

🎾 Agilent	Spectru	n Analyzer -	Swept SA						22		
Cente	r Freq	5.2600	00000 G	Hz	AC SEN		#Avg	ALIGNAUTO	06:28:29 P	M May 07, 2012	Frequency
		Ir	iput: RF P IF	NO: Fast G Gain:Low	Atten: 30	B			DE	PSNNNN	Auto Tune
10 dB/d	iv R	ef 20.00	dBm					Mkr2	5.260 3 3.3	00 GHz 32 dBm	
Log 10.0			Day to Andrea		H. d. and a	2		of the first Mar. N			Center Freg
0.00	_	address and the	Mar Challen an		where the second of	of here and here	and the second second	an san kanantan marantar	www.		5.260000000 GHz
-10.0	MMM	17. 17.								Polyon Way U. Ale	
-30.0											Start Freq
-40.0			-				-	_			5.247500000 GHz
-50.0 —											Stop Freg
-60.0											5.272500000 GHz
Contor	5 260								Enan 2	5 00 MHz	
#Res E	3.200 3W 1.0	MHz		#VB	W 3.0 MHz			#Sweep	500 ms (	1001 pts)	CF Step 2.500000 MHz
			X	0 GHz	Y 10.20 dB	FU	NCTION	FUNCTION WIDTH	FUNCTIO	DN VALUE	<u>Auto</u> Man
2 N 3	2 f		5.260 30	0 GHz	3.32 dB	m					Eren Offset
4						7					0 Hz
6											
8 9		_									
10		-				_					
MSG	- 105 - 105			1				STATU	s		

Channel 52:

Channel 60:

💭 Agilent Spectrum	Analyzer - Swept SA						
Center Freq	Ω 5.300000000 GH			A #Avg Type:	LIGNAUTO D Log-Pwr	06:32:47 PM May 07, 2012 TRACE 1 2 3 4 5 6 TYPE MMMMMMM	Frequency
10 dB/div <b>D</b> e	Input: RF PN IFG	ain:Low Att	en: 30 dB		Mkr2 5.	300 050 GHz 2.86 dBm	Auto Tune
	AND THE POLICE AND	1 ivenMirijuanhimint/anture	2- 	ungalawilingu	n, wied y Uprin, Parma	Martin Line	Center Freq 5.300000000 GHz
-20.0 -20.0						a milinywinyd	<b>Start Freq</b> 5.287500000 GHz
-50.0 -60.0 -70.0							<b>Stop Freq</b> 5.312500000 GHz
Center 5.3000 #Res BW 1.0	00 GHz MHz	#VBW 3.0	MHz	#	Sweep 50	Span 25.00 MHz 0 ms (1001 pts)	CF Step 2.500000 MHz
MKR         MODE         TRC         SCI           1         N         1         f           2         N         2         f           3         -         -         -           4         -         -         -           5         -         -         -           6         -         -         -           7         -         -         -	5.295 860 5.300 050	0 GHz 10 0 GHz 2	2000 FU .59 dBm .86 dBm	NCTION FUNC	TION WIDTH	FUNCTION VALUE	Auto Man Freq Offset 0 Hz
8 9 10 11 12 MSG					STATUS		



D Agi	ilent S	ipect	rum /	alyzer -	Swept SA	A									9.0			-	
Cen	L Iter	Fre	50 Ω q	5.3200	00000	0 GH	Z V. Foot		ser	NSE:IN	1T	#Avg	AL Type: I	IGNAUTO Log-Pwr	06:40:1 Tf	3 PM N RACE 1 TYPE N	lay 07, 201: L 2 3 4 5 ( AMWWW	Fr	equency
						IFGai	in:Low	<u>م</u>	Atten: 30	dB	~			Mkr2	5.320	250			Auto Tune
10 dl Log 10.0	B/div		Ref	20.00	dBm NTWWW4/P	of the particular	vullitur	Maqualata	PHO ALIPPINI	<b>2</b> .	John Jane	M. Jumph	Pyrobabald	formationally	Salinhapa Su	1.93		<b>(</b> 5.32	Center Freq
-10.0 -20.0 -30.0 -40.0	pulp	yr Hill	WIT													- 1014	Mar Prayer	5.30	Start Freq 7500000 GHz
-50.0 -60.0 -70.0																		5.33	Stop Freq 2500000 GHz
Cen #Re	ter : s B\	5.32 N 1	2000 .0 N	) GHz 1Hz			#VE	SW 3.0	0 MHz				#\$	Sweep	Span 500 ms	25. (10	00 MHz 01 pts	2	CF Step .500000 MHz
MKR 1 2 3 4	N N N	12	SCI f f		× 5.31 5.32	5 925 ( 0 250 (	GHz GHz		9.25 df 1.93 df	3m 3m	FUN	TION	FUNCT	TION WIDTH	FUNC	CTION	/ALUE	Auto	Man Freq Offset
5 6 7 8 9																			0 Hz
10 11 12 MSG					_						_	_	30	STATU	s				

Channel 64:

Channel 100:

🎒 Agilent Spectrum	Analyzer - Swept SA	an en						
Center Freq	Ω 5.500000000 GI			#Avg Type	ALIGNAUTO : Log-Pwr	07:02:05 PM TRACI	May 07, 2012	Frequency
10 dB/div Re	Input: RF PN IFG	io:Fast 🖵 🦷 ing.r ain:Low Atten	: 30 dB		Mkr2 :	5.500 1 0.4	50 GHz	Auto Tune
Log 10.0 0.00	and the second sec	1 างไขยังทุ่มา™การับการไปเ	2- When a show of pro-	nations of the states of	<	Weiter Barris		Center Freq 5.50000000 GHz
-20.0 -20.0							W AND AND AND A	Start Freq 5.487500000 GHz
-50.0 -60.0 -70.0								<b>Stop Freq</b> 5.512500000 GHz
Center 5.5000 #Res BW 1.0 I	00 GHz MHz	#VBW 1.0 M	Hz	#	≠Sweep ∜	Span 2: 500 ms (′	5.00 MHz 1001 pts)	CF Step 2.500000 MHz
MKR         M003         TRD         SCI           1         N         1         f           2         N         2         f           3	5.495 926 5.500 150	5 GHz 7.5 0 GHz 0.4 0 GHz	FUNC 1 dBm 4 dBm	TION FUN		FUNCTIO	N VALUE	Auto Man Freq Offset 0 Hz



