5.2 OCCUPIED BANDWIDTH (99%) TEST APPLIED PROCEDURES / LIMIT

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

5.2.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.
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.

5.2.2 DEVIATION FROM STANDARD

No deviation.

5.2.3 TEST SETUP

5.2.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.2.5 TEST RESULTS

For the measurement records，refer to the appendix I.

5.3 MINIMUM EMISSION BANDWIDTH(6 DB) PROCEDURES / LIMIT

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth.

5.3.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.
a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) 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.

5.3.2 DEVIATION FROM STANDARD

No deviation.

5.3.3 TEST SETUP

5.3.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.3.5 TEST RESULTS

For the measurement records，refer to the appendix I.

6. MAXIMUM CONDUCTED OUTPUT POWER

6.1 LIMIT

For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz,If transmitting antennas of directional gain greater than 6 dBi are used.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used.

FCC Part15 (15.407) , Subpart E				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.407(a) (1) (iv)	Peak Output Power	0.25 watt	5150-5250	PASS
		The lesser of 250 mW or 11 dBm + 10 log (26 dB emission bandwidth)	5250-5350 5470-5725	
15.407(a) (3)		1 watt	5725-5825	

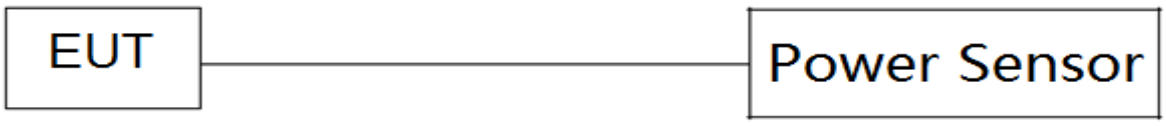
6.2 TEST PROCEDURE

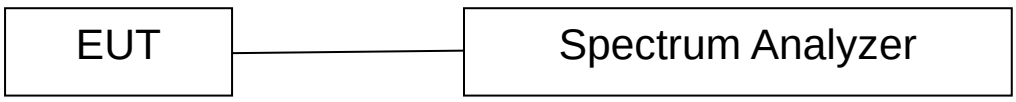
The EUT was directly connected to the Power Sensor&PC

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP





6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

For the measurement records，refer to the appendix I.

7. AUTOMATICALLY DISCONTINUE TRANSMISSION

7.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

7.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission

8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

Part 15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

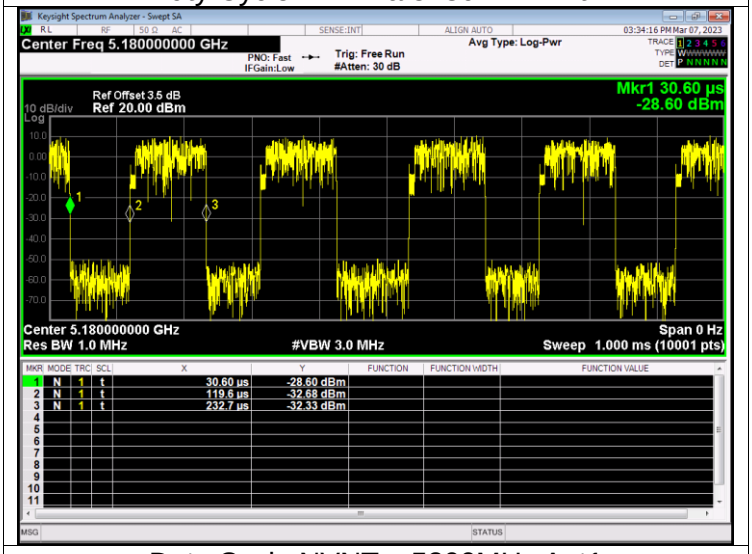
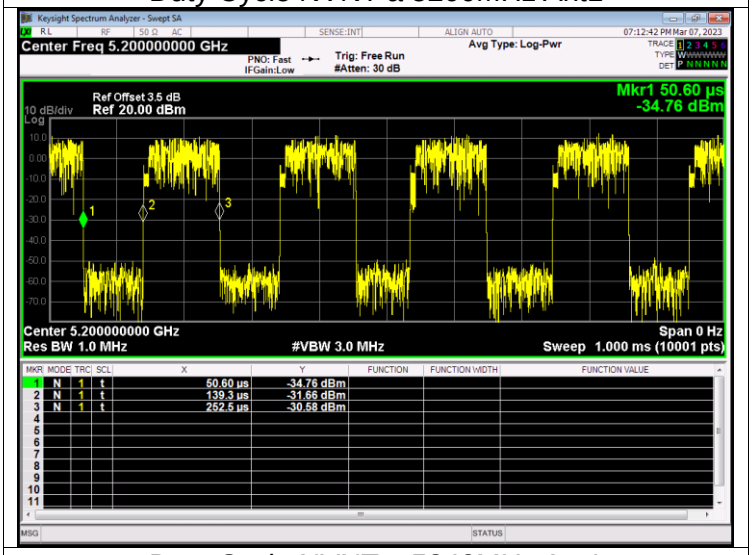
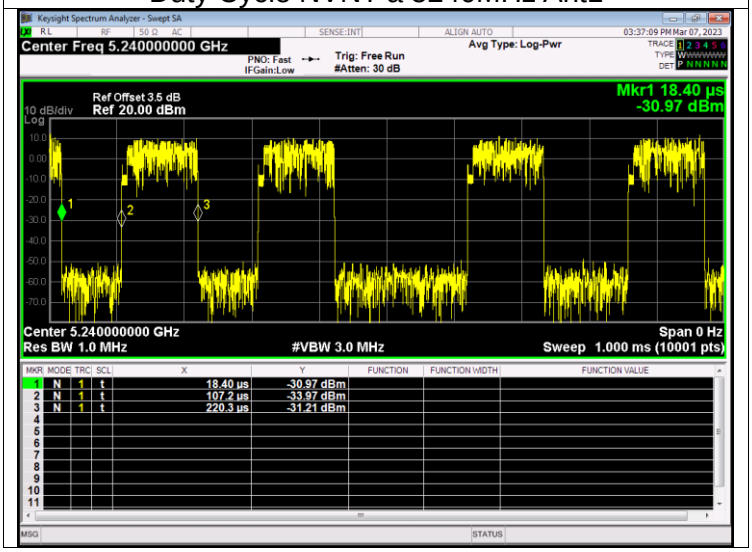
8.2 EUT ANTENNA

