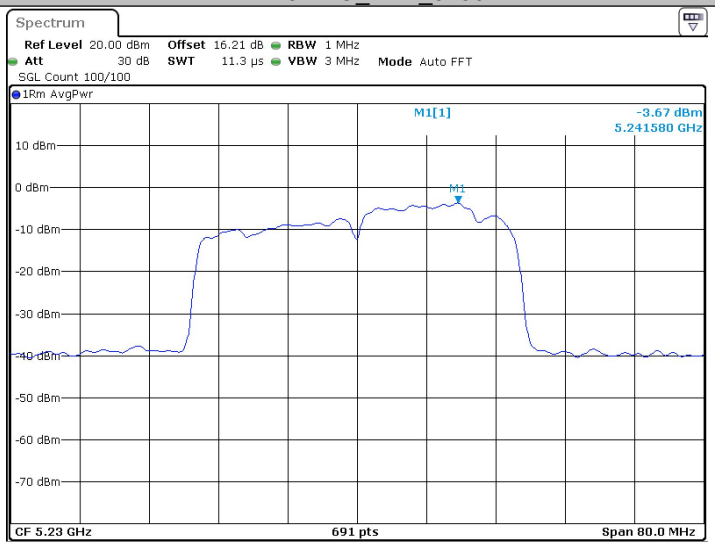
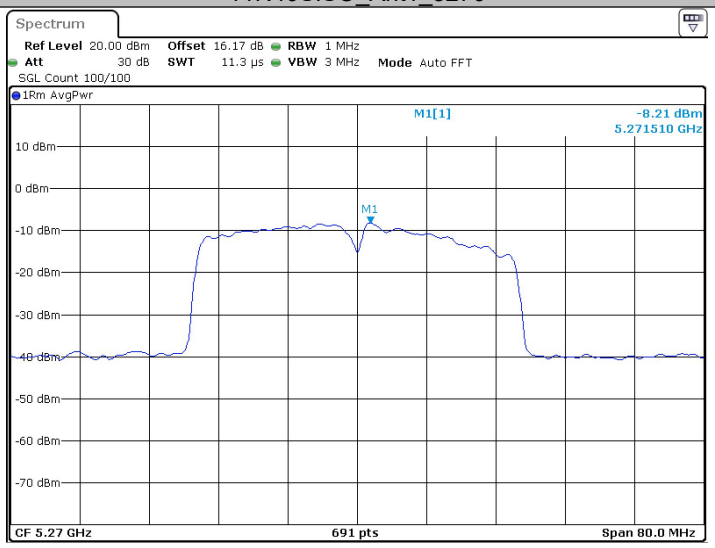
11N40SISO_Ant1_5230