Agilen	it Spec	ctrum /	Analyzer	- Swe	pt SA		25								
LXI R	L		RF	50 Ω	AC			S	ENSE:INT			ALIGN AUTO	07:27:09 F	PM Jun 25, 2012	Frequency
Cen	iter	Frec	5.58	8000	00000	GH	z	Tuin Fun	• D	#4	vg Typ	e: Log-Pwr	TRAI TV	CE 1 2 3 4 5 6	riequency
						PNC	D:Fast G	Atten: 3	0 dB				D	ETPSNNNN	
						IFGa	IIII.LOW	Theorem of	- 4B						Auto Tune
												WKr2	5.580 0	25 GHz	
10 di	B/div	R	ef 20.	00 d	Bm								2.	16 dBm	-
Log					A 4 22		-		2		()1				
10.0				And a lat	in man	whicher !!	- Andrew Make	and the section of the section of		1 June thating	Lind Inter	Mumaha hiller and	Maket		Center Freq
0.00			Jul Pro	Sector of a			a brane a		And the Associated Processing	ub. no entratio	14 1 201		Colorer 1	-	5.58000000 GHz
.10.0		-	TAN										"Wi	al l	
10.0	ille	upper pr	W											MUNHABALL	
-20.0	999			3										take and	Start From
-30.0			-	-		-			-					2 5	
-40.0															5.567500000 GHz
-50.0															
-60.0	<u> </u>			-		-			+						Stop Freq
-70.0				4		1									5.592500000 GHz
100.000															
Cen	ter :	5.580	00 GH	IZ		- 20				100		<i>a</i> :	Span 2	5.00 MHz	
#Re	s BV	N 1.0	MHz				#VB	N 1.0 MH;	2			#Sweep	500 ms (	1001 pts)	CF Step
															2.500000 MHz
MKE	MODE	TRC			×	250	011-	Y	ID	FUNCTION	FU	NCTION WIDTH	FUNCTI	ON VALUE	<u>Auto</u> Man
2	N	2	F		5.584	025	GHZ GH7	9.48 0	IBm IBm		-		-		
3		-			0.000	020	0112	2.10			0				Eron Offeet
4							1								Frequise
5			-								_				0 Hz
7															
8		-													
9											1				
10		_	-								-				
12											-				
MEC												CTATIN	,		1
MSG												STATUS			

Channel 116:

#### Channel 140:

DAgilent Spect	rum Analyzer -	Swept SA							-78
	50Ω ∋q 5.7000	000000 GHz	AC SE		#Avg Type	ALIGNAUTO e: Log-Pwr	07:11:06 Pf TRAC	M May 07, 2012	Frequency
10 dB/div	Ref 20.00	iput: RF PNO: Fa IFGain:L	ow Atten: 30	D dB		Mkr2	5.700 0 -2.4	25 GHz 22 dBm	Auto Tune
Log 10.0 0.00 -10.0	10 cm Martin	anna aite na mata	1 1.5800- 10000000000000000000000000000000000	2	and Ref Directory	maanstati	all a start of the		Center Freq 5.700000000 GHz
-20.0 -30.0 -40.0								1 AN AND AN ANT	Start Freq 5.687500000 GHz
-50.0 -60.0 -70.0									<b>Stop Freq</b> 5.712500000 GHz
Center 5.70 #Res BW 1	0000 GHz .0 MHz	#	VBW 1.0 MHz	2		#Sweep	Span 2 500 ms (	5.00 MHz 1001 pts)	CF Step 2.500000 MHz
MKR MODE TRC	SCL f	X 5 695 900 GH	z 5.00 d	FUNC	TION FUI	NCTION WIDTH	FUNCTIC	IN VALUE	<u>Auto</u> Man
2 N 2 3 4 5 6	f	5.700 025 GH	z -2.42 d	IBm					Freq Offset 0 Hz
7 8 9 10 11 12									
MSG			*			STATU	5		

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Peak Excursion
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps)

## Chain A

Channel	Frequency	Measurement Level	Required Limit	Decult
No.	(MHz)	(dB)	(dB)	Result
38	5190	10.730	<13	Pass
46	5230	11.420	<13	Pass
54	5270	11.510	<13	Pass
62	5310	12.330	<13	Pass
102	5510	11.270	<13	Pass
110	5550	12.680	<13	Pass
134	5670	11.120	<13	Pass

## Channel 38:

🎩 Agilent Sp	ectrum Analyze	er - Swept SA								- 8 🛛
Center F	50 Ω Freq 5.19	0000000 GH	Hz	AC SE	NSE:INT	#Avg Typ	ALIGNAUTO e: Log-Pwr	08:10:31 P TRAC TYP	M May 07, 2012 E 1 2 3 4 5 6 E MMWWWW	Frequency
10 dB/div	Ref 20.0	Input: RF PN	in:Low	Atten: 30	dB		Mkr	2 5.190 -8.5	05 GHz 98 dBm	Auto Tune
Log 10.0 0.00 -10.0	and the second	Alla Vilopation of the	all-second files	2 <sup>1</sup>	2. martine	- Walker with	allo Children	Walachan		Center Freq 5.19000000 GHz
-20.0 -30.0 -40.0									N. Hitelerin	Start Freq 5.16500000 GHz
-50.0 -60.0 -70.0										<b>Stop Freq</b> 5.215000000 GHz
Center 5. #Res BW	19000 GH 1.0 MHz	Z	#VBV	/ 3.0 MHz			#Sweep	Span 5 500 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz
MK8         Model         1         N         1         N         1         N         2         N         2         3         4         4         5         6         6         7         7         8         9         10         11         12 <t< td=""><td>I         f           2         f           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -</td><td>× 5.186 00 5.190 05</td><td>) GHz 5 GHz</td><td>Y 1.75 dl -8.98 dl</td><td></td><td></td><td></td><td></td><td></td><td>Freq Offset 0 Hz</td></t<>	I         f           2         f           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -	× 5.186 00 5.190 05	) GHz 5 GHz	Y 1.75 dl -8.98 dl						Freq Offset 0 Hz
MSG							STATU	6		



🎾 Agilent	Spectr	um Ana	lyzer - S	Swept SA											
Center	r Fre	50 Ω <b>q 5.</b>	2300 In	00000 out: RF	GHz PNO: F	Fast G	AC S	e Run	T	#Avg	ALIG Type: Lo	nauto g-Pwr	08:15:56 F TRA/ TY	M May 07, 2012 CE 1 2 3 4 5 6 PE MMWWWW FT P S N N N	Frequency
10 dD/d		Dof 2	0.00	-	IFGain:	:Low	Atten: 3	U dB				Mkr	2 5.230	20 GHz 24 dBm	Auto Tune
10.00			Annulan		withing	wither	1	2	WITH The	Armanitar	J. M. M. M.	Lumpsil/m	whitemprotect		Center Freq 5.230000000 GHz
-20.0	mar	M												Nor man	Start Freq 5.205000000 GHz
-50.0															Stop Fred 5.255000000 GHz
Center #Res E	5.23 3W 1.	000 Q 0 MH	GHz z			#VBV	/ 3.0 MH;	z			#S\	veep	Span 5 500 ms (	i0.00 MHz (1001 pts)	CF Step 5.000000 MHz
MKB MOD 1 N 2 N 3 4 5 6 7 8 9 10 11		f f		× 5.22 5.23	25 95 GI 30 20 GI		1.18 c	JBm IBm	FUNC			N WIDTH	FUNCTI		Freq Offset
12 MSG												STATUS	5		

Channel 46:

Channel 54:

DAgilent Spectrum A	inalyzer - Swept SA		- 112	150				
KI 50 Ω Center Freq	5.270000000	Hz		אד #Avg T	ALIGNAUTO	10:39:57 PM TRACI	May 07, 2012	Frequency
10 dB/div Ref	20.00 dBm	Gain:Low	Atten: 30 dB		Mkr	2 5.270 2 -6.9	20 GHz 20 dBm	Auto Tune
10.0 0.00 -10.0	for a particular interest	1 Harrison Hang H	allanting the state of the stat	with the party of the	har an	Phatphan		Center Freq 5.270000000 GHz
-20.0 -30.0							When a family	<b>Start Freq</b> 5.245000000 GHz
-50.0								<b>Stop Freq</b> 5.295000000 GHz
Center 5.27000 #Res BW 1.0 N	) GHz IHz	#VBW	3.0 MHz		#Sweep	Span 5 500 ms (′	0.00 MHz 1001 pts)	<b>CF Step</b> 5.000000 MHz
MKF         MODE         TRC         SCL           1         N         1         f           2         N         2         f           3         -         -         -           4         -         -         -           5         -         -         -           6         -         -         -           7         -         -         -           8         -         -         -           9         -         -         10	× 5.260 5.270	00 GHz 20 GHz	4.59 dBm -6.92 dBm	FUNCTION	FUNCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Man FreqOffset 0 Hz
11 12 MSG					STATUS	3		



								141111	104						
D Agi	lent S	pectru	ım Analyze	er - Swep	ot SA	23									
Cen	ter	Free	<sup>i0 Ω</sup> 1 5.31	00000	000 G	Hz	AC	SE	NSE:INT	Г	#Avg	ALIGN AUTO Type: Log-Pwi	10:53:43 TR	ACE 1 2 3 4 5 6	Frequency
				Input:	RF PI IF(	NO: Fast Gain:Low	<b>P</b>	Atten: 30	e Run dB					DET P S N N N N	
10 di	3/div	F	lef 20.0	0 dBr	n							Mk	r2 5.310 -8	0 20 GHz 0.06 dBm	
10.0				$\rightarrow$	1			2	8						Center Freq
0.00			Anthe	ter the firmer	oly alweight	an a	de la constante	dista they way	2,7	welter the	Winglast	nt manufactures	and a laboration of	λ	5.310000000 GHz
-20.0	-		AN AN				-							Million and water	Start Freq
-30.0 -40.0		AND L		5										- mprint	5.285000000 GHz
-50.0									я. ,				8		Stop Freq
-70.0							_								5.335000000 GHz
Cen #Re:	ter : s B\	5.31( N 1.(	000 GH	z		#VI	BW 3	.0 MHz				#Sweep	Span 500 ms	50.00 MHz (1001 pts)	CF Step 5.000000 MHz
MKR	MODE	TRC			×			Y		FUNCT	ION	FUNCTION WIDT	H FUNC	TION VALUE	<u>Auto</u> Man
2	N	2	f		5.296 0 5.310 2	0 GHZ		4.27 d -8.06 d	Bm Bm						Eren Offenst
4												j.			0 Hz
6															
8 9 10			_										-		
11 12							_								
MSG												STAT	US		<u>.                                    </u>

Channel 62:

#### Channel 102:

💴 Agilent Sj	pectrum	Analyzer -	Swept SA								🛛
Center	50 Freq	∝ 5.5100	00000 G	Hz	AC SE	NSE:INT	#Avg Typ	ALIGNAUTO e: Log-Pwr	12:54:44 A	M May 08, 2012	Frequency
10 dB(div	Input: RF         PN0: Fast         Ing. File Rdin         DET P SNNNN           IFGain:Low         Atten: 30 dB         Mkr2 5.510 30 GHz         -6.01 dBm           10 dB/div         Ref 20.00 dBm         -6.01 dBm         -6.01 dBm										
		A Contract	May Thepatha	1	and the second states of	2,	Analyse, W.J. and any in all	and the second	New Welling		Center Freq 5.510000000 GHz
-20.0 -30.0	Horaldit	1								Ministerio Anna II	Start Freq 5.48500000 GHz
-50.0 -60.0 -70.0											<b>Stop Freq</b> 5.535000000 GHz
Center 5 #Res BV	5.5100 V 1.0 I	0 GHz MHz		#VB	W 1.0 MHz			#Sweep	Span 5 500 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz
MRE         MODS           1         N           2         N           3         4           5         6           7         8           9         10           11         12			× 5.500 0 5.510 3	15 GHz	Y <u>5.26 d</u> -6.01 d	Bm Bm Bm			FUNCTIO		Freq Offset 0 Hz
мsg 🗼 Alig	gning 2	of 3						STATU	3		



Agilent Spectrum Analyzer - Swept SA	ng ng			
M         RL         RF         50 Ω         AC           Center Freq         5.5500000000         GHz	SENSE:INT	ALIGNAUTO #Avg Type: Log-Pwr	07:33:00 PM Jun 25, 2012 TRACE 1 2 3 4 5 6	Frequency
PNO: Fast 🖵 IFGain:Low	Atten: 30 dB	Mice		Auto Tune
10 dB/div Ref 20.00 dBm	75		-2.13 dBm	
10.0 Juliandhardidured landradiger	1 111-444. 10-10 2 . 1000 - 2 . 1000 - 2 . 1000 - 2 . 1000 - 2 . 1000 - 2 . 1000 - 2 . 1000 - 2 . 1000 - 2 . 1000	and the president of the second of the	- In prility	Center Freq
-10.0			home	5.550000000 GHz
-20.0 phan and a start			My April May	Start Fred
-30.0				5.525000000 GHz
-50.0				
-60.0				Stop Freq 5.575000000 GHz
Cepter 5 55000 GHz			Spap 50.00 MHz	1
#Res BW 1.0 MHz #VBW	1.0 MHz	#Sweep	500 ms (1001 pts)	CF Step 5.000000 MHz
MKR         MODE         TRC         SCL         X           1         N         1         f         5.545         50         GHz	Y FUN 10.55 dBm	ICTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
2 N 2 f 5.550 20 GHz 3 4	-2.13 dBm			Freq Offset
				0 Hz
7 8 9				
10 11				
12 MSG		STATUS		

Channel 110:

Channel 134:

🎩 Agilent Spe	🛛 Agilent Spectrum Analyzer - Swept SA 📃 🖻 🔀										
Center Fi	50 Ω req 5.	67000	0000 G	Hz	AC SE	NSE:INT	#Avg	ALIGNAUTO Type: Log-Pwr	01:06:26 A	M May 08, 2012	Frequency
10 dB/div	Input: RF         PN0: Fast         Inguine real         Inguine real           IFGain:Low         Atten: 30 dB         Mkr2 5.669 90 GHz           dB/div         Ref 20.00 dBm         -8.90 dBm										
10.0 0.00		North Martine V	huntruhan	ann thur and the	and the second states of the s	2 inund	1	and and the paper of the			Center Freq 5.670000000 GHz
-20.0 -30.0	AN WALK								h h	Wingon	Start Freq 5.645000000 GHz
-50.0 -60.0 -70.0											<b>Stop Freq</b> 5.695000000 GHz
Center 5.0 #Res BW	67000 ( 1.0 MH	GHz Iz		#VE	W 1.0 MHz			#Sweep	Span 5 500 ms (	0.00 MHz 1001 pts)	<b>CF Step</b> 5.000000 MHz
MKR MODE TR 1 N 1 2 N 2 3 4 5 6	C SCL		× 5.675 1 5.669 9	0 GHz 0 GHz	2.22 d -8.90 d	Bm Bm	FUNCTION	FUNCTION WIDTH	FUNCTI	DN VALUE	<u>Auto</u> Man Freq Offset 0 Hz
7 8 9 10 11 12											
MSG								STATU	s		J

Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dB)	Result
38	5190	10.570	<13	Pass
46	5230	10.730	<13	Pass
54	5270	10.660	<13	Pass
62	5310	10.750	<13	Pass
102	5510	10.890	<13	Pass
110	5550	11.360	<13	Pass
134	5670	11.600	<13	Pass

#### Chain B

#### Channel 38:

🎾 Agilent Sp	🛛 Agilent Spectrum Analyzer - Swept SA											
Center F	50 s req	2 5.19000	00000 GH	lz	AC SE		#Avg Ty	ALIGNAUTO pe: Log-Pwr	08:22:30 P TRAC	M May 07, 2012	Frequency	
10 dB/div	Atten: 30 dB         Der P SNNN           0 dB/div         Ref 20.00 dBm         -9.72 dBm											
10.0 0.00 -10.0		- Andren plan	hand a star a start of the star	and a March	1 Munthin the monthing	2 million line	Warumaldhic	artally high recovering the	Mr. where a		Center Freq 5.190000000 GHz	
-20.0 -30.0 -40.0	THIN .	pu							Ĥ	Maganeral	Start Freq 5.165000000 GHz	
-50.0 -60.0 -70.0											<b>Stop Freq</b> 5.215000000 GHz	
Center 5 #Res BW	.1900 / 1.0	0 GHz /IHz		#VB\	V 3.0 MHz			#Sweep	Span 5 500 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz	
MKR MODE 1 N 2 N 3 4 5	IRC SCI 1 f 2 f		× 5.185 40 5.190 00	) GHz ) GHz	0.85 d -9.72 d	Bm Bm	NCTION	UNCTION WIDTH	FUNCTIO	DN VALUE	Auto Man Freq Offset 0 Hz	
6 7 8 9 10												
12 MSG		а. С		2			2	STATU	s			



🔎 Agilent	Spectri	ım Analy	zer - Swej	pt SA								
Cente	r Free	<sup>50 Ω</sup> <b>q 5.2</b> 3	300001 Input:	000 GI RF PM	Hz 10: Fast (	AC S	ENSE:INT	#Avg	ALIGN AUTO	08:27:31 P TRAC TYI	M May 07, 2012 1 2 3 4 5 6 PE MMWWWWW	Frequency
	IFGain:Low Atten: 30 dB Mkr2 5.230 05 GHz											
10 dB/d Log 10.0	iv F	Ref 20.	00 dBr	m	4-400 Playor	1	2	- Herrice Library	ant and an ally	-9.		Center Freq 5.230000000 GHz
-10.0 -20.0 -30.0	-									ł	A AND AND AND AND AND AND AND AND AND AN	Start Freq 5.205000000 GHz
-50.0												<b>Stop Freq</b> 5.255000000 GHz
Center #Res E	5.23 3W 1.0	000 GI 0 MHz	łz		#VB	W 3.0 MH:	z		#Sweep	Span 5 500 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz
MKR MOD 1 N 2 N 3 4 5 6		f f		× 5.225 40 5.230 09	0 GHz 5 GHz	1.53 ( -9.20 (	lBm lBm	FUNCTION	FUNCTION WIDTH	FUNCTIO	DN VALUE	Auto Man Freq Offset 0 Hz
7 8 9 10 11 12												
MSG									STATU	s		

Channel 46:

Channel 54:

💴 Agilent Spectrum Analyze	er - Swept SA				
Center Freq 5.27	0000000 GHz	AC SENSE:INT	ALIGNAUTO #Avg Type: Log-Pwr	11:15:43 PM May 07, 2012 TRACE 1 2 3 4 5 6 TYPE MMWWWW	Frequency
10 dB/div Ref 20.0	Auto Tune				
10.0 0.00	anter and a star of the start o		www.iterydian.la lays add la	Tonal angle	Center Freq 5.270000000 GHz
-20.0				Wy Wyranistania	Start Freq 5.245000000 GHz
-50.0 -60.0 -70.0					<b>Stop Freq</b> 5.295000000 GHz
Center 5.27000 GH #Res BW 1.0 MHz	z #VE	3W 3.0 MHz	#Sweep	Span 50.00 MHz 500 ms (1001 pts)	<b>CF Step</b> 5.000000 MHz
MKR         MODE         TRC         SCL           1         N         1         f           2         N         2         f           3         -         -           4         -         -	× 5.265 40 GHz 5.270 25 GHz	5.13 dBm -5.53 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Man Freq Offset
5 6 7 8 9 9					0 HZ
10 11 12 MSG			STATU:	6	



						Unum							
D Agil	ent Sp	ectrum	Analyzer -	Swept SA									- 7 🛛
Cent	ter F	50 req	Ω 5.310(	000000	GHz		SENSE:IN	T	#Avg Typ	ALIGNAUTO e: Log-Pwr	11:33:20 P TRAC	M May 07, 2012	Frequency
	IFGain:Low Atten: 30 dB												Auto Tune
10 dE	10 dB/div Ref 20.00 dBm -5.49 dBm												
10.0						1							Center Freq
0.00			J Stan	materiliajer	and states the self is	1. in the second second	A Contraction	denner fri	p. Analas Villagen	A MAR MARAN	Maphagal		5.310000000 GHz
-20.0	4.11	1	-	2							<u> </u>	Wall, Jacks	Start From
-30.0	N-PANL	r hal										THAN THE	5.285000000 GHz
-40.0				2		_	6 						
-60.0													Stop Freq 5 33500000 GHz
-70.0													
Cent #Res	s BW	.3100 1.0	DO GHZ MHZ		#VB	W 3.0 M	Hz			#Sweep	Span 5 500 ms (	0.00 MHZ 1001 pts)	CF Step 5.000000 MHz
MKR M	10DE T	RC SC		× 5.305	45 GHz	Y 5.20	6 dBm	FUNCT	ION FL	INCTION WIDTH	FUNCTIO	DN VALUE	<u>Auto</u> Man
2	N :	2 f		5.310	05 GHz	-5.49	∂dBm						Freq Offset
4			-										0 Hz
7													
9 10													
12	0.1												
MSG										STATU	S		

Channel 62:

#### Channel 102:

🗊 Agilent Sp	pectrum An	alyzer - Swept S	δA	ne -	200	254		Ann			
Center F	50 Ω Freq 5.	51000000	0 GHz	AC SEM	Run	#Avg Typ	ALIGNAUTO e: Log-Pwr	01:12:59 A TRAC TYP	M May 08, 2012 E 1 2 3 4 5 6 E MMWWWW	Frequency	
10 dB(diu	IFGain:Low         Atten: 30 dB         DETIP SNNNN           Mkr2 5.510 25 GHz         -6.64 dBm         -6.64 dBm										
		Manager and Antonia	apart and stated by the d		2	- Trippingle-Line	and the state of the			Center Freq 5.510000000 GHz	
-20.0 -30.0	and the provide				· · · · · · · · · · · · · · · · · · ·				Wandar	Start Freq 5.48500000 GHz	
-50.0 -60.0 -70.0										<b>Stop Freq</b> 5.535000000 GHz	
Center 5 #Res BW	.51000 V 1.0 MH	GHz Iz	#VB	W 1.0 MHz			#Sweep	Span 5 500 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz	
MKF         MODE           1         N           2         N           3         4           5         6           7         8           9         10           11         12	TRC         SCL           1         f           2         f	× 5. 5.	505 40 GHz	4.25 dE -6.64 dE	FU 3m 3m 			FUNCTIO		Freq Offset 0 Hz	
MSG							STATUS	5			



