Shenzhen GUOREN Certification Technology Service Co., Ltd.
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community, Fenghuang Street, Guangming District, Shenzhen, China

FCC PART 15 SUBPART C TEST REPORT
FCC CFR 47 PART 15E (15.407)

Report Reference No.........................:	**GRCTR250302048-05**
FCC ID.. :	**SMC-T91A**

Compiled by (position+printed name+signature)..:	Testing Engineer Jimmy Wang	
Supervised by (position+printed name+signature)..:	Project Engineer Kelley Zhang	
Approved by (position+printed name+signature)..:	Manager Sam Wang	
Date of issue...:	May. 28, 2025	

Testing Laboratory Name.................:	**Shenzhen GUOREN Certification Technology Service Co., Ltd.**
Address...:	101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community, Fenghuang Street, Guangming District, Shenzhen, China
Applicant's name...............................:	**SHENZHEN HOLATEK CO., LTD.**
Address...:	#12,Building 1,Chongwen Park, Nanshan Zhiyuan,3370 Liuxian Ave, Nanshan District, Shenzhen, China.

Test specification............................. :	
Standard...:	**FCC CFR 47 PART 15E (15.407)**

Test item description.......................:	Smart Laser TV
Trade Mark...:	JMGO
Manufacturer..:	SHENZHEN HOLATEK CO., LTD.
Model/Type reference..........................:	JA1-8T2
Listed Models ....:	JA1-8T1,JA1-8T0,JA1-8T3,JA1-8T4,JA1-8T5,JA1-8T6,JA1-8T7,JA1-8T8,JA1-8T9,JA1-8TA,JA1-8TB,JA1-8TC,JA1-8TD,JA1-8TE,JA1-8TF,JA1-8TG,JA1-8TH
Modulation ....:	DSSS,OFDM
Frequency...:	From 5260MHz to 5320MHz, 5500MHz to 5700MHz
Rating...:	DC 24V from external circuit
Result..:	**PASS**

T E S T   R E P O R T

Equipment under Test	:	Smart Laser TV
Model /Type	:	JA1-8T2
Listed Models	:	JA1-8T1,JA1-8T0,JA1-8T3,JA1-8T4,JA1-8T5,JA1-8T6,JA1-8T7,JA1-8T8,JA1-8T9,JA1-8TA,JA1-8TB,JA1-8TC,JA1-8TD,JA1-8TE,JA1-8TF,JA1-8TG,JA1-8TH
Applicant	:	**SHENZHEN HOLATEK CO., LTD.**
Address	:	#12,Building 1,Chongwen Park, Nanshan Zhiyuan,3370 Liuxian Ave, Nanshan District, Shenzhen, China.
Manufacturer	:	**SHENZHEN HOLATEK CO., LTD.**
Address	:	#12,Building 1,Chongwen Park, Nanshan Zhiyuan,3370 Liuxian Ave, Nanshan District, Shenzhen, China.

Test Result:	PASS

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. General Information about EUT

1.1. General Remarks

Date of receipt of test sample	:	Mar. 26, 2025
Testing commenced on	:	Mar. 26, 2025
Testing concluded on	:	May. 28, 2025

1.2. Product Description

Product Name:	Smart Laser TV
Model/Type reference:	JA1-8T2
Listed Models:	JA1-8T1,JA1-8T0,JA1-8T3,JA1-8T4,JA1-8T5,JA1-8T6,JA1-8T7,JA1-8T8,JA1-8T9,JA1-8TA,JA1-8TB,JA1-8TC,JA1-8TD,JA1-8TE,JA1-8TF,JA1-8TG,JA1-8TH (Their electrical circuit design, layout, components used and internal wiring are identical. Only the product appearance, body color, pattern, sales customers, and sales regions are different.)
Power supply:	DC 24V from external circuit
Adapter information:	M/N:NSA240EC-2401001 Input:100-240V~ 50/60Hz,2.5A Output:24.0V⎓10.0A
testing sample ID:	GRCTR250302048-1# (Engineer sample), GRCTR250302048-2# (Normal sample)
WIFI:	
Supported type:	Supported 802.11 a/n/ac/ax
Modulation:	IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11acVHT20/VHT40/VHT80: OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11axHE20/HE40/HE80: OFDM(1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
Operation frequency:	IEEE 802.11a:5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz

	IEEE 802.11n HT20: 5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz IEEE 802.11n HT40: 5190-5230MHz,5270-5310MHz,5510-5670MHz,5755-5795MHz IEEE 802.11acVHT20: 5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz IEEE 802.11acVHT40: 5190-5230MHz,5270-5310MHz,5510-5670MHz,5755-5795MHz IEEE 802.11acVHT80:5210MHz,5290MHz,5530MHz,5610MHz,5775MHz IEEE 802.11axHE20: 5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz IEEE 802.11axHE40: 5190-5230MHz,5270-5310MHz,5510-5670MHz,5755-5795MHz IEEE 802.11axHE80:5210MHz,5290MHz,5530MHz,5610MHz,5775MHz
Channel number:	4 Channels for 20MHz bandwidth(5180-5240MHz) 4 Channels for 20MHz bandwidth(5260-5320MHz) 11 Channels for 20MHz bandwidth(5500-5700MHz) 5 channels for 20MHz bandwidth(5745-5825MHz) 2 channels for 40MHz bandwidth(5190~5230MHz) 2 channels for 40MHz bandwidth(5270~5310MHz) 5 Channels for 40MHz bandwidth(5510-5670MHz) 2 channels for 40MHz bandwidth(5755~5795MHz) 1 channel for 80MHz bandwidth(5210MHz) 1 channel for 80MHz bandwidth(5290MHz) 1 Channel for 80MHz bandwidth(5530Hz) 1 Channel for 80MHz bandwidth(5610Hz) 1 channel for 80MHz bandwidth(5775MHz)
Antenna type:	FPC antenna
Antenna gain* (Supplied by the customer):	Ant 1: 4.60 dBi Ant 2: 4.40 dBi
Remark:*When the information provided by the customer was used to calculate test results, if the information provided by the customer is not accurate, shenzhen GUOREN Certification Technology Service Co., Ltd. does not assume any responsibility.	

