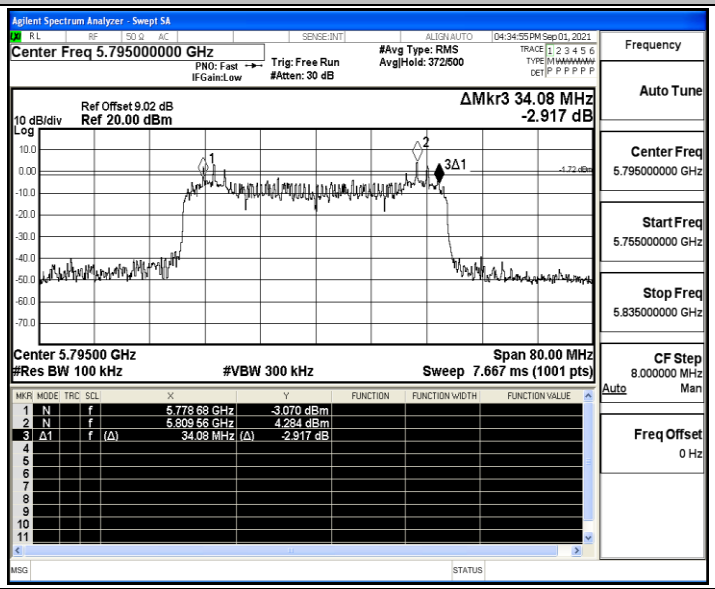
Ant1_5795



Ant2_5755



Ant2_5795



B.2 Maximum conducted output power

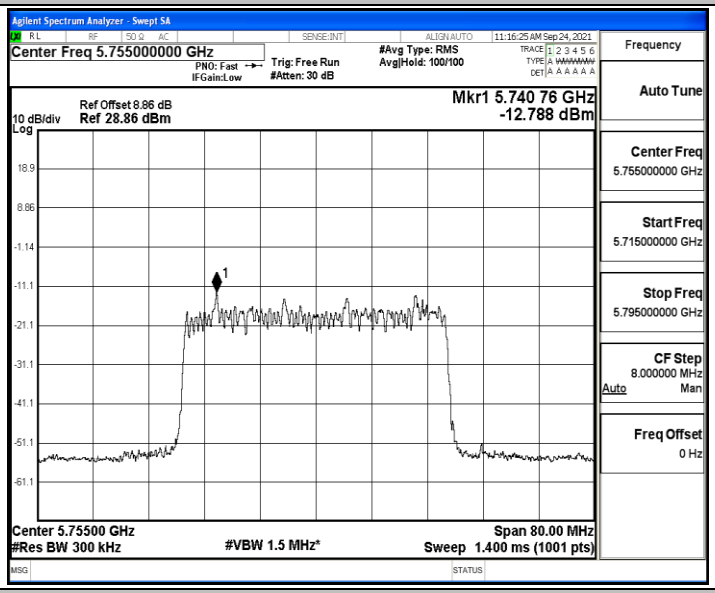
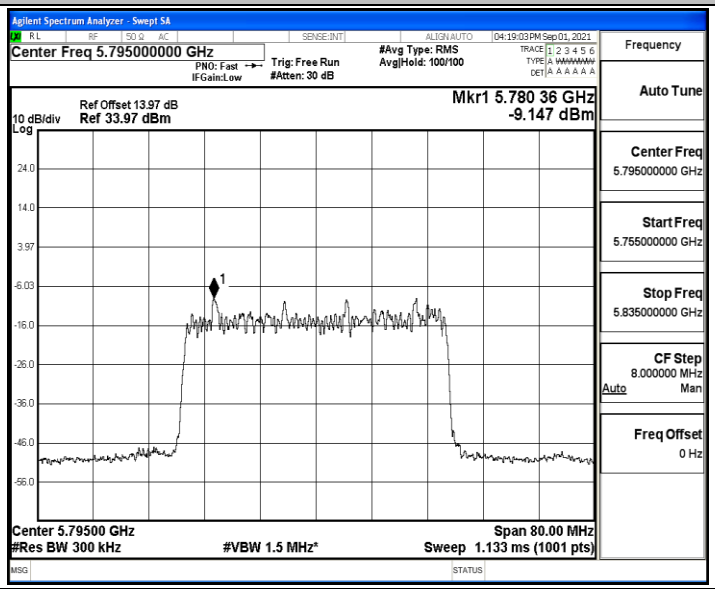
Test Result

