



Report No.: TW2107388-01E File Reference No.: 2021-09-06

Applicant: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Product: Commercial Kiosk Tablet

Model No.: EMT431

Trademark: Glory Star

Test Standards: FCC Part 15.247

Test Result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.10, FCC Part 15.247 for the

evaluation of electromagnetic compatibility

Approved By

Jack Chung

Manager

Dated: September 06, 2021

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TESTING LABORATORIES

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com

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Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAL. This approval result is accepted by MRA of APLAC.

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

CNAS-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 744189

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

Industry Canada (IC) —Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

A2LA (Certification Number:5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

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Test Report Conclusion

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1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le

Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

Site Listed with Federal Communications commission (FCC)

Registration Number:744189 For 3m Anechoic Chamber

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A

For 3m Anechoic Chamber

1.2 Applicant Details

Applicant: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Address: Bldg., 9, 4/F., ZongYuntai Technology Industrial Park, Songbai Road, Shiyan Street, Boan,

Shenzhen, China

Telephone: (755)-26001808-305 Fax: (755)-26002933

1.3 Description of EUT

Product: Commercial Kiosk Tablet

Manufacturer: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Address: Bldg., 9, 4/F., Zong Yuntai Technology Industrial Park, Songbai Road, Shiyan

Street, Boan, Shenzhen, China

Trademark: Glory Star
Model Number: EMT431
Additional Model Number: N/A
Hardware Version: RK3399 V1.x
Software Version: 20210203.143658

Serial No.: GS431210300001

Type of Modulation IEEE 802.11b: DSSS (CCK, QPSK, DBPSK)

IEEE 802.11g/n (HT20, HT40) : OFDM(64QAM, 16QAM, QPSK, BPSK)

Frequency range IEEE 802.11b/g/n (HT20): 2412-2462MHz; 802.11n HT40: 2422-2452MHz

Channel Spacing 5MHz for IEEE 802.11b/g/n HT20,HT40

Air Data Rate IEEE 802.11b : 11, 5.5, 2, 1 Mbps

IEEE 802.11g: 54, 48,36, 24, 18, 12, 9, 6 Mbps

IEEE 802.11n HT20/HT40: mcs0-mcs9

The report refers only to the sample tested and does not apply to the bulk.

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Frequency Selection By software

Channel Number IEEE 802.11b/g/n (HT20): 11 Channels; EEE 802.11n (HT40): 7 Channels;

Antenna: Two Dipole antennas used. The gain of the antenna is 2.20dBi for each one (Declared

by the applicant)

Input Voltage: 100-240V, ~50/60Hz, 0.7A, 100W (max)

1.4 Submitted Sample: 1 Samples

1.5 Test Duration: 2021-07-29 to 2021-09-06

1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty = 6.0dB

Occupied Channel Bandwidth Uncertainty =5%

Note: The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

1.7 Test Engineer

The sample tested by

Print Name: Terry Tang

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2.0 Test Equipment					
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2021-06-18	2022-06-17
LISN	R&S	EZH3-Z5	100294	2021-06-18	2022-06-17
LISN	R&S	EZH3-Z5	100253	2021-06-18	2022-06-17
Ultra Broadband ANT	R&S	HL562	100157	2021-06-18	2022-06-17
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2021-06-18	2022-06-17
Loop Antenna	EMCO	6507	00078608	2021-06-18	2024-06-17
Spectrum	R&S	FSIQ26	100292	2021-06-18	2022-06-17
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2021-06-18	2023-06-17
Horn Antenna	R&S	BBHA 9120D	9120D-631	2021-07-02	2022-07-01
Power meter	Anritsu	ML2487A	6K00003613	2021-08-22	2022-08-21
Power sensor	Anritsu	MA2491A	32263	2021-08-22	2022-08-21
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2021-07-02	2024-07-01
9*6*6 Anechoic			N/A	2018-02-07	2021-02-06
EMI Test Receiver	RS	ESVB	826156/011	2021-06-18	2022-06-17
EMI Test Receiver	RS	ESH3	860904/006	2021-06-18	2022-06-17
Spectrum	HP/Agilent	ESA-L1500A	US37451154	2021-06-18	2022-06-17
Spectrum	HP/Agilent	E4407B	MY50441392	2021-06-18	2022-06-17
Spectrum	RS	FSP	1164.4391.38	2021-01-07	2022-01-06
RF Cable	Zhengdi	ZT26-NJ-NJ-8 M/FA		2021-06-18	2022-06-17
RF Cable	Zhengdi	7m		2021-06-18	2022-06-17
RF Switch	EM	EMSW18	060391	2021-06-18	2022-06-17
Pre-Amplifier	Schwarebeck	BBV9743	#218	2021-06-18	2022-06-17
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2021-06-18	2022-06-17
LISN	SCHAFFNER	NNB42	00012	2021-01-07	2022-01-06

2.2 Automation Test Software

For Conducted Emission Test

Name	Version				
EZ-EMC	Ver.EMC-CON 3A1.1				
Zen Dedicad Emissions					

For Radiated Emissions

Name	Version
EMI Test Software BL410-EV18.91	V18.905
EMI Test Software BL410-EV18.806 High Frequency	V18.06

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3. DESCRIPTION OF TEST MODES

IEEE 802.11b, 802.11g, 802.11n (HT20) mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode: 1Mbps data rate (worst case) was chosen for full testing. IEEE 802.11g mode: 6Mbps data rate (worst case) was chosen for full testing. IEEE 802.11n (HT20) mode: mcs0 (worst case) were chosen for full testing

IEEE 802.11n (HT40) mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2422
Middle	2437
High	2452

IEEE 802.11n (HT40) mode: mcs0 data rate (worst case) were chosen for full testing

Note: during the test, the duty cycle was set up to 100%.

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3.0 **Technical Details**

3.1 **Summary of test results**

Standard	Test Type	Result	Notes
CC Part 15, Paragraph 15.107 & 15.207	Conducted Emission Test	PASS	Complies
FCC Part 15 Subpart C Paragraph 15.247(a)(2) Limit	Spectrum bandwidth of a Orthogonal Frequency Division Multiplex System Limit: 6dB bandwidth>500kHz	PASS	Complies
FCC Part 15, Paragraph 15.247(b)	Maximum peak output power Limit: max. 30dBm	PASS	Complies
FCC Part 15, Paragraph 15.109,15.205 & 15.209	Transmitter Radiated Emission Limit: Table 15.209	PASS	Complies
FCC Part 15, Paragraph 15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Complies
FCC Part 15, Paragraph 15.247(d)	Out of Band Emission and Restricted Band Radiation Limit: 20dB less than peak value of fundamental frequency Restricted band limit: Table 15.209	PASS	Complies

3.2 **Test Standards**

FCC Part 15 Subpart & Subpart C, Paragraph 15.247

EUT Modification 4.0

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES.

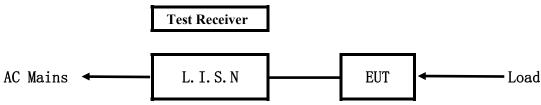
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5.0 Power Line Conducted Emission Test

5.1 Schematics of the test

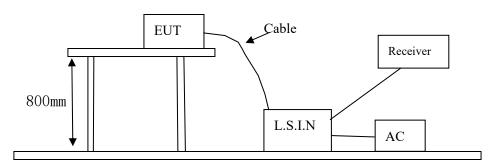


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10-2013.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

A. EUT

Device	Manufacturer		FCC ID	
Commercial Kiosk	GLORY STAR TECHNICS	EMT421	24 A CC EMT421	
Tablet	(SHENZHEN) CO., LTD.	EMT431	2AACS-EMT431	

B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model	Rating
N/A			

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5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013.

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (d	lB μV)
(MHz)	Quasi-peak Level	Average Level
$0.15 \sim 0.50$	66.0~56.0*	56.0~46.0*
$0.50 \sim 5.00$	56.0	46.0
$5.00 \sim 30.00$	60.0	50.0

Notes:

- 1. *Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

5.6 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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Conducted Emission on Live Terminal (150kHz to 30MHz) A:

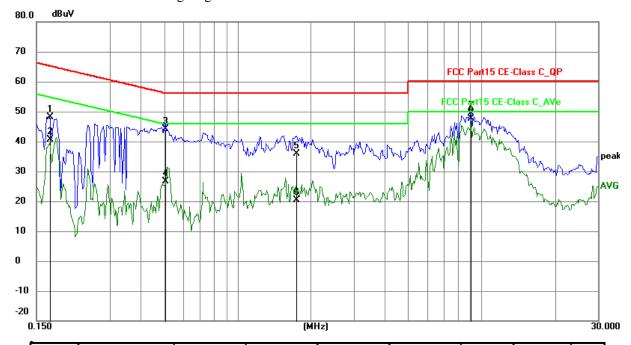
EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 kPa

EUT set Condition: Keep WIFI Transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1695	38.45	9.77	48.22	64.98	-16.76	QP	Р
2	0.1695	30.91	9.77	40.68	54.98	-14.30	AVG	Р
3	0.5049	34.38	9.77	44.15	56.00	-11.85	QP	Р
4	0.5049	16.88	9.77	26.65	46.00	-19.35	AVG	Р
5	1.7373	26.08	9.80	35.88	56.00	-20.12	QP	Р
6	1.7373	10.59	9.80	20.39	46.00	-25.61	AVG	Р
7	9.0450	39.31	10.11	49.42	60.00	-10.58	QP	Р
8	9.0450	37.52	10.11	47.63	50.00	-2.37	AVG	Р

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B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

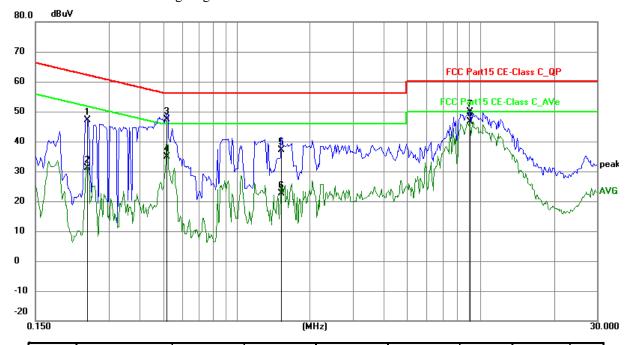
EUT Operating Environment

Humidity: 65%RH Atmospheric Pressure: 101 kPa Temperature: 26°C

EUT set Condition: Keep WIFI Transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2436	37.48	9.75	47.23	61.97	-14.74	QP	Р
2	0.2436	21.37	9.75	31.12	51.97	-20.85	AVG	Р
3	0.5166	37.56	9.77	47.33	56.00	-8.67	QP	Р
4	0.5166	25.22	9.77	34.99	46.00	-11.01	AVG	Р
5	1.5267	27.37	9.80	37.17	56.00	-18.83	QP	Р
6	1.5267	12.71	9.80	22.51	46.00	-23.49	AVG	Р
7	9.0450	39.88	10.11	49.99	60.00	-10.01	QP	Р
8	9.0450	36.49	10.11	46.60	50.00	-3.40	AVG	Р

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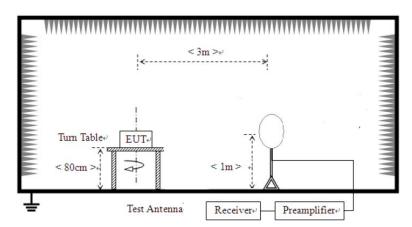


6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are Quasi-peak values with a resolution bandwidth of 120 kHz. F For measurement above 1GHz, peak values with RBW=1MHz VBW=3MHz and PK detector. AV value with RBW=1MHz, VBW=3MHz and RMS detector. Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (6) The antenna polarization: Vertical polarization and Horizontal polarization.

Block diagram of Test setup

For radiated emissions from 9kHz to 30MHz



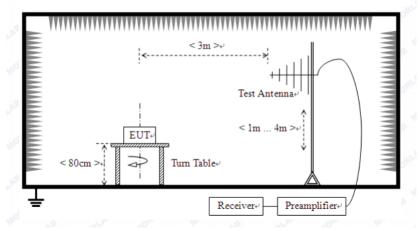
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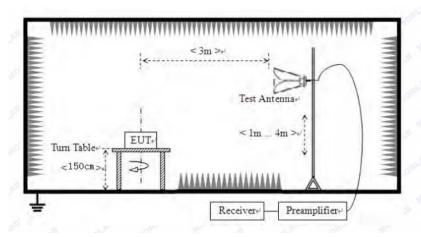
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For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



- 6.2 Configuration of The EUT

 Same as section 5.3 of this report
- 6.3 EUT Operating Condition

 Same as section 5.4 of this report.
- 6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

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Frequencies in restricted band are complied to limit on Paragraph 15.209

Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the higher limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. Worse case were recorded in the test report. 802.11b was the worst case.