1.3. Equipment Under Test

Power supply system utilised

| Power supply voltage	:	○	230V / 50 Hz	○	120V / 60Hz
		○	12 V DC	○	24 V DC
		●	Other (specified in blank below)		

<div align="center">DC 24V from external circuit</div>

1.4. Short description of the Equipment under Test (EUT)

This is a Smart Laser TV.

For more details, refer to the user's manual of the EUT.

1.5. Block Diagram of Test Setup
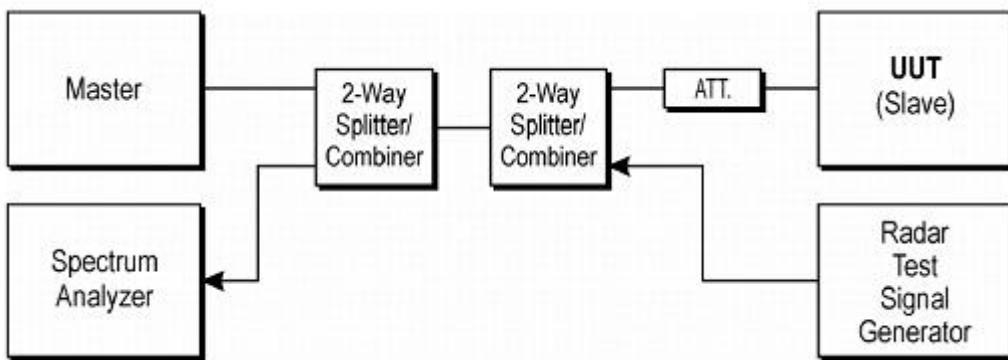
1.6. Conducted Output Power and EIRP

Mode	Frequency Band (MHz)	Maximum Conducted Output Power (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)
ANT1 IEEE 802.11a	5260 – 5320	12.84	4.60	17.44	55.4626
	5500 – 5700	13.43	4.60	18.03	63.5331
ANT1 IEEE 802.11n HT20	5260 – 5320	12.95	4.60	17.55	56.8853
	5500 – 5700	13.88	4.60	18.48	70.4693
ANT1 IEEE 802.11n HT40	5260 – 5320	11.93	4.60	16.53	44.9780
	5500 – 5700	12.97	4.60	17.57	57.1479
ANT1 IEEE	5260 – 5320	12.89	4.60	17.49	56.1048

802.11ac VHT20	5500 – 5700	13.97	4.60	18.57	71.9449
ANT1 IEEE	5260 – 5320	11.98	4.60	16.58	45.4988
802.11ac VHT40	5500 – 5700	13.97	4.60	18.57	71.9449
ANT1 IEEE	5260 – 5320	11.33	4.60	15.93	39.1742
802.11ac VHT80	5500 – 5700	13.19	4.60	17.79	60.1174
ANT1 IEEE	5260 – 5320	12.81	4.60	17.41	55.0808
802.11ax HE20	5500 – 5700	13.84	4.60	18.44	69.8232
ANT1 IEEE	5260 – 5320	11.99	4.60	16.59	45.6037
802.11ax HE40	5500 – 5700	13.56	4.60	18.16	65.4636
ANT1 IEEE	5260 – 5320	11.29	4.60	15.89	38.8150
802.11ax HE80	5500 – 5700	13.96	4.60	18.56	71.7794

Mode	Frequency Band (MHz)	Maximum Conducted Output Power (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)
ANT2 IEEE	5260 – 5320	13.13	4.40	17.53	56.6239
802.11a	5500 – 5700	13.40	4.40	17.80	60.2560
ANT2 IEEE	5260 – 5320	13.40	4.40	17.80	60.2560
802.11n HT20	5500 – 5700	12.77	4.40	17.17	52.1195
ANT2 IEEE	5260 – 5320	13.51	4.40	17.91	61.8016
802.11n HT40	5500 – 5700	12.56	4.40	16.96	49.6592
ANT2 IEEE	5260 – 5320	13.44	4.40	17.84	60.8135
802.11ac VHT20	5500 – 5700	12.88	4.40	17.28	53.4564
ANT2 IEEE	5260 – 5320	13.57	4.40	17.97	62.6614
802.11ac VHT40	5500 – 5700	13.99	4.40	18.39	69.0240
ANT2 IEEE	5260 – 5320	13.51	4.40	17.91	61.8016
802.11ac VHT80	5500 – 5700	13.01	4.40	17.41	55.0808
ANT1 IEEE	5260 – 5320	13.79	4.40	18.19	65.9174
802.11ax HE20	5500 – 5700	13.52	4.40	17.92	61.9441
ANT1 IEEE	5260 – 5320	14.31	4.40	18.71	74.3019
802.11ax HE40	5500 – 5700	13.19	4.40	17.59	57.4116
ANT1 IEEE	5260 – 5320	13.26	4.40	17.66	58.3445
802.11ax HE80	5500 – 5700	13.92	4.40	18.32	67.9204