The EUT antenna is FPC Antenna with RP-SMA connector. It comply with the standard requirement.

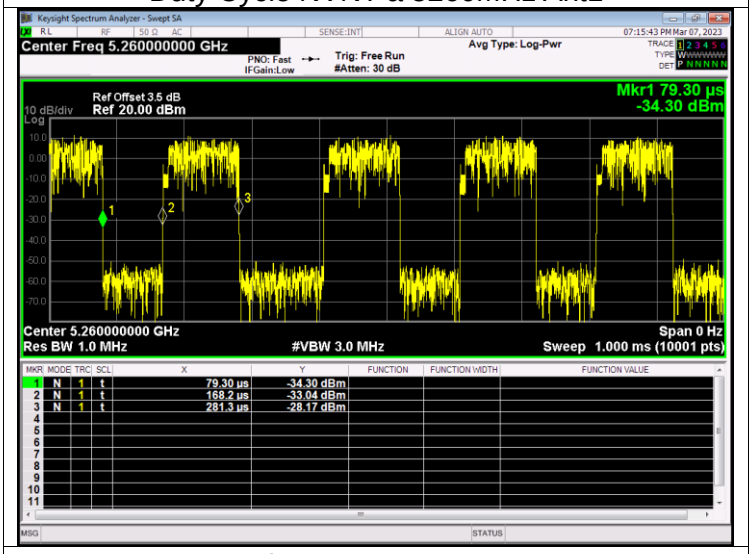
APPENDIX I:TEST RESULTS

Duty Cycle

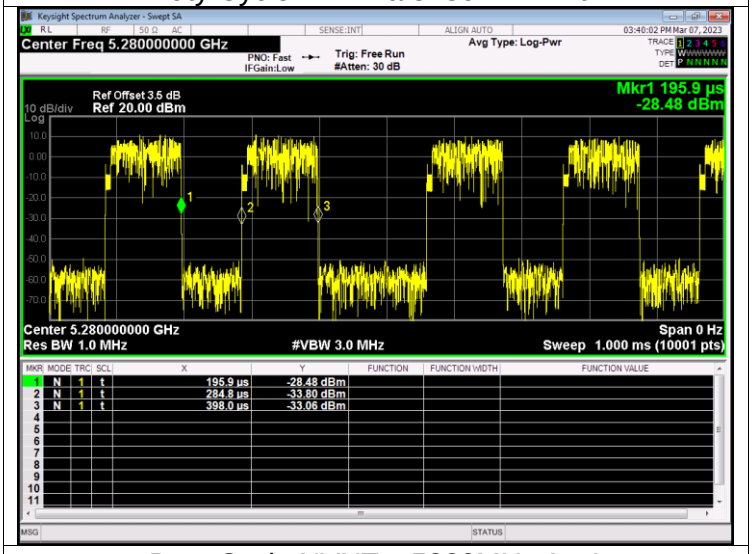
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	55.96	2.52	8.84
NVNT	a	5200	Ant1	56.07	2.51	8.83
NVNT	a	5240	Ant1	56.02	2.52	8.84
NVNT	a	5260	Ant1	55.99	2.52	8.84
NVNT	a	5280	Ant1	56.01	2.52	8.83
NVNT	a	5320	Ant1	56.02	2.52	8.84
NVNT	a	5500	Ant1	56.06	2.51	8.83
NVNT	a	5600	Ant1	56.14	2.51	8.82
NVNT	a	5700	Ant1	56.14	2.51	8.82
NVNT	a	5745	Ant1	56.09	2.51	8.83
NVNT	a	5785	Ant1	56.05	2.51	8.84
NVNT	a	5825	Ant1	55.98	2.52	8.83
NVNT	n20	5180	Ant1	57.65	2.39	8.26
NVNT	n20	5200	Ant1	57.67	2.39	8.26
NVNT	n20	5240	Ant1	57.66	2.39	8.25
NVNT	n20	5260	Ant1	57.69	2.39	8.25
NVNT	n20	5280	Ant1	57.65	2.39	8.26
NVNT	n20	5320	Ant1	57.64	2.39	8.26
NVNT	n20	5500	Ant1	57.62	2.39	8.26
NVNT	n20	5600	Ant1	57.62	2.39	8.26
NVNT	n20	5700	Ant1	57.81	2.38	8.24
NVNT	n20	5745	Ant1	57.81	2.38	8.24
NVNT	n20	5785	Ant1	57.83	2.38	8.23
NVNT	n20	5825	Ant1	57.71	2.39	8.25
NVNT	n40	5190	Ant1	46.38	3.34	13
NVNT	n40	5230	Ant1	46.47	3.33	12.97
NVNT	n40	5270	Ant1	46.48	3.33	12.95
NVNT	n40	5310	Ant1	46.42	3.33	12.97
NVNT	n40	5510	Ant1	46.42	3.33	12.97
NVNT	n40	5550	Ant1	46.47	3.33	12.97
NVNT	n40	5670	Ant1	46.41	3.33	12.99
NVNT	n40	5755	Ant1	46.41	3.33	12.99
NVNT	n40	5795	Ant1	46.51	3.32	12.95
NVNT	ac80	5210	Ant1	41.28	3.84	16.26
NVNT	ac80	5290	Ant1	41.21	3.85	16.29
NVNT	ac80	5530	Ant1	41.28	3.84	16.26
NVNT	ac80	5610	Ant1	41.28	3.84	16.26
NVNT	ac80	5775	Ant1	41.84	3.78	16.26

