

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT



EUT Description: VR Headset
Applicant: Valve Corporation
10400 NE 4th Street, Suite 1400, Bellevue, WA 98004, USA
Manufacturer: Valve Corporation
10400 NE 4th Street, Suite 1400, Bellevue, WA 98004, USA
Brand Name: VALVE
Model No. 1015
Report Number: TERF2504001432E2
FCC ID 2AES4-1015
Date of EUT Received: April 18, 2025
Date of Test: N/A, the test results are fully leveraged from test report number TERF2504001441E2, for more details please refer to section 2 in this report.
Issue Date: April 1, 2026

Approved By

Jay Lin

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 and the energy emitted by the sample EUT comply with FCC rule part §15.407.

The results of this report relate only to the sample identified in this report.

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Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
TERF2504001432E2	00	Original	April 1, 2026	Karen Huang	

Note:

- 1、The remark "*" indicates modification of the report upon requests from certification body.

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1 GENERAL INFORMATION

1.1 Equipment Under Test (EUT)

EUT Description	VR Headset
Brand Name	VALVE
Model No.	1015
Power Supply	7.74 Vdc
Test Software (Name/Version)	Dynamic Frequency Selection Test Version 24.11.13

1.2 DFS Firmware version

```
C:\Users\user\Desktop\A_D_B>adb devices
List of devices attached
A00      device

C:\Users\user\Desktop\A_D_B>adb version
Android Debug Bridge version 1.0.41
Version 34.0.1-9680074
Installed as C:\Users\user\Desktop\A_D_B\adb.exe
```

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1.3 RF Specification

Wi-Fi	Frequency Range	Channels	Modulation Technology
802.11a/ 802.11n_HT20/ 802.11ac_VHT20/ 802.11ax_HE20/ 802.11be_EHT20	5180~5240	4	OFDMA
	5260~5320	4	OFDM
	5500~5720	12	OFDMA
	5745~5825	5	OFDMA
	5845~5885	3	OFDMA
802.11n_HT40/ 802.11ac_VHT40/ 802.11ax_HE40/ 802.11be_EHT40	5190~5230	2	OFDM
	5270~5310	2	OFDM
	5510~5710	6	OFDMA
	5755~5795	2	OFDM
	5835~5875	2	OFDM
802.11ac_VHT80/ 802.11ax_HE80/ 802.11be_EHT80	5210	1	OFDM
	5290	1	OFDM
	5530~5690	3	OFDMA
	5775	1	OFDM
	5855	1	OFDM
802.11ac_VHT160/ 802.11ax_HE160/ 802.11be_EHT160	5250	1	OFDM
	5570	1	OFDMA
	5815	1	OFDM

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2 SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result	Note
§15.407(h) FCC KDB 905462 D02	TPC and DFS Measure- ment	Compliant	

Note

1. N/S Indicates whether item(s) being newly tested [N] or spot checked [S].
2. Items other than newly tested [N] are leveraged from test report TERF2504001441E2.

2.1 Test Methodology of Applied Standards

1. FCC Part 15, Subpart E §15.407
2. FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02
3. FCC KDB 905462 D03 UNII Clients Without Radar Detection New Rules v01r02

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2.2 Measurement Uncertainty

Test Items	Uncertainty
TPC and DFS Measurement	+/- 1.62 Hz
Temperature	+/- 0.60 °C
Humidity	+/- 3.00 %
DC / AC Power Source	+/- 1.00 %

Note

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
2. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

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2.3 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designation number / Registration Number	IC CAB identifier / Company Number
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803	SAC 1 / SAC 2 / SAC 3 Conduction 1 / Conducted 1 Conducted 2 / Conducted 3 Conducted 4 / Conducted 5 Conducted 6	TW0027 / 891563	TW3702 / 4620A
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	No.2, Keji 1st Rd, Guishan District, Taoyuan City, Taiwan 333	SAC C / SAC D / SAC G Conduction C/ Conducted A Conducted B / Conducted C Conducted D / Conducted E Conducted F / Conducted G	TW0028 / 200037	TW3702 / 4620E

Measurement	Test Site Name	Test Engineer	EUT S/N	Test Environment	Test Date
DFS	Conducted A	Ari	FPGAC5040001E	27.1°C / 94%	2025/07/18 ~ 2025/07/18

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3 CONTROL UNIT(S) AND PERIPHERAL(S)

