

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT



EUT Description AI Hub
Applicant: FLH Co., LTD.
9F, No.35, Ln.11, Guangfu N. Rd., Songshan Dist., Taipei City
105410, Taiwan
Manufacturer: HSUN WEALTH TECHNOLOGY CO., LTD.
11F., No. 49, Sec. 1, Qingfeng Rd., Qingpu Vil., Zhongli Dist.,
Taoyuan City 320016, Taiwan (R.O.C.)
Brand Name: Ferqo
Model No.: MG-1
Family Model No.: DSC-1AA53
Model Difference: Refer to Section 1.3
Report Number: TERF2603000847E2
FCC ID 2BXXB8MG1
Date of EUT Received: February 25, 2026
Date of Test: April 20, 2026 ~ April 22, 2026
Issue Date: May 22, 2026

Approved By

Aken Huang

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
TERF2603000847E2	00	Original	May 22, 2026	Mini Yeh	

Note:

- 1、The remark "*" indicates modification of the report upon requests from certification body.
- 2、Variant information of model numbers is provided by the applicant, test results of this report are applicable to the sample EUT(s) received.
And are assessed as electrically identical in RF characteristics, therefore, no further assessment required for the variant(s).

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1 GENERAL INFORMATION

1.1 Equipment Under Test (EUT)

EUT Description	AI Hub
Brand Name:	Ferqo
Model No.:	MG-1
Family Model No.:	DSC-1AA53
Model Difference:	Refer to Section 1.3
Hardware Version:	v1.0
Firmware Version:	v1.0
EUT Series No.:	N/A
Power Supply:	5 Vdc
Test Software (Name/Version)	Tera Term Version 4.68

1.2 DFS Firmware version:

```
root@genio-350-evk:~# lsusb
Bus 001 Device 004: ID 0e8d:7663 MediaTek Inc. Wireless Device
Bus 001 Device 003: ID 0fe6:9900 ICS Advent USB 10/100 LAN
Bus 001 Device 002: ID 3431:6243 Corechips USB2.0 HUB
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
root@genio-350-evk:~# ls /lib/firmware | grep -i 7663
EEPROM_MT7663.bin
HIFI_RAM_CODE_MT7663.bin
mt7663_patch_e2_hdr.bin
root@genio-350-evk:~#
```

1.3 Model Difference

Model No.	Brand Name	Marketing Name	Sales Country
MG-1	Ferqo	Ferqo AI Hub	Taiwan
DSC-1AA53	Daikin	AI NILM Smart Hub	Singapore

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1.4 Modulation & Data Rate

Modulation type:	64QAM, 16QAM, QPSK, BPSK for OFDM in 802.11a, 11n
	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM in 802.11ac
Transition Rate:	802.11 a: 6 - 54 Mbps
	802.11 n_HT20: up to 144.4 Mbps
	802.11 n_HT40: up to 300 Mbps
	802.11 ac_VHT20: up to 173.4 Mbps
	802.11 ac_VHT40: up to 400 Mbps
	802.11 ac_VHT80: up to 866.6 Mbps

1.5 Antenna Designation

Ant. Type	Brand	Model No.	Freq (MHz) / Peak Gain (dBi)
PIFA	DESHIQIN	2.4G/5.8G-WIFI	5150~5250: -2.283
			5250~5350: -2.64
			5470~5725: -2.23
			5725~5850: -2.35
PIFA	DESHIQIN	2.4G/5.8G-WIFI	5150~5250: -2.283
			5250~5350: -2.64
			5470~5725: -2.23
			5725~5850: -2.35

Note:

1. Pre-scanned was done on the above antennas, measurements were demonstrated by using the antenna with the highest or lowest gain for the worst-case scenarios.
2. The antenna information is provided by the applicant. The laboratory does not verify the accuracy of this information, and all test results related to antenna characteristics are based solely on the data supplied. Responsibility for the authenticity and accuracy of these specifications rests entirely with the party who provided the information.

