

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT



Applicant: Manufacturer:	Laipac Technology Inc 25 Valleywood Drive Unit11, Markham, Ontario, L3R 5L9 Laipac Technology Inc	Canada,
	25 Valleywood Drive Unit11, Markham, Ontario, L3R 5L9	Canada,
Product Name:	LooK SPOT 2	
Brand Name:	LooK SPOT	
Model No.:	LooK SPOT 2	
Model Difference:	N/A	
Report Number:	E2/2021/80082	
FCC ID	TET-LOOKSPOT2	
IC:	11280A-LOOKSPOT2	
Issue Date:	Dec.03,2021	
Date of Test:	Aug.30,2021~Sep.27,2021	
Date of EUT Received:	Jun.15,2021	

Approved By ALMO HSiel

Arno Hsieh

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10:2013 and the energy emitted by the sample EUT comply with FCC rule part §15.247, ISED RSS-247.

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

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Revision History					
Report Number	Revision	Description	Issue Date	Revised By	Remark
E2/2021/80082	Rev.00	Original.	Dec.03,2021	Viola Su	-

Note:

- 1 . The remark "*" indicates modification of the report upon requests from certification body.
- 2 · Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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GENERAL INFORMATION 1

1.1 Product Description

Product Name:	LooK SPOT 2
Brand Name:	LooK SPOT
Model No.:	LooK SPOT 2
Model Difference:	N/A
Hardware Version:	V2.0
Firmware Version:	V1.0
EUT Series No.:	PJ216050001
Power Supply:	12V DC

1.2 **RF** Specification

WLAN 2.4GHz					
Wi-Fi	Frequency Range	Channels	Rated Power in dBm (Peak)	Modulation Technology	
802.11b	2412~2462	11	16.00	DSSS	
802.11g	2412~2462	11	22.56	OFDM	
802.11n20	2412~2462	11	22.29	OFDM	
802.11n40	2422~2452	7	22.45	OFDM	
		CCK, DQPSK, DBPSK for DSSS			
Modulation type:		64QAM, 16	QAM, QPSK, BPSK	for OFDM	
		802.11 b: 1/2/5.5/11 Mbps			
Data Rate:		802.11 g: 6/9/12/18/24/36/48/54 Mbps			
		802.11 n_20MHz:6.5 - 72.2Mbps			
		802.11 n_40MHz:13.5 - 150Mbps			

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WLAN 2.4GHz for IC

Wi-Fi	Frequency Range	Channels	Rated Power in dBm (Peak)	Rated Power in dBm (EIRP)	Modulation Technology	
802.11b	2412~2462	11	16.00	19.50	DSSS	
802.11g	2412~2462	11	22.56	26.06	OFDM	
802.11n20	2412~2462	11	22.29	25.79	OFDM	
802.11n40	2422~2452	7	22.45	25.95	OFDM	
		CCK, DQPSK, DBPSK for DSSS				
Modulation type:		64QAM, 16Q	AM, QPSK, BPSK f	or OFDM		
		802.11 b: 1/2/5.5/11 Mbps				
Data Rate:		802.11 g: 6/9/12/18/24/36/48/54 Mbps				
		802.11 n_20MHz:6.5 - 72.2Mbps				
		802.11 n_40MHz:13.5 - 150Mbps				

1.3 Antenna Designation

Antenna	Freq.	Peak Antenna
Type	(MHz)	Gain (dBi)
resonant cavity	2.4GHz	3.5

Note:

1. Antenna information is provided by the applicant.

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1.4 Test Methodology of Applied Standards

FCC Part 15, Subpart C §15.247 FCC KDB 558074 D01 15.247 Meas Guidance v05r02 RSS-247 issue 2 Feb. 2017 RSS-Gen, Issue 5 (Amendment 2, February 2021) ANSI C63.10:2013

1.5 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designa- tion number	IC CAB identifier
	-	SAC 1		
		SAC 3		
		Conduction 1		
	No.134, Wu Kung Road, New Taipei	Conducted 1		
	Industrial Park, Wuku District, New	Conducted 2	TW0027	
	Taipei City, Taiwan.	Conducted 3		
		Conducted 4		TW3702
		Conducted 5		
		Conducted 6		
SGS Taiwan Ltd. Central RF Lab.	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conduction C	TW0028	
(TAF code 3702)		SAC C		
(171 Code 3702)		SAC D		
		SAC G		
		Conducted A		
		Conducted B		
		Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
		Conducted G		
Note: Test site name is remarked on the equipment list in each section of this report as an indica- tion where measurements occurred in specific test site and address.				

1.6 Special Accessories

There are no special accessories used while test was conducted.

1.7 Equipment Modifications

There was no modification incorporated into the EUT.

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2 SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on a table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz. The CISPR Quasi-Peak and Average detector mode is employed. The two LISNs provide 50uH/50 ohm of coupling impedance for the measuring instrument. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

2.3.2 Conducted Test (RF)

The active antenna port of the unlicensed wireless device is connected to the spectrum analyzer with attenuator to protect the instrumentation. If a second antenna port is available, it is tested at one operating frequency, with other port(s) appropriately terminated, to verify it has similar output characteristics as the fully tested port.

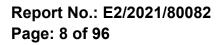
2.3.3 Radiated Emissions

The EUT is a placed on a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

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2.4 Measurement Results Explanation Example

2.4.1 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m*6m*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

2.4.2 For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

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2.5 Test Configuration

Conduted Setup & Radiated Setup & Conduction Adaptor EUT

2.6 Control Unit(s)

ltem	Equipment	MRF/BRAND	Model/Type No.	Version
Test Software	SGS Taiwan	Radio Test Software	Ver.21	N/A
Test Software	audix	e3	210322 sgs Ver.9	N/A
Test Software	audix	e3	E3 20923 SGS Ver.9(C)	N/A
Cmd	N/A	N/A	N/A	N/A
Adapter	CUI INC	SDM36-12-U	2038000662	N/A

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SUMMARY OF TEST RESULTS 3

FCC Rules	IC Rules	Description Of Test	Result
§15.207(a)	RSS-Gen §8.8	AC Power Line Conducted Emission	Compliant
§15.247(b) (3)	RSS-247 §5.4 d	Peak Output Power	Compliant
§15.247(a)(2)	RSS-247 §5.2 a RSS-Gen §6.7	Emission Bandwidth	Compliant
§15.205 §15.209 §15.247(d)	RSS-247 §5.5 RSS-Gen §8.9 RSS-Gen §8.10 RSS-Gen §6.13	Radiated & Conducted Band Edge and Spurious Emission	Compliant
§15.247(e)	RSS-247 §5.2 b	Power Spectral Density	Compliant
§15.203	N/A	Antenna Requirement	Compliant

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DESCRIPTION OF TEST MODES 4

4.1 Operatin Frequencies

Modulation of 20MHz nominal bandwidth

CHANNEL	FREQUENCY (MHz)
1	2412
2	2417
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	2457
11	2462

Modulation of 40MHz nominal bandwidth

CHANNEL	FREQUENCY (MHz)
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452

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4.2 The Worst Test Modes and Channel Details

- 1. The EUT has been tested under operating condition.
- 2. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.
- 3. Investigation has been done on all the possible configurations for searching the worst case.

The gevin UE is pre-scanned among below modes.

	Modulation	Transmiss ion Chain		Single Transmission Spatial	
v	802.11 b	۷	Ch0	۷	1TX
v	802.11 g	۷	Ch0	۷	1TX
v	802.11 n	۷	Ch0	۷	SISO

Modulation	Transmission Chain			'n	Single Transmission Spatial	Multiple Transmission Spatial
⊠ 802.11 b	⊠ Ch0	\Box Ch1	\Box Ch2	□ Ch3	⊠ 1TX	□ 2TX
⊠ 802.11 g	⊠ Ch0	\Box Ch1	\Box Ch2	\Box Ch3	⊠ 1TX	□ 2TX
⊠ 802.11 n	⊠ Ch0	□ Ch1	\Box Ch2	□ Ch3	⊠ SISO	
□ 802.11 ax	□ Ch0	□ Ch1	□ Ch2	\Box Ch3	□ SISO	

4. Therefore, below summary is the modes of test configuration that yield the highest reading and generate the highest emission chosen to carry out the relevantly mandatory test items.

Conducted								
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT			
802.11b	1 to 11	1,6,11	DSSS	1	ch0			
802.11g	1 to 11	1,6,11	OFDM	6	ch0			
802.11n (HT20)	1 to 11	1,6,11	OFDM	MCS0	ch0			
802.11n (HT40)	3 to 9	3,6,9	OFDM	MCS0	ch0			

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MCS0

ch0

RADIATED EMISSION TEST (BELOW 1 GHz)								
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT			
802.11g	1 to 11	1,6,11	OFDM	6	ch0			
RADIATED EMISSION TEST (ABOVE 1 GHz)								
				<u> </u>				
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT			
802.11b	1 to 11	1,6,11	DSSS	1	ch0			
802.11g	1 to 11	1,6,11	OFDM	6	ch0			
802.11n (HT20)	1 to 11	1,6,11	OFDM	MCS0	ch0			

Note:

802.11n (HT40)

The field strength of radiation emission was measured as EUT three orthogonal planes, E1 / E2 / H, are positioned to pre-scan the emission generating the highest one. The worst position E2 Plane is tested and recorded.

3,6,9

3 to 9

OFDM

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MEASUREMENT UNCERTAINTY 5

Test Items	Un	certain	ty
AC Power Line Conducted Emission	+/-	2.34	dB
Emission Bandwidth	+/-	1.53	Hz
The Maximum Output Power Measurement	+/-	1	dB
Peak Power Spectral Density Measurement	+/-	1.53	dB
Frequency Stability	+/-	1.53	Hz
Temperature	+/-	0.4	°C
Humidity	+/-	3.5	%
DC / AC Power Source	+/-	1	%

Radiated Spurious Emission Measurement Uncertainty					
Polarization: Vertical	+/-	2.64	dB	9kHz~30MHz	
	+/-	4.93	dB	30MHz - 1000MHz	
	+/-	4.81	dB	1GHz - 18GHz	
	+/-	4.52	dB	18GHz - 40GHz	
	+/-	2.64	dB	9kHz~30MHz	
	+/-	4.45	dB	30MHz - 1000MHz	
Polarization: Horizontal	+/-	4.81	dB	1GHz - 18GHz	
	+/-	4.52	dB	18GHz - 40GHz	

Note:

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

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6 CONDUCTED EMISSION TEST

6.1 Standard Applicable

Frequency range within 150kHz to 30MHz shall not exceed the Limit table as below.

Frequency range	Limits (dBuV)				
MHz	Quasi-peak	Average			
0.15 to 0.50	66 to 56	56 to 46			
0.50 to 5	56	46			
5 to 30	60	50			
Note					
1.The lower limit shall apply at the transition frequencies					
2. The limit decreases linearly wit	h the logarithm of the frequency ir	n the range 0.15 MHz to 0.50 MHz.			

6.2 Measurement Equipment Used

AC Power-Line Conducted Emission Test Site: Conduction C								
EQUIPMENT TYPE	MFR/BRAND	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.			
Test Software	audix	e3	210322 sgs Ver.9	N.C.R	N.C.R			
LISN	SCHWARZBECK Mess-Elektronik	NSLK8127	974	04/19/2021	04/18/2022			
EMI Test Receiver	R&S	ESCI	101342	04/28/2021	04/27/2022			
Coaxial Cable	EC Lab	RF-HY-CAB-250	RF-HY-CAB-250- 01	03/27/2021	03/26/2022			
Pulse Limiter	EC Lab	VTSD 9561F-N	485	03/27/2021	03/26/2022			
Adapter	CUI INC	SDM36-12-U	2038000662	N.C.R	N.C.R			

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

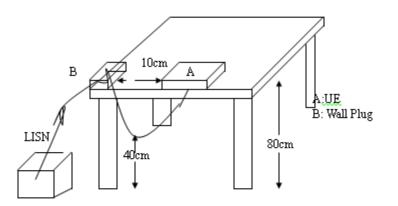
6.3 EUT Setup

- 1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.10:2013.
- 2. The AC/DC Power adaptor of EUT was plug-in LISN. The EUT was placed flushed with the rear of the table.
- 3. The LISN was connected with 120Vac/60Hz power source.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



6.4 Test SET-UP (Block Diagram of Configuration)



6.5 Measurement Procedure

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 3. Repeat above procedures until all phases of power being supplied by given UE are completed

6.6 Measurement Result

Note: Refer to next page for measurement data and plots. Note2: The * reveals the worst-case results that closet to the limit.

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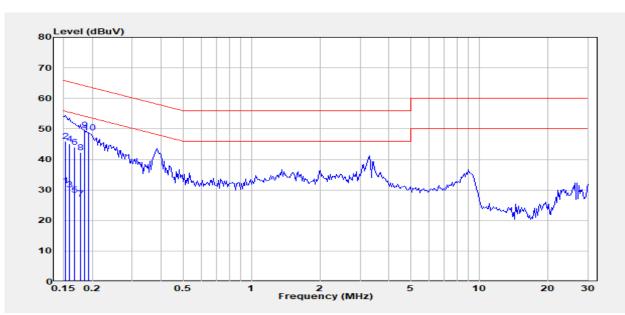
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AC POWER LINE CONDUCTED EMISSION TEST DATA

Report Number	:E2/2021/80082
Test Mode	:2.4G
Power	:120V/60Hz
Probe	:L1
Note:	: Adpater:SDM36-12-U

Test Site :Conduction C Test Date :2021-09-02 Temp./Humi. :23.5/60 Engineer :Jack Tseng



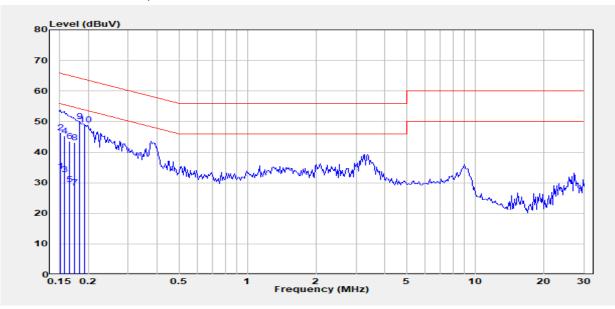
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.153	Average	21.10	10.30	31.40	55.82	-24.42
0.153	QP	35.60	10.30	45.90	65.82	-19.92
0.158	Average	19.90	10.30	30.20	55.56	-25.36
0.158	QP	34.70	10.30	45.00	65.56	-20.56
0.167	Average	18.00	10.30	28.30	55.12	-26.82
0.167	QP	33.80	10.30	44.10	65.12	-21.02
0.178	Average	16.70	10.30	27.00	54.59	-27.59
0.178	QP	32.00	10.30	42.30	64.59	-22.29
0.185	Peak	39.36	10.30	49.66	64.24	-14.58
0.193	Peak	38.41	10.30	48.71	63.89	-15.18

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Report Number	:E2/2021/80082	Test Site	:Conduction C
Test Mode	:2.4G	Test Date	:2021-09-02
Power	:120V/60Hz	Temp./Humi.	:23.5/60
Probe	:N	Engineer	:Jack Tseng
Note:	: Adpater:SDM36-12-U		