Test Graphs
Duty Cycle NVNT a 5180MHz Ant1

Duty Cycle NVNT a 5200MHz Ant1

Duty Cycle NVNT a 5240MHz Ant1


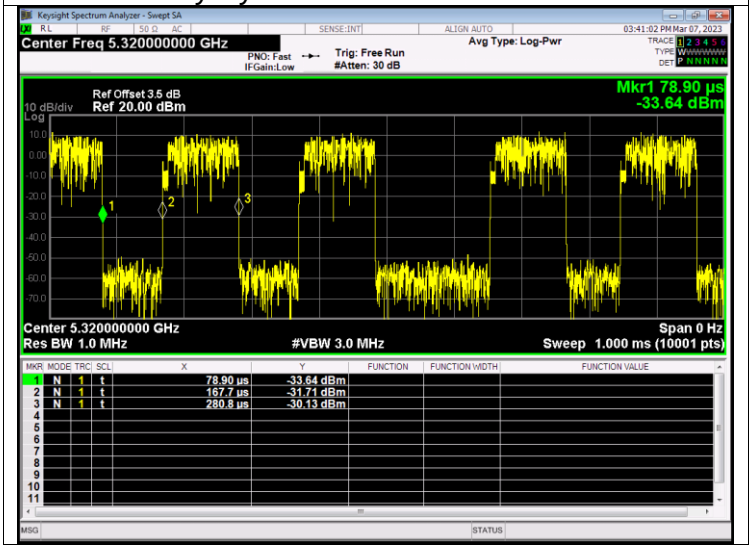
Duty Cycle NVNT a 5260MHz Ant1



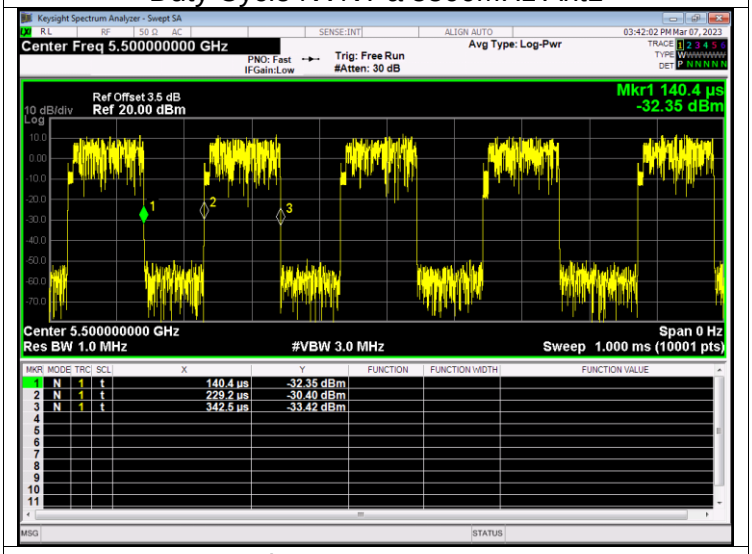
Duty Cycle NVNT a 5280MHz Ant1



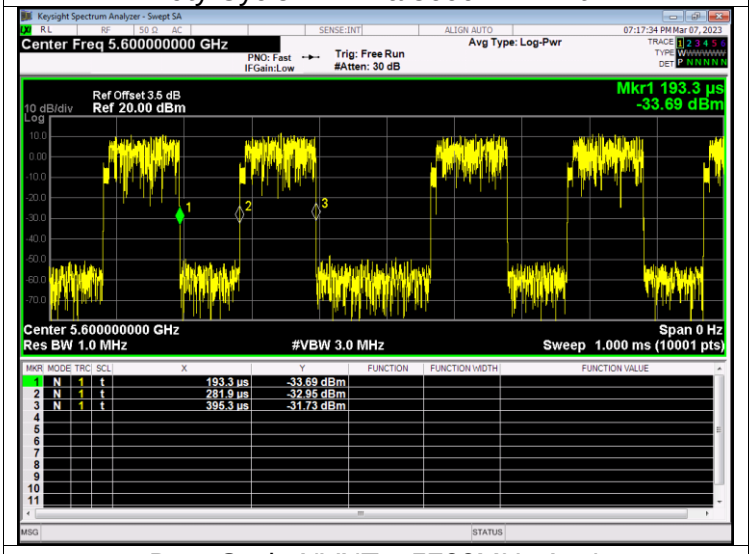
Duty Cycle NVNT a 5320MHz Ant1