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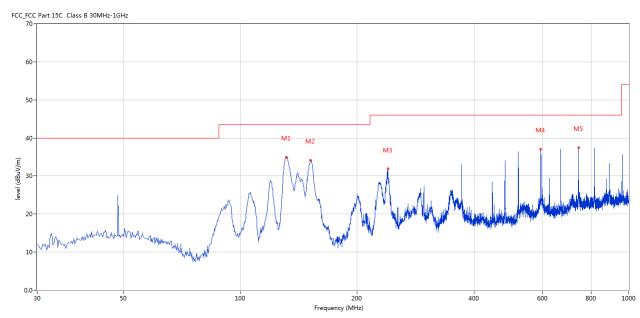


Test result General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Transmitting

Results: Pass



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	131.582	34.92	-16.93	43.5	-8.58	Peak	290.00	100	Horizontal	Pass
2	151.705	34.10	-16.94	43.5	-9.40	Peak	297.00	100	Horizontal	Pass
3	239.953	31.84	-12.33	46.0	-14.16	Peak	131.00	100	Horizontal	Pass
4	593.914	37.04	-5.25	46.0	-8.96	Peak	314.00	100	Horizontal	Pass
5	742.529	37.39	-3.47	46.0	-8.61	Peak	154.00	100	Horizontal	Pass

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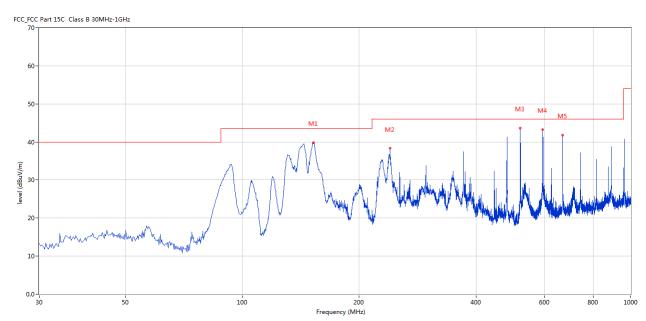


Test result General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Transmitting

Results: Pass



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	152.674	39.83	-16.88	43.5	-3.67	Peak	171.00	100	Vertical	Pass
2	239.953	38.41	-12.33	46.0	-7.59	Peak	122.00	100	Vertical	Pass
3	519.728	43.64	-6.76	46.0	-2.36	Peak	32.00	100	Vertical	Pass
4	593.914	43.21	-5.25	46.0	-2.79	Peak	73.00	100	Vertical	Pass
5	668.343	41.84	-4.46	46.0	-4.16	Peak	219.00	100	Vertical	Pass

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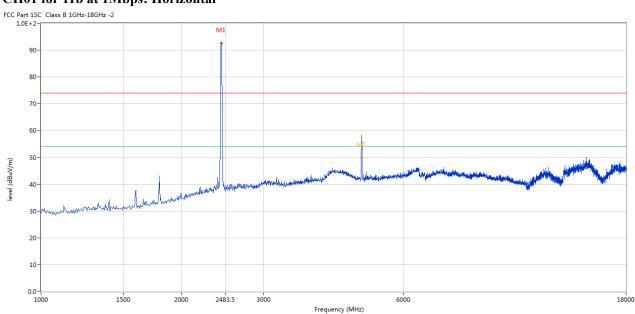
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Please refer to the following test plots for details:

CH01 for 11b at 1Mbps: Horizontal



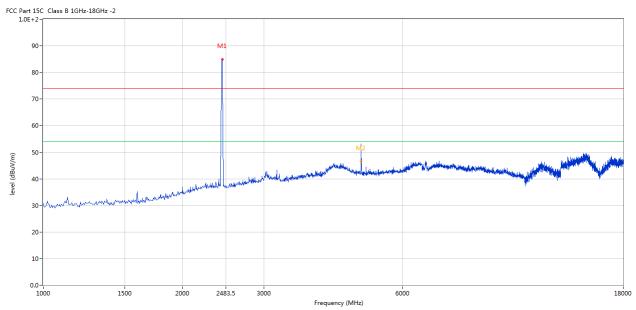
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
2	4825.031	59.51	3.19	74.0	-14.49	Peak	129.00	100	Horizontal	Pass
2**	4825.031	49.67	3.19	54.0	-4.33	AV	129.00	100	Horizontal	Pass

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CH01 for 11b at 1Mbps: Vertical



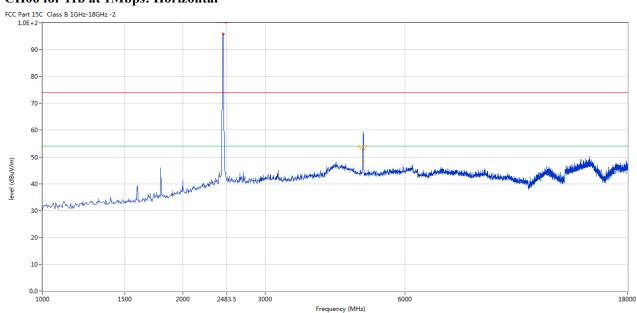
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
2	4825.031	53.17	3.19	74.0	-20.83	Peak	208.00	100	Vertical	Pass
2**	4825.031	46.61	3.19	54.0	-7.39	AV	208.00	100	Vertical	Pass

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CH06 for 11b at 1Mbps: Horizontal



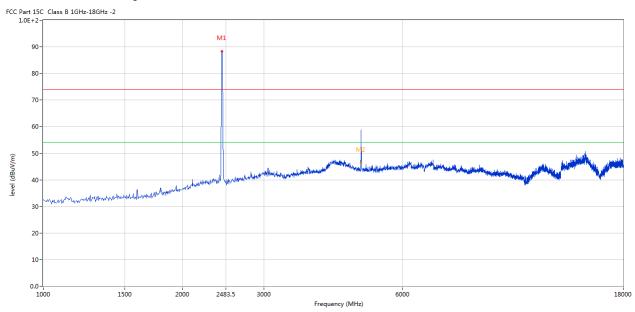
No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
2	4875.126	59.71	3.19	74.0	-14.29	Peak	101.00	100	Horizontal	Pass
2**	4875.126	48.56	3.19	54.0	-5.44	AV	101.00	100	Horizontal	Pass

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CH06 for 11b at 1Mbps: Vertical



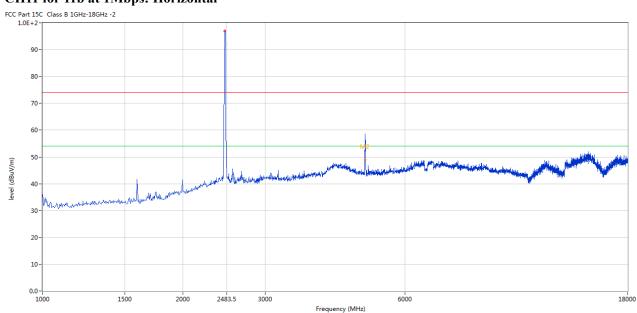
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
2	4875.126	58.75	3.19	74.0	-15.25	Peak	131.00	100	Vertical	Pass
2**	4875.126	46.40	3.19	54.0	-7.60	AV	131.00	100	Vertical	Pass

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CH11 for 11b at 1Mbps: Horizontal



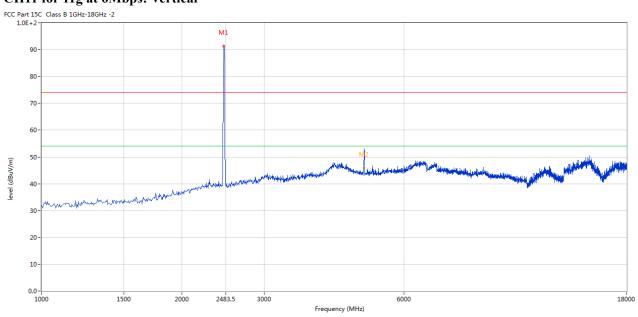
No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
2	4921.770	59.08	3.27	74.0	-14.92	Peak	49.00	100	Horizontal	Pass
2**	4921.770	48.94	3.27	54.0	-5.06	AV	49.00	100	Horizontal	Pass

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CH11 for 11g at 6Mbps: Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
2	4921.770	53.46	3.27	74.0	-20.54	Peak	136.00	100	Vertical	Pass
2**	4921.770	45.94	3.27	54.0	-8.06	AV	136.00	100	Vertical	Pass

Note: 1. Result Level = Reading + Factor

- 2. Factor= AF + Cable Loss- Preamp
- 3. Margin = Result– Limit
- 4. For radiated Emissions from 18-25GHz and below 30MHz, it is only the floor noise.
- 5. The peak value less than the AV limit, no necessary to take down the AV measurement result.

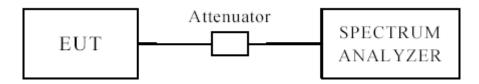
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7.0 6dB Bandwidth Measurement

7.1 Test Setup



7.2 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is >500 kHz

7.3 Test Procedure

- 1. Set resolution bandwidth (RBW) = 100 kHz
- 2. Set the video bandwidth (VBW) \geq 3 x RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

7.4 Test Result

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6dB Occupied Bandwidth

EUT		Commerc	ial Kiosk T	ablet	Mod	lel	EM	T431
Mode		8	302.11b		Input Vol	tage	120	0V~
Temperat	ure	24	deg. C,		Humidity		56%	6 RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ndwidth Hz)		mum Limit MHz)	Pass/ Fail
1		2412	1	10	.10		0.5	Pass
6		2437	1	10	.16		0.5	Pass
11		2462	1	10	.10		0.5	Pass
1		2412	11	11	.46		0.5	Pass
6		2437	11	11	.60		0.5	Pass
11	11 2462		11	11.06		0.5		Pass

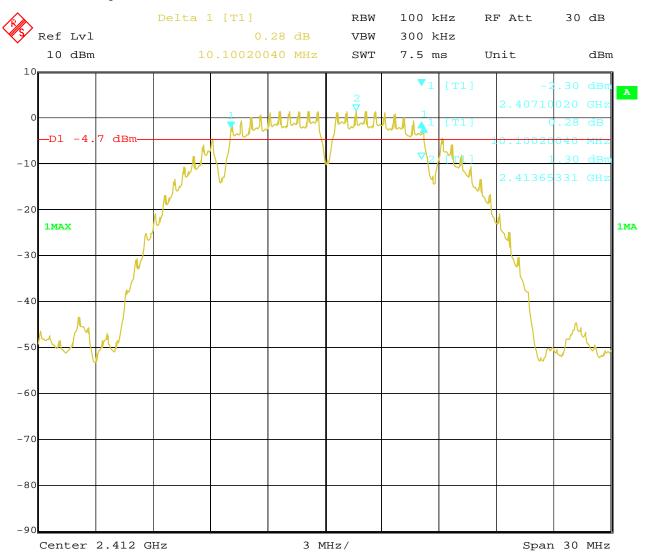
Note: Two antennas were tested and only the worst cased was recorded in the test report. Ant 0 was the worst case.

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1. 802.11b at 1Mbps of CH01

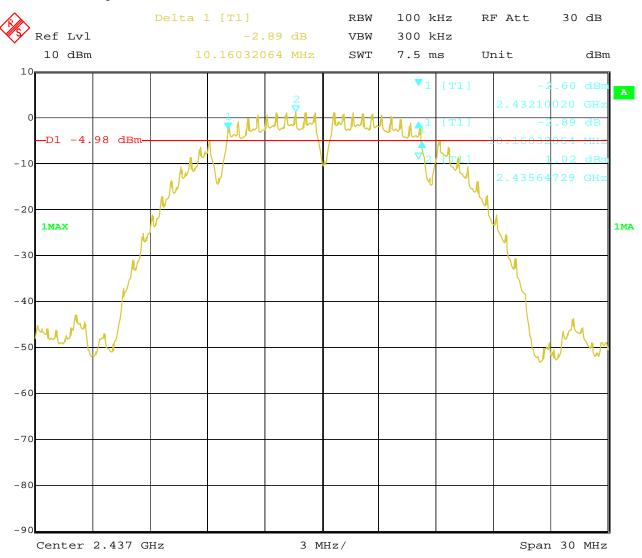


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2. 802.11b at 1Mbps of CH06

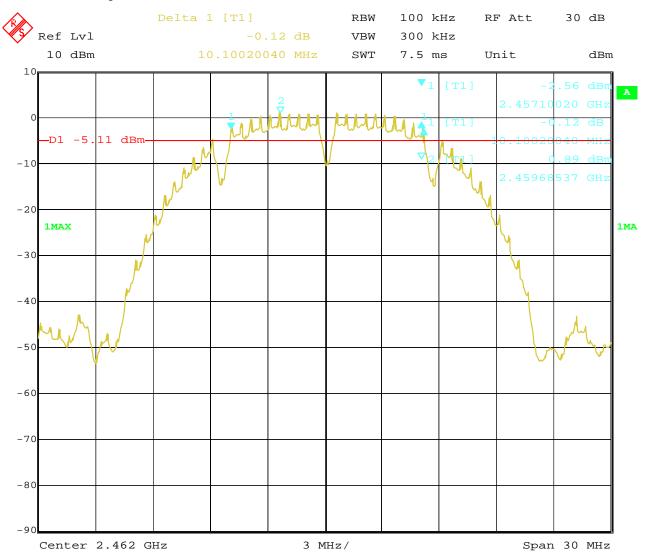


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3. 802.11b at 1Mbps of CH11



Date: 20.AUG.2021 09:43:55

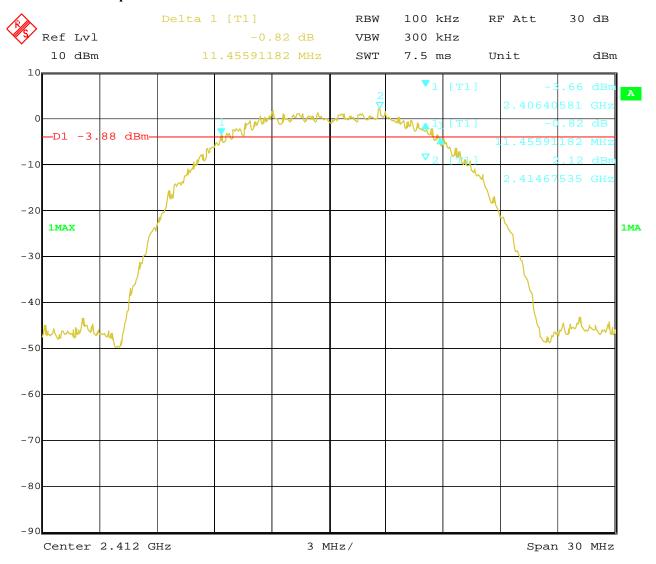
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4. 802.11b at 11Mbps of CH01



