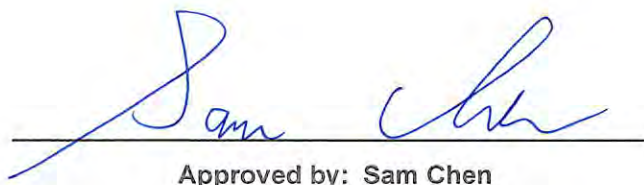


DFS TEST REPORT

Equipment : Indoor Wall-Plate Wi-Fi 6 Access Point
Brand Name : **E d g e - c o r e**
Model Name : EAP104
Applicant : Accton Technology Corp
No. 1, Creation Rd. III, Science-based Industrial Park
Hsin Chu 30077, Taiwan R.O.C.
Manufacturer (1) : Accton Technology Corp
No. 1, Creation Rd. III, Science-based Industrial Park
Hsin Chu 30077, Taiwan R.O.C.
Manufacturer (2) : Accton Technology Corporation Zhunan Factory
1F & 4F & 5F, No. 1, Keyi St., Zhunan Township, Miaoli
County 350, TAIWAN, R.O.C..
Standard : MIC Certification Rule, Article 2 Paragraph 1 Item 19-3

The product was received on Sep. 27, 2022, and testing was started from Oct. 22, 2022 and completed on Dec. 06, 2022. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in [Test method temporarily determined by TELEC] and shown compliance with the applicable MIC Ordinance Regulating Radio Equipment Article 49.20 technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-D5_2 Ver1.1



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	NT No.368,2011	Channel Availability Check (CAC)	PASS	-
3.3	NT No.368,2011	In-service Monitoring	PASS	-
3.4	NT No.368,2011	Channel Shutdown and Non-Occupancy Period	PASS	-
RLE: Radio Law Enforcement Regulations ORE: Ordinance Regulating Radio Equipment TR: Terminal and Other Equipment Regulations NT: Notification of the Ministry of Internal Affairs and Communications Reference to Sporton Project No.: 292606-01				

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen**Report Producer: Viola Huang**

1 General Description

1.1 Information

1.1.1 DFS General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5250-5350	a, n (HT20), ac (VHT20), ax (HEW20)	5260-5320	52-64 [4]
5470-5730		5500-5720	100-144 [12]
5250-5350	n (HT40), ac (VHT40), ax (HEW40)	5270-5310	54-62 [2]
5470-5730		5510-5710	102-142 [6]
5250-5350	ac (VHT80), ax (HEW80)	5290	58 [1]
5470-5730		5530-5690	106-138 [3]
5150-5350	ac (VHT160), ax (HEW160)	5250	50 [1]
5470-5730		5570	114 [1]
11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation. - VHT20, VHT40, VHT80 and VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation. - HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.			

1.1.2 Frequency Band

Frequency Band	
☒	W53:
☒	(20MHz) - 5260, 5280, 5300, 5320MHz
☒	(40MHz) - 5270, 5310MHz
☒	(80MHz) - 5290MHz
☒	W52+W53:
☒	(160MHz) contiguous – 5250MHz
☒	W56:
☒	(20MHz) - 5500, 5520, 5540, 5560, 5580, 5600, 5620, 5640, 5660, 5680, 5700, 5720MHz
☒	(40MHz) - 5510, 5550, 5590, 5630, 5670, 5710MHz
☒	(80MHz) - 5530, 5610, 5690MHz
☒	(160MHz) contiguous - 5570MHz
☐	W52+W56: (80+80 MHz) non-contiguous - 5210, 5530MHz or 5210, 5610MHz or 5210, 5690MHz
☐	W53+W56: (80+80 MHz) non-contiguous - 5290, 5530MHz or 5290, 5610MHz or 5290, 5690MHz
☐	W56: (80+80 MHz) non-contiguous - 5530, 5690MHz
Note: The EUT supports 802.11a/n/ac/ax	

1.1.3 Antenna Information

Ant.	Port		Brand	Model Name	Antenna Type	Connector	Gain (dBi)
	WLAN 2.4GHz	WLAN 5GHz					
1	1	-	Accton	EC-3-PB01-001	Dipole	I-PEX	3.94
2	2	-	Accton	EC-3-PB01-002	PIFA	I-PEX	3.11
3	-	1	Accton	EC-5-PB02-001	Monopole	I-PEX	5.21
4	-	2	Accton	EC-5-PB02-002	Monopole	I-PEX	5.11

Note 1: The above information was declared by manufacturer.

Note 2: **For WLAN 2.4GHz function:**

For IEEE 802.11 b/g/n/VHT/ax (2TX/2RX):

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

For WLAN 5GHz function:

For IEEE 802.11a/n/ac/ax (2TX/2RX):

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

1.2 Accessories

Accessories
Wall-mounted rack*1
RJ-45 cable*1 (Non-shielded, 0.05m)

1.3 Support Equipment

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	Lenovo	L440	N/A
C	WLAN module	Intel	AX210NGW	PD9AX210NG
D	AC Adapter	ADP	POEA30U-1ATE	N/A

1.4 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ MIC Ordinance Regulating Radio Equipment Article 49.20
- ♦ [Test method temporarily determined by TELEC]

1.5 Testing Location Information

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
DFS Site	DF02-CB	Sean Ku	22~24.5 / 57~51	Oct. 22, 2022~ Dec. 06, 2022



2 Test Configuration of EUT

2.1 EUT Information

EUT Information				
Operating Mode	☒	Master		
	☐	Slave with radar detection		
	☐	Slave without radar detection		
Software / Firmware Version	OpenWrt Chaos Calmer 15.05.1 51e4f74+r49254 / LuCI Master (git-22.090.11214-271c675)			
Communication Mode	☒	IP Based (Load Based)	☐	Frame Based
TPC Function	☒	With TPC	☐	Without TPC

2.2 Test Channel Frequencies Configuration

Test Channel Frequencies Configuration		
Frequency Range (MHz)	IEEE Std. 802.11	Test Channel Freq. (MHz)
5250-5350MHz	ax (HEW20)	5300
5470-5730MHz	ax (HEW20)	5500
5250-5350MHz	ax (HEW40)	5310
5470-5730MHz	ax (HEW40)	5510
5250-5350MHz	ax (HEW80)	5290
5470-5730MHz	ax (HEW80)	5530
5250-5350MHz	ax (HEW160)	5250
5470-5730MHz	ax (HEW160)	5570

2.3 The Worst Case Measurement Configuration

Tests Item		Dynamic Frequency Selection (DFS)	
Test Condition		Conducted measurement at transmit chains	
Modulation Mode		11ax (HEW20), 11ax (HEW40), 11ax (HEW80), 11ax (HEW160)	
☒	For conducted tests, antenna ports are used for the tests and Master lowest antenna gain that was used to set the DFS Detection Threshold level during calibration of the test setup.		
☐	For radiated tests, the DFS test should be performed with lowest antenna gain (regardless of antenna type).		
Modulation modes consist of below configuration: 11a: IEEE 802.11a, HT20/HT40: IEEE 802.11n, VHT20/VHT40/VHT80/VHT160: IEEE 802.11ac, HEW20/HEW40/HEW80/HEW160: IEEE 802.11ax			

3 Dynamic Frequency Selection (DFS) Test Result

3.1 General DFS Information

3.1.1 DFS Parameters

DFS requirement values	
Parameter	Value
Channel Availability Check Time	60 sec
Channel Move Time	10 sec
Channel Closing Transmission Time	260 ms
Non-occupancy period	Minimum 30 minutes

W53: Parameters DFS radar test signal							
Test Signal (#)	Pulse width [μ s]		Pulse repetition frequency PRF [Hz]		Pulses per burst [PPB]	Detection Probability (%)	Note
	Min	Max	Min	Max			
1	0.5	5	200	1000	10	≥ 60	N/A
2	0.5	15	200	1600	15	≥ 60	
3	0.5	5	200	1000	$\min\{\max\{22, [0.026 \times \text{PRF}]\}, 30\}$	≥ 60	Note 1
4	0.5	15	200	1600	$\min\{\max\{22, [0.026 \times \text{PRF}]\}, 30\}$	≥ 60	
5	0.5	1.5	1114	1118	30	≥ 60	Note 2
6	0.5	1.5	928	932	25	≥ 60	
7	0.5	1.5	886	890	24	≥ 60	
8	0.5	1.5	738	742	20	≥ 60	

Note :

- Chirp width : $\pm 0.5\text{MHz} \sim 1.0\text{MHz}$, $P_1 : T_1 : \geq 70\mu\text{s}$, $P_2 : W_2 : 20 \sim 110 \mu\text{s}$ (which has an accuracy of $\pm 5\%$), $|W_2 - W_1| : \geq 15\mu\text{s}$, Duty ratio : Less than 10%.
- Chirp width : $\pm 0.5\text{MHz} \sim 1.0\text{MHz}$, $P_1 : T_1 : \geq 50\mu\text{s}$, $P_2 : W_2 : 28.5 \sim 33.6\mu\text{s}$ (which has an accuracy of $\pm 5\%$).



W56: Un-modulation Parameters DFS radar test signal				
Test Signal (#)	Pulse width [μs]	Pulse repetition frequency PRF [Hz]	Pulses per burst [PPB]	Detection Probability (%)
1	0.5	720	18	≥60
2	1.0	700	18	≥60
3	2.0	250	18	≥60
4	1~5 (step 1)	200-500 (step 1)	23~29	≥60
5	6~10 (step 1)	2000-5000 (step 1)	16~18	≥60
6	11~20 (step 1)	2000-5000 (step 1)	12~16	≥60
Aggregate (Radar Types 1-6)				≥80

W56: Chirp Modulation (5~20MHz) Parameters DFS radar test signal					
Test Signal (#)	Pulse width [μs]	Pulse repetition frequency PRF [Hz]	Number of Pulses per Burst	Number of Bursts	Detection Probability (%)
7	50-100 (step 1)	500-1000 (step 1)	1-3	8-20	≥80

W56: 5250-5724 MHz Frequency Hopping Modulation Parameters DFS radar test signal					
Test Signal (#)	Pulse width [μs]	Pulse repetition frequency PRF [Hz]	Number of Pulses per Burst	Hopping Length (ms)	Detection Probability (%)
8	1	3000	9 (3ms)	300	≥70

3.1.2 DFS Threshold Level

DFS Threshold Level	
DFS Threshold level: -58.89 dBm	☒ at the antenna connector
	☐ in front of the antenna
Note 1: DFS Detection Threshold (dBm) = -64 + G 5.11 (dBi) The DFS Detection Threshold Level is (-64 dBm) + 5.11 dBi = -58.89 dBm Note 2: maximum EIRP < 200mW (23dBm). DFS Detection Threshold Level is (-62dBm) + G _{ANT} maximum EIRP ≥ 200mW (23dBm). DFS Detection Threshold Level is (-64dBm) + G _{ANT}	

3.1.3 User Access Restrictions

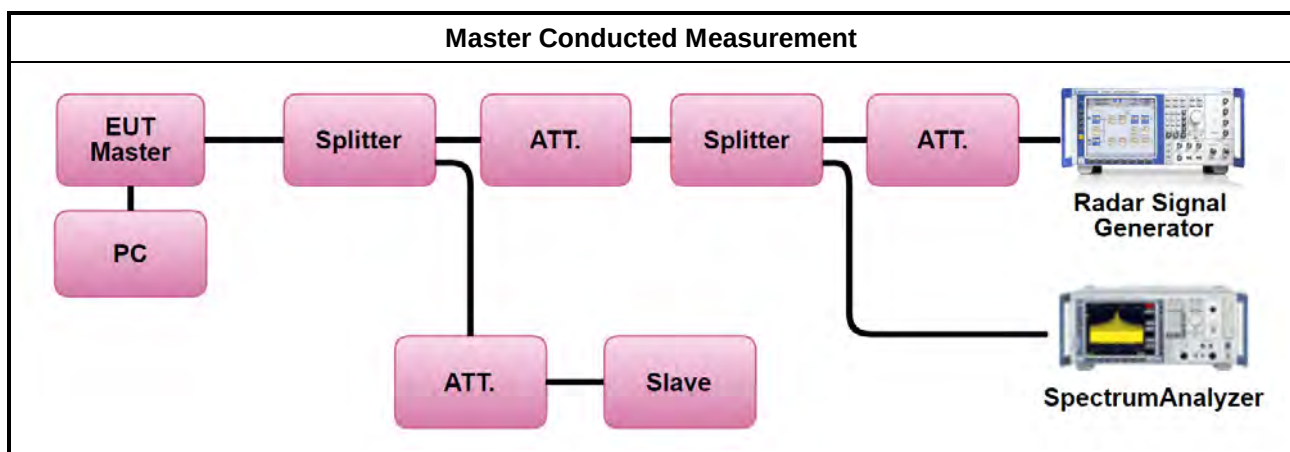
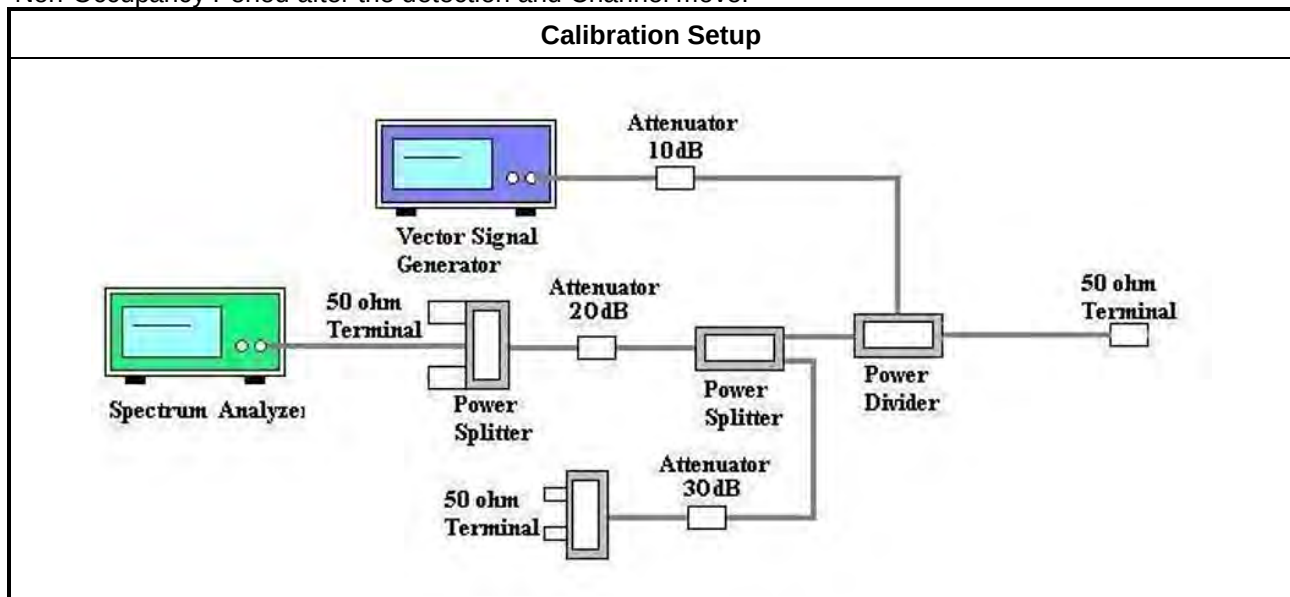
User Access Restrictions
☒ DFS controls (hardware or software) related to radar detection are NOT accessible to the user

3.1.4 Channel Loading/Data Streaming

☒	Test transmission sequence is from the Master to the Slave.
☒	For W53 band (5250-5350 MHz) Monitoring of operating channel with total transmission time performing transmission of 30ms or more in any 100ms.
☒	For W56 band (5470-5730 MHz) Monitoring of operating channel with about 17% loading over maximum signal transmission speed.
☒	No transmissions on channels being checked during a Channel Availability Check and Confirming Available Channels.

3.1.5 Test Setup and Calibration Setup

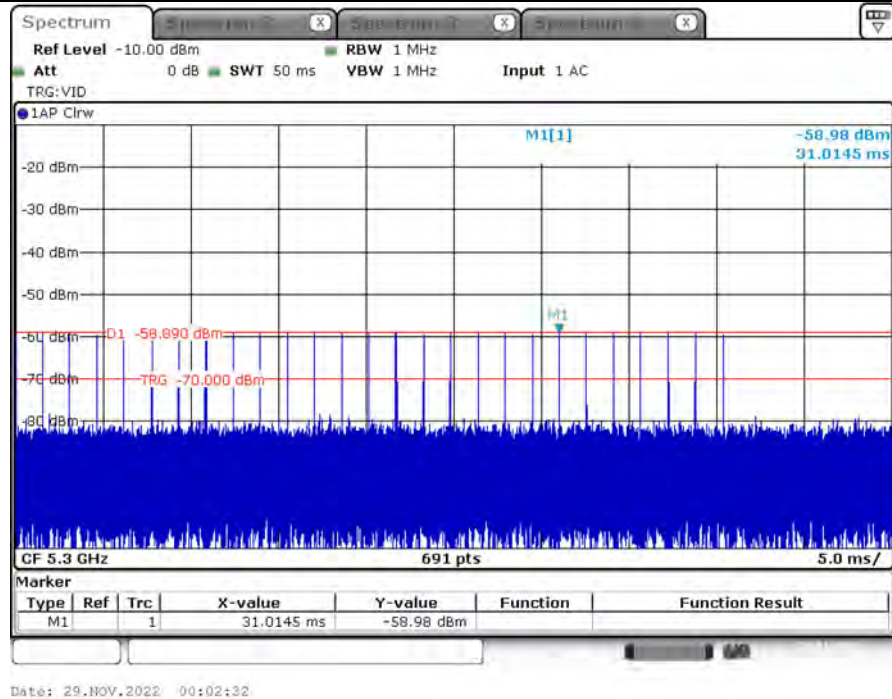
A spectrum analyzer is used as a monitor to verify that the EUT has vacated the Channel within the (Channel Closing Transmission Time and Channel Move Time, and does not transmit on a Channel during the Non-Occupancy Period after the detection and Channel move.



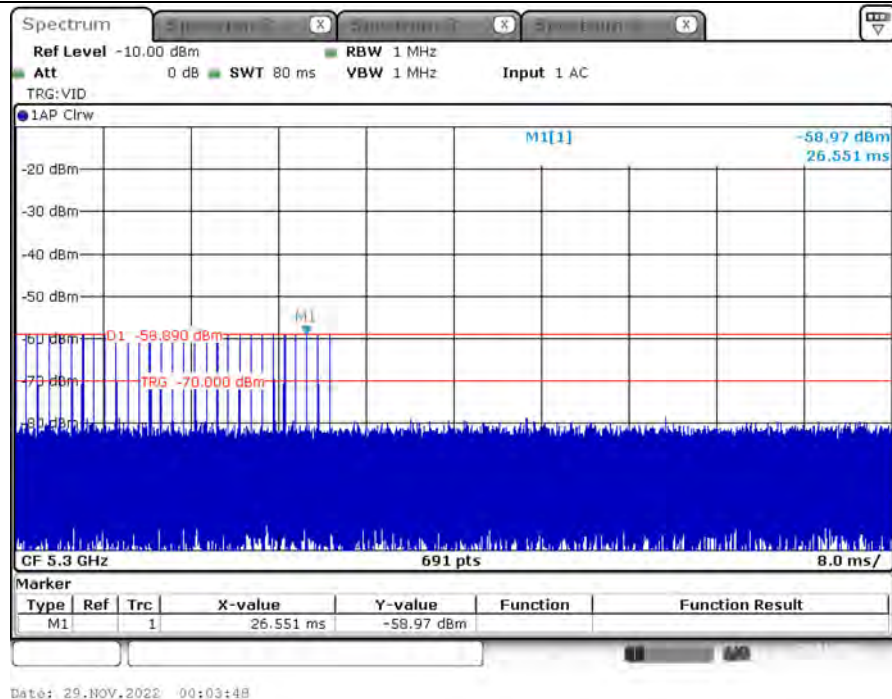
3.1.6 Radar Waveform calibration Plot

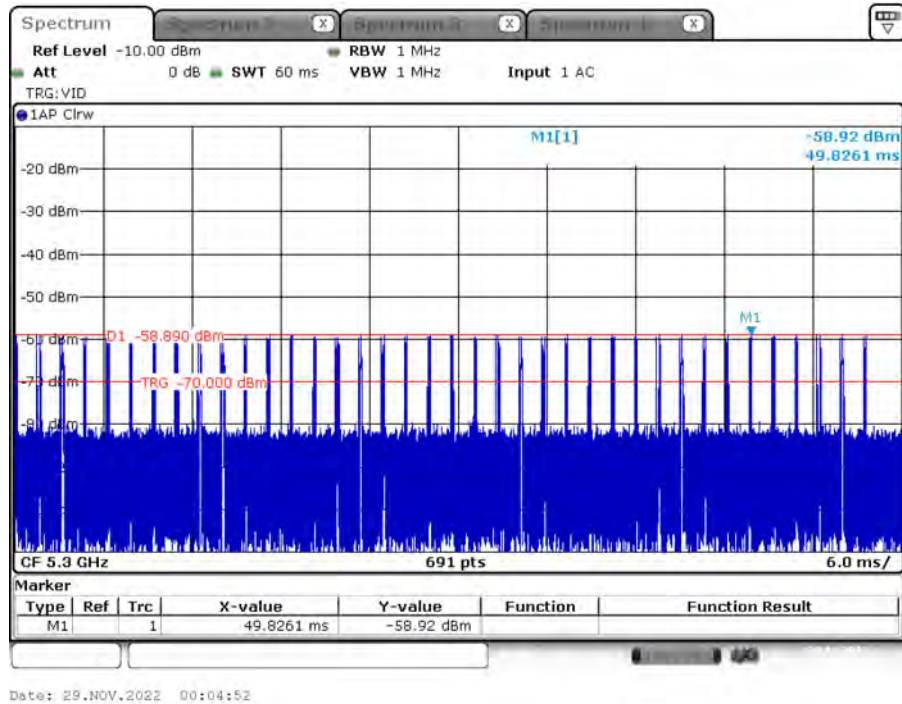
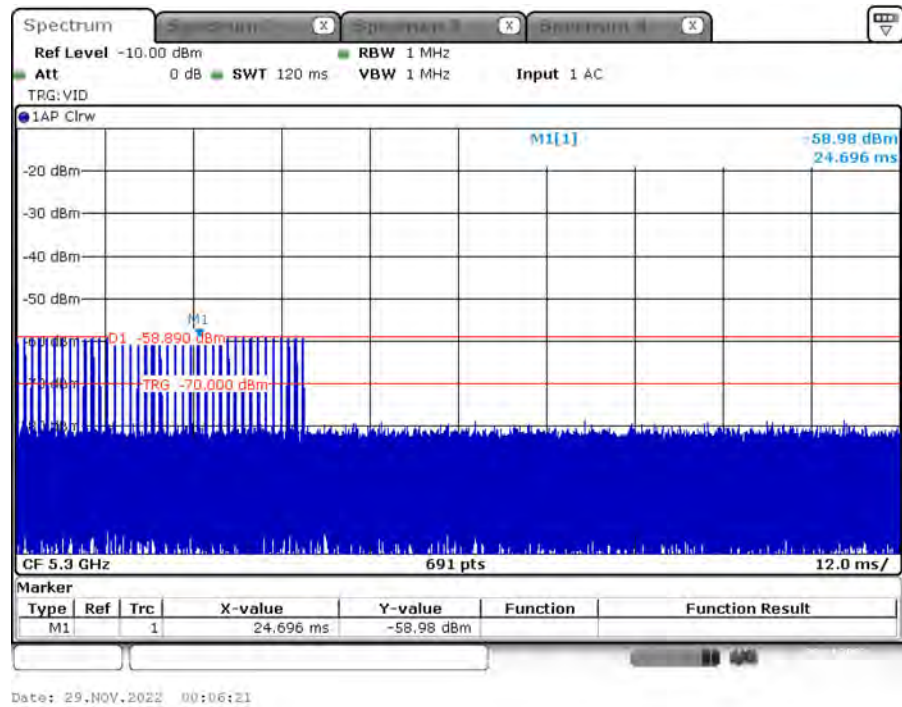
W53 band (5250-5350 MHz)