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2 SUMMARY OF TEST RESULT

FCC Rules	ISED Rules	Description Of Test	Result
§15.407(h)	RSS-247 §7.3.6	TPC and DFS Measurement	Compliant

2.1 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407

FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

FCC KDB 905462 D03 UNII Clients Without Radar Detection New Rules v01r02

2.2 Measurement Uncertainty

Test Items	Uncertainty		
TPC and DFS Measurement	+/-	1.49	Hz
Temperature	+/-	0.6	°C
Humidity	+/-	3	%
DC / AC Power Source	+/-	1	%

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	ISED 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.	SAC 1	TW0027 / 891563	TW3702 / 4620A
		SAC 2		
		SAC 3		
		Conduction 1		
		Conducted 1		
		Conducted 2		
		Conducted 3		
		Conducted 4		
		Conducted 5		
		Conducted 6		
	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conduction C	TW0028 / 200037	TW3702 / 4620E
		SAC C		
		SAC D		
		SAC G		
		Conducted A		
		Conducted B		
		Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
		Conducted G		

Note: The test site name is noted on the equipment list to indicate where the measurements were conducted.

Test Condition	Test Site name	Test Engineer	Test Environment:	Test Date
RF Conducted	Conducted A	Ari	25.5~26 / 52~57	April 21, 2026 ~ April 22, 2026

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3 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	RF46	11/13/2025	11/12/2026
EMI Test Receiver	Anritsu	N9038A	MY52260216	11/24/2025	11/23/2026
Signal Generator	Keysight	N5182B	MY59101143	01/26/2026	01/25/2027
Splitter	Marvelous Microwave	MVE8586	RF50	11/13/2025	11/12/2026
Splitter	RF-LAMBDA	RFLT2W1G18G	RF53	11/13/2025	11/12/2026
Splitter	RF-LAMBDA	RFLT2W1G18G	RF55	11/13/2025	11/12/2026
Splitter	RF-LAMBDA	RFLT4W1G18G	RF62	11/13/2025	11/12/2026
Test Software	SGS Taiwan	Dynamic Frequency Selection Test	Ver. 22.01.24	N.C.R	N.C.R

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

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4 REGULATORY REQUIREMENTS

4.1 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.

4.2 Dynamic Frequency Selection (DFS)

4.2.1 FCC

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. Note 3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

(i) Operational Modes. The DFS requirement applies to the following operational modes:

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- (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.
- (iv) 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.

4.3 Applicability of DFS requirements during normal operation

Requirement	Operational Mode
	Client Without Radar Detection
DFS Detection Threshold	Not required
Channel Closing Transmission time	Yes
Channel Move time	Yes
U-NII Detection Bandwidth	Not required

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.

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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.

Additional requirements for devices with multiple bandwidth mode	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	Not required
Channel Move Time and Channel Closing Transmission Time	Test using the widest BW mode available for the link
All other tests	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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4.4 Radar Test Waveforms

4.4.1 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 $\left\{ \left(\frac{1}{360} \right) \cdot \left(\frac{19 \cdot 10^6}{PRI_{\mu sec}} \right) \right\}$	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.					

4.4.2 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

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4.4.3 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

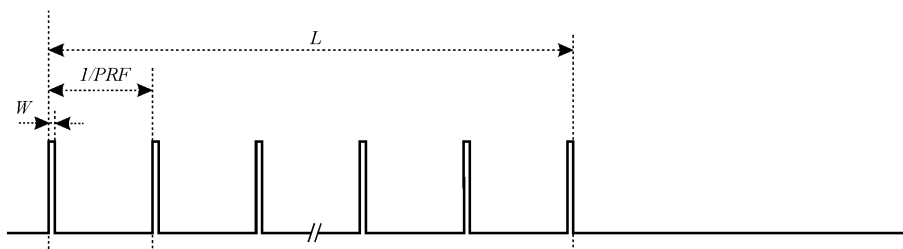


Figure D.1: General structure of a single-burst radar test signal with constant PRF