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS		
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.152	Average	23.50	10.31	33.81	55.91	-22.10
0.152	QP	36.00	10.31	46.31	65.91	-19.60
0.156	Average	22.40	10.31	32.71	55.65	-22.94
0.156	QP	35.00	10.31	45.31	65.65	-20.34
0.165	Average	19.10	10.31	29.41	55.21	-25.80
0.165	QP	33.30	10.31	43.61	65.21	-21.60
0.174	Average	18.20	10.30	28.50	54.77	-26.26
0.174	QP	32.80	10.30	43.10	64.77	-21.66
0.183	Peak	39.73	10.30	50.03	64.33	-14.30
0.193	Peak	38.70	10.30	49.00	63.89	-14.89

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DUTY CYCLE OF TEST SIGNAL 7

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

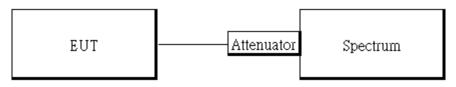
All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

7.1 Measurement Equipment Used

Conducted Emission Test Site: Conducted B										
EQUIPMENT TYPE	MFR/BRAND	MODEL NUMBER	SERIAL NUM- BER	LAST CAL.	CAL DUE.					
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/13/2021	07/12/2022					
Attenuator	Marvelous	MVE2213-10	RF05	11/19/2020	11/18/2021					
DC Block	PASTERNACK	PE8210	RF157	11/19/2020	11/18/2021					
Test Software	SGS Taiwan	Radio Test Soft- ware	Ver.21	N.C.R	N.C.R					

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

7.2 Test Set-up



7.3 Measurement Procedure:

- 1. Set span = Zero
- 2. RBW = 8MHz
- 3. VBW = 8MHz.
- 4. Detector = Peak

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7.4 Duty Cycle:

	Duty Cycle (%) = Ton / (Ton+Toff)	Duty Factor (dB) =10*log(1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11b	99.99	0.00	0.08	0.01
802.11g	98.95	0.05	0.48	0.01
802.11n_20	98.88	0.05	0.52	0.01
802.11n_40	97.62	0.10	1.06	2.00

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7.5 Duty Cycle test plots

802.11b 20MHz Chain0 2412MHz

	ipectrum Analyzer - S								- 0 ×
🗶 R	RF 50	Ω DC		SENS	E:INT A	ALIGN AUTO	02:05:42 PM Aug 3 TRACE 1 2	0,2021 Fred	uency
			PNO: Fast ++ IFGain:Low	Trig: Free F #Atten: 30	tun	9 ijpe. 209 i m	DET P N	NNNN	
10 dB/div	Ref Offset					L	Mkr3 12.43-0.54	smsji	uto Tune
og	×a					₩3∆4			
									nter Free
10.0								2.4120	00000 GH
10.0									
-20.0									Start Free 00000 GH
-30.0								2.4120	00000 GH
40.0						1			
-50.0									Stop Fre
-60.0								2.4120	00000 GH
Contor 2	2.412000000	CH2					Span	0.147	CF Ste
Res BW		GHZ	#VBV	V 8.0 MHz		Sweep 2	0.00 ms (500	1 pts) 8.0	00000 MH
MKR MODE		x		Y	FUNCTION	FUNCTION WIDTH	FUNCTION VAL	Auto	Ma
1 Δ2 2 F	1 t (Δ)		12.42 ms (Δ) 992.0 μs	-1.54 di 23.46 dBr					
3 ∆4	1 t (Δ)		12.43 ms (Δ) 992.0 us	-0.54 di	3			Fr Fr	eq Offse
5	T		992.0 µs	23.46 dBr	n				0 H
6									
8									
9									
11								-	
* [] 15G							-	·	
ISG						STATU	5		

802.11g_20MHz_Chain0_2412MHz

	Spectrum Analyzer - Sv										- 6 ×
Center	RF 50 G		GHz		SENSE:IN		Avg Typ	ALIGN AUTO e: Log-Pwr	TR	PM Aug 30, 2021 ACE 1 2 3 4 5 6	Frequency
10 dB/div	Ref Offset 1	0.5 dB	PNO: Fast * IFGain:Low		i: Free Run ten: 30 dB			Ĺ	Mkr3 2	2.086 ms	Auto Tune
Log		1/1/	2. 4 Kara an		an a			peulopetine s			Center Fred 2.412000000 GHz
-10.0 -20.0 -30.0											Start Free 2.412000000 GH:
-40.0 -50.0 -60.0							-				Stop Free 2.412000000 GH:
Center 2 Res BW		GHz	#VB	W 8.0 I	MHz	FUNCTIO	_	weep 10).00 ms (Span 0 Hz 10001 pts)	CF Step 8.000000 MH Auto Mar
1 Δ2 2 F 3 Δ4 4 F 5 6	1 t (Δ) 1 t 1 t (Δ) 1 t		2.064 ms (Δ 260.0 μs 2.086 ms (Δ 260.0 μs	20.	1.29 dB 89 dBm 1.09 dB 89 dBm						Freq Offse 0 H
7 8											

802.11n 20MHz Chain0 2412MHz

Keysight Spectrum Analyzer - Swept SA					
R RF 50 Ω DC		SENSE:INT		32 PM Aug 30, 2021	Frequency
enter Freq 2.4120000	DNO East - Trig: F	Free Run 1: 30 dB	/pe: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE WWWWWW DET P N N N N N	
Ref Offset 10.5 dl 0 dB/div Ref 30.00 dBn			∆Mkr3	9.16 dB	Auto Tur
	3∆4 111111111111111111111111111111111111			with the second	Center Fre
0.0 / 2					2.412000000 GI
0.0					Start Fr
0.0					2.412000000 G
0.0			1	1	Stop Fr 2.412000000 G
0.0					2.41200000 G
enter 2.412000000 GHz es BW 8 MHz	#VBW 8.0 M	Hz	Sweep 10.00 m		CF Ste 8.000000 M
1 Δ2 1 t (Δ)		10 dB	FUNCTION WIDTH FU		idito M
2 F 1 t 3 Δ4 1 t (Δ) 4 F 1 t	1.943 ms (Δ) 9.	'dBm 16 dB 'dBm			Freq Offs 0
5 6 7					
8 9 0					
sg			STATUS		

802.11n_40MHz_Chain0_2422MHz

Keysight Spectrum Analyzer - Swept SA					- d ×
R RF 50Ω DC Center Freq 2.422000000		SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	02:14:24 PM Aug 30, 2021 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency
Ref Offset 10.5 dB 10 dB/div Ref 30.00 dBm	PNO: Fast 🔸 IFGain:Low	√ Trig: Free Run #Atten: 30 dB		ΔMkr3 967.0 μs 0.53 dB	Auto Tune
20.0 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	and and and		in the second second	en procession property	Center Fred 2.422000000 GH2
20.0					Start Free 2.422000000 GH
40.0					Stop Fre 2.422000000 GH
center 2.422000000 GHz tes BW 8 MHz	#VBW	1 8.0 MHz	Sweep 10	Span 0 Hz .00 ms (10001 pts)	CF Stej 8.000000 MH <u>Auto</u> Ma
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	944.0 μs (Δ) 528.0 μs 967.0 μs (Δ) 528.0 μs	3.97 dB 11.84 dBm 0.53 dB 11.84 dBm		F	Freq Offse 0 H
8 9 10 11 11 11 11 11 11 11 11 11 11 11 11		m	STATUS	· ·	

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PEAK OUTPUT POWER MEASUREMENT 8

8.1 Standard Applicable

For systems using digital modulation in the 2400-2483.5 MHz bands, the limit for peak output power is 1Watt and the e.i.r.p. shall not exceed 4 W.

If the transmitting antenna of directional gain greater than 6dBi are used the peak output power form the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the Antenna exceeds 6dBi.

In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of Antenna exceeds 6dBi.

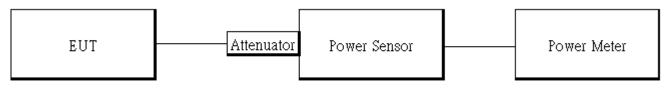
Conducted Emission Test Site: Conducted B										
EQUIPMENT TYPE	MFR/BRAND	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.					
Attenuator	Marvelous	MVE2213-10	RF05	11/19/2020	11/18/2021					
Power Meter	Anritsu	ML2496A	1804002	04/14/2021	04/13/2022					
Power Sensor	Anritsu	MA2411B	1726105	04/14/2021	04/13/2022					
Power Sensor	Anritsu	MA2411B	1726106	04/14/2021	04/13/2022					
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/13/2021	07/12/2022					
Attenuator	Marvelous	MVE2213-10	RF05	11/19/2020	11/18/2021					
DC Block	PASTERNACK	PE8210	RF157	11/19/2020	11/18/2021					
Test Software	SGS Taiwan	Radio Test Software	Ver.21	N.C.R	N.C.R					

8.2 Measurement Equipment Used

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

8.3 Test Set-up

Power Meter:



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8.4 Measurement Procedure

- 1. Place the EUT on the table and set it in transmitting mode.
- 2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance .
- 3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter.

Power Meter:

It is used as the auxiliary test equipment to conduct the output power measurement.

4. Record the max. Reading as observed from Spectrum or Power Meter.

* Note: The duty cycle factor and below is compensated to obtain the maximum value of measurement in average.

8.5 Measurement Result

8.5.1 Peak Output Power

802.1	1b Ch0					
СН	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	1	48	16.00	30.00	PASS
6	2437	1	47	15.84	30.00	PASS
11	2462	1	47	15.77	30.00	PASS
802.1	1b Ch0		- I I		`	
СН	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Limit (dBm)	RESULT
1	2412	1	48	12.95	30.00	PASS
6	2437	1	47	12.88	30.00	PASS
11	2462	1	47	12.78	30.00	PASS

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СН	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	46	22.49	30.00	PASS
6	2437	6	46	22.43	30.00	PASS
11	2462	6	46	22.56	30.00	PASS
302.1	1g Ch0					
СН	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Limit (dBm)	RESULT
	2412	6	46	12.87	30.00	PASS
1	2.12					D400
1 6	2437	6	46	12.97	30.00	PASS

802.11n_HT20M Ch0											
СН	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT					
1	2412	MCS0	46	21.92	30.00	PASS					
6	2437	MCS0	46	22.27	30.00	PASS					
11	2462	MCS0	46	22.29	30.00	PASS					
802.1	1n_HT201	M Ch0			•						
СН	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Limit (dBm)	RESULT					
1	2412	MCS0	46	12.43	30.00	PASS					
6	2437	MCS0	46	12.48	30.00	PASS					
11	2462	MCS0	46	12.65	30.00	PASS					

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802.1	802.11n_HT40M Ch0											
СН	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT						
3	2422	MCS0	48	22.45	30.00	PASS						
6	2437	MCS0	47	22.34	30.00	PASS						
9	2452	MCS0	44	21.18	30.00	PASS						
802.1	1n_HT40I	M Ch0			•	•						
СН	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Limit (dBm)	RESULT						
3	2422	MCS0	48	13.25	30.00	PASS						
6	2437	MCS0	47	13.27	30.00	PASS						
9	2452	MCS0	44	11.47	30.00	PASS						

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8.5.2 EIRP

802 11h Ch0

СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT			
1	2412	1	12.95	3.50	16.45	36	PASS			
6	2437	1	12.88	3.50	16.38	36	PASS			
11	2462	1	12.78	3.50	16.28	36	PASS			

802.11a Ch0

002.1							
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	6	12.87	3.50	16.37	36	PASS
6	2437	6	12.97	3.50	16.47	36	PASS
11	2462	6	13.21	3.50	16.71	36	PASS

802.1 <i>°</i>	In_HT20N	1 Ch0					
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	12.43	3.50	15.93	36	PASS
6	2437	MCS0	12.48	3.50	15.98	36	PASS
11	2462	MCS0	12.65	3.50	16.15	36	PASS

802.11	ln_HT40N	I Ch0					
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	13.25	3.50	16.75	36	PASS
6	2437	MCS0	13.27	3.50	16.77	36	PASS
9	2452	MCS0	11.47	3.50	14.97	36	PASS

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9 EMISSION BANDWIDTH MEASUREMENT

9.1 Standard Applicable

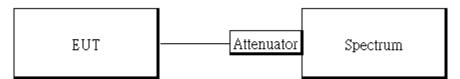
The minimum 6 dB bandwidth shall be at least 500 kHz.

9.2 Measurement Equipment Used

	Conducte	ed Emission Test S	ite: Conducted B		
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/13/2021	07/12/2022
Attenuator	Marvelous	MVE2213-10	RF05	11/19/2020	11/18/2021
DC Block	PASTER- NACK	PE8210	RF157	11/19/2020	11/18/2021
Test Software	SGS Taiwan	Radio Test Soft- ware	Ver.21	N.C.R	N.C.R

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

9.3 Test Set-up



9.4 Measurement Procedure

- 1. Place the EUT on the table and set it in transmitting mode.
- 2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance .
- 3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 4. Set the spectrum analyzer as

RBW= 100kHz , VBW = 3 X RBW, Span= 2 to 5 times of the OBW, Sweep=auto, Detector = Peak, and Max hold for -6dB Bandwidth test.

5. Set the spectrum analyzer as

RBW= 1 % to 5% of 99% Bandwidth ,

VBW \geq 3 X RBW,

Span= large enough to capture all products of the modulation process,

Sweep=auto,

Detector = Peak, and Max hold for 99% Bandwidth test.

