

FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

For

1080P Pan/Tilt Wi-Fi Indoor Security Camera

MODEL NUMBER: IP2M-841B-V3

ADDTIONAL MODEL NUMBER: IP2M-841W-V3

PROJECT NUMBER: 4790465786-2

REPORT NUMBER: 4790465786-2-1

FCC ID: ZZ2-IP2M-841-V3

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Prepared for

Amcrest Technologies LLC.

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	07/20/2022	Initial Issue	



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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Address:	Amcrest Technologies LLC. 16727 Park Row Dr, Houston, America	TX 77084, United States of			
Manufacturer Information Company Name: Address:	Amcrest Technologies LLC. 16727 Park Row Dr, Houston, America	TX 77084, United States of			
EUT Description Product Name: Model Name: Additional No.: Sample Number: Data of Receipt Sample: Date Tested:	1080P Pan/Tilt Wi-Fi Indoor Secu IP2M-841B-V3 IP2M-841W-V3 5102560 Jun 28, 2022 Jun 28, 2022~ Jul. 20, 2022	rity Camera			
APPLICABLE STANDARDS					
ST	ANDARD	TEST RESULTS			
FCC 47CFR	Part 15 Subpart C	PASS			



Summary of Test Results						
Clause	Test Items	FCC Rules	Test Results			
1	6db DTS Bandwidth	FCC 15.247 (a) (2)	Complied			
2	Conducted Power	FCC 15.247 (b) (3)	Complied			
3	Power Spectral Density	FCC 15.247 (e)	Complied			
4	Conducted Band edge And Spurious emission	FCC 15.247 (d)	Complied			
5	Radiated Band edges and Spurious emission	FCC 15.247 (d) FCC 15.209 FCC 15.205	Complied			
6	Conducted Emission Test For AC Power Port	FCC 15.207	Complied			
7	Antenna Requirement	FCC 15.203	Complied			
Remark: The measurement result for the sample received is <pass> according to < ANSI C63.10-2013,</pass>						

FCC CFR 47 Part 2, FCC CFR 47 Part 15C> when <Accuracy Method> decision rule is applied.

Prepared By:

Reviewed By:

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	A2LA (Certificate No.: 4829.01) UL-CCIC COMPANY LIMITED has been assessed and proved to be in compliance with A2LA. FCC (FCC Designation No.: CN1247) UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules. IC (IC Designation No.: 25056; CAB No.:CN0073) UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.
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Note 1: All tests measurement facilities use to collect the measurement data are located at No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122, People's Republic of China

Note 2: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. These measurements below 30MHz had been correlated to measurements performed on an OFS.

Note 3: The test anechoic chamber in UL-CCIC COMPANY LIMITED had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.



4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty		
Conduction emission	3.1dB		
Radiation Emission test(include Fundamental emission) (9KHz-30MHz)	3.4dB		
Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	3.4dB		
Radiation Emission test (1GHz to 26GHz)(include Fundamental emission)	3.7dB (1GHz-18Gz)		
	4.0dB (18GHz-26.5Gz)		
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.			

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

PSK, BPSK)
onsible for

Remark:

Model No.:

No.:	Name:	No.:	Name:
1	IP2M-841B-V3	2	IP2M-841W-V3

Only the main model **IP2M-841B-V3** was tested and only the data of this model is shown in this test report. Since Their material, types of enclosure, antenna location, electrical circuit design, layout, components used and internal wiring are identical, only the name and color of the models are different.



5.2. MAXIMUM OUTPUT POWER

Number of Transmit Chains (NTX)	IEE Std. 802.11	Channel Number	Max AV Conducted Power (dBm)
1	IEEE 802.11B SISO	1-11[11]	11.82
1	IEEE 802.11G SISO	1-11[11]	9.50
1	IEEE 802.11nHT20	1-11[11]	9.20
1	IEEE 802.11nHT40	3-9[7]	7.74

5.3. CHANNEL LIST

	Channel List for 802.11b/g/n (20 MHz)						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	4	2427	7	2442	10	2457
2	2417	5	2432	8	2447	11	2462
3	2422	6	2437	9	2452		

Channel List for 802.11n (40 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	5	2432	7	2442	9	2452
4	2427	6	2437	8	2447		



5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel	Frequency
WiFi TX(802.11b)	CH 1, CH 6, CH 11	2412MHz, 2437MHz, 2462MHz
WiFi TX(802.11g)	CH 1, CH 6, CH 11	2412MHz, 2437MHz, 2462MHz
WiFi TX(802.11n HT20)	CH 1, CH 6, CH 11	2412MHz, 2437MHz, 2462MHz
WiFi TX(802.11n HT40)	CH 3, CH 6, CH 9	2422MHz, 2437MHz, 2452MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The W	The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band										
Test Softw	vare		Sec	ure CRT (mar	nufacturer de	clare)					
	Transmit		Test Channel								
Modulation Mode	Antenna		NCB: 20M⊦	lz	NCB: 40MHz						
Mode	Number	CH 1	CH 6	CH 11	CH 3	CH 6	CH 9				
802.11b	1	N/A	N/A	N/A							
802.11g	1	N/A	N/A	N/A		/					
802.11n HT20	1	N/A	N/A	N/A							
802.11n HT40	1		/	N/A	N/A						

Remark: Although this EUT looks like it has two antennas, but the only one antenna is working, another is no function just for decoration.



5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2400-2483.5	IFA Antenna	2.84

Test Mode	Transmit and Receive Mode	Description			
IEEE 802.11b	⊠1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.			
IEEE 802.11g	⊠1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.			
IEEE 802.11N (HT20)	⊠1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.			
IEEE 802.11N (HT40)	⊠1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.			

5.7. THE WORSE CASE CONFIGURATIONS

For the product, there only one transmission antenna, and worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps 802.11g mode: 6 Mbps 802.11n HT20 mode: MCS0 802.11n HT40 mode: MCS0



5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Description
1	Laptop	ThinkPad	E590	N/A
2	SD Card	N/A	N/A	Supply by UL Lab

I/O PORT

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	USB to TTL	USB	100cm Length	N/A
2	LAN	LAN	LAN	100cm Length	N/A

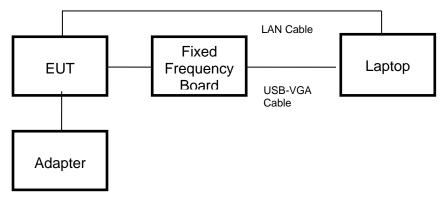
ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	AC Adapter	N/A	E010- 1D050150VUU	INPUT:100-240V~, 50/60Hz, 0.3A OUTPUT:5.0V=1.5A

TEST SETUP

The EUT can work in an engineer mode with a software through a table PC.