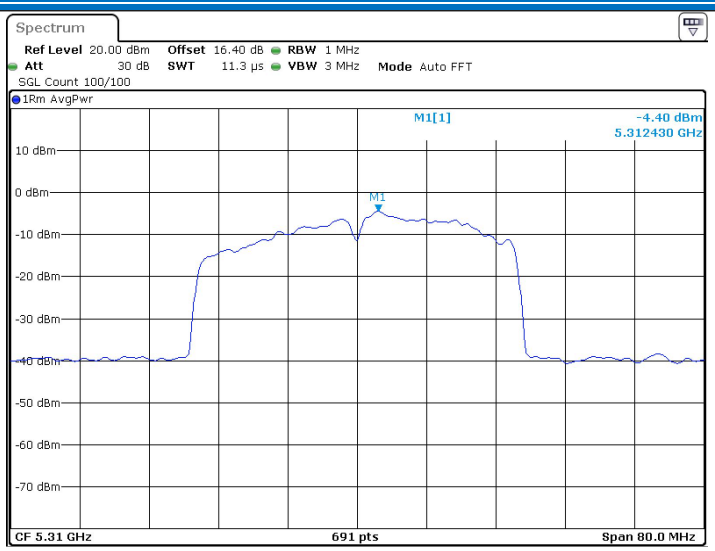
Date: 6.MAR.2025 12:09:19

11N40SISO_Ant1_5270



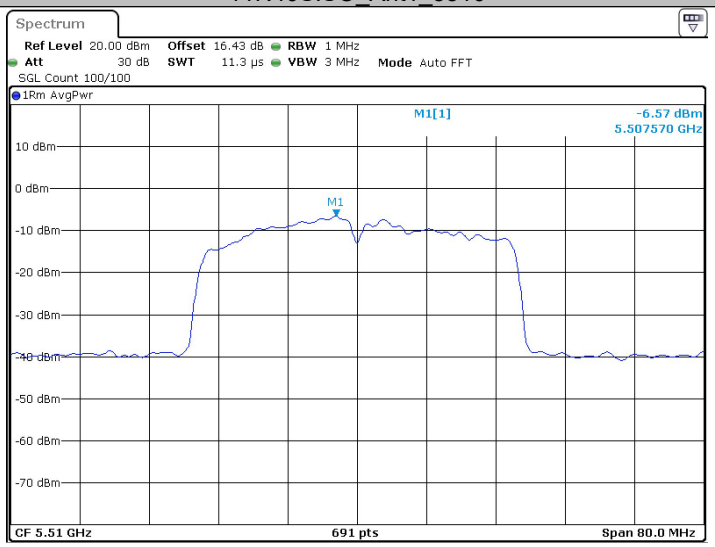
Date: 6.MAR.2025 12:10:33

11N40SISO_Ant1_5310



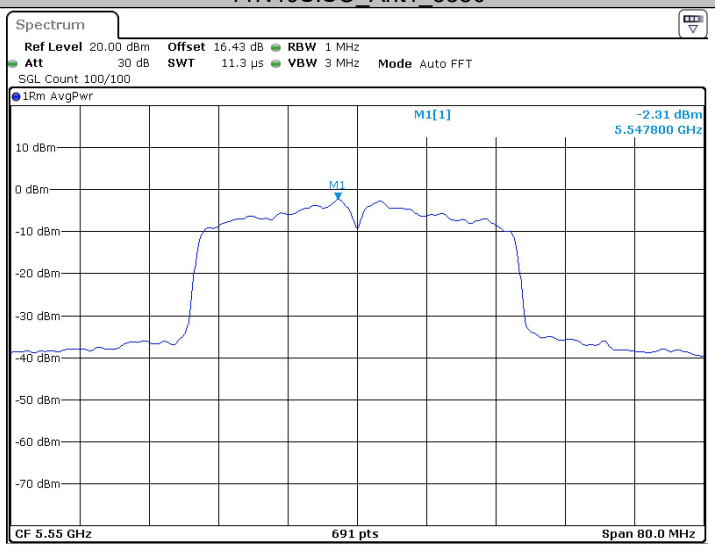
Date: 6.MAR.2025 12:11:49

11N40SISO_Ant1_5510



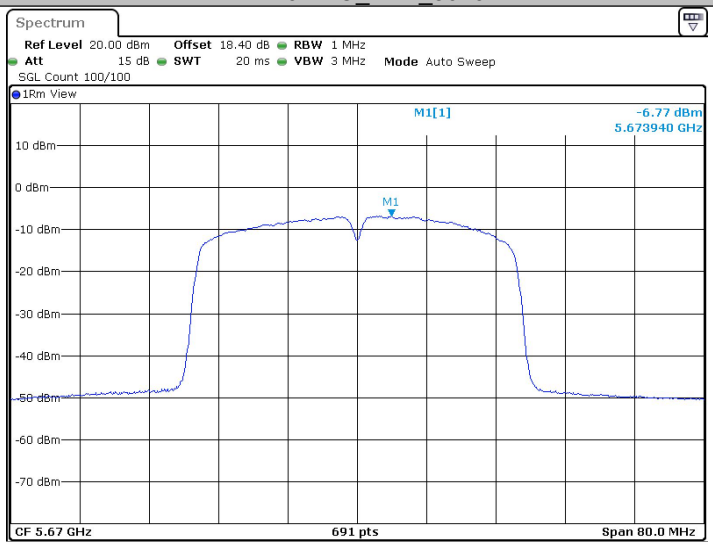
Date: 6.MAR.2025 12:14:03

11N40SISO_Ant1_5550



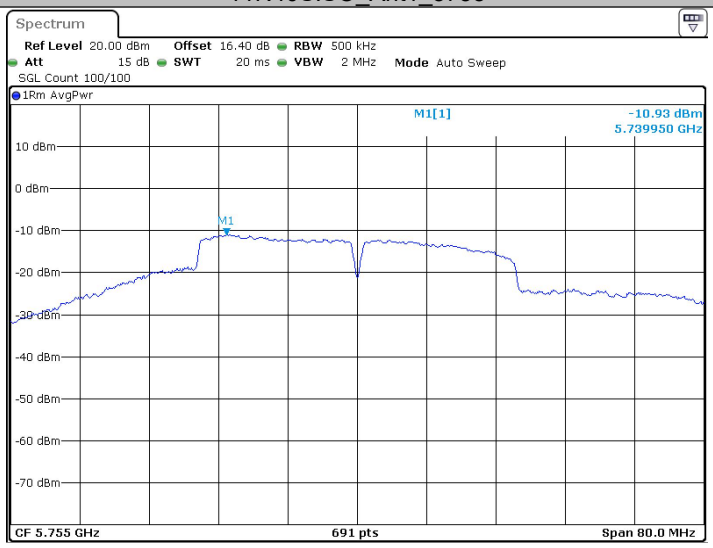
Date: 6.MAR.2025 13:48:15

11N40SISO_Ant1_5670



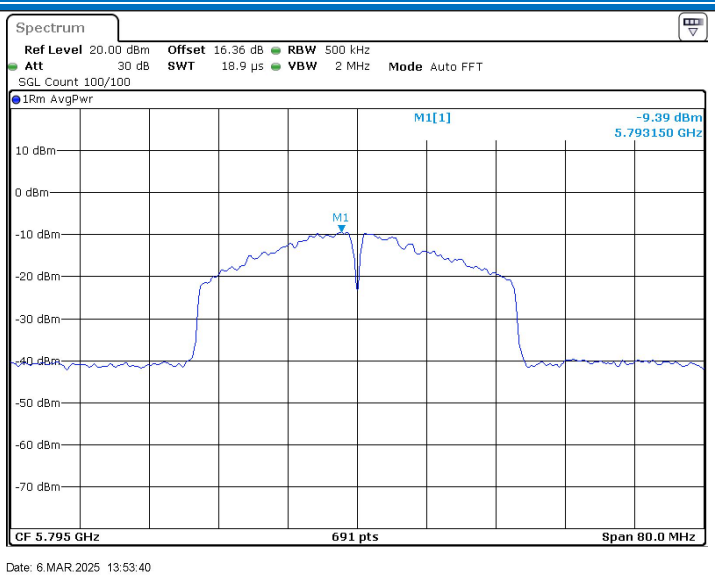
Date: 5.JUN.2025 10:46:57

11N40SISO_Ant1_5755



Date: 22.MAR.2025 11:02:06

11N40SISO_Ant1_5795


Spectrum
Ref Level 20.00 dBm Offset 16.36 dB RBW 500 kHz
Att 30 dB SWT 18.9 µs VBW 2 MHz Mode Auto FFT
SGL Count 100/100
1Rm AvgPwr
M1[1] -9.39 dBm
5.793150 GHz
M1
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 5.795 GHz
691 pts
Span 80.0 MHz
Date: 6.MAR.2025 13:53:40

Appendix D): Band Edge Measurements

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

Test Procedure:

1. The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.

2. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

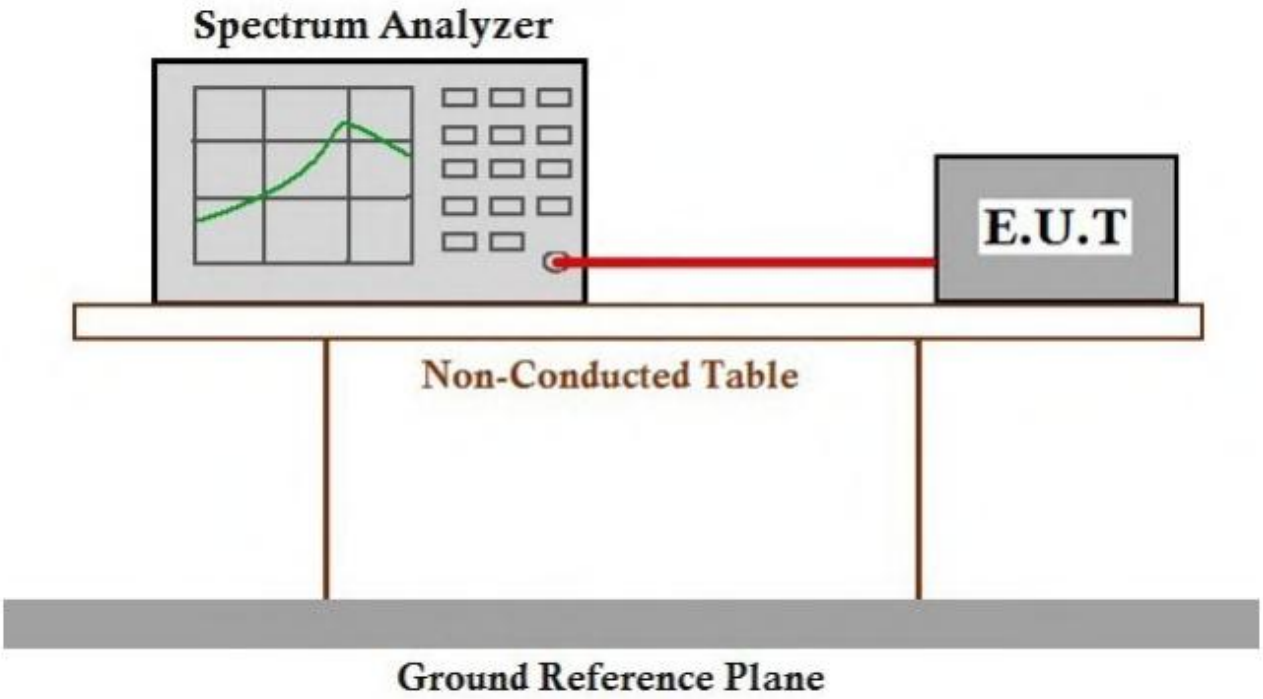
(a) PEAK: RBW=VBW=1MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz ; VBW=1/on time(1KHz) / Sweep=AUTO

Limit:

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 (68.2dBuV/m).
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 (68.2dBuV/m).
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 (68.2dBuV/m).
For transmitters operating in the 5.725-5.85 GHz band:	(i) All emissions shall be limited to a level of −27 dBm/MHz (68.2dBuV/m) at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz (105.2dBuV/m) 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 (110.8dBuV/m) 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 (122.2dBuV/m) at the band edge.

Test Setup Diagram



7.1.1 Test Result B1/2/3

TestMode	ChName	Freq(MHz)	Result[dBm]	Limit[dBm]	Verdict
11A	Low	5180	-36.83	≤-27	PASS
	High	5320	-37.41	≤-27	PASS
	Low	5500	-36.82	≤-27	PASS
	High	5700	-49.95	≤-27	PASS
11N20SISO	Low	5180	-36.81	≤-27	PASS
	High	5320	-36.76	≤-27	PASS
	Low	5500	-36.68	≤-27	PASS
	High	5700	-47.35	≤-27	PASS
11N40SISO	Low	5190	-36.83	≤-27	PASS
	High	5310	-36.24	≤-27	PASS
	Low	5510	-36.69	≤-27	PASS
	High	5670	-37.41	≤-27	PASS

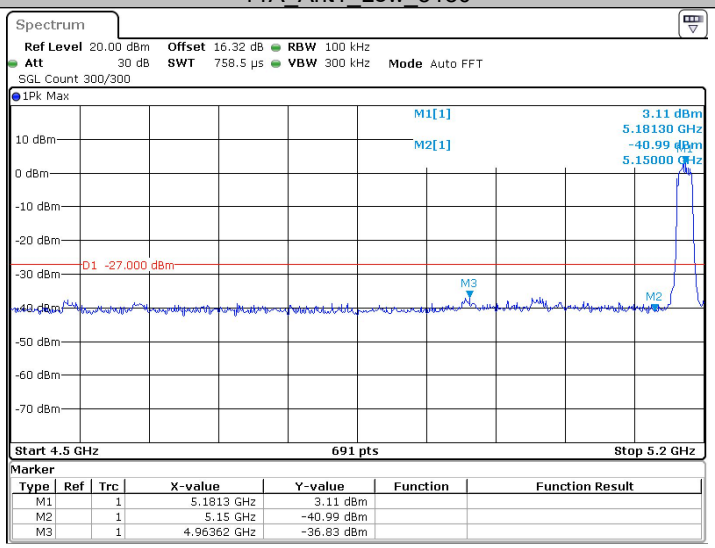
7.1.2 Test Result B4

TestMode	ChName	Freq(MHz)	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Low	5745	5650~5700	-40.03	≤-26.63	PASS
			5700~5720	-37.83	≤10.28	PASS
			5720~5725	-38.98	≤15.98	PASS
			5760~5650	-39.06	≤-27	PASS
	High	5825	5850~5855	-28.16	≤15.65	PASS
			5855~5875	-27.62	≤15.06	PASS
			5875~5925	-38.21	≤-26.87	PASS
			5925~5935	-37.34	≤-27	PASS
11N20SISO	Low	5745	5650~5700	-40.19	≤-26.75	PASS
			5700~5720	-25.59	≤15.46	PASS
			5720~5725	-25.74	≤17.12	PASS
			5760~5650	-39.12	≤-27	PASS
	High	5825	5850~5855	-26.59	≤16.99	PASS
			5855~5875	-26.23	≤15.50	PASS
			5875~5925	-37.31	≤-26.73	PASS
			5925~5935	-36.79	≤-27	PASS
11N40SISO	Low	5755	5650~5700	-41.72	≤-26.36	PASS
			5700~5720	-20.28	≤15.58	PASS