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- 6. Turn on the 99% bandwidth function, max reading.
- 7. Repeat above procedures until all test default channel is completed

9.5 6dB Bandwidth

802.11b Ch0			
Freq.	6dB BW	Limit	Result
(MHz)	(kHz)	(kHz)	Result
2412	8120.00	≧ 500	PASS
2437	8119.00	≧ 500	PASS
2462	8121.00	≧ 500	PASS
802.11g Ch0			
Freq.	6dB BW	Limit	Result
(MHz)	(kHz)	(kHz)	Result
2412	16340.00	≧ 500	PASS
2437	16340.00	≧ 500	PASS
2462	15210.00	≧ 500	PASS
802.11_n_HT20 Ch0			
Freq.	6dB BW	Limit	Result
(MHz)	(kHz)	(kHz)	Result
2412	17320.00	≧ 500	PASS
2437	17310.00	≧ 500	PASS
2462	15210.00	≧ 500	PASS
802.11_n_HT40 Ch0	-		-
Freq.	6dB BW	Limit	Result
(MHz)	(kHz)	(kHz)	Result
2422	35700.00	≧ 500	PASS
2437	35920.00	≥ 500	PASS
2452	35780.00	≧ 500	PASS

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802.11b 20MHz Chain0 2412MHz

	um Analyzer - Occupi								- 6 -
Center Fre	q 2.4120000	000 GHz	Center	Freq: 2.412000 ree Run 30 dB	000 GHz Avg Hold	ALIGN AUTO	Radio Std		Frequency
10 dB/div	Ref Offset 10 Ref 30.00 c								
20.0 10.0			um	mm					Center Freq 2.412000000 GHz
-10.0		- Martin		V (b	My			
-30.0 -40.0 -50.0	- m	ŗ				Y.	/~~	Van war	
Center 2.4 #Res BW 1			#\	/BW 300 kł	Hz			n 30 MHz 2.933 ms	CF Step 3.000000 MHz
Occupi	ed Bandw	idth 10.842 N	IHz	Total Po	ower	20.6	i dBm		Auto Man Freq Offset
Transmi x dB Ba	it Freq Error ndwidth	9.463 8.120		OBW Po x dB	ower		0.00 % 00 dB		он:
vsg						STATUS	5		

802.11b_20MHz_Chain0_2437MHz

📕 Keysight Spectrum Analy		/								
Center Freq 2.4	37000000	GHz #FGai	n:Low	Center Fr	nse:INT req: 2.43700 e Run 0 dB	0000 GHz Avg Hol	ALIGN AUTO	Radio Std		Frequency
	Offset 10.5 dE 30.00 dBm									
20.0				unn	NO 0.0 0					Center Freq 2.437000000 GHz
-10.0		w	Mark		mm	www	h.			
-30.0	\sim						-\ \	~~~	man	
-60.0										
Center 2.437 GH #Res BW 100 kH				#VE	300 F	Hz			in 30 MHz 2.933 ms	CF Step 3.000000 MHz
Occupied E					Total P	ower	20.4	4 dBm		Auto Mar
			9 MI							Freq Offset
Transmit Fre			2.806		OBW P	ower		9.00 %		
x dB Bandwi	atn	8	.119 M	IHZ	x dB		-6.	.00 dB		
NSG							STATU	s		1

802.11b_20MHz_Chain0_2462MHz

📕 Keysight Spects 🕱 R	rum Analyzer - Occupied BV	V	anner mel			- 6 -
	RF 50 Ω DC eq 2.462000000	GHz #IFGain:Low	SENSE:INT Center Freq: 2.462000 Trig: Free Run #Atten: 30 dB	ALIGN AUTI 000 GHz Avg Hold: 50/50	09:09:33 AM Aug 31, 20 Radio Std: None Radio Device: BTS	Frequency
10 dB/div	Ref Offset 10.5 dl Ref 30.00 dBn					
20.0		~~~~~	man	A-n .		Center Freq 2.462000000 GHz
-10.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	N	¥	- My My		
-40.0 -50.0					When	-
Center 2.4 #Res BW 1			#VBW 300 kH	łz	Span 30 MH Sweep 2.933 m	s 3.000000 MHz
Occupi	ied Bandwidt 11	հ I.403 MH	Total Po	wer 20	.5 dBm	Auto Man Freq Offset
	it Freq Error	-55.146 k	Hz OBW Po		99.00 %	0 Hz
х ав ва	ndwidth	8.121 M	Hz xdB	-	6.00 dB	
ISG				STA	TUS	

802.11g_20MHz_Chain0_2412MHz

R	RF 50 Ω DC		SENSE:INT		ALIGN AUTO		M Aug 31, 2021	Frequency
Center Fr	eq 2.412000000		nter Freq: 2.41200 g: Free Run	0000 GHz Avg Hold		Radio Std	: None	Frequency
		#FGain:Low #A	g: Free Run tten: 30 dB	Avginoid	1: 50/50	Radio De	vice: BTS	
10 dB/div	Ref Offset 10.5 di Ref 30.00 dBn							
. og 20.0								Center Fre
10.0		_						2.412000000 GH
1.00			mont	mm	hundry			
0.0	1		1					
0.0								
0.0 0.0 محمد 0.0	maria					- ¹		
0.0							a nation the	
0.0								
enter 2.4 Res BW			#VBW 300 k	Hz			n 30 MHz 2.933 ms	CF Ste 3.000000 MH
Occup	ied Bandwidt	h	Total P	ower	20.	2 dBm		<u>Auto</u> Ma
	16	6.430 MHz						Freq Offse
Transm	nit Freq Error	-19.132 kHz	OBW P	ower	9	9.00 %		0 H
x dB Ba	andwidth	16.34 MHz	x dB		-6	.00 dB		
a					STAT			

802.11g_20MHz_Chain0_2437MHz

	n Analyzer - Occupied BV	v							
	RF 50 Ω DC 2.437000000	I GHz #EGain:Low				ALIGN AUTO	Radio De		Frequency
10 dB/div	Ref Offset 10.5 d Ref 30.00 dBr	в							
20.0									Center Fre 2.437000000 GH
0.00	- M	mlashar	same	Jun Marando,	mhunhun	hudm	h		
0.0 10.0	Warman .						- ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	malana ang	
50.0									
enter 2.43 Res BW 10			#VB	W 300 k	Hz		Sweep	an 30 MHz 2.933 ms	CF Ste 3.000000 MH
Occupie	d Bandwidt			Total P	ower	20	.3 dBm		Auto Ma
	16	6.433 M⊦	z						Freq Offs
Transmit	Freq Error	-21.132 k	Hz	OBW P	ower	ş	99.00 %		01
x dB Ban	dwidth	16.34 M	Hz	x dB		-(6.00 dB		
sg						STAT	rus		

802.11g_20MHz_Chain0_2462MHz

R Center Fre	RF 50 Ω DC eq 2.462000000	Trig:	SENSE:INT ALIGN AUTO 09:23:36 AM Aug 31, 202 enter Freq: 2.46200000 GHz Radio Std: None rig: Free Run Avg[Hold: 50/50 Atten: 30 dB Radio Device: BTS			: None	Frequency
0 dB/div	Ref Offset 10.5 di Ref 30.00 dBn						
og 20.0							Center Fre 2.462000000 GH
10.0	L.A.	mlavelunterror	and mound	- And			
10.0 mmhrr	maria				en here	Man Jaway	
50.0							
enter 2.4 Res BW		#	VBW 300 kHz			in 30 MHz 2.933 ms	CF Ste 3.000000 M
Occup	ied Bandwidt	h	Total Power	20.	idBm		Auto M
	16	6.285 MHz					Freq Offs
Transm	it Freq Error	-18.336 kHz	OBW Power	99	9.00 %		01
x dB Ba	andwidth	15.21 MHz	x dB	-6.	00 dB		

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802.11n 20MHz Chain0 2412MHz

	um Analyzer - Occupied BW							
X R Center Fre	q 2.412000000		SENSE:INT Center Freq: 2.41200 Trig: Free Run #Atten: 30 dB		50/50	Radio Sto		Frequency
10 dB/div	Ref Offset 10.5 dE Ref 30.00 dBm							
20.0 10.0 0.00		under and have the second	newtone produced	an hugh a	h h			Center Free 2.412000000 GH:
10.0 20.0 30.0						West when		
40.0 50.0 60.0							andrik-ninvy.	
Center 2.41 #Res BW 1			#VBW 300 P	Hz			in 30 MHz 2.933 ms	CF Step 3.000000 MH
Occupi	ed Bandwidt		Total P	ower	20.1	dBm		<u>Auto</u> Mar
	17	.629 MH	Z					Freq Offse
Transmi	t Freq Error	-7.157 kH	z OBW P	ower	99	.00 %		0 H
x dB Bar	ndwidth	17.32 MH	z xdB		-6.	00 dB		
ISG					STATUS	5		

802.11n_20MHz_Chain0_2437MHz

	um Analyzer - Occupied	BW						- 6 ×
Center Fre	q 2.43700000	0 GHz		437000000 GHz Avg Ho	ALIGN AUTO	09:32:16 A Radio Std	M Aug 31, 2021 : None	Frequency
		#IFGain:Low	#Atten: 30 dB			Radio Dev	rice: BTS	
10 dB/div Log	Ref Offset 10.5 Ref 30.00 dE							
20.0								Center Freq
10.0								2.437000000 GHz
-10.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Muslimmum	and por front	mbrohunt	or have	1		
-20.0	- Annanal					hora -		
-30.0						- Vu		
-40.0 Junit(Naur -50.0	4.						norther the second s	
-60.0								
Center 2.43							n 30 MHz	CF Step
#Res BW 1	UU KHZ		#VBW 3	SUU KHZ		sweep	2.933 ms	3.000000 MHz Auto Man
Occupi	ed Bandwid			al Power	20.2	2 dBm		
	1	7.631 MI	Ηz					Freq Offset
Transmi	t Freq Error	-9.429	KHZ OB	W Power	99	9.00 %		0 Hz
x dB Bar	x dB Bandwidth		17.31 MHz x dB		-6.	00 dB		
wsg					STATU	S		r

802.11n_20MHz_Chain0_2462MHz

Keysight Spectr	um Analyzer - Occupied BW RF 50 Q DC		SENSE:INT	ALIGN	0110 10:22:04 05	4 Aug 31, 2021	
	q 2.462000000		Center Freq: 2.462000 Trig: Free Run #Atten: 30 dB	Radio Std: Radio Devi	None	Frequency	
0 dB/div	Ref Offset 10.5 dE Ref 30.00 dBm						
10.0		A sharked					Center Freq 2.462000000 GHz
				muhal	Mong		
0.0 0.0 0.0	who for the second s				`` ``	allannastrad	
enter 2.40 Res BW 1			#VBW 300 kl		n 30 MHz 2.933 ms	CF Step 3.000000 MHz	
Occupi	ed Bandwidt		Total Po	wer	20.1 dBm		<u>Auto</u> Man
	17	.460 MH	z				Freq Offse
Transmi	t Freq Error	-8.789 kH	Iz OBW Po	wer	99.00 %		0 Ha
x dB Baı	ndwidth	15.21 MH	lz xdB		-6.00 dB		
iG					STATUS		

802.11n 40MHz Chain0 2422MHz

	trum Analyzer - Occupied BV	v							- 6 2
enter Fre	RF 50 Ω DC eq 2.422000000	Center F	SENSE:INT ALIGN AUTO Center Freq: 2.422000000 GHz Trig: Free Run Avg Hold: 50/50 #Atten: 30 dB Avg Hold: 50/50 Atten: 30 dB			Radio	48 AM Aug 31, 2021 Std: None Device: BTS	Frequency	
10 dB/div	Ref Offset 10.5 d Ref 30.00 dBr								
-og 20.0 10.0 0.00									Center Fre 2.422000000 GH
20.0	hadeedaalaalaalaalaalaalaalaalaa	alaa ahadadha		an a	huberholo	จะ ใงไข้	harland	\	
0.0 0.0 0.0								- marketer	
enter 2.4 Res BW			#V	BW 300 k	Hz			pan 50 MHz eep 4.8 ms	CF Ste
Occupied Bandwidth 35.942 MHz			Hz	Total Power Z			i dBm		Auto Mar Freq Offse 0 H:
Transmit Freq Error -37.130 kH			.00 %						
x dB Ba	Indwidth	35.70	ИНz	x dB		-6.	00 dB		
20						STATIS			

802.11n_40MHz_Chain0_2437MHz

	um Analyzer - Occupi									
enter Fre	RF 50 Ω 0 q 2.4370000	000 GHz	Trig: Free Run Avg Hold: 50/50					Std:	None	Frequency
0 dB/div	Ref Offset 10 Ref 30.00 c									
.og 20.0 10.0										Center Fre 2.437000000 Gi
1.00	hadadaa	hadadan ala kan ka	a handraadhan	munic	-hurberto	lwhohn	horbold	Ļ		
0.0 10.0 2000-{ 2 000 /								Ì	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
0.0										
enter 2.43 Res BW 1			#VBW 300 kHz				Span 50 MHz Sweep 4.8 ms			CF Ste 5.000000 MI
Occupi	ed Bandw			Total F	ower	20.6 dBm				<u>Auto</u> Mar
		35.944 N	Hz							Freq Offs
Transmi	t Freq Error	-40.382	kHz	OBW F	ower	99	99.00 %			01
x dB Baı	ndwidth	35.92	MHz	x dB		-6.	00 dB			
5G						STATUS	2			

802.11n_40MHz_Chain0_2452MHz

R Center Fr	RF	er - Occupied B ¹ 50 Ω DC 2000000) GHz	Center	SENSE:INT Freq: 2.4520 Free Run	00000 GHz Avg Hol	ALIGN AUTO	Radio	Std	M Aug 31, 2021 None	Frequency
			#IFGain:Low	#Atten: 30 dB				Radio	Dev	ice: BTS	
0 dB/div		ffset 10.5 d 30.00 dBr									
og 20.0				_							Center Fr
0.0				-			-				2.452000000 G
.00	1	halala	a har and when		m mahala	hours					
0.0	1				Ψ				1		
0.0	1			_					X		
0.0	A+			-						mann	
50.0											
50.0											
enter 2. Res BW				#	#VBW 300 kHz			Span 50 MHz Sweep 4.8 ms			CF St 5.000000 M
Occur	bied Ba	andwid	th		Total F	Power	19.4	l dBn	1		<u>Auto</u> Mar
			5.959 N	IHz							Freq Offs
Transn	Transmit Freq Error -48.07		-48.079) kHz	OBW F	Power	99	.00 %	6		0
x dB Bandwidth		35.78	35.78 MHz		x dB		-6.00 dB				
ig.							STATU	s			<u>.</u>

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(ポチカオ) 就例 「 近根 守路 木健 町 淘風之(kai 貝 頁 「 阿可花(kai) 程 頃 留 切 べ う 板 守 木座 本公 可 音 幽 叶 づ 、 不 可 守 板 夜 れ 夏 え This document is issued by the Company subject to is General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemni-fication and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. S Taiwan Ltd.