Conducted Emission Test Site: Conducted A					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL. (mm/dd/yyyy)	CAL DUE. (mm/dd/yyyy)
AP	ASUS	BQ16Pro	S6IG6XK01679894 (FCC ID :MSQ- RTBE6X00)	N/A	N/A
Notebook	HP	HSN-Q35C-4	P0003870	N/A	N/A
Notebook	Lenovo	T490	P0002523	N/A	N/A

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4 TEST INSTRUMENT

Conducted Emission Test Site: Conducted A					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL. (mm/dd/yyyy)	CAL DUE. (mm/dd/yyyy)
Attenuator	KEYSIGHT	11716C	RF44	11/14/2024	11/13/2025
EMI Test Receiver	Anritsu	N9038A	MY52260216	11/20/2024	11/19/2025
Power Divider	Titan	T0510E4W118Q	RF67	11/14/2024	11/13/2025
Splitter	Woken	DOM35LW1A2	RF57	11/14/2024	11/13/2025
Splitter	RF-LAMBDA	RFLT2W1G18G	RF52	11/14/2024	11/13/2025
Splitter	RF-LAMBDA	RFLT2W1G18G	RF53	11/14/2024	11/13/2025
Test Software	SGS Taiwan	Dynamic Frequency Selection Test	Ver. 24.11.13	N.C.R	N.C.R

NOTE: N.C.R refers to Not Calibrated Required.

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5 REGULATORY REQUIREMENTS

5.1 Transmit Power Control (TPC)

U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

5.2 Dynamic Frequency Selection (DFS)

Radar Detection Function of Dynamic Frequency Selection (DFS). U-NII devices operating with any part of its 26 dB emission bandwidth in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems. Operators shall only use equipment with a DFS mechanism that is turned on when operating in these bands. The minimum DFS detection threshold for devices with a maximum e.i.r.p. of 200 mW to 1 W is -64 dBm. For devices that operate with less than 200 mW e.i.r.p. and a power spectral density of less than 10 dBm in a 1 MHz band, the minimum detection threshold is -62 dBm. The detection threshold is the received power averaged over 1 microsecond referenced to a 0 dBi antenna. For the initial channel setting, the manufacturers shall be permitted to provide for either random channel selection or manual channel selection.

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

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- (i) Operational Modes. The DFS requirement applies to the following operational modes:
 - (a) The requirement for channel availability check time applies in the master operational mode.
 - (b) The requirement for channel move time applies in both the master and slave operational modes.
- (ii) Channel Availability Check Time. A U-NII device shall check if there is a radar system already operating on the channel before it can initiate a transmission on a channel and when it has to move to a new channel. The U-NII device may start using the channel if no radar signal with a power level greater than the interference threshold values, is detected within 60 seconds.
- (iii) Channel Move Time. After a radar's presence is detected, all transmissions shall cease on the operating channel within 10 seconds. Transmissions during this period shall consist of normal traffic for a maximum of 200 ms after detection of the radar signal. In addition, intermittent management and control signals can be sent during the remaining time to facilitate vacating the operating channel.

Non-occupancy Period. A channel that has been flagged as containing a radar system, either by a channel availability check or in-service monitoring, is subject to a non-occupancy period of at least 30 minutes. The non-occupancy period starts at the time when the radar system is detected.

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5.3 Applicability of DFS requirements during normal operation

	☐	☒	☐
Requirement	Master	Client without radar detection	Client with radar detection
Non-Occupancy Period	✓	✓(note)	✓
DFS Detection Threshold	✓	Not required	✓
Channel Availability Check Time	✓	Not required	Not required
U-NII Detection Bandwidth	✓	Not required	✓

Note: Regarding KDB 905462 D03 Client Without Radar Detection New Rules v01r02 section(b)(5/6), If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear. An analyzer plot that contains a single 30-minute sweep on the original channel.

	☐	☒
Requirement	Master or Client with radar detection	Client without radar detection
DFS Detection Threshold	✓	Not required
Channel Closing Transmission Time	✓	✓
Channel Move Time	✓	✓
U-NII Detection Bandwidth	✓	Not required

	☐	☒
Additional requirements for devices with multiple bandwidth modes	Master or Client with radar detection	Client without radar detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.