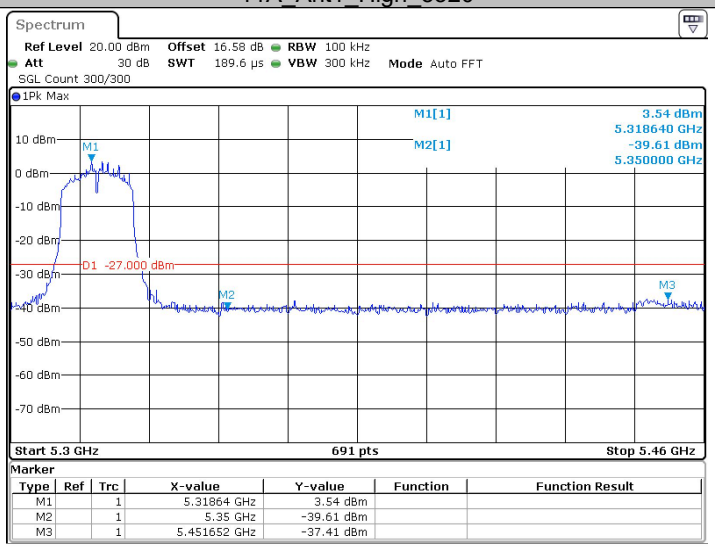
			5720~5725	-20.58	≤15.90	PASS
			5780~5650	-39.42	≤-27	PASS
	High	5795	5850~5855	-38.67	≤15.85	PASS
			5855~5875	-37.09	≤10.14	PASS
			5875~5925	-36.23	≤-26.08	PASS
			5925~5935	-36.84	≤-27	PASS

7.1.3 Test Graphs B1/2/3

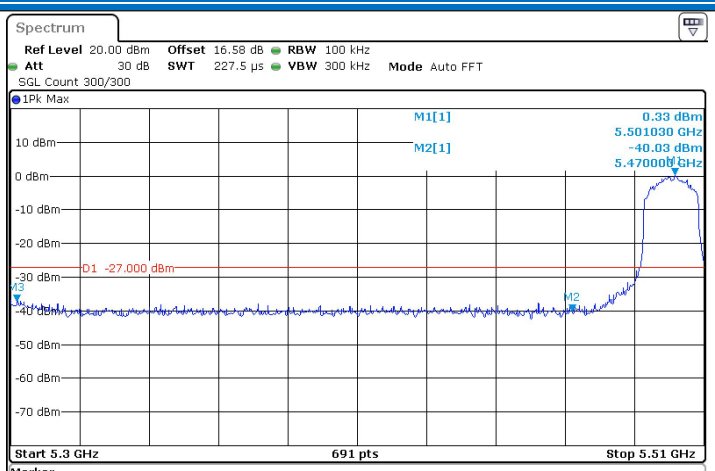
11A_Ant1_Low_5180



11A_Ant1_High_5320



11A_Ant1_Low_5500

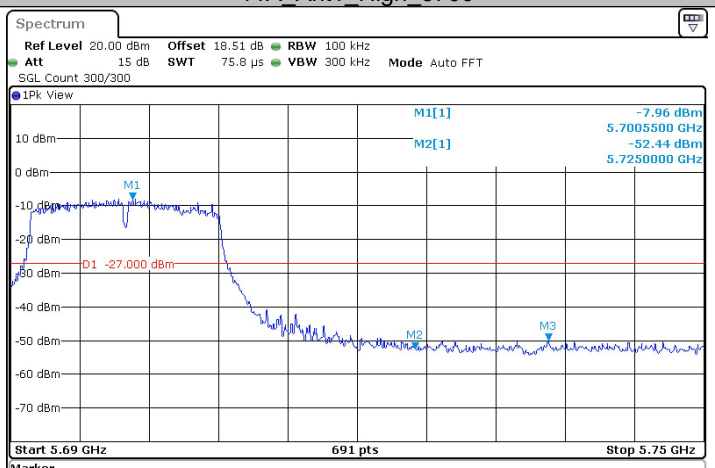


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.50103 GHz	0.33 dBm		
M2		1	5.47 GHz	-40.03 dBm		
M3		1	5.30213 GHz	-36.82 dBm		

Date: 6.MAR.2025 11:17:17

11A_Ant1_High_5700

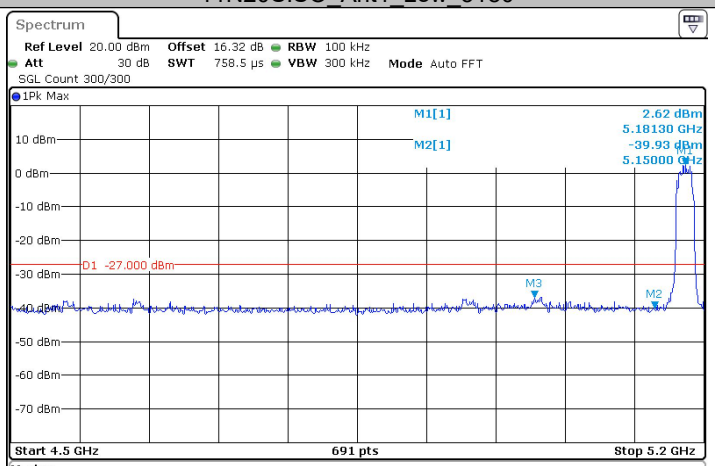


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.70055 GHz	-7.96 dBm		
M2		1	5.725 GHz	-52.44 dBm		
M3		1	5.7365217 GHz	-49.95 dBm		