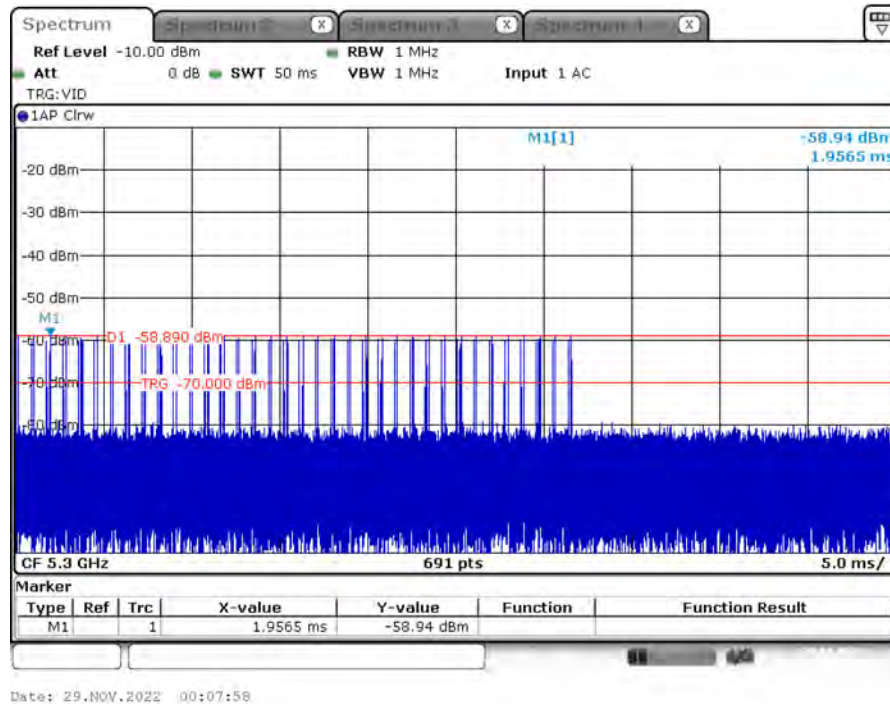
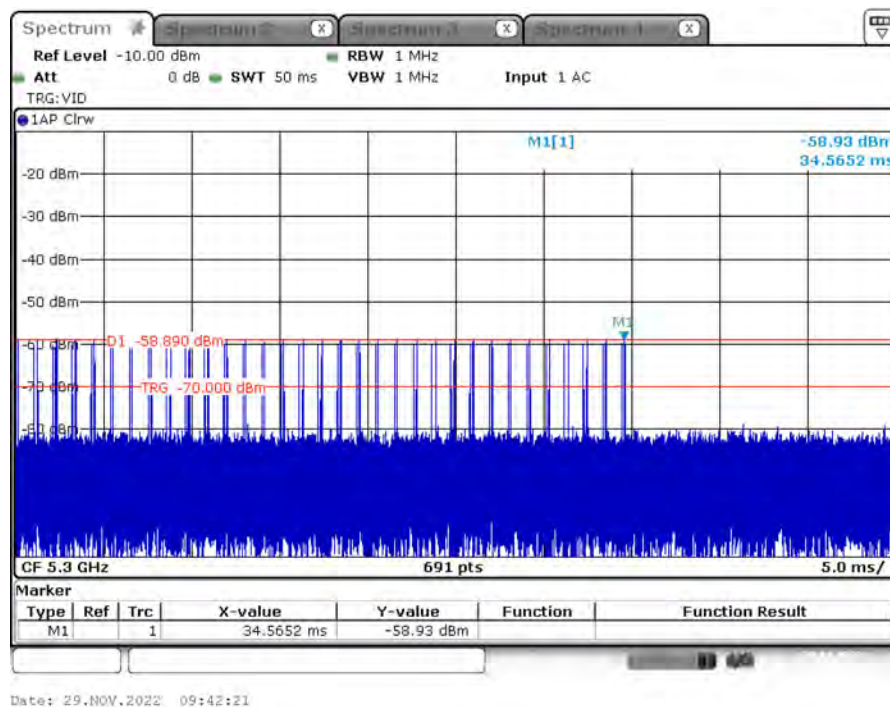
Radar #1 DFS detection threshold level and the burst of pulses on the Channel frequency

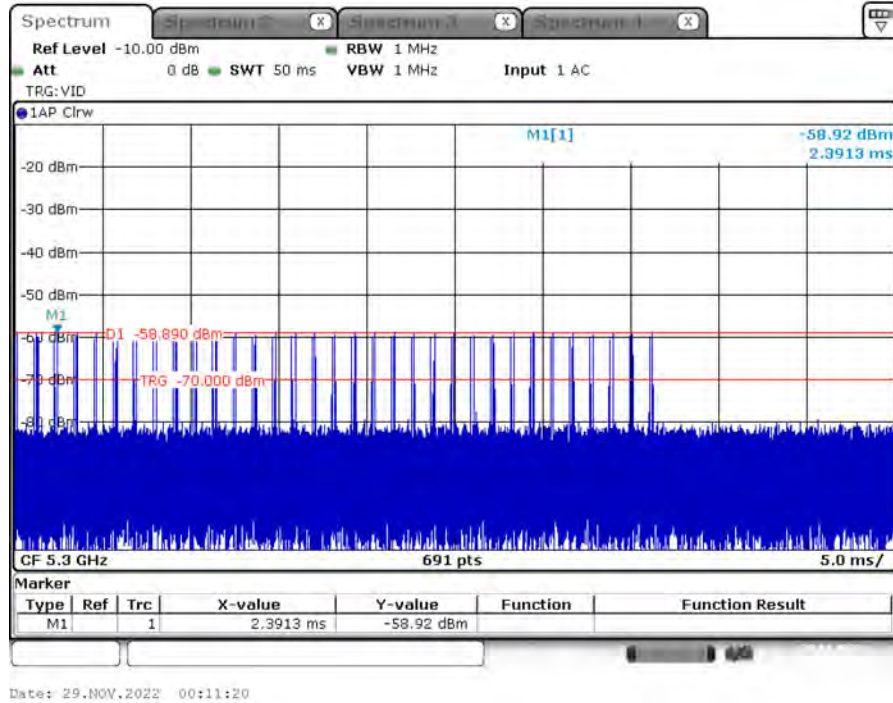
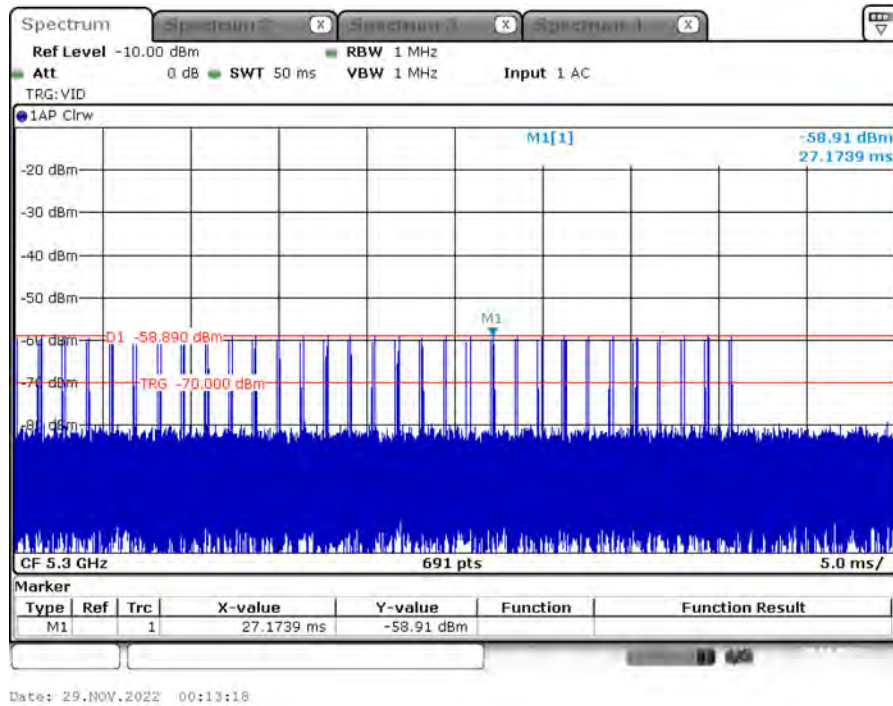


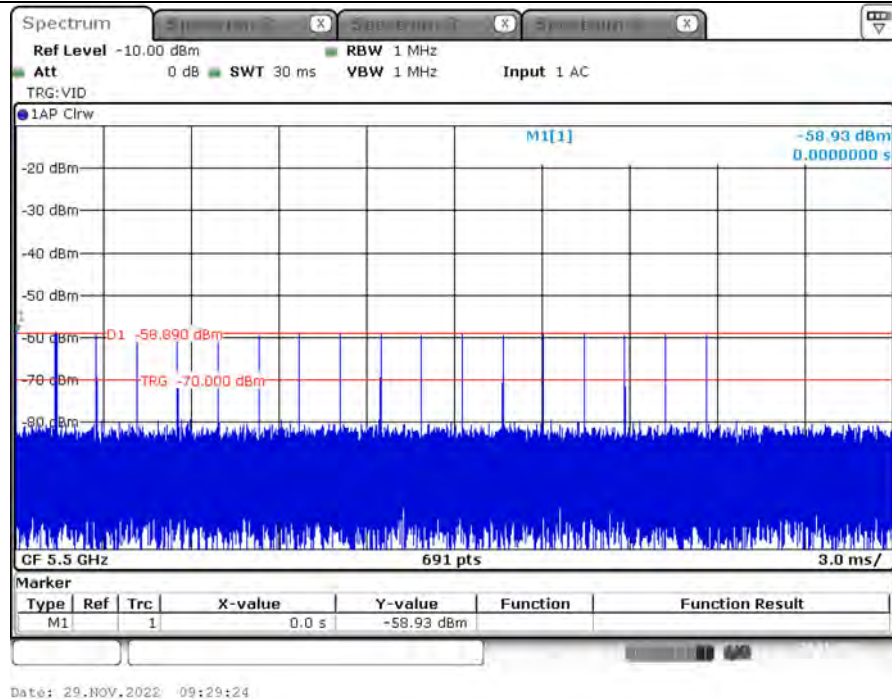
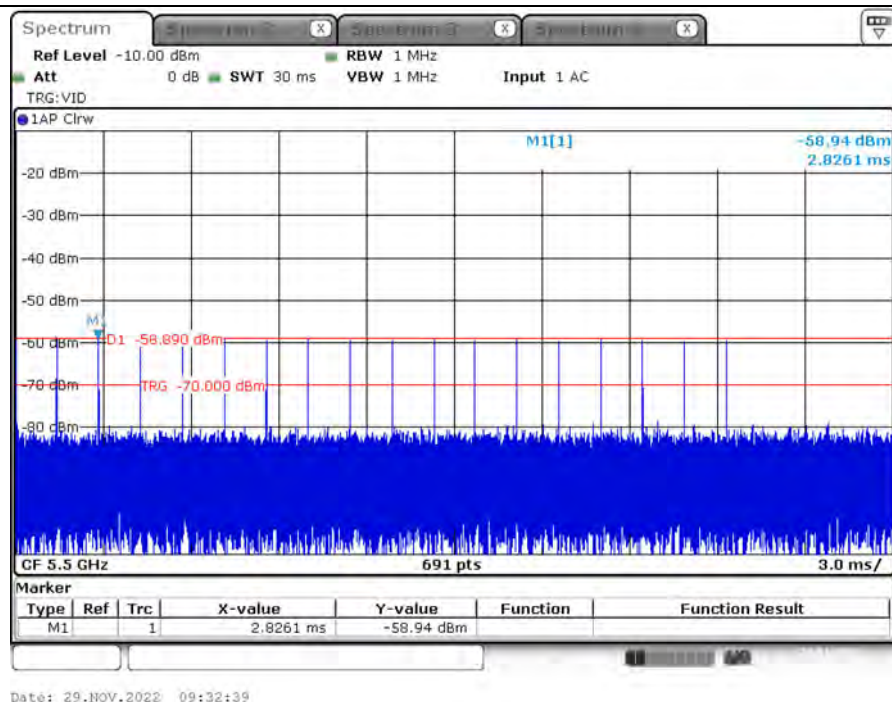
Radar #2 DFS detection threshold level and the burst of pulses on the Channel frequency



Radar #3 DFS detection threshold level and the burst of pulses on the Channel frequency

Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency


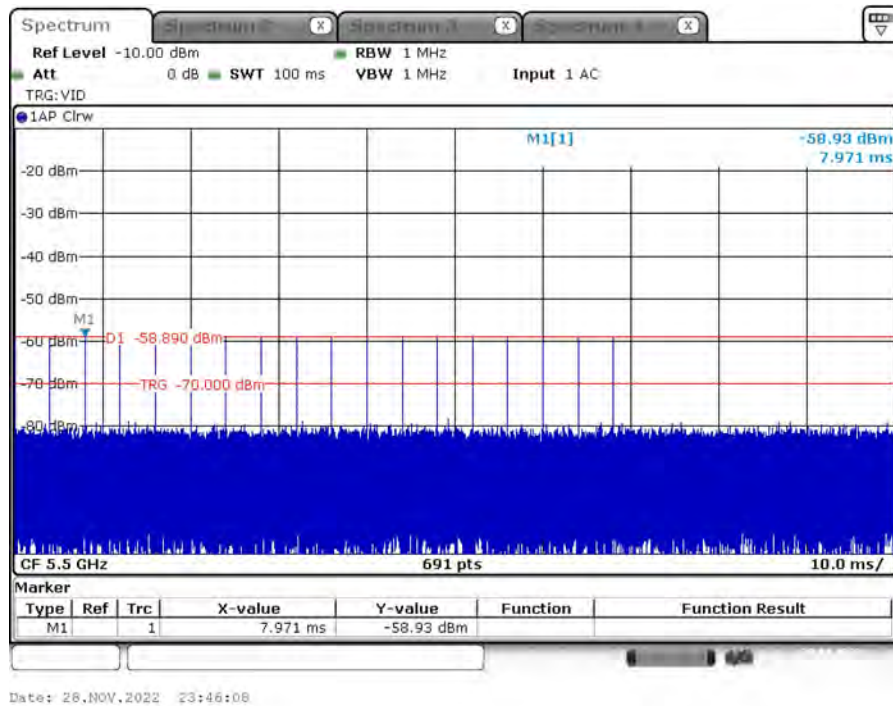
Radar #5 DFS detection threshold level and the burst of pulses on the Channel frequency

Radar #6 DFS detection threshold level and the burst of pulses on the Channel frequency


Radar #7 DFS detection threshold level and the burst of pulses on the Channel frequency

Radar #8 DFS detection threshold level and a single hop (9 pulses) on the Channel frequency within UNII detection bandwidth.


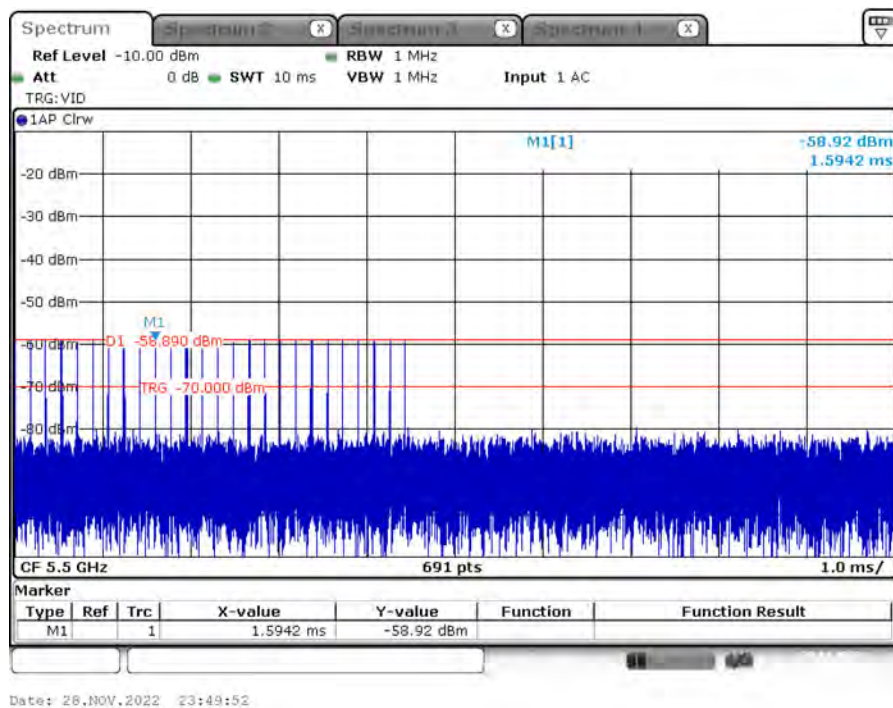
W56 band (5470-5730 MHz)
Radar #1 DFS detection threshold level and the burst of pulses on the Channel frequency

Radar #2 DFS detection threshold level and the burst of pulses on the Channel frequency




Radar #3 DFS detection threshold level and the burst of pulses on the Channel frequency

