Appendix Test Data

Report No.:	18220WC20060301	Test Sample No.:	1-2-2
Start Test Date:	2022.3.28	Finish Test Date:	2022.4.7
Test Engineer:	Tony.He	Auditor:	Edward.Pan
Temperature:	24.3℃	Relative Humidity:	57 %
Pressure:	1012 hPa		

Appendix A: DTS Bandwidth

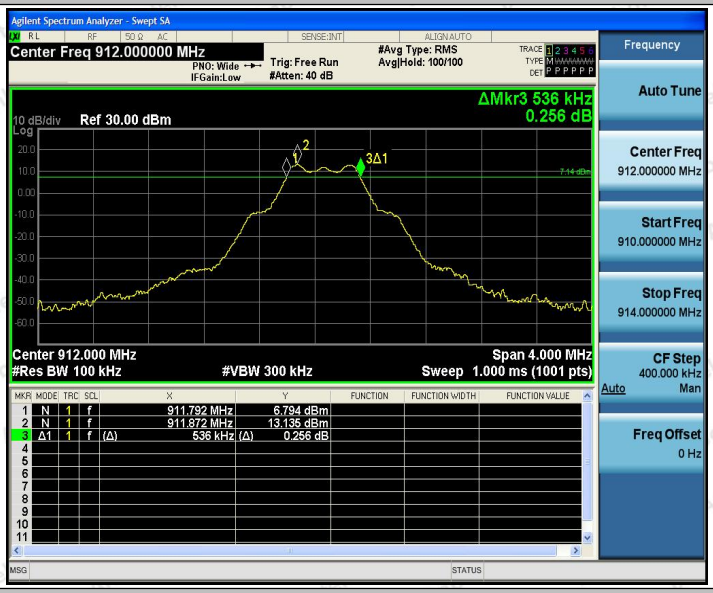
Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
900M	Ant1	904	0.540	903.792	904.332	≥0.5	PASS
		912	0.536	911.792	912.328	≥0.5	PASS
		926	0.532	925.796	926.328	≥0.5	PASS

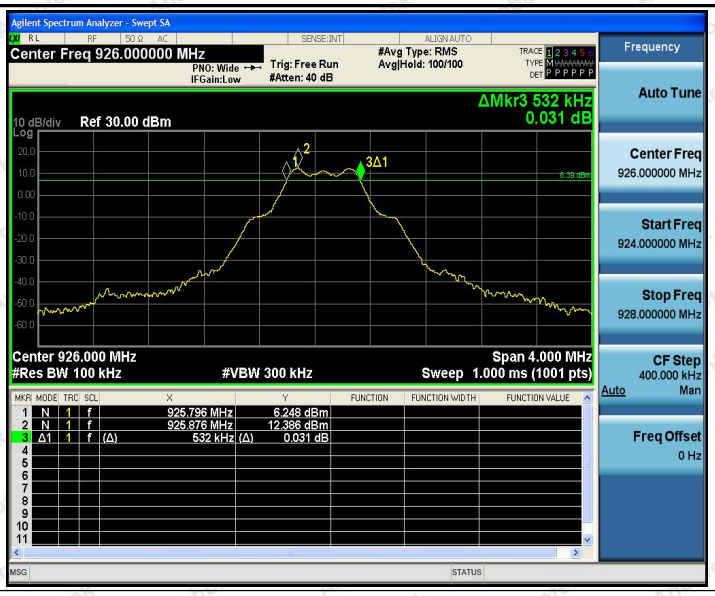
Test Graphs

900M_Ant1_904

900M_Ant1_912



900M_Ant1_926


Agilent Spectrum Analyzer - Swept SA
Center Freq 926.000000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold: 100/100
ΔMkr3 532 kHz
0.031 dB
10 dB/div Ref 30.00 dBm
Log
Center 926.000 MHz
#Res BW 100 kHz
#VBW 300 kHz
Span 4.000 MHz
Sweep 1.000 ms (1001 pts)
1 N 1 f 925.796 MHz 6.248 dBm
2 N 1 f 925.876 MHz 12.386 dBm
3 Δ1 1 f (Δ) 532 kHz (Δ) 0.031 dB
Frequency
Auto Tune
Center Freq
926.000000 MHz
Start Freq
924.000000 MHz
Stop Freq
928.000000 MHz
CF Step
400.000 kHz
Auto Man
Freq Offset
0 Hz