Date: 5.JUN.2025 10:37:18

11N20SISO_Ant1_Low_5180

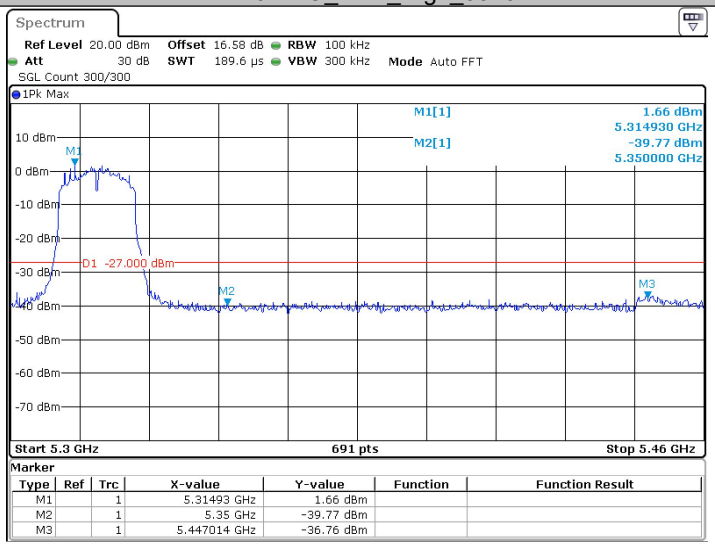


Marker

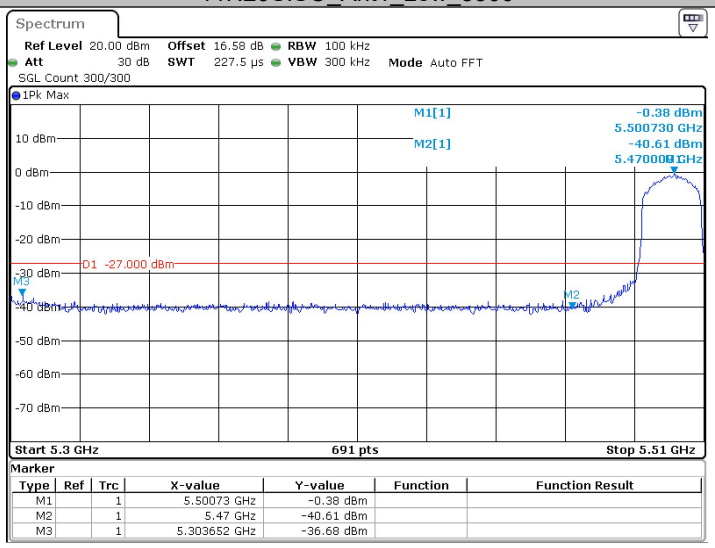
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.1813 GHz	2.62 dBm		
M2		1	5.15 GHz	-39.93 dBm		
M3		1	5.02855 GHz	-36.81 dBm		

Date: 6.MAR.2025 11:38:03

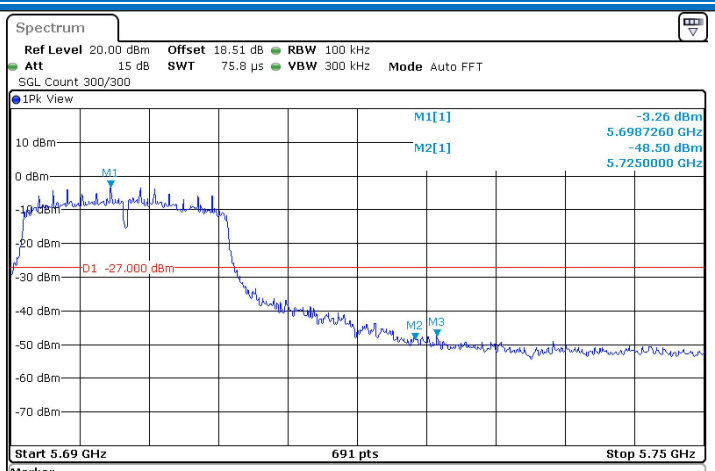
11N20SISO_Ant1_High_5320



11N20SISO_Ant1_Low_5500



11N20SISO_Ant1_High_5700

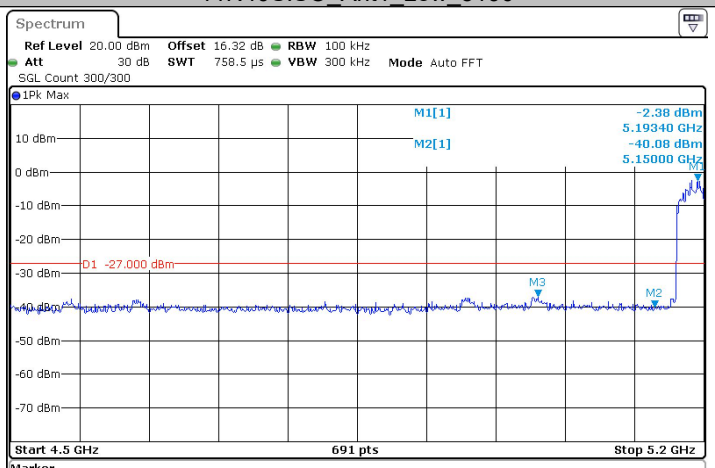


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.698726 GHz	-3.26 dBm		
M2		1	5.725 GHz	-48.50 dBm		
M3		1	5.7268696 GHz	-47.35 dBm		