Remark:

1. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW;

1.7. SYSTEM TEST CONFIGURATION

1. Connect FCC approved Master AP to a network, via wired Ethernet, that allows connection to an FTP server.

2. Associate the EUT with the Master AP.

3. Launch the FTP application on the EUT.

4. Connect to the FTP server application to the FTP server hosting the file

5. Initiate an FTP download of the file from the host.

6. Monitor the channel loading during transfer.

7. Reduce the maximum allowed data rate for the Master AP, using the AP's GUI interface.

8. Repeat steps 4-6 until the channel loading is as close to 20 % as possible.

9. Record the data rate setting on the Master AP and the channel loading.

10. While the system is performing an FTP transfer using the settings form item 8 above, perform the Channel Closing Transmission Time and Channel Move Time Measurements as required by KDB905462 D02 v02 using a conducted test.

1.8. Procedure

The KDB905462 D02 v02 describes a conducted test setup. Each one channel selected between bands 2, band 3 is chosen for the testing.

1. The radar pulse generator is setup to provide a pulse at the frequency that the Master and Client are operating. A Type 0 radar pulse with a 1 μs pulse width and a 1428 μs PRI is used for the testing.

2. The vector signal generator is adjusted to provide the radar burst (18 pulses) at a level of approximately -62 dBm at the antenna of the Master device.

3. The Client Device (EUT) is set up per the diagram in Figure 3-1 and communications between the Master device and the Client is established.

4.The MPEG file specified by the FCC ("6½ Magic Hours") is streamed from the "file computer" through the Master to the Slave Device and played in full motion video using Media Player Classic Ver.6.4.8.6 in order to properly load the network.

5. The spectrum analyzer is set to record about 15 sec window to any transmissions occurring up to and after 10 sec.

6. The system is again setup and the monitoring time is shortened in order to capture the Channel Closing Transmission Time. This time is measured to insure that the Client ceases transmission within 200 ms and the aggregate of emissions occurring after 200 ms up to 10 sec do not exceed 60 ms.

(Note: the channel may be different since the Master and Client have changed channels due to the detection of the initial radar pulse.)

7. After the initial radar burst the channel is monitored for 30 minutes to insure no transmissions or beacons occur. A

second monitoring setup is used to verify that the Master and Client have both moved to different channels.

1.9. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 920798 Designation Number: CN1304

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6202.01

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

ISED#: 27264CAB identifier: CN0115

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

CNAS-Lab Code: L15631

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories for the Competence of Testing and Calibration Laboratories.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

2. Test Equipment

Test Equipment	Manufacturer	Model No.	Equipment No.	Calibration Date	Calibration Due Date
LISN	R&S	ENV216	GRCTEE009	2024/09/19	2025/09/18
LISN	R&S	ENV216	GRCTEE010	2024/09/19	2025/09/18
EMI Test Receiver	R&S	ESPI	GRCTEE017	2024/09/19	2025/09/18
EMI Test Receiver	R&S	ESCI	GRCTEE008	2024/09/19	2025/09/18
Spectrum Analyzer	Agilent	N9020A	GRCTEE002	2024/09/19	2025/09/18
Spectrum Analyzer	R&S	FSP	GRCTEE003	2024/09/20	2025/09/19
Vector Signal generator	Agilent	N5181A	GRCTEE007	2024/09/19	2025/09/18
Analog Signal Generator	R&S	SML03	GRCTEE006	2024/09/19	2025/09/18
Climate Chamber	QIYA	LCD-9530	GRCTES016	2024/09/19	2025/09/18
Ultra-Broadband Antenna	Schwarzbeck	VULB9163	GRCTEE018	2023/09/28	2026/09/27
Horn Antenna	Schwarzbeck	BBHA 9120D	GRCTEE019	2023/09/28	2026/09/27
Loop Antenna	Zhinan	ZN30900C	GRCTEE020	2023/10/15	2026/10/14
Horn Antenna	Beijing Hangwei Dayang	OBH100400	GRCTEE049	2023/09/28	2026/09/27
Amplifier	Schwarzbeck	BBV 9745	GRCTEE021	2024/09/19	2025/09/18
Amplifier	Taiwan chengyi	EMC051845B	GRCTEE022	2024/09/19	2025/09/18
Temperature/Humidity Meter	Huaguan	HG-308	GRCTES037	2024/09/19	2025/09/18
Directional coupler	NARDA	4226-10	GRCTEE004	2024/09/19	2025/09/18
High-Pass Filter	XingBo	XBLBQ-GTA18	GRCTEE053	2024/09/19	2025/09/18
High-Pass Filter	XingBo	XBLBQ-GTA27	GRCTEE054	2024/09/19	2025/09/18
Automated filter bank	Tonscend	JS0806-F	GRCTEE055	2024/09/19	2025/09/18
Power Sensor	Agilent	U2021XA	GRCTEE070	2024/09/19	2025/09/18
EMI Test Software	ROHDE & SCHWARZ	ESK1-V1.71	GRCTEE060	N/A	N/A
EMI Test Software	Fera	EZ-EMC	GRCTEE061	N/A	N/A