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Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

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5.4 Radar Test Waveforms

5.4.1 Short Pulse Radar

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A	Roundup $\left\{ \begin{array}{l} \left(\frac{1}{360} \right) \cdot \\ \left(\frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \end{array} \right\}$	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

5.4.2 Long Pulse Radar

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

5.4.3 Frequency Hopping Radar

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

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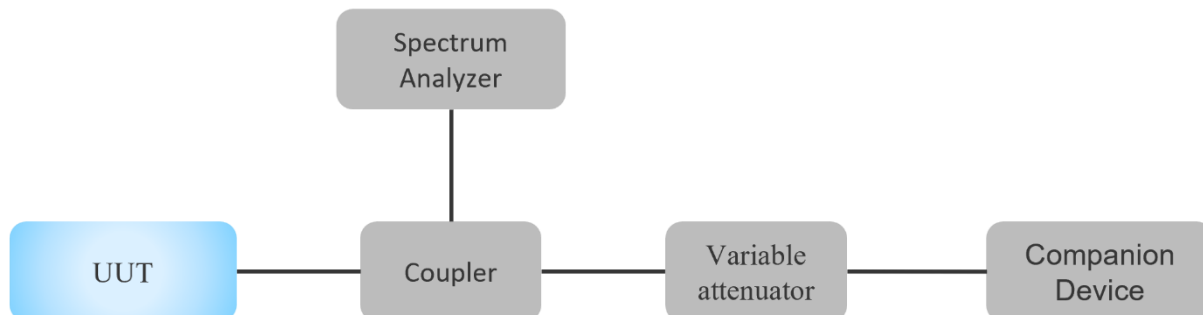
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6 TEST CONFIGURATION

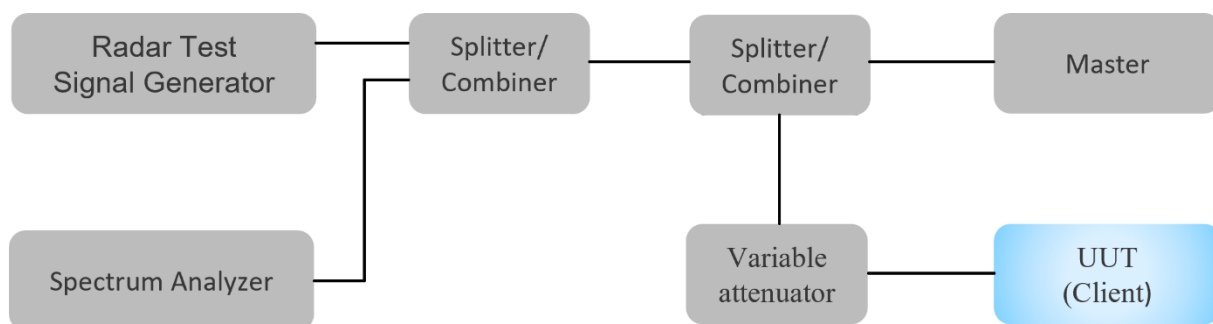
6.1 Transmit Power Control (TPC)



- 1 Configure EUT and companion device for peer-to-peer communication
- 2 Set variable attenuator to a high RSSI level to enable TPC function of the device (noise free spectral environment)
- 3 Establish a link and start communication between EUT and companion device
- 4 Capture power from spectrum analyzer/power meter
- 5 Set variable attenuator to a low RSSI level to disable TPC function of the device (noisy spectral environment)
- 6 Capture power from spectrum analyzer/power meter
- 7 Compare the highest power from the step 4 to the highest power from the step 6 and determine the delta. For MIMO operations use the sum of the highest power from each individual antenna.

6.2 Dynamic Frequency Selection (DFS)

Setup for Client with injection at the Master



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6.3 EUT Exercise

EUT operates over the 5250-5350MHz and 5470-5725MHz ranges and EUT is a slave device (client equipment) w/o radar detection and DFS capability.

WLAN traffic is generated by streaming the mpeg file from the master to slave in full monitor video mode using the media player or transmit the data with the minimum channel loading of approximately 17%.

While calibrate the path on antenna port of DFS test equipment (master), measurements equipments (spectrum) is ensured to be 50 Ohms, and therefore verification on antenna gain measurement can be ignored.

The EUT uses one transmitter/receiver chains and one receive only chain, each connected to an antenna to perform radiated tests.

The Slave device associated with the EUT during these tests does not have radar detection capability.

Message or files that is used for communication between Master and Client:

IP based system:

For the required channel loading, send packets via software to reach the applicable payload via the UE to the slave.