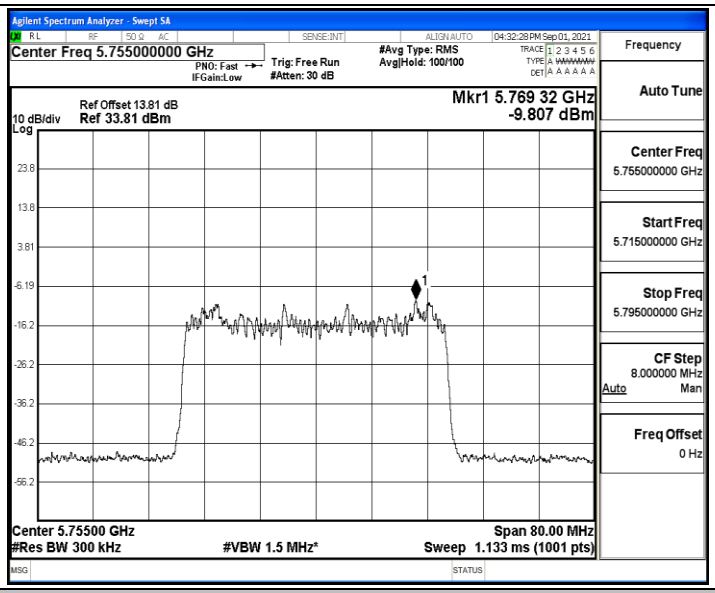
Modulation Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
OFDM	Ant1	5755	9.34	≤30	PASS
		5795	9.12	≤30	PASS
OFDM	Ant2	5755	9.52	≤30	PASS
		5795	9.32	≤30	PASS
OFDM	Ant1+Ant2	5755	12.44	≤30	PASS
		5795	12.23	≤30	PASS

B.3 Maximum power spectral density

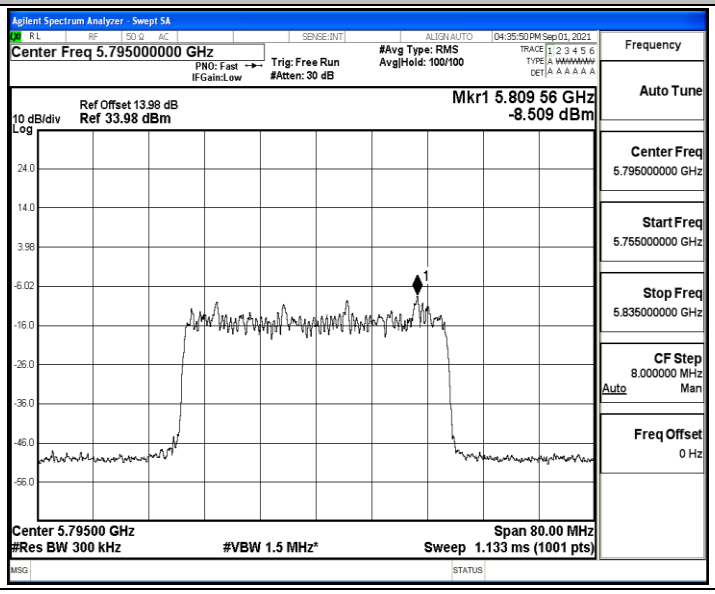
Modulation Mode	Antenna	Channel	Power Density (dBm/300KHz)	RBW Factor (dB)	Report Power Density (dBm/500KHz)	Limit[dBm/500KHz]	Verdict
OFDM	Ant1	5755	-12.79	2.218	-10.57	≤30	PASS
		5795	-9.15	2.218	-6.93	≤30	PASS
OFDM	Ant2	5755	-9.81	2.218	-7.59	≤30	PASS
		5795	-8.51	2.218	-6.29	≤30	PASS
OFDM	Ant 1+Ant2	5755	-8.04	2.218	-5.82	≤30	PASS
		5795	-5.81	2.218	-3.59	≤30	PASS

Note：1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.
3.Report conducted PSD = measured conducted PSD + Duty Cycle factor + RBW factor;
RBW factor = 10 log (500 KHz / 300 KHz) = 2.218 dB.