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9.6 99% Bandwidth

802.11b Ch0	
Freq. (MHz)	99% BW (MHz)
2412	11.266
2437	11.211
2462	11.537

802.11g Ch0

Freq.	99% BW
(MHz)	(MHz)
2412	16.882
2437	16.869
2462	16.553

802.11n_HT20M Ch0

Freq. (MHz)	99% BW (MHz)
2412	17.963
2437	17.992
2462	17.605

802.11n_HT40M Ch0

Freq.	99% BW
(MHz)	(MHz)
2422	36.215
2437	36.226
2452	36.258

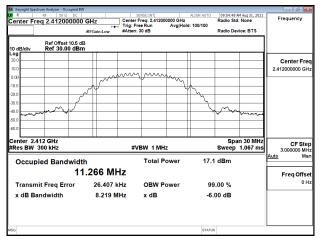
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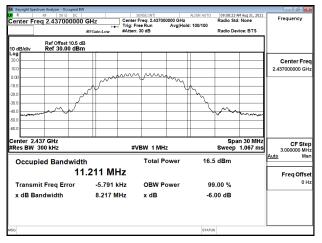
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802.11b_20MHz_Chain0_2412MHz



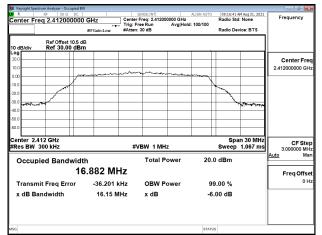
802.11b_20MHz_Chain0_2437MHz



802.11b_20MHz_Chain0_2462MHz

Keysight Spe	ctrum Analyzer - Occupied B	w	SENSE:INT		N AUTO 0):12:15 AM Aug 31, 2021	
	req 2.46200000	D GHz #IFGain:Low	Center Freq: 2.46200		Ra 0/100	dio Std: None dio Device: BTS	Frequency
10 dB/div	Ref Offset 10.5 d Ref 30.00 dB						
.og 20.0 10.0 0.00				M.			Center Freq 2.462000000 GHz
10.0 20.0 30.0	لر			- Un	Ny -		
10.0 50.0						Mr. Conserve	
	462 GHz 300 kHz		#VBW 1 MH	z	Sv	Span 30 MHz veep 1.067 ms	CF Step 3.000000 MHz
Occu	bied Bandwid	th 1.537 MI	Total P Hz	ower	16.6 di	3m	<u>Auto</u> Man
	Transmit Freq Error -22.656		kHz OBW P	99.00		Freq Offse 0 Ha	
X dB B	andwidth	8.631 N	1Hz xdB		-6.00	dB	
sg					STATUS		

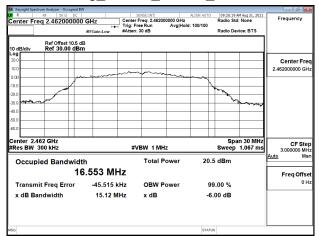
802.11g_20MHz_Chain0_2412MHz



802.11g_20MHz_Chain0_2437MHz

Keysight Spectrum Analyzer - Occupied B	N					- 6 -
R RF 50 Ω DC	CH7 Cente	SENSE:INT Freq: 2.437000000 GHz	ALIGN AUTO	09:22:21 AM Radio Std:		Frequency
zeniter Freq 2.45700000	Trig:		d:>100/100	Radio Devic	DTC	
	#IFGain:Low #Atte	#Atten: 30 dB		Radio Devic		
Ref Offset 10.5 d Ref 30.00 dBr						
-0g 28.0						Center Fre
10.0	-					2.437000000 GH
0.00			many			
10.0			<u> </u>	m		
20.0				N.		
0.0 Hrall and and					فعمريا ري	
50.0						
50.0						
					30 MHz	
Center 2.437 GHz #Res BW 300 kHz	#	#VBW 1 MHz				CF Ste
						3.000000 MHz Auto Man
Occupied Bandwid		Total Power	20.4	dBm		
10	6.869 MHz					Freq Offs
Transmit Freg Error	-40.342 kHz	OBW Power	99	.00 %		01
x dB Bandwidth	16.13 MHz	x dB	-6.0	00 dB		
G			STATUS			

802.11g_20MHz_Chain0_2462MHz



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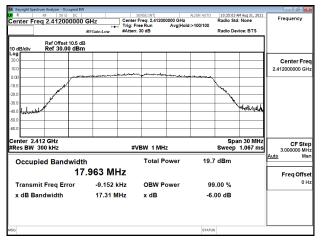
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802.11n_20MHz_Chain0_2412MHz



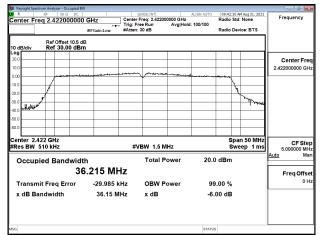
802.11n_20MHz_Chain0_2437MHz

	it Spectrum Analyzer - Occ									- 0 -
Center	RF 50 Ω Freq 2.43700		7		NSE:INT reg: 2.43700		ALIGN AUTO	09:34:30 A	M Aug 31, 2021	Frequency
Conter	1100 2.45700		Sain:Low	Trig: Fre #Atten: 3	e Run 0 dB	Avg Hold	: 100/100	Radio De	vice: BTS	
			sain:Low	watten. o	U UD			Radio De	nce. DT3	
10 dB/di	Ref Offset iv Ref 30.00									
20.0										Center Freq
10.0										2.437000000 GHz
0.00		man	mana		ma	manne	manine .			2.407000000 0112
-10.0	2						L `	<u> </u>		
-20.0	Lower							1 Vron		
-30.0								Ň		
-40.0	Marked Mark								HAA/HAAA/	
-50.0										
-60.0										
	2.437 GHz W 300 kHz			#VBW 1 MHz					n 30 MHz 1.067 ms	CF Step 3.00000 MHz
										Auto Man
Oco	upied Band	width			Total P	ower	19.8	dBm		
		17.9	92 MI	١z						Freq Offset
Tran	nsmit Freq Err	or	3.868	Hz	OBW P	ower	99	.00 %		0 Hz
	x dB Bandwidth		17.37 M		x dB		-6	00 dB		
A GL	Danawidan		17.57 1	1112	x ub		-0.	00 00		
MSG							STATUS			
							onno			

802.11n_20MHz_Chain0_2462MHz

	ctrum Analyzer - Occupied BV	/				- 6 ×	
enter Fr	req 2.462000000	Trig	sense:INT ter Freq: 2.462000000 GHz I: Free Run Avg Hole en: 30 dB	ALIGN AUTO	10:24:46 AM Aug 31, 2021 Radio Std: None Radio Device: BTS	Frequency	
0 dB/div	Ref Offset 10.5 dl Ref 30.00 dBn						
20.0		a chundhadanaan	mymm			Center Fred 2.462000000 GHz	
10.0				a new serve			
30.0 40.0	war, and a				"And the radiation		
50.0 60.0							
	enter 2.462 GHz Span 30 MHz Span 30 MHz Res BW 300 kHz #VBW 1 MHz Sweep 1.067 ms						
Occup	bied Bandwidt	^h .605 MHz	Total Power	19.9	dBm	<u>Auto</u> Mar	
Transmit Freq Error -10.472			OBW Power	99	.00 %	Freq Offse 0 H	
x dB Bandwidth 15.38 M		15.38 MHz	x dB	-6.	00 dB		
sg				STATUS	5		

802.11n_40MHz_Chain0_2422MHz



802.11n_40MHz_Chain0_2437MHz

	um Analyzer - Occupied B	w								
R RF 50 Ω DC Center Freq 2.437000000 GHz			Center I	SENSE:INT ALIGN AUTO Center Freq: 2.437000000 GHz			09:46:35 AM Aug 31, 2021 Radio Std: None Radio Device: BTS			Frequency
0 dB/div	Ref Offset 10.5 d Ref 30.00 dB	iB								
0.0									_	Center Fre 2.437000000 GF
00				¥		**************************************	and and			
0.0 minut	/							1,00	-	
0.0										
Center 2.437 GHz Res BW 510 kHz				BW 1.5 MH	Iz			oan 50 weep		CF Ste 5.000000 MH
Occupied Bandwidth				Total Po	wer	20.2	2 dBm			Auto Ma
	3	6.226 M	HZ							Freq Offs
Transmit Freq Error -42.924 k		kHz	OBW Power		99	99.00 %			01	
x dB Bandwidth		35.75 N	75 MHz x dB			-6.00 dB				
G						STATU	5			

802.11n_40MHz_Chain0_2452MHz

Keysight Spectrum Analyzer - Occupied BW		SENSE:INT	ALIGN AUTO	09:50:30 AM	4 Aug 31, 2021	
enter Freq 2.45200000	Trig: F	r Freq: 2.452000000 GHz Free Run Avg Hold h: 30 dB	: 100/100	Radio Std: Radio Devi	None	Frequency
Ref Offset 10.5 dB 0 dB/div Ref 30.00 dBm 9g						
0.0						Center Fre
0.0						2.452000000 G
0.00		V	a bolan on board	nerry		
0.0				- \		
					TIM	
0.0 4444/80000						
0.0						
enter 2.452 GHz Res BW 510 kHz	#	VBW 1.5 MHz			n 50 MHz ep 1 ms	CF Ste 5.000000 M
Occupied Bandwidt	h	Total Power	Total Power 18.8 dBm			Auto M
36	.258 MHz					Freq Offs
Transmit Freq Error	-41.749 kHz	OBW Power	99	.00 %		0
x dB Bandwidth	36.24 MHz	x dB	-6.0	00 dB		
3G			STATUS			

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10 CONDUCTED BAND EDGES AND SPURIOUS EMISSION MEASUREMENT

10.1 Standard Applicable

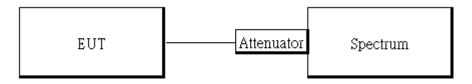
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a) & RSS-Gen §8.10, must also comply with the radiated emission limits specified in §15.209(a) & RSS-Gen §8.9.

10.2 Measurement Equipment Used

Conducted Emission Test Site: Conducted B									
EQUIPMENT TYPE	MFR/BRAND	MODEL NUM- BER	SERIAL NUMBER	LAST CAL.	CAL DUE.				
Attenuator	Marvelous	MVE2213-10	RF05	11/19/2020	11/18/2021				
Power Meter	Anritsu	ML2496A	1804002	04/14/2021	04/13/2022				
Power Sensor	Anritsu	MA2411B	1726105	04/14/2021	04/13/2022				
Power Sensor	Anritsu	MA2411B	1726106	04/14/2021	04/13/2022				

10.3 Test SET-UP



10.4 Measurement Procedure

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Reference Level of Emission Limit:

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance .
- Set the span to 1.5 times the DTS channel bandwidth.
- 4. Set the RBW = 100kHz & VBW = 300 kHz.
- 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.

Conducted Band Edge:

- 1. To connect Antenna Port of EUT to Spectrum.
- 2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance.
- 3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 4. Set start to edge frequency, and stop frequency of spectrum analyzer so as to encompass the spectrum to be examined.
- 5. Set the spectrum analyzer as RBW=100 kHz, VBW=300 kHz, Detector = Peak, Sweep = auto
- 6. Mark the highest reading of the emission as the reference level measurement.
- 7. Set DL as the limit = reading on marker of reference level measurement 20dBm
- 8. Mark the highest readings of the emissions outside of 2400MHz~2483.5MHz.
- 9. Repeat above procedures until all default test channel (low, middle, and high) was complete.

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Conducted Spurious Emission:

- 1. To connect Antenna Port of EUT to Spectrum
- 2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance.
- 3. Set RBW = 100 kHz & VBW= 300 kHz, Detector =Peak, Sweep = Auto.
- 4. Allow trace to fully stabilize.
- 5. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
- 6. Repeat above procedures until all default test channel measured were complete.

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10.5 Measurement Result

Reference Level of Limit 802.11b mode					
Freq.	PSD	Reference Level of Limit			
(MHz)	(dBm)	(dBm)			
2412	4.80	-15.20			
2437	4.66	-15.34			
2462	4.65	-15.35			

Reference Level of Limit 802.11g mode					
Freq.	PSD	Reference Level of Limit			
(MHz)	(dBm)	(dBm)			
2412	1.34	-18.66			
2437	1.65	-18.35			
2462	2.16	-17.84			

Reference Level of Limit 802.11n20 MODE						
Freq.	Freq. PSD Reference Level of Limit					
(MHz)	(dBm)	(dBm)				
2412	1.58	-18.42				
2437	1.66	-18.34				
2462	1.83	-18.17				

Reference Level of Limit 802.11n40 MODE						
Freq. PSD Reference Level of Limit						
(MHz)	(dBm)	(dBm)				
2422	-1.12	-21.12				
2437	-0.97	-20.97				
2452	-2.15	-22.15				

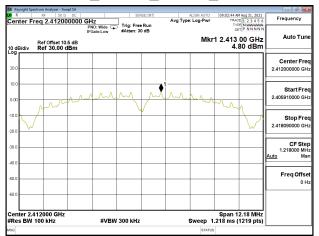
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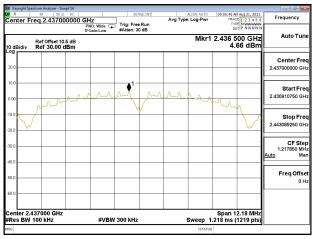
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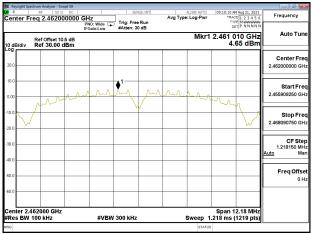
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802.11b_20MHz_Chain0_2437MHz



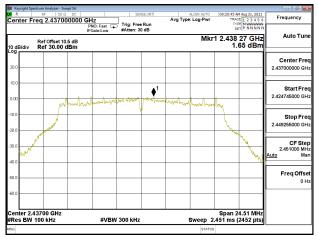
802.11b_20MHz_Chain0_2462MHz



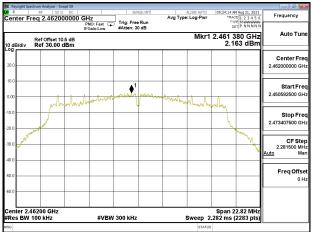
802.11g_20MHz_Chain0_2412MHz



802.11g_20MHz_Chain0_2437MHz



802.11g_20MHz_Chain0_2462MHz

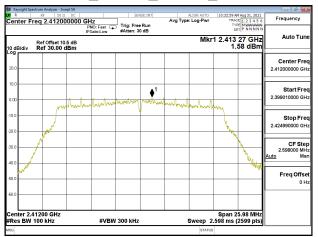


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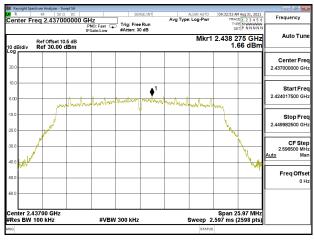
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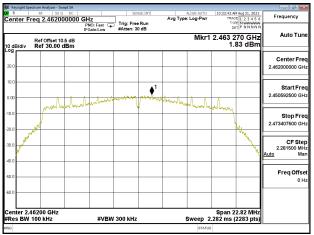
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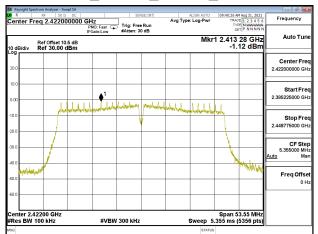
802.11n 20MHz Chain0 2437MHz



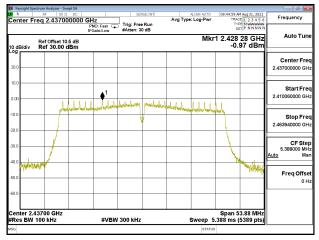
802.11n 20MHz Chain0 2462MHz



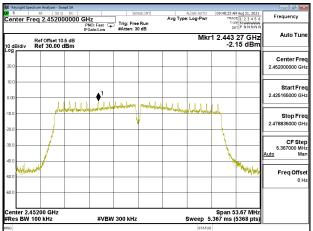
802.11n 40MHz Chain0 2422MHz



802.11n_40MHz_Chain0_2437MHz



802.11n 40MHz Chain0 2452MHz



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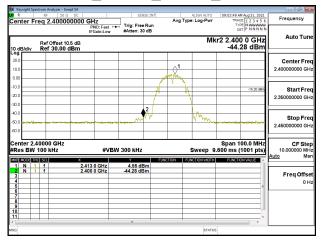
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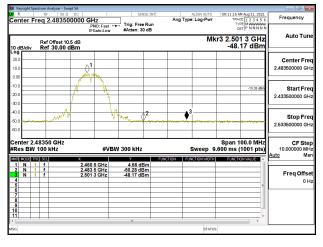
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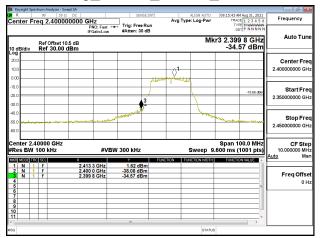
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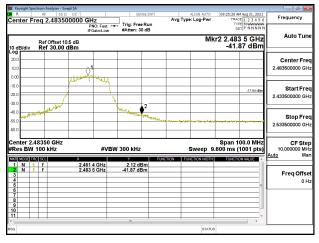
802.11b_20MHz_Chain0_2462MHz