Agilent Spectrum Analyzer - Swept SA				
Center Freq 5.550000000	GHz	NT ALIGNAUTO #Avg Type: Log-Pwr	07:35:42 PM Jun 25, 2012 TRACE 1 2 3 4 5 6	Frequency
40 dB/dia - Bof 30.00 dBm	Auto Tune			
10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	han the property of the proper	With the stands of the stand of the stand	Tool when	Center Freq 5.55000000 GHz
-20.0 1000 1000 1000 1000 1000 1000 1000			When when we wanted	<b>Start Freq</b> 5.525000000 GHz
-60.0				<b>Stop Freq</b> 5.575000000 GHz
Center 5.55000 GHz #Res BW 1.0 MHz	#VBW 1.0 MHz	#Sweep	Span 50.00 MHz 500 ms (1001 pts)	CF Step 5.000000 MHz
1         N         1         f         5.54           2         N         2         f         5.55           3         4         4         4         5           4         6         6         6         7           7         8         9         9         9           10         11         11         12	5 50 GHz 7.28 dBm 0 40 GHz -4.08 dBm			Freq Offset

#### Channel 110:

Channel 134:

🖻 Agilent Spectrum Analyzer - Swept SA 📃 🗖 🔀											
	<sup>50 Ω</sup> eq 5.670	000000 GH	lz	AC SE	NSE:INT	#Avg Ty	ALIGN AUTO /pe: Log-Pwr	01:25:48 A TRAC TY	M May 08, 2012 E 1 2 3 4 5 6 PE MMWWWW	Frequency	
10 dB/div	Input Ref         Pro: rast         Atten: 30 dB         Der P SNNN           I0 dB/div         Ref 20.00 dBm         -9.32 dBm										
Log 10.0 0.00	and the second	april frendelle Luce part of	where Municip	1	2 primerical	John and the second	panintunture	Non and a start of the		Center Freq 5.670000000 GHz	
-20.0 -30.0 <b>(1997)</b> -40.0	WWW -							1	AND	Start Freq 5.645000000 GHz	
-50.0 -60.0 -70.0										<b>Stop Freq</b> 5.695000000 GHz	
Center 5.6 #Res BW 1	7000 GHz 1.0 MHz		#VBV	V 1.0 MHz			#Sweep	Span 5 500 ms (	0.00 MHz 1001 pts)	<b>CF Step</b> 5.000000 MHz	
	SOL f	× 5 665 4(	) GHz	Y 2 28 d	Fl Bm	INCTION	FUNCTION WIDTH	FUNCTIO	DN VALUE	<u>Auto</u> Man	
2 N 2 3 4 5 6	f	5.670 05	GHZ	-9.32 d	Bm					Freq Offset 0 Hz	
7 8 9 10 11											
MSG			26				STATU	s			

## 6. Radiated Emission

## 6.1. Test Equipment

The following test equipments are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3	X Bilog Antenna		Schaffner Chase	CBL6112B/2673	Sep., 2011
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
	Х	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	Х	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2012
	Х	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2011
	Х	Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2012
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
	Х	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2012
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Χ	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

## 6.2. Test Setup

Radiated Emission Below 1GHz



## Radiated Emission Above 1GHz



## 6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits						
Frequency MHz	uV/m @3m	dBuV/m@3m				
30-88	100	40				
88-216	150	43.5				
216-960	200	46				
Above 960	500	54				

Remarks: E field strength (dBuV/m) =  $20 \log E$  field strength (uV/m)

## 6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15.407 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement. The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna. The worst radiated emission is measured in the Open Area Test Site on the Final Measurement. The measurement frequency range form 30MHz - 10th Harmonic of fundamental was investigated.

## 6.5. Uncertainty

- ± 3.8 dB below 1GHz
- ± 3.9 dB above 1GHz

## 6.6. Test Result of Radiated Emission

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10360.000	12.930	37.430	50.360	-23.640	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
Vertical					
Peak Detector:					
10360.000	13.724	36.910	50.634	-23.366	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					

Note:

--

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module					
Test Item	: Harmonic Radiated Emission Data					
Test Site : No.3 OATS						
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5220MHz	z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
<b>Peak Detector:</b>						
10440.000	13.322	37.510	50.832	-23.168	74.000	
15660.000	*	*	*	*	74.000	
20880.000	*	*	*	*	74.000	
26100.000	*	*	*	*	74.000	
Average						
<b>Detector:</b>						
10440.000	14.245	37.700	51.945	-22.055	74.000	
Vertical						
<b>Peak Detector:</b>						
15660.000	*	*	*	*	74.000	
20880.000	*	*	*	*	74.000	
26100.000	*	*	*	*	74.000	
Average						
<b>Detector:</b>						

---

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module					
Test Item	: Harmonic Radiated Emission Data					
Test Site	ite : No.3 OATS					
Test Mode	: Mode 1:	Transmit (802.11	la-6Mbps) (5240MHz	z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
<b>Peak Detector:</b>						
10480.000	13.693	36.130	49.824	-24.176	74.000	
15720.000	*	*	*	*	74.000	
20960.000	*	*	*	*	74.000	
26200.000	*	*	*	*	74.000	
Average						
<b>Detector:</b>						
Vertical						
<b>Peak Detector:</b>						
10480.000	14.620	36.850	51.471	-22.529	74.000	
15720.000	*	*	*	*	74.000	
20960.000	*	*	*	*	74.000	
26200.000	*	*	*	*	74.000	
Average						
<b>Detector:</b>						

---

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module					
Test Item	: Harmonic Radiated Emission Data					
Test Site	Site : No.3 OATS					
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5260MHz	Z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
10520.000	14.015	36.000	50.015	-23.985	74.000	
15780.000	*	*	*	*	74.000	
21040.000	*	*	*	*	74.000	
26300.000	*	*	*	*	74.000	
Average						
<b>Detector:</b>						
Vertical						
Peak Detector:						
10520.000	14.818	36.270	51.088	-22.912	74.000	
15780.000	*	*	*	*	74.000	
21040.000	*	*	*	*	74.000	
26300.000	*	*	*	*	74.000	
Average						

# Detector:

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module							
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5300MHz	z)				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
10600.000	14.550	35.790	50.339	-23.661	74.000			
15900.000	*	*	*	*	74.000			
21200.000	*	*	*	*	74.000			
26500.000	*	*	*	*	74.000			
Average								
<b>Detector:</b>								
Vertical								
Peak Detector:								
10600.000	14.881	36.190	51.071	-22.929	74.000			
15900.000	*	*	*	*	74.000			
21200.000	*	*	*	*	74.000			
26500.000	*	*	*	*	74.000			
Average								
<b>Detector:</b>								