SETUP DIAGRAM FOR TESTS



Remark: The EUT has been built one SD card during the testing



5.9. MEASURING INSTRUMENT AND SOFTWARE USED

	Conducted Emissions (Instrument)								
Used	Equipment	Manufacturer	Model	No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.	
\checkmark	EMI Test Receiver	R&S	ESR	3	126700	2020-12-05	2021-12-04	2022-12-03	
	Two-Line V- Network	R&S	ENV2		126701	2020-12-05	2021-12-04	2022-12-03	
				Soft	ware				
Used	Des	cription		Ma	nufacturer	Name	Version		
\checkmark	Test Software for C	Conducted distu	ırbance		R&S	EMC32	Ver. 9.25		
		Ra	diated E	missi	ons (Instrum	nent)			
Used	Equipment	Manufacturer	Model	No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.	
\checkmark	Spectrum Analyzer	Keysight	N901		155727	2021-05-09	2022-04-09	2023-04-08	
	EMI test receiver	R&S	ESR	26	126703	2020-12-05	2021-12-04	2022-12-03	
	Receiver Antenna (9kHz-30MHz)	Schwarzbeck	FMZB ²	1513	155456	2018-06-15	2021-06-03	2024-06-02	
	Receiver Antenna (30MHz-1GHz)	SunAR RF Motion	JB1	I	177821	2019-01-28	2022-01-18	2025-01-17	
\checkmark	Receiver Antenna (1GHz-18GHz)	R&S	HF90	07	126705	2018-01-29	2022-02-28	2025-02-27	
V	Receiver Antenna (18GHz-26.5GHz)	ETS	3160-	·10	155565	2019-01-05	2021-07-15	2024-07-14	
	Pre-amplification (To 18GHz)	Compliance Direction System Inc.	PAP-10 50		177825	2021-03-18	2022-03-01	2023-02-28	
V	Pre-amplification (To 26.5GHz)	R&S	SCU-2	26D	135391	2021-12-05	2022-12-04	2022-12-03	
V	Band Reject Filter	Wainwright	WRCJ 2350-2 2483 2533.5-4	400- .5-	1	2021-05-09	2022-04-09	2023-04-08	
	Highpass Filter	Wainwright	WHKX 2700-3 18000-4	000-	2	2021-05-09	2022-04-09	2023-04-08	
				Soft	ware				
Used	Descr	•		anufac	turer	Name	Version		
\checkmark	Test Software for R	adiated disturba		onsce		36-RSE	4.0.0.1		
			Oth	er ins	truments				
Used	Equipment	Manufacturer	Model	No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.	
\checkmark	Spectrum Analyzer	Keysight	N901	0B	155368	2021-05-09	2022-04-09	2023-04-08	
	Power Meter	Keysight	U2021	XA	155370	2021-05-09	2022-04-09	2023-04-08	



6. MEASUREMENT METHODS

No.	Test Item	KDB Name	Section
1	6dB Bandwidth	KDB 558074 D01 15.247 Meas Guidance v05r02	8.2
2	Conducted Output Power	KDB 558074 D01 15.247 Meas Guidance v05r02	8.3.2.3 (Method AVGPM)
3	Power Spectral Density	KDB 558074 D01 15.247 Meas Guidance v05r02	8.4 (Method PKPSD)
4	Out-of-band emissions in non-restricted bands	KDB 558074 D01 15.247 Meas Guidance v05r02	8.5
5	Out-of-band emissions in restricted bands	KDB 558074 D01 15.247 Meas Guidance v05r02	8.6
6	Band-edge	KDB 558074 D01 15.247 Meas Guidance v05r02	8.7
7	Conducted Emission Test For AC Power Port	ANSI C63.10-2013	6.2



7. ANTENNA PORT TEST RESULTS

7.1. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests
Relative Humidity	57.5%
Atmospheric Pressure:	101kPa
Temperature	23.7°C



7.2. ON TIME AND DUTY CYCLE

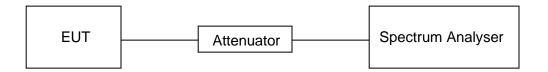
<u>LIMITS</u>

None; for reporting purposes only

PROCEDURE

FCC KDB 558074 Zero-Span Spectrum Analyzer Method

TEST SETUP

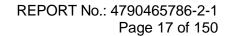


RESULTS

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/T Minimum VBW (KHz)	Final Minimum VBW (KHz)
11B	12.42	12.46	0.997	99.7	0.01	/	0.01(Note4)
11G	2.06	2.30	0.896	89.6	0.48	0.49	1
11N HT20	1.92	2.17	0.885	88.5	0.53	0.52	1
11N HT40	0.95	1.19	0.798	79.8	0.98	1.05	2

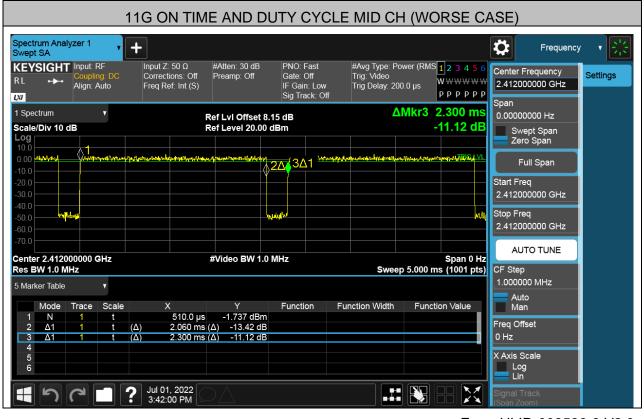
Note: 1) Duty Cycle Correction Factor=10log(1/x).

- 2) Where: x is Duty Cycle(Linear)
- 3) Where: T is On Time (transmit duration)
- 4) The minimum VBW should be 10Hz if the duty cycle is over 98%.





				11B (E AND D	UTY	CYC	LE M	ID CH	H (WC	DRSE C/	ASE)			
Spectr Swept		yzer 1	•	+									₽	Frequency	, ,	12 12
KEYS RL	SIGH1	Input: Coupli Align:	ng: DC	Corr	t Z: 50 Ω rections: Off ι Ref: Int (S)	#Atten: 30 dB Preamp: Off			∣nng.	g Type: Po : Video Delay: 20		³ 123456 W\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		Frequency 100000 GHz	Settings	
1 Spec Scale/	trum Div 10 (dB	T			Ref LvI Offset 8 Ref Level 20.00	3.15 dB			Δ	Mkr3	12.46 ms -0.06 dB	Sv	00000 Hz ⁄ept Span		
Log 10.0 0.00							∿Jaa≓ a uk u k uta* -	X ₄						ro Span ⁻ ull Span		
-20.0 -30.0 -40.0														000000 GHz		
-50.0 -60.0 -70.0				, N									Stop Fr 2.4120	eq 000000 GHz		
	2.4120 N 1.0 N	00000 Hz	GHz			#Video BW 1.	0 MHz			Swee	p 20.00 r	Span 0 Hz ns (1001 pts)	CF Ste			
	er Table Mode	Trace	▼ Scale		X	Y	Funct	ion	Functior	n Width	Func	tion Value	1.0000 — Au Ma			
1 2 3 4	Ν Δ1 Δ1 F	1 1 1 1	t t t	(Δ) (Δ)		6.366 dBm (Δ) -4.443 dE (Δ)-0.05953 dE 7.308 dBm	3						Freq Of 0 Hz	ffset	1	
5													X Axis : Lo Lir	g		
	ょ	2			01, 2022 31:32 PM								Signal ⁻ (Span Z	Track oom)	1	