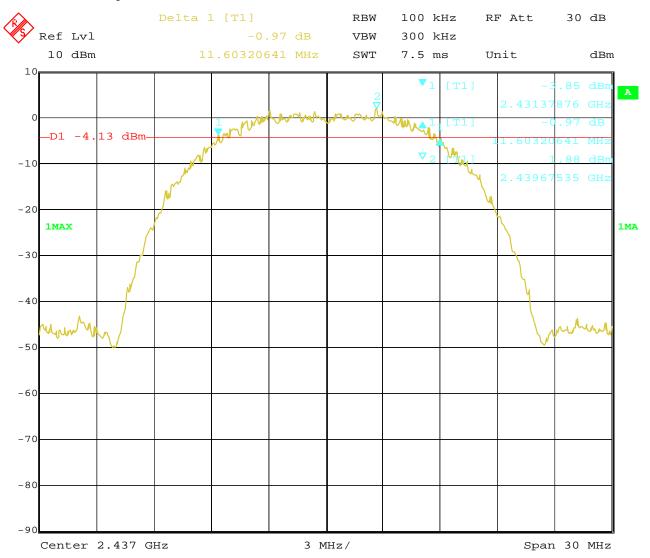
Date: 20.AUG.2021 09:23:34

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5. 802.11b at 11Mbps of CH06



Date: 20.AUG.2021 09:38:37

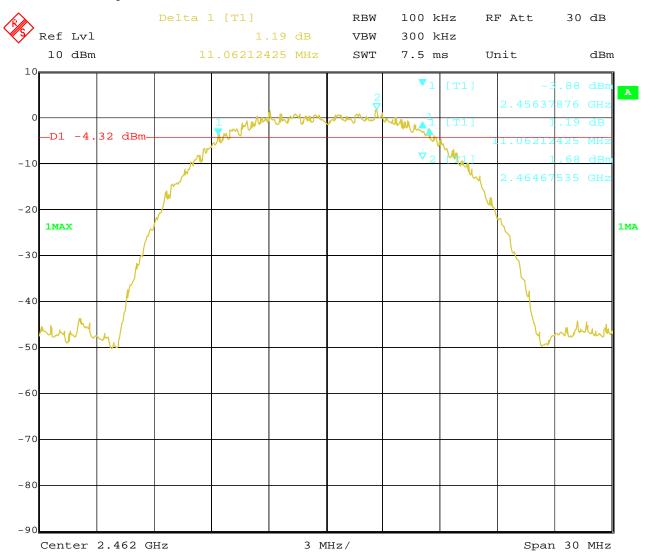
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6. 802.11b at 11Mbps of CH11



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6dB Occupied Bandwidth

EUT		Commerc	ial Kiosk T	ablet	Mod	lel	Е	MT431
Mode		8	302.11g		Input Vol	tage		120V~
Temperat	ure	24	4 deg. C,		Humidity	y		6% RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ndwidth Hz)		mum Limit MHz)	Pass/ Fail
1		2412	6	16	16.33		0.5	Pass
6		2437	6	16	.35	0.5		Pass
11		2462	6	16	.35	0.5		Pass

Note: Two antennas were tested and only the worst cased was recorded in the test report. Ant 0 was the worst case.

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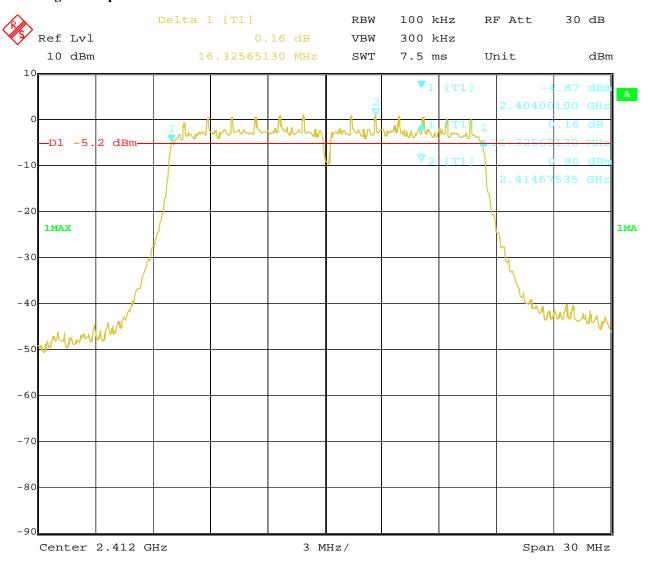
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Test Plots:

1. 802.11g at 6Mbps of CH01



20.AUG.2021 09:28:12 Date:

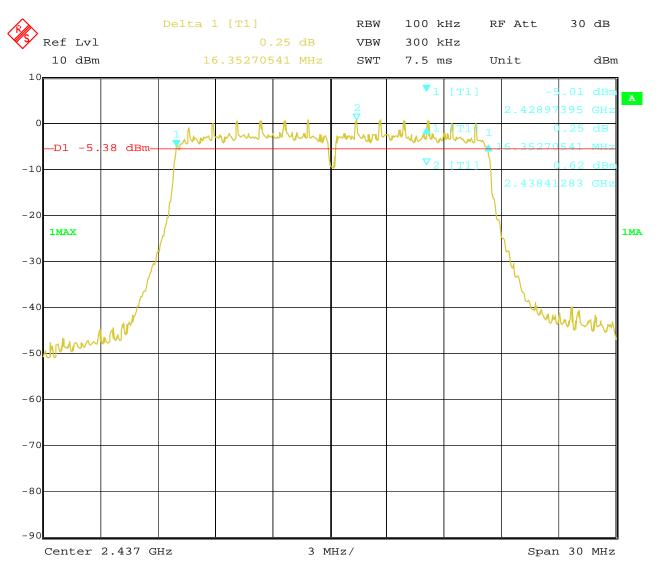
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2. 802.11g at 6Mbps of CH06



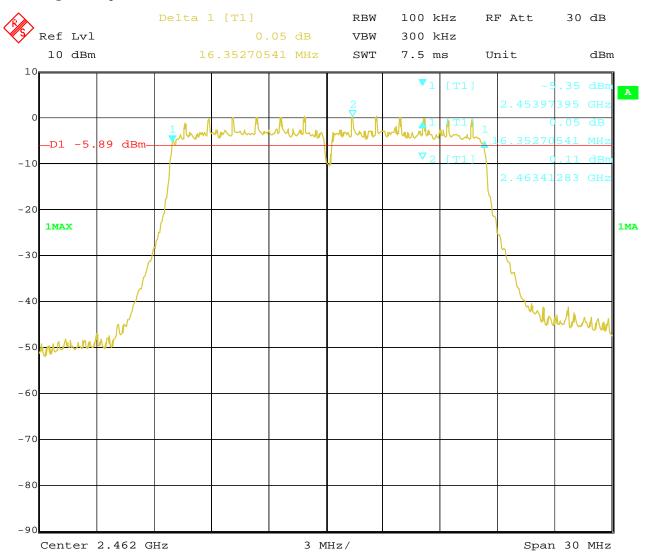
20.AUG.2021 09:31:29 Date:

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3. 802.11g at 6Mbps of CH11



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6dB Occupied Bandwidth

EUT		Commercial Kiosk Tablet			Model		EMT431	
Mode		802.11n HT20			Input Voltage		120V~	
Temperature		24 deg. C,			Humidity		56% RH	
Channel	Channel Frequency (MHz)		Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail
1	2412		mcs0	17.56		0.5		Pass
6		2437	mes0 17.50		56		0.5	Pass
11		2462	mcs0	17.56			0.5	Pass

Note: Two antennas were tested and only the worst cased was recorded in the test report. Ant 0 was the worst case.

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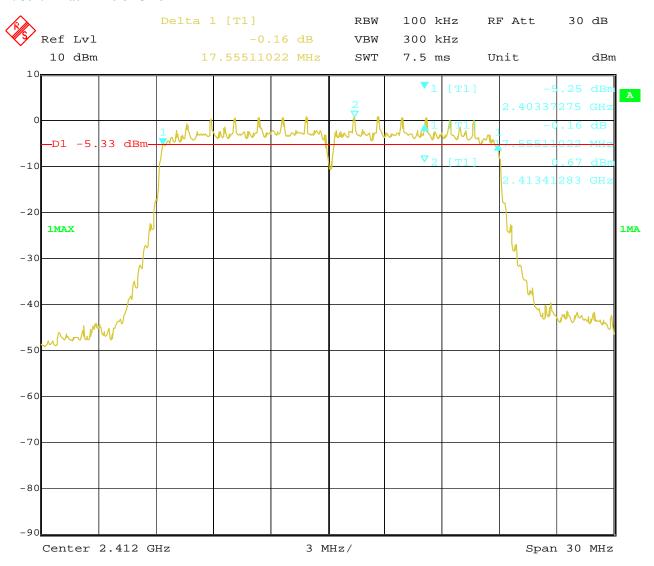
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Test Plots:

1. 802.11n at HT20 of CH01



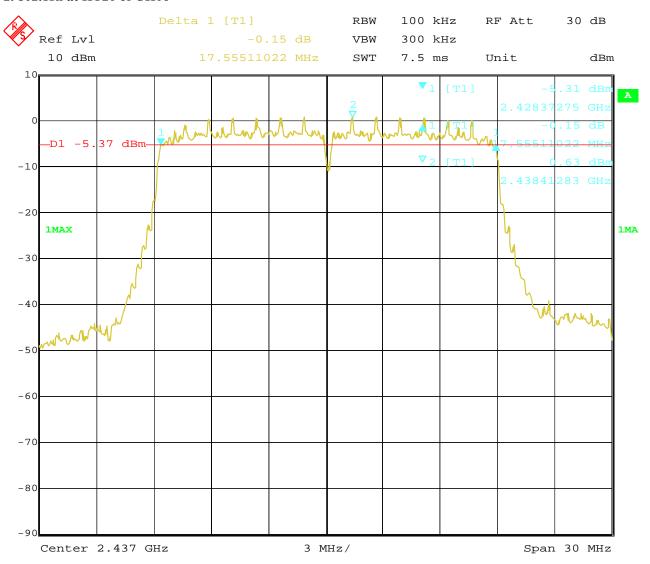
20.AUG.2021 09:51:33 Date:

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2. 802.11n at HT20 of CH06

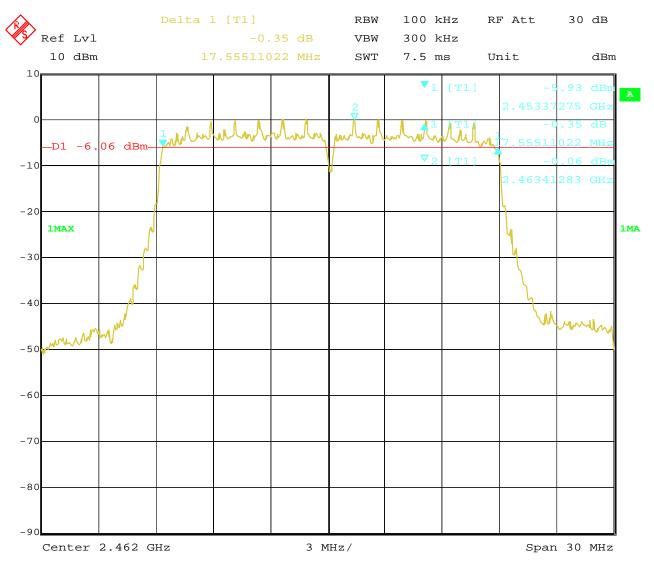


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3. 802.11n at HT20 of CH11



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6dB Occupied Bandwidth

EUT		Commerc	ial Kiosk T	ablet	Model		EMT431	
Mode	ode 802.11n HT40				Input Voltage		120V~	
Temperat	Temperature 2		4 deg. C,		Humidity		56% RH	
Channel	Channel Frequency (MHz)		Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail
3		2422	mcs0	36	.17		0.5	Pass
6		2437		36	.18	.18 0.5		Pass
9	2452		mcs0	36.11		0.5		Pass

Note: Two antennas were tested and only the worst cased was recorded in the test report. Ant 0 was the worst case.