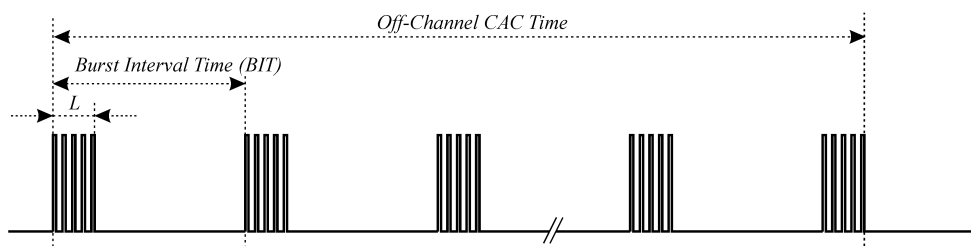


Figure D.2: General structure of a multi-burst radar test signal with constant PRF

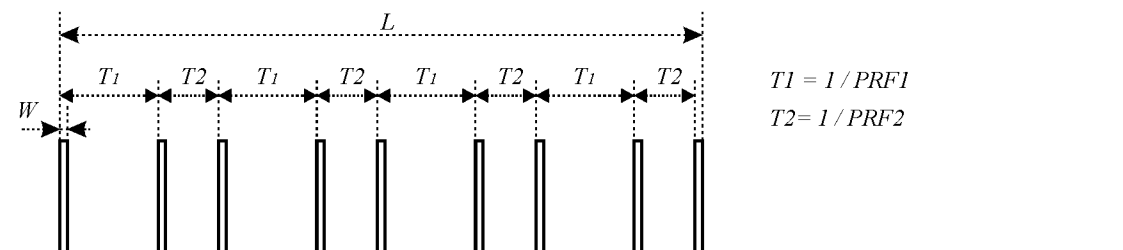


Figure D.3: General structure of a single-burst radar test signal with single pulse-based staggered PRF

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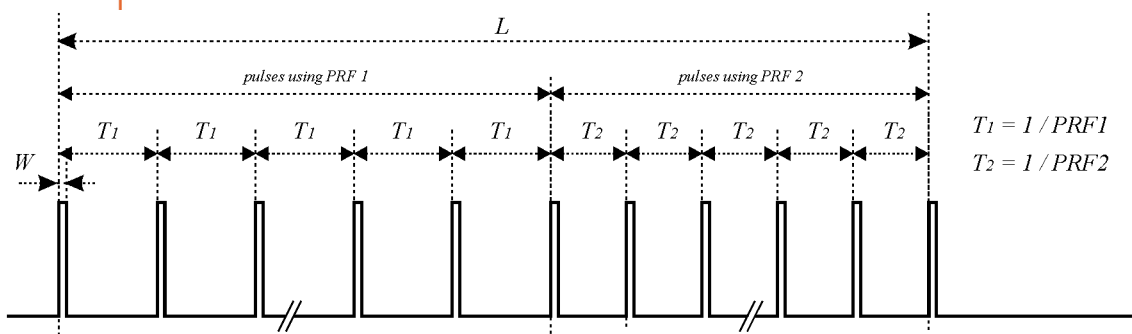


Figure D.4: General structure of a single-burst radar test signal with packet-based staggered PRF

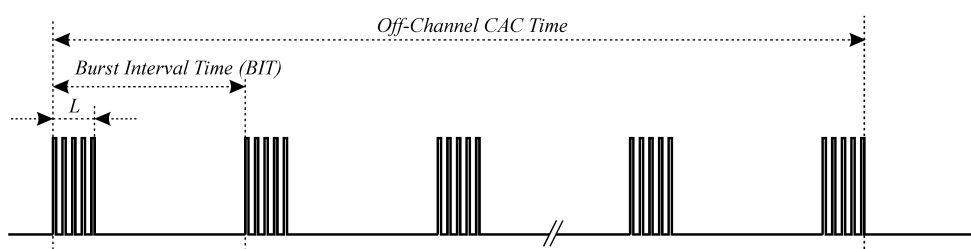


Figure D.5: General structure of a multi-burst radar test signal with packet-based staggered PRF

The applicant of this given application confirms that information regarding the parameters of the detected Radar Waveforms is not available to the end user.