---

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module					
Test Item	: Harmonic Radiated Emission Data					
Test Site	Test Site : No.3 OATS					
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5320MHz	Z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
10640.000	14.690	35.790	50.480	-23.520	74.000	
15960.000	*	*	*	*	74.000	
21280.000	*	*	*	*	74.000	
26600.000	*	*	*	*	74.000	
Average						
<b>Detector:</b>						
Vertical						
Peak Detector:						
10640.000	15.083	36.810	51.893	-22.107	74.000	
15960.000	*	*	*	*	74.000	
21280.000	*	*	*	*	74.000	
26600.000	*	*	*	*	74.000	
Average						
<b>Detector:</b>						

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module					
Test Item	: Harmonic Radiated Emission Data					
Test Site	: No.3 OATS					
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5500MHz	Z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
11000.000	16.399	36.190	52.589	-21.411	74.000	
16500.000	*	*	*	*	74.000	
22000.000	*	*	*	*	74.000	
27500.000	*	*	*	*	74.000	
Average						
<b>Detector:</b>						
Vertical						
Peak Detector:						
11000.000	17.132	35.790	52.922	-21.078	74.000	
16500.000	*	*	*	*	74.000	
22000.000	*	*	*	*	74.000	
27500.000	*	*	*	*	74.000	
Average						
Detector:						

--

Note:
1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.

2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.

3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.

- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module					
Test Item	: Harmonic Radiated Emission Data					
Test Site	: No.3 OATS					
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5580MHz	2)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
11160.000	16.656	34.590	51.246	-22.754	74.000	
16800.000	*	*	*	*	74.000	
22400.000	*	*	*	*	74.000	
28000.000	*	*	*	*	74.000	
Average						
<b>Detector:</b>						
Vertical						
Peak Detector:						
11160.000	17.726	34.720	52.446	-21.554	74.000	
16800.000	*	*	*	*	74.000	
22400.000	*	*	*	*	74.000	
28000.000	*	*	*	*	74.000	
Average						
<b>Detector:</b>						

---

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module								
Test Item	: Harmonic Radiated Emission Data								
Test Site	: No.3 OA	: No.3 OATS							
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5700MHz	z)					
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Horizontal									
<b>Peak Detector:</b>									
11400.000	16.530	35.860	52.391	-21.609	74.000				
17100.000	*	*	*	*	74.000				
22800.000	*	*	*	*	74.000				
28500.000	*	*	*	*	74.000				
Average									
<b>Detector:</b>									
Vertical									
<b>Peak Detector:</b>									
11400.000	17.138	34.870	52.008	-21.992	74.000				
17100.000	*	*	*	*	74.000				
22800.000	*	*	*	*	74.000				
28500.000	*	*	*	*	74.000				
Average Detector:									

--

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

-

Product Test Item Test Site Test Mode	<ul> <li>802.11 a/b/g/n RTL8192DU Module</li> <li>Harmonic Radiated Emission Data</li> <li>No.3 OATS</li> <li>Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5180MHz)</li> </ul>					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
10360.000	12.930	38.350	51.280	-22.720	74.000	
15540.000	*	*	*	*	74.000	
20720.000	*	*	*	*	74.000	
25900.000	*	*	*	*	74.000	
Average Detector: 						
Vertical						
Peak Detector:						
10360.000	13.724	36.720	50.444	-23.556	74.000	
15540.000	*	*	*	*	74.000	
20720.000	*	*	*	*	74.000	
25900.000 Average Detector:	*	*	*	*	74.000	

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	<ul> <li>802.11 a/b/g/n RTL8192DU Module</li> <li>Harmonic Radiated Emission Data</li> <li>No.3 OATS</li> <li>Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5220MHz)</li> </ul>						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
10440.000	13.322	37.160	50.482	-23.518	74.000		
15660.000	*	*	*	*	74.000		
20880.000	*	*	*	*	74.000		
26100.000	*	*	*	*	74.000		
Average							
Detector:							
Vertical							
Peak Detector:							
10440.000	14.245	36.900	51.145	-22.855	74.000		
15660.000	*	*	*	*	74.000		
20880.000	*	*	*	*	74.000		
26100.000	*	*	*	*	74.000		
Average Detector:							

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

-

Product Test Item Test Site Test Mode	<ul> <li>802.11 a/b/g/n RTL8192DU Module</li> <li>Harmonic Radiated Emission Data</li> <li>No.3 OATS</li> <li>Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5240MHz)</li> </ul>						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
10480.000	13.693	36.060	49.754	-24.246	74.000		
15720.000	*	*	*	*	74.000		
20960.000	*	*	*	*	74.000		
26200.000	*	*	*	*	74.000		
Average Detector: 							
Vertical							
Peak Detector:	1.1.100		<b>7</b> 4 004		- 4 000		
10480.000	14.620	36.710	51.331	-22.669	74.000		
15720.000	*	*	*	*	74.000		
20960.000	*	*	*	*	74.000		
26200.000 Average Detector:	*	*	*	*	74.000		

Note:

---

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module								
Test Item	: Harmonic Radiated Emission Data								
Test Site : No.3 OATS									
Test Mode	: Mode 2:	: Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5260MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Horizontal									
<b>Peak Detector:</b>									
10520.000	14.015	36.180	50.195	-23.805	74.000				
15780.000	*	*	*	*	74.000				
21040.000	*	*	*	*	74.000				
26300.000	*	*	*	*	74.000				
Average									
<b>Detector:</b>									
Vertical									
<b>Peak Detector:</b>									
10520.000	14.818	36.360	51.178	-22.822	74.000				
15780.000	*	*	*	*	74.000				
21040.000	*	*	*	*	74.000				
26300.000	*	*	*	*	74.000				
Average									
Detector:									

--

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

-

Product	: 802.11 a/b/g/n RTL8192DU Module						
Test Item	: Harmonic Radiated Emission Data						
Test Site	<ul> <li>No.3 OATS</li> <li>Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5300MHz)</li> </ul>						
Test Mode							
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
10600.000	14.550	36.120	50.669	-23.331	74.000		
15900.000	*	*	*	*	74.000		
21200.000	*	*	*	*	74.000		
26500.000	*	*	*	*	74.000		
Average							
Detector:							
Vertical							
Peak Detector:							
10600.000	14.881	36.120	51.001	-22.999	74.000		
15900.000	*	*	*	*	74.000		
21200.000	*	*	*	*	74.000		
26500.000	*	*	*	*	74.000		
Average Detector:							

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5320MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
10640.000	14.690	35.360	50.050	-23.950	74.000		
15960.000	*	*	*	*	74.000		
21280.000	*	*	*	*	74.000		
26600.000	*	*	*	*	74.000		
Average							
<b>Detector:</b>							
Vertical							
Peak Detector:							
10640.000	15.083	35.790	50.873	-23.127	74.000		
15960.000	*	*	*	*	74.000		
21280.000	*	*	*	*	74.000		
26600.000	*	*	*	*	74.000		
Average							
<b>Detector:</b>							