3. Summary of Test Results

Applied Standard: FCC CFR 47 PART 15.407			
Requirement	Operational Mode		RESULTS
	Master	Client	
Non-Occupancy Period	Yes	Yes	Pass
DFS Detection Threshold	Yes	Not required	Not required
Channel Availability Check Time	Yes	Not required	Not required
Channel Closing Transmission Time	Yes	Yes	Pass
Channel Move Time	Yes	Yes	Pass
U-NII Detection Bandwidth	Yes	Not required	Not required

4. U-NII DFS Rule Requirements

Requirements

KDB905462 D02 v02 (04/08/2016) the following are the requirements for Client Devices:

1) A Client Device will not transmit before having received appropriate control signals from a Master Device.

2) A Client Device will stop all its transmissions whenever instructed by a Master Device to which it is associated and will meet the Channel Move Time and Channel Closing Transmission Time requirements.

The Client Device will not resume any transmissions until it has again received control signals from a Master Device.

3) If a Client Device is performing In-Service Monitoring and detects a Radar Waveform above the DFS Detection Threshold, it will inform the Master Device. This is equivalent to the Master Device detecting the Radar Waveform and d) through f) of section 5.1.1(KDB905462 D02 v02) apply.

4) Irrespective of Client Device or Master Device detection the Channel Move Time and Channel Closing Transmission Time requirements remain the same.

Limit

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.

5. DFS detection threshold values

The DFS detection thresholds are defined for Master devices and Client Devices with In-service monitoring. These detection thresholds are listed in the following table.

Maximum Transmit Power	Value (See Notes 1 and 2)
EIRP≥ 200 milliwatt	-64 dBm
EIRP< 200 milliwatt and Power pectral < 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.

Calibration:

The EUT is slave equipment with a max gain is 4.60dBi;

For a detection threshold level of -62dBm and the master (Shenzhen SDMC Technology Co., Ltd.), Model: GR140IG, FCC ID: 2AW68-GR140IG).

Maximum transmit power is less than 200 milliwatt in this report, so detection threshold level is -62dBm.

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. For MIMO devices refer to KDB Publication 662911 D01.

6. DFS test signals

As the EUT is a Client Device with no Radar Detection only one type radar pulse is required for the testing. Radar Pulse type 0 was used in the evaluation of the Client device for the purpose of measuring the Channel Move Time and the Channel Closing Transmission Time.

Table 5 – Short Pulse Radar Test Waveforms

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	$\text{Roundup}\left\{ \dfrac{\left(\dfrac{1}{360}\right) \cdot}{\left(\dfrac{19 \cdot 10^6}{PRI_{\mu sec}}\right)} \right\}$	60%	30
		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			
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.					

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B.

Table 6 – Long Pulse Radar Test Waveform

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

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.

Table 7 – Frequency Hopping Radar Test Waveform

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

Table 5a - Pulse Repetition Intervals Values for Test A

Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulses Per Second)	Pulse Repetition Interval (Microseconds)
1	1930.5	518
2	1858.7	538
3	1792.1	558
4	1730.1	578
5	1672.2	598
6	1618.1	618
7	1567.4	638
8	1519.8	658
9	1474.9	678
10	1432.7	698
11	1392.8	718
12	1355	738
13	1319.3	758
14	1285.3	778
15	1253.1	798
16	1222.5	818
17	1193.3	838
18	1165.6	858
19	1139	878
20	1113.6	898
21	1089.3	918
22	1066.1	938
23	326.2	3066

Manufacturer's Statement Regarding Uniform Channel Spreading

The end product implements an automatic channel selection feature at startup such that operation commences on channels distributed across the entire set of allowed 5GHz channels. This feature will ensure uniform spreading is achieved while avoiding non-allowed channels due to prior radar events.

TEST AND MEASUREMENT SYSTEM

System Overview

The measurement system is based on a conducted test method.

The short pulse and long pulse signal generating system utilizes the NTIA software and the same manufacturer / model Vector Signal Generator as the NTIA. The hopping signal generating system utilizes the simulated hopping method.

The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution. The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time. The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005

NTIA Hopping Frequency List, with the initial starting point randomized at run-time.

The signal monitoring equipment consists of a spectrum analyzer with the capacity to display 8192 bins on the horizontal axis. A time-domain resolution of 2 msec / bin is achievable with a 16 second sweep time, meeting the 10 second short pulse reporting criteria. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold. A time-domain resolution of 3 msec / bin is achievable with a 24 second sweep time, meeting the 22 second long pulse reporting criteria and allowing a minimum of 10 seconds after the end of the long pulse waveform.

Frequency Hopping Signal Generation

The hopping burst generator is a High Speed Digital I/O card plugged into the control computer. This card utilizes an independent hardware clock reference therefore the output pulse timing is unaffected by host computer operating system latency times.

The software selects the hopping sequence as a 100-length segment of the August 2005 NTIA hopping frequency list. This list contains 274 unique pseudorandom sequences. Each such sequence contains 475 frequencies ordered on a random without replacement basis. Each successive trial uses a contiguous 100- length segment from within each successive 475-length sequence in the list. The initial starting point within the list is randomized at run-time such that the first 100-length segment is entirely contained within the first 475-length sequence. The starting point of each successive trial is incremented by 475.

Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from FL to FH for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

Conducted Method System Block Diagram
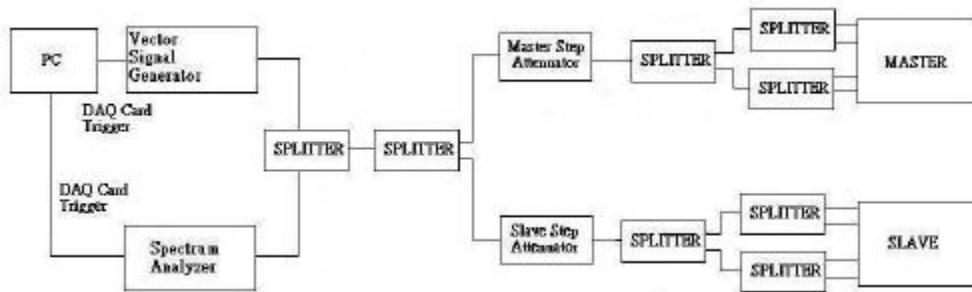
Measurement System Frequency Reference

Lock the signal generator and the spectrum analyzer to the same reference source as follows: Connect the 10 MHz OUT (SWITCHED) on the spectrum analyzer to the 10 MHz IN on the signal generator and set the spectrum analyzer 10 MHz Out to On.

System Calibration

Connect the spectrum analyzer to the test system in place of the master device. Set the signal generator to CW

mode. Adjust the amplitude of the signal generator to yield a measured level of –62 dBm on the spectrum analyzer. Without changing any of the instrument settings, reconnect the spectrum analyzer to the Common port of the Spectrum Analyzer Combiner/Divider and connect a 50 ohm load to the Master Device port of the test system. Measure the amplitude and calculate the difference from –62 dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference. Confirm that the signal is displayed at –62 dBm. Readjust the RBW and VBW to 3 MHz, set the span to 10 MHz, and confirm that the signal is still displayed at –62 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –62 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection threshold. Separate signal generator amplitude settings are determined as required for each radar type.


Interference Detection Threshold Adjustment

Download the applicable radar waveforms to the signal generator. Select the radar waveform, trigger a burst manually and measure the amplitude on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection threshold. Separate signal generator amplitude settings are determined as required for each radar type.


Adjustment Of Displayed Traffic Level

Establish a link between the Master and Slave, adjusting the Link Step Attenuator as needed to provide a suitable received level at the Master and Slave devices. Stream the video test file to generate WLAN traffic. Confirm that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold. Confirm that the displayed traffic is from the Master Device. For Master Device testing confirm that the displayed traffic does not include Slave Device traffic. For Slave Device testing confirm that the displayed traffic does not include Master Device traffic.

If a different setting of the Master Step Attenuator is required to meet the above conditions, perform a new System Calibration for the new Master Step Attenuator setting.

Test Setup

```
┌─────────────────────────────────────────────────────────────────┐
│         Antenna Port RF Connections to Test Instrument Setup      │
└─────────────────────────────────────────────────────────────────┘
            ▲                                    ▲
            │                                    │
┌───────────────────────────┐      ┌───────────────────────────┐
│ Master Device (Support     │      │     Slave Device (EUT)     │
│        Equipment)          │      │                            │
└───────────────────────────┘      └───────────────────────────┘
            │                                    │
┌───────────────────────────┐      ┌───────────────────────────┐
│   PC Controller and Server,│      │      Host Computer,        │
│       with MPEG file       │      │     with MPEG Player       │
└───────────────────────────┘      └───────────────────────────┘
```