Ant1_5755

Ant1_5795

Ant2_5755


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.755000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
04:32:28 PM Sep 01, 2021
Frequency
Auto Tune
Ref Offset 13.81 dB
10 dB/div
Ref 33.81 dBm
Log
Mkr1 5.769 32 GHz
-9.807 dBm
23.8
13.8
3.81
-6.19
-16.2
-26.2
-36.2
-46.2
-56.2
Center Freq
5.755000000 GHz
Start Freq
5.715000000 GHz
Stop Freq
5.795000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
Center 5.75500 GHz
#Res BW 300 kHz
#VBW 1.5 MHz*
Span 80.00 MHz
Sweep 1.133 ms (1001 pts)
MSG
STATUS

Ant2_5795


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.795000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
04:35:50 PM Sep 01, 2021
Frequency
Auto Tune
Ref Offset 13.98 dB
10 dB/div
Ref 33.98 dBm
Log
Mkr1 5.809 56 GHz
-8.509 dBm
24.0
14.0
3.98
-6.02
-16.0
-26.0
-36.0
-46.0
-56.0
Center Freq
5.795000000 GHz
Start Freq
5.755000000 GHz
Stop Freq
5.835000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
Center 5.79500 GHz
#Res BW 300 kHz
#VBW 1.5 MHz*
Span 80.00 MHz
Sweep 1.133 ms (1001 pts)
MSG
STATUS

B.4 Emissions in Restricted Bands

Test Result

Modulation Mode	Antenna	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
OFDM	ANT1	5755	Peak	5650.000	-39.98	≤-27.00	---	---	PASS
			Peak	5700.000	-45.05	≤10.00	---	---	PASS
			Peak	5720.000	-42.29	≤15.60	---	---	PASS
			Peak	5725.000	-41.48	≤27.00	- --	- --	PASS
		5795	Peak	5650.000	-39.94	≤-27.00	---	---	PASS
			Peak	5700.000	-41.22	≤10.00	---	---	PASS
			Peak	5720.000	-40.70	≤15.60	---	---	PASS
			Peak	5725.000	-39.79	≤27.00	- --	- --	PASS
OFDM	ANT2	5755	Peak	5650.000	-41.48	≤-27.00	---	---	PASS
			Peak	5700.000	-40.76	≤10.00	---	---	PASS
			Peak	5720.000	-38.97	≤15.60	---	---	PASS
			Peak	5725.000	-40.86	≤27.00	- --	- --	PASS
		5795	Peak	5650.000	-40.26	≤-27.00	---	---	PASS
			Peak	5700.000	-39.96	≤10.00	---	---	PASS
			Peak	5720.000	-41.35	≤15.60	---	---	PASS
			Peak	5725.000	-40.65	≤27.00	- --	- --	PASS

ANT1+ANT2

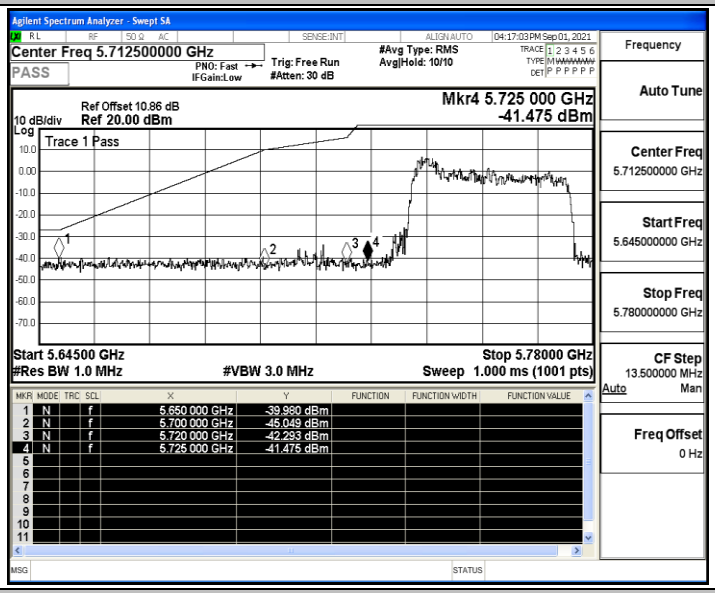
Modulation Mode	Antenna	Channel	Detector	Freq. [MHz]	Ant1 [dBm]	Ant2 [dBm]	Ant1 + Ant2 [dBm]	Compensated	Sum [dBm]	Limit [dBm]	Verdict
OFDM	ANT1+ ANT2	5755	Peak	5650.000	-39.98	-41.48	-37.66	3.01	-34.65	≤-27.00	PASS
			Peak	5700.000	-45.05	-40.76	-39.39	3.01	-36.38	≤10.00	PASS
			Peak	5720.000	-42.29	-38.97	-37.31	3.01	-34.3	≤15.60	PASS
			Peak	5725.000	-41.48	-40.86	-38.15	3.01	-35.14	≤27.00	PASS
		5795	Peak	5650.000	-39.94	-40.26	-37.09	3.01	-34.08	≤-27.00	PASS
			Peak	5700.000	-41.22	-39.96	-37.53	3.01	-34.52	≤10.00	PASS
			Peak	5720.000	-40.70	-41.35	-38.00	3.01	-34.99	≤15.60	PASS
			Peak	5725.000	-39.79	-40.65	-37.19	3.01	-34.18	≤27.00	PASS