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7 TEST RESULTS

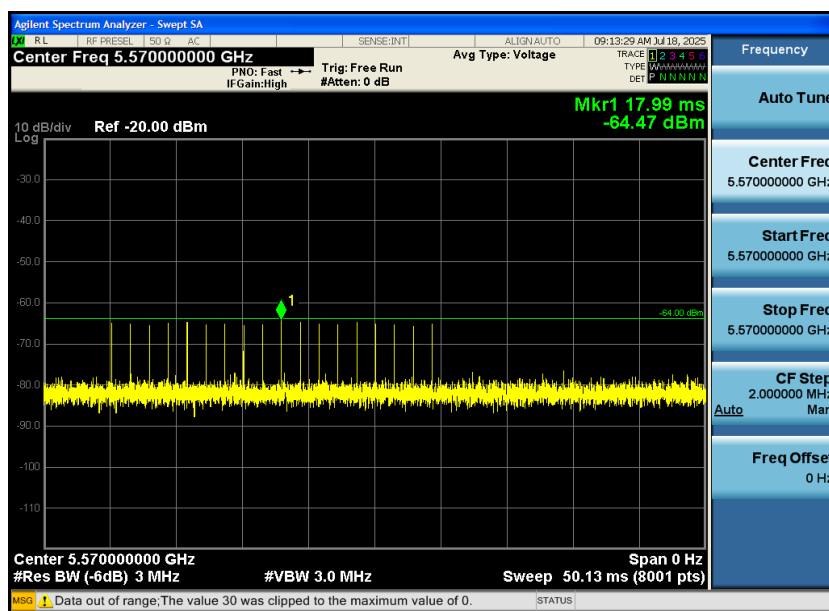
7.1 Transmitter Power Control (TPC)

N/A, TPC is not required.

7.2 Radar waveforms

Radar Type 0

EHT160_5570MHz



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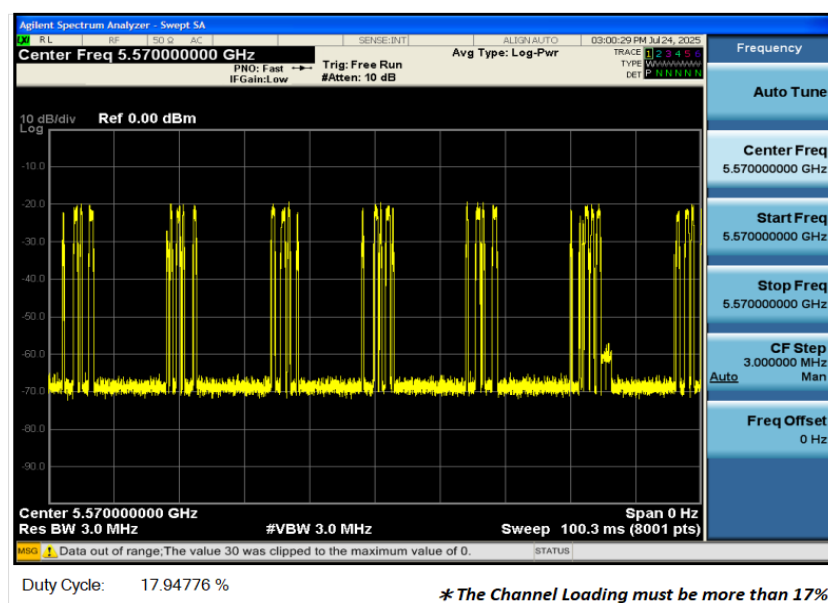
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7.3 Duty Cycle

EHT160_5570MHz



7.4 Channel closing transmission and Move time

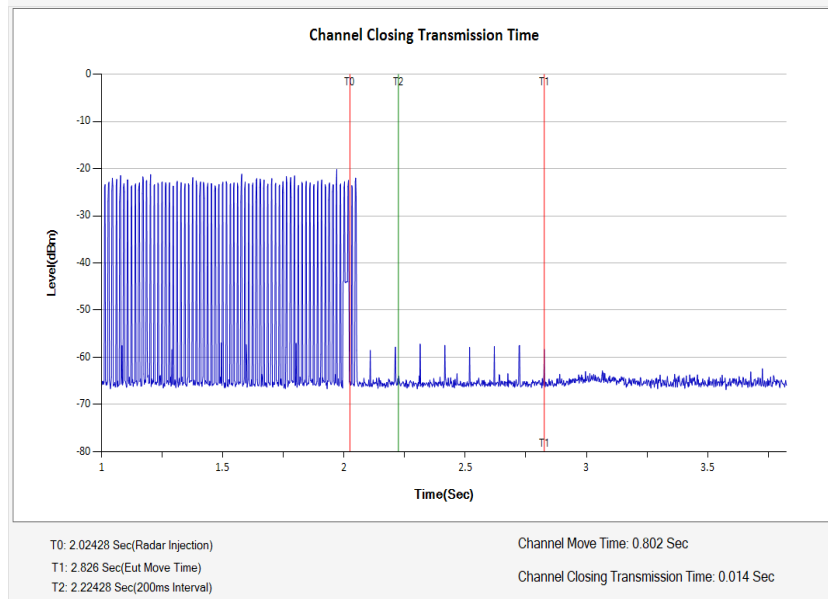
Modulation Mode	Freq. (MHz)	Radar Test Signal	Channel Closing Transmission Time (ms)	Channel Move Time (s)	Detection Threshold Level (dBm)	Result
EHT160	5570	Type 0	14	0.812	-64	Complied
Limit			60 ms	10 s		