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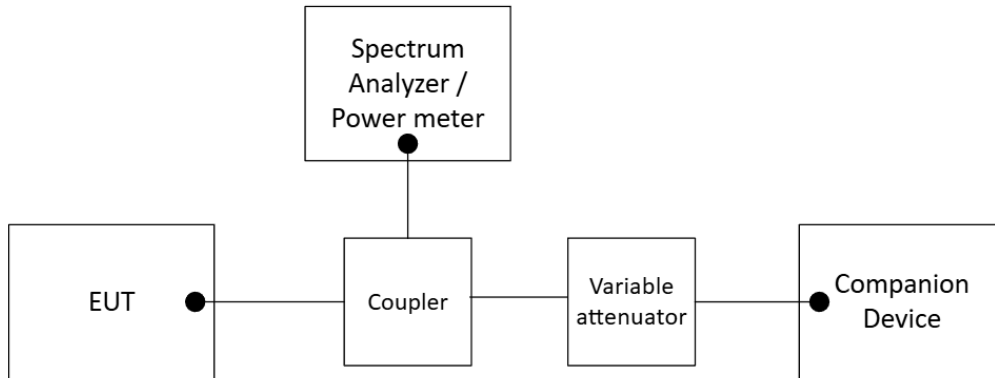
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5 TEST CONFIGURATION

5.1 Transmit Power Control (TPC)



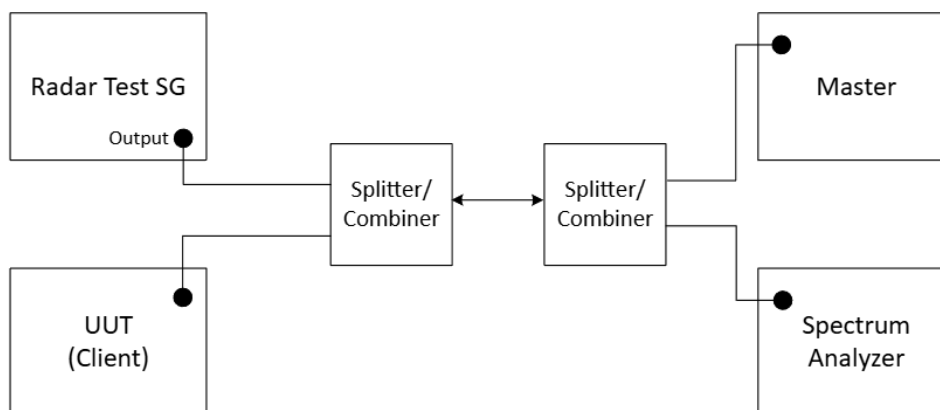
1. Configure EUT and companion device for peer-to-peer communication
2. Set variable attenuator to a high RSSI level to enable TPC function of the device (noise free spectral environment)
3. Establish a link and start communication between EUT and companion device
4. Capture power from spectrum analyzer/power 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.

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5.2 Dynamic Frequency Selection (DFS)

Setup for Client with injection at the Master



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 equipment (spectrum) is ensured to be 50 Ohms, and therefore verification on antenna gain measurement can be ignored.

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 pay load via the UE to the slave.