7. TEST RESULT

11AC80SISO_5290_Type0

11AC80SISO_5530_Type0
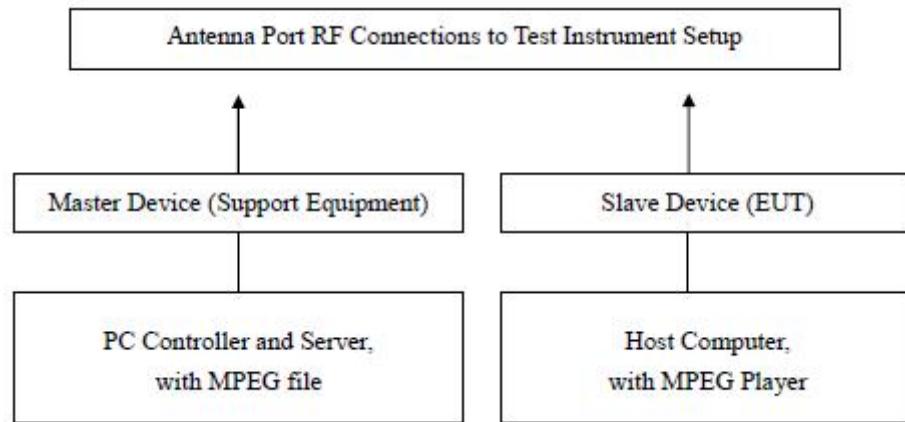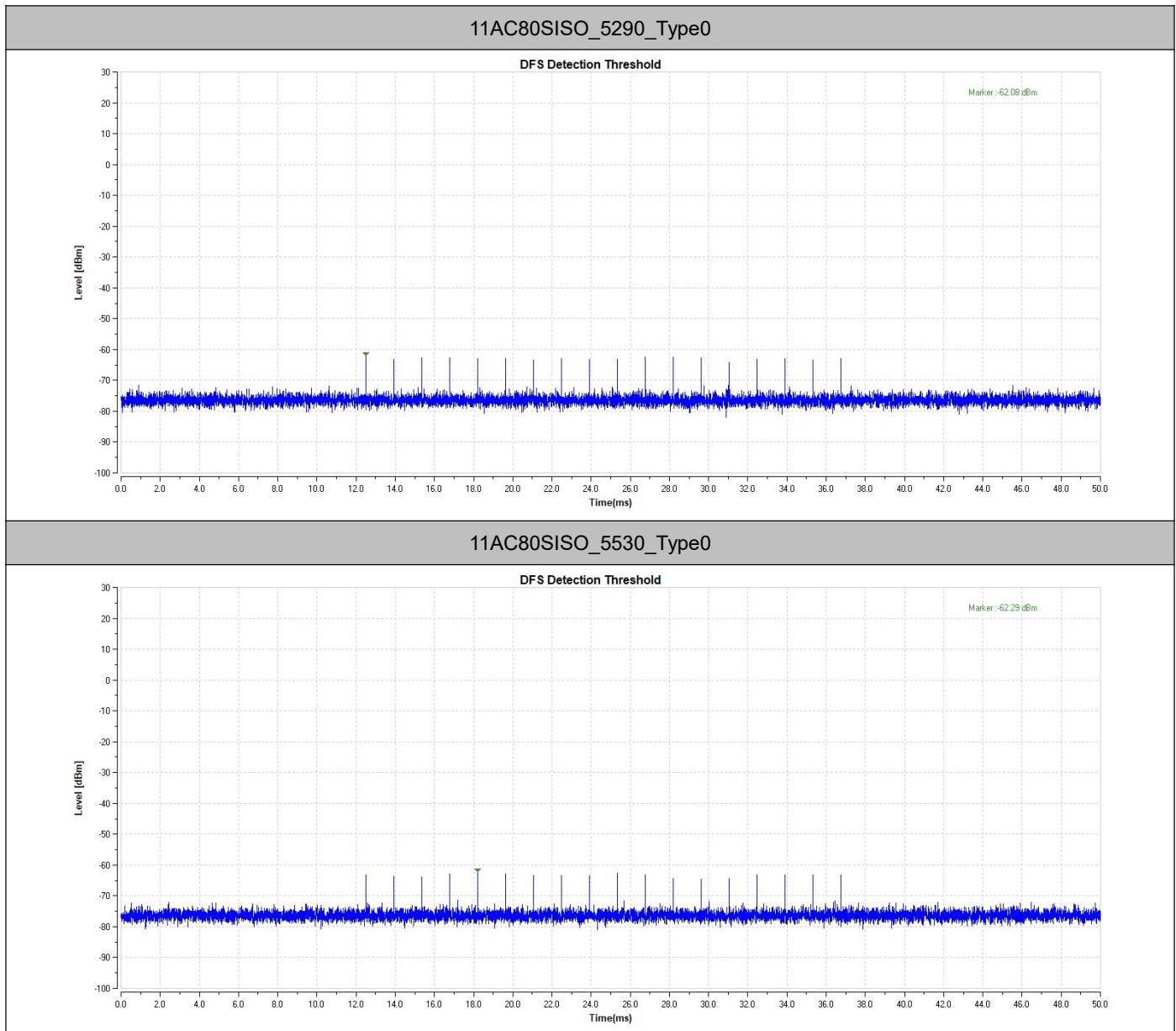
Trial List Table - FCC-13-22

Save Load | ↑ Trigger ⅃ Download All

Sample Rate | 10 MHz

Trial List

|	Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
Download	0	Type 0	1.0	1428.0	18	25704.0
Download	1	Type 0	1.0	1428.0	18	25704.0
Download	2	Type 0	1.0	1428.0	18	25704.0
Download	3	Type 0	1.0	1428.0	18	25704.0
Download	4	Type 0	1.0	1428.0	18	25704.0
Download	5	Type 0	1.0	1428.0	18	25704.0
Download	6	Type 0	1.0	1428.0	18	25704.0
Download	7	Type 0	1.0	1428.0	18	25704.0
Download	8	Type 0	1.0	1428.0	18	25704.0
Download	9	Type 0	1.0	1428.0	18	25704.0
Download	10	Type 0	1.0	1428.0	18	25704.0
Download	11	Type 0	1.0	1428.0	18	25704.0
Download	12	Type 0	1.0	1428.0	18	25704.0
Download	13	Type 0	1.0	1428.0	18	25704.0
Download	14	Type 0	1.0	1428.0	18	25704.0
Download	15	Type 0	1.0	1428.0	18	25704.0
Download	16	Type 0	1.0	1428.0	18	25704.0
Download	17	Type 0	1.0	1428.0	18	25704.0
Download	18	Type 0	1.0	1428.0	18	25704.0
Download	19	Type 0	1.0	1428.0	18	25704.0
Download	20	Type 0	1.0	1428.0	18	25704.0
Download	21	Type 0	1.0	1428.0	18	25704.0
Download	22	Type 0	1.0	1428.0	18	25704.0
Download	23	Type 0	1.0	1428.0	18	25704.0
Download	24	Type 0	1.0	1428.0	18	25704.0
Download	25	Type 0	1.0	1428.0	18	25704.0
Download	26	Type 0	1.0	1428.0	18	25704.0
Download	27	Type 0	1.0	1428.0	18	25704.0
Download	28	Type 0	1.0	1428.0	18	25704.0