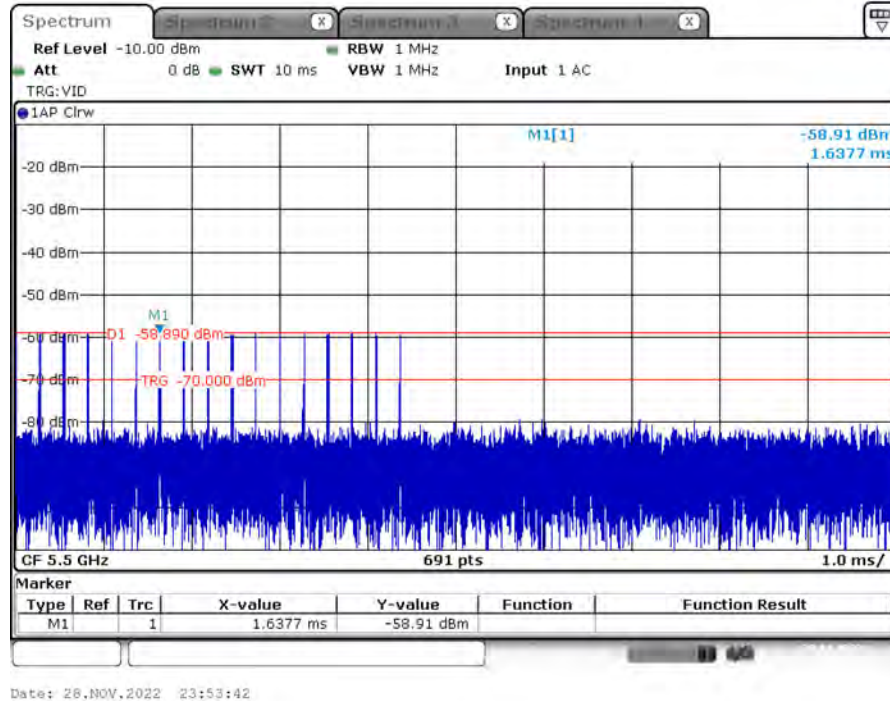


Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency

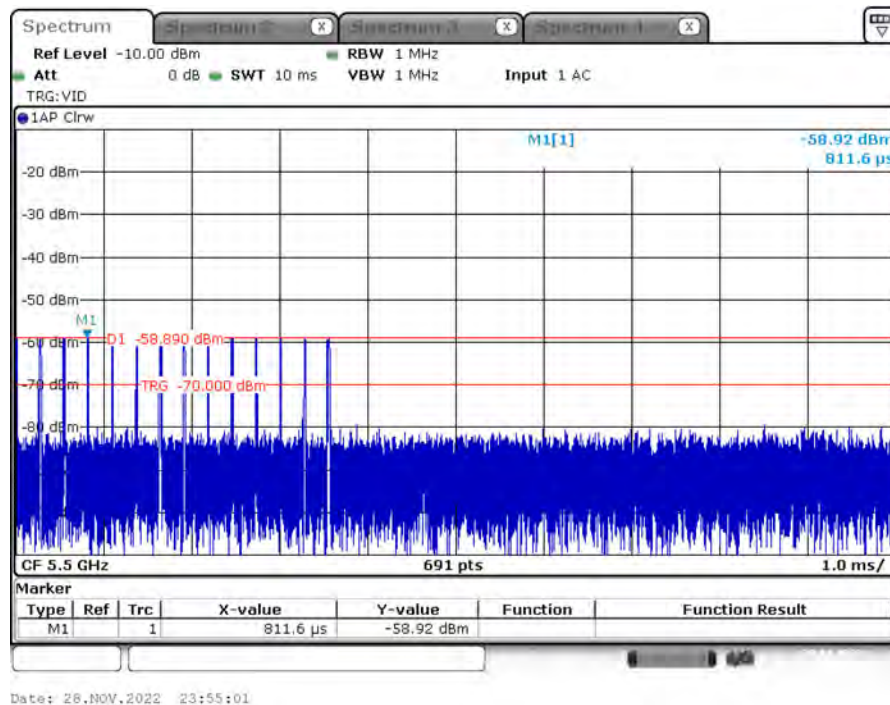


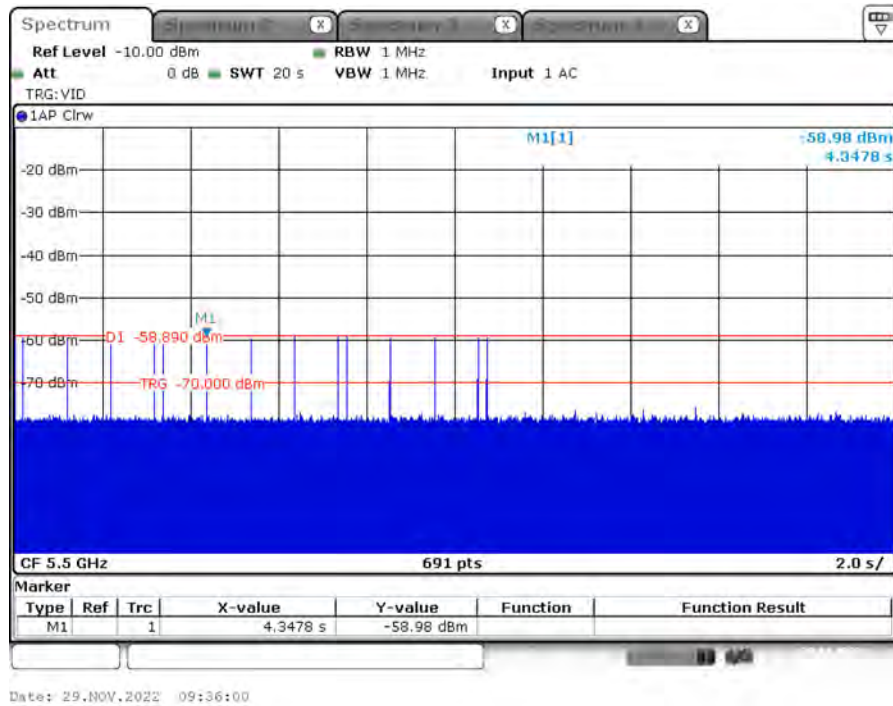
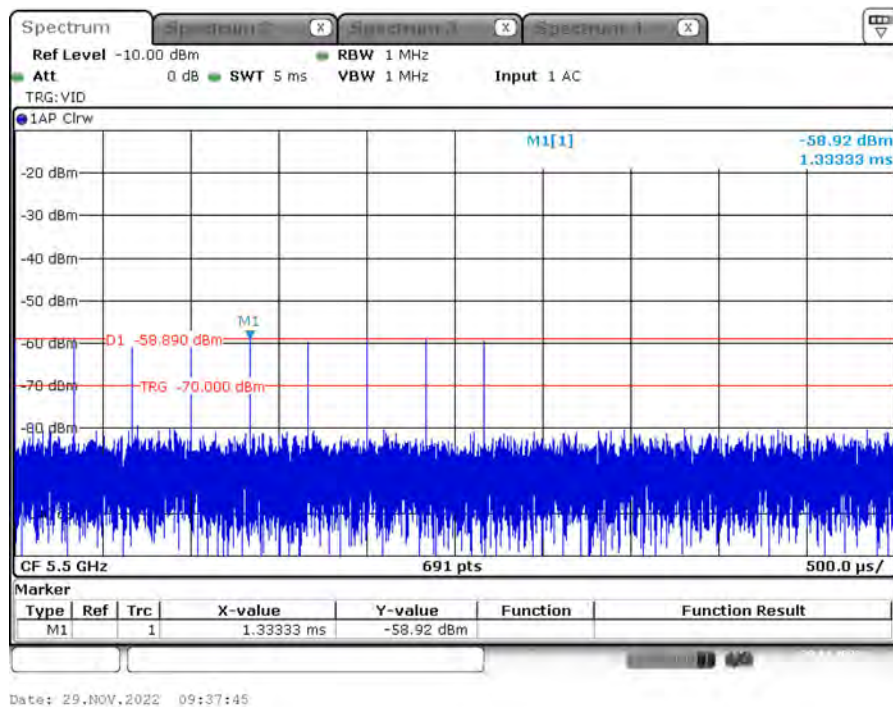


Radar #5 DFS detection threshold level and the burst of pulses on the Channel frequency

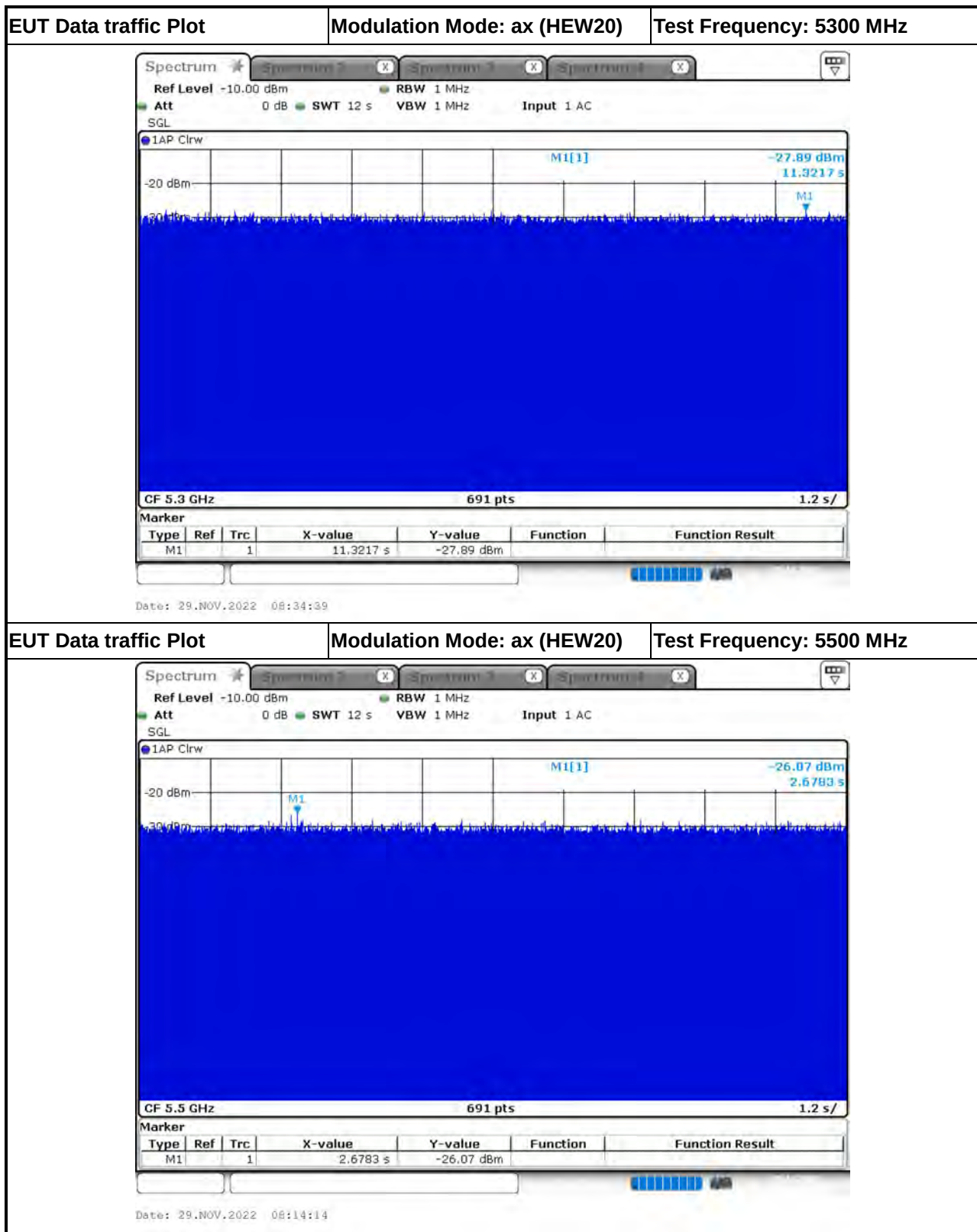


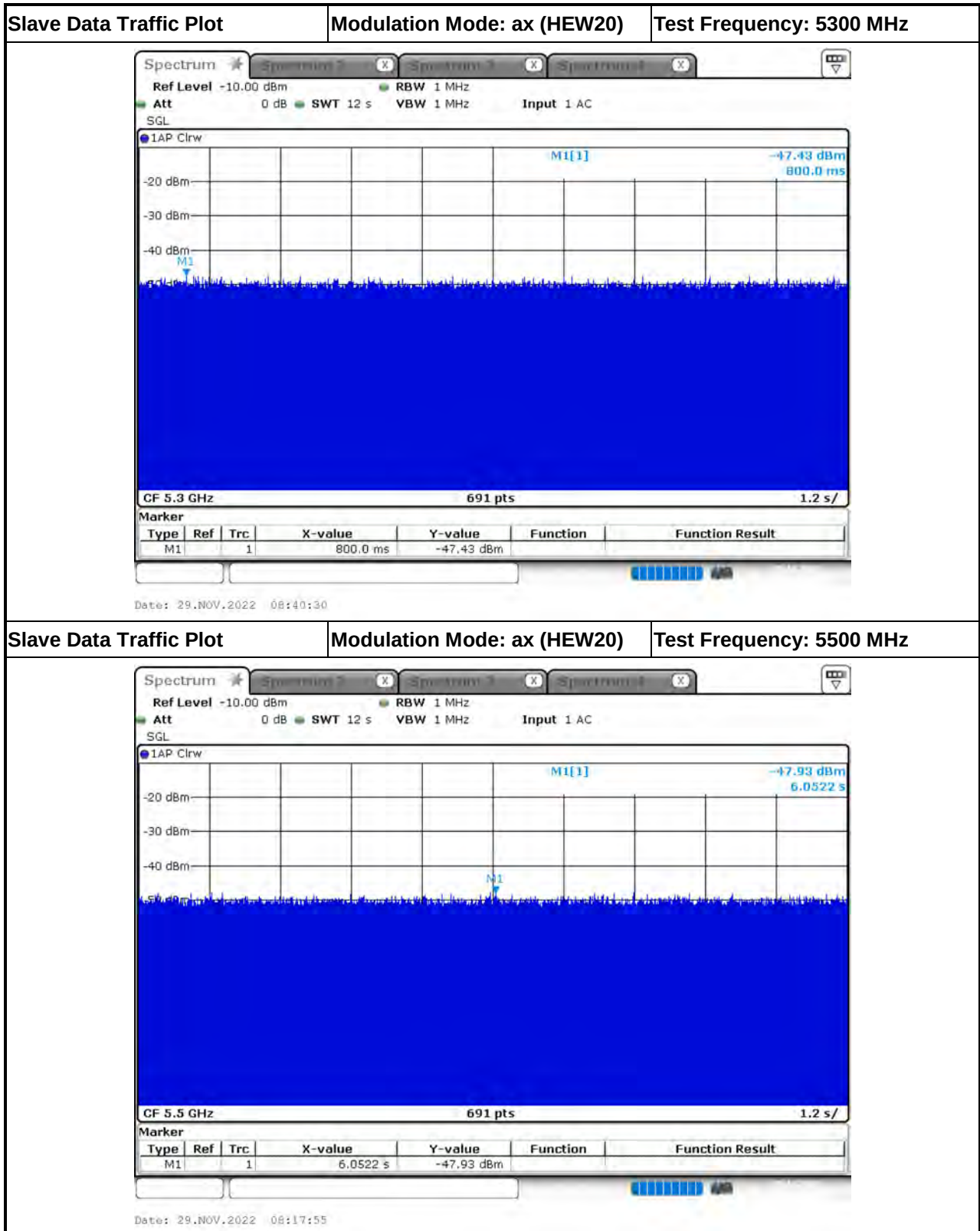
Radar #6 DFS detection threshold level and the burst of pulses on the Channel frequency

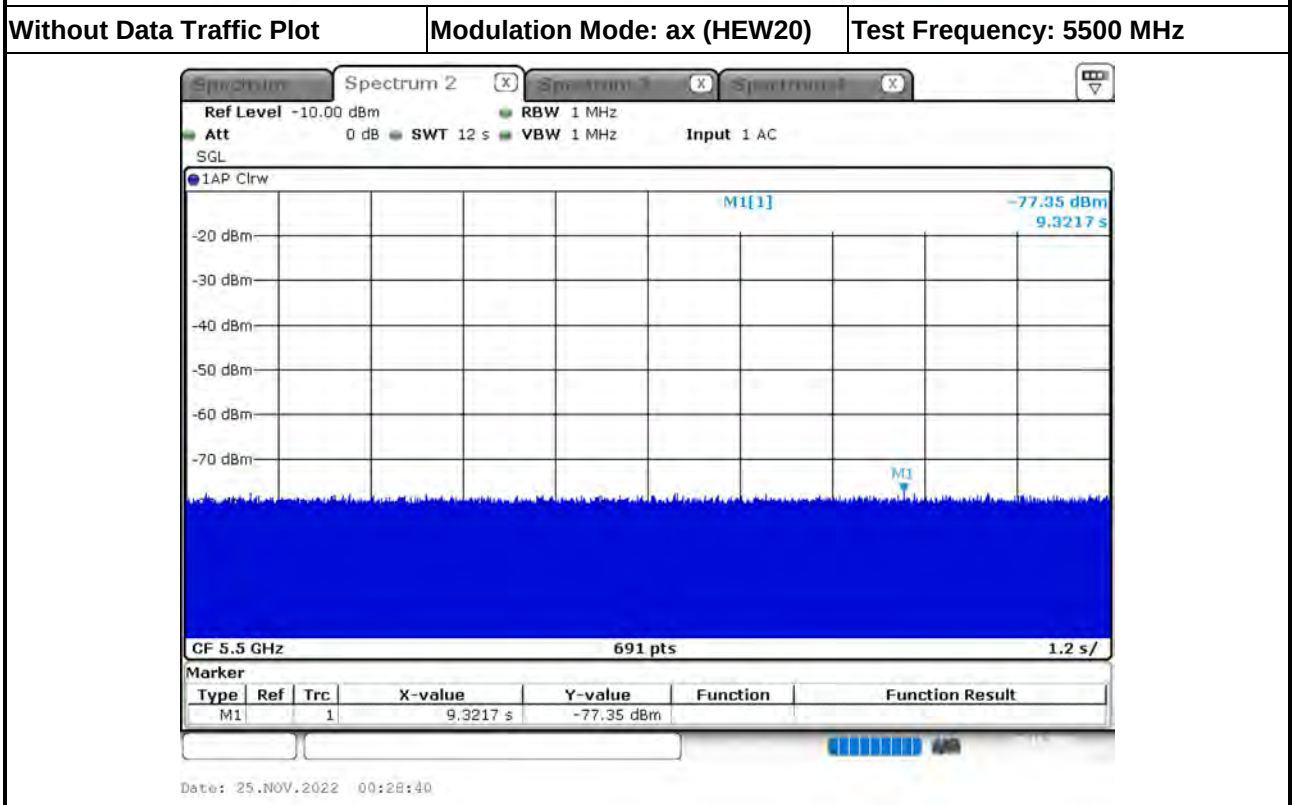
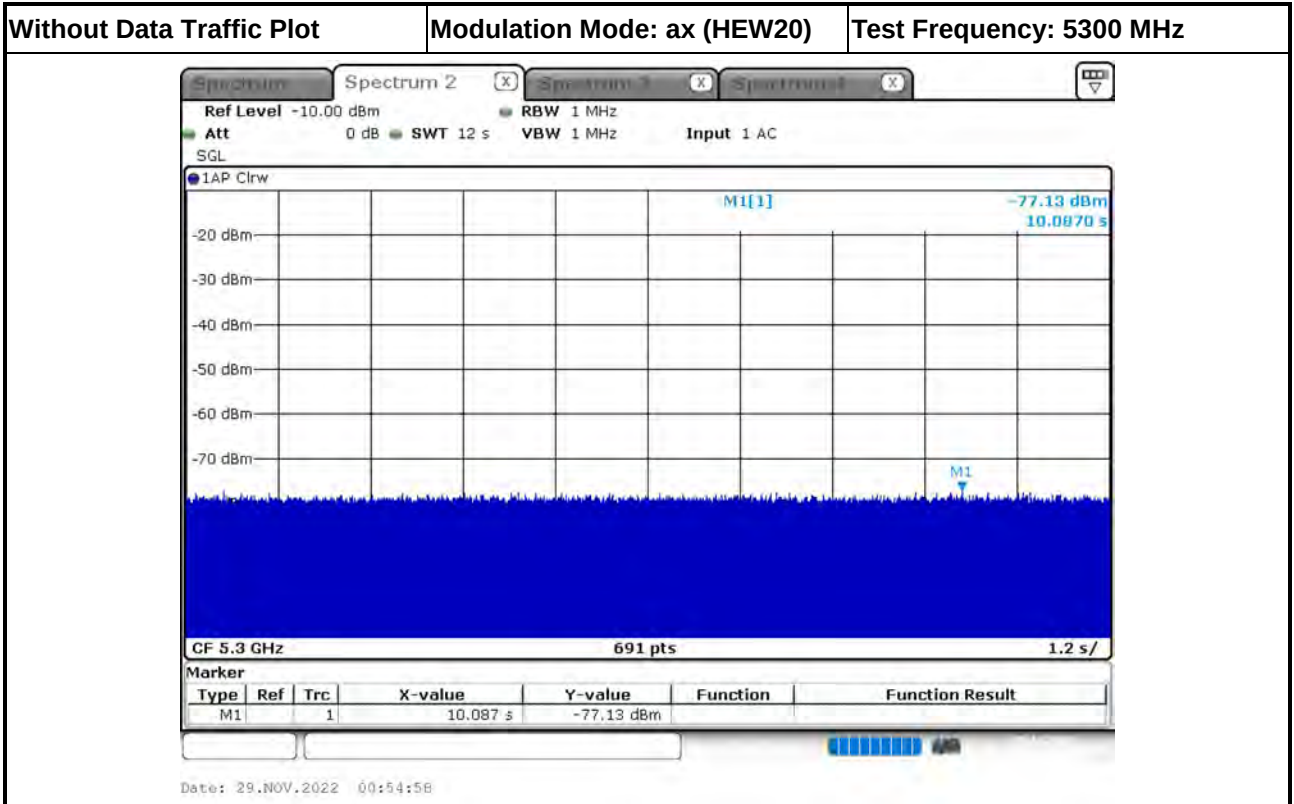


Radar #7 DFS detection threshold level and the burst of pulses on the Channel frequency

Radar #8 DFS detection threshold level and a single hop (9 pulses) on the Channel frequency within UNII detection bandwidth.