802.11g_20MHz_Chain0_2412MHz



802.11g_20MHz_Chain0_2462MHz



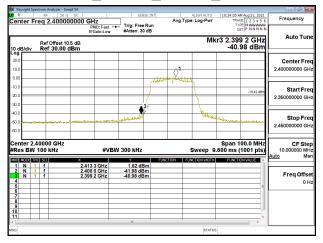
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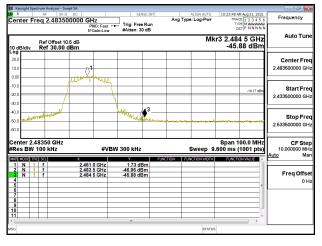
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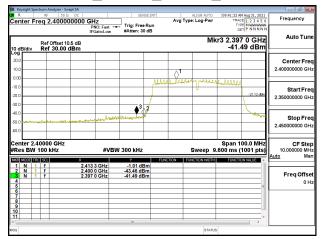
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802.11n 20MHz Chain0 2462MHz



802.11n 40MHz Chain0 2422MHz



802.11n 40MHz Chain0 2452MHz

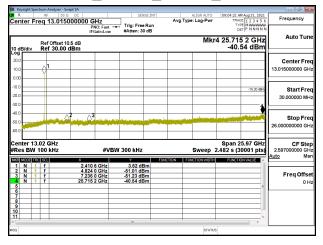
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Ref Offset 10 10 dB/div Ref 30.00	IFGain:Low #At	g: Free Run tten: 30 dB	Mk	r3 2.487 0 GHz -43.67 dBm	Auto Tune
20.0 10.0 0.00					Center Fred 2.483500000 GHz
-10.0				-22.15 oBm	Start Free 2.433500000 GH:
-40.0 -50.0 -60.0	-	2 \$ 3 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			Stop Free 2.533500000 GH:
Center 2.48350 GHz #Res BW 100 kHz	#VBW 300) KHZ		Span 100.0 MHz .600 ms (1001 pts)	CF Step 10.000000 MH: <u>Auto</u> Mar
I N I f 2 N 1 f 3 N 1 f 4 - - 6 - - 7 - - 8 - - 9 - -	2.443 3 GHz -2 2.483 5 GHz -46	.15 dBm .74 dBm .67 dBm		E	Freq Offse 0 H
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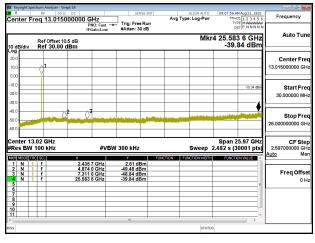
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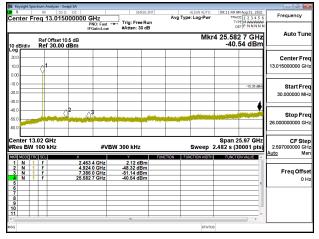
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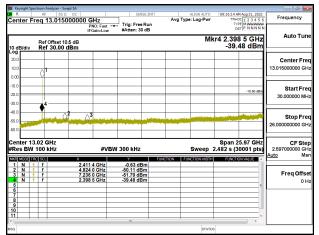
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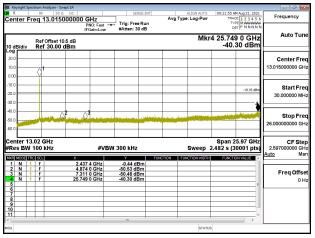
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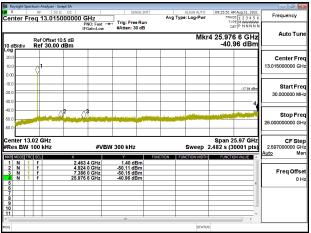
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802.11g_20MHz_Chain0_2437MHz



802.11g_20MHz_Chain0_2462MHz



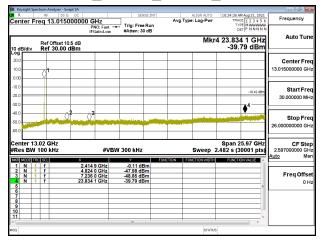
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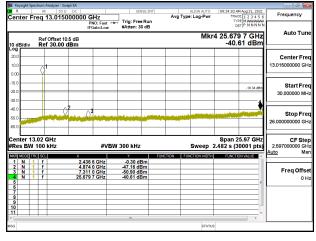
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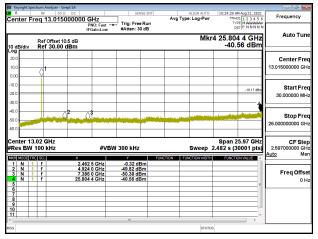
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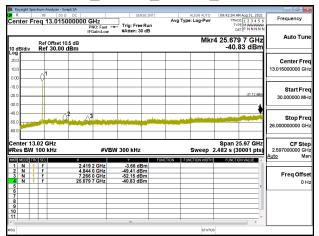
802.11n_20MHz_Chain0_2437MHz



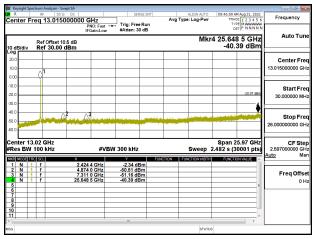
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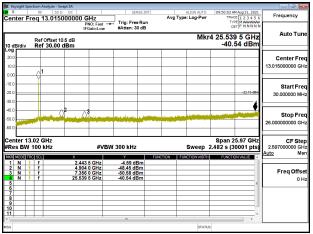
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802.11n_40MHz_Chain0_2437MHz



802.11n_40MHz_Chain0_2452MHz



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11 RADIATED BANDEDGE AND SPURIOUS EMISSION MEASUREMENT

11.1 Standard Applicable

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands must also comply with the §15.209 and RSS-Gen §8.9 Table 5 and 6 limit as below.

And according to §15.33(a) (1) & RSS-Gen §6.13.2.a, for an intentional radiator operates below 10GHz, the frequency range of measurements: to the tenth harmonic of the highest fundamental frequency or to 40GHz, whichever is lower.

Frequency (MHz)	Field strength (microvolts/meter)	Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Note:

1. The lower limit shall apply at the transition frequencies.

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11.2 Measurement Equipment Used:

Radiated Emission Test Site: SAC D								
EQUIPMENT TYPE	MFR/BRAND	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.			
Broadband Antenna	SCHWAZBECK	VULB 9168	9168-617	11/11/2020	11/10/2021			
Horn Antenna	Schwarzbeck	BBHA9170	184	12/11/2020	12/10/2021			
Horn Antenna	Schwarzbeck	BBHA9120D	1341	06/04/2021	06/03/2022			
Loop Antenna	ETS.LINDGREN	6502	143303	05/07/2021	05/06/2022			
3m Site NSA	SGS	966 chamber D	N/A	07/12/2021	07/11/2022			
Test Software	audix	e3	E3 20923 SGS Ver.9 (C)	N.C.R	N.C.R			
Spectrum Analyzer	KEYSIGHT	N9010A	MY57120200	03/22/2021	03/21/2022			
Pre-Amplifier	EMC Instruments	EMC184045B	980135	10/27/2020	10/26/2021			
Pre-Amplifier	EMC Instruments	EMC9135	980234	11/19/2020	11/18/2021			
Pre-Amplifier	EMC Instruments	EMC12630SE	980273	11/19/2020	11/18/2021			
Coaxial Cable	Huber+Suhner	RG 214/U	W21.01	11/19/2020	11/18/2021			
Coaxial Cable	Huber Suhner	EMC106-SM-SM- 7200	150703	11/19/2020	11/18/2021			
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17413/4	11/19/2020	11/18/2021			
Attenuator	Marvelous	WATT-218FS-10	RF17	11/19/2020	11/18/2021			
Lowpass Filter	Woken	EWT-56-0019	RF173	11/19/2020	11/18/2021			
High Pass Filter	R&S	F13 HPF 3GHz	RF175	11/19/2020	11/18/2021			
Band Rejection Filter	Micro-Tronics	BRM50701-01	RF201	11/19/2020	11/18/2021			

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

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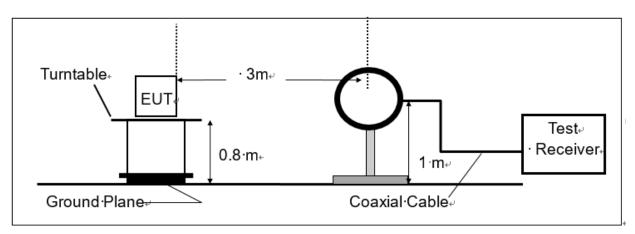
(ポチカオ) 就(明) に取ぎ時本能す) 新人(株ing) 員) 同時10年後に留いた。今年版 学校をなび) 書面計 「 ^ 小 可時10年後ま。 This document is issued by the Company subject to is General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemni-fication and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Taiwan Ltd.

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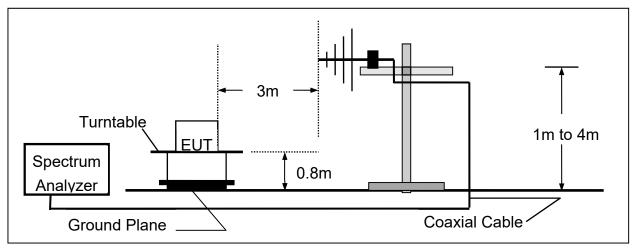


11.3 Test SET-UP

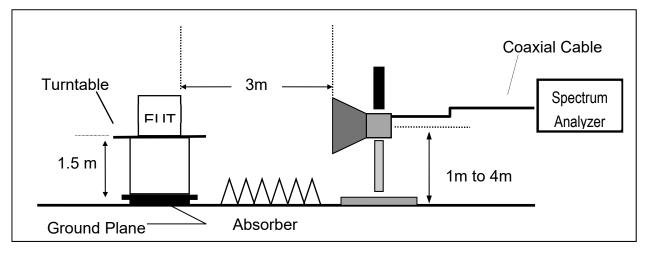
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz.



(B) Radiated Emission Test Set-Up, Frequency From 30MHz to 1000MHz



(C) Radiated Emission Test Set-Up, Frequency Above 1GHz



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11.4 Measurement Procedure

- 1. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance.
- 2. The EUT was placed on a turn table with 0.8m for frequency< 1GHz and 1.5m for frequency> 1GHz above ground plane.
- 3. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
- 4. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
- 5. Set the spectrum analyzer as RBW=100 kHz and VBW=300 kHz for Peak Detector (PK) at frequency between 30MHz and 1 GHz.
- 6. Use receiver mode as RBW=120 kHz for Quasi-peak (QP) at frequency between 30MHz and 1 GHz.
- 7. Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Maximum Emission Measurements at frequency above 1 GHz.
- Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 1/T (Duty cycle < 98%) for Average Emission Measurements at frequency above 1 GHz.
- 9. When measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.
- 10. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 11. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 12. Repeat above procedures until all default test channel measured were complete.

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11.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = *Field Strength*

CL = Cable Attenuation Factor (Cable Loss) AG = Amplifier Gain

AF = Antenna Factor

RA = Reading Amplitude

The limit of the emission level is expressed in dBuV/m, which converts 20*log(uV/m)

Actual FS($dB\mu V/m$) = SPA. Reading level($dB\mu V$) + Factor(dB) Factor(dB) = Antenna Factor($dB\mu V/m$) + Cable Loss(dB) – Pre_Amplifier Gain(dB)

11.6 Test Results of Radiated Spurious Emissions from 9 kHz to 30 MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit per 15.31(o) & RSS-GEN §6.13.2 was not reported.

11.7 Measurement Result

Note:

- 1. Refer to next page spectrum analyzer data chart and tabular data sheets.
- 2. Measurements are completed at peak and average level, the mark of average is the highest emission in restricted bands

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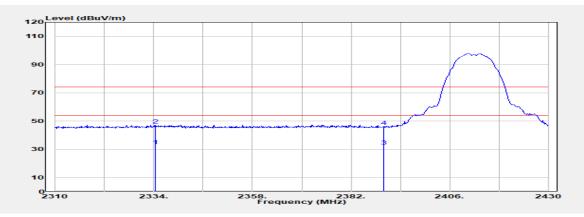
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Report No.: E2/2021/80082 Page: 49 of 96



11.7.1 Radiated Band Edge Measurement Result

Report Number	:E2/2021/80082	Test Site	:SAC D
Operation Mode	:802.11b	Test Date	:2021-08-30
Test Frequency	:2412 MHz	Temp./Humi.	:22.2/64
Test Mode	:BE CH LOW	Antenna Pol.	:Vertical
EUT Pol	:E2 Plane	Engineer	:Andy Wang



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2334.360	Average	40.07	-7.63	32.45	54.00	-21.55
2334.360	Peak	54.92	-7.63	47.29	74.00	-26.71
2390.000	Average	40.18	-7.89	32.29	54.00	-21.71
2390.000	Peak	54.07	-7.89	46.18	74.00	-27.82

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Report Number Operation Mode Test Frequency	:E2/2021/8 :802.11b :2412 MHz			Test Site Test Date Temp./Humi.	:SAC D :2021-08-30 :22.2/64	
Test Mode	:BE CH LO	W		Antenna Pol.	:Horizontal	
EUT Pol	:E2 Plane			Engineer	:Andy Wang	
120 Level (dBuv 110 90 70 50 30 10 2310	2334.	2 2 2 358. Frequen	2382. cy (MHZ)	- - - - - - - - - - - - - - - - - - -	. 2430	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2357.280	Average	39.92	-7.83	32.09	54.00	-21.91
2357.280	Peak	55.55	-7.83	47.73	74.00	-26.27
2390.000	Average	40.67	-7.89	32.78	54.00	-21.22
2390.000	Peak	54.80	-7.89	46.92	74.00	-27.08

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:SAC D



:E2/2021/80082

Report Number

Operation Mode Test Frequency Test Mode EUT Pol	:802.11b :2462 MHz :BE CH HI :E2 Plane	Z		Test Date Temp./Humi. Antenna Pol. Engineer	:2021-08-31 :21.8/63 :Vertical :Andy Wang	
120 Level (dBu 110 90 70 50 30 10 0 2450	V/m)	2490. Frequen	2510. cy (MHz)		. 2550	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2483.500	Average	41.11	-8.15	32.96	54.00	-21.04
2483.500	Peak	54.70	-8.15	46.55	74.00	-27.45
2537.600	Average	41.91	-7.91	33.99	54.00	-20.01
2537.600	Peak	56.29	-7.91	48.38	74.00	-25.62