Date: 5.JUN.2025 10:42:46

11N40SISO_Ant1_Low_5190

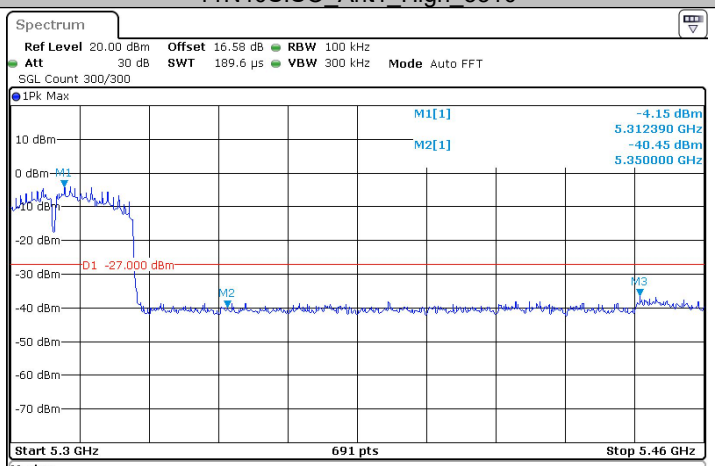


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.1934 GHz	-2.38 dBm		
M2		1	5.15 GHz	-40.08 dBm		
M3		1	5.03261 GHz	-36.83 dBm		

Date: 6.MAR.2025 12:07:06

11N40SISO_Ant1_High_5310

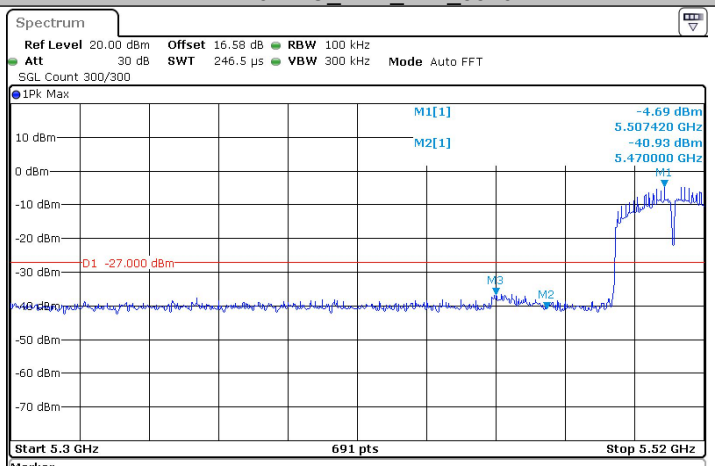


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.31239 GHz	-4.15 dBm		
M2		1	5.35 GHz	-40.45 dBm		
M3		1	5.445159 GHz	-36.24 dBm		

Date: 6.MAR.2025 12:11:59

11N40SISO_Ant1_Low_5510

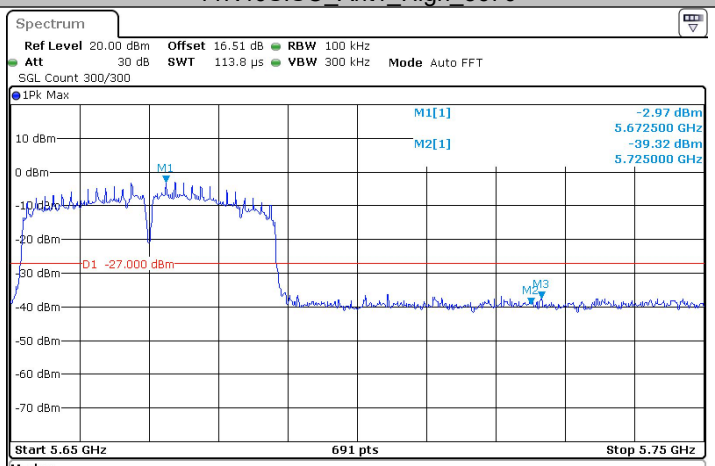


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.50742 GHz	-4.69 dBm		
M2		1	5.47 GHz	-40.93 dBm		
M3		1	5.454 GHz	-36.69 dBm		

Date: 6.MAR.2025 12:14:13

11N40SISO_Ant1_High_5670



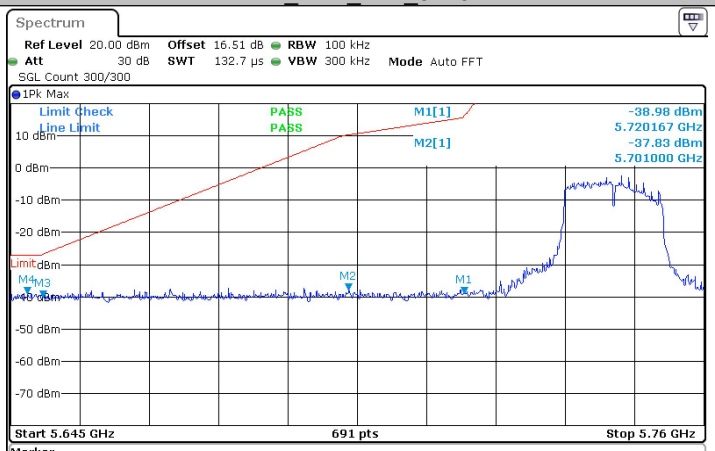
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.6725 GHz	-2.97 dBm		
M2		1	5.725 GHz	-39.32 dBm		
M3		1	5.726522 GHz	-37.41 dBm		