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11N HT20 ON TIME AND DUTY CYCLE MID CH (WORSE	E CASE)	
Spectrum Analyzer 1 The Swept SA	Frequency	- * 崇
KEYSIGHT RLInput: RF Coupling: DC Align: AutoInput Z: 50 Ω Corrections: Off Freq Ref: Int (S)#Atten: 30 dB Preamp: OffPNO: Fast Gate: Off IF Gain: Low#Avg Type: Power (RMS 1 2 3 4 5 6 Trig: VideoWWWWWW	2.412000000 GHz	Settings
LVI Sig Track: Off P P P P P P 1 Spectrum Ref Lvl Offset 8.15 dB ΔMkr3 2.170 ms	Span 0.00000000 Hz	
Scale/Div 10 dB Ref Level 20.00 dBm 0.37 dB Log 10.0	Swept Span Zero Span	
0.00 hope burners a general general general second de la	Full Span	
-20.0 -30.0 -40.0	Start Freq 2.412000000 GHz	
-50.0	Stop Freq 2.412000000 GHz	
-70.0 Center 2.412000000 GHz #Video BW 1.0 MHz Span 0 Hz		
Res BW 1.0 MHz Sweep 5.000 ms (1001 pts) 5 Marker Table v	1.000000 MHz	
Mode Trace Scale X Y Function Function Value 1 N 1 t 1.950 ms -13.33 dBm Image: Compare the second s	Auto Man	
2 Δ1 1 t (Δ) 1.920 ms (Δ) -33.96 dB 3 Δ1 1 t (Δ) 2.170 ms (Δ) 0.3704 dB 4	Freq Offset 0 Hz	
	X Axis Scale Log Lin	
■ う C ■ ? Jul 01, 2022 3:49:06 PM	Signal Track (Span Zoom)	

11N HT40 ON TIME AND DUTY CYCLE MID CH (WORSE	CASE)
Spectrum Analyzer 1 v +	Frequency V 🔆
KEYSIGHT Input: RF Input: Z: 50 Ω #Atten: 30 dB PNO: Fast #Avg Type: Power (RMS 1 2 3 4 5 6 R L Coupling: DC Corrections: Off Preamp: Off Gate: Off Trig: Video IF Gate: Not Freq Ref: Int (S) Preamp: Off Gate: Off Trig: Delay: 200.0 µs V P P P P P P P	Center Frequency 2.422000000 GHz
Scale/Div 10 dB Ref Lvl Offset 8.15 dB ΔMkr3 1.190 ms Log 10.0 5.89 dB	Span 0.00000000 Hz Swept Span Zero Span
0.0 0.00 -10.0 Highly raliant marked and and an operation with the second state of the	Full Span
-20.0	Start Freq 2.422000000 GHz
-50.0 1000 1000 1000 1000 1000 1000 1000	Stop Freq 2.422000000 GHz
-70.0 Center 2.42200000 GHz #Video BW 1.0 MHz Span 0 Hz Res BW 1.0 MHz Sweep 5.000 ms (1001 pts)	AUTO TUNE CF Step
5 Marker Table V	1.000000 MHz
Mode Trace Scale X Y Function Function Width Function Value 1 N 1 t 2.120 ms -18.27 dBm -18.27 dBm -18.27 dBm -100 dB	Auto Man Freq Offset 0 Hz X Axis Scale Log Lin
	Signal Track (Span Zoom)

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7.3. 6 dB BANDWIDTH

LIMITS

FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247(a)(2)	6dB Bandwidth	>= 500KHz	2400-2483.5

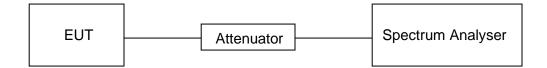
TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyzer and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	For 6dB Bandwidth :100K
VBW	For 6dB Bandwidth : ≥3 × RBW
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP





RESULTS

Test Mode	Test Channel	6dB bandwidth (MHz)	Result
	LCH	8.520	Pass
11B	MCH	9.040	Pass
	HCH	8.520	Pass
	LCH	16.360	Pass
11G	MCH	16.360	Pass
	HCH	16.400	Pass
	LCH	17.520	Pass
11N HT20	MCH	17.320	Pass
	НСН	17.280	Pass
	LCH	35.440	Pass
11N HT40	MCH	35.040	Pass
	НСН	35.280	Pass



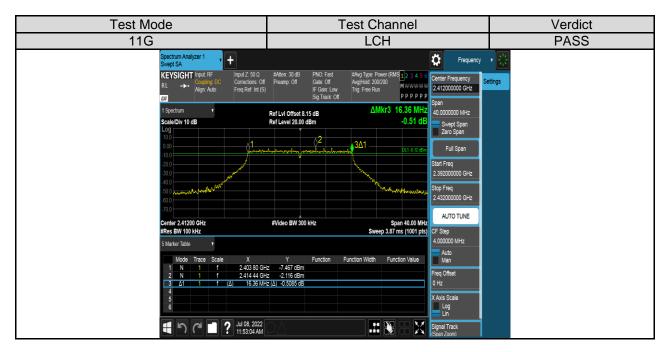
Test Graphs

Test Mode	Test Channel	Verdict
11B	LCH	PASS
Spectrum Analyzer 1 Swept SA KEVSIGHT Input RF RL →→ Company 00 Align Auto 1 Spectrum Scale/Div 10 dB	#Atten: 30 dB PNO: Fast #Avg Type: Power (RMS] 2 3 4 5 6 Center Frequency Preamp: Off Gate: Off AugHold: 200200 M WWWWW Center Frequency IF Gate: Low Tig: Free Run M WWWWW 2 41200000 GHz 2 43556 Ref LvI Offset 8.15 dB ΔMkr3 8.52 MHz 40000000 MHz 40000000 MHz Ref LvI Offset 8.15 dB 0.25 dB Svept Span Svept Span	• 🐹 Settings
Log 100 -000 -000 -000 -000 -000 -000 -000	3Δ1 FL 472 45 4 FL 472 45 4 FL 472 45 4 FL 472 45 5 FL 472 45 4 FL 472 45 5 FL 472 45 4 FL 472 45 5 FL 472 45 5 FL 472 45 4 FL 472 45 5 FL 472 45 5 FL 472 45 5 FL 472 45 4 FL 472 45 5 FL 472 45 5 <td></td>	
2 N 1 F 241148 OH 3 <u>A1</u> 1 F (<u>A)</u> 852 MH 4 F 1 f 241200 GHz 5 6	(A) 02515 dB 0Hz VAvis Scale	
4 5 C 1 ? Jul 08, 2022 11:4330 AM	DA Signal Track (Span Zoom)	