3.1.7 Data traffic Plot







3.2 Channel Availability Check (CAC)

3.2.1 Channel Availability Check Limit

Channel Availability Check Limit	
☒	The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute (60 sec) on the intended operating frequency.

3.2.2 Measuring Instruments

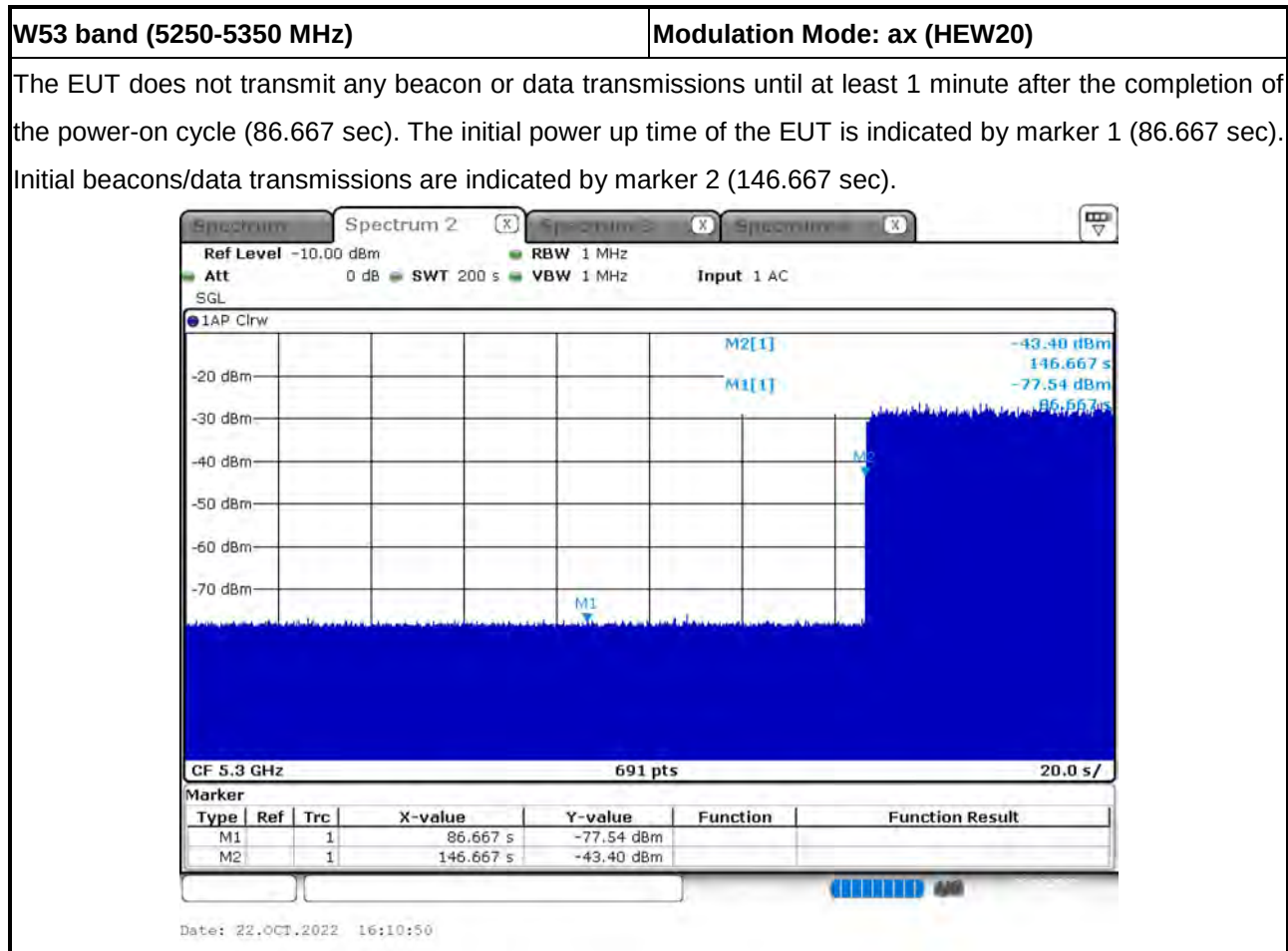
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method for W53	
Measuring Equipment Conditions	[Test method temporarily determined by TELEC], clause 13.2/26.2
Conditions of Equipment under Test	[Test method temporarily determined by TELEC], clause 13.3/26.3
Measuring Operation Procedures	[Test method temporarily determined by TELEC], clause 13.4/26.4
Presentation of Results	[Test method temporarily determined by TELEC], clause 13.5/26.5
Other Conditions	[Test method temporarily determined by TELEC], clause 13.6/26.6

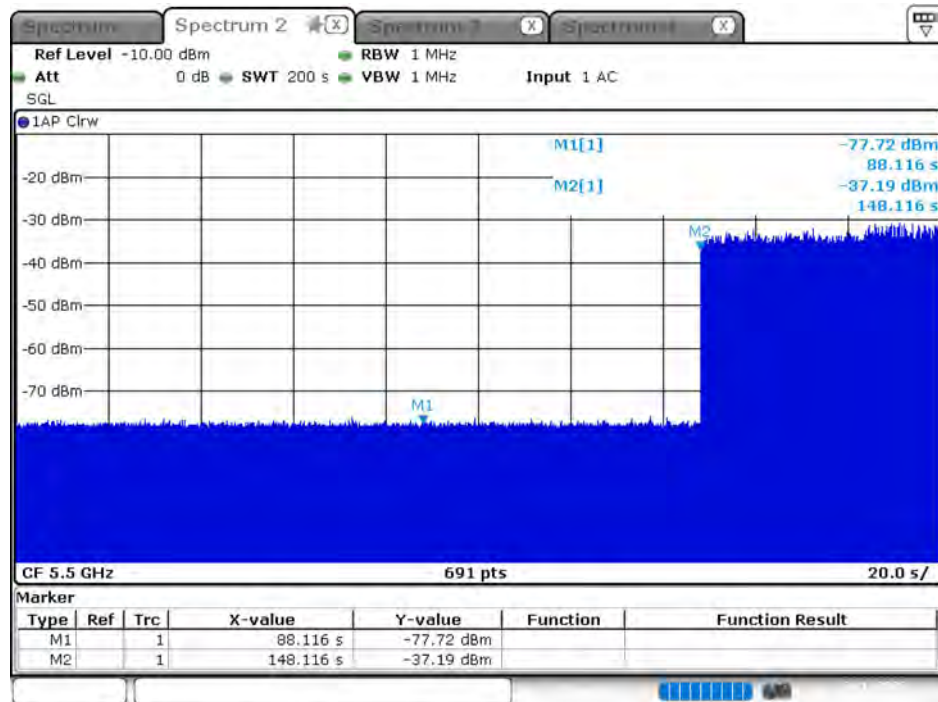
Test Method for W56	
Measuring Equipment Conditions	[Test method temporarily determined by TELEC], clause 13.2/27.2
Conditions of Equipment under Test	[Test method temporarily determined by TELEC], clause 13.3/27.3
Measuring Operation Procedures	[Test method temporarily determined by TELEC], clause 13.4/27.4
Presentation of Results	[Test method temporarily determined by TELEC], clause 13.5/27.5
Other Conditions	[Test method temporarily determined by TELEC], clause 13.6/27.6

3.2.4 Radar Detection Threshold (Initial Channel Availability Check) Result



W56 band (5470-5730 MHz)
Modulation Mode: ax (HEW20)

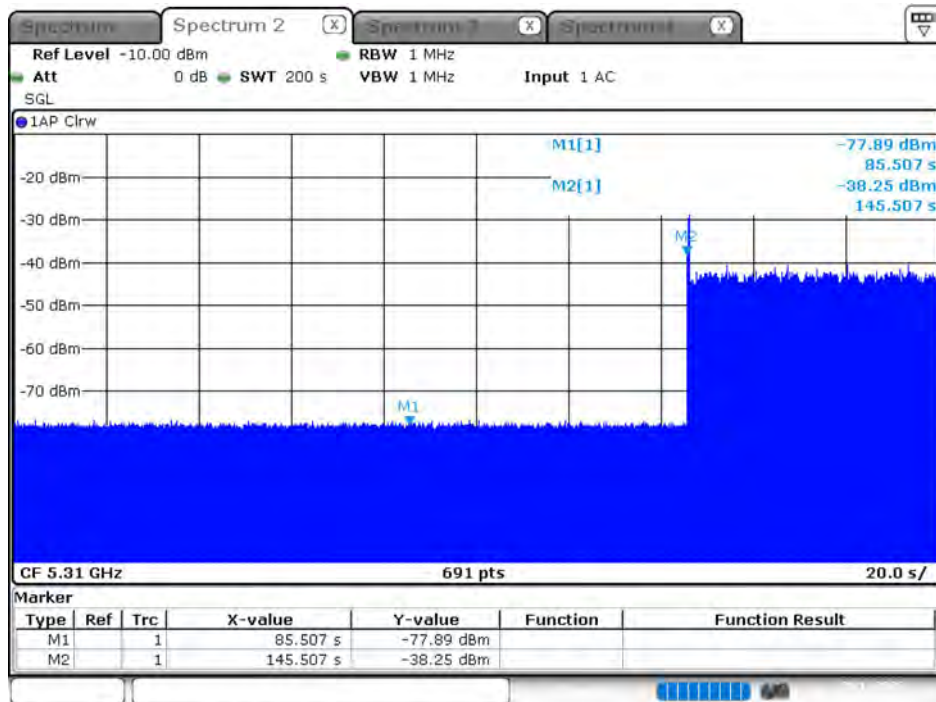
The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (88.116 sec). The initial power up time of the EUT is indicated by marker 1 (88.116 sec). Initial beacons/data transmissions are indicated by marker 2 (148.116 sec).



Date: 24.NOV.2022 20:36:14

W53 band (5250-5350 MHz)
Modulation Mode: ax (HEW40)

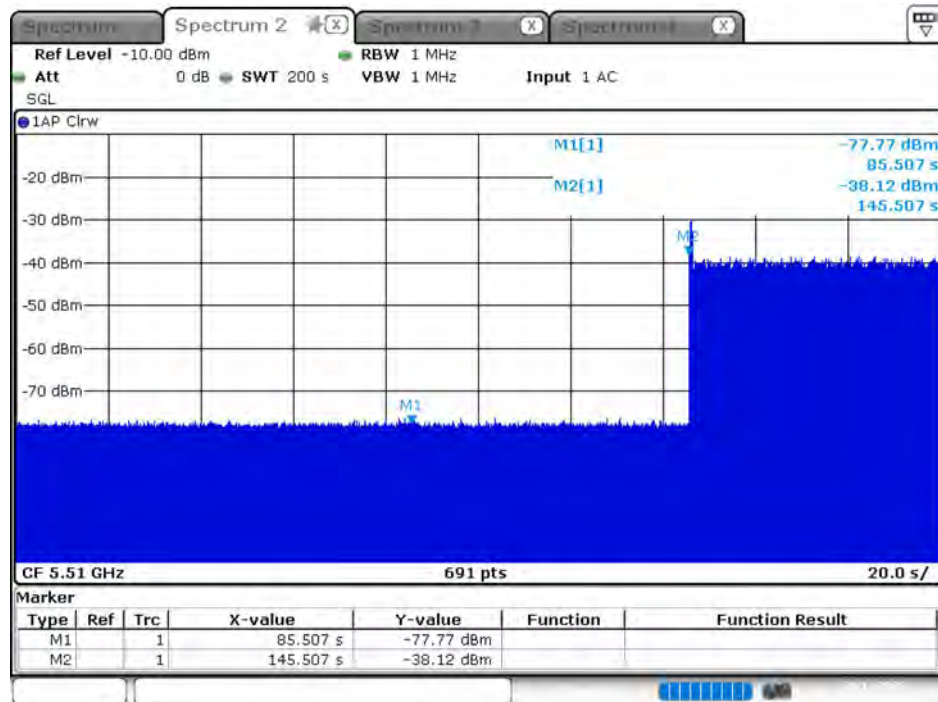
The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (85.507 sec). The initial power up time of the EUT is indicated by marker 1 (85.507 sec). Initial beacons/data transmissions are indicated by marker 2 (145.507 sec).



Date: 28.NOV.2022 20:11:36

W56 band (5470-5730 MHz)
Modulation Mode: ax (HEW40)

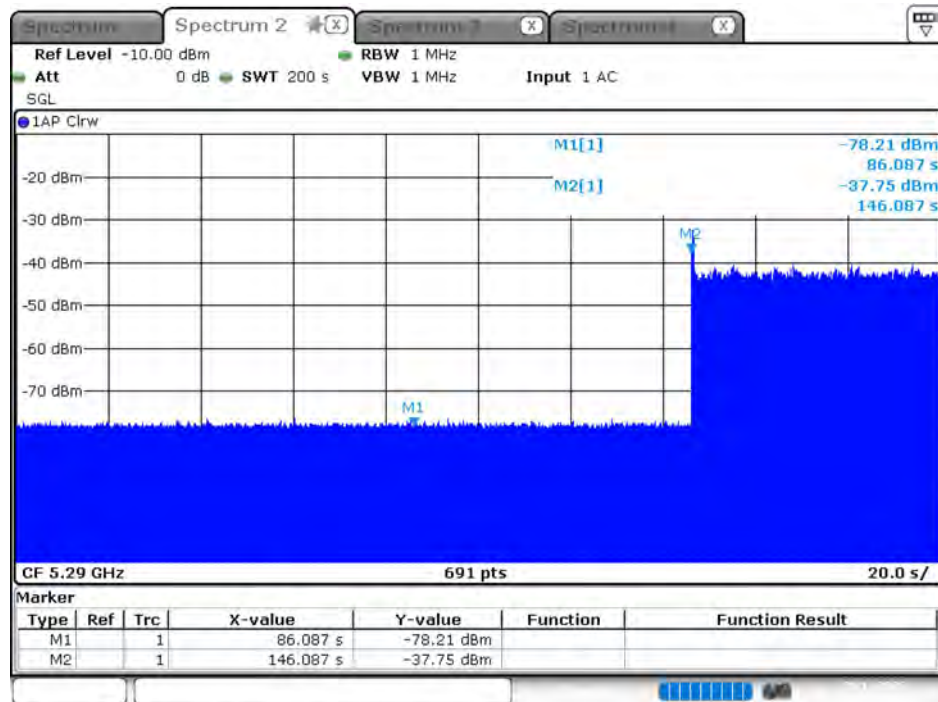
The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (85.507 sec). The initial power up time of the EUT is indicated by marker 1 (85.507 sec). Initial beacons/data transmissions are indicated by marker 2 (145.507 sec).



Date: 26.NOV.2022 15:18:13

W53 band (5250-5350 MHz)
Modulation Mode: ax (HEW80)

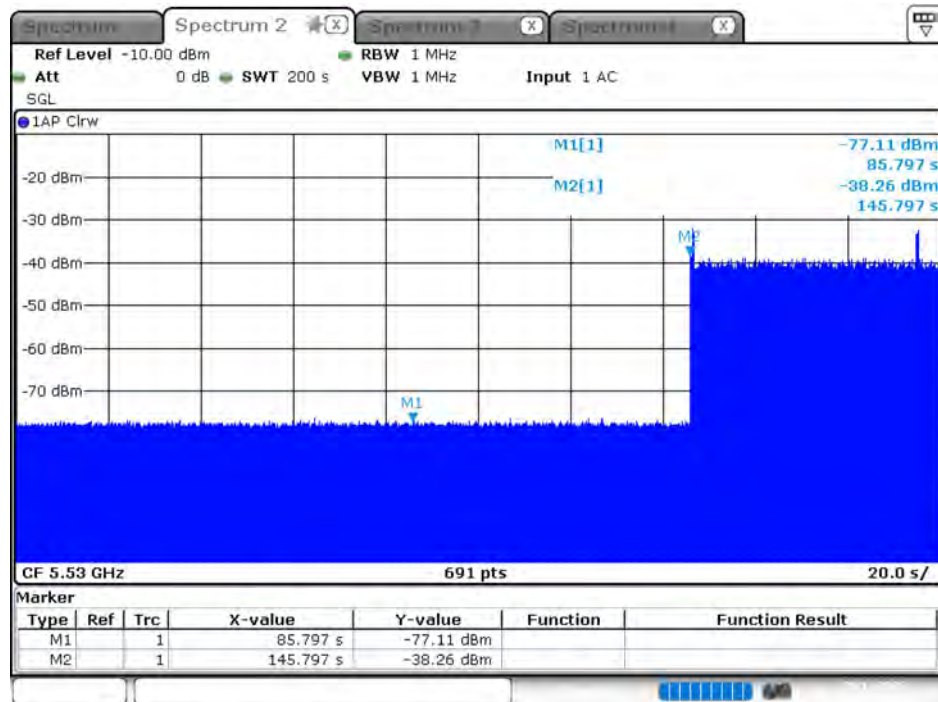
The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (86.087 sec). The initial power up time of the EUT is indicated by marker 1 (86.087 sec). Initial beacons/data transmissions are indicated by marker 2 (146.087 sec).



Date: 28.NOV.2022 14:34:23

W56 band (5470-5730 MHz)
Modulation Mode: ax (HEW80)

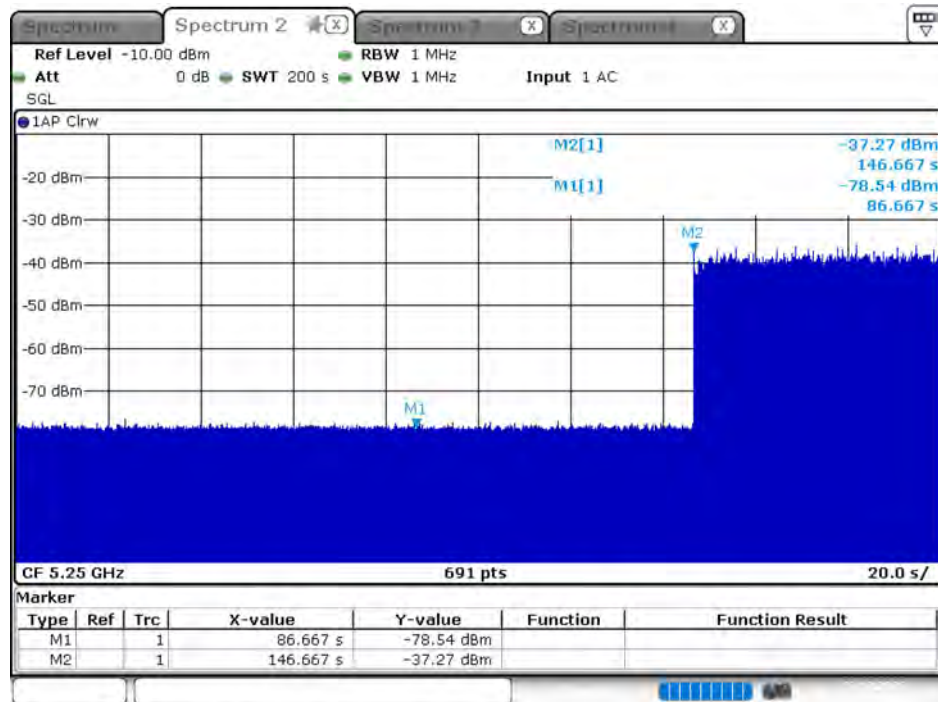
The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (85.797 sec). The initial power up time of the EUT is indicated by marker 1 (85.797 sec). Initial beacons/data transmissions are indicated by marker 2 (145.797 sec).



Date: 28.NOV.2022 22:18:52

W53 band (5250-5350 MHz)
Modulation Mode: ax (HEW160)

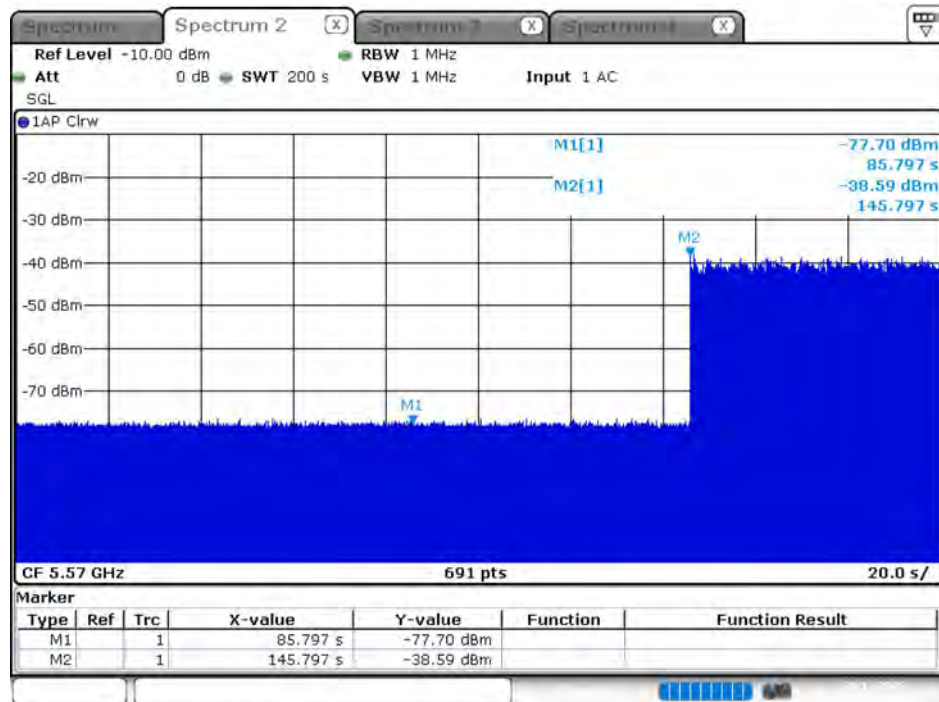
The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (86.667 sec). The initial power up time of the EUT is indicated by marker 1 (86.667 sec). Initial beacons/data transmissions are indicated by marker 2 (146.667 sec).