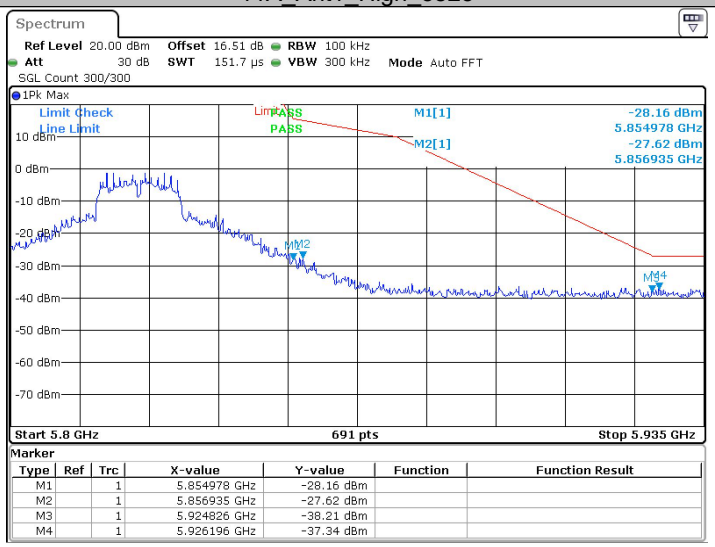
Date: 6.MAR.2025 13:49:46

7.1.4 Test Graphs B4

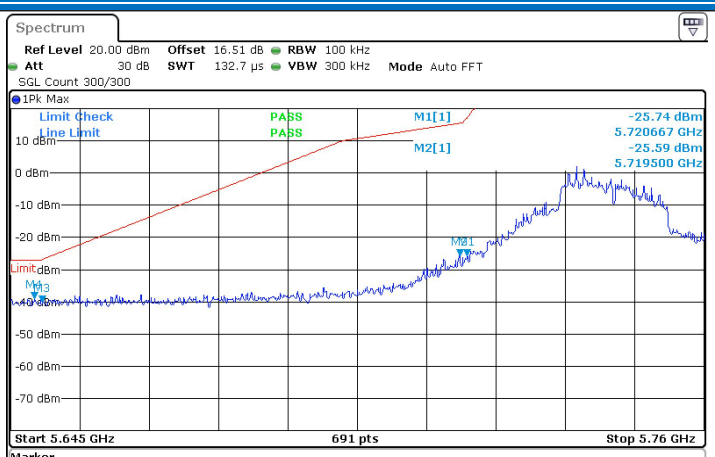
11A_Ant1_Low_5745



11A_Ant1_High_5825



11N20SISO_Ant1_Low_5745

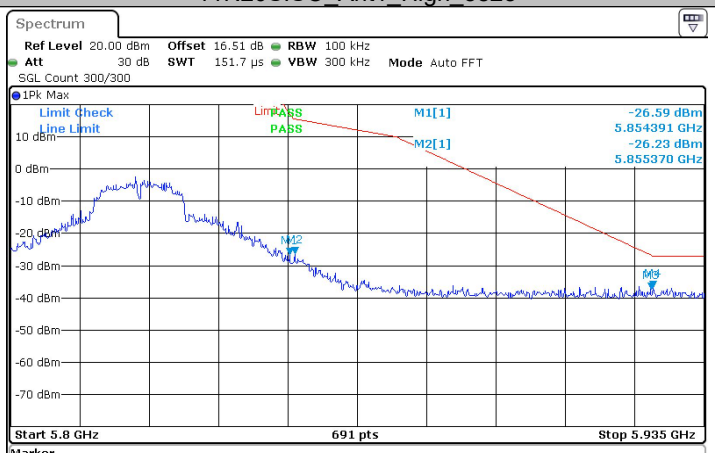


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.720667 GHz	-25.74 dBm		
M2		1	5.7195 GHz	-25.59 dBm		
M3		1	5.650333 GHz	-40.19 dBm		
M4		1	5.649 GHz	-39.12 dBm		

Date: 22.MAR.2025 10:47:07

11N20SISO_Ant1_High_5825

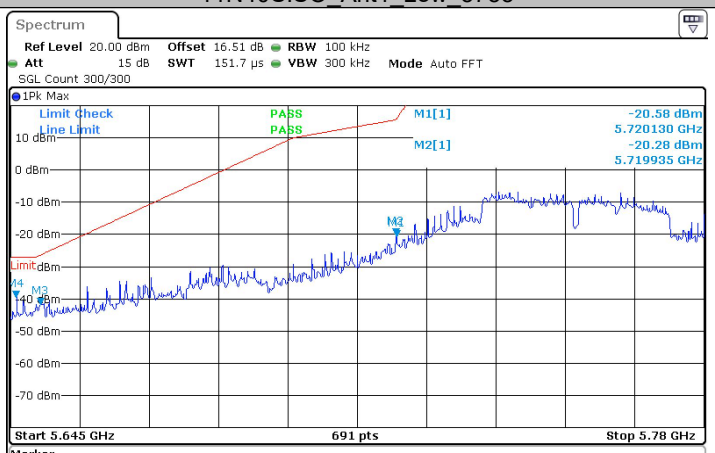


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.854391 GHz	-26.59 dBm		
M2		1	5.85537 GHz	-26.23 dBm		
M3		1	5.92463 GHz	-37.31 dBm		
M4		1	5.925022 GHz	-36.79 dBm		

Date: 22.MAR.2025 10:53:07

11N40SISO_Ant1_Low_5755

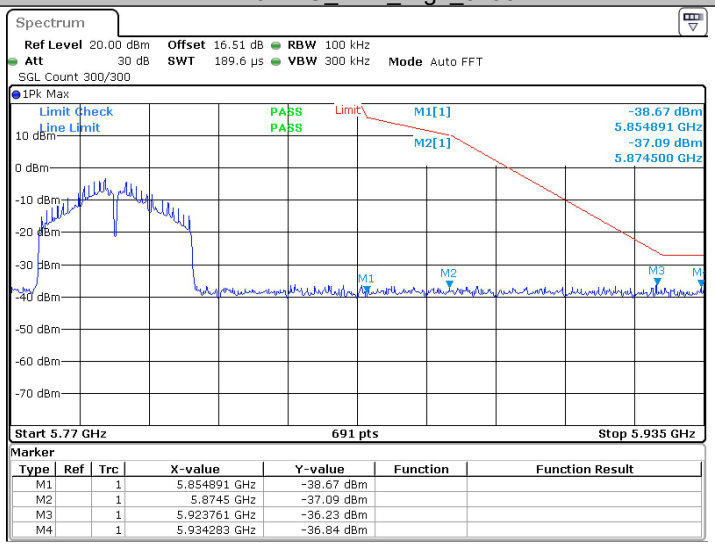


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.72013 GHz	-20.58 dBm		
M2		1	5.719935 GHz	-20.28 dBm		
M3		1	5.65087 GHz	-41.72 dBm		
M4		1	5.646174 GHz	-39.42 dBm		