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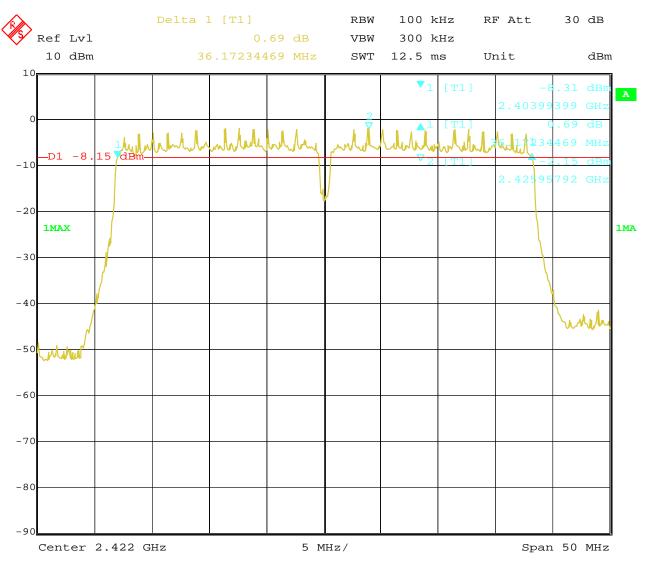
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Test Plots:

1. 802.11n at HT40 of CH03



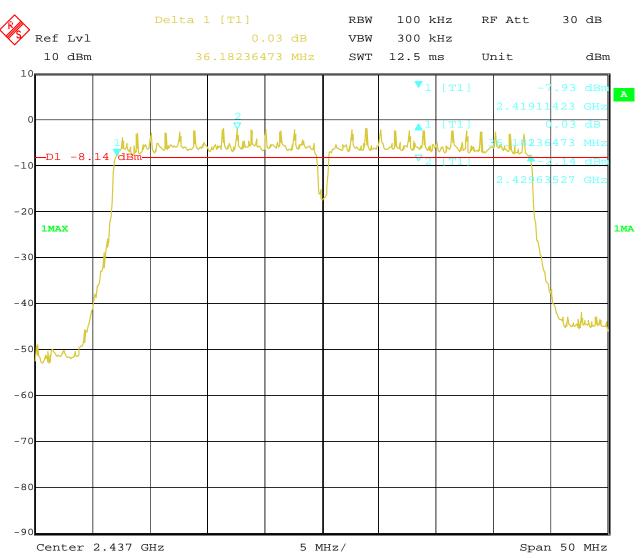
20.AUG.2021 09:53:18 Date:

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2. 802.11n at HT40 of CH06

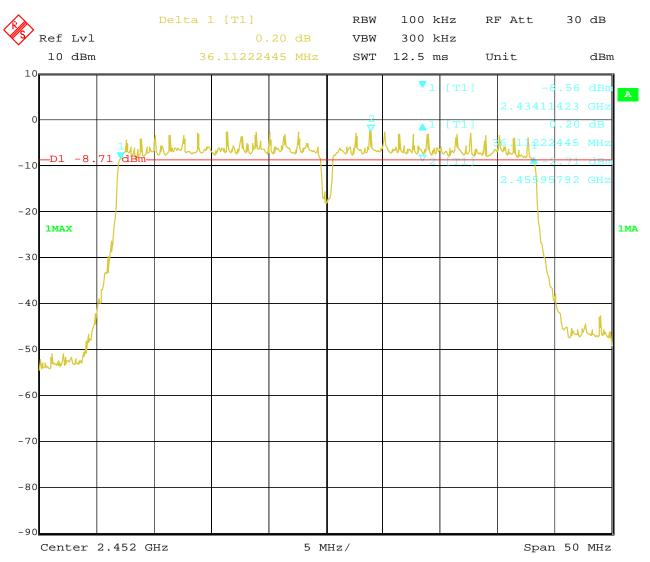


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3. 802.11n at HT40 of CH09



Date: 20.AUG.2021 09:57:05 Report No.: TW2107388-01E

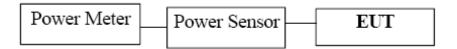
Date: 2021-09-06



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8. Maximum Output Power

8.1 Test Setup



8.2 Limits of Maximum Output Power

The Maximum Output Power Measurement is 30dBm.

8.3 Test Procedure

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate centre frequency.

Note: the Peak power was measured

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8.4Test Results

EUT		Com	mercial	Kiosk Ta	ıblet	Mo	del	EMT431	
Mode		802.11b				Test V	oltage	120V~	
Temperat	Temperature 24 deg. C, Humidity				idity	56% RH			
Channel	Freque	uency z)	Ant 0 I	Power	Ant 1 l	Power	Total Max. Power Output	Power Limit (dBm)	Pass/ Fail
			uDili	111 44	abili	111 VV	(dBm)		
1	2412		17.65	58.21	17.32	53.95	20.50	30	Pass
6	2437		17.51	56.36	17.21	52.60	20.37	30	Pass
11	2462		17.14	51.76	16.92	49.20	20.04	30	Pass

Note: 1. At finial test to get the worst-case emission at 1Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Power Output = Power Reading + Cable loss + Attenuator

3. The worse case was recorded

EUT		Com	mercial	Kiosk Ta	blet	Mo	del	EMT431		
Mode			802.11g			Test V	oltage	120V~		
Temperat	ure		24 de	eg. C,		Hum	idity	idity 56% RH		
Channel	Frequence (MH	uency z)	Ant 0 I	Power mW	Ant 1		Total Max. Power Output (dBm)	Power Limit (dBm)	Pass/ Fail	
1	2412		18.14	65.16	17.91	61.80	21.04	30	Pass	
6	2437		18.14	65.16	17.89	61.52	21.03	30	Pass	
11	2462		17.50	56.23	17.23	52.84	20.38	30	Pass	

Note: 1. At finial test to get the worst-case emission at 6Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow: Power Output = Power Reading + Cable loss + Attenuator

3. The worse case was recorded

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EUT		Con	Commercial Kiosk Tablet			Model			EMT431	
Mode			802.11n	2.11n (HT20)			Test Vo	oltage	120V~	
Temperat	ure		24 de	deg. C, Humi			Humi	idity 56% RH		RH
Channel	1 -	uency	Ant 0 I	Power	Ant 1 I		wer	Total Max. Power	Power Limit	Pass/ Fail
	(MH	z)	dBm	mW	dBm	ı	mW	Output (dBm)	(dBm)	
1	2412		18.28	67.30	18.0	1	63.24	21.16	30	Pass
6	2437		18.24	66.68	17.98	8	62.81	21.12	30	Pass
11	2462		17.62	57.81	17.53	3	56.62	20.59	30	Pass

Note: 1. At finial test to get the worst-case emission at mcs0 of 11n HT20 for CH01, CH06 and CH11

- 2. The result basic equation calculation as follow: Power Output = Power Reading + Cable loss + Attenuator
- 3. The worse case was recorded

EUT		Con	mercial	Kiosk Ta	blet		Mod	del	EMT431	
Mode		802.11n (HT40)				Test Voltage		oltage	120V~	
Temperat	Temperature 24 deg. C, Humi			idity 56% RH		RH				
Channel	Frequ	uency	Ant 0 I	Power	Ant 1 Power		wer	Total Max. Power	Power Limit	Pass/ Fail
Chamier	(MH	z)	dBm	mW	dBm	1	mW	Output (dBm)	(dBm)	1 455/ 1 411
3	2422		18.62	72.78	18.32	2	67.92	21.48	30	Pass
6	2437		18.52	71.12	18.25	5	66.83	21.40	30	Pass
9	2452		17.89	61.52	17.58	8	57.28	20.75	30	Pass

Note: 1. At finial test to get the worst-case emission at mcs0 of 11n HT40 for CH03, CH06 and CH09

2. The result basic equation calculation as follow:

Power Output = Power Reading + Cable loss + Attenuator

3. The worse case was recorded

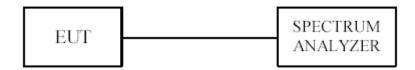
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9. Power Spectral Density Measurement

9.1 Test Setup



9.2 Limits of Power Spectral Density Measurement

The Maximum Power Spectral Density Measurement is 8dBm/3kHz.

9.3 Test Procedure

- 1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
- 2. Set the RBW = 10 kHz.
- 3. Set the VBW \geq 30 kHz.
- 4. Set the span to 1.5 times the DTS channel bandwidth.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
- 11. The resulting peak PSD level must be $\leq 8 \text{ dBm/3kHz}$.

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9.4Test Result

EUT	Commercial Kiosk Tablet		Model		EMT431				
Mode	e 802.11b 11Mbps			Test Voltage			120V~		
Temperat	ture		24 deg. C,		Humidity			56% RH	
Channel	Freq	uency	Ant 0 Power	F	actor	Total Pow	er Spectral	Limit	Pass/ Fail
	(M	IHz)	Spectral Density			Density (d	Bm/10kHz)	(dBm/3kHz)	
1	24	412	-6.67		3.01	-3.66		8	Pass
6	24	437	-6.57		3.01	-3	.56	8	Pass
11	24	462	-6.77		3.01	-3	.76	8	Pass

Note: 1. Total Power Spectral Density = Ant1 Power Spectral Density + Factor

2. Factor=10log2=3.01

3. Ant 0 and Ant 1 were tested and Ant 0 was the worst case

EUT	EUT Commercial Kiosk Tablet		Model		EMT431				
Mode	Mode 802.11b 1Mbps		Test Voltage		120V~				
Temperat	ture		24 deg. C,	4 deg. C,		Humidity		56% RH	
Channel	Freq	uency	Ant 0 Power	F	actor	Total Pow	er Spectral	Limit	Pass/ Fail
	(M	IHz)	Spectral Density			Density (d	Bm/10kHz)	(dBm/3kHz)	
1	24	412	-7.76		3.01	-4	.75	8	Pass
6	24	437	-7.84		3.01	-4	.83	8	Pass
11	24	462	-8.07		3.01	-5	.06	8	Pass

Note: 1. Total Power Spectral Density = Ant1 Power Spectral Density + Factor

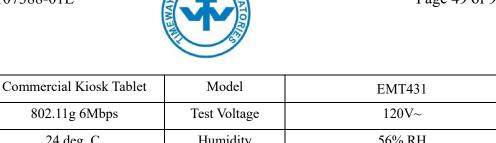
3. Ant 0 and Ant 1 were tested and Ant 0 was the worst case

^{2.} Factor=10log2=3.01

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Mode		802.11g 6Mbps		Test Voltage		120V~			
Temperat	Temperature 24 deg. C,		Hu	ımidity	56% RH				
Channel	Freq	uency	Ant 0 Power	F	actor	Total Pow	er Spectral	Limit	Pass/ Fail
	(M	Hz)	Spectral Density			Density (d	Bm/10kHz)	(dBm/3kHz)	
1	24	112	-7.95		3.01	-4	.94	8	Pass
6	24	137	-7.84		3.01	-4	.83	8	Pass
11	24	162	-8.63		3.01	-5	.62	8	Pass

Note: 1. Total Power Spectral Density = Ant1 Power Spectral Density + Factor

2. Factor=10log2=3.01

3. Ant 0 and Ant 1 were tested and Ant 0 was the worst case

EUT	CUT Commercial Kiosk Tablet		Model		EMT431				
Mode	Mode 802.11n HT20 mcs0		Test Voltage		120V~				
Temperat	ure		24 deg. C,		Humidity		56% RH		
Channel	Freq	uency	Ant 0 Power	F	actor	Total Pow	er Spectral	Limit	Pass/ Fail
	(M	Hz)	Spectral Density			Density (d	Bm/10kHz)	(dBm/3kHz)	
1	24	112	-8.33		3.01	-5	.32	8	Pass
6	24	137	-8.38		3.01	-5	.37	8	Pass
11	24	162	-9.08		3.01	-6	.07	8	Pass