Date: 22.OCT.2022 14:15:14

W56 band (5470-5730 MHz)
Modulation Mode: ax (HEW160)

The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (85.797 sec). The initial power up time of the EUT is indicated by marker 1 (85.797 sec). Initial beacons/data transmissions are indicated by marker 2 (145.797 sec).



Date: 26.NOV.2022 08:25:36

3.2.5 Radar Detection Threshold (during the Channel Availability Check) Result

Radar Detection Threshold (during the Channel Availability Check) Result					
Detection Threshold Level (dBm)			-58.89		
Modulation Mode	Freq. (MHz)	Radar Test Signal (#)	Nr of Times Triggered (# out of 4)	Detection Probability (%)	Detection Probability Limit (%)
ax (HEW20)	5300	1	4	100	100
		2	4	100	100
		3	4	100	100
		4	4	100	100
		5	4	100	100
		6	4	100	100
		7	4	100	100
		8	4	100	100
ax (HEW20)	5500	1 - Fixed	4	100	100
		2 - Fixed	4	100	100
		3 - Fixed	4	100	100
		4 - Variable	4	100	100
		5 - Variable	4	100	100
		6 - Variable	4	100	100
		7 - Chirp	4	100	100
		8 - Hopping	4	100	100
Result		PASS			

Radar Detection Threshold (during the Channel Availability Check) Result					
Detection Threshold Level (dBm)			-58.89		
Modulation Mode	Freq. (MHz)	Radar Test Signal (#)	Nr of Times Triggered (# out of 4)	Detection Probability (%)	Detection Probability Limit (%)
ax (HEW40)	5310	1	4	100	100
		2	4	100	100
		3	4	100	100
		4	4	100	100
		5	4	100	100
		6	4	100	100
		7	4	100	100
		8	4	100	100
ax (HEW40)	5510	1 - Fixed	4	100	100
		2 - Fixed	4	100	100
		3 - Fixed	4	100	100
		4 - Variable	4	100	100
		5 - Variable	4	100	100
		6 - Variable	4	100	100
		7 - Chirp	4	100	100
		8 - Hopping	4	100	100
Result		PASS			

Radar Detection Threshold (during the Channel Availability Check) Result					
Detection Threshold Level (dBm)			-58.89		
Modulation Mode	Freq. (MHz)	Radar Test Signal (#)	Nr of Times Triggered (# out of 4)	Detection Probability (%)	Detection Probability Limit (%)
ax (HEW80)	5290	1	4	100	100
		2	4	100	100
		3	4	100	100
		4	4	100	100
		5	4	100	100
		6	4	100	100
		7	4	100	100
		8	4	100	100
ax (HEW80)	5530	1 - Fixed	4	100	100
		2 - Fixed	4	100	100
		3 - Fixed	4	100	100
		4 - Variable	4	100	100
		5 - Variable	4	100	100
		6 - Variable	4	100	100
		7 - Chirp	4	100	100
		8 - Hopping	4	100	100
Result		PASS			

Radar Detection Threshold (during the Channel Availability Check) Result					
Detection Threshold Level (dBm)			-58.89		
Modulation Mode	Freq. (MHz)	Radar Test Signal (#)	Nr of Times Triggered (# out of 4)	Detection Probability (%)	Detection Probability Limit (%)
ax (HEW160)	5250	1	4	100	100
		2	4	100	100
		3	4	100	100
		4	4	100	100
		5	4	100	100
		6	4	100	100
		7	4	100	100
		8	4	100	100
ax (HEW160)	5570	1 - Fixed	4	100	100
		2 - Fixed	4	100	100
		3 - Fixed	4	100	100
		4 - Variable	4	100	100
		5 - Variable	4	100	100
		6 - Variable	4	100	100
		7 - Chirp	4	100	100
		8 - Hopping	4	100	100
Result		PASS			

3.3 In-service Monitoring

3.3.1 In-service Monitoring Limit

In-service Monitoring Limit	
☒	The <i>In-Service Monitoring</i> shall be used to monitor an <i>Operating Channel</i> .
☒	The <i>In-Service-Monitoring</i> shall start immediately after the EUT has started transmissions on a channel. During the <i>In-Service Monitoring</i> , the EUT shall be capable of detecting any of the radar test signals that fall within the started transmissions ranges and with a level above the <i>Radar Detection Threshold</i> .
☒	The minimum required detection probability is defined in clause 3.1.1 DFS Parameters.

3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method for W53	
Measuring Equipment Conditions	[Test method temporarily determined by TELEC], clause 13.2/26.2
Conditions of Equipment under Test	[Test method temporarily determined by TELEC], clause 13.3/26.3
Measuring Operation Procedures	[Test method temporarily determined by TELEC], clause 13.4/26.4
Presentation of Results	[Test method temporarily determined by TELEC], clause 13.5/26.5
Other Conditions	[Test method temporarily determined by TELEC], clause 13.6/26.6

Test Method for W56	
Measuring Equipment Conditions	[Test method temporarily determined by TELEC], clause 13.2/27.2
Conditions of Equipment under Test	[Test method temporarily determined by TELEC], clause 13.3/27.3
Measuring Operation Procedures	[Test method temporarily determined by TELEC], clause 13.4/27.4
Presentation of Results	[Test method temporarily determined by TELEC], clause 13.5/27.5
Other Conditions	[Test method temporarily determined by TELEC], clause 13.6/27.6

3.3.4 Test Result of In-service Monitoring

In-service Monitoring Result					
Detection Threshold Level (dBm)			-58.89 (DFS Detection Threshold)		
Modulation Mode	Freq. (MHz)	Radar Test Signal (#)	Nr of Times Triggered (# out of 20)	Detection Probability (%)	Detection Probability Limit (%)
ax (HEW20)	5300	1	17	85	60
		2	18	90	60
		3	18	90	60
		4	18	90	60
		5	19	95	60
		6	18	90	60
		7	17	85	60
		8	18	90	60
ax (HEW20)	5500	1 - Fixed	17	85	60
		2 - Fixed	16	80	60
		3 - Fixed	18	90	60
		4 - Variable	17	85	60
		5 - Variable	16	80	60
		6 - Variable	18	90	60
		7 - Chirp	16	80	80
		8 - Hopping	16	80	70
Result		PASS			



In-service Monitoring Result					
Detection Threshold Level (dBm)			-58.89 (DFS Detection Threshold)		
Modulation Mode	Freq. (MHz)	Radar Test Signal (#)	Nr of Times Triggered (# out of 20)	Detection Probability (%)	Detection Probability Limit (%)
ax (HEW40)	5310	1	18	90	60
		2	18	90	60
		3	17	85	60
		4	18	90	60
		5	18	90	60
		6	18	90	60
		7	17	85	60
		8	18	90	60
ax (HEW40)	5510	1 - Fixed	18	90	60
		2 - Fixed	19	95	60
		3 - Fixed	18	90	60
		4 - Variable	16	80	60
		5 - Variable	15	75	60
		6 - Variable	13	65	60
		7 - Chirp	18	90	80
		8 - Hopping	19	95	70
Result		PASS			



In-service Monitoring Result					
Detection Threshold Level (dBm)			-58.89 (DFS Detection Threshold)		
Modulation Mode	Freq. (MHz)	Radar Test Signal (#)	Nr of Times Triggered (# out of 20)	Detection Probability (%)	Detection Probability Limit (%)
ax (HEW80)	5290	1	17	85	60
		2	18	90	60
		3	17	85	60
		4	18	90	60
		5	17	85	60
		6	18	90	60
		7	18	90	60
		8	17	85	60
ax (HEW80)	5530	1 - Fixed	18	90	60
		2 - Fixed	17	85	60
		3 - Fixed	18	90	60
		4 - Variable	18	90	60
		5 - Variable	18	90	60
		6 - Variable	18	90	60
		7 - Chirp	17	85	80
		8 - Hopping	17	85	70
Result		PASS			

In-service Monitoring Result					
Detection Threshold Level (dBm)			-58.89 (DFS Detection Threshold)		
Modulation Mode	Freq. (MHz)	Radar Test Signal (#)	Nr of Times Triggered (# out of 20)	Detection Probability (%)	Detection Probability Limit (%)
ax (HEW160)	5250	1	19	95	60
		2	19	95	60
		3	19	95	60
		4	18	90	60
		5	18	90	60
		6	19	95	60
		7	18	90	60
		8	18	90	60
ax (HEW160)	5570	1 - Fixed	17	85	60
		2 - Fixed	16	80	60
		3 - Fixed	17	85	60
		4 - Variable	15	75	60
		5 - Variable	17	85	60
		6 - Variable	16	80	60
		7 - Chirp	18	90	80
		8 - Hopping	19	95	70
Result		PASS			



In-service Monitoring Result				
Detection Threshold Level (dBm)			-58.89 (DFS Detection Threshold)	
Modulation Mode	Freq. (MHz)	Radar Test Signal (#)	Detection Probability (%)	Detection Probability Limit (%)
ax (HEW20)	5500	1 - Fixed	85	60
		2 - Fixed	80	
		3 - Fixed	90	
		4 - Variable	85	
		5 - Variable	80	
		6 - Variable	90	
		Total	85	80
ax (HEW40)	5510	1 - Fixed	90	60
		2 - Fixed	95	
		3 - Fixed	90	
		4 - Variable	80	
		5 - Variable	75	
		6 - Variable	65	
		Total	83	80
ax (HEW80)	5530	1 - Fixed	90	60
		2 - Fixed	85	
		3 - Fixed	90	
		4 - Variable	90	
		5 - Variable	90	
		6 - Variable	90	
		Total	89	80
ax (HEW160)	5570	1 - Fixed	85	60
		2 - Fixed	80	
		3 - Fixed	85	
		4 - Variable	75	
		5 - Variable	85	
		6 - Variable	80	
		Total	82	80
Result		PASS		

3.4 Channel Shutdown and Non-Occupancy Period

3.4.1 Channel Shutdown and Non-Occupancy Period Limit

Channel Shutdown and Non-Occupancy Period Limit	
Channel Move Time	10 sec
Channel Closing Transmission Time	260 ms in Channel Move Time 10 sec period.
Non-occupancy period	Minimum 30 minutes

3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method for W53	
Measuring Equipment Conditions	[Test method temporarily determined by TELEC], clause 13.2/26.2
Conditions of Equipment under Test	[Test method temporarily determined by TELEC], clause 13.3/26.3
Measuring Operation Procedures	[Test method temporarily determined by TELEC], clause 13.4/26.4
Presentation of Results	[Test method temporarily determined by TELEC], clause 13.5/26.5
Other Conditions	[Test method temporarily determined by TELEC], clause 13.6/26.6

Test Method for W56	
Measuring Equipment Conditions	[Test method temporarily determined by TELEC], clause 13.2/27.2
Conditions of Equipment under Test	[Test method temporarily determined by TELEC], clause 13.3/27.3
Measuring Operation Procedures	[Test method temporarily determined by TELEC], clause 13.4/27.4
Presentation of Results	[Test method temporarily determined by TELEC], clause 13.5/27.5
Other Conditions	[Test method temporarily determined by TELEC], clause 13.6/27.6

3.4.4 Test Result of Channel Shutdown

Channel Shutdown and Non-Occupancy Period Result				
Detection Threshold Level (dBm)			-58.89	
Modulation Mode	Freq. (MHz)	Radar Test Signal	Channel Closing Transmission Time (ms)	Channel Move Time (s)
ax (HEW20)	5300	1 - Fixed	63.770	0.469
ax (HEW20)	5500	2 - Fixed	28.990	0.451
ax (HEW40)	5310	1 - Fixed	28.990	0.434
ax (HEW40)	5510	2 - Fixed	34.780	0.521
ax (HEW80)	5290	1 - Fixed	23.190	0.503
ax (HEW80)	5530	2 - Fixed	34.780	0.434
ax (HEW160)	5250	1 - Fixed	31.880	0.434
ax (HEW160)	5570	2 - Fixed	31.880	0.452
Limit			260 ms	10 sec
Result			PASS	

3.4.5 Channel Shutdown Plots

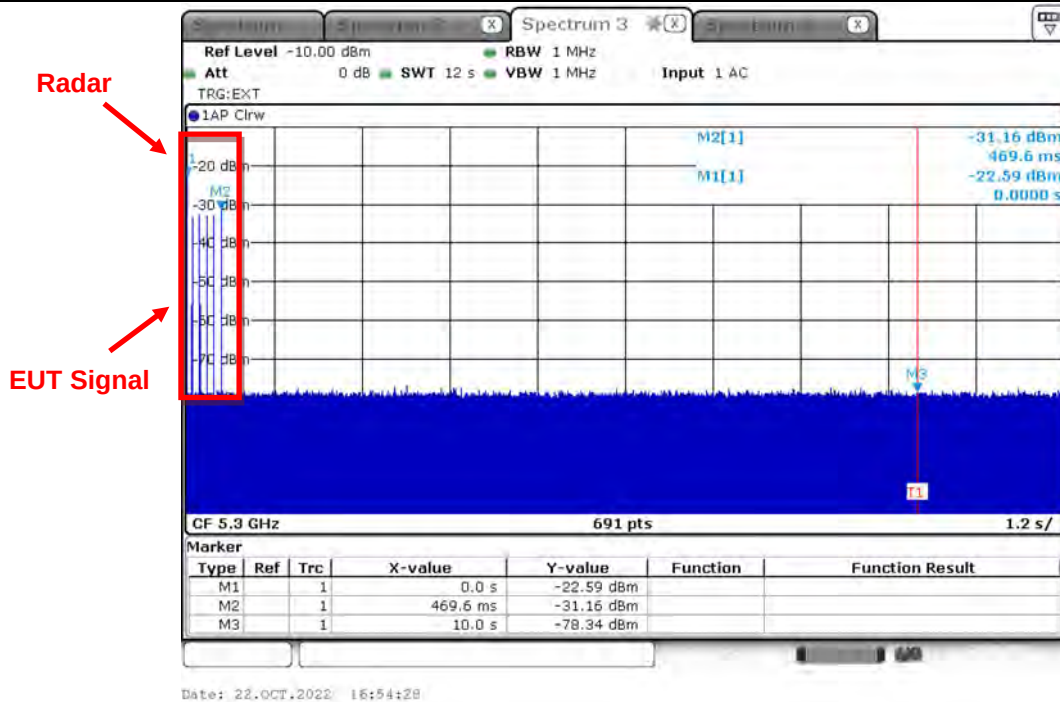
W53 band (5250-5350 MHz)

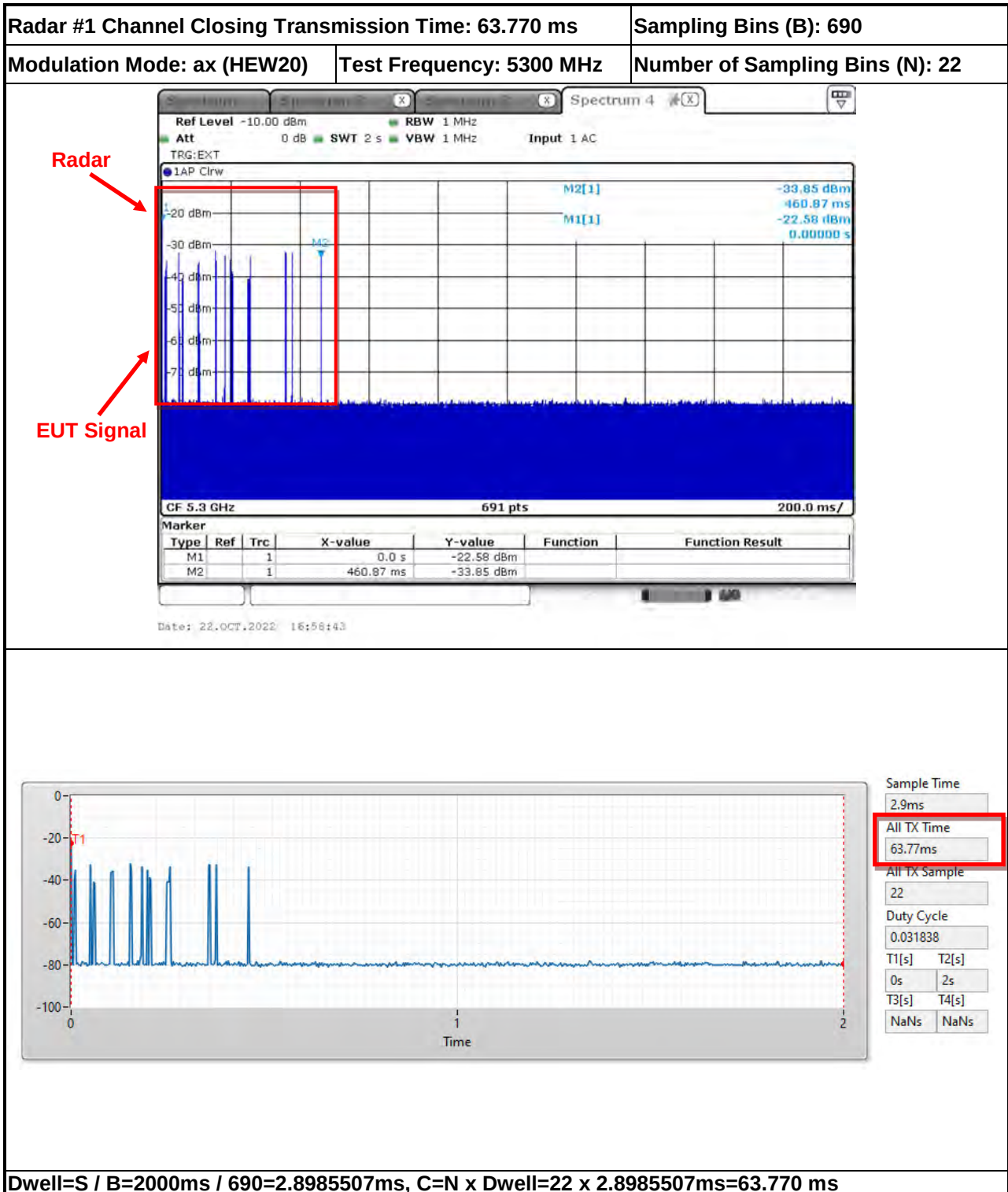
Radar #1 Channel Move Time: < 10 sec

Modulation Mode: ax (HEW20)