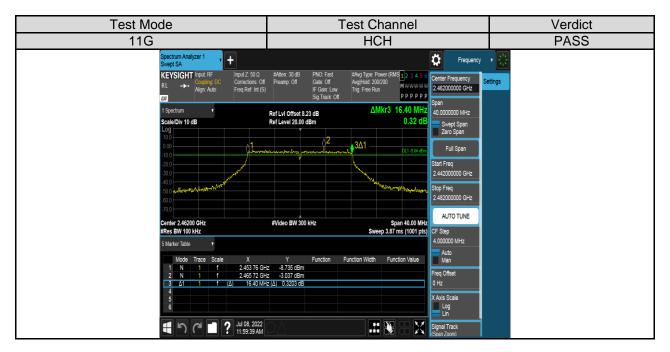


Test Mode			Test Cha	annel		Verdict
11B			HCH	ł		PASS
Spectrum Analyzer 1 Swept SA KEYSIGHT Input RF RL →→ Align Au 20	PC O O Preq Ref: Int (S)		Avg Hold: 200/200 .ow Trig: Free Run	(RMS <mark>1</mark> 23456 M₩₩₩₩₩ ₽₽₽₽₽₽	2.462000000 GHz	tings
1 Spectrum ScaleDiv 10 dB		Ref LvI Offset 8.23 dB Ref Level 20.00 dBm		r3 8.52 MHz 0.22 dB	Span 40.0000000 MHz Swept Span Zero Span	
100 000 	م ^م رم م	June mark	<u>01</u>	DL1-2-94 dBm	Full Span Start Freq 2.44200000 GHz	
40.0 50.0 			Marcan	man and a star of the star of	Stop Freq 2.482000000 GHz	
Center 2.46200 GHz #Res BW 100 KHz 5 Marker Table		#Video BW 300 kHz	Sweep 3.	Span 40.00 MHz .87 ms (1001 pts)	CF Step 4.000000 MHz	
Mode Trace S 1 N 1 2 N 1 3 <u>A1</u> 1 4	f 2.457 48 GH f 2.460 96 GH	Y Function +z -2.935 dBm +z 3.057 dBm +z (Δ) 0.2204 dB	Function Width F	Function Value	Man Freq Offset 0 Hz	
* •	Jul 08, 2022 11:49:14 AM	Ω <u>Δ</u>			X Axis Scale Log Lin Signal Track (Span Zoom)	



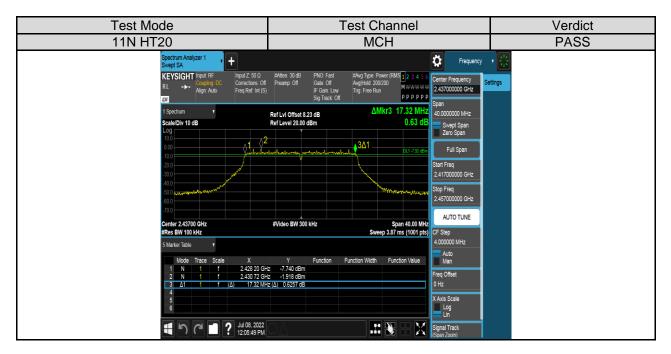


Test Mode	Test Channel	Verdict
11G	MCH	PASS
Spectrum Analyzer 1 ▼ Swept SA KEYSIGHT Indu: RF RL →→ Align: Auto Support SA Align: Auto	#Atten 30 dB PNO Fast #Ang Type: Power (RMS 1 2 3 4 5 6 Preamp: Off Gate: Off AugHeid: 200200 M #WW#W# 2437000000 GHz Sig Track: Off P P P P P P Soan	۲ 🔀
1 Spectrum Scale/Div 10 dB Log	Ref Lvi Offset 8.23 dB ΔMkr3 16.36 MHz 40.000000 MHz Ref Level 20.00 dBm -0.65 dB Swept Span Zero Span	
100 0.00 .10.0 .200	2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	
-30.0 -40.0	2.417000000 GHz	
50 0 juppy have for the former of the former	2.45700000 GHz	
Center 2.43700 GHz #Res BW 100 kHz	#Video BW 300 kHz Span 40.00 MHz Sweep 3.87 ms (1001 pts) CF Step	
5 Marker Table V Mode Trace Scale X	Y Function Function Width Function Value Auto Man Auto Man	
2 N 1 f 2.438 28 G	iz −1.828 dBm Freq Offset iz (Δ) −0.6478 dB 0 Hz	
5	X Avis Scale	
4 5 C 1 ? JU 08, 2022	Signal Track (Span Zoom)	



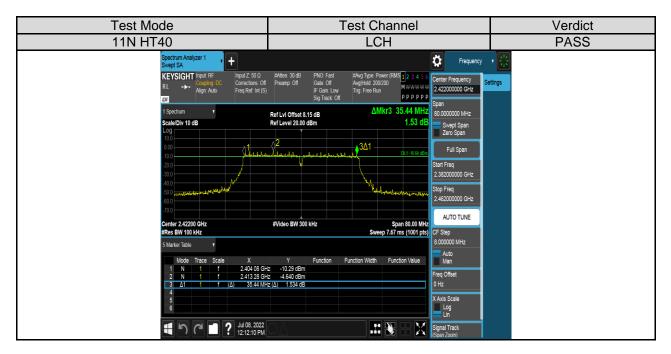


Test Mode	Test Channel	Verdict
11N HT20	LCH	PASS
Spectrum Analyzer 1 ↓ + Swept SA KEYSIGHT Input RF RL → Align Auto Freq Ref. Int (S) D	#Atten: 30 dB PNO. Fast #Avg Type: Power (RMS 1 2 3 4 5 5 Preamp Off Gate: Off Avg]Hold 200/200 Set	• 🔀
1 Spectrum Scale/Div 10 dB Log 10	Ref Lvi Offset 8.15 dB ΔMkr3 17.52 MHz 40.000000 MHz Ref Level 20.00 dBm -0.27 dB Swept Span Swept Span	
000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 	
-300 -400 -500	2.39200000 GHz	
Center 2.41200 GHz #Res BW 100 kHz	#Video BW 300 kHz Span 40.00 MHz Sweep 3.87 ms (1001 pts) 4.000000 MHz	
5 Marker Table v Mode Trace Scale X 1 N 1 f 2.403 20 GH	Y Function Function Width Function Value	
	τ - 2.112 ABm Freq Offset ιz (Δ) - 0.2692 dB 0 Hz X Avis Scale X Avis Scale	
6		
4 5 C 1 ? JU 08, 2022 12/02/29 PM	Signal Track (Span Zoom)	



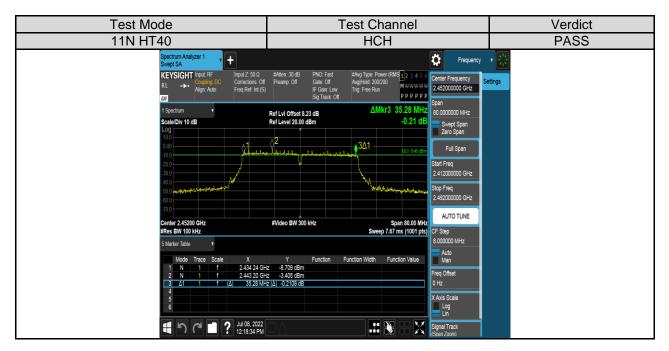


Test Mode	Test Channel	Verdict
11N HT20	НСН	PASS
Spectrum Analyzer 1 Swept SA KEYSIGHT Inspit RF RL → Align Auto Fine Ref. int (S) Correctores: 0ff Fine Ref. int (S)	#Atten: 30 dB PNO. Fast #Avg Type: Power (RMS 1 2 3 4 5 5 Preamp Off Gate: Off Avg]Hold 200/200 Set	• 🔀
1 Spectrum v Scale/Div 10 dB	Amkr3 17.28 MHz 4.0000000 MHz Ref Level 20.00 dBm -0.14 dB Swept Span	
	et-re-uturen petrologialarianiania	
-200	Start Freq 2.44200000 GHz	
-0.0 0	Stop Freq 2.482000000 GHz	
-700 Center 2.46200 GHz #Res BW 100 KHz	#Video BW 300 kHz Span 40.00 MHz Sweep 3.87 ms (1001 pts) CF Step	
5 Marker Table v	4.00000 MHz	
Mode Trace Scale X	Y Function Function Width Function Value Man	
2 N 1 f 2.455 72 GH	iz -7.850 dBm iz -2.245 dBm Freq Offset z (Δ) -0.1395 dB 0 Hz	
4 5 6	X Avis Scale Log Lin	
モッペ ア 120927 PM	Signal Track (Span Zoom)	