Note: 1. Total Power Spectral Density = Ant1 Power Spectral Density + Factor

2. Factor=10log2=3.01

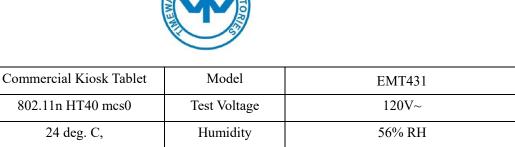
3. Ant 0 and Ant 1 were tested and Ant 0 was the worst case

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EUT

Mode



Temperat	Temperature 24 deg. C,		Humidity		56% RH				
Channel	Frequency A		Ant 0 Power	Factor		Total Power Spectral		Limit	Pass/ Fail
	(M	(Hz)	Spectral Density		Dens		Density (dBm/10kHz)		
3	24	122	22 -11.77		3.01	-8.76		8	Pass
6	24	137	-11.72	3.01		-8.71		8	Pass
9	24	152	-12.42		3.01	-9	.41	8	Pass

Note: 1. Total Power Spectral Density = Ant1 Power Spectral Density + Factor

^{2.} Factor=10log2=3.01

^{3.} Ant 0 and Ant 1 were tested and Ant 0 was the worst case

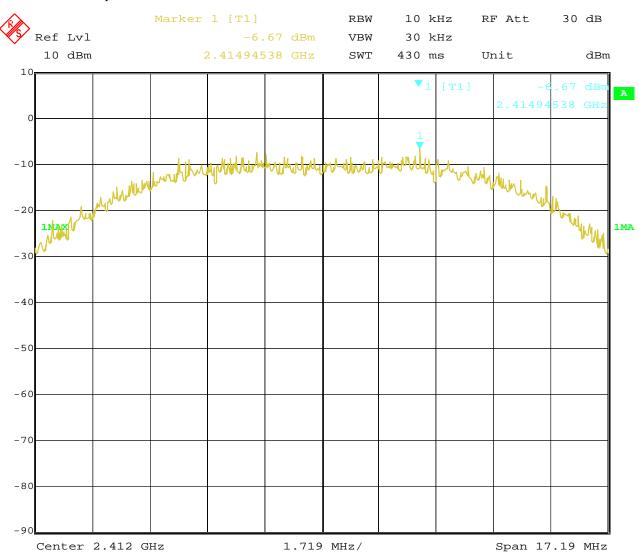
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9.5 Photo of Power Spectral Density Measurement

1.802.11b at 11Mbps of CH01



20.AUG.2021 13:00:30 Date:

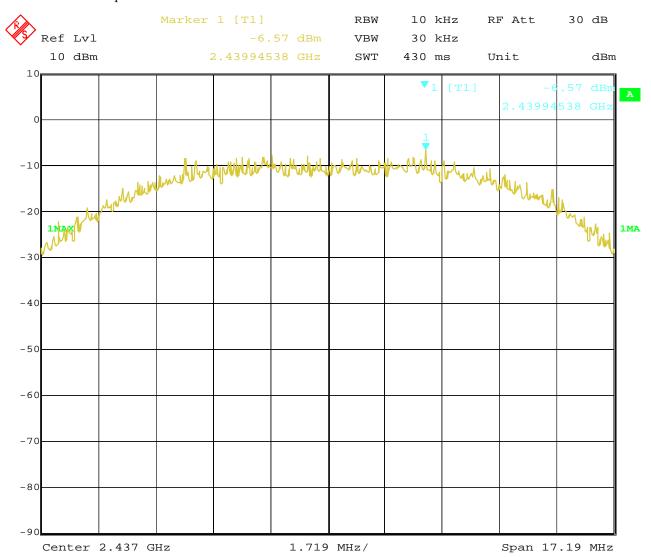
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2. 802.11b at 11Mbps at CH06



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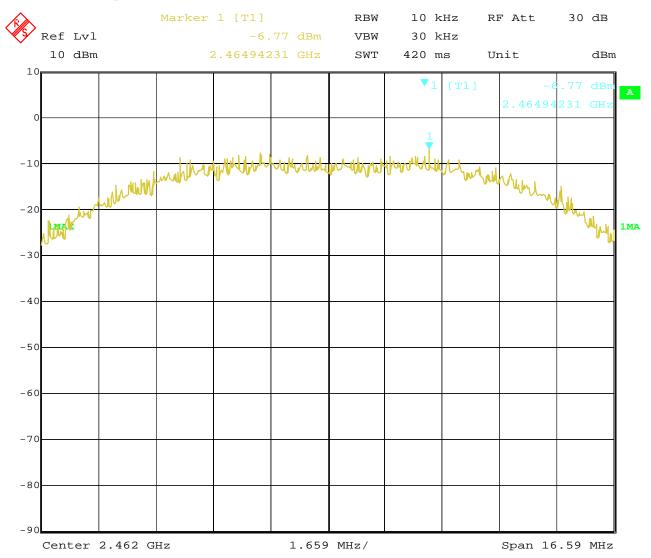
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3. 802.11b at 11Mbps of CH11



Date: 20.AUG.2021 13:02:52

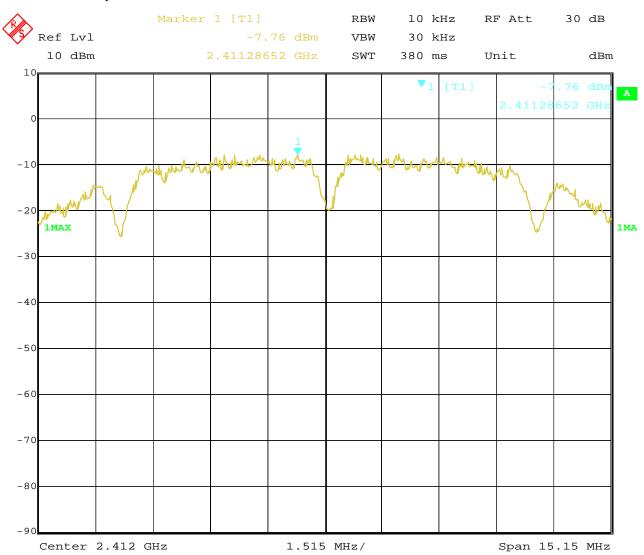
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4. 802.11b at 1Mbps of CH1



Date: 20.AUG.2021 13:07:04

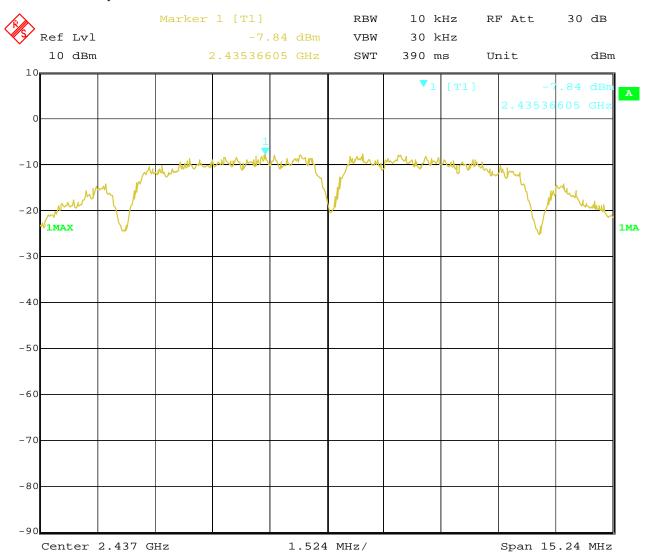
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5. 802.11b at 1Mbps of CH6



Date: 20.AUG.2021 13:09:25

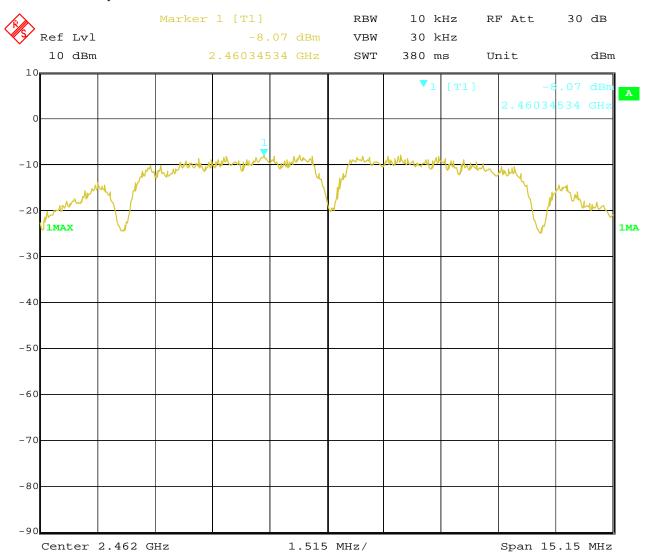
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6. 802.11b at 1Mbps of CH11



Date: 20.AUG.2021 13:05:39

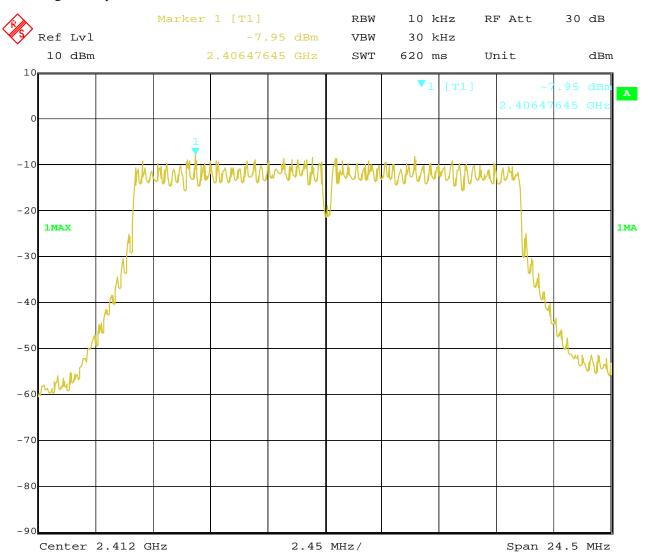
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7. 802.11g at 6Mbps of CH1



Date: 20.AUG.2021 13:14:00

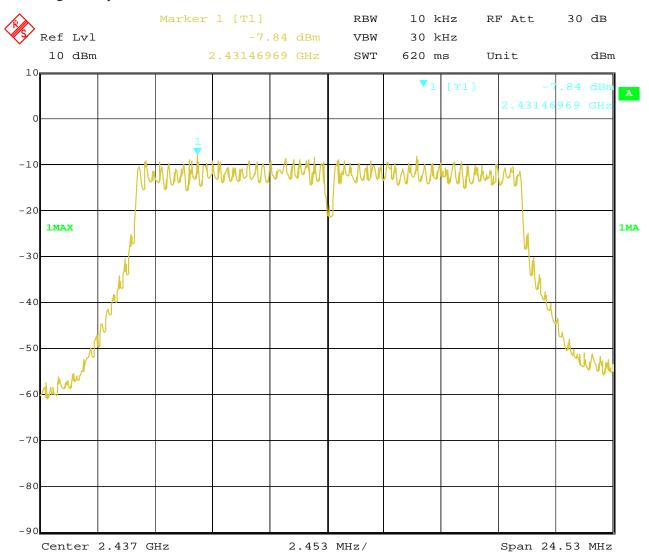
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8. 802.11g at 6Mbps of CH6



Date: 20.AUG.2021 13:11:17

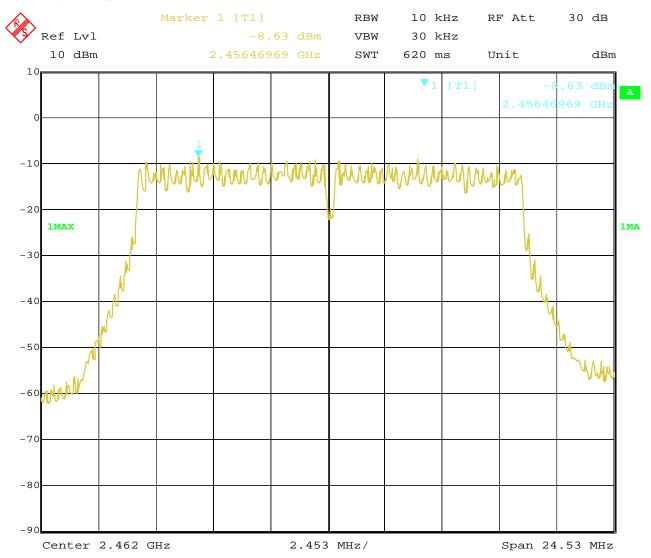
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9. 802.11g at 6Mbps of CH11