Test Frequency: 5300 MHz

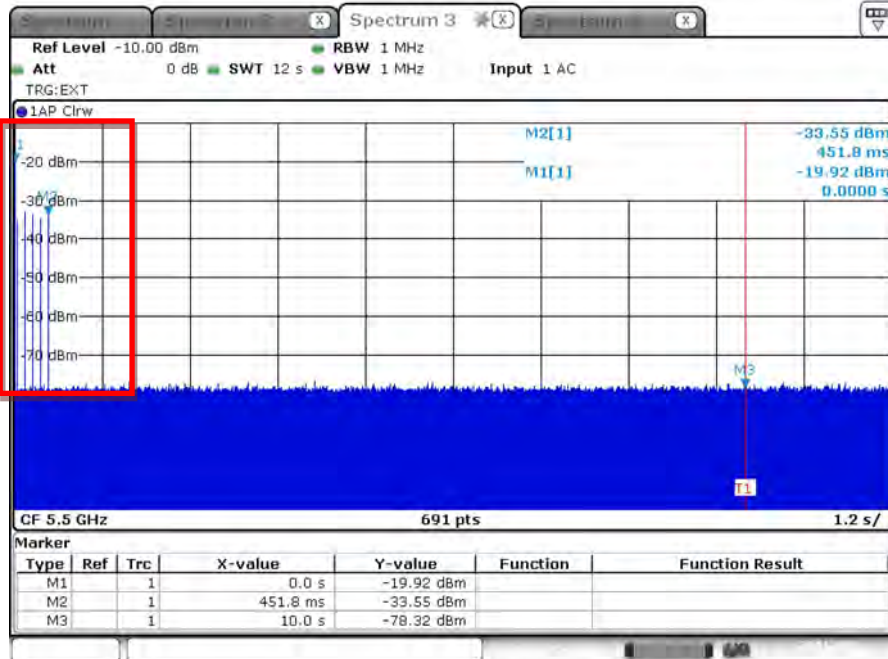
Channel Move Time: 0.469 s



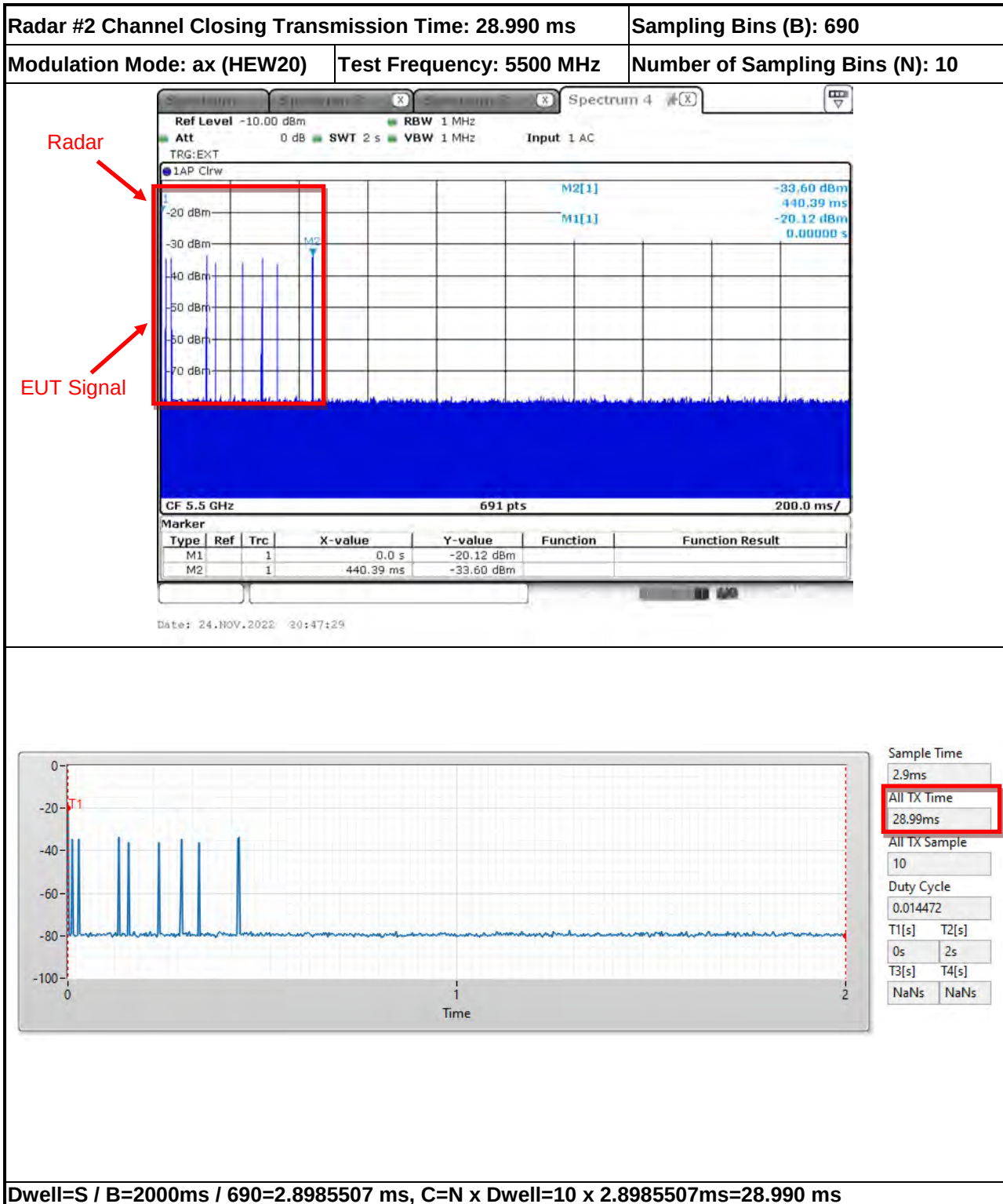


Note: The first sweep point of spectrum analyzer is occupied by radar signal, therefore, the number "Sweep Point-1" should be used for Channel Closing Transmission Time calculation.

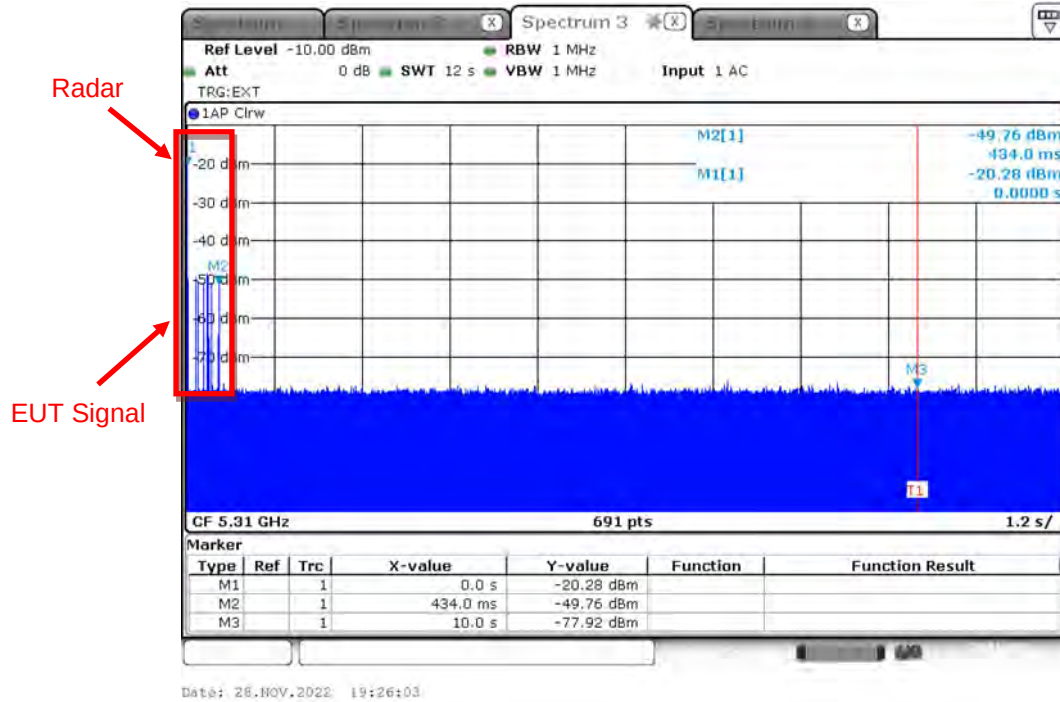
The Channel Closing Transmission Time is calculated by Closing Time = N*(Sweep time/Sweep Point-1) where N is the number of spectrum analyzer sampling bins.

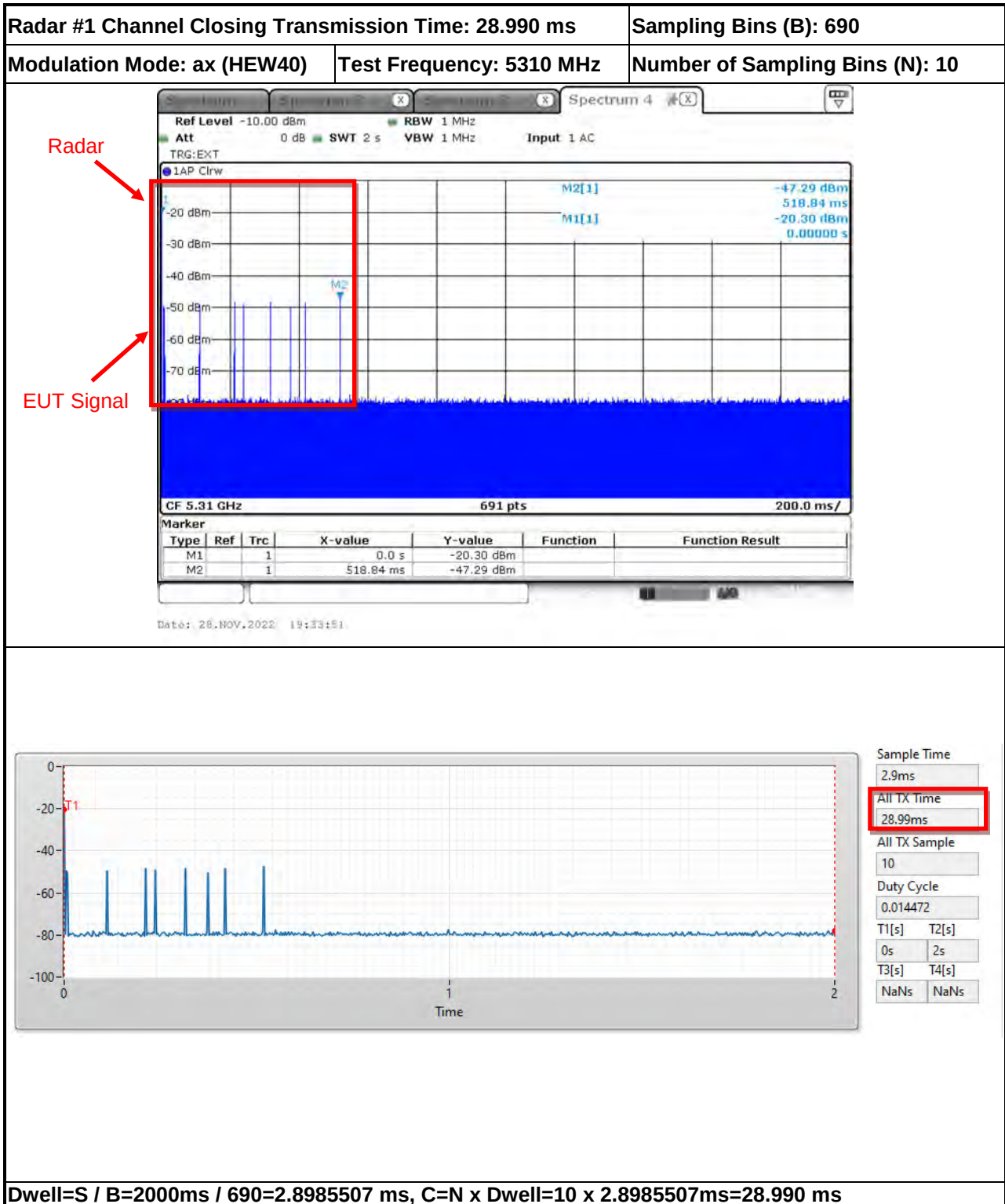
W56 band (5470-5730 MHz)
Radar #2 Channel Move Time: < 10 sec
Modulation Mode: ax (HEW20)
Test Frequency: 5500 MHz
Channel Move Time: 0.451 s
Radar
EUT Signal


Date: 24.NOV.2022 20:43:44

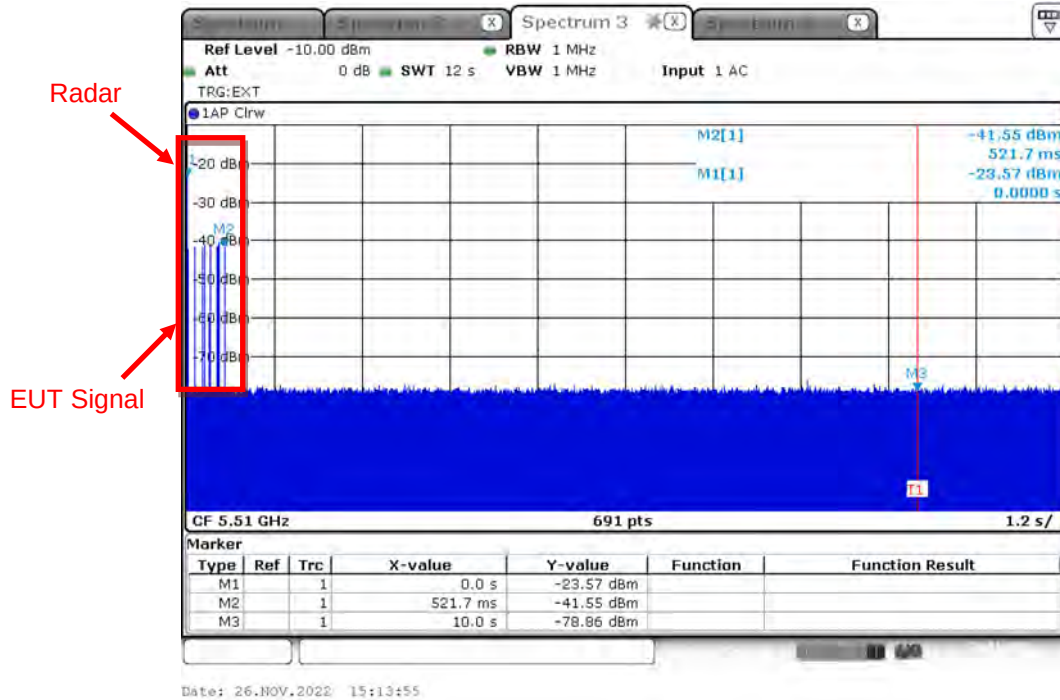


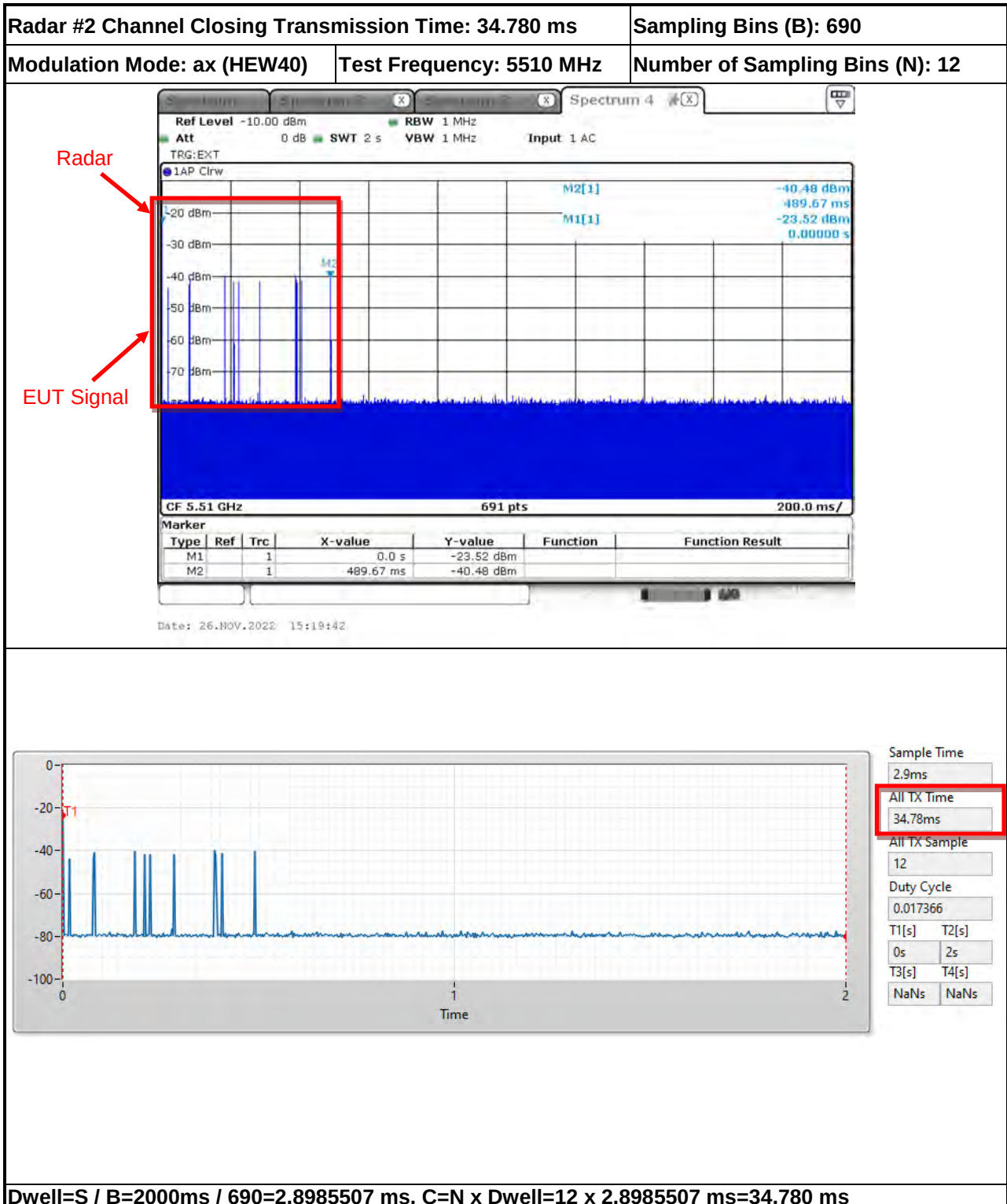
Note: The first sweep point of spectrum analyzer is occupied by radar signal, therefore, the number "Sweep Point-1" should be used for Channel Closing Transmission Time calculation.
The Channel Closing Transmission Time is calculated by Closing Time = N*(Sweep time/Sweep Point-1)
where N is the number of spectrum analyzer sampling bins.

W53 band (5250-5350 MHz)
Radar #1 Channel Move Time: < 10 sec
Modulation Mode: ax (HEW40)
Test Frequency: 5310 MHz
Channel Move Time: 0.434 s




Note: The first sweep point of spectrum analyzer is occupied by radar signal, therefore, the number "Sweep Point-1" should be used for Channel Closing Transmission Time calculation.
The Channel Closing Transmission Time is calculated by Closing Time = N*(Sweep time/Sweep Point-1)
where N is the number of spectrum analyzer sampling bins.

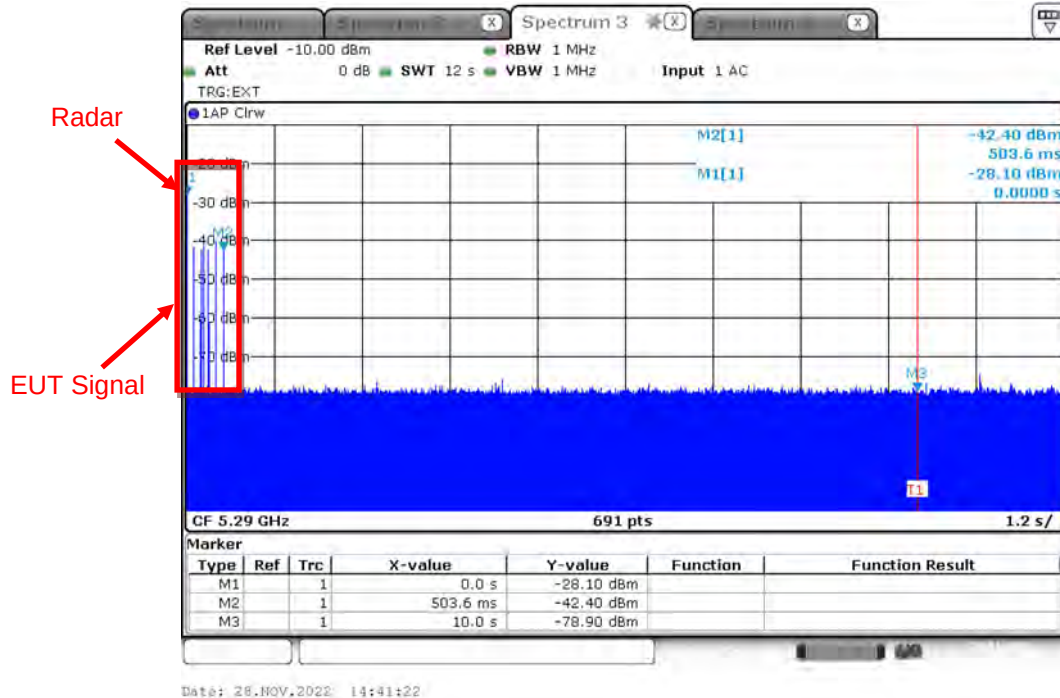
W56 band (5470-5730 MHz)
Radar #2 Channel Move Time: < 10 sec
Modulation Mode: ax (HEW40)
Test Frequency: 5510 MHz
Channel Move Time: 0.521 s


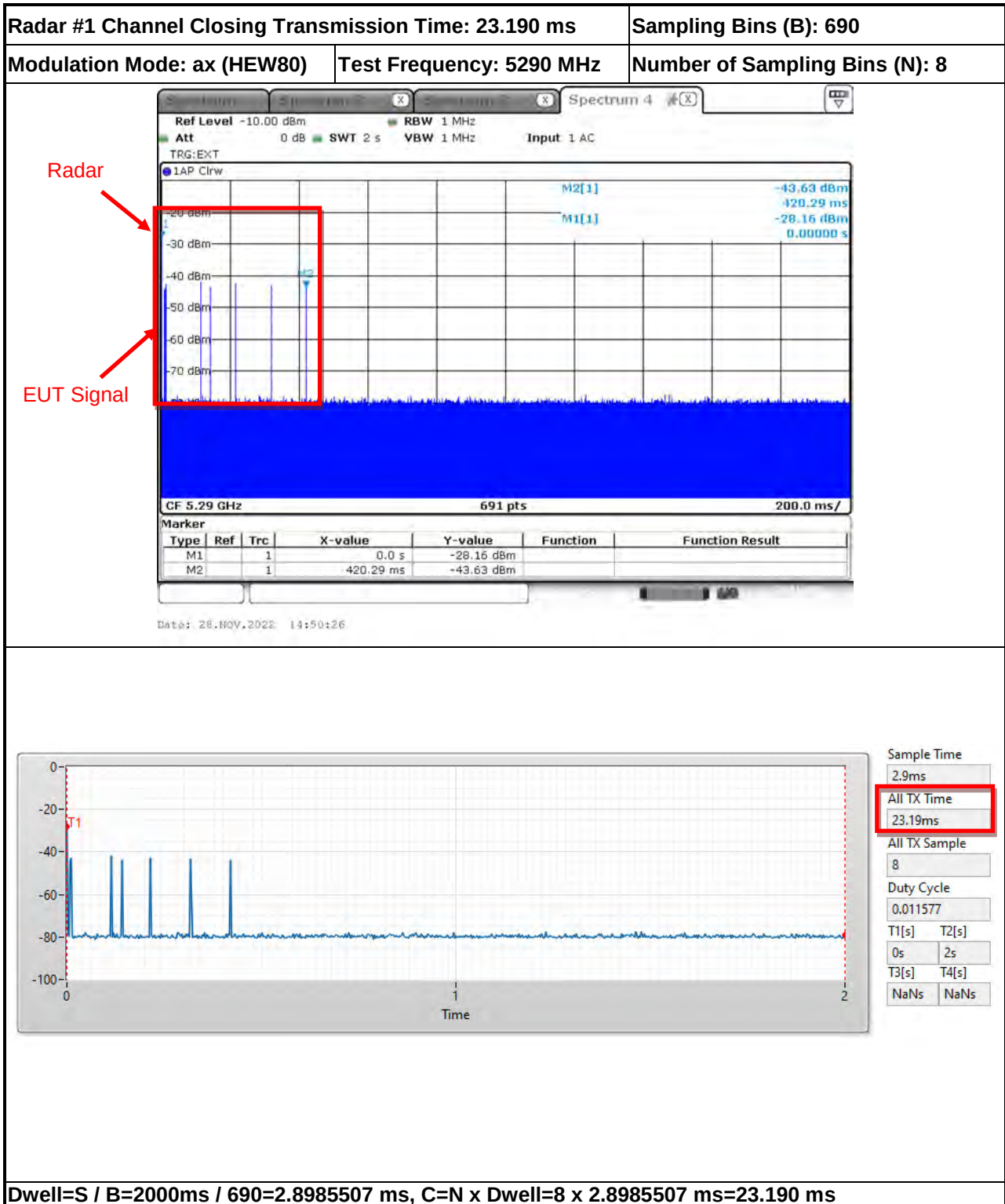


Dwell=S / B=2000ms / 690=2.8985507 ms, C=N x Dwell=12 x 2.8985507 ms=34.780 ms

Note: The first sweep point of spectrum analyzer is occupied by radar signal, therefore, the number "Sweep Point-1" should be used for Channel Closing Transmission Time calculation.