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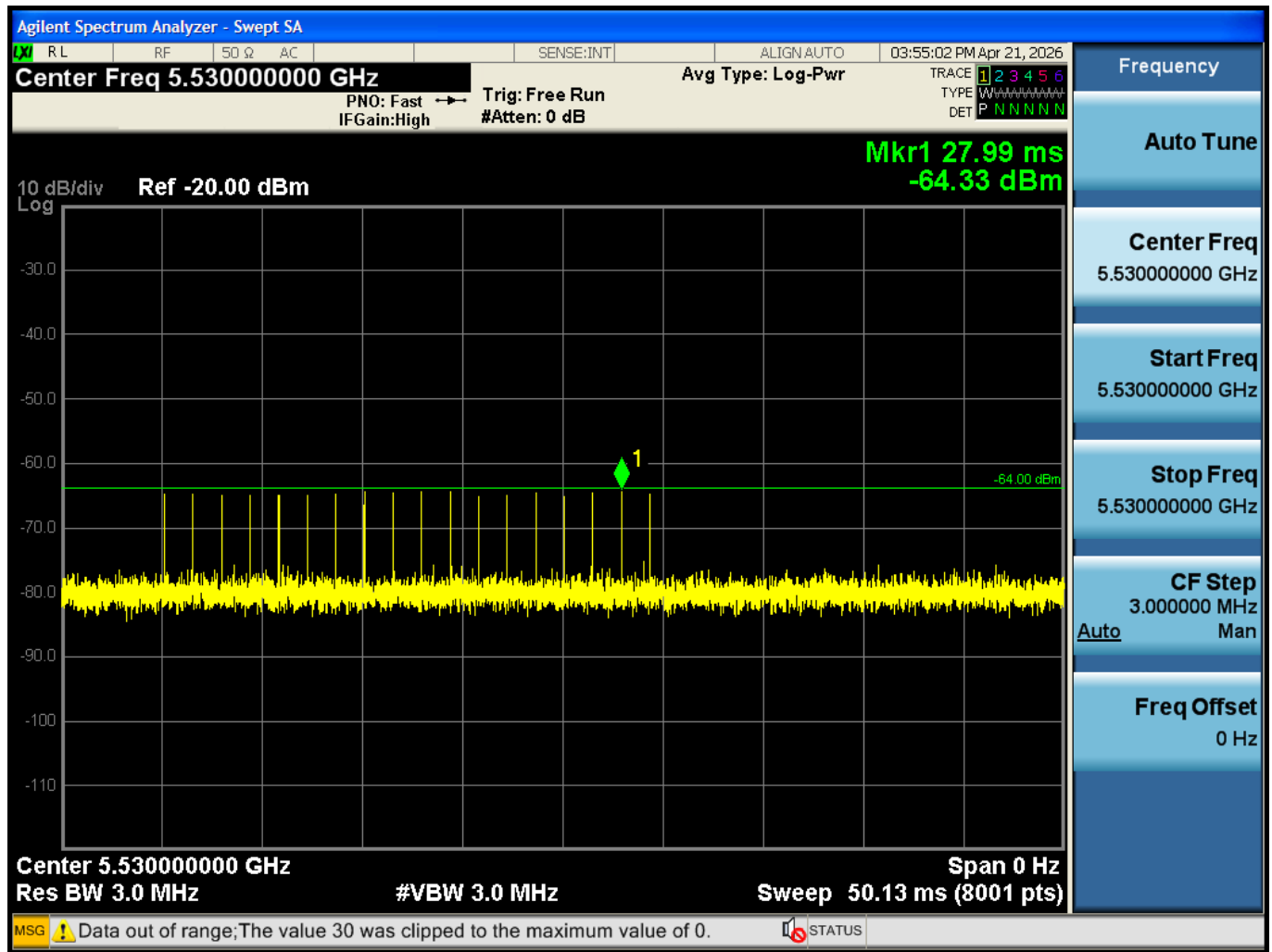
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6 TEST RESULTS

6.1 Transmitter Power Control (TPC)

N/A, TPC is not required.