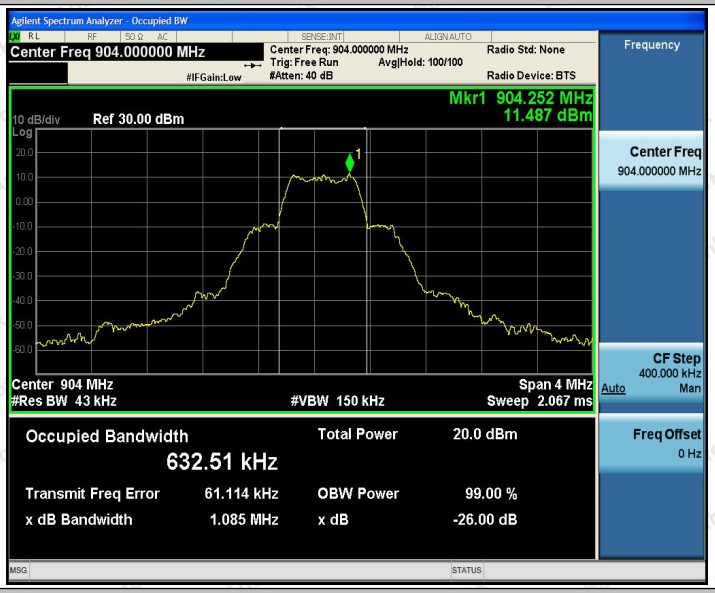
Appendix B: Occupied Channel Bandwidth

Test Result

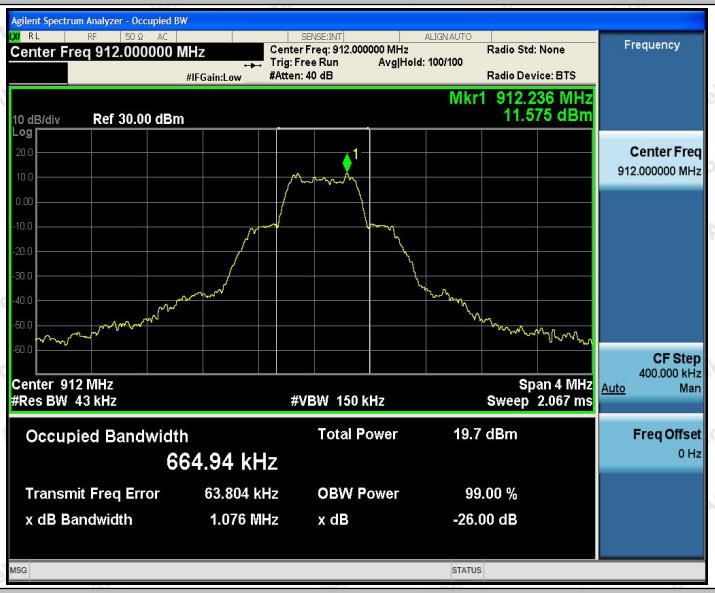
Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
900M	Ant1	904	0.63251	903.745	904.377	---	PASS
		912	0.66494	911.731	912.396	---	PASS
		926	0.60680	925.759	926.366	---	PASS