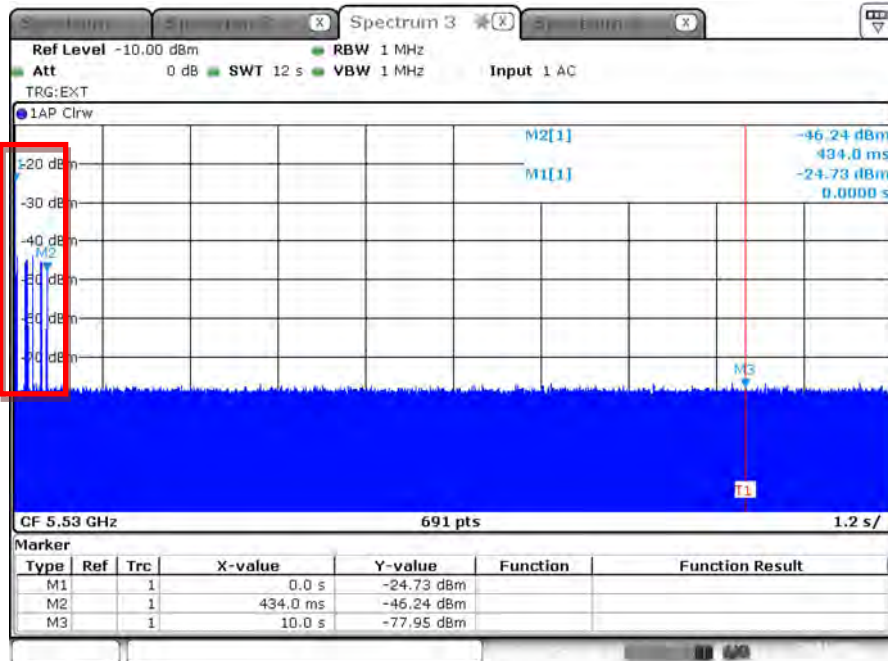
The Channel Closing Transmission Time is calculated by Closing Time = N*(Sweep time/Sweep Point-1) where N is the number of spectrum analyzer sampling bins.

W53 band (5250-5350 MHz)
Radar #1 Channel Move Time: < 10 sec
Modulation Mode: ax (HEW80)
Test Frequency: 5290 MHz
Channel Move Time: 0.503 s


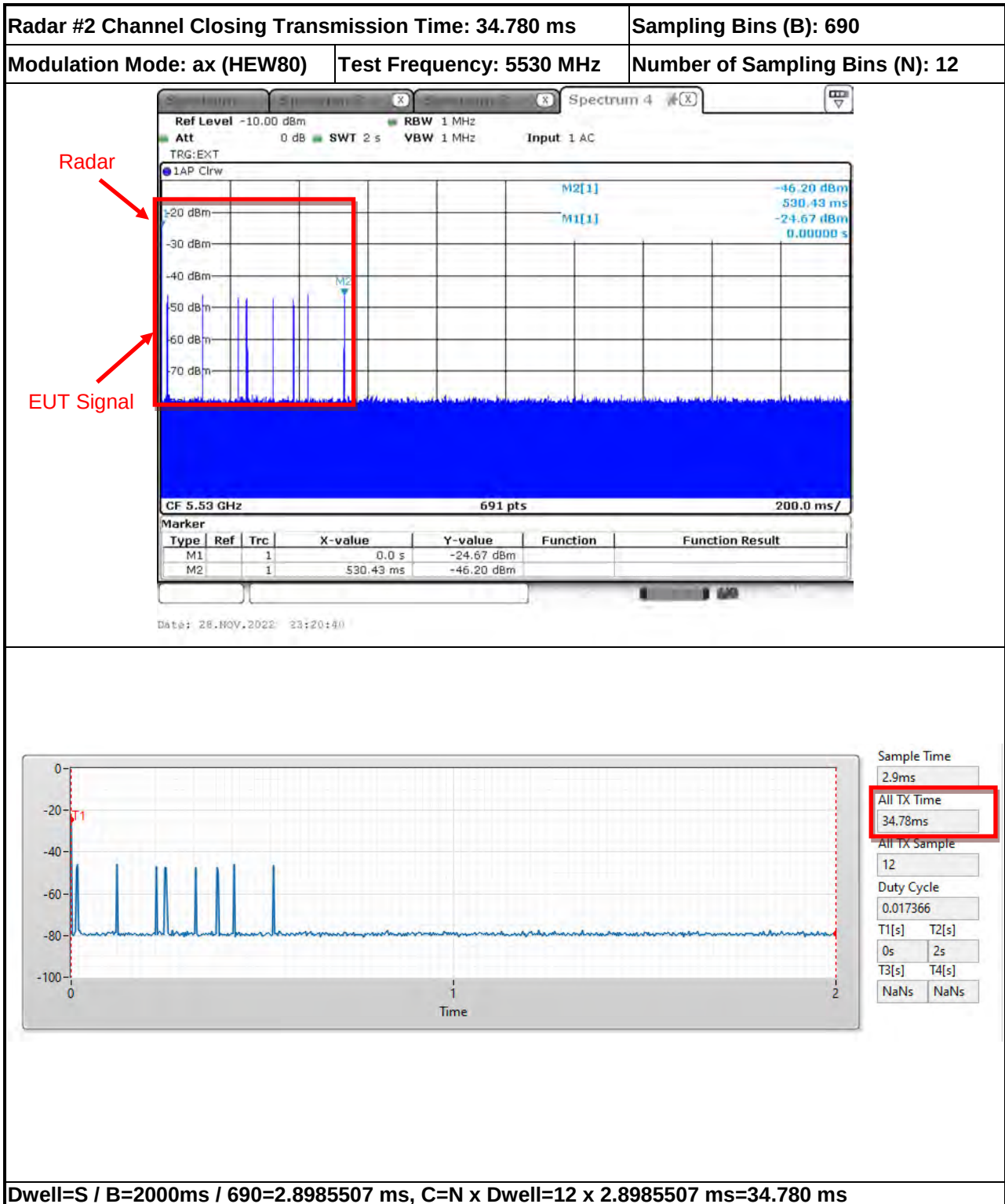


Note: The first sweep point of spectrum analyzer is occupied by radar signal, therefore, the number "Sweep Point-1" should be used for Channel Closing Transmission Time calculation.

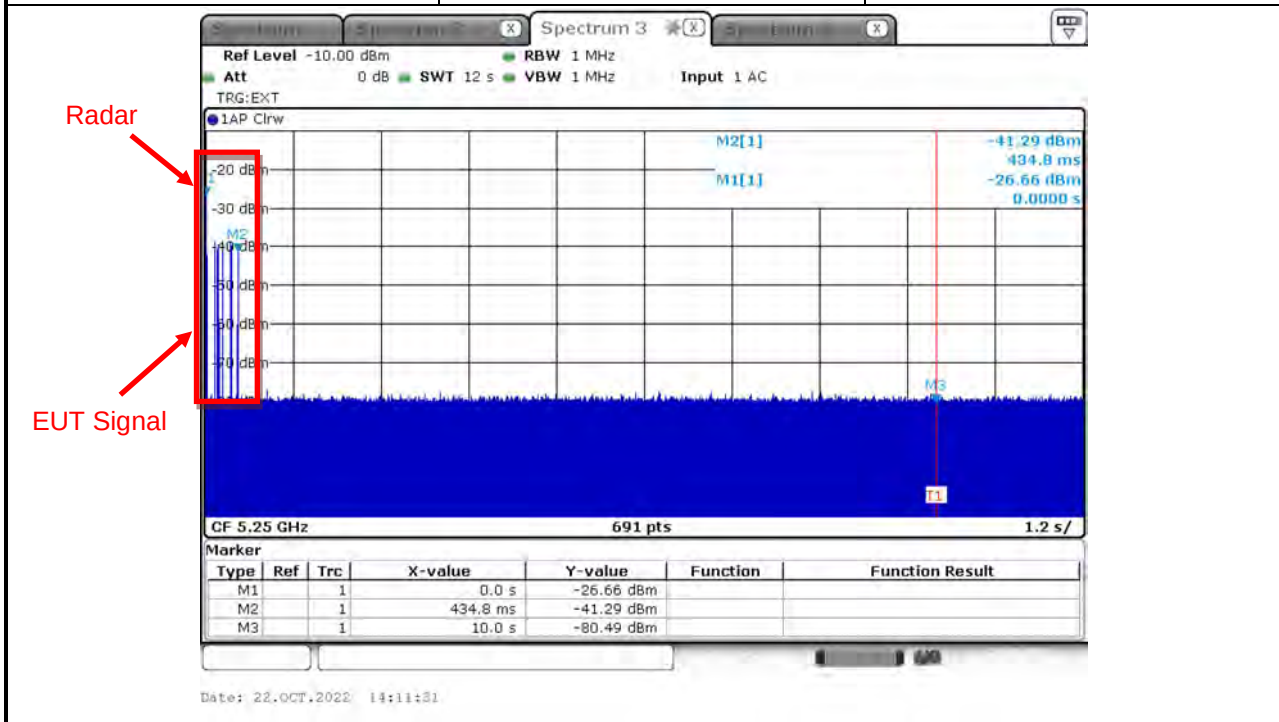
The Channel Closing Transmission Time is calculated by Closing Time = $N \times (\text{Sweep time} / \text{Sweep Point}-1)$ where N is the number of spectrum analyzer sampling bins.

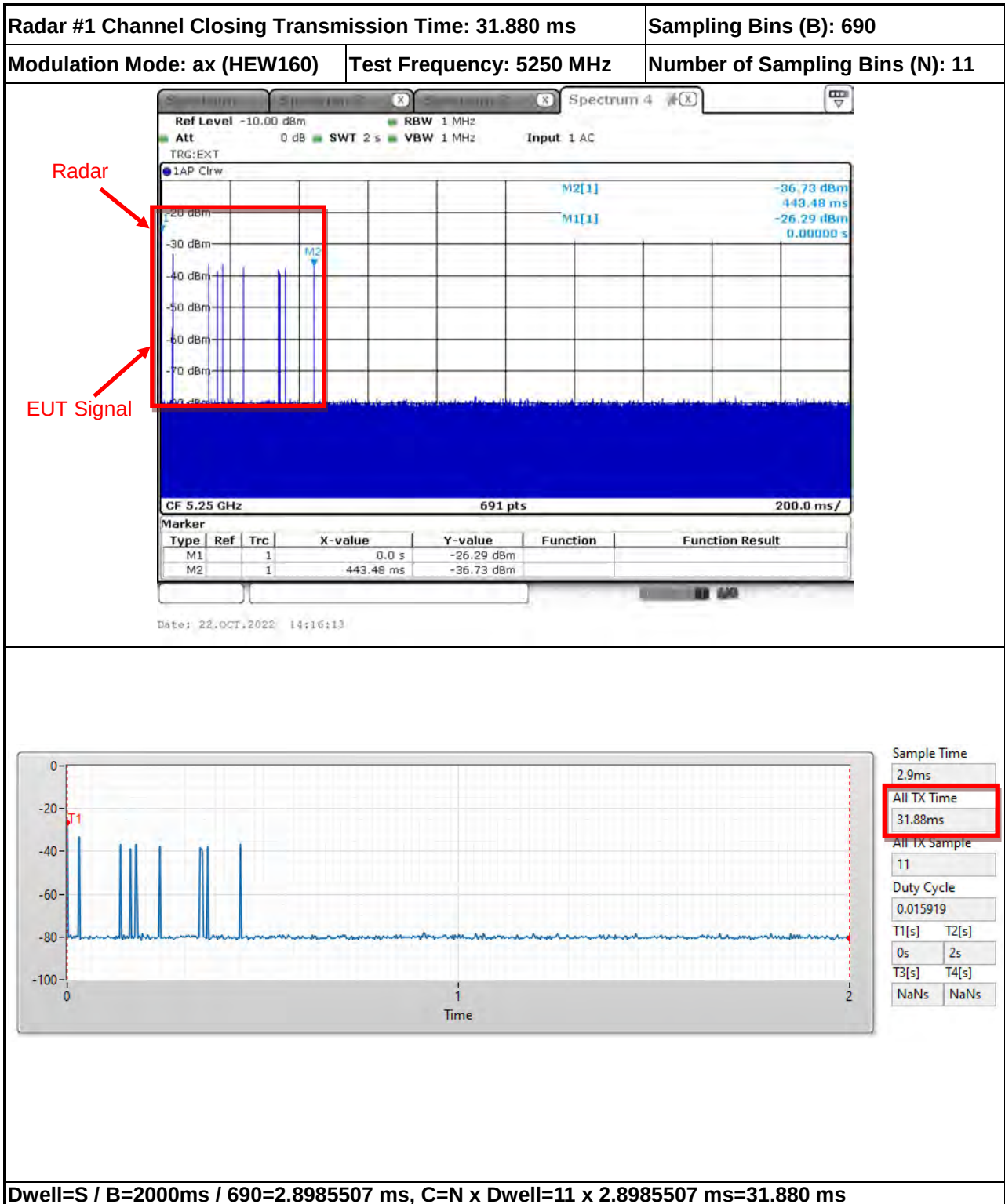
W56 band (5470-5730 MHz)
Radar #2 Channel Move Time: < 10 sec
Modulation Mode: ax (HEW80)
Test Frequency: 5530 MHz
Channel Move Time: 0.434 s
Radar
EUT Signal


Date: 28.NOV.2022 23:17:29

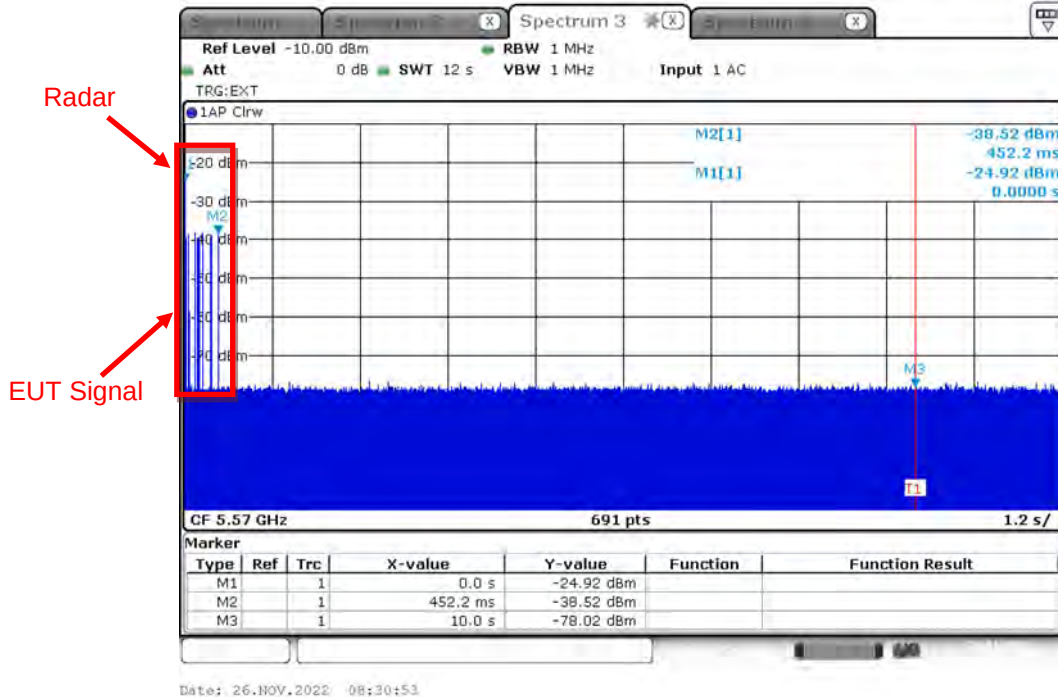


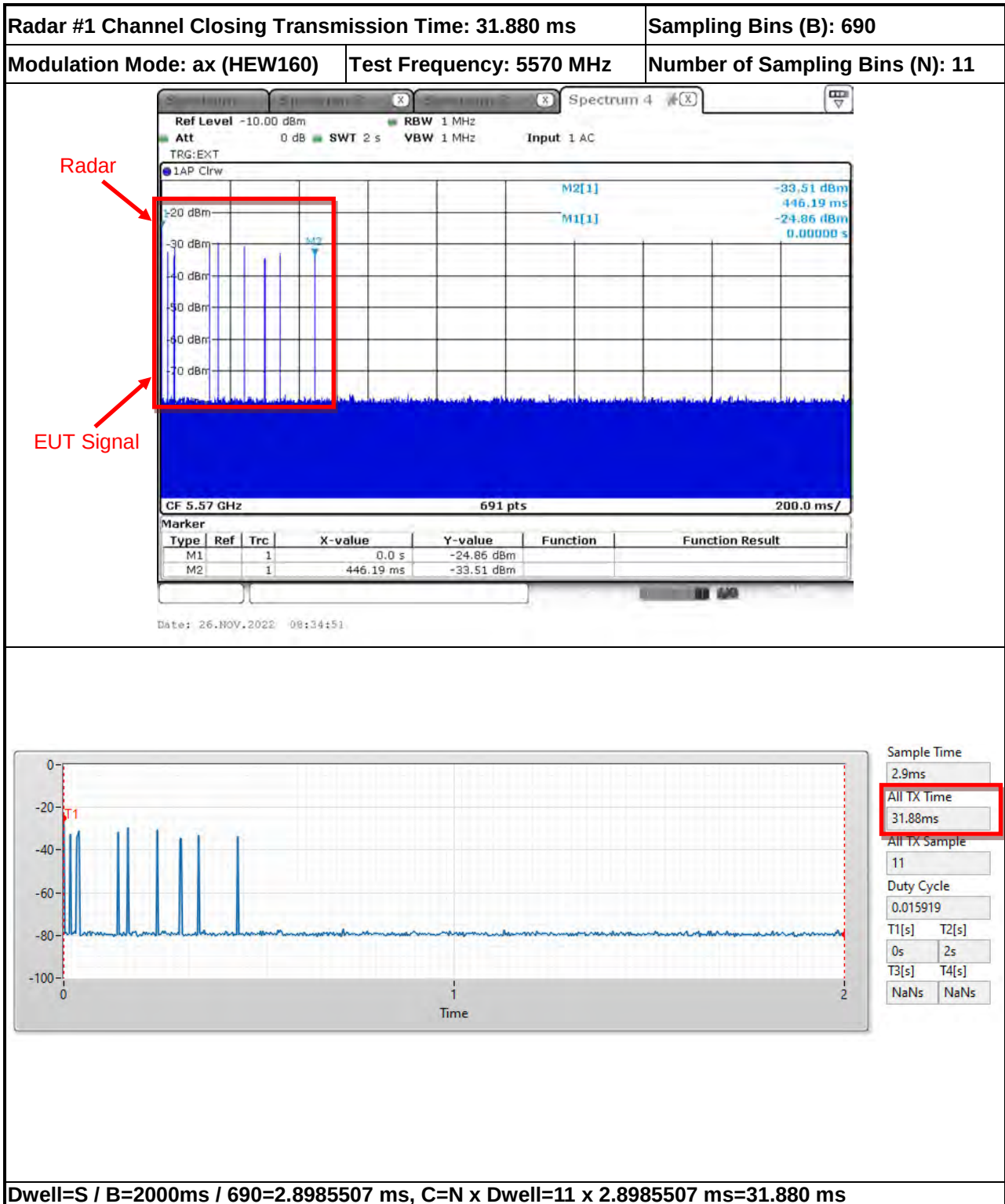
Note: The first sweep point of spectrum analyzer is occupied by radar signal, therefore, the number "Sweep Point-1" should be used for Channel Closing Transmission Time calculation.
 The Channel Closing Transmission Time is calculated by Closing Time = N*(Sweep time/Sweep Point-1)
 where N is the number of spectrum analyzer sampling bins.