Date: 20.AUG.2021 13:12:38

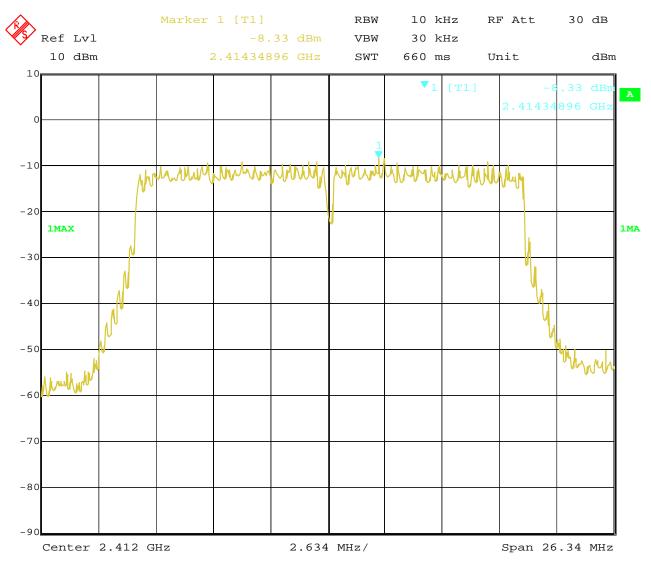
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10. 802.11n at HT20 of CH01



Date: 20.AUG.2021 13:16:10

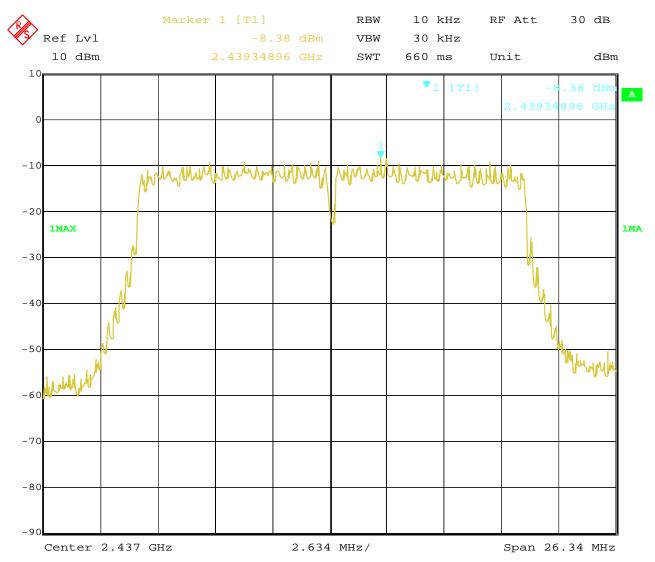
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11. 802.11n at HT20 of CH06



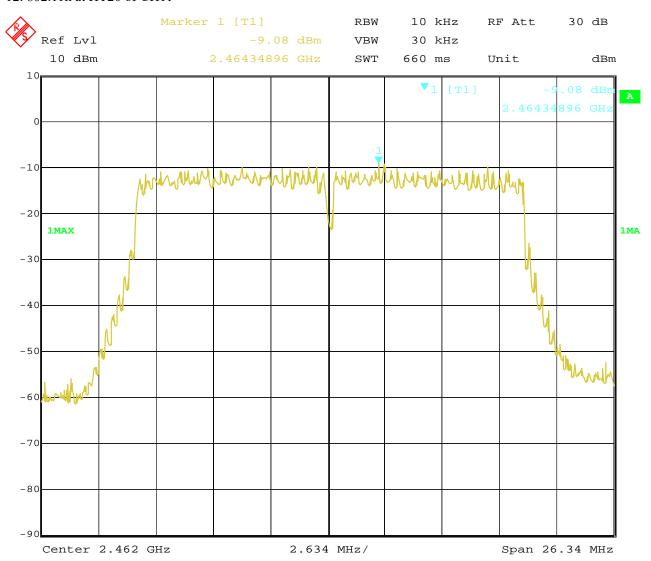
Date: 20.AUG.2021 13:17:24

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12. 802.11n at HT20 of CH11



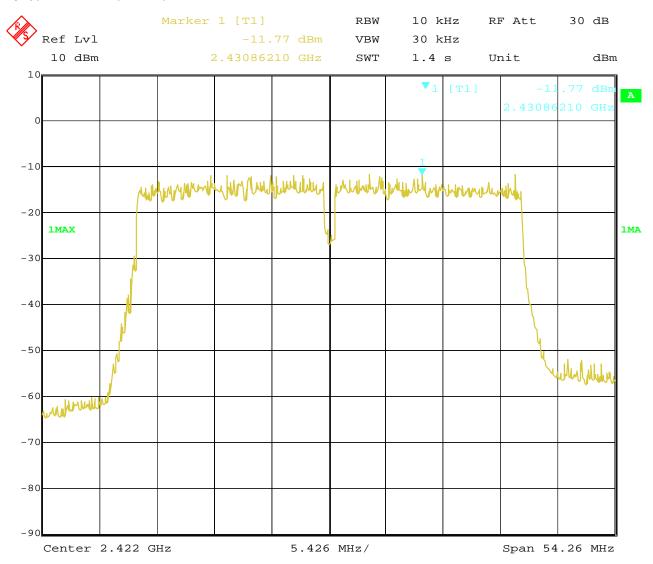
Date: 20.AUG.2021 13:19:01 Page 63 of 98

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13. 802.11n at HT40 of CH01

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Date: 20.AUG.2021 13:20:59

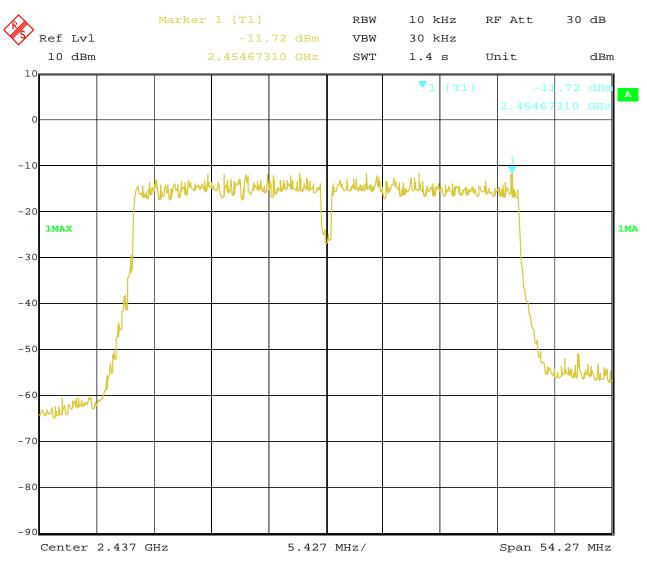
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14. 802.11n at HT40 of CH04



Date: 20.AUG.2021 13:23:49

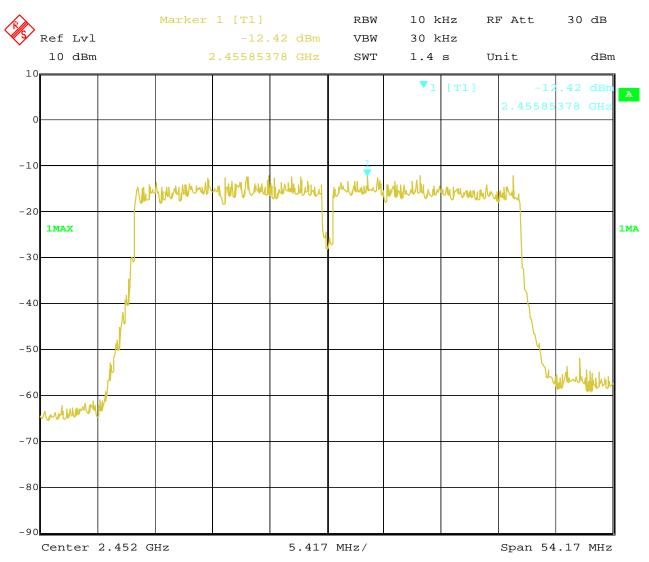
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15. 802.11n at HT40 of CH07



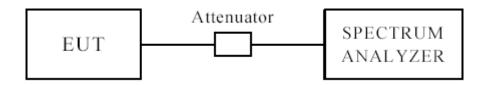
Date: 20.AUG.2021 13:26:35 Report No.: TW2107388-01E Page 66 of 98

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10 Out of Band Measurement

10.1 Test Setup for band edge



The restricted band requirement based on radiated emission test; please see the clause 6 for the test setup

10.2 Limits of Out of Band Emissions Measurement

- 1. Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).
- 2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

10.3 Test Procedure

For signals in the restricted bands above and below the 2.4-2.483GHz allocated band a measurement was made of radiated emission test.(Peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK detector)

For bandage test, the spectrum set as follows: RBW=100, VBW=300 kHz. A conducted measurement used

10.4 Test Result

Please see next pages

Note: 1. For band-edge measurement, the frequency from 30MHz-25GHz was tested. And It met the FCC rule.

2. Two antennas were tested and only the worst cased was recorded in the test report. Ant 0 was the worst case.

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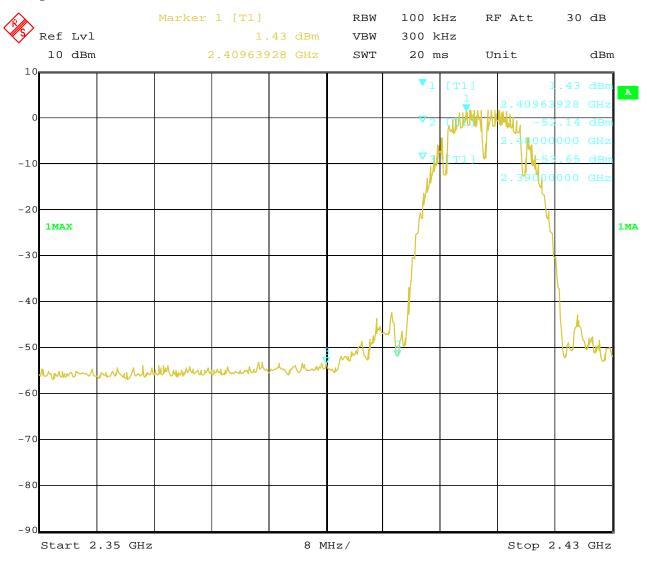
For 802.11b mode

CH01 at 1Mbps

10.4 Band-edge Measurement

EUT	Commercial Kiosk Tablet	Model	EMT431
Mode	Keeping Transmitting	Input Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



20.AUG.2021 13:35:11 Date:

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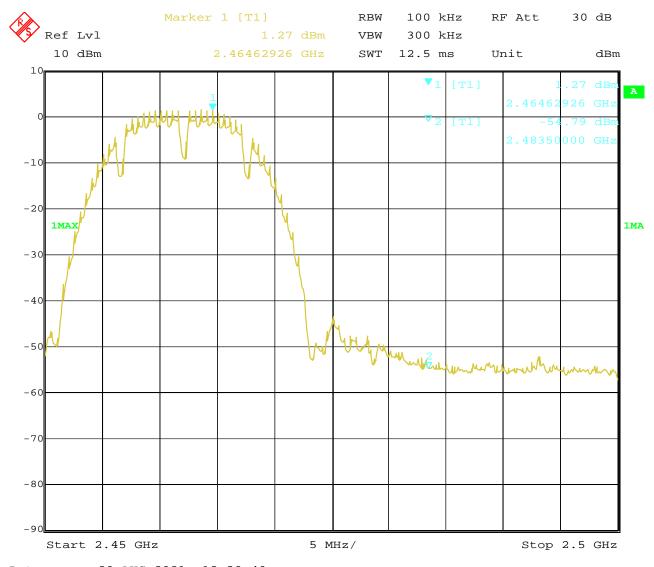


CH11 at 1Mbps

10.4 Band-edge Measurement

EUT	Commercial Kiosk Tablet	Model	EMT431
Mode	Keeping Transmitting	Input Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



20.AUG.2021 13:39:40 Date:

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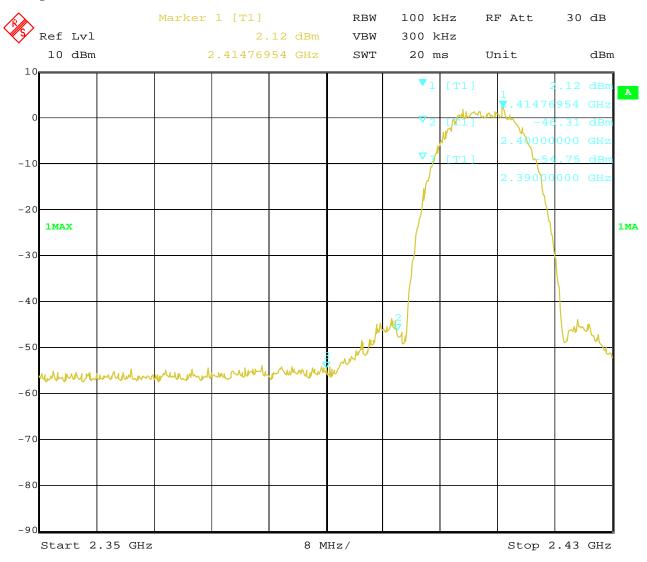
For 802.11b mode