Test Graphs

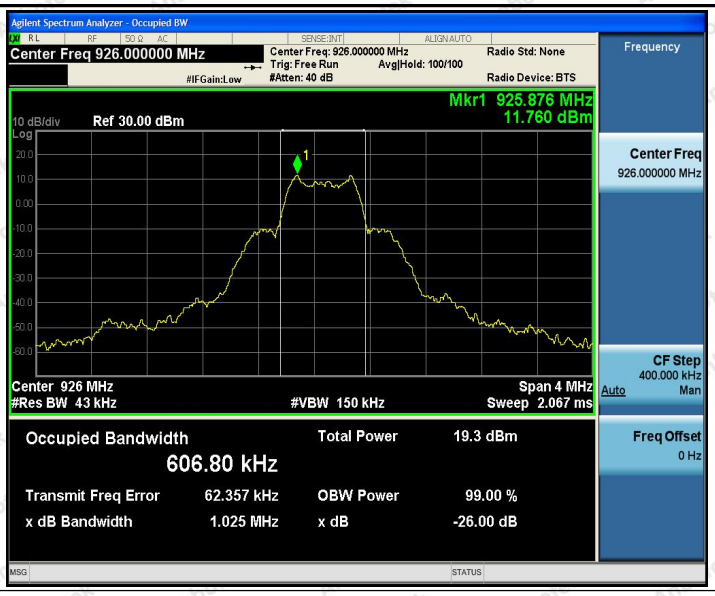
900M_Ant1_904



900M_Ant1_912



900M_Ant1_926


Agilent Spectrum Analyzer - Occupied BW
Center Freq 926.000000 MHz
Center Freq: 926.000000 MHz
Trig: Free Run
Avg|Hold: 100/100
#Atten: 40 dB
Radio Std: None
Radio Device: BTS
Mkr1 925.876 MHz
11.760 dBm
10 dB/div
Ref 30.00 dBm
Center 926 MHz
#Res BW 43 kHz
#VBW 150 kHz
Span 4 MHz
Sweep 2.067 ms
Occupied Bandwidth
606.80 kHz
Total Power 19.3 dBm
Transmit Freq Error 62.357 kHz
OBW Power 99.00 %
x dB Bandwidth 1.025 MHz
x dB -26.00 dB
Frequency
Center Freq
926.000000 MHz
CF Step
400.000 kHz
Auto Man
Freq Offset
0 Hz

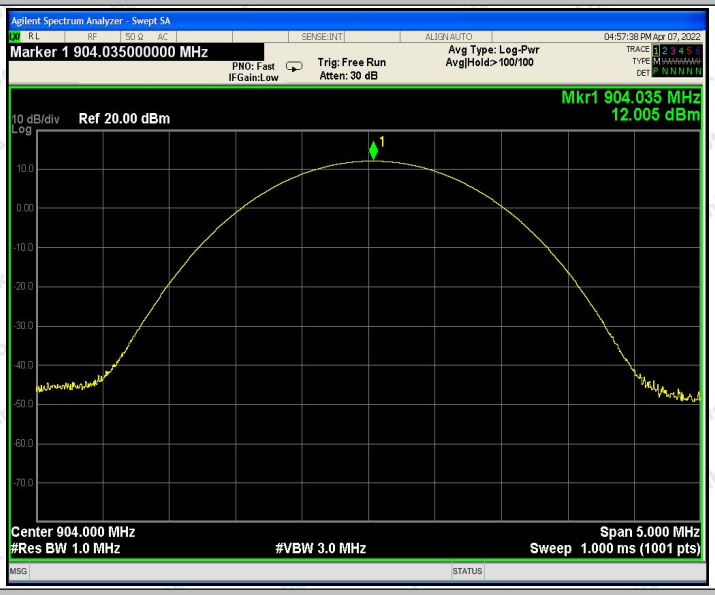
Appendix C: Maximum conducted output power

Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	904	12.005	≤30	PASS
		912	12.051	≤30	PASS
		926	11.875	≤30	PASS