Test Site

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:SAC D



:E2/2021/80082

Report Number

Operation Mode Test Frequency Test Mode EUT Pol	:802.11b :2462 MHz :BE CH HI :E2 Plane	2		Test Date Temp./Humi. Antenna Pol. Engineer	:2021-08-31 :21.8/63 :Horizontal :Andy Wang	
120 Level (dBu) 110 90 70 50 30 10 92450	2470.	2490. Frequen	2510. cy (MHZ)	2530		
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2483.500	Average	41.79	-8.15	33.64	54.00	-20.36
2483.500	Peak	54.73	-8.15	46.57	74.00	-27.43
2538.400	Average	44.64	-7.90	36.74	54.00	-17.26
2538.400	Peak	56.96	-7.90	49.05	74.00	-24.95

Test Site

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Report Number Operation Mode Test Frequency Test Mode	:2412 MHz :BE CH LO		Te Te A	est Site est Date emp./Humi. ntenna Pol.	:SAC D :2021-08-31 :21.8/63 :Vertical	
EUT Pol	:E2 Plane		E	ngineer	:Andy Wang	
120 Level (dBu 110 90	V/m)					
50		ana		2 ml		
30						
0 2310	2334.	2358. Frequer	2382. ncy (MHz)	2406.	2430	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2390.000 2390.000	Average Peak	49.13 72.25	-7.89 -7.89	41.24 64.36	54.00 74.00	-12.76 -9.64

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Report Number Operation Mode Test Frequency Test Mode EUT Pol	:E2/2021/80 :802.11g :2412 MHz :BE CH LO :E2 Plane		Te Te Ar	st Site st Date mp./Humi. htenna Pol. ngineer	:SAC D :2021-08-31 :21.8/63 :Horizontal :Andy Wang	
120 Level (dBu) 110 90 70 50 10 0 2310	2334.		2382.	2406	2430	
		2358. Frequen				
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2390.000 2390.000	Average Peak	51.18 73.35	-7.89 -7.89	43.29 65.46	54.00 74.00	-10.71 -8.54

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Report Number Operation Mode Test Frequency Test Mode	:2462 MH: :BE CH H	Z		Test Site Test Date Temp./Humi. Antenna Pol.	:SAC D :2021-08-31 :21.8/63 :Vertical	
EUT Pol	:E2 Plane			Engineer	:Andy Wang	
120 Level (dBu 110 90 70 50 30 10 92450	2470.	2490. Frequen	2510. cy (MHZ)	2530	. 2550	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2483.500	Average	41.40	-8.15	33.25	54.00	-20.75
2483.500	Peak	66.34	-8.15	58.18	74.00	-15.82
2484.400	Average	46.19	-8.15	38.04	54.00	-15.96
2484.400	Peak	66.80	-8.15	58.64	74.00	-15.36

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Report Number Operation Mode Test Frequency	e :802.11g		Т	est Site est Date emp./Humi.	:SAC D :2021-08-31 :21.8/63	
Test Mode	:BE CH H	IGH	А	ntenna Pol.	:Horizontal	
EUT Pol	:E2 Plane		E	Ingineer	:Andy Wang	
120 Level (dBu 110 90 70 50 30 10 2450	2470.	2490. Frequen	2510. rcy (MHz)	2530		
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2483.500	Average	48.77	-8.15	40.62	54.00	-13.38
2483.500	Peak	68.54	-8.15	60.39	74.00	-13.61
2483.800	Average	48.69	-8.15	40.54	54.00	-13.46
2483.800	Peak	69.12	-8.15	60.97	74.00	-13.03

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Report Number Operation Mode	:E2/2021/8 :802.11n20			ēst Site ēst Date	:SAC D :2021-08-31	
Test Frequency	:2412 MHz		Т	emp./Humi.	:21.8/63	
Test Mode	:BE CH LO	W	A	Antenna Pol.	:Vertical	
EUT Pol	:E2 Plane		E	Engineer	:Andy Wang	
120 Level (dBu) 110 90 70 50 30 10 0 2310	//m)	2358. Frequen	2382. ICY (MHz)	2406	. 2430	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2389.800	Average	48.91	-7.88	41.03	54.00	-12.97
2389.800	Peak	70.17	-7.88	62.29	74.00	-11.71
2390.000	Average	49.03	-7.89	41.14	54.00	-12.86
2390.000	Peak	69.79	-7.89	61.90	74.00	-12.10

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Report Number Operation Mode	:E2/2021/800 :802.11n20	082		est Site est Date	:SAC D :2021-08-31	
Test Frequency	:2412 MHz		Te	emp./Humi.	:21.8/63	
Test Mode	:BE CH LOW	V	A	ntenna Pol.	:Horizontal	
EUT Pol	:E2 Plane		E	ngineer	:Andy Wang	
120 Level (dBuV) 110 90 70 50 30 10 92310	/m)	2358. Frequen	2382. cy (MHZ)	2406	5. 2430	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode R	leading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2389.680	Average	50.82	-7.88	42.94	54.00	-11.06
2389.680	Peak	72.94	-7.88	65.06	74.00	-8.94
2390.000	Average	51.29	-7.89	43.40	54.00	-10.60
2390.000	Peak	71.60	-7.89	63.71	74.00	-10.29

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Report Number Operation Mode Test Frequency Test Mode	:E2/2021/ :802.11n2 :2462 MH :BE CH H	0 z		Test Site Test Date Temp./Humi. Antenna Pol.	:SAC D :2021-08-31 :21.8/63 :Vertical	
EUT Pol	:E2 Plane			Engineer	:Andy Wang	
120 Level (dBu 110 90 70 50 30 10 2450	V/m)	2490. Frequen	2510. cy (MHz)	2530	. 2550	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2483.500	Average	46.31	-8.15	38.15	54.00	-15.85
2483.500	Peak	67.26	-8.15	59.11	74.00	-14.89
2484.000	Average	46.11	-8.15	37.96	54.00	-16.04
2484.000	Peak	67.21	-8.15	59.05	74.00	-14.95

(ポチカオ) 就例 「 近根 守路 木健 町 海風之 (kai 貝 貝 「 阿可 近後 ai 筐 街 留 ひ く 今 株 管 木座 へ び 自 置 時 「 う 不 り 可 内 夜 表 で This document is issued by the Company subject to is General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemni-fication and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report Number Operation Mode Test Frequency Test Mode	:E2/2021/8 :802.11n2(:2462 MHz :BE CH HI	0 z	ד ד	est Site est Date emp./Humi. ntenna Pol.	:SAC D :2021-08-31 :21.8/63 :Horizontal	
EUT Pol	:E2 Plane	ЮП		Engineer	:Andy Wang	
			L	Ingineer	.Andy Wang	
120 Level (dBu 110 90 70 50 30 10 2450		2490. Frequen	2510. cy (MHz)	2530	. 2550	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2483.500	Average	48.81	-8.15	40.66	54.00	-13.34
2483.500	Peak	70.31	-8.15	62.16	74.00	-11.84
2483.700	Average	48.75	-8.15	40.60	54.00	-13.40
2483.700	Peak	70.88	-8.15	62.73	74.00	-11.27

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Report Number Operation Mode	:E2/2021/8 :802.11n4			est Site est Date	:SAC D :2021-08-31	
Test Frequency	:2422 MHz			emp./Humi.	:21.8/63	
Test Mode	:BE CH LC	Jvv		ntenna Pol.	:Vertical	
EUT Pol	:E2 Plane		E	ingineer	:Andy Wang	
120 Level (dBu	V/m)					
110						
90				_ /		
70			and the second			
50	ange all and a second and	and the second		3		
30						
10						
0 2310	2334.	2358. Freque	2382. ncy (MHz)	2406	s. 2430	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2389.680	Average	56.75	-7.88	48.88	54.00	-5.12
2389.680	Peak	77.79	-7.88	69.92	74.00	-4.08
2390.000	Average	56.88	-7.89	48.99	54.00	-5.01
2390.000	Peak	77.86	-7.89	69.97	74.00	-4.03

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Report Number Operation Mode	:E2/2021/ :802.11n4			Test Site Test Date	:SAC D :2021-08-31	
Test Frequency	:2422 MH	Z		Temp./Humi.	:21.8/63	
Test Mode	:BE CH LO	WC		Antenna Pol.	:Horizontal	
EUT Pol	:E2 Plane			Engineer	:Andy Wang	
120 Level (dBu 110 90 70 50 30	V/m)					
10 2310	2334.	2350	2382.	2406	j. 2430	
2310	2334.	2358. Freque	ncy (MHz)	2400	o. 2430	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2389.680	Average	58.11	-7.88	50.24	54.00	-3.76
2389.680	Peak	78.82	-7.88	70.94	74.00	-3.06
2390.000	Average	58.27	-7.89	50.38	54.00	-3.62
2390.000	Peak	78.97	-7.89	71.08	74.00	-2.92

(ポチカオ) 就例 「 近根 守路 木健 町 海風之 (kai 貝 貝 「 阿可 近後 ai 筐 街 留 ひ く 今 株 管 木座 へ び 自 置 時 「 う 不 り 可 内 夜 表 で This document is issued by the Company subject to is General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemni-fication and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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Report Number Operation Mode Test Frequency Test Mode	:E2/2021/ :802.11n4 :2452 MH :BE CH H	0 z		Test Site Test Date Temp./Humi. Antenna Pol.	:SAC D :2021-08-31 :21.8/63 :Vertical	
EUT Pol	:E2 Plane			Engineer	:Andy Wang	
120 Level (dBu 110 90 70 50 30 10 0 2450	V/m)	B 2490. Frequer	2510. (MHZ)		. 2550	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2483.500	Average	50.21	-8.15	42.06	54.00	-11.94
2483.500	Peak	69.40	-8.15	61.25	74.00	-12.75
2484.200	Average	49.98	-8.15	41.83	54.00	-12.17
2484.200	Peak	69.79	-8.15	61.64	74.00	-12.36

(ポチカオ) 就例 「 近根 守路 木健 町 海風之 (kai 貝 貝 「 阿可 近後 ai 筐 街 留 ひ く 今 株 管 木座 へ び 自 置 時 「 う 不 り 可 内 夜 表 で This document is issued by the Company subject to is General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemni-fication and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

:SAC D



·E2/2021/80082

Report Number

	:E2/2021/8		-			
Operation Mode	:802.11n40			Fest Date	:2021-08-31	
Test Frequency	:2452 MHz	2	٦	ſemp./Humi.	:21.8/63	
Test Mode	:BE CH HI	GH	ŀ	Antenna Pol.	:Horizontal	
EUT Pol	:E2 Plane		E	Engineer	:Andy Wang	
120 Level (dBuV	//m)					
110						
90						
70						
		and Vicenson and and the second	line			
50		13				
30						
10						
0 2450	2470.	2490. Frequen	2510. Icy (MHz)	2530	. 2550	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
i ieq.		•	T actor			Maryin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2483.500	Average	53.53	-8.15	45.37	54.00	-8.63
2483.500	Peak	73.08	-8.15	64.92	74.00	-9.08
2484.700	Average	53.08	-8.16	44.92	54.00	-9.08
2484.700	Peak	73.15	-8.16	65.00	74.00	-9.00

Test Site

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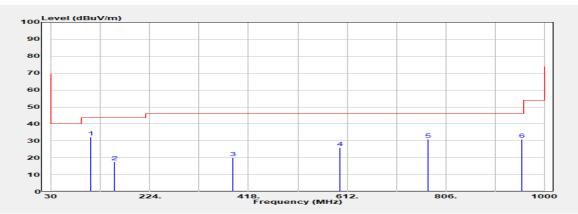
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Report No.: E2/2021/80082 Page: 65 of 96

11.7.2 Spurious Emission:

Report Number	:E2/2021/80082	Test Site	:SAC D
Operation Mode	:802.11g	Test Date	:2021-08-31
Test Frequency	:2437 MHz	Temp./Humi.	:22.2/64
Test Mode	:TX CH MID	Antenna Pol.	:Vertical
EUT Pol	:E2 Plane	Engineer	:Andy Wang
Ant	:		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
107.600	Peak	52.83	-20.65	32.17	43.50	-11.33
154.160	Peak	34.36	-16.84	17.53	43.50	-25.97
386.960	Peak	34.25	-14.08	20.17	46.00	-25.83
598.420	Peak	35.06	-8.93	26.13	46.00	-19.87
772.050	Peak	37.39	-6.57	30.82	46.00	-15.18
956.350	Peak	35.93	-4.91	31.02	46.00	-14.98

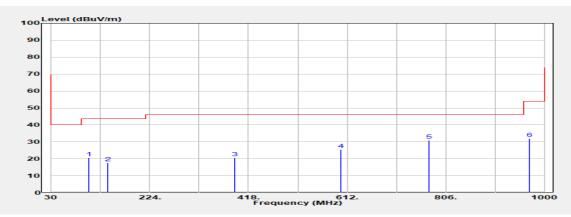
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Report Number	:E2/2021/80082
Operation Mode	:802.11g
Test Frequency	:2437 MHz
Test Mode	:TX CH MID
EUT Pol	:E2 Plane
Ant	:

:SAC D
:2021-08-31
:22.2/64
:Horizontal
:Andy Wang



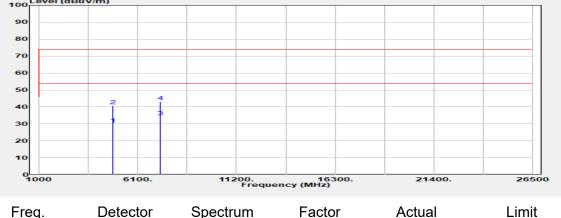
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
104.690	Peak	41.67	-21.08	20.59	43.50	-22.91
141.550	Peak	34.65	-16.98	17.67	43.50	-25.83
391.810	Peak	34.58	-13.88	20.69	46.00	-25.31
599.390	Peak	34.34	-8.89	25.45	46.00	-20.55
773.020	Peak	37.57	-6.58	30.99	46.00	-15.01
970.900	Peak	36.01	-3.94	32.07	54.00	-21.93

(ポチカオ) 就例 「 近根 守路 木健 町 海風之 (kai 貝 貝 「 阿可 近後 ai 筐 街 留 ひ く 今 株 管 木座 へ び 自 置 時 「 う 不 り 可 内 夜 表 で This document is issued by the Company subject to is General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemni-fication and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Taiwan Ltd. No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號



Report Number	:E2/2021/80082			Test	Site		
Operation Mode	:802.11b	:802.11b					
Test Frequency	:2412 MHz			Temp	Temp./Humi.		
Test Mode	:TX CH LOW	:TX CH LOW					
EUT Pol	:E2 Plane	Engii	Engineer				
Ant	:						
100 Level (dBuV/	m)			1			
90							
80							
70							