6.2 Radar waveforms

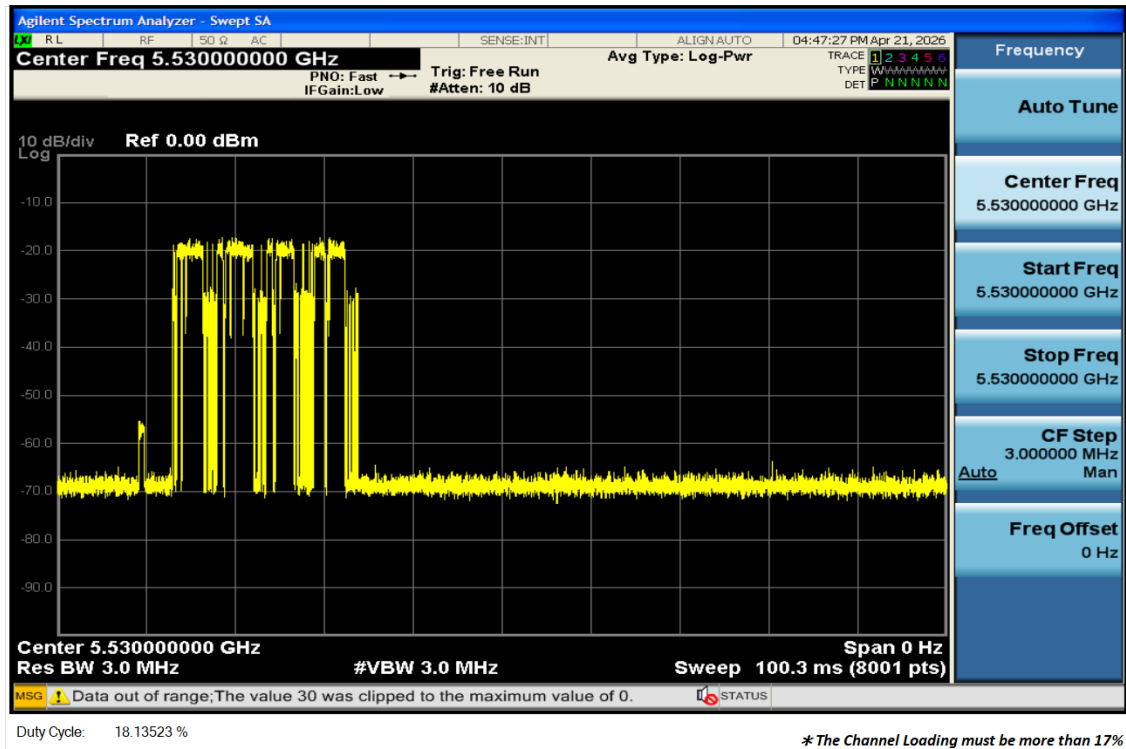


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6.3 WLAN traffic



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6.4 Channel closing transmission and Move time

Channel Shutdown Result				
Detection Threshold Level (dBm)			-64	
Modulation Mode	Freq. (MHz)	Radar Test Signal	Channel Closing Transmission Time(ms) 200ms~10sec	Channel Move Time(s)
VHT80	5530	Type 0	16	0.832
Limit			60 ms	10 sec
Result			Complied	