Test Graphs

900M_Ant1_904



900M_Ant1_912

900M_Ant1_926

Agilent Spectrum Analyzer - Swept SA
Marker 1 926.025000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:59:30 PM Apr 07, 2022
Mkr1 926.025 MHz
11.875 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 926.000 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 5.000 MHz
Sweep 1.000 ms (1001 pts)

Appendix D: Maximum power spectral density

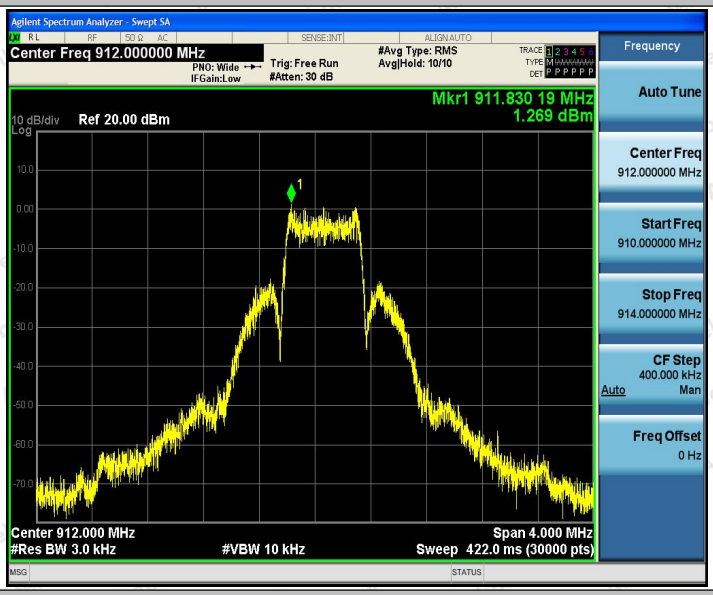
Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
900M	Ant1	904	0.83	≤8	PASS
		912	1.27	≤8	PASS
		926	-0.42	≤8	PASS

Test Graphs

900M_Ant1_904

900M_Ant1_912



900M_Ant1_926

Agilent Spectrum Analyzer - Swept SA
Center Freq 926.000000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 10/10
Mkr1 926.294 34 MHz
-0.417 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 926.000 MHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 4.000 MHz
Sweep 422.0 ms (30000 pts)
Frequency
Auto Tune
Center Freq
926.000000 MHz
Start Freq
924.000000 MHz
Stop Freq
928.000000 MHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz

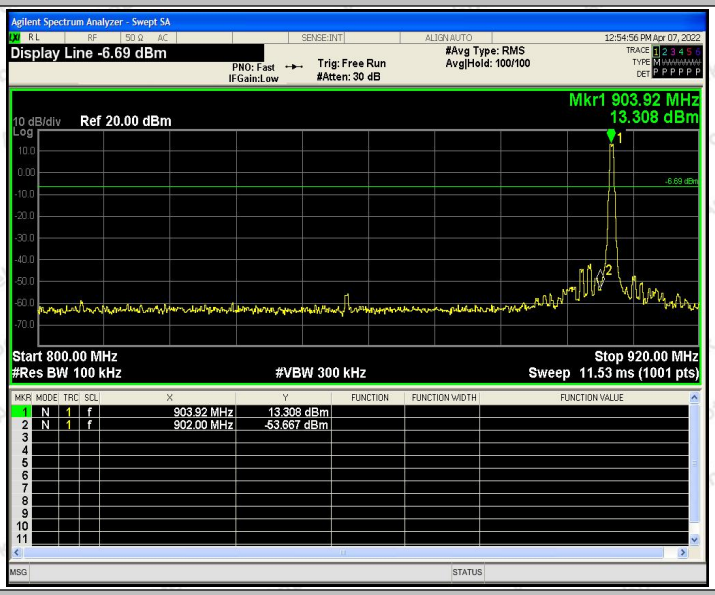
Appendix E: Band edge measurements

Test Result

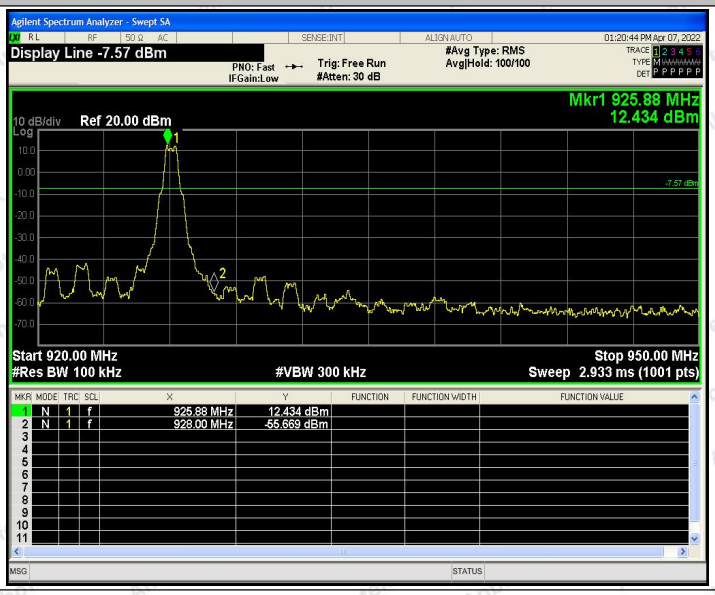
Test Mode	Antenna	Ch Name	Channel	Ref Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
900M	Ant1	Low	904	13.31	-53.667	≤-6.69	PASS
		High	926	12.43	-55.669	≤-7.57	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



Appendix F: Conducted Spurious Emission

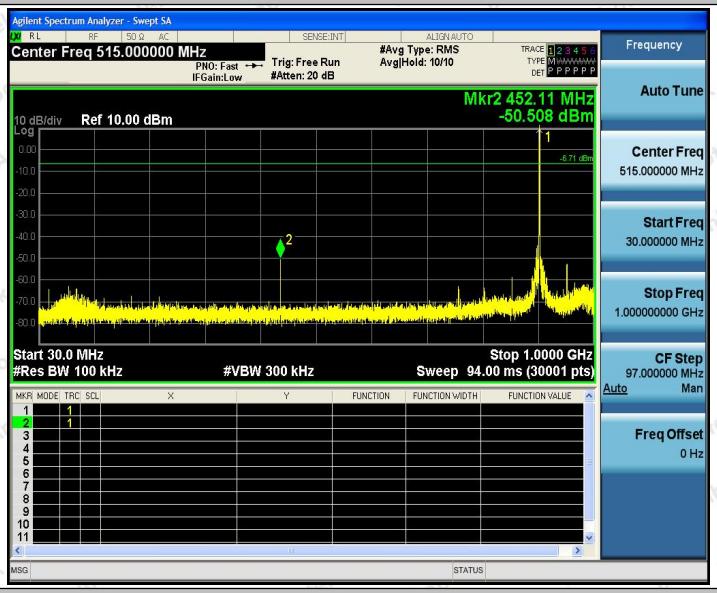
Test Result

Test Mode	Antenna	Channel	Freq Range [MHz]	Ref Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
900M	Ant1	904	Reference	13.29	13.29	---	PASS
			30~1000	13.29	-50.51	≤-6.71	PASS
			1000~26500	13.29	-38.73	≤-6.71	PASS
		912	Reference	13.13	13.13	---	PASS
			30~1000	13.13	-50.64	≤-6.87	PASS
			1000~26500	13.13	-40.88	≤-6.87	PASS
		926	Reference	12.33	12.33	---	PASS
			30~1000	12.33	-49.05	≤-7.67	PASS
			1000~26500	12.33	-39.54	≤-7.67	PASS