Duty Cycle NVNT a 5500MHz Ant1



Duty Cycle NVNT a 5600MHz Ant1



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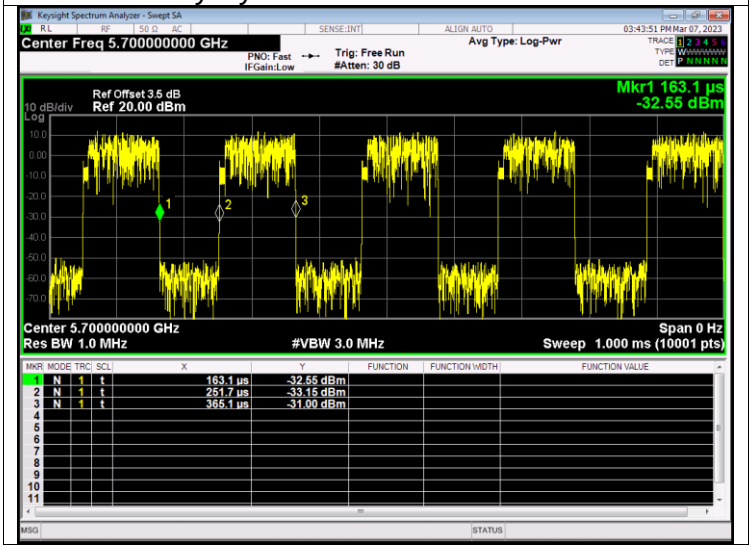

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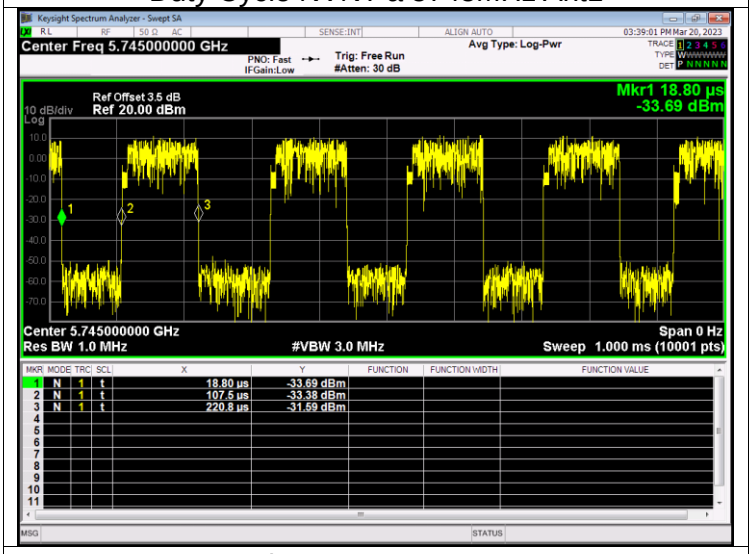

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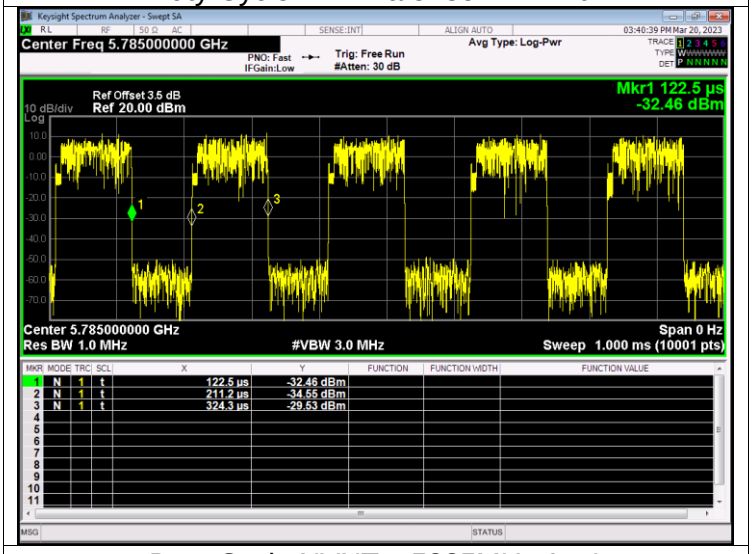