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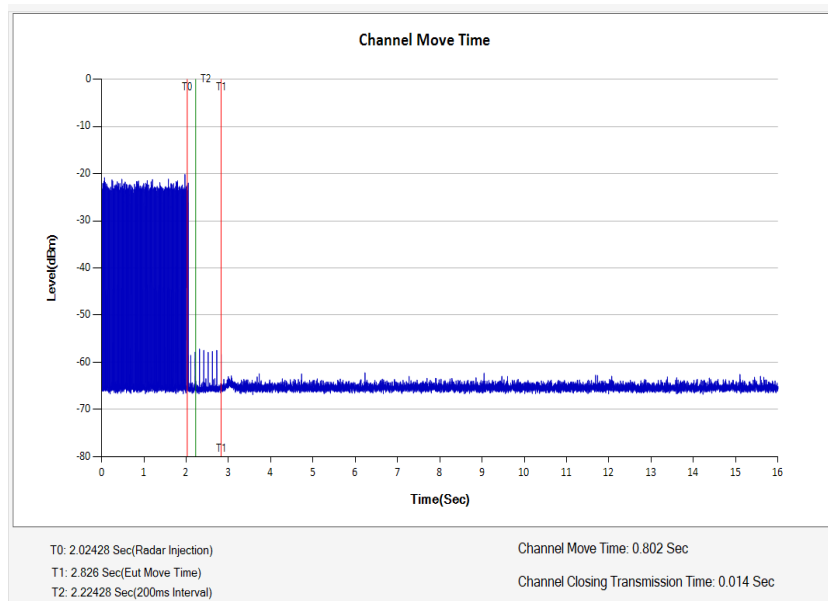
Channel Move and Closing Transmission Time-1

EHT160_5570MHz



Channel Move and Closing Transmission Time-2

EHT160_5570MHz



Verdict: Note: narrowing the sweep time as the good engineering process for the verification of transmission closing in 200ms

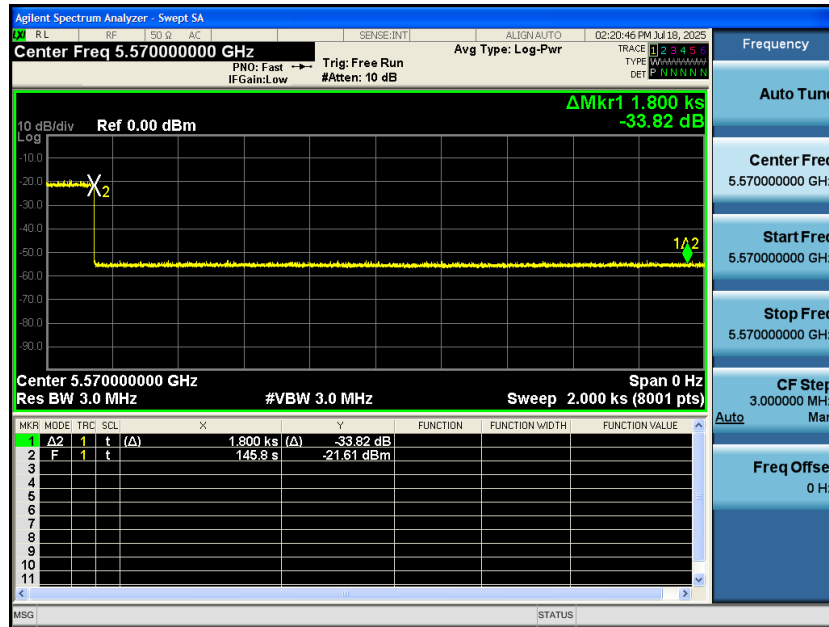
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7.5 Non-occupancy Period (without radar detection)

EHT160_5570MHz



Verdict: To verify whether channel is unavailable to be operated in 30 minutes.

$1.8\text{ks} = 1800\text{s} = 1800\text{ s/min} / 60 = 30\text{minute}$

~ End of Report ~

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