Test Site	:SAC D
Test Date	:2021-08-31
Temp./Humi.	:22.2/64
Antenna Pol.	:Vertical
Engineer	:Andy Wang



	Freq.	Detector	Spectrum	Factor Actual		Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
	4824.000	Average	33.09	-3.18	29.92	54.00	-24.08
	4824.000	Peak	43.81	-3.18	40.63	74.00	-33.37
	7236.000	Average	31.67	2.41	34.08	54.00	-19.92
	7236.000	Peak	40.64	2.41	43.05	74.00	-30.95

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Report Number	:E2/2021/80082		Test	Site	:SAC	D
Operation Mode :802.11b			Test	Test Date		1-08-31
Test Frequency	:2412 MHz		Temp	o./Humi.	:22.2	/64
Test Mode	:TX CH LOW		Ante	Antenna Pol.		zontal
EUT Pol	:E2 Plane		Engii	Engineer		y Wang
Ant	:					
100 Level (dBuV/	m)	1				
90						
80						
70						
60						

40	2					
30						
20						
10						
0 1000	6100.	11200. Frequer	16300. ncy (MHz)	21400.	26500	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4824.000	Average	31.81	-3.18	28.63	54.00	-25.37
4824.000	Peak	42.83	-3.18	39.66	74.00	-34.34
7236.000	Average	31.27	2.41	33.68	54.00	-20.32
7236.000	Peak	42.21	2.41	44.62	74.00	-29.38

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30 20 10

Report Number Operation Mode Test Frequency Test Mode EUT Pol Ant	:E2/2021/80082 :802.11b :2437 MHz :TX CH MID :E2 Plane			Test Site:SAC DTest Date:2021-0Temp./Humi.:22.2/64Antenna Pol.:VerticaEngineer:Andy V			1-08-31 2/64 ical
Ant							
100 Level (dBuV/	m)						
90							
80							
70							
60							
50	4						
40	2 3						

0	6100.	44200	16300.	21400.	26500	
1000	6100.	11200. 16300 Frequency (MHz)		21400.	26500	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	ode Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4874.000	Average	33.49	-3.05	30.43	54.00	-23.57
4874.000	Peak	42.81	-3.05	39.76	74.00	-34.24
7311.000	Average	32.97	3.91	36.88	54.00	-17.12
7311.000	Peak	40.36	3.91	44.27	74.00	-29.73

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0 1000

6100.

Report Number	:E2/2021/80082	Test Site	:SAC D	
Operation Mode	:802.11b	Test Date	:2021-08-31	
Test Frequency	:2437 MHz	Temp./Humi.	:22.2/64	
Test Mode	:TX CH MID	Antenna Pol.	:Horizontal	
EUT Pol	:E2 Plane	Engineer	:Andy Wang	
Ant	:			
100Level (dBuV/	m)			
90				
80				
70				
60				
50	4			
40				
30				
20				
10				

11200. 16300. Frequency (MHz)

21400.

	•	Factor	Actual FS	Limit @3m	Margin
K/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
verage	33.38	-3.05	30.33	54.00	-23.67
Peak	42.95	-3.05	39.90	74.00	-34.10
verage	32.77	3.91	36.68	54.00	-17.32
Peak	40.83	3.91	44.74	74.00	-29.26
	Mode Re (/QP/AV verage Peak verage	Mode Reading Level <u>K/QP/AV</u> <u>dBµV</u> Average 33.38 Peak 42.95 Average 32.77	Mode Reading Level <u>K/QP/AV dBµV dB</u> verage 33.38 -3.05 Peak 42.95 -3.05 verage 32.77 3.91	Mode Reading Level FS K/QP/AV dBμV dB dBμV/m Average 33.38 -3.05 30.33 Peak 42.95 -3.05 39.90 Average 32.77 3.91 36.68	Mode Reading Level FS @3m K/QP/AV dBμV dB dBμV/m dBμV/m werage 33.38 -3.05 30.33 54.00 Peak 42.95 -3.05 39.90 74.00 werage 32.77 3.91 36.68 54.00

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20 10 1000

6100.

Report Number Operation Mode Test Frequency Test Mode EUT Pol	:E2/2021/80082 :802.11b :2462 MHz :TX CH HIGH :E2 Plane		Test Site Test Da Temp./H Antenna Enginee	te Iumi. a Pol.	:22.2 :Verti	-08-31 /64
Ant						,
Am	•					
100 Level (dBuV/	m)					
90						
80						
70						
60						
50	4					
40 30	3					

11200. 16300. Frequency (MHz)

21400.

Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4924.000	Average	31.84	-3.21	28.63	54.00	-25.37
4924.000	Peak	42.52	-3.21	39.31	74.00	-34.69
7386.000	Average	31.21	3.24	34.45	54.00	-19.55
7386.000	Peak	39.92	3.24	43.16	74.00	-30.84

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Margin



Report Number	:E2/2021/8	30082		Test Site	:SAC D
Operation Mode	:802.11b			Test Date	:2021-08-31
Test Frequency	:2462 MHz	Ζ		Temp./Humi.	:22.2/64
Test Mode	:TX CH HI	GH		Antenna Pol.	:Horizontal
EUT Pol	:E2 Plane			Engineer	:Andy Wang
Ant	:				
100 Level (dBu	V/m)				
90					
80					
70					
60					
50					
40	2				
30					
20					
10					
1000	6100.	11200. Frequen	16300 cy (MHz)	0. 2140	0. 26500
Freq.	Detector	Spectrum	Factor	Actual	Limit
	Mode	Reading Level		FS	@3m
			dP	dRu\//m	dBu\//m

P/AV dBµV	dB	dBµV/m	dBµV/m	dB
rage 30.96	-3.21	27.75	54.00	-26.25
ak 40.99	-3.21	37.78	74.00	-36.22
rage 30.86	3.24	34.10	54.00	-19.90
ak 39.66	3.24	42.89	74.00	-31.11
r r	rage 30.96 ak 40.99 rage 30.86	rage 30.96 -3.21 ak 40.99 -3.21 rage 30.86 3.24	rage 30.96 -3.21 27.75 ak 40.99 -3.21 37.78 rage 30.86 3.24 34.10	rage30.96-3.2127.7554.00ak40.99-3.2137.7874.00rage30.863.2434.1054.00

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Report Number	:E2/2021/	80082		Test Site	:SAC D
Operation Mode	:802.11g			Test Date	:2021-08-31
Test Frequency	:2412 MH	z		Temp./Humi.	:22.2/64
Test Mode	:TX CH LO	WC		Antenna Pol.	:Vertical
EUT Pol	:E2 Plane	:E2 Plane		Engineer	:Andy Wang
Ant	:				
100 Level (dBu	V/m)				_
90					
80					
70					
60					
50	4				
40	2				
30	1				
20					
10					
1000	6100.	11200. Frequer	1630 icy (MHz)	0. 2140	0. 26500
Freq.	Detector	Spectrum	Factor	Actual	Limit
	Mode	Reading Level		FS	@3m
MHz		dBu\/	dB	dBu\//m	dBu\//m

MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4824.000	Average	28.65	-3.18	25.47	54.00	-28.53
4824.000	Peak	41.68	-3.18	38.50	74.00	-35.50
7236.000	Average	28.52	2.41	30.93	54.00	-23.07
7236.000	Peak	41.15	2.41	43.56	74.00	-30.44

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dB

-28.41

-34.99

-23.16

-31.20

54.00

74.00

54.00

74.00



4824.000

4824.000

7236.000

7236.000

Average

Peak

Average

Peak

Report Number	:E2/2021/8	80082		Test	Site	:SAC D	
Operation Mode	:802.11g			Test	Date	:2021-08-31	
Test Frequency	:2412 MH	z		Temp	o./Humi.	:22.2/64	
Test Mode	:TX CH LO	WC		Ante	nna Pol.	:Horizontal	
EUT Pol	:E2 Plane			Engii	neer	:Andy Wang	
Ant	:						
100 Level (dBuV	//m)						
90							
80							
70							
60							
50	2 4						
40 30							
20							
10							
1000	6100.	11200. Freque	1630 ncy (MHz)	0.	2140	00. 26500	
Freq.	Detector	Spectrum	Factor		Actual	Limit	
	Mode	Reading Level			FS	@3m	
MHz	PK/QP/AV	dBµV	dB		dBµV/m	n dBµV/m	

25.59

39.01

30.84

42.80

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28.77

42.18

28.43

40.39

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-3.18

-3.18

2.41

2.41

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dB

-28.61 -35.43

-21.83

-28.88

54.00

74.00

:SAC D



:E2/2021/80082

Report Number

7311.000

7311.000

Average

Peak

Operation Mode Test Frequency Test Mode EUT Pol Ant	:802.11g :2437 MHz :TX CH MID :E2 Plane :			Test Date Temp./Humi. Antenna Pol. Engineer	:2021-08-31 :22.2/64 :Vertical :Andy Wang	
100 Level (dBuV) 90 80 70 60 50 40 30 20 10 1000	/m)	11200. Frequen	16300 16300 (MHZ)	. 2140	0. 26500	
Freq. MHz I	Detector Mode F PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	I
4874.000	Average Peak	28.44 41.62	-3.05 -3.05	25.39 38.57	54.00 74.00	

Test Site

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28.26

41.21

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3.91

3.91

32.17

45.12

dB

-28.49

-34.75

-21.70

-30.17

74.00

54.00

74.00

:SAC D



:E2/2021/80082

Report Number

4874.000

7311.000

7311.000

Peak

Average

Peak

	.EZ/2021/0	50002			
Operation Mode	e :802.11g		-	Test Date	:2021-08-31
Test Frequency	:2437 MH	Z	-	Temp./Humi.	:22.2/64
Test Mode	:TX CH M	ID		Antenna Pol.	:Horizontal
EUT Pol	:E2 Plane		I	Engineer	:Andy Wang
Ant	:				
100 Level (dBu	V/m)				
90					
80					
70					
60					
50	4				
40	2				
30	1				
20					
10					
1000	6100.	11200. Frequer	16300. icy (MHz)	2140	0. 26500
Freq.	Detector	Spectrum	Factor	Actual	Limit
	Mode	Reading Level		FS	@3m
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m
4874.000	Average	28.56	-3.05	25.51	54.00

Test Site

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42.30

28.39

39.92

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-3.05

3.91

3.91

39.25

32.30

43.83

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:SAC D



:E2/2021/80082

Report Number

7386.000

Peak

Operation Mode Test Frequency Test Mode EUT Pol Ant	:802.11g :2462 MH :TX CH H :E2 Plane :	IGH	-	Test Date Temp./Humi. Antenna Pol. Engineer	:2021-08-31 :22.2/64 :Vertical :Andy Wang	
100 Level (dBu 90 80 70 60 50 40 30 20 10 1000	V/m)	11200. Frequer	16300. ncy (MH2)		0. 26500	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4924.000 4924.000	Average Peak	28.10 43.30	-3.21 -3.21	24.90 40.09	54.00 74.00	-29.10 -33.91
7386.000	Average	27.67	3.24	40.09 30.91	54.00	-23.09
	5	-				

Test Site

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40.83

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3.24

44.07

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74.00

-29.93

:SAC D



:E2/2021/80082

Report Number

7386.000

Peak

Operation Mode Test Frequency Test Mode EUT Pol Ant	:802.11g :2462 MH :TX CH H :E2 Plane :	z IGH		Test Date Temp./Humi. Antenna Pol. Engineer	:2021-08-31 :22.2/64 :Horizontal :Andy Wang	
100 Level (dBuV 90 80 70 60 50 40 30 20 10 1000	//m)	11200. Frequer	1630(MHz)	D. 2140	0. 26500	
Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4924.000 4924.000	Average Peak	28.28 41.78	-3.21 -3.21	25.07 38.57	54.00 74.00	-28.93 -35.43
7386.000	Average	28.13	3.24	31.37	54.00	-22.63

Test Site

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3.24

43.34

74.00

-30.66

:SAC D

:2021-08-31 :22.2/64 :Vertical

:Andy Wang



Report Number	:E2/2021/80082 Test Site	
Operation Mode	:802.11n20 Test Date	
Test Frequency	:2412 MHz Temp./Humi	
Test Mode	:TX CH LOW Antenna Pol	
EUT Pol	:E2 Plane Engineer	
Ant	:	
100 Level (dBuV/	m)	
90		
80		
70		
60		
50		-

1000	6100.	11200. Frequer	16300. icy (MHz)	21400.	26500	
Freq.	Detector	Spectrum	Spectrum Factor		Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4824.000	Average	28.31	-3.18	25.13	54.00	-28.87
4824.000	Peak	42.29	-3.18	39.12	74.00	-34.88
7236.000	Average	28.07	2.41	30.48	54.00	-23.52
7236.000	Peak	40.43	2.41	42.84	74.00	-31.16

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26500



10 01000

6100

Report Number	:E2/2021/80082	Test Site	:SAC D
Operation Mode	:802.11n20	Test Date	:2021-08-31
Test Frequency :2412 MHz		Temp./Humi.	:22.2/64
Test Mode	:TX CH LOW	Antenna Pol.	:Horizontal
EUT Pol	:E2 Plane	Engineer	:Andy Wang
Ant	:		
100 Level (dBuV/	m)		
90			
80			
70			
60			
50			
40	2 4		
30	3		
20			

Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
 MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4824.000	Average	28.24	-3.18	25.07	54.00	-28.93
4824.000	Peak	42.21	-3.18	39.04	74.00	-34.96
7236.000	Average	28.14	2.41	30.55	54.00	-23.45
7236.000	Peak	39.74	2.41	42.15	74.00	-31.85

11200. 16300. Frequency (MHz)

21400

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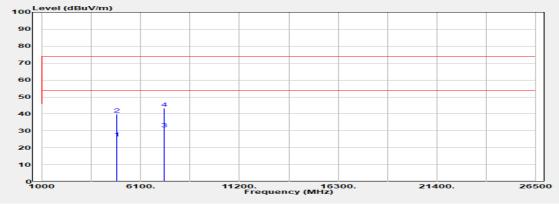
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Report Number	:E2/2021/800	82		Test
Operation Mode	:802.11n20			Test
Test Frequency	:2437 MHz			Tem
Test Mode	:TX CH MID			Ante
EUT Pol	:E2 Plane			Eng
Ant	:			
100 Level (dBuV/	m)			
90				

D
08-31
64
al
Wang



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4874.000	Average	28.85	-3.05	25.79	54.00	-28.21
4874.000	Peak	43.01	-3.05	39.96	74.00	-34.04
7311.000	Average	27.34	3.91	31.25	54.00	-22.75
7311.000	Peak	39.47	3.91	43.38	74.00	-30.62

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Report Number Operation Mode Test Frequency Test Mode	:E2/2021/80 :802.11n20 :2437 MHz :TX CH MID			Test Site Test Date Temp./Humi. Antenna Pol.	:SAC D :2021-08-31 :22.2/64 :Horizontal
EUT Pol	:E2 Plane				
	.EZ FIAITE			Engineer	:Andy Wang
Ant	:				
100 Level (dBuV	//m)				
90					
80					
70					
60					
50	4				
40	2				
30					
20					
0					
1000	6100.	11200. Freque	16300. ncy (MHz)	. 2140	0. 26500
Freq.	Detector	Spectrum	Factor	Actual	Limit