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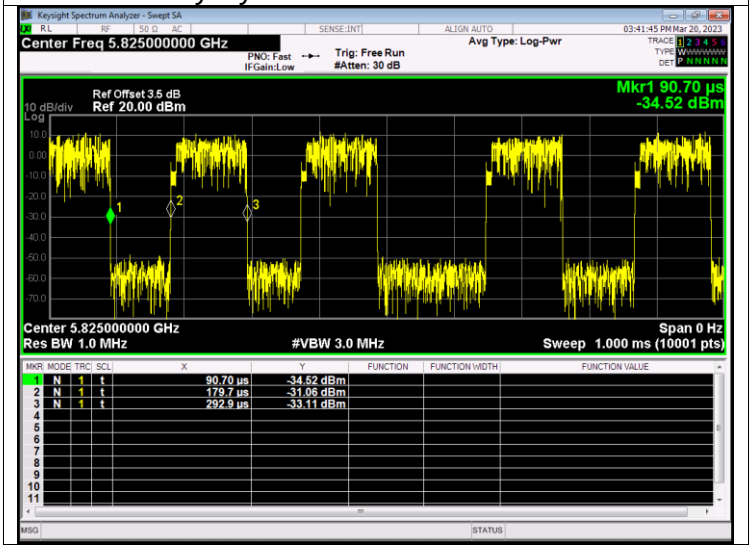
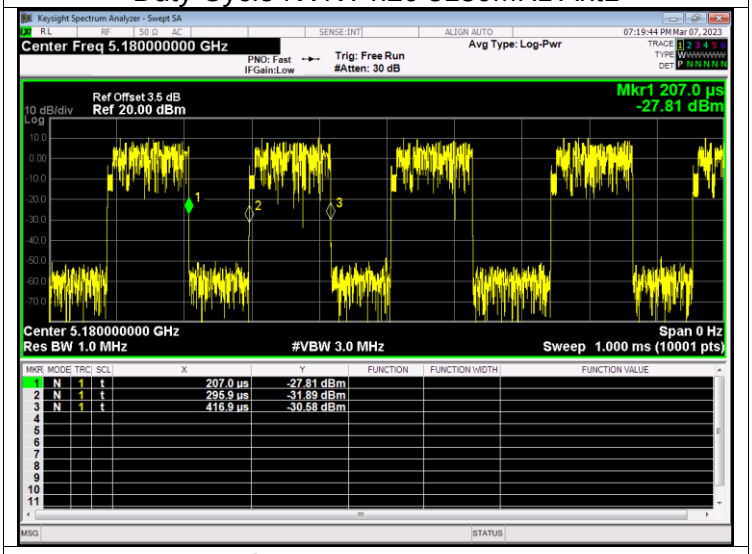


Duty Cycle NVNT n20 5180MHz Ant1



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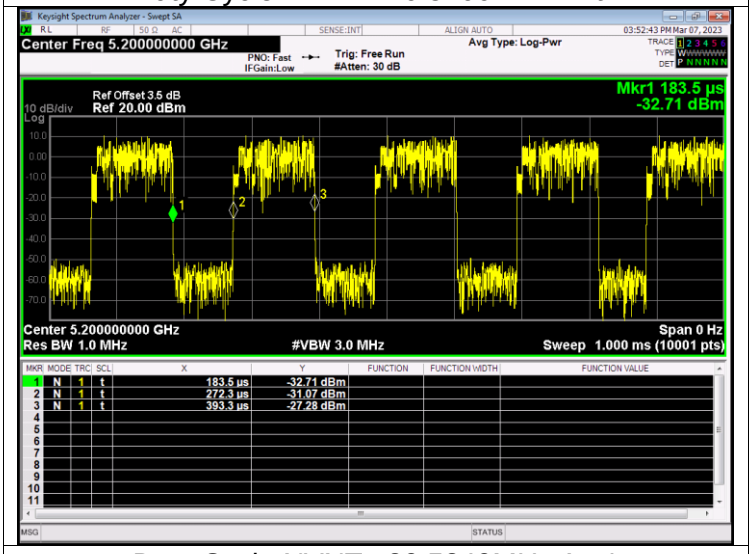

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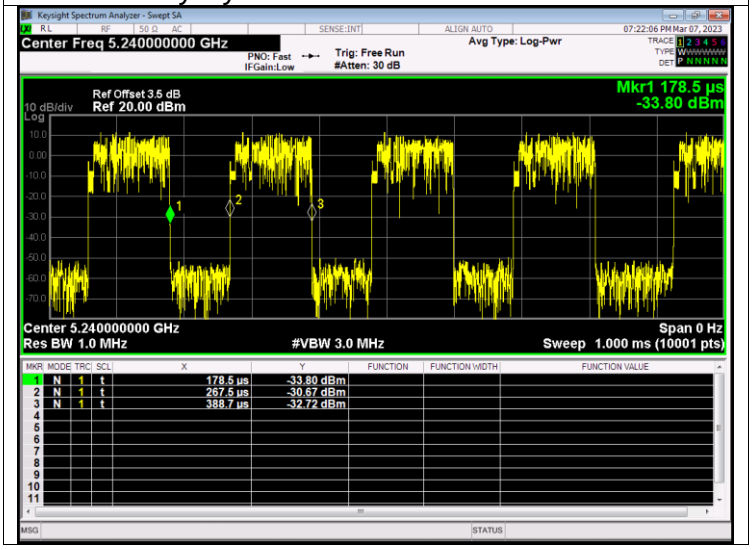