--

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

-

Product Test Item Test Site Test Mode	<ul> <li>802.11 a/b/g/n RTL8192DU Module</li> <li>Harmonic Radiated Emission Data</li> <li>No.3 OATS</li> <li>Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5500MHz)</li> </ul>						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
11000.000	16.399	35.980	52.379	-21.621	74.000		
16500.000	*	*	*	*	74.000		
22000.000	*	*	*	*	74.000		
27500.000	*	*	*	*	74.000		
Average Detector: 							
Vertical							
Peak Detector:							
11000.000	17.132	35.970	53.102	-20.898	74.000		
16500.000	*	*	*	*	74.000		
22000.000	*	*	*	*	74.000		
27500.000	*	*	*	*	74.000		
Average Detector:							

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

\_

Product Test Item Test Site Test Mode	<ul> <li>802.11 a/b/g/n RTL8192DU Module</li> <li>Harmonic Radiated Emission Data</li> <li>No.3 OATS</li> <li>Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5580MHz)</li> </ul>						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
11160.000	16.656	34.990	51.646	-22.354	74.000		
16800.000	*	*	*	*	74.000		
22400.000	*	*	*	*	74.000		
28000.000	*	*	*	*	74.000		
Average Detector:							
Vertical Peak Detector:							
11160.000	17.726	35.210	52.936	-21.064	74.000		
16800.000	*	*	*	*	74.000		
22400.000	*	*	*	*	74.000		
28000.000 Average Detector:	*	*	*	*	74.000		

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module							
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 2:	Transmit (802.11	n-20BW 14.4Mbps)	(5700MHz)				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
11400.000	16.530	34.790	51.321	-22.679	74.000			
17100.000	*	*	*	*	74.000			
22800.000	*	*	*	*	74.000			
28500.000	*	*	*	*	74.000			
Average								
<b>Detector:</b>								
Vertical								
<b>Peak Detector:</b>								
11400.000	17.138	34.720	51.858	-22.142	74.000			
17100.000	*	*	*	*	74.000			
22800.000	*	*	*	*	74.000			
28500.000	*	*	*	*	74.000			
Average								
<b>Detector:</b>								

--

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module								
Test Item	: Harmonic Radiated Emission Data								
Test Site	<ul> <li>No.3 OATS</li> <li>Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)</li> </ul>								
Test Mode									
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Horizontal									
Peak Detector:									
10380.000	12.939	37.120	50.059	-23.941	74.000				
15570.000	*	*	*	*	74.000				
20760.000	*	*	*	*	74.000				
25950.000	*	*	*	*	74.000				
Average									
<b>Detector:</b>									
Vertical									
Peak Detector:									
10380.000	13.796	36.650	50.446	-23.554	74.000				
15570.000	*	*	*	*	74.000				
20760.000	*	*	*	*	74.000				
25950.000	*	*	*	*	74.000				
Average									
<b>Detector:</b>									

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module							
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS de : Mode 3: Transmit (802.11n-40BW 30Mbps) (5230MHz)							
Test Mode								
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
10460.000	13.508	36.370	49.878	-24.122	74.000			
15690.000	*	*	*	*	74.000			
20920.000	*	*	*	*	74.000			
26150.000	*	*	*	*	74.000			
Average								
<b>Detector:</b>								
Vertical								
Peak Detector:								
10460.000	14.433	36.910	51.343	-22.657	74.000			
15690.000	*	*	*	*	74.000			
20920.000	*	*	*	*	74.000			
26150.000	*	*	*	*	74.000			
Average Detector:								

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module							
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS de : Mode 3: Transmit (802.11n-40BW 30Mbps) (5270MHz)							
Test Mode								
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
10540.000	14.151	35.560	49.710	-24.290	74.000			
15810.000	*	*	*	*	74.000			
21080.000	*	*	*	*	74.000			
26350.000	*	*	*	*	74.000			
Average								
<b>Detector:</b>								
Vertical								
<b>Peak Detector:</b>								
10540.000	14.829	36.690	51.518	-22.482	74.000			
15810.000	*	*	*	*	74.000			
21080.000	*	*	*	*	74.000			
26350.000	*	*	*	*	74.000			
Average								
<b>Detector:</b>								

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module							
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 3: Transmit (802.11n-40BW 30Mbps) (5310MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
10620.000	14.623	36.130	50.753	-23.247	74.000			
15930.000	*	*	*	*	74.000			
21240.000	*	*	*	*	74.000			
26550.000	*	*	*	*	74.000			
Average								
<b>Detector:</b>								
Vertical								
Peak Detector:								
10620.000	14.970	35.110	50.080	-23.920	74.000			
15930.000	*	*	*	*	74.000			
21240.000	*	*	*	*	74.000			
26550.000	*	*	*	*	74.000			
Average Detector:								

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
| Product          | : 802.11 a/b/g/n RTL8192DU Module |                                   |                   |         |        |  |  |
|------------------|-----------------------------------|-----------------------------------|-------------------|---------|--------|--|--|
| Test Item        | : Harmoni                         | : Harmonic Radiated Emission Data |                   |         |        |  |  |
| Test Site        | : No.3 OA                         | ATS                               |                   |         |        |  |  |
| Test Mode        | : Mode 3:                         | Transmit (802.11                  | n-40BW 30Mbps) (5 | 510MHz) |        |  |  |
|                  |                                   |                                   |                   |         |        |  |  |
| Frequency        | Correct                           | Reading                           | Measurement       | Margin  | Limit  |  |  |
|                  | Factor                            | Level                             | Level             |         |        |  |  |
| MHz              | dB                                | dBuV                              | dBuV/m            | dB      | dBuV/m |  |  |
| Horizontal       |                                   |                                   |                   |         |        |  |  |
| Peak Detector:   |                                   |                                   |                   |         |        |  |  |
| 11020.000        | 16.474                            | 35.940                            | 52.413            | -21.587 | 74.000 |  |  |
| 15930.000        | *                                 | *                                 | *                 | *       | 74.000 |  |  |
| 21240.000        | *                                 | *                                 | *                 | *       | 74.000 |  |  |
| 26550.000        | *                                 | *                                 | *                 | *       | 74.000 |  |  |
| Average          |                                   |                                   |                   |         |        |  |  |
| <b>Detector:</b> |                                   |                                   |                   |         |        |  |  |
|                  |                                   |                                   |                   |         |        |  |  |
|                  |                                   |                                   |                   |         |        |  |  |
| Vertical         |                                   |                                   |                   |         |        |  |  |
| Peak Detector:   |                                   |                                   |                   |         |        |  |  |
| 11020.000        | 17.224                            | 35.950                            | 53.174            | -20.826 | 74.000 |  |  |
| 15930.000        | *                                 | *                                 | *                 | *       | 74.000 |  |  |
| 21240.000        | *                                 | *                                 | *                 | *       | 74.000 |  |  |
| 26550.000        | *                                 | *                                 | *                 | *       | 74.000 |  |  |
| Average          |                                   |                                   |                   |         |        |  |  |
| Detector         |                                   |                                   |                   |         |        |  |  |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

\_

Product Test Item Test Site Test Mode	<ul> <li>802.11 a/b/g/n RTL8192DU Module</li> <li>Harmonic Radiated Emission Data</li> <li>No.3 OATS</li> <li>Mode 3: Transmit (802.11n-40BW 30Mbps) (5550MHz)</li> </ul>				
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11100.000	11100.000 16.657		51.236	-22.764	74.000
16770.000 *		*	*	*	74.000
22360.000 *		*	*	*	74.000
27950.000	*	*	*	*	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
11100.000	17.681	34.120	51.800	-22.200	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	74.000
Average Detector:					