Channel Move Time & Channel Closing Transmission Time

Test Mode	Frequency[MHz]	CCTT[ms]	Limit[ms]	CMT[ms]	Limit[ms]	Verdict
11AC80SISO	5290	200+0	200+60	101.3	10000	PASS
	5530	200+0	200+60	79.2	10000	PASS

11AC80SISO_5290
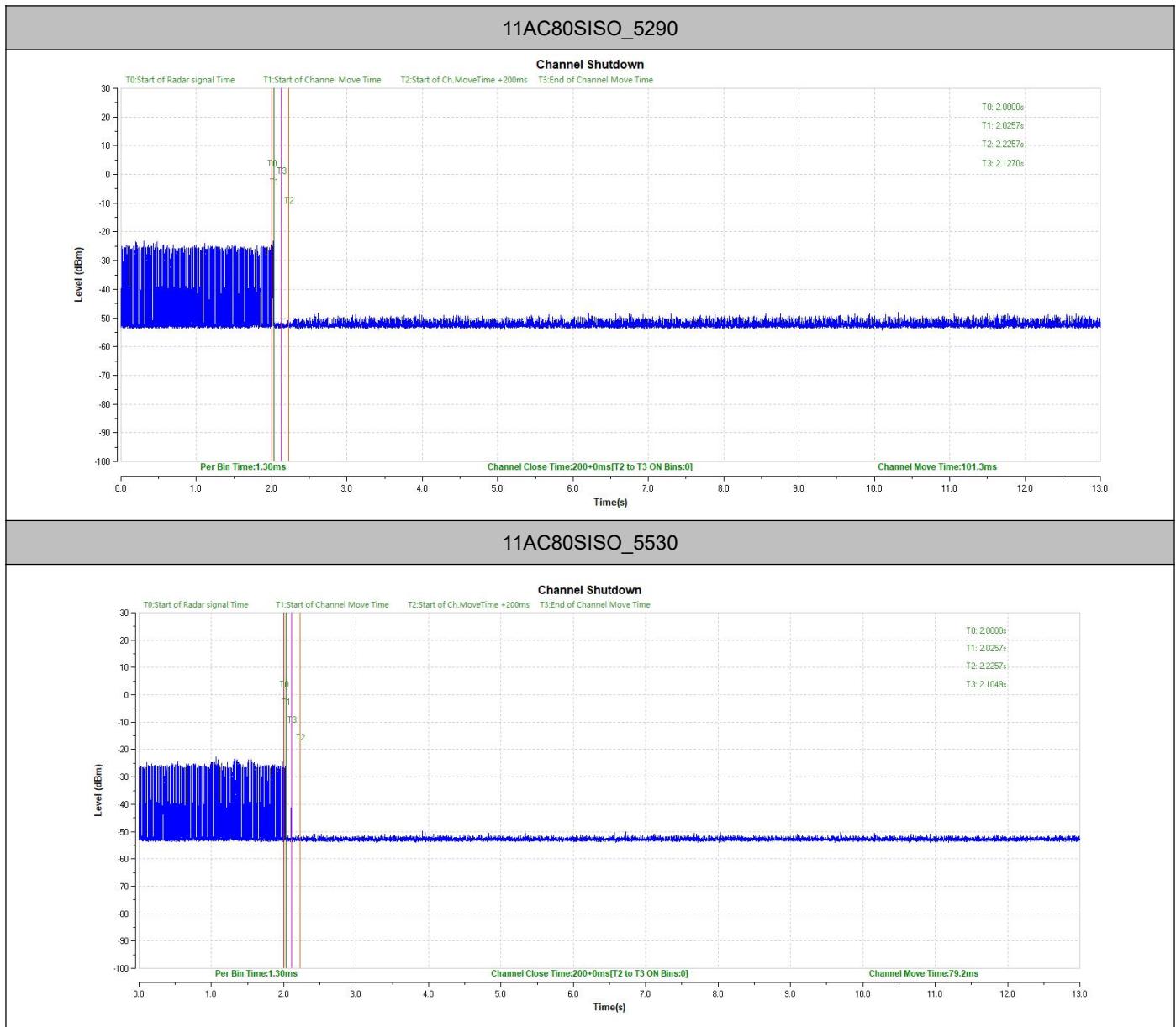
11AC80SISO_5530

Non-Occupancy Period

Test Mode	Frequency[MHz]	Result	Limit[s]	Verdict
11AC80SISO	5290	see test graph	≥1800	PASS
	5530	see test graph	≥1800	PASS