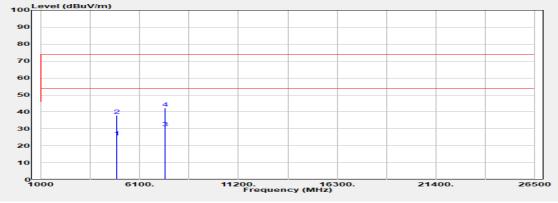
	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
	4874.000	Average	28.19	-3.05	25.14	54.00	-28.86
	4874.000	Peak	42.06	-3.05	39.01	74.00	-34.99
	7311.000	Average	27.06	3.91	30.97	54.00	-23.03
	7311.000	Peak	40.89	3.91	44.80	74.00	-29.20

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Report Number	:E2/2021/80082	Test
Operation Mode	:802.11n20	Test
Test Frequency	:2462 MHz	Tem
Test Mode	:TX CH HIGH	Ante
EUT Pol	:E2 Plane	Engi
Ant	:	
100 Level (dBuV/	'm)	
90		

:SAC D
:2021-08-31
:22.2/64
:Vertical
:Andy Wang



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4924.000	Average	28.41	-3.21	25.21	54.00	-28.79
4924.000	Peak	41.03	-3.21	37.82	74.00	-36.18
7386.000	Average	27.33	3.24	30.57	54.00	-23.43
7386.000	Peak	39.04	3.24	42.27	74.00	-31.73

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dB

-29.10

-34.70

-23.10

-31.76

dBµV/m

54.00

74.00

54.00

74.00



Report Number	:E2/2021/	80082	Test Site	:SAC D	
Operation Mode	:802.11n2	0		Test Date	:2021-08-31
Test Frequency	:2462 MH	z		Temp./Humi.	:22.2/64
Test Mode	:TX CH H	IGH		Antenna Pol.	:Horizontal
EUT Pol	:E2 Plane	1		Engineer	:Andy Wang
Ant	:				
100 Level (dBuV	/m)		1		
90					
80					
70					
60					
50					
40	2 4				
30	1 3				
20					
10					
0L 1000	6100.	11200. Frequer	1630 ncy (MHz)	0. 2140	00. 26500
Freq.	Detector	Spectrum	Factor	Actual	Limit
	Mode	Reading Level		FS	@3m

dBµV

28.11

42.51

27.66

39.01

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dB

-3.21

-3.21

3.24

3.24

dBµV/m

24.90

39.30

30.90

42.24

PK/QP/AV

Average

Peak

Average

Peak

MHz

4924.000

4924.000

7386.000

7386.000



Report Number	:E2/2021/	80082	Test Site	:SAC D	
Operation Mode	:802.11n4	0		Test Date	:2021-08-31
Test Frequency	:2422 MH	z		Temp./Humi.	:22.2/64
Test Mode	:TX CH LO	WC		Antenna Pol.	:Vertical
EUT Pol	:E2 Plane			Engineer	:Andy Wang
Ant	:				
100 Level (dBu	V/m)			1 1	
90					
80					
70					
60					
50					
40	2				
30	1				
20					
10					
0L 1000	6100.	11200. Freque	1630 ncy (MHz)	0. 2140	0. 26500
Freq.	Detector	Spectrum	Factor	Actual	Limit
	Mode	Reading Level		FS	@3m
			AP	dBu\//m	dBu\//m

		•			-		
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB	
4844.000	Average	28.28	-3.07	25.21	54.00	-28.79	
4844.000	Peak	41.56	-3.07	38.49	74.00	-35.51	
7266.000	Average	27.44	3.10	30.54	54.00	-23.46	
7266.000	Peak	39.35	3.10	42.45	74.00	-31.55	

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dB

-28.97

-34.35

-23.86

-28.54

74.00

54.00

74.00

:SAC D



:E2/2021/80082

Report Number

4844.000

7266.000

7266.000

Peak

Average

Peak

	.EZ/2021/0	50002	-	-	-
Operation Mode	:802.11n4	0	Т	est Date	:2021-08-31
Test Frequency	:2422 MH:	z	Т	emp./Humi.	:22.2/64
Test Mode	:TX CH LO	W	A	Antenna Pol.	:Horizontal
EUT Pol	:E2 Plane		E	Engineer	:Andy Wang
Ant	:			-	
100 Level (dBu)	V/m)		1 1	1	
90					
80					
70					
50					
40	2				
30	3				
20					
10					
0 1000	6100.	11200. Frequen	16300. cy (MHz)	2140	0. 26500
Freq.	Detector	Spectrum	Factor	Actual	Limit
	Mode	Reading Level		FS	@3m
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m
4844.000	Average	28.10	-3.07	25.03	54.00

Test Site

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42.72

27.04

42.37

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-3.07

3.10

3.10

39.65

30.14

45.46

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26500



Report Number	:E2/2021/80082	Test Site	:SAC D
Operation Mode	:802.11n40	Test Date	:2021-08-31
Test Frequency	:2437 MHz	Temp./Humi.	:22.2/64
Test Mode	:TX CH MID	Antenna Pol.	:Vertical
EUT Pol	:E2 Plane	Engineer	:Andy Wang
Ant	:		
100 Level (dBuV/	m)		
90			
80			
70			
60		 	
50	4		
40	2		
30	1 3		
20			

6100

			Frequen	icy (MHZ)			
	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
_							
	4874.000	Average	28.39	-3.05	25.33	54.00	-28.67
	4874.000	Peak	41.82	-3.05	38.77	74.00	-35.23
	7311.000	Average	26.97	3.91	30.88	54.00	-23.12
	7311.000	Peak	39.62	3.91	43.53	74.00	-30.47

11200. 16300.

21400.

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Report Number	:E2/2021/80082			Test Site	:SAC D
Operation Mode	:802.11n40			Test Date	:2021-08-31
Test Frequency	:2437 MHz			Temp./Humi.	:22.2/64
Test Mode	:TX CH MID			Antenna Pol.	:Horizontal
EUT Pol	:E2 Plane			Engineer	:Andy Wang
Ant	:				
100 Level (dBuV/	m)				
90					
80					
70					
60					
50	4				
40					
30	1				
20					
10					
1000	6100.	11200. Frequence	16300. cy (MHz)	. 2140	0. 26500

Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4874.000	Average	28.53	-3.05	25.48	54.00	-28.52
4874.000	Peak	42.03	-3.05	38.98	74.00	-35.02
7311.000	Average	27.42	3.91	31.33	54.00	-22.67
7311.000	Peak	40.93	3.91	44.84	74.00	-29.16

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26500



Report Number	:E2/2021/80082		Test Site	:SAC D
Operation Mode	:802.11n40		Test Date	:2021-08-31
Test Frequency	:2452 MHz		Temp./Humi.	:22.2/64
Test Mode	:TX CH HIGH		Antenna Pol.	:Vertical
EUT Pol	:E2 Plane		Engineer	:Andy Wang
Ant	:			
100 Level (dBuV/	m)			
90				
80				
70				
60				
50	4			
40				
30	1			
20				
10				
0	6100. 11200. Free	16300 quency (MHz)	0. 2140	0. 265

Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4904.000	Average	28.48	-3.03	25.45	54.00	-28.55
4904.000	Peak	42.43	-3.03	39.40	74.00	-34.60
7356.000	Average	27.63	3.74	31.37	54.00	-22.63
7356.000	Peak	39.84	3.74	43.58	74.00	-30.42

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dB



Report Number	:E2/2021/	80082		Test Site	:SAC D
Operation Mode	:802.11n4	0		Test Date	:2021-08-31
Test Frequency	:2452 MH	z		Temp./Humi.	:22.2/64
Test Mode	:TX CH H	IGH		Antenna Pol.	:Horizontal
EUT Pol	:E2 Plane			Engineer	:Andy Wang
Ant	:				
100 Level (dBu	V/m)		1		
90					
80					
70					
60					
50	4				
40					
30	1				
20					
10					
1000	6100.	11200. Frequer	16300 ncy (MHz)). 2140	00. 26500
Freq.	Detector	Spectrum	Factor	Actual	Limit
	Mode	Reading Level		FS	@3m
MHz	PK/QP/AV	dBµV	dB	dBµV/m	n dBµV/m

4904.000	Average	28.47	-3.03	25.44	54.00	-28.56
4904.000	Peak	41.96	-3.03	38.93	74.00	-35.07
7356.000	Average	27.37	3.74	31.11	54.00	-22.89
7356.000	Peak	39.75	3.74	43.49	74.00	-30.51

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12 POWER SPECTRAL DENSITY

12.1 Standard Applicable

Per Part 15.247 (e)

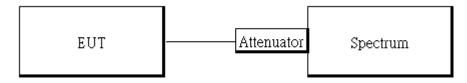
The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

12.2 Measurement Equipment Used

	Conducted Emission Test Site: Conducted B										
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUM- BER	LAST CAL.	CAL DUE.						
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/13/2021	07/12/2022						
Attenuator	Marvelous	MVE2213-10	RF05	11/19/2020	11/18/2021						
DC Block	PASTER- NACK	PE8210	RF157	11/19/2020	11/18/2021						
Test Software	SGS Taiwan	Radio Test Soft- ware	Ver.21	N.C.R	N.C.R						

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

12.3 Test Set-up



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12.4 Measurement Procedure

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance.
- 3. Set the span to 1.5 times the DTS channel bandwidth.
- 4. Set the RBW = 3 kHz & VBW = 10 kHz.
- 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.

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12.5 Power spectral density

POWER DENSITY 802.11b								
Freq.	Ch0	PSD	Limit	Result				
(MHz)	PSD	(dBm/3kHz)	(dBm/3kHz)	Result				
2412	-9.67	-9.67	8.00	PASS				
2437	-9.91	-9.91	8.00	PASS				
2462	-8.1	-8.10	8.00	PASS				

POWER DENSITY 802.11g									
Freq.	Ch0	PSD	Limit	Result					
(MHz)	PSD	(dBm/3kHz)	(dBm/3kHz)	Result					
2412	-10.67	-10.67	8.00	PASS					
2437	-10.29	-10.29	8.00	PASS					
2462	-9.4	-9.40	8.00	PASS					

POWER DENSITY 802.11n HT20									
Freq.	Ch0	PSD	Limit	Result					
(MHz)	PSD	(dBm/3kHz)	(dBm/3kHz)	Nesul					
2412	-11.34	-11.34	8.00	PASS					
2437	-11.87	-11.87	8.00	PASS					
2462	-10.2	-10.20	8.00	PASS					

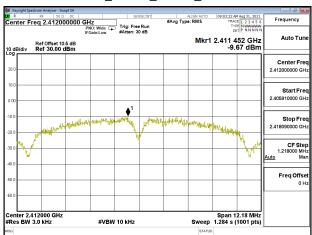
POWER DENSITY 802.11n HT40									
Freq.	Ch0	PSD	Limit	Result					
(MHz)	PSD	(dBm/3kHz)	(dBm/3kHz)	Nesuit					
2422	-14.75	-14.75	8.00	PASS					
2437	-14.72	-14.72	8.00	PASS					
2452	-15.82	-15.82	8.00	PASS					

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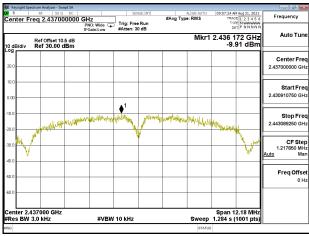
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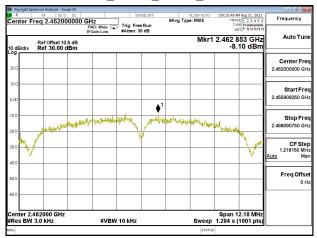
802.11b 20MHz Chain0 2412MHz



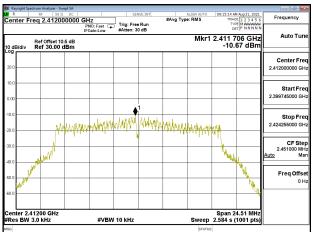




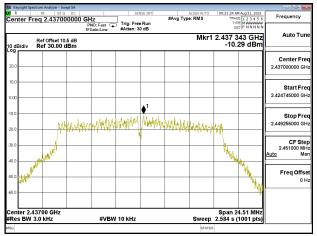
802.11b_20MHz_Chain0_2462MHz



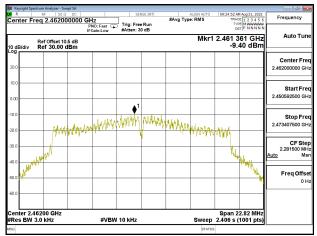
802.11g_20MHz_Chain0_2412MHz



802.11g_20MHz_Chain0_2437MHz



802.11g_20MHz_Chain0_2462MHz

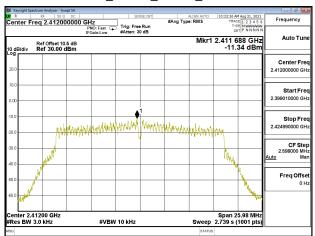


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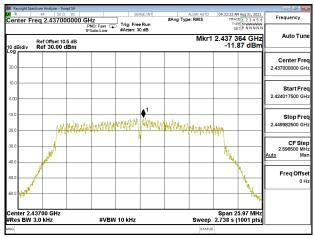
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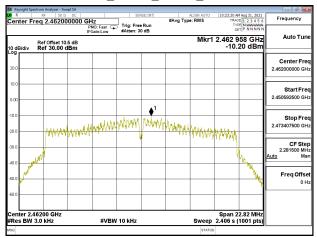
802.11n 20MHz Chain0 2412MHz



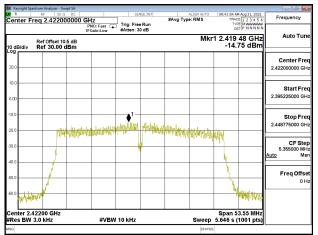
802.11n_20MHz_Chain0_2437MHz



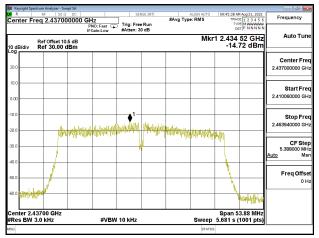
802.11n_20MHz_Chain0_2462MHz



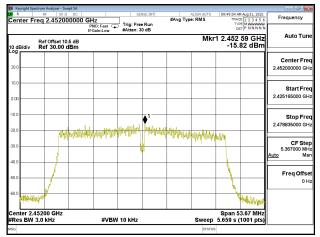
802.11n_40MHz_Chain0_2422MHz



802.11n_40MHz_Chain0_2437MHz



802.11n_40MHz_Chain0_2452MHz



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13 ANTENNA REQUIREMENT

13.1 Standard Applicable

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§ 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

13.2 Antenna Connected Construction

The antenna is designed as permanently attached and no consideration of replacement. Please see EUT photo for details.

~ End of Report ~

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only

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