CH01 at 11Mbps

10.4 Band-edge Measurement

EUT	Commercial Kiosk Tablet	Model	EMT431
Mode	Keeping Transmitting	Input Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



20.AUG.2021 13:36:02 Date:

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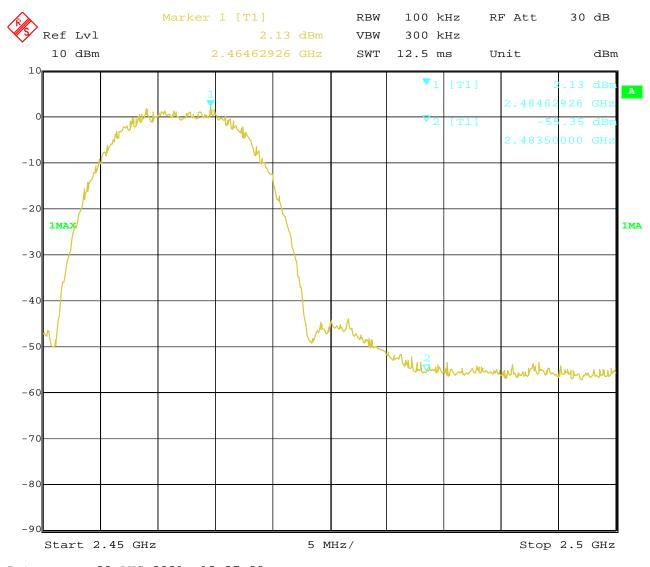


CH11 at 11Mbps

10.4 Band-edge Measurement

EUT	Commercial Kiosk Tablet	Model	EMT431
Mode	Keeping Transmitting	Input Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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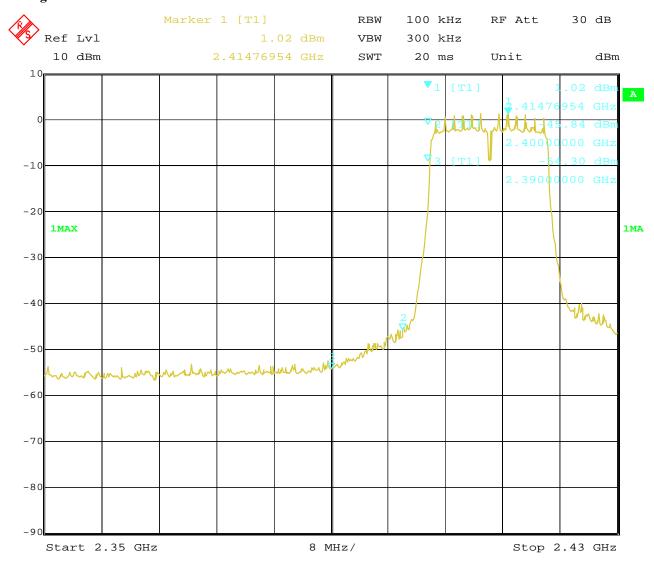
For 802.11g mode

CH01 at 6Mbps

10.4 Band-edge Measurement

EUT	Commercial Kiosk Tablet	Model	EMT431
Mode	Keeping Transmitting	Input Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



20.AUG.2021 13:33:37 Date:

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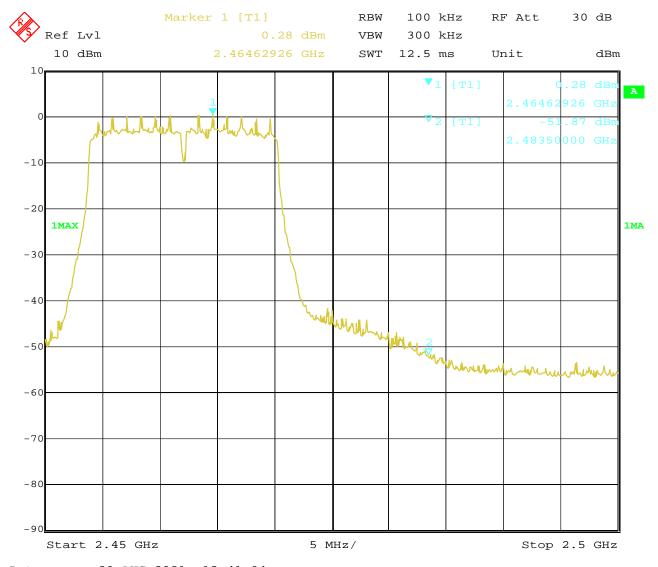


CH11 at 6Mbps

Band-edge Measurement 10.4

EUT	Commercial Kiosk Tablet	Model	EMT431
Mode	Keeping Transmitting	Input Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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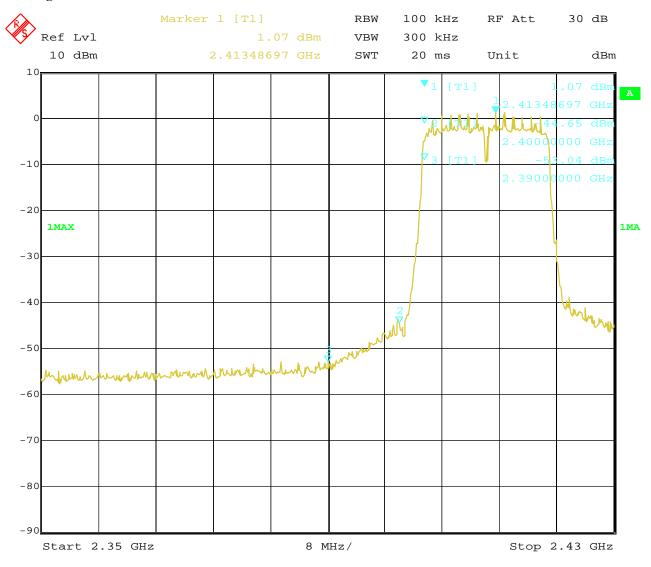
For 802.11n (HT20) mode

CH01 at mcs0

10.4 Band-edge Measurement

EUT	Commercial Kiosk Tablet	Model	EMT431
Mode	Keeping Transmitting	Input Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 20.AUG.2021 13:31:19

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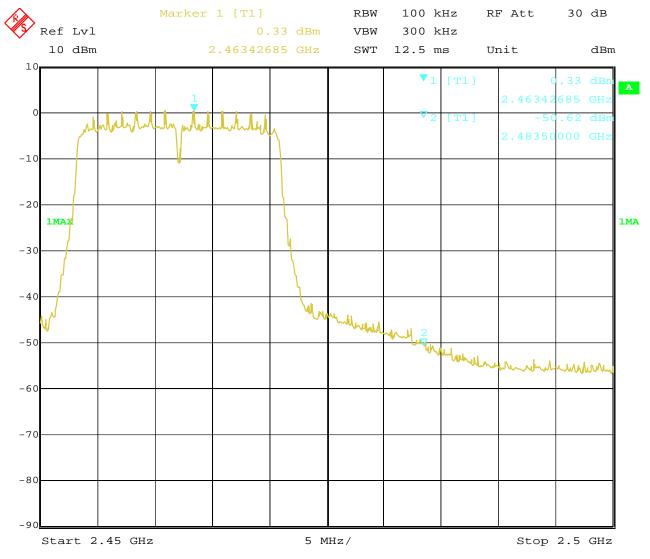


CH11 at mcs0

10.4 Band-edge Measurement

EUT	Commercial Kiosk Tablet	Model	EMT431
Mode	Keeping Transmitting	Input Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



20.AUG.2021 13:42:57 Date:

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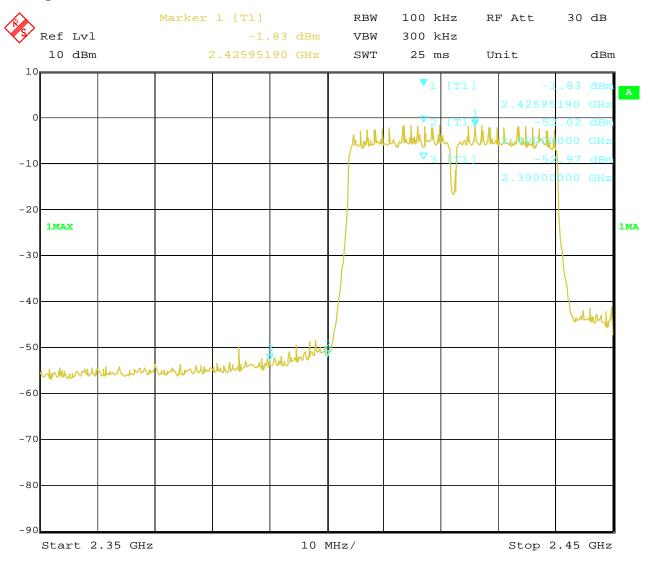
For 802.11n (HT40) mode

CH03 at mcs0

10.4 Band-edge and Restricted band Measurement

EUT	Commercial Kiosk Tablet	Model	EMT431
Mode	Keeping Transmitting	Input Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 20.AUG.2021 13:30:08

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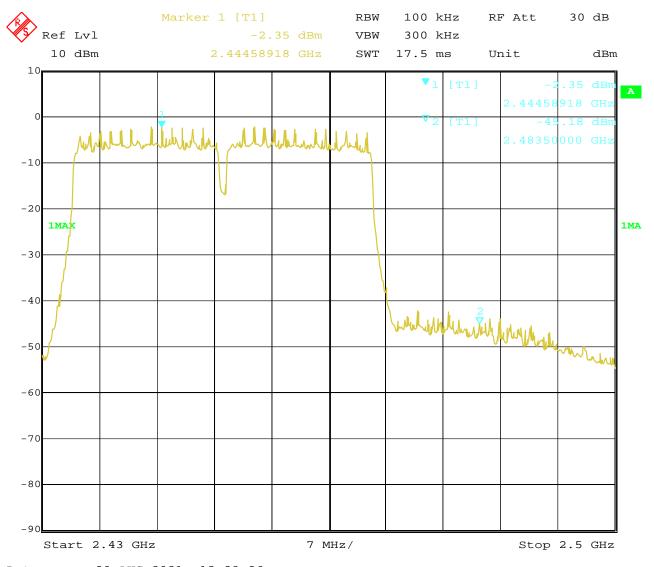


CH09 at mcs0

10.4 Band-edge and Restricted band Measurement

EUT	Commercial Kiosk Tablet	Model	EMT431
Mode	Keeping Transmitting	Input Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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10.5 Restricted band Measurement

EUT	Commercial Kiosk Tablet		Model	EMT431	
Mode	Keeping	g Transmitting	Input Voltage	120V~	
Temperature	24	deg. C,	Humidity	56% RH	
Test Result:		Pass	Detector	PK	
802.11b mode, Low Channel, Horizontal					
2390	PK (dBμV/m)	47.56	T: :/	$74(dB\mu V/m)$	
	AV (dBμV/m)		Limit	54(dBμV/m)	
	802.11b mode, Low Channel, Vertical				
2390	PK (dBμV/m)	44.86	Limit	74(dBμV/m)	
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$	

10.5 Restricted band Measurement

EUT	Commercial Kiosk Tablet		Model	EMT431	
Mode	Keeping	g Transmitting	Input Voltage	120V~	
Temperature	24	deg. C,	Humidity	56% RH	
Test Result:		Pass	Detector	PK	
802.11b mode, High Channel, Horizontal					
2483.5	PK (dBµV/m)	46.01	T :!4	$74(dB\mu V/m)$	
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$	
802.11b mode, High Channel, Vertical					
2483.5	PK (dBµV/m)	44.06	Limit	74(dBμV/m)	
	AV (dBμV/m)			$54(dB\mu V/m)$	

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10.5 Restricted band Measurement

EUT	Commercial Kiosk Tablet		Model	EMT431	
Mode	Keeping	Transmitting	Input Voltage	120V~	
Temperature	24	deg. C,	Humidity	56% RH	
Test Result:	Pass		Detector	PK	
802.11g mode, Low Channel, Horizontal					
2390	PK (dBµV/m)	50.31	T : :/	$74(dB\mu V/m)$	
	AV (dBμV/m)		Limit	54(dBμV/m)	
	802.11g mode, Low Channel, Vertical				
2390	PK (dBμV/m)	46.21	Limit	$74(dB\mu V/m)$	
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$	

Restricted band Measurement 10.5

EUT	Commercial Kiosk Tablet		Model	EMT431
Mode	Keeping	Transmitting	Input Voltage	120V~
Temperature	24	deg. C,	Humidity	56% RH
Test Result:		Pass	Detector	PK
802.11g mode, High Channel, Horizontal				
2483.5	PK (dBµV/m)	48.03	T 114	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$
802.11g, High Channel, Vertical				
2483.5	PK (dBμV/m)	47.50	Limit	74(dBμV/m)
	AV (dBμV/m)			$54(dB\mu V/m)$