Test Mode	Test Channel	Verdict
11N HT40	MCH	PASS
Spectrum Analyzer 1 Swept SA KEVSIGHT Input RF RL + Augn Auto RU Correctors Off Freq Ref Int (S)	#Aten: 30 dB PNO Fast #Avg Type: Power (RMS 1 2 3 4 5 6 Preamp Off Gate: Off AvgHold 200200 IF Gan Low Ting: Free Run P P P P P P So Track: Off	۲ مرکز ان مرکز ا مرکز ان مرکز ان
1 Spectrum v Scale/Div 10 dB Log	American ΔMkr3 35.04 MHz Span 80.0000000 MHz 80.000000 MHz 80.00000 MHz 80.00000 MHz 80.0000 MH	
10.0	2 - Los blue mathematical 3Δ1 (1.100 det Start Freq	
300 -400 -500	2.39700000 GHz	
40.0 -70.0 Center 2.43700 GHz	#Video BW 300 kHz Span 80.00 MHz	
#Res BW 100 kHz 5 Marker Table • Mode Trace Scale X	Sweep 7.67 ms (1001 pts) CF Step 8.000000 MHz #Auto Y Function Worth Function Value	
1 N 1 f 2.418 84 GH 2 N 1 f 2.428 28 GH	Y Function Function Width Function Value Man iz -10.07 dBm Freq Offset Freq Offset iz -0.01169 dB 0 Hz 0 Hz	
4 5 6	X Avis Scale Log Lin	
4 5 C 1 2 JU 08, 2022 12:15:38 PM	Signal Track (Span Zoom)	





7.4. CONDUCTED POWER

<u>LIMITS</u>

FCC Part15 (15.247) Subpart C				
Section Test Item Limit Frequency Range (MHz)				
FCC 15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5	

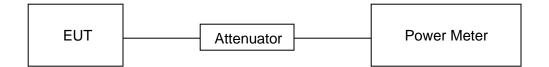
TEST PROCEDURE

Place the EUT on the table and set it in the transmitting mode.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power Meter.

Measure the power of each channel. AVG Detector use for AVG result.

TEST SETUP



RESULTS

Test Mode	Test Channel	Measurement Output Power (AV)	10log(1/x) Factor	Maximum Conducted Output Power (AV)	Result
		dBm	dB	dBm	
	LCH	11.82	N/A(Remark3)	11.82	Pass
11B	MCH	11.65	N/A(Remark3)	11.65	Pass
	HCH	10.95	N/A(Remark3)	10.95	Pass
	LCH	9.02	0.48	9.50	Pass
11G	MCH	8.55	0.48	9.03	Pass
	HCH	8.62	0.48	9.10	Pass
	LCH	8.57	0.53	9.10	Pass
11N HT20	MCH	8.67	0.53	9.20	Pass
11120	HCH	8.25	0.53	8.78	Pass
	LCH	6.11	0.98	7.09	Pass
11N HT40	MCH	6.45	0.98	7.43	Pass
	HCH	6.76	0.98	7.74	Pass

Remark:

1) For all the test results has been adjusted the duty cycle factor.

2) For Correction Factor is refer to the result in section 7.2

3) For duty cycle is higher than 98% and according to KDB 558074, it is not required to be adjusted with duty factor for output power



7.5. POWER SPECTRAL DENSITY

LIMITS

FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC §15.247 (e)	Power Spectral Density	8 dBm in any 3 kHz band	2400-2483.5

TEST PROCEDURE

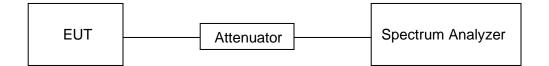
Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	3 kHz ≤ RBW ≤100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST SETUP





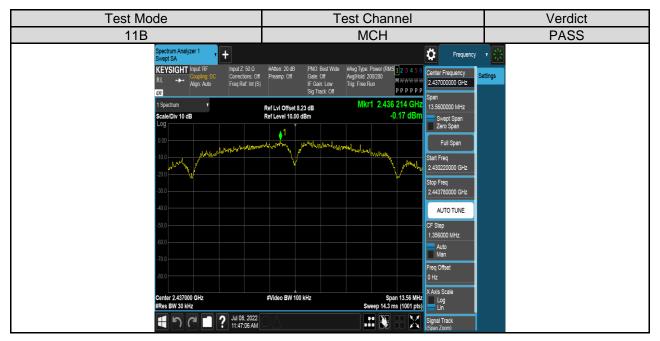
RESULTS

Test Mode	Test Channel	Maximum Peak power spectral density (dBm/30kHz)	Result
	LCH	0.28	Pass
11B	MCH	-0.17	Pass
	НСН	-0.32	Pass
	LCH	-6.22	Pass
11G	MCH	-6.27	Pass
	HCH	-6.78	Pass
	LCH	-6.8	Pass
11N HT20	MCH	-6.65	Pass
	НСН	-7.57	Pass
	LCH	-9.84	Pass
11N HT40	MCH	-9.54	Pass
	НСН	-8.92	Pass



Test Graphs:

Test Mode	Test Channel	Verdict
11B	LCH	PASS
11B Spectrum Analyzer 1 Swept SA KEYSIGHT Input. RF RL →→ Align Auto ScaleDiv 10 dB Log 0.00	#Atten: 20 dB PNO Best Wde #Avg Type: Power (RMS AvgHodd 200200 Trig Free Run Sig Track: Off 2 3 4 5 6 AvgHodd 200200 Trig Free Run Sig Track: Off Center Frequency 2.41200000 GHz Second Sig Second Sig	PASS tings
-50 0 -20 0 -70 0 -70 0 -20 0	#Video BW 100 kHz Span 12.78 MHz #Video BW 100 kHz Span 12.76 MHz Build of the state	