Note：

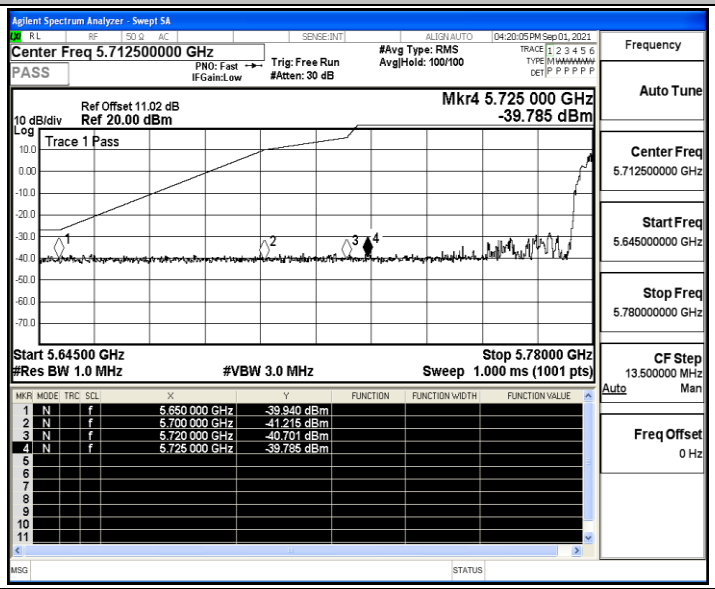
1. The Antenna Gain is compensated in the graph, for MIMO calculate,need considered 10 log2 compensated.
2. For transmitters operating in 5150-5350 GHz band and 5470-5725 GHz band: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