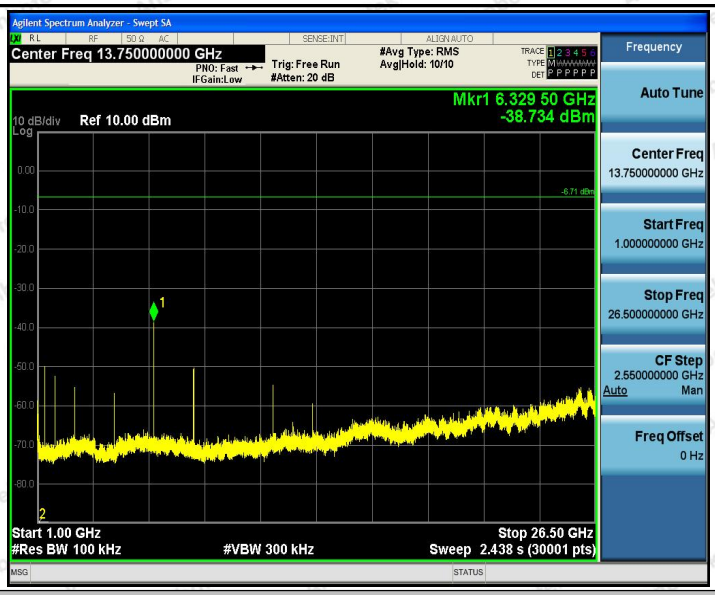
Test Graphs

900M_Ant1_904_0~Reference

900M_Ant1_904_30~1000

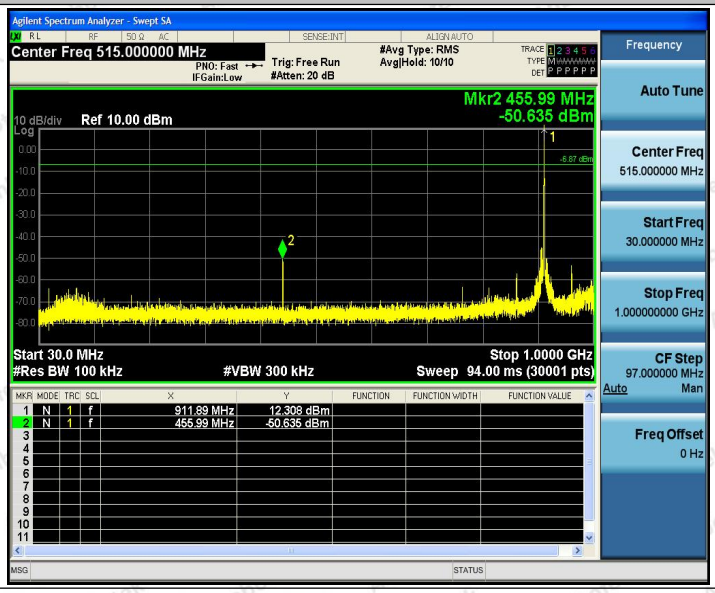


900M_Ant1_904_1000~26500

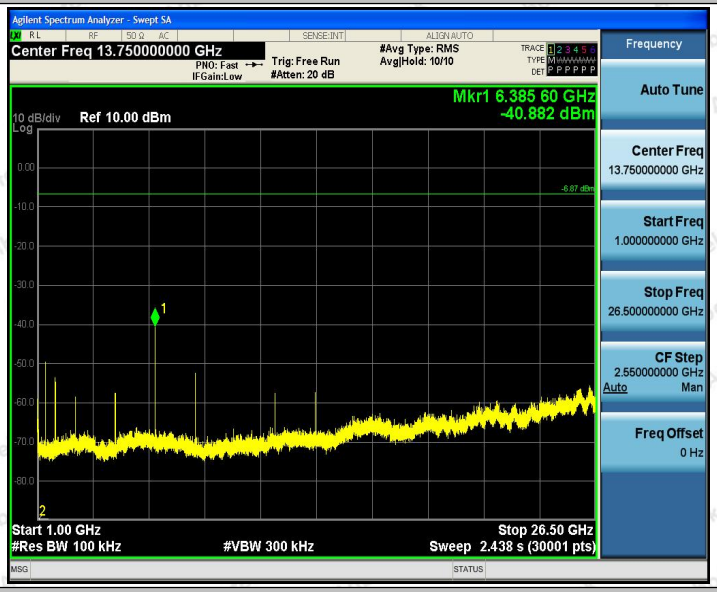


900M_Ant1_912_0~Reference

900M_Ant1_912_30~1000

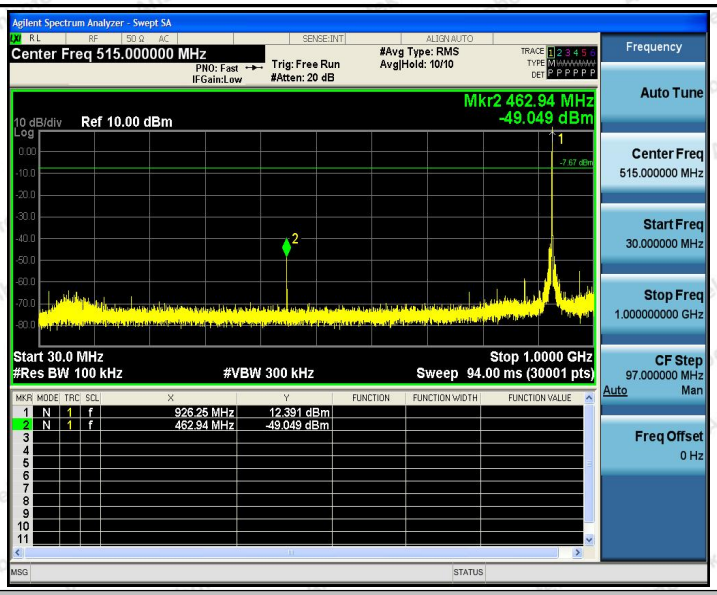


900M_Ant1_912_1000~26500



900M_Ant1_926_0~Reference

900M_Ant1_926_30~1000



900M_Ant1_926_1000~26500

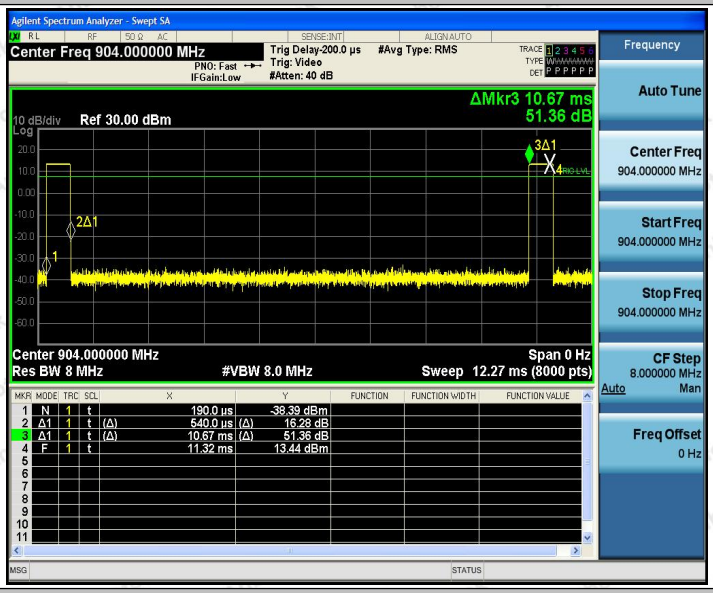
Appendix G: Duty Cycle