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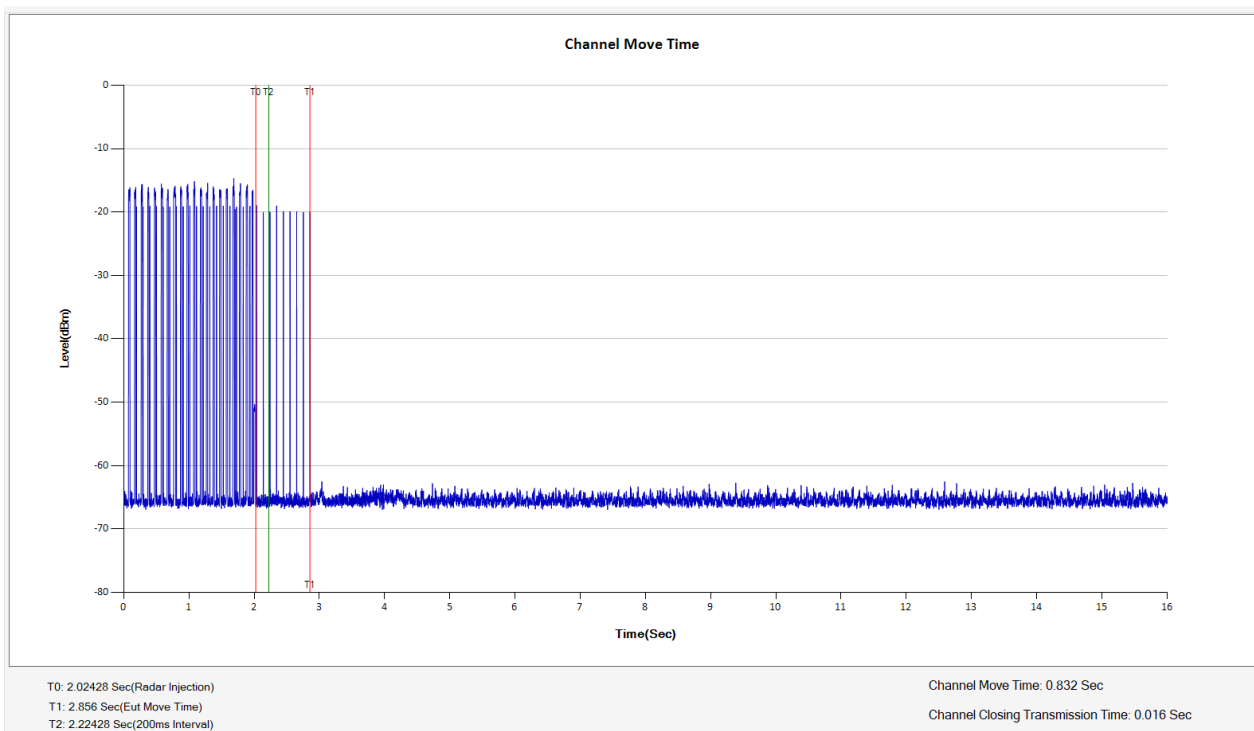
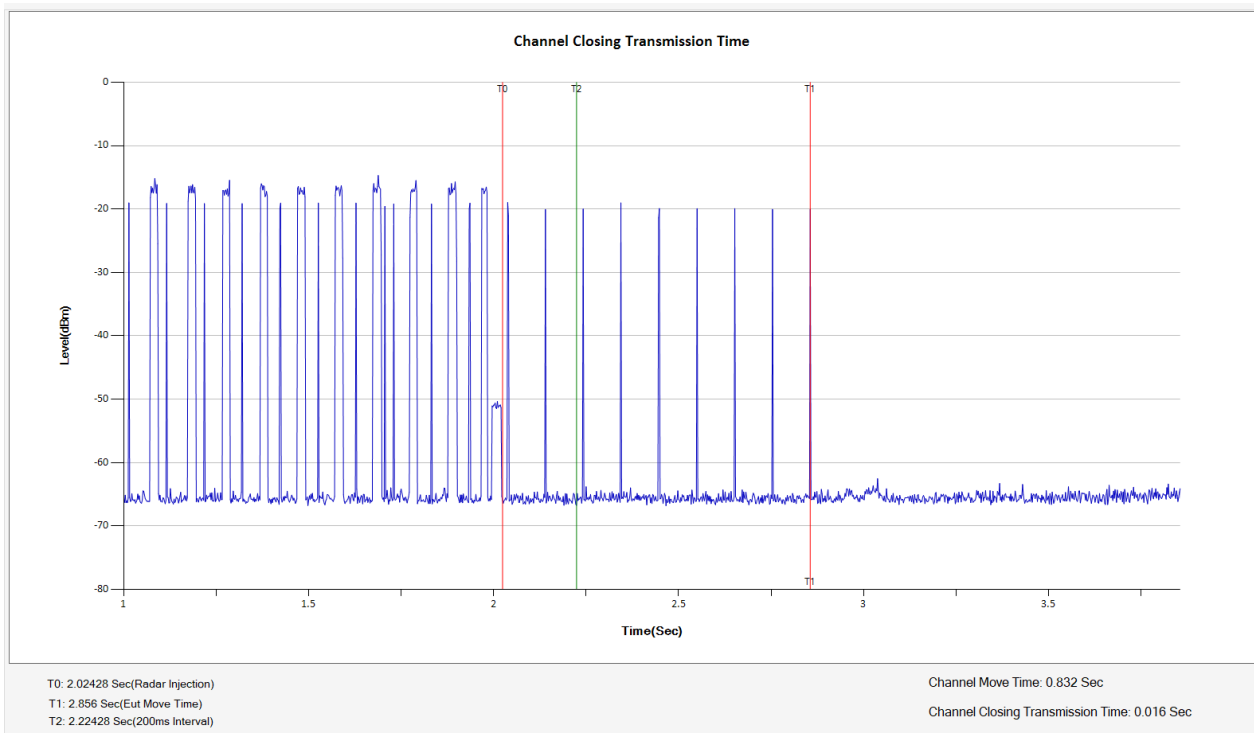
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Channel Move and Closing Transmission Time