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10.5 Restricted band Measurement

EUT	Commercial Kiosk Tablet		Model	EMT431	
Mode	Keeping	g Transmitting	Input Voltage	120V~	
Temperature	24	deg. C,	Humidity	56% RH	
Test Result:		Pass		PK	
	802.11n HT20 mode, Low Channel, Horizontal				
2390	PK (dBμV/m)	53.46	T :!4	$74(dB\mu V/m)$	
	AV (dBμV/m)	35.31	Limit	54(dBµV/m)	
	802.11n HT20 mode, Low Channel, Vertical				
2390	PK (dBμV/m)	47.09	I imit	74(dBμV/m)	
	AV (dBμV/m)		Limit	54(dBμV/m)	

10.5 Restricted band Measurement

EUT	Commercial Kiosk Tablet		Model	EMT431	
Mode	Keeping	Transmitting	Input Voltage	120V~	
Temperature	24	deg. C,	Humidity	56% RH	
Test Result:	Pass		Detector	PK	
802.11n HT20 mode, High Channel, Horizontal					
2483.5	PK (dBμV/m)	54.97	T ' '4	$74(dB\mu V/m)$	
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$	
	802.11n HT20 mode, High Channel, Vertical				
2483.5	PK (dBµV/m)	50.75	Timit	74(dBμV/m)	
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$	

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10.5 Restricted band Measurement

EUT	Commerci	al Kiosk Tablet	Model	EMT431	
Mode	Keeping	Transmitting	Input Voltage	120V~	
Temperature	24	deg. C,	Humidity	56% RH	
Test Result:		Pass		PK	
	802.11n HT40 mode, Low Channel, Horizontal				
2390	PK (dBμV/m)	55.69	T: '/	$74(dB\mu V/m)$	
	AV (dBμV/m)	37.92	Limit	54(dBμV/m)	
	802.11n HT20 mode, Low Channel, Vertical				
2390	PK (dBµV/m)	50.12	T :	$74(dB\mu V/m)$	
	AV (dBμV/m)		- Limit	54(dBμV/m)	

10.5 Restricted band Measurement

EUT	Commercial Kiosk Tablet		Model	EMT431
Mode	Keeping	Transmitting	Input Voltage	120V~
Temperature	24	deg. C,	Humidity	56% RH
Test Result:		Pass	Detector	PK
802.11n HT40 mode, High Channel, Horizontal				
2483.5	PK (dBμV/m)	53.26	T 114	$74(dB\mu V/m)$
	AV (dBμV/m)	35.03	Limit	$54(dB\mu V/m)$
802.11n HT20 mode, High Channel, Vertical				
2483.5	PK (dBμV/m)	51.59	Limit	74(dBμV/m)
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$

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11.0 Antenna Requirement

11.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitter antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the mount in dB that the directional gain of the antenna exceeds 6 dBi.

11.2 Antenna Connected construction

Two Dipole antennas used. The gain of the antenna is 2.20dBi for each one.

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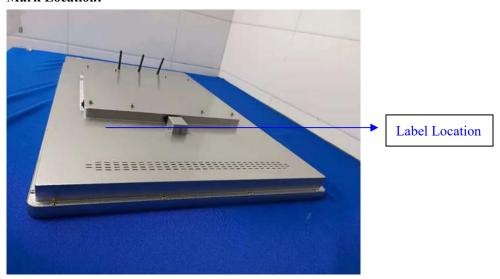
12.0 FCC ID Label

FCC ID: 2AACS-EMT431

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



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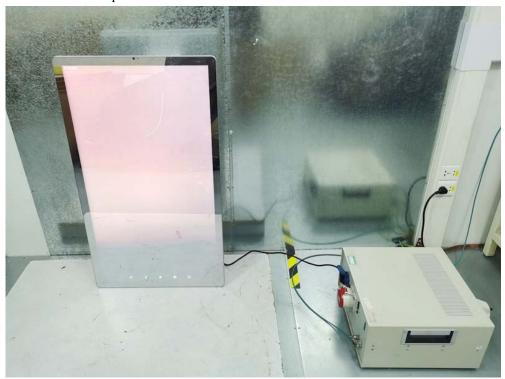
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13.0 **Photo of testing**

Conducted Emission Test Setup:



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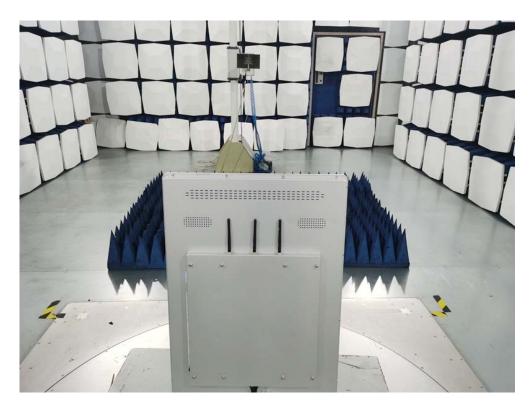
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Radiated Emission Test Setup:





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Photographs - EUT

Outside View





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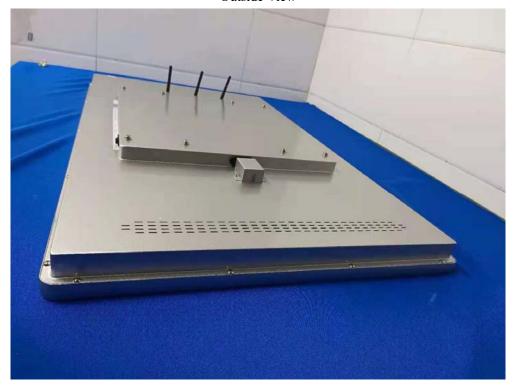
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Outside View





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Outside View



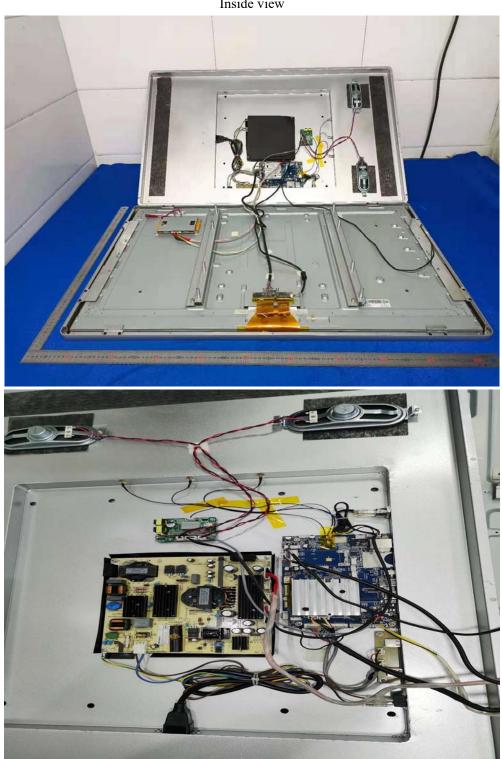
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Inside view



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Inside view





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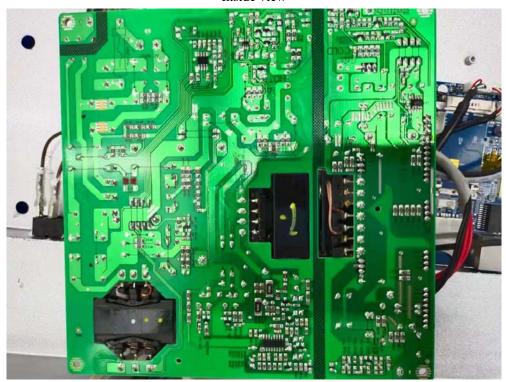
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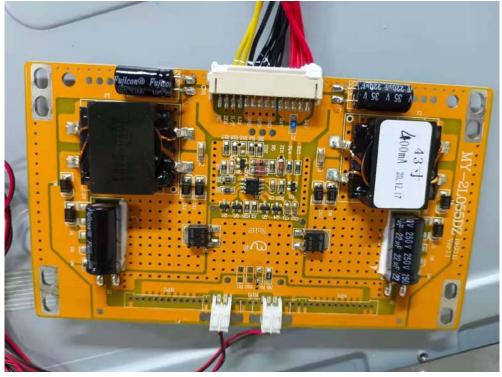
Report No.: TW2107388-01E

Date: 2021-09-06



Inside view





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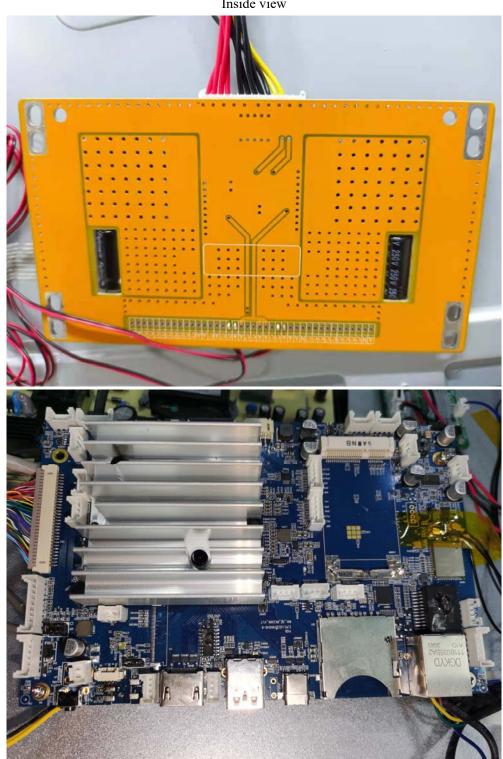
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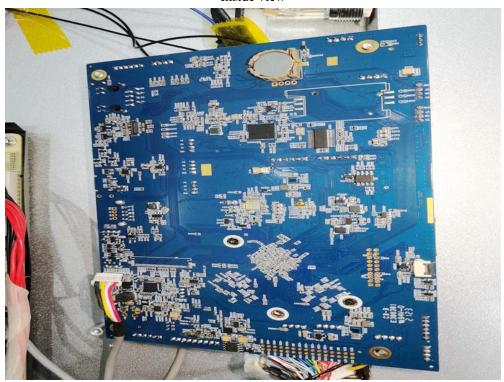
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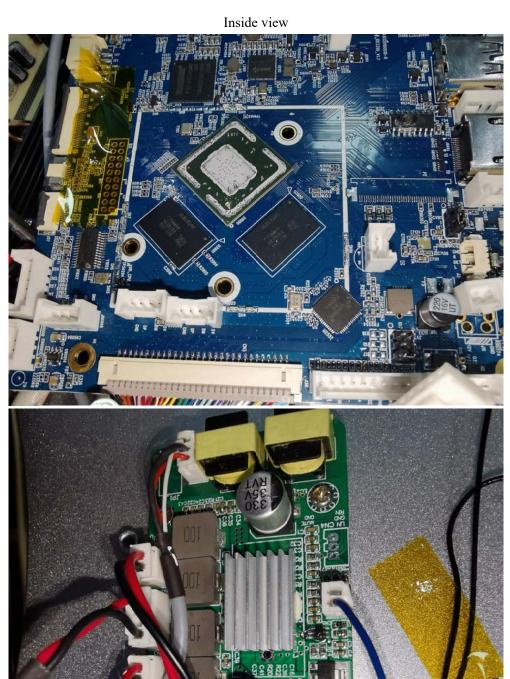
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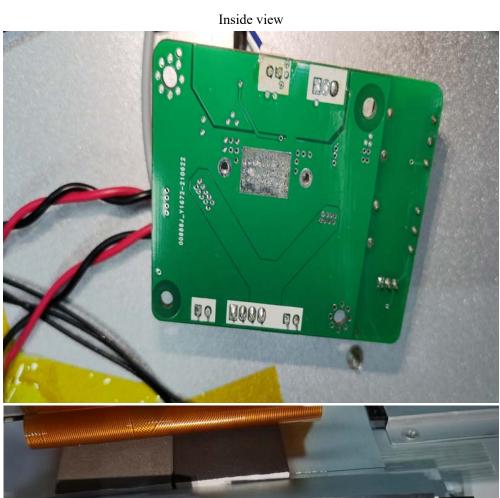
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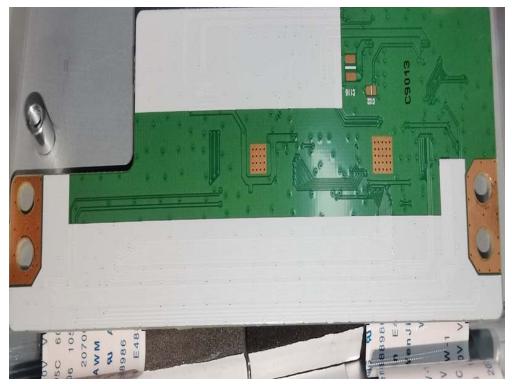
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Inside view



End of the report