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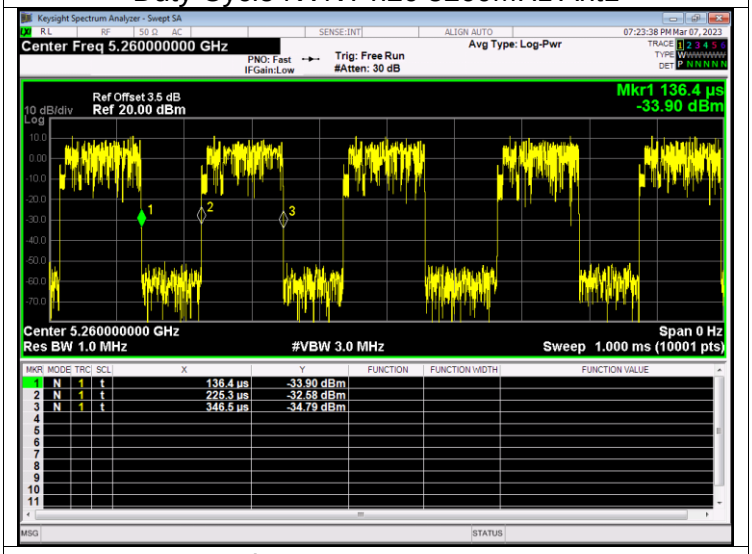

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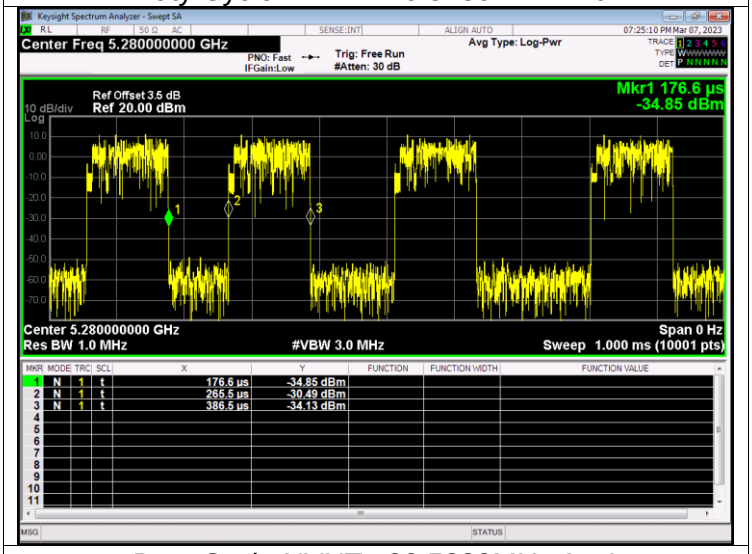
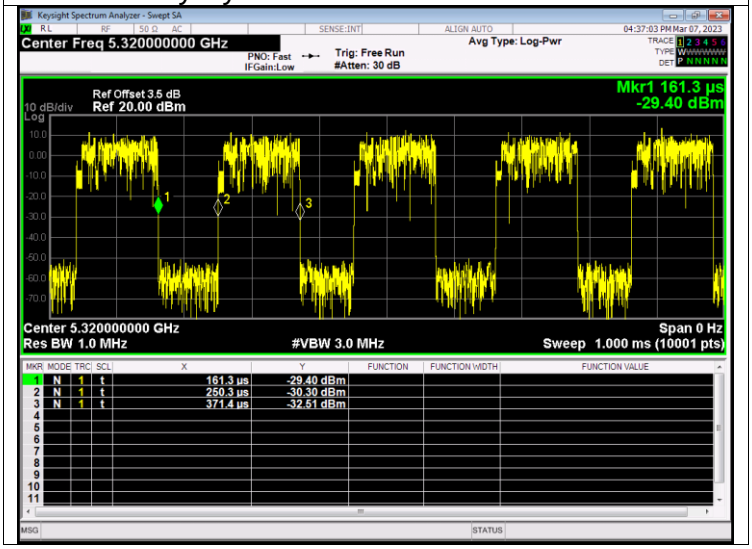