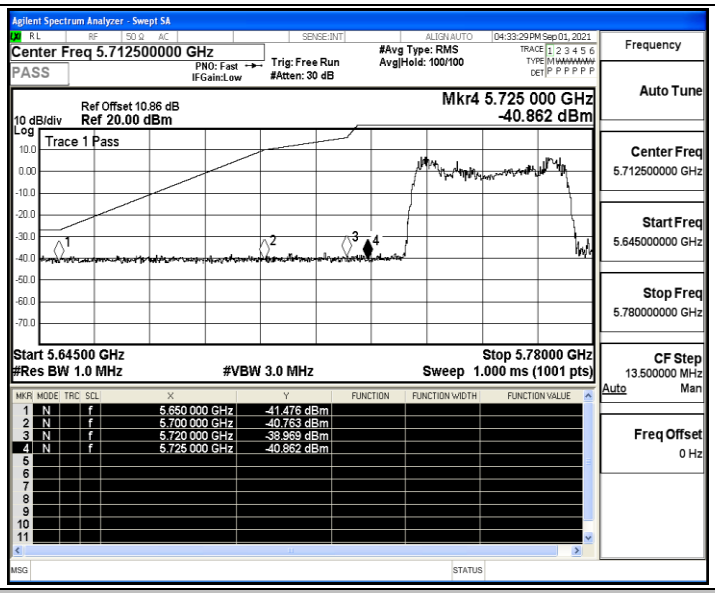
Ant1 _5755



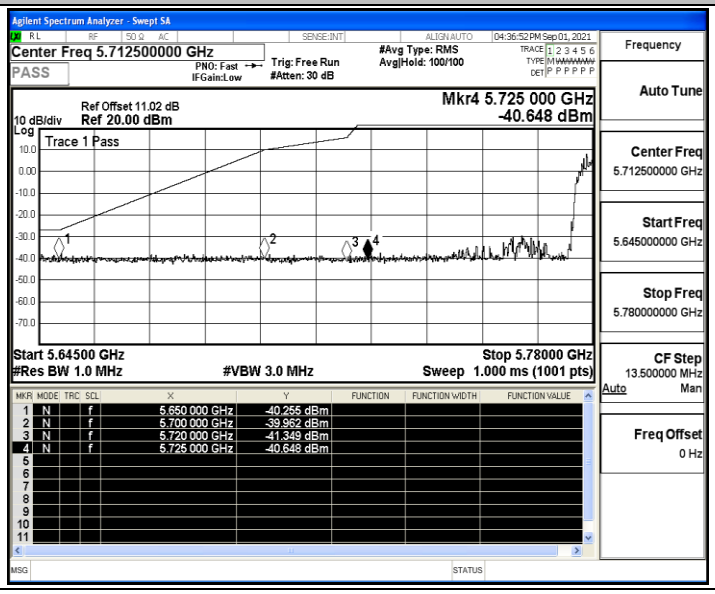
Ant1_ 5795_Peak



Ant2_ 5755_Peak



Ant2 _5795_Peak



B.5 Frequency Stability

Test Result

Modulation Mode	Antenna	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (ppm)	Limit (ppm)	Verdict
OFDM	Ant1	5755	NV	NT	-0.522193	20	PASS
			LV	NT	-0.696258	20	PASS
			HV	NT	-0.522193	20	PASS
		5795	NV	NT	-0.518583	20	PASS
			LV	NT	-0.691443	20	PASS
			HV	NT	-0.691443	20	PASS
OFDM	Ant2	5755	NV	NT	-0.696258	20	PASS
			LV	NT	-0.696258	20	PASS
			HV	NT	-0.696258	20	PASS
		5795	NV	NT	-0.691443	20	PASS
			LV	NT	-0.691443	20	PASS
			HV	NT	-0.691443	20	PASS

Modulation Mode	Antenna	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (ppm)	Limit (ppm)	Verdict
OFDM	Ant1	5755	NV	-30	-0.696258	20	PASS
			NV	-20	-0.696258	20	PASS
			NV	-10	-0.522193	20	PASS
			NV	0	-0.522193	20	PASS
			NV	10	-0.522193	20	PASS
			NV	20	-0.522193	20	PASS
			NV	30	-0.696258	20	PASS
			NV	40	-0.696258	20	PASS
			NV	50	-0.522193	20	PASS
		5795	NV	-30	-0.691443	20	PASS
			NV	-20	-0.691443	20	PASS
			NV	-10	-0.691443	20	PASS
			NV	0	-0.691443	20	PASS
			NV	10	-0.691443	20	PASS
			NV	20	-0.691443	20	PASS
			NV	30	-0.691443	20	PASS
			NV	40	-0.691443	20	PASS
			NV	50	-0.691443	20	PASS
OFDM	Ant2	5755	NV	-30	-0.696258	20	PASS
			NV	-20	-0.696258	20	PASS
			NV	-10	-0.696258	20	PASS
			NV	0	-0.696258	20	PASS