Test Result

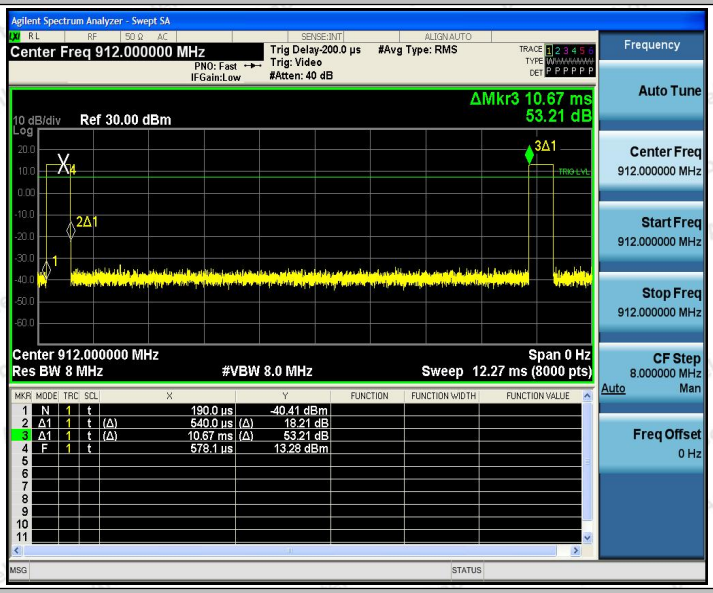
Test Mode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	X Factor	Limit	Verdict
900M	Ant1	904	0.54	10.67	0.0506	5.06	12.96	---	PASS
		912	0.54	10.67	0.0506	5.06	12.96	---	PASS
		926	0.54	10.67	0.0506	5.06	12.96	---	PASS

Test Graphs

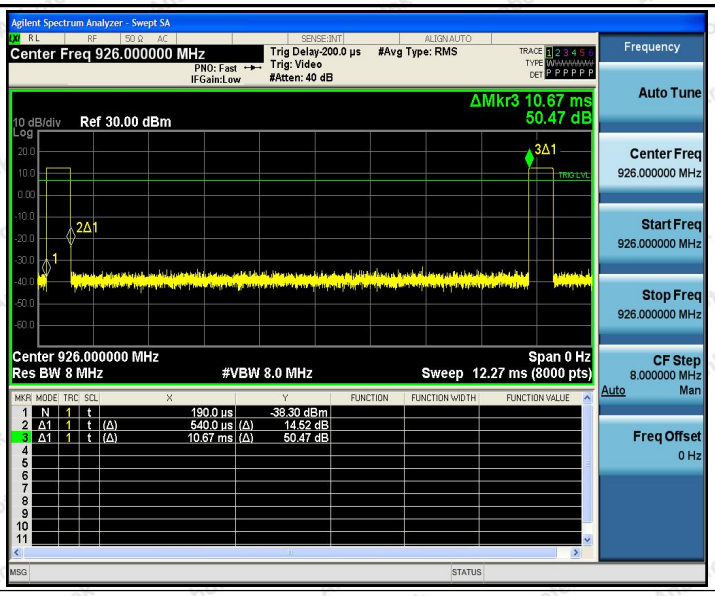
900M_Ant1_904



900M_Ant1_912



900M_Ant1_926


Agilent Spectrum Analyzer - Swept SA
Center Freq 926.000000 MHz
PNO: Fast
IFGain:Low
Trig Delay-200.0 µs
Trig: Video
#Atten: 40 dB
#Avg Type: RMS
ΔMkr3 10.67 ms
50.47 dB
10 dB/div
Ref 30.00 dBm
Log
3Δ1
2Δ1
1
TRIG LVL
Center 926.000000 MHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 12.27 ms (8000 pts)
1 N 1 t 190.0 µs -38.30 dBm
2 Δ1 1 t (Δ) 540.0 µs (Δ) 14.52 dB
3 Δ1 1 t (Δ) 10.67 ms (Δ) 50.47 dB
Frequency
Auto Tune
Center Freq
926.000000 MHz
Start Freq
926.000000 MHz
Stop Freq
926.000000 MHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

---End---