Duty Cycle NVNT n20 5320MHz Ant1



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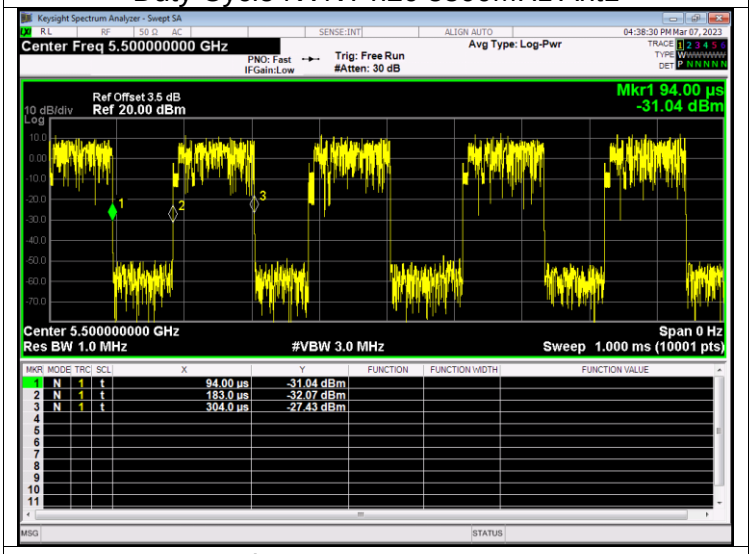

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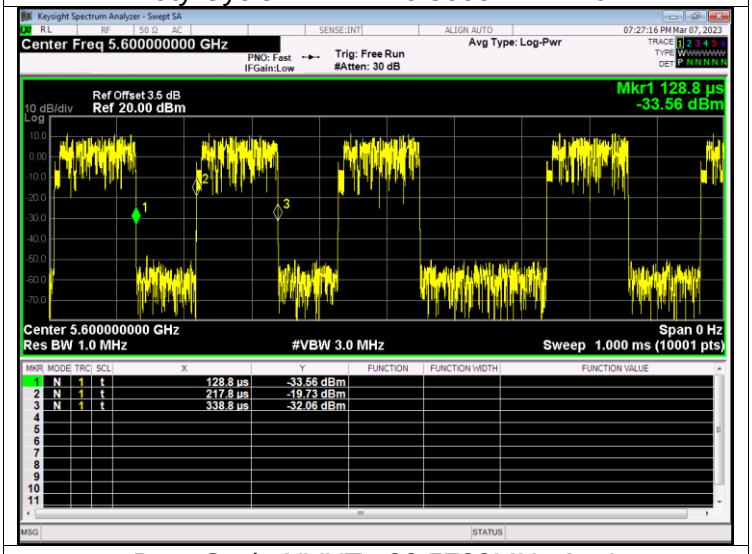

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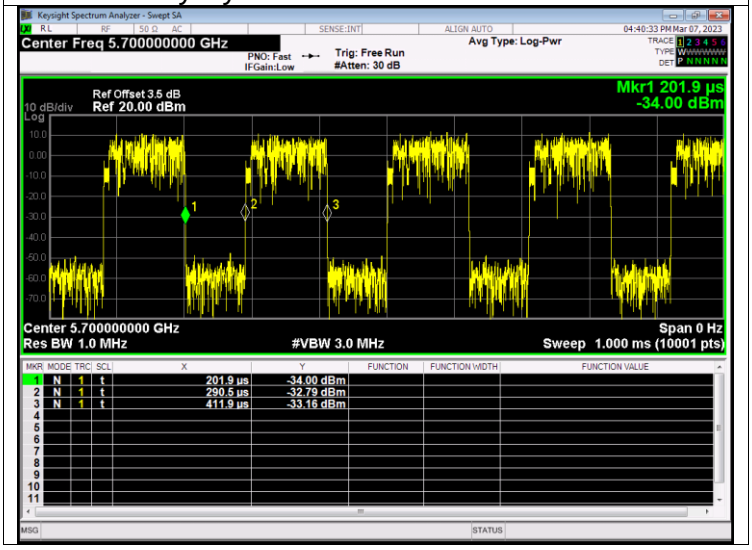

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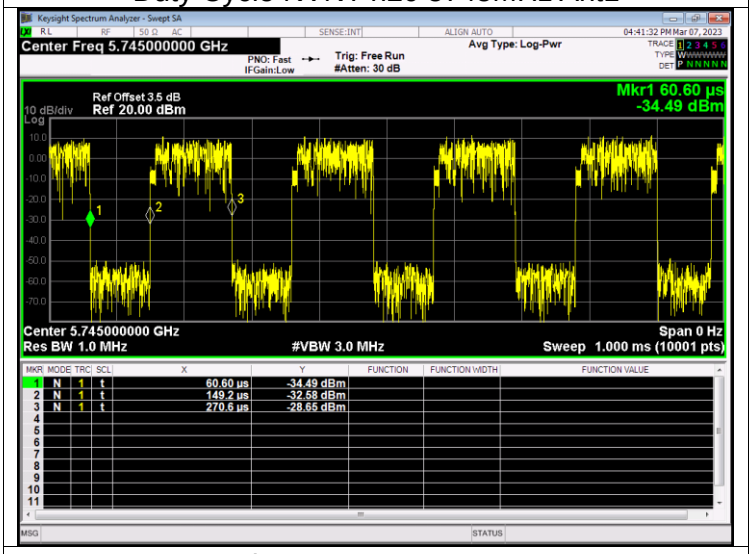