11AC80SISO_5290
11AC80SISO_5530
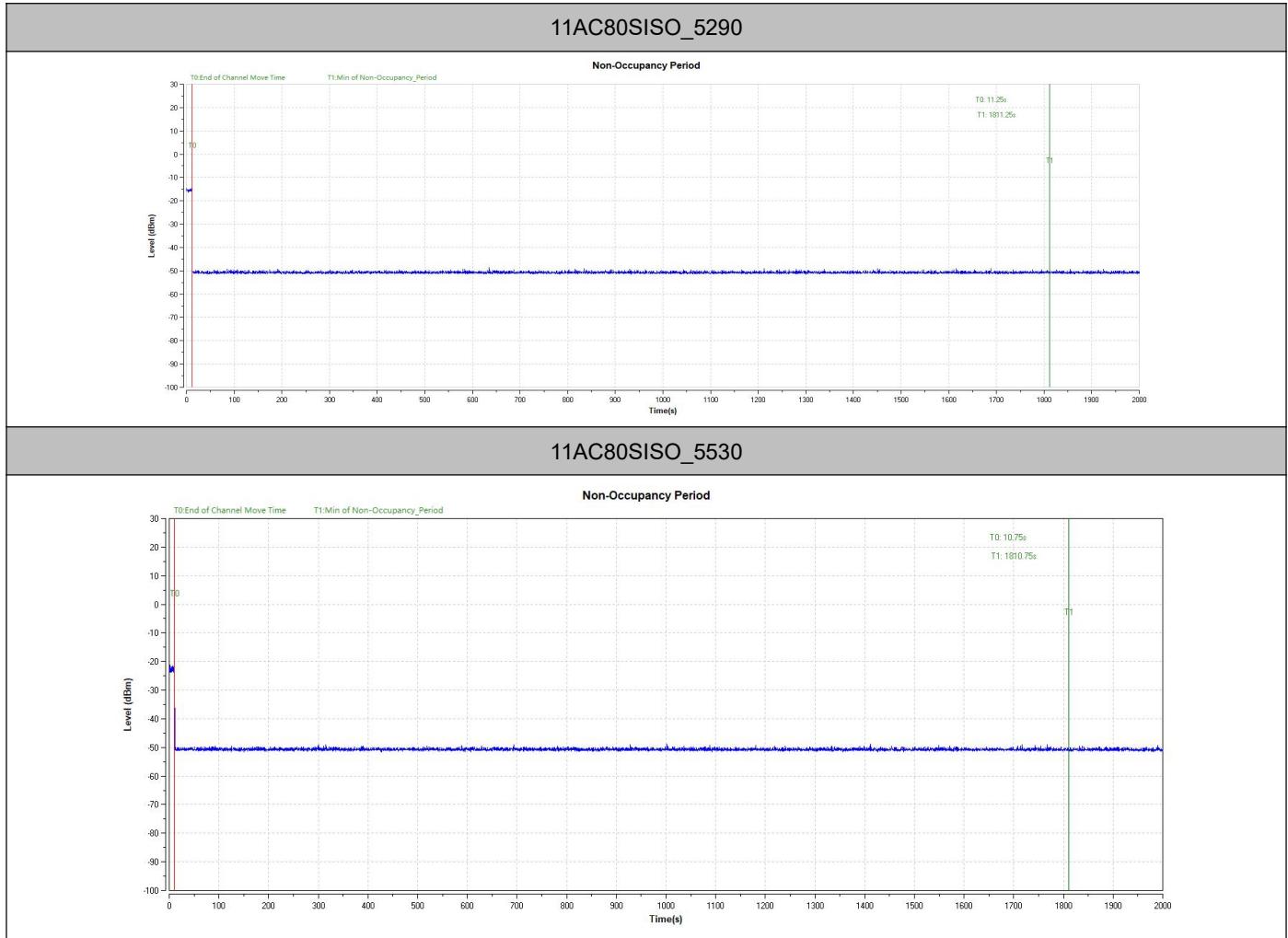
8. Test Setup Photos of the EUT
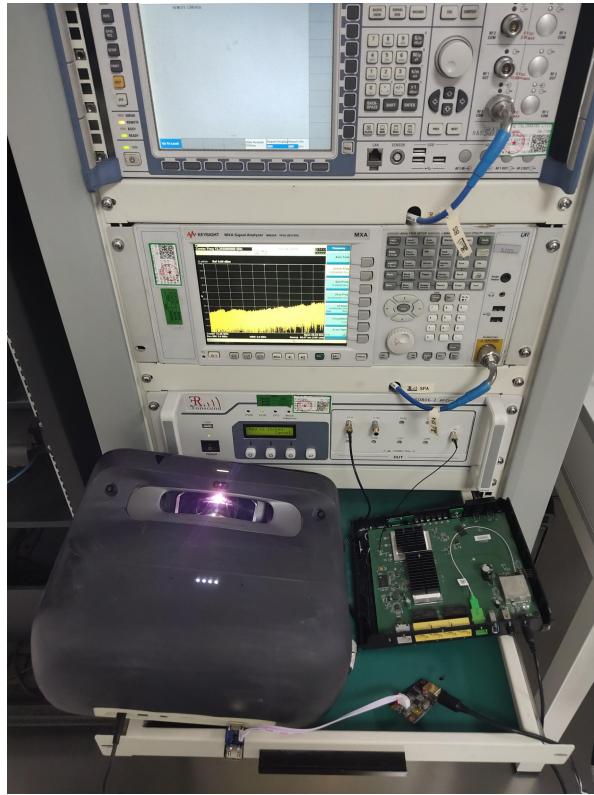
9. Photos of the EUT

Reference to the test report No.**GRCTR250302048-01.**

*********************** End of Report *********************