Test Mode	Test Channel	Verdict
11B	HCH	PASS
Spectrum Analyzer 1 Swept SA KEYSIGHT Input RF RL → Again Auto C3 1 Spectrum 1 Spec	#Atter: 20 dB PNO: Best Wide #Arg Type: Power (RMS] 2 3 4 5 6 Center Frequency S) Gate Off IF Gan Low Sig Track Off Angihida 200200 M ₩₩₩₩₩₩ Tig: Free Run M ₩₩₩₩₩₩₩ P P P P P Center Frequency Ref Lvi0 Offset 8.23 dB Mkr1 2.461 476 GHz Span 12 Stoppon HHz Ref Lvi0 Offset 8.23 dB -0.32 dBm Span 1 -0.32 dBm Frequency	I ASS
	Lates for Course of Course	
-80.0 Center 2.462000 GHz #Res BW 30 kHz III (19.223 AV 11.4823 AV	#Video BW 100 kHz Span 12.78 MHz D Hz Sweep 13.5 ms (1001 pt) Log Image: Strate	





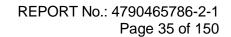
Test Mode	Test Channel	Verdict
11G	MCH	PASS
11G Spectrum Analyzer 1 Heyet SA KEYSIGHT Input: RF RL →→ Align Auto I Spectrum 1 Spectrum Scale Div 10 dB Log 0.00	Atten 20 dB PNO Fast #Avg Type: Power (RMS 12 3 4 5 6 Center Frequency # Preamp Off Gate Off AvgHold 200200 Center Frequency Ge	
-70 0 -80 0 Center 2.43700 GHz #Res BW 30 kHz ThisBilliam ThisBilliam	#Video BW 100 kHz Span 24.54 MHz Sweep 25.9 ms (1001 pts) Signal Track Span 24.54 MHz Sgan Z4.54 MHz Sgan Track Signal Track Span 24.54 MHz Sgan Track Signal Track	

11G HCH PASS	Test Mode	Test Channel	Verdict
KEYSIGHT input.RF RL Input Z 50 0. Angih Auto Peamp Off Peamp Off Peamp Off Peamp Off Peamp Off Peamp Off Sain Low Sain Low P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P	11G	HCH	PASS
1 Spectrum * Ref Lui Offset 8.23 dB Mkr1 2.464 460 0 GHz 24 600000 MHz ScaleDin 10 dB Ref Level 10.00 dBm -6.78 dBm Swept Span 00 1 - - Full Span 2400000 GHz 2400000 GHz - - - 000 1 - - - - 000 1 - - - - - 000 1 - - - - - - 000 1 -<	Swept SA T KEYSIGHT Input RF Input Z 50 Ω RL →→ Align Auto Freq Ref. Int (S)	#Atten: 20 dB PNO: Fast #Avg Type Power (RMS 2 3 4 5 6 Preamp Off Gate: Off Avg Hold 200200 IF Gat. Low Trig: Free Run So Track Off P P P P P P P	
100 Arthought for the former form	Scale/Div 10 dB	Ref Lvi Offset 8.23 dB Mkr1 2.464 460 0 GHz 24.6000000 MHz Ref Level 10.00 dBm -6.78 dBm Swept Span	
-70 0 Freq Offset	-20 0 -30 0 -30 0	AN (144) Public An (144) AN (1	
Center 2.46200 GHz #Video BW 100 kHz Span 24.60 MHz Log #Res BW 30 kHz Sweep 26.0 mc (1001 pts) Itil 39:50 AM A A I I I I I I I I I I I I I I I I	-80 0 Center 2.46200 GHz #Res BW 30 KHz	#Video BW 100 kHz Span 24.60 MHz Log Sweep 26.0 ms (1001 pts) Lin	









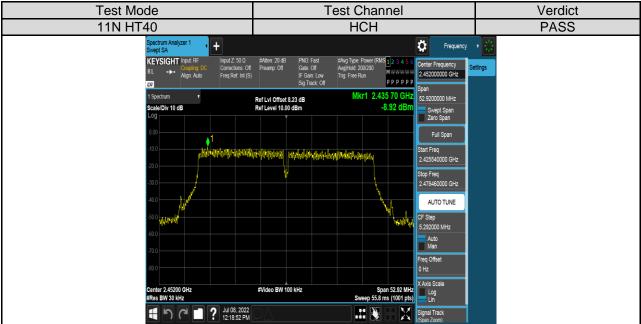


Test Mode	Test Channel	Verdict
11N HT20	НСН	PASS
Spectrum Analyzer 1 Swept SA KEYSIGHT Input RF RL → KEYSIGHT Cooping DC Align: Audo Freq Ref. Int (S) U	IF Gain: Low Trig: Free Run P P P P P P Sig Track: Off Scan	• 🐹
1 Spectrum v Scale/Div 10 dB Log	Ref Lvi Offset 8.23 dB Mkr1 2.455 701 GHz 25 5200000 MHz Ref Level 10.00 dBm -7.57 dBm Swept Span Zero Span	
	Full Span	
-20.0 -30.0 	Stop Freq 2.474960000 GHz	
-50 0 parts	CF Step 2.592000 MHz	
-70.0	Auto Man Freq Offset	
-30 0 Center 2.46200 GHz #Res BW 30 KHz	#Video BW 100 kHz Span 25.92 MHz Log Sweep 27.3 ms (1001 pts) Log	
・ つ つ 回 ? JU 08, 2022 12:09:39 PM	Signal Track	

Test Mode	Test Channel	Verdict
11N HT40	LCH	PASS
Cpectrum Analyzer 1	#Atten: 20 dB PNO: Fast #Avg Type: Power (RMS 1 2 3 4 5 6 Center Frequency See	ings
1 Spectrum Scale/Div 10 dB Log	Ref Lvi Offset 8.15 dB Mkr1 2.410 73 GHz 9,941 Ref Level 10.00 dBm -9.84 dBm Swept Span Zero Span	
0.00 1 .100	Full Span	
-20 0	Plotestinited and an analysis and a second	
-30.0	Stop Freq 2.448580000 GHz	
-40.0		
-00 0	HrvWW 5.316000 MHz Auto Man	
-70.0	Freq Offset 0 Hz	
Center 2.42200 GHz #Res BW 30 KHz	#Video BW 100 kHz Span 53.16 MHz Log Sweep 56.1 ms (1001 pts) Log	
4 5 C 1 ? JU 08, 2022 12:12:26 PM	Signal Track	









7.6. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

<u>LIMITS</u>

FCC Part15 (15.247) Subpart C				
Section	Test Item	Limit		
FCC §15.247 (d)	Conducted Bandedge and Spurious Emissions	At least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power		

TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	100K
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

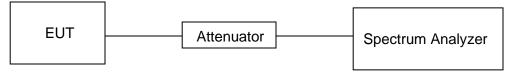
settings:

Use the peak marker function to determine the maximum PSD level.

12090	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100K
VBW	≥3 × RBW
measurement points	≥span/RBW
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level.