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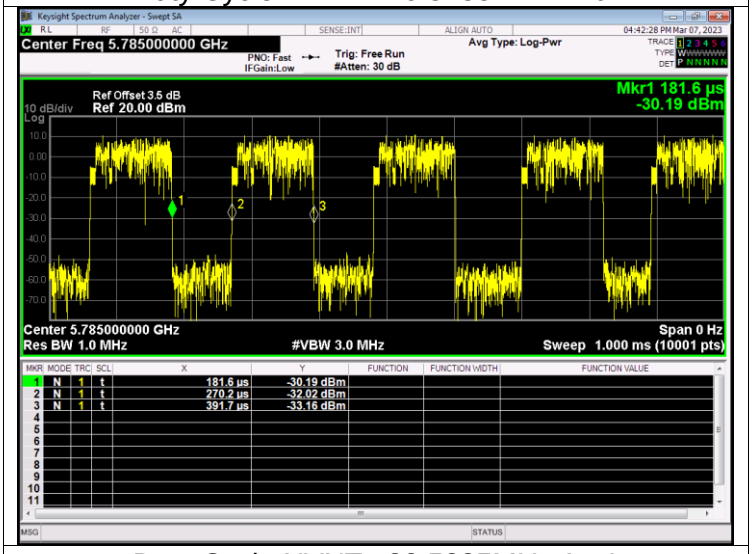

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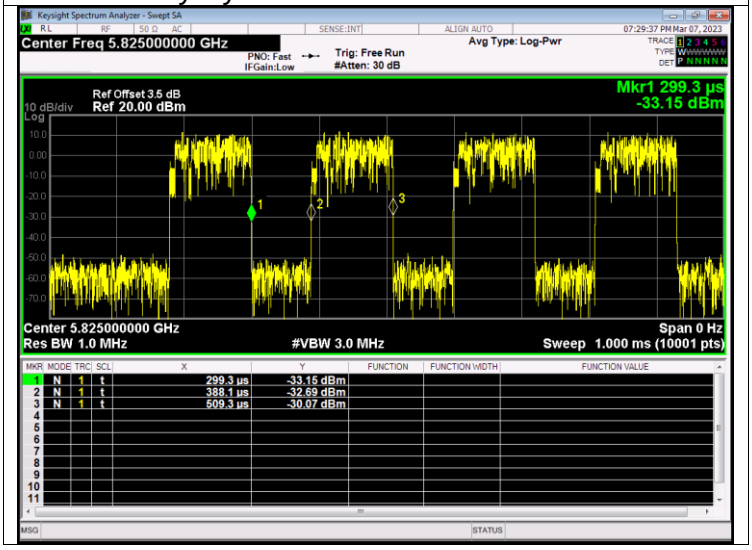

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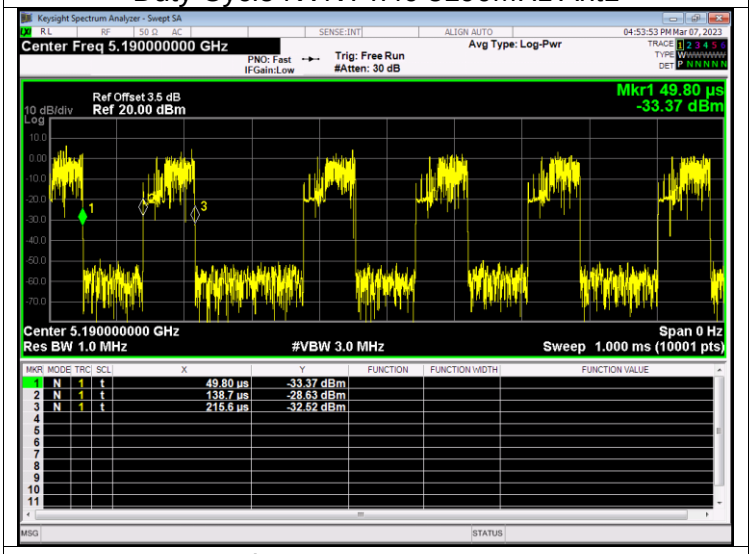

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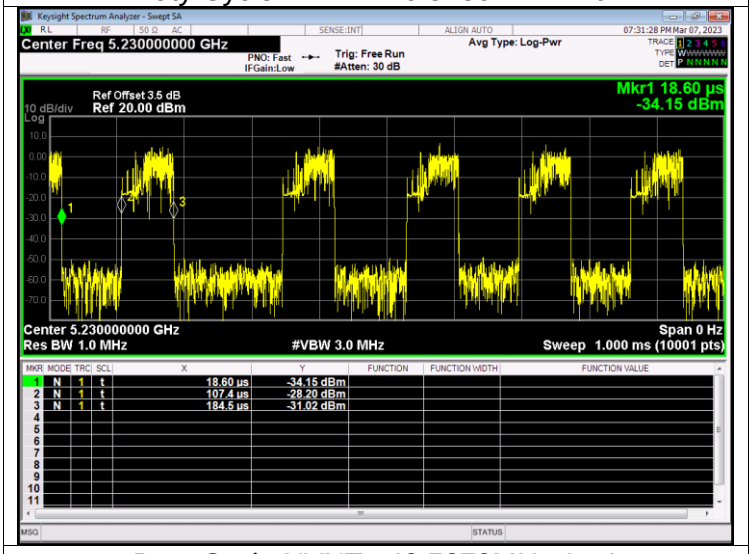

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