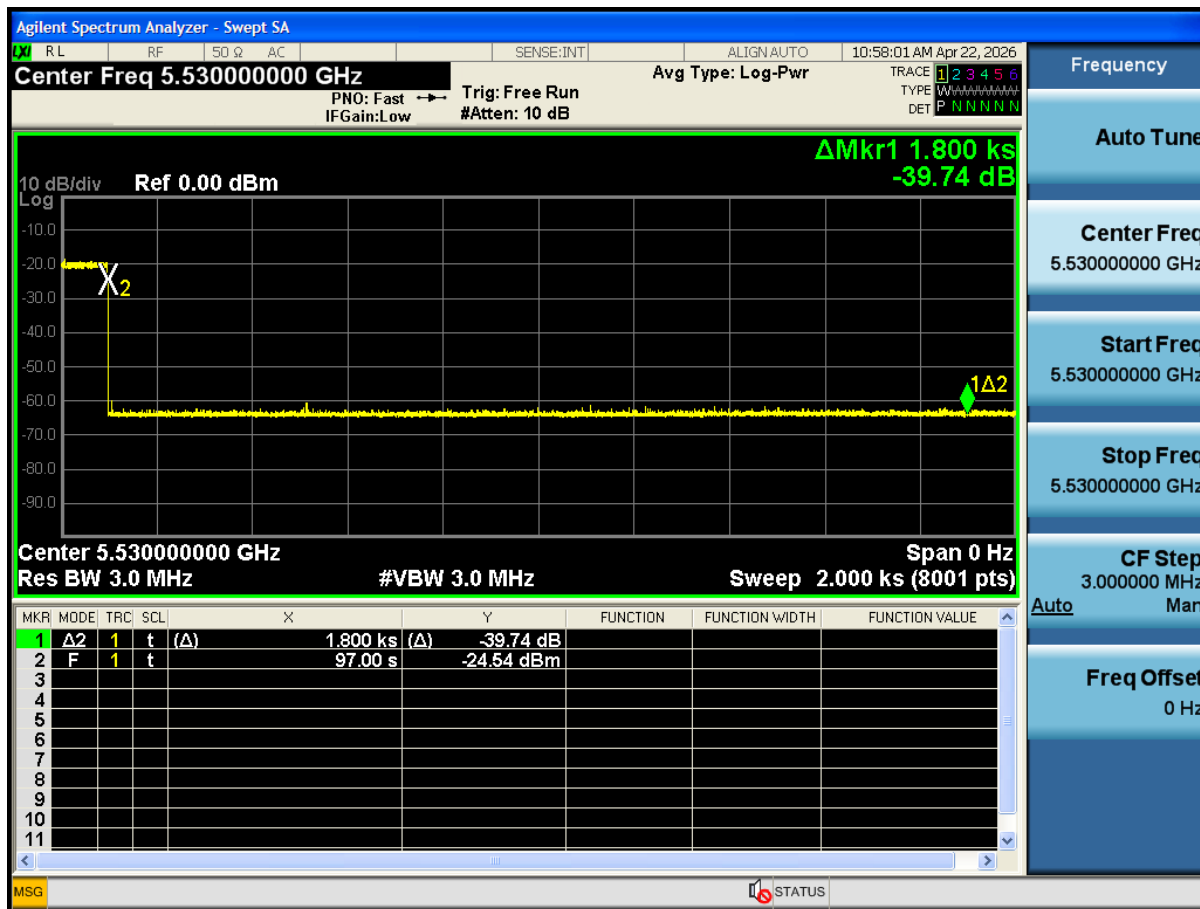
Verdict: Note: narrowing the sweep time as the good engineering process for the verification of transmission closing in 200ms

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6.5 Non-occupancy Period (without radar detection)



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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