W53 band (5250-5350 MHz)
Radar #1 Channel Move Time: < 10 sec
Modulation Mode: ax (HEW160)
Test Frequency: 5250 MHz
Channel Move Time: 0.434 s




Note: The first sweep point of spectrum analyzer is occupied by radar signal, therefore, the number "Sweep Point-1" should be used for Channel Closing Transmission Time calculation.
The Channel Closing Transmission Time is calculated by Closing Time = N*(Sweep time/Sweep Point-1)
where N is the number of spectrum analyzer sampling bins.

W56 band (5470-5730 MHz)
Radar #1 Channel Move Time: < 10 sec
Modulation Mode: ax (HEW160)
Test Frequency: 5570 MHz
Channel Move Time: 0.452 s




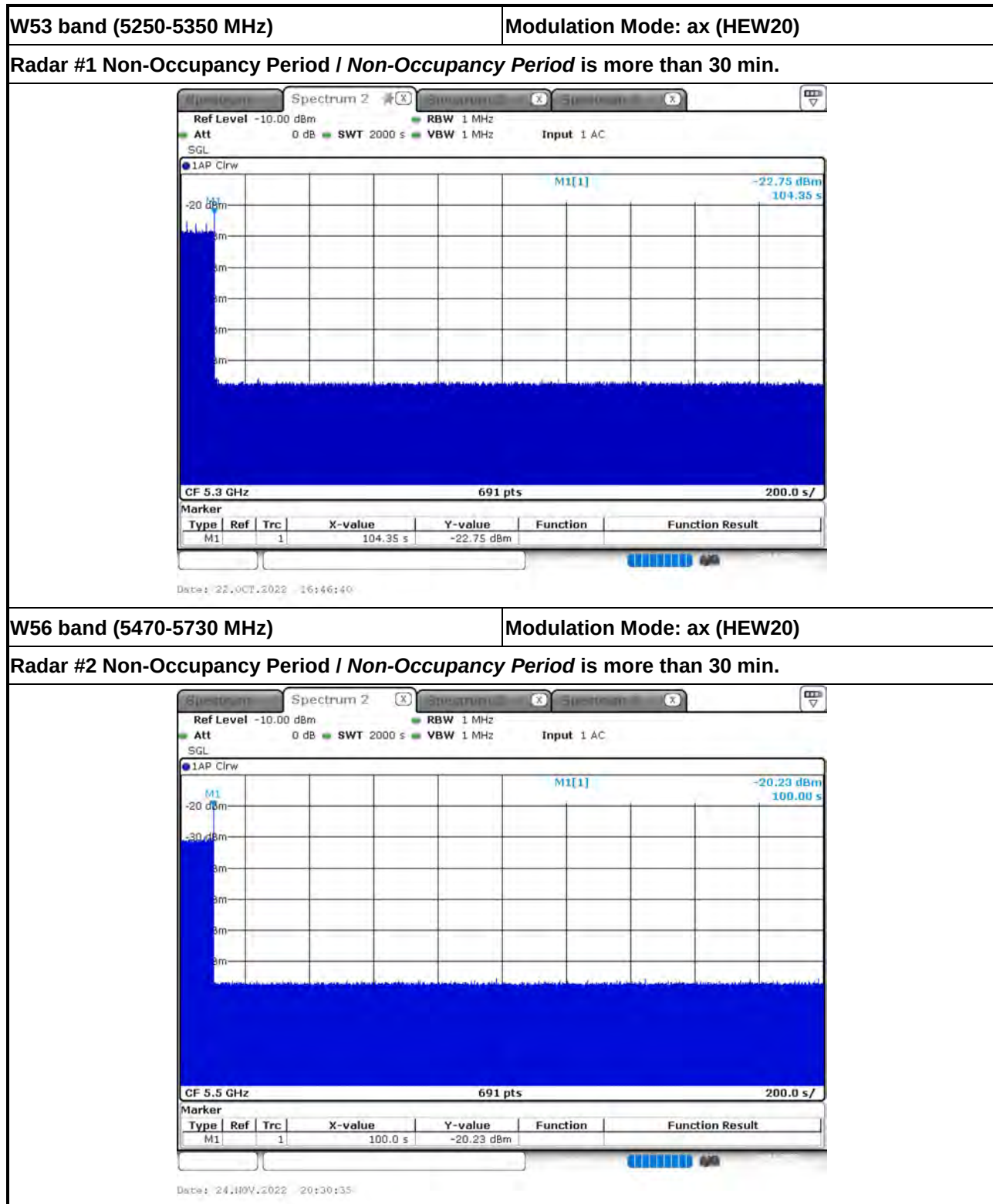
Note: The first sweep point of spectrum analyzer is occupied by radar signal, therefore, the number "Sweep Point-1" should be used for Channel Closing Transmission Time calculation.
The Channel Closing Transmission Time is calculated by Closing Time = N*(Sweep time/Sweep Point-1)
where N is the number of spectrum analyzer sampling bins.

3.4.6 Test Result of Non-Occupancy Period

Non-Occupancy Period Result			
Detection Threshold Level (dBm)			-58.89
Modulation Mode	Freq. (MHz)	Radar Test Signal	Non-Occupancy Period (min)
ax (HEW20)	5300	1 - Fixed	>30
ax (HEW20)	5500	2 - Fixed	>30
ax (HEW40)	5310	1 - Fixed	>30
ax (HEW40)	5510	2 - Fixed	>30
ax (HEW80)	5290	1 - Fixed	>30
ax (HEW80)	5530	2 - Fixed	>30
ax (HEW160)	5250	1 - Fixed	>30
ax (HEW160)	5570	2 - Fixed	>30
Limit			30 min
Result			PASS



3.4.7 Non-Occupancy Period Plots



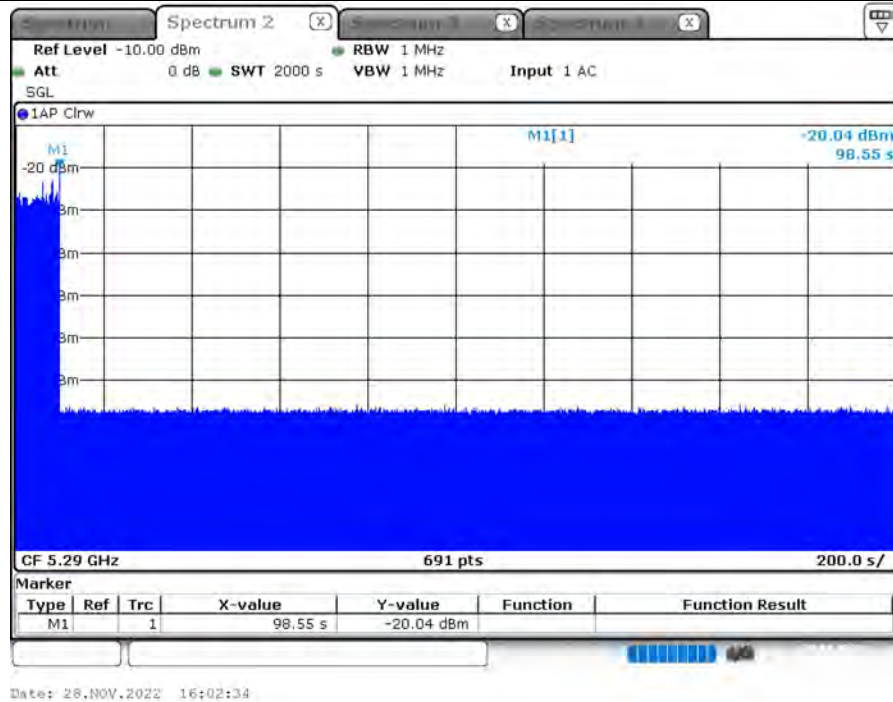




W53 band (5250-5350 MHz)

Modulation Mode: ax (HEW80)

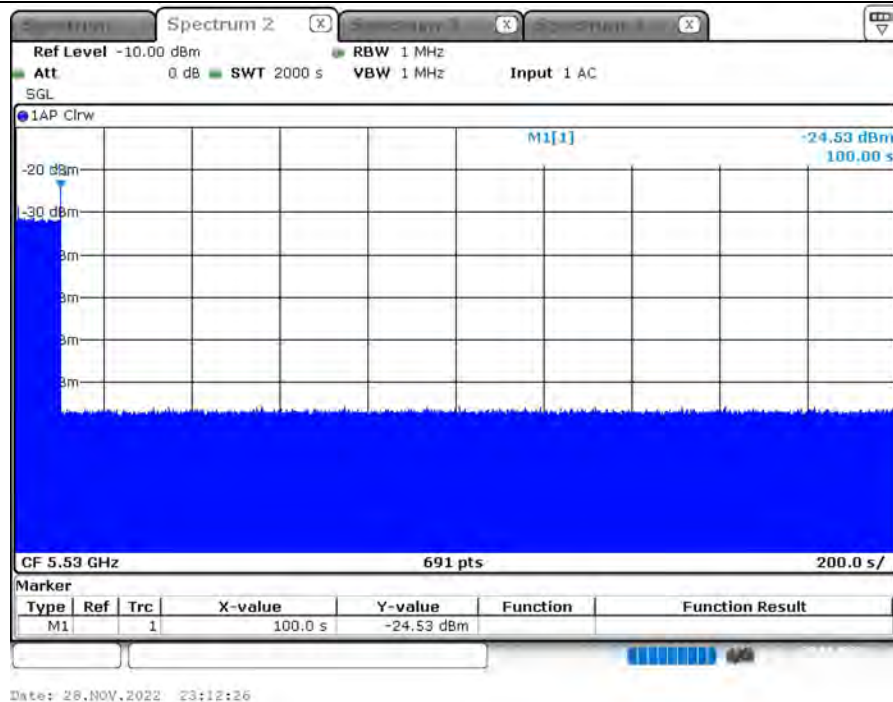
Radar #1 Non-Occupancy Period / Non-Occupancy Period is more than 30 min.



W56 band (5470-5730 MHz)

Modulation Mode: ax (HEW80)

Radar #2 Non-Occupancy Period / Non-Occupancy Period is more than 30 min.

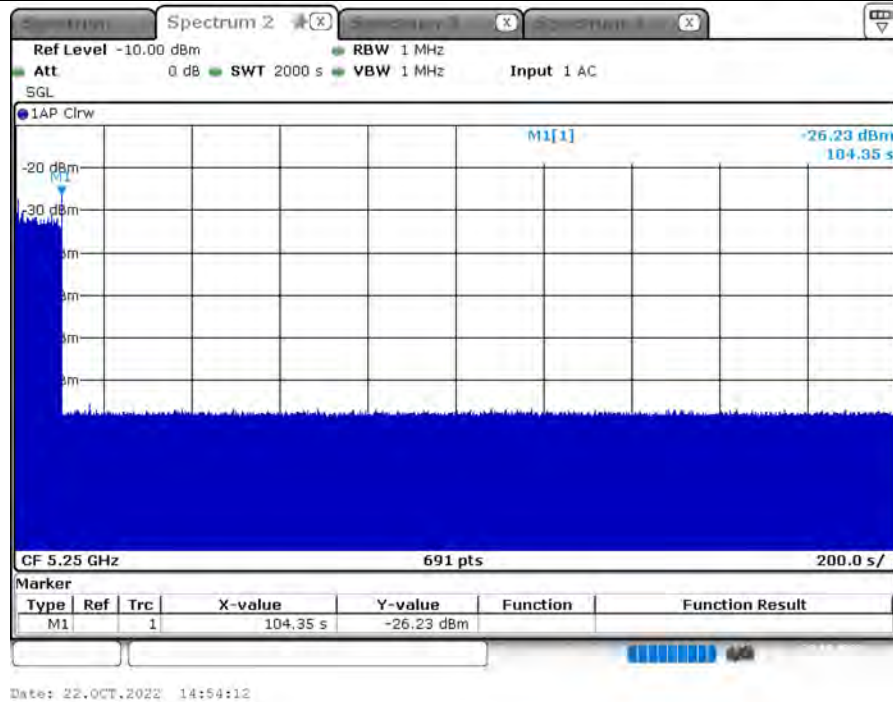




W53 band (5250-5350 MHz)

Modulation Mode: ax (HEW160)

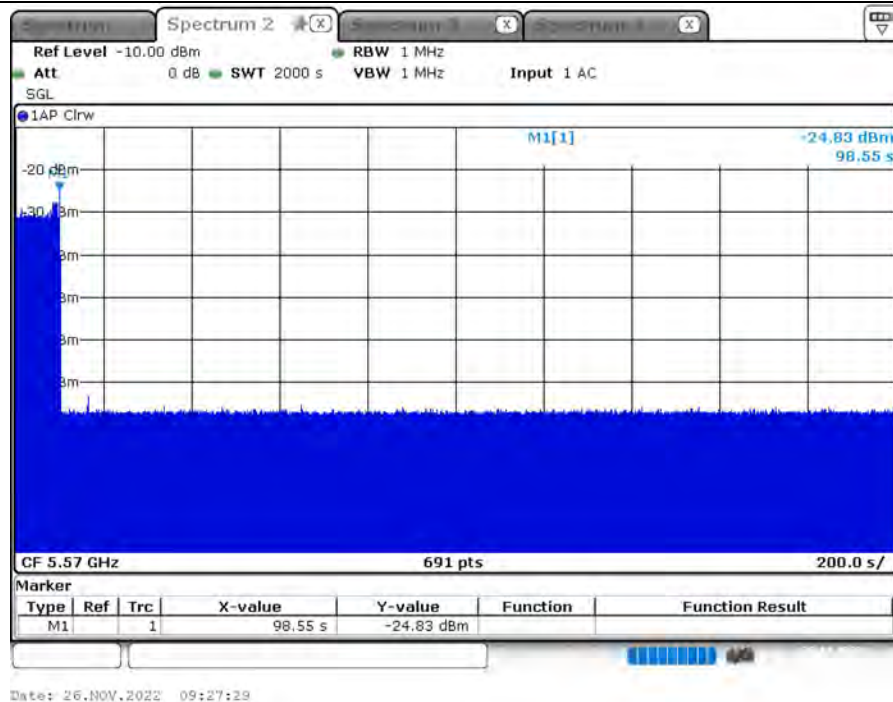
Radar #1 Non-Occupancy Period / Non-Occupancy Period is more than 30 min.



W56 band (5470-5730 MHz)

Modulation Mode: ax (HEW160)

Radar #2 Non-Occupancy Period / Non-Occupancy Period is more than 30 min.



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Calibration Method	Calibration Agent Name	Remark
Spectrum Analyzer	R&S	FSV40	101025	9kHz ~ 40GHz	Nov. 06, 2021	Nov. 05, 2022	c)	C	Conducted (DF02-CB)
Spectrum Analyzer	R&S	FSV40	101025	9kHz ~ 40GHz	Oct. 28, 2022	Oct. 27, 2023	c)	C	Conducted (DF02-CB)
Vector Signal generator	R&S	SMU200A	105352	25MHz-6GHz	Mar. 11, 2022	Mar. 10, 2023	c)	C	Conducted (DF02-CB)
RF Power Divider	STI	2 Way	DV-2way -07	1GHz ~ 8GHz	Oct. 04, 2022	Oct. 03, 2023	d)	B	Conducted (DF02-CB)
RF Power Divider	STI	2 Way	DV-2way -08	1GHz ~ 8GHz	Oct. 04, 2022	Oct. 03, 2023	d)	B	Conducted (DF02-CB)
RF Power Divider	Woken	4 Way	DFS02-DV-02	1GHz ~ 6GHz	Oct. 04, 2022	Oct. 03, 2023	d)	B	Conducted (DF02-CB)
RF Power Divider	Woken	4 Way	DFS02-DV-04	1GHz ~ 6GHz	Oct. 04, 2022	Oct. 03, 2023	d)	B	Conducted (DF02-CB)
RF Power Divider	Woken	4 Way	DFS02-DV-05	1GHz ~ 6GHz	Oct. 04, 2022	Oct. 03, 2023	d)	B	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-60	1 GHz ~ 18 GHz	Oct. 03, 2022	Oct. 02, 2023	d)	B	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-61	1 GHz ~ 18 GHz	Oct. 03, 2022	Oct. 02, 2023	d)	B	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-62	1 GHz ~ 18 GHz	Oct. 03, 2022	Oct. 02, 2023	d)	B	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-63	1 GHz ~ 18 GHz	Oct. 03, 2022	Oct. 02, 2023	d)	B	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-66	1 GHz ~ 18 GHz	Oct. 03, 2022	Oct. 02, 2023	d)	B	Conducted (DF02-CB)

Note:

- Calibration Interval of instruments listed above is one year.
- N.C.R. means Non-Calibration required.
- Calibration Agent Name: Describe calibration agent name with its country name, and symbols in "Calibration Agent Name" shows the agent names as follows,
A: Electronics Testing Center, Taiwan.
B: Sporton International Inc., Taiwan.
C: ROHDE&SCHWARZ, Taiwan.
- Calibration Method
a) : Calibration conducted by the National Institute of Information and Communications Technology or a designated calibration agency under Article 102-18 paragraph (1)
b) : Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992)
c) : Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)
d) : Calibration conducted by using other equipment that listed above from a) to c)

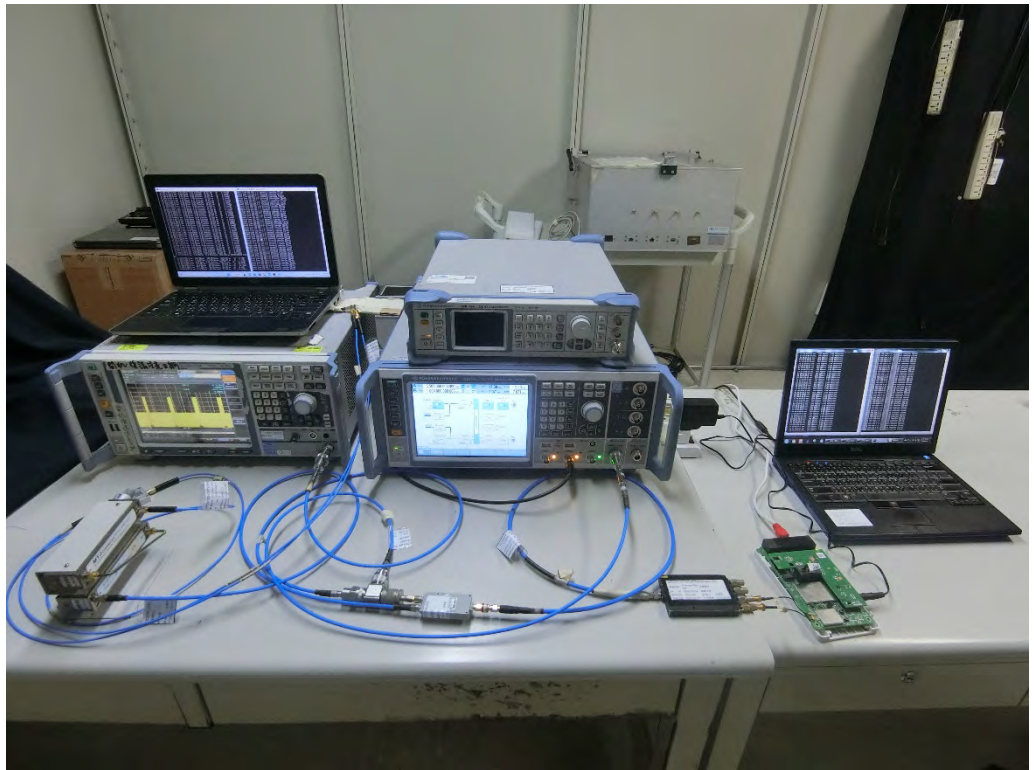


5 Measurement Uncertainty

Test Items	Uncertainty	Remark
Conducted Emission	3.2 dB	Confidence levels of 95%

1. Photographs of Dynamic Frequency Selection Test Configuration

FRONT VIEW



CLOSE-UP VIEW



————THE END————