TEST SETUP



Form-ULID-008536-9 V2.0

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Part I : Conducted Bandedge

RESULTS TABLE

Test Mode	Test Antenna	Test Channel	Test Result	Verdict
11B	Antonno 1	LCH	See the test graphs	PASS
ПВ	Antenna 1	НСН	See the test graphs	PASS
11G	Antenna 1	LCH	See the test graphs	PASS
TIG	Antenna 1	НСН	See the test graphs	PASS
	Antenna 1	LCH	See the test graphs	PASS
11N HT20		НСН	See the test graphs	PASS
	Antenna 1	LCH	See the test graphs	PASS
11N HT40		НСН	See the test graphs	PASS



Test Mode		Test Cl	nannel	Verdict
11B		LC	Ή	PASS
Spectrum Analyzer 1 Swept SA KEYSIGHT Industry RL → Algon Auto Spectrum To Section Sector 10 dB Log 100 100 100 100 100 100 100 10	Ref Lvi Offse Ref Level 20.	B PNO Fast dev off AvgHod 200 IF Gain Low Ting Free Rut 200 Rest and Rut 200	wer (RMS 1 2 3 4 5 6 Center Frequency 200	

Test Mode	Test Channel	Verdict
11B	HCH	PASS
Spectrum Analyzer 1 ↓ ↓ Swept SA KEYSIGHT Input. RF RL → Align Auto Freq Ref Int (S)) IF Gain: Low Trig: Free Run 2.495000000 GHz	• 🔀
1 Spectrum v Scale/Div 10 dB Log	Sig Track: Off P P P P P P Span Ref Levi Offset 8.23 dB Mkr4 2.505 45 GHz 110.00000 MHz Ref Leviel 20.00 dBm -49.97 dBm Span Zero Span Zero Span	
	CLS 27 to db CLS 2	
-00 0 -70 0 Start 2.44000 GHz #Res BW 100 kHz	#Video BW 300 kHz Stop 2.55000 GHz Sweep 10.5 ms (1001 pts) 11.000000 MHz	
5 Marker Table v Mode Trace Scale X	Y Function Function Width Function Value Man	
2 N 1 f 2.483 50 G 3 N 1 f 2.500 0 G 4 N 1 f 2.500 X 5 G 5	12 -53.58 dBm 12 -49.97 dBm X Avis Scale	
6 • • • • • • • • • • • • • • • • • • •	Ling Ling Signal Track Repart Com	

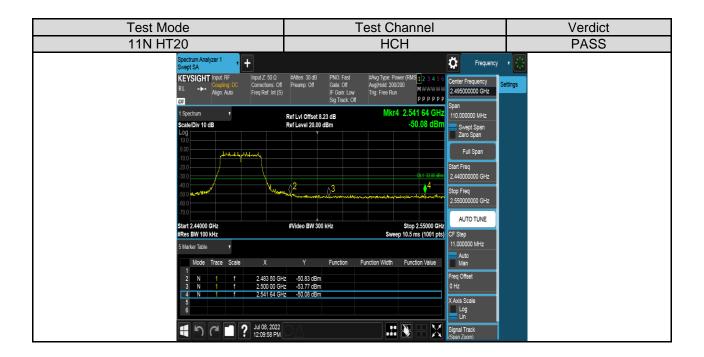


Indext Indext Indext PASS Spectrum Analyzer 1 Swept SA • • • • • KEYSIGHT Input RF RL • • • • • • Variable Sa • • • • • • <th>Test Mode</th> <th></th> <th></th> <th>Test Channel</th> <th></th> <th>Verdict</th>	Test Mode			Test Channel		Verdict
Swept SA Image: Simple Same transmission of the sector	11G			LCH		PASS
1 Spectum Ref Livi Offset 8.15 dB MKr5 2.399 97 GHz 130000000 MHz Scale Div 10 dB Ref Level 20.00 dBm -37.82 dBm Swept Span 100	Spectrum Analyzer Swept SA KEYSIGHT Impa RL → Ang CU 1 Spectrum 1 Spectrum Ang CU 1 Spectrum CU 1 Spectrum Scale Div 10 dB Log 100 100 0 0 0 200 0 0 0 0 400 0 0 0 0 0 400 0	RF Input Z 50 0 Auto Connections: Off Freq Ref. Int (S) Freq Ref. Int (S) Imput Z 50 0 Imput Z 50 0 Imput Z 50 0 Imput Z 50 0	Preamp: Off Cate off Gate	#Aug Type: Power (RMS] 2 3 4 5 6 AugHold: 200200 Trg: Free Run Mkr5 2.399 97 GHz -37.82 dBm 5 mrt 1 mrt Stop 2.43000 GHz Sweep 12.5 ms (1001 pts) Function Width Function Value	Center Frequency 235500000 GHz Span 130.000000 MHz Zero Span Full Span Staft Freq 2.30000000 GHz Stop Freq 2.43000000 GHz CF Step 13.000000 MHz Auto TUNE CF Step 13.000000 MHz Auto Scale Un	- 😹



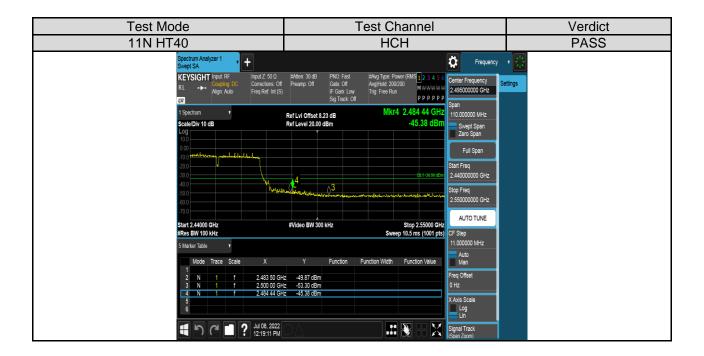


Test Mode	Test Channel	Verdict
11N HT20	LCH	PASS
11N HT20 Spectrum Analyzer 1 + KEYSIGHT Input RF RL → Coopting DC Alagr. Auto 1 Spectrum	LCH #Atten: 30 dB PNO Fast Geter Frequency Sig Track Off Br Gan Low Sig Track Off Ref Lvi Offset 8.15 dB Ref Lvi Offset 8.15 dB Ref Lvi Offset 8.15 dB Mikt's 2.399 97 GHZ Suppose 125 ms (1001 pts) #Video BW 300 kHz Sweep 125 ms (1001 pts) Y Function Function Width Function Value Y Function Function Width Function Value	
6	z _39.97 dBm X Avis Scale Log Log Lin	
4 う で 且 ? ม08,2022 12:03:01 PM	Signal Track (Span Zoom)	





11N HT40 LCH I	PASS
Spectrum Analyzer 1 Spectrum	PASS



Part II :Conducted Emission

Test	Result	Table

Test Mode	Test Antenna	Channel	Pref(dBm)	Puw(dBm)	Verdict
		LCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
11B SISO Antenna 1		MCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		LCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
11G SISO Antenna 1		MCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		LCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT20 Antenna 1		MCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		LCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT40	Antenna 1	MCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS