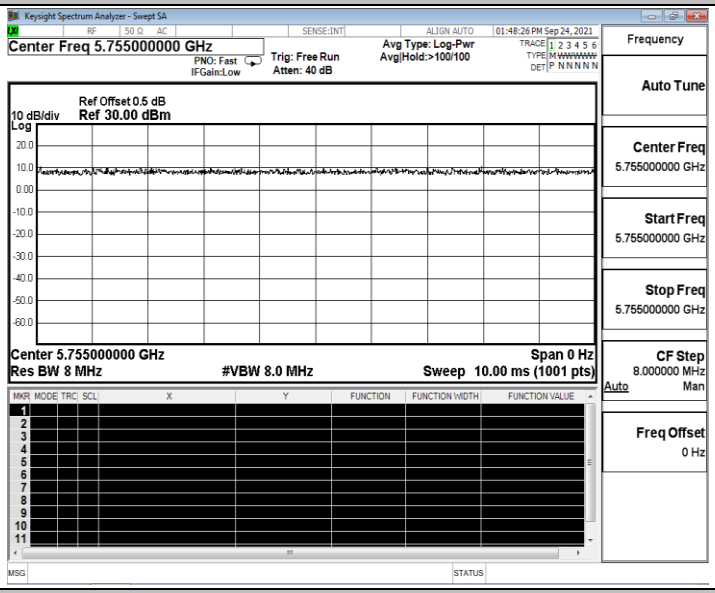
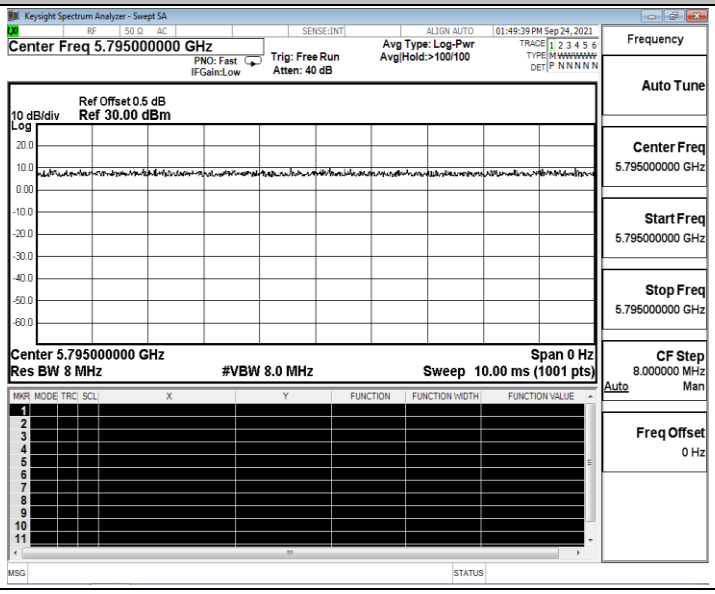
			NV	10	-0.696258	20	PASS
			NV	20	-0.696258	20	PASS
			NV	30	-0.696258	20	PASS
			NV	40	-0.696258	20	PASS
			NV	50	-0.696258	20	PASS
		5795	NV	-30	-0.691443	20	PASS
			NV	-20	-0.691443	20	PASS
			NV	-10	-0.691443	20	PASS
			NV	0	-0.691443	20	PASS
			NV	10	-0.691443	20	PASS
			NV	20	-0.691443	20	PASS
			NV	30	-0.691443	20	PASS
			NV	40	-0.691443	20	PASS
			NV	50	-0.691443	20	PASS

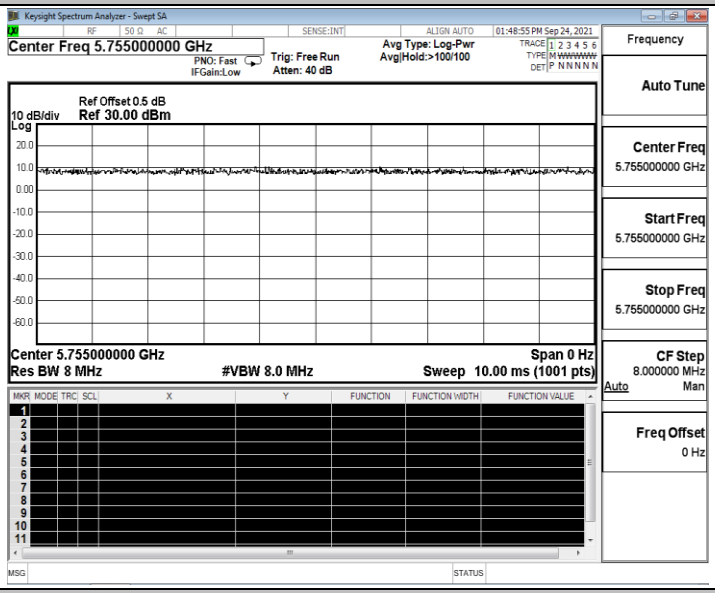
B.6 Duty Cycle

Test Result

Modulation Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
OFDM	Ant1	5755	30.00	30.00	100.00	---	PASS
		5795	30.00	30.00	100.00	---	PASS
OFDM	Ant2	5755	30.00	30.00	100.00	---	PASS
		5795	30.00	30.00	100.00	---	PASS

Test Graphs

Ant1_5755

Ant1_5795


Ant2_5755


Ant2_5795