Date: 22.MAR.2025 11:02:15

11N40SISO_Ant1_High_5795



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.854891 GHz	-38.67 dBm		
M2		1	5.8745 GHz	-37.09 dBm		
M3		1	5.923761 GHz	-36.23 dBm		
M4		1	5.934283 GHz	-36.84 dBm		

Date: 6.MAR.2025 13:53:50

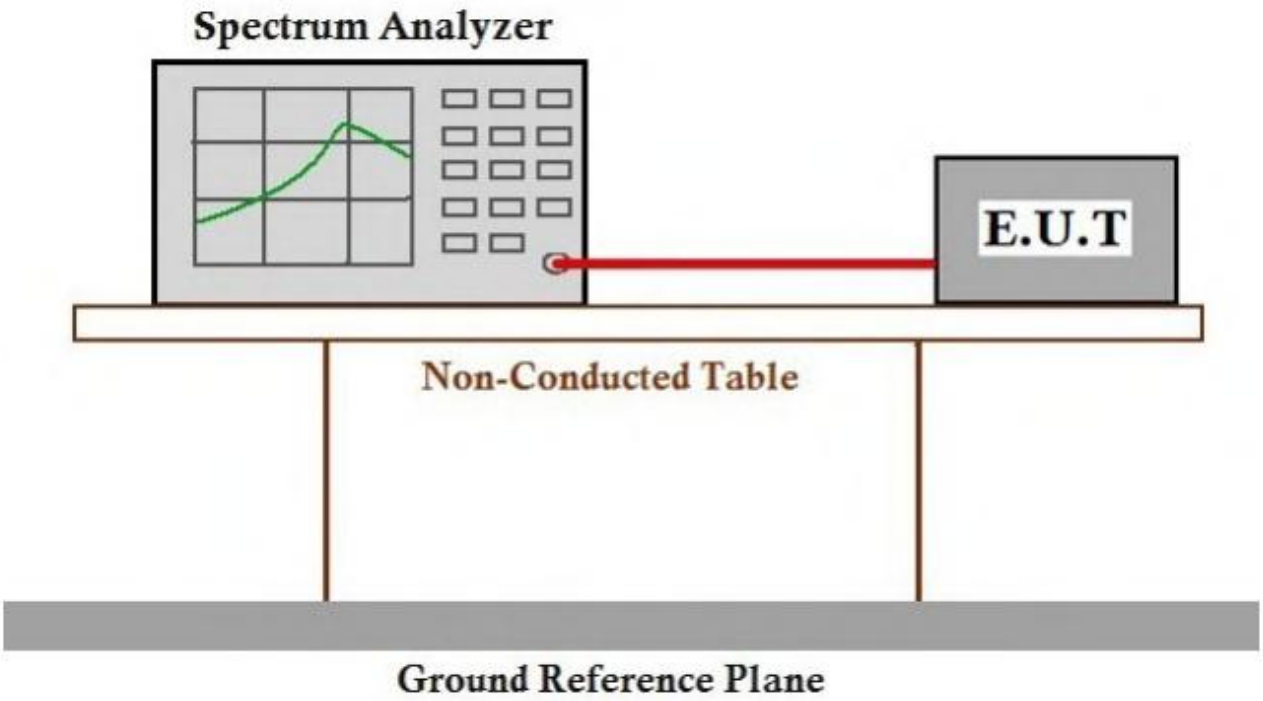
Appendix E): Frequency Stability

Test Requirement 47 CFR Part 15, Subpart C 15.407 (g)

Test Method: ANSI C63.10 (2013) Section 6.8

Limit:The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

Test Setup Diagram



Measurement Data

Frequency Stability Versus Temp.			
Operating Frequency: 5240 MHz			
Temp (℃)	Volta ge	Measured Frequency (MHz)	Frequency Drift (ppm)
50	VN	5240.03	5.72519
40		5240.02	3.81679
30		5240.01	1.90840
20		5240.02	3.81679
10		5240.02	3.81679
0		5240.01	1.90840
-10		5240.02	3.81679
-30		5240.03	5.72519

Frequency Stability Versus Temp.			
Operating Frequency: 5210 MHz			
Temp.	Volta ge	Measured Frequency (MHz)	Frequency Drift (ppm)
TN	VL	5210.00	0.00000
	VN	5210.03	5.75816
	VH	5210.02	3.83877

Note: All the modulation and channels had been tested, but only the worst data recorded in the report.

Appendix F): Antenna Requirement

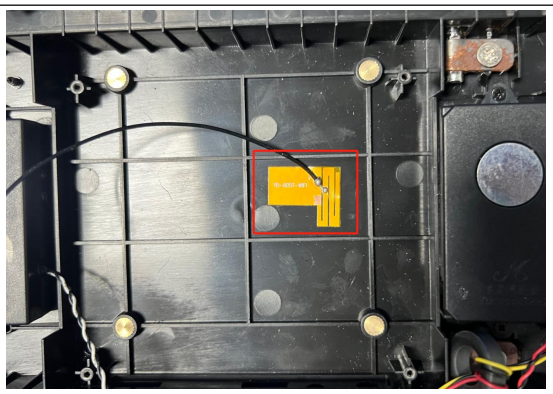
15.203 requirement:

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.407(a)(1) (2) requirement:

The conducted output power limit specified in paragraph (a) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (a) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power and the peak power spectral density shall be reduced by the by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:



The antenna is FPC antenna.

The connection/connection type between the antenna to the EUT's antenna port is: unique coupling .

This is either permanently attachment or a unique coupling that satisfies the requirement.

Appendix G): Operation in the absence of information to the transmit

15.407(c) requirement: 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 signal ling 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 a description of how this requirement is met.
Operation in the absence of information to the transmit
While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ASK message transmitting from remote device and verify whether it shall resend or discontinue transmission. (manufacturer declare)