Test ModeChannelVerdict11BLCHPASS

Pref test Plot





Puw test Plot LCH SPURIOUS E

CH SPURIOUS EM	ISSION_30)MHz~1GHz					
	Spectrum Analyzer 1	F			Frequency	- 崇	
	KEYSIGHT Input: RF RL ↔ Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 20 dB Corrections: Off Preamp: Off Freq Ref. Int (S)	Gate: Off Av	vg Type: Power (RMS <mark>1</mark> 2 3 4 5 6 g Hold: 30/30 g: Free Run P P P P P P	Center Frequency	Settings	
	1 Spectrum Scale/Div 10 dB Log	Ref LvI Offset 8.1 Ref Level 15.00 d		Mkr1 757.76 MHz -62.83 dBm	970.000000 MHz Swept Span Zero Span		
	5.00				Full Span Start Freq		
	-15.0			DL1-25.26 d8m	30.000000 MHz Stop Freq 1.00000000 GHz		
	-35.0				AUTO TUNE CF Step		
	-55.0	esperian layer (gelage) projekt y respected (en induit (escai	rough alder to shift - to	1	97.000000 MHz Auto Man		
	-75.0	a de constante président de la constant de la const	nalajiad _e kanatan ^{an}	i sezen der ander beitender bermet der	Freq Offset 0 Hz X Axis Scale		
	Start 0.0300 GHz #Res BW 100 kHz	#Video BW 300 I	kHz	Stop 1.0000 GHz Sweep 94.0 ms (30001 pts)	Log Lin		
	ל א א 🖬 ?	Jul 08, 2022 11:44:08 AM			Signal Track (Span Zoom)		

LCH SPURIOUS EMISSION_1GHz~26GHz				
	Spectrum Analyzer 1		Frequ	iency T Sta
	KEYSIGHT Input: RF Input: RF Coupling: DC C	nput Z: 50 Ω #Atten: 20 dB PNO: Fast corrections: Off Preamp: Off Gate: Off req Ref: Int (S) IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS 1 2 3 4 5 6 Avg[Hold: 30/30 Trig: Free Run P p p p p p	
	1 Spectrum v	Ref LvI Offset 8.15 dB	Mkr2 4.824 15 GHz Span 25.5000000 GHz	
	Scale/Div 10 dB	Ref Level 15.00 dBm	-34.24 dBm Swept Span Zero Span	
	-5.00		Full Span	
	-15.0 -25.0 -35.0		011-25.25 dBm Start Freq 1.00000000 GH	Z
	-45.0 -55.0 -66.0		Stop Freq 26.50000000 G	+2
	-13.0 Start 1.00 GHz	#Video BW 300 kHz	Stop 26.50 GHz	
	#Res BW 100 kHz 5 Marker Table v		Sweep 2.44 s (30001 pts) CF Step 2.550000000 GH	z
	Mode Trace Scale	X Y Function Fi 2.410 15 GHz 3.608 dBm	unction Width Function Value Man	
		4.824 15 GHz -34.24 dBm	Freq Offset 0 Hz	
	4 5 6		X Avis Scale	
	י? ב אר ב	Jul 08, 2022	Signal Track (Span Zoom)	



Test Mode	Channel	Verdict
11B	MCH	PASS

Pref test Plot





Puw test Plot

MCH SPURIOUS EMISSION_30MHz~1GHz				
	Spectrum Analyzer 1			🗱 Frequency 🔹 👯
	KEYSIGHT Input: RF Input: Z': 50 Ω RL ↔ Align: Auto Corrections: Off T ↔ Align: Auto Freq Ref. Int (S)	#Atten: 20 dB PNO: Fast Preamp: Off Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS 1 2 3 4 5 6 Avg Hold: 30/30 Trig: Free Run P P P P P P	
	1 Spectrum v Scale/Div 10 dB Log	Ref LvI Offset 8.23 dB Ref Level 15.00 dBm	Mkr1 811.76 MHz -61.58 dBm	
	5.00			Full Span Start Free
	-15.0		Di 175 % dBm	30.00000 MHz Stop Freq
	-25.0			1.00000000 GH2 AUTO TUNE
	-45.0		1	CF Step 97.000000 MHz Auto
	-65.0 a segan con di seleta prima da li trata la strata una dela da la segan con regenerate del del a segan del segan del segan del segan del segan del segan del segan	مرحم المراقبة المراقب محمد المراقبة	n separat kenstander bit hitek bit	Man Freq Offset 0 Hz
	Start 0.0300 GHz #Res BW 100 kHz	#Video BW 300 kHz	Stop 1.0000 GHz Sweep 94.0 ms (30001 pts)	X Axis Scale
	Jui 08, 2022 11:47:23 AM	ΔQ		Signal Track (Span Zoom)

MCH SPURIOUS EMISSION_1GHz~26GHz + Ö Frequency PNO: Fast Gate: Off IF Gain: Low Sig Track: Off #Avg Type: Pow Avg|Hold: 30/30 Trig: Free Run KEYSIGHT Input R input Z: 50 C en: 20 di ımp: Off Corrections: Off Freq Ref: Int (S) nter Frequency ttings 13.750000000 GHz Align: Auto M₩₩₩₩₩ ₽₽₽₽₽₽ pan Mkr2 4.874 30 GH -34.74 dB Ref LvI Offset 8.23 dB Ref Level 15.00 dBm 25.5000000 GHz ale/Div 10 dB Swept Span Zero Span Start Freq 1.000000000 GHz Stop Freq 000 GHz 26.50000 AUTO TUNE Stop 26.50 GHz Sweep 2.44 s (30001 pts) #Video BW 300 kHz Start 1.00 GHz #Res BW 100 kHz CF Step 100 GHz Auto Man Trace Scale X 2.436 50 GHz 4.874 30 GHz Function Function Width Function Valu 2.311 dBm -34.74 dBm Freq Offset 0 Hz X Axis Scale Log Lin

#

Signal Track

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Test Mode	Channel	Verdict
11B	HCH	PASS

Pref test Plot





Puw test Plot HCH SPURIOUS EN

SPURIOUS EMISSION_30MHz~1GHz					
Sp	ectrum Analyzer 1			Frequency •	
	EYSIGHT Input: RF In Coupling: DC C Align: Auto F	orrections: Off Preamp: Off Gai req Ref: Int (S) IF (0:Fast ≢AvgType:Power(RMS <mark>1</mark> 23456 te:Off Avg Hold:3030 M₩₩₩₩₩ Sain:Low Trig:FreeRun PPPPP Track:Off PPPPP	Center Frequency Settin 515.000000 MHz	
	Spectrum v	Ref LvI Offset 8.23 dB	Mkr1 929.06 MHz	970.000000 MHz	
	cale/Div 10 dB	Ref Level 15.00 dBm	-61.95 dBm	Swept Span Zero Span	
5.				Full Span	
-5.				Start Freq	
-15				30.000000 MHz Stop Freq	
-28	5.0		DL1-27:10 dBm	1.000000000 GHz	
-36				AUTO TUNE	
-45				CF Step 97.000000 MHz	
-55			11	Auto	
-65		and printing properties to fill the term from the formula - A second of the term in the term formula for the fill the term of the term	niya ya kuniya na kana dina di kasing da na kuniya ka ta kuniya na kuniya ka kuniya na kuniya na kuniya na kuni Kuniya kuniya na kuniya pang ka kuniya na	Freq Offset	
-75				0 Hz	
	art 0.0300 GHz les BW 100 kHz	#Video BW 300 kHz	Stop 1.0000 GHz Sweep 94.0 ms (30001 pts)	X Axis Scale Log Lin	
E	ר י ר י ר י ר	Jul 08, 2022 11:49:52 AM		Signal Track (Span Zoom)	





Test Mode	Channel	Verdict
11G	LCH	PASS

Pref test Plot