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module						
Test Item	: Harmoni	: Harmonic Radiated Emission Data					
Test Site	: No.3 OA	TS					
Test Mode	: Mode 3:	Transmit (802.11	n-40BW 30Mbps) (5	670MHz)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
11340.000	16.408	35.170	51.577	-22.423	74.000		
17010.000	*	*	*	*	74.000		
22680.000	*	*	*	*	74.000		
28350.000	*	* *	*	*	74.000		
Average							
<b>Detector:</b>							
Vertical							
Peak Detector:							
11340.000	17.167	34.570	51.737	-22.263	74.000		
17010.000	*	*	*	*	74.000		
22680.000	*	*	*	*	74.000		
28350.000	*	*	*	*	74.000		
Average Detector:							

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module						
Test Item	: General	: General Radiated Emission					
Test Site	: No.3 OA	: No.3 OATS					
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5220MHz	2)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
<b>Peak Detector</b>							
134.760	-10.298	47.611	37.313	-6.187	43.500		
235.640	-8.540	42.262	33.722	-12.278	46.000		
373.380	-1.163	34.525	33.362	-12.638	46.000		
499.480	0.048	36.242	36.290	-9.710	46.000		
792.420	5.209	28.911	34.120	-11.880	46.000		
961.200	6.450	27.866	34.316	-19.684	54.000		
Vertical							
<b>Peak Detector</b>							
64.920	-5.683	41.126	35.443	-4.557	40.000		
105.660	-0.253	35.134	34.881	-8.619	43.500		
272.500	-9.019	34.213	25.194	-20.806	46.000		
499.480	-0.852	32.862	32.010	-13.990	46.000		
749.740	2.510	29.274	31.784	-14.216	46.000		
961.200	7.260	27.673	34.933	-19.067	54.000		

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	General Radiated Emission
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
127.000	-10.017	47.275	37.258	-6.242	43.500
243.400	-6.441	39.859	33.418	-12.582	46.000
499.480	0.048	36.248	36.296	-9.704	46.000
600.360	3.977	29.308	33.285	-12.715	46.000
792.420	5.209	29.018	34.227	-11.773	46.000
961.200	6.450	27.451	33.901	-20.099	54.000
Vertical					
<b>Peak Detector</b>					
64.920	-5.683	39.654	33.971	-6.029	40.000
113.420	-1.849	37.030	35.181	-8.319	43.500
258.920	-7.490	32.110	24.620	-21.380	46.000
499.480	-0.852	33.428	32.576	-13.424	46.000

Note:

749.740

961.200

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.

30.958

34.812

-15.042

-19.188

46.000

54.000

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.

28.448

27.552

4. Measurement Level = Reading Level + Correct Factor.

2.510

7.260

- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

:	802.11 a/b/g/n RTL8192DU Module
:	General Radiated Emission
:	No.3 OATS
:	Mode 1: Transmit (802.11a-6Mbps) (5580MHz)
	: : :

Frequency	Correct	Reading Measurement		Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
127.000	-10.017	47.013	36.996	-6.504	43.500
237.580	-7.700	40.942	33.242	-12.758	46.000
375.320	-1.209	34.453	33.244	-12.756	46.000
549.920	2.943	33.976	36.919	-9.081	46.000
794.360	5.181	28.152	33.333	-12.667	46.000
961.200	6.450	25.940	32.390	-21.610	54.000
Vertical					
<b>Peak Detector</b>					
64.920	-5.683	38.997	33.314	-6.686	40.000
113.420	-1.849	37.738	35.889	-7.611	43.500

113.420	-1.849	37.738	35.889	-/.611	43.500
274.440	-8.718	33.848	25.130	-20.870	46.000
499.480	-0.852	33.357	32.505	-13.495	46.000
749.740	2.510	29.828	32.338	-13.662	46.000
961.200	7.260	27.876	35.136	-18.864	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	General Radiated Emission
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5220MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
144.460	-10.377	47.473	37.096	-6.404	43.500
233.700	-8.619	47.376	38.757	-7.243	46.000
499.480	0.048	35.372	35.420	-10.580	46.000
600.360	3.977	28.767	32.744	-13.256	46.000
798.240	5.148	28.802	33.950	-12.050	46.000
965.080	6.852	31.069	37.921	-16.079	54.000
Vertical					
<b>Peak Detector</b>					
59.100	-4.097	38.152	34.055	-5.945	40.000
105.660	-0.253	36.272	36.019	-7.481	43.500
272.500	-9.019	35.110	26.091	-19.909	46.000
499.480	-0.852	32.858	32.006	-13.994	46.000

Note:

749.740

961.200

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.

30.885

34.386

-15.115

-19.614

46.000

54.000

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.

28.375

27.126

4. Measurement Level = Reading Level + Correct Factor.

2.510

7.260

- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

46.000

54.000

:	802.11 a/b/g/n RTL8192DU Module
:	General Radiated Emission
:	No.3 OATS
:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5300MHz)
	: : :

Frequency	cy Correct Reading Measurement		Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
134.760	-10.298	46.880	36.582	-6.918	43.500
245.340	-6.346	40.279	33.933	-12.067	46.000
499.480	0.048	35.430	35.478	-10.522	46.000
600.360	3.977	29.412	33.389	-12.611	46.000
794.360	5.181	31.919	37.100	-8.900	46.000
968.960	6.981	29.528	36.509	-17.491	54.000
Vertical					
<b>Peak Detector</b>					
68.800	-6.305	39.567	33.262	-6.738	40.000
113.420	-1.849	38.430	36.581	-6.919	43.500
332.640	-4.914	31.353	26.439	-19.561	46.000
499.480	-0.852	33.117	32.265	-13.735	46.000

Note:

749.740

961.200

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.

31.481

34.346

-14.519

-19.654

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.

28.971

27.086

4. Measurement Level = Reading Level + Correct Factor.

2.510

7.260

- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	General Radiated Emission
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5580MHz)

Correct Reading Me		Measurement	Margin	Limit
Factor	Level	Level		
dB	dBuV	dBuV/m	dB	dBuV/m
-10.230	46.778	36.548	-6.952	43.500
-6.531	41.347	34.816	-11.184	46.000
-1.097	33.933	32.836	-13.164	46.000
3.977	28.373	32.350	-13.650	46.000
5.181	29.464	34.645	-11.355	46.000
6.450	27.708	34.158	-19.842	54.000
-5.683	39.005	33.322	-6.678	40.000
	Correct Factor dB -10.230 -6.531 -1.097 3.977 5.181 6.450 -5.683	Correct         Reading           Factor         Level           dB         dBuV           -10.230         46.778           -6.531         41.347           -1.097         33.933           3.977         28.373           5.181         29.464           6.450         27.708           -5.683         39.005	Correct         Reading         Measurement           Factor         Level         Level           dB         dBuV         dBuV/m           -10.230         46.778         36.548           -6.531         41.347         34.816           -1.097         33.933         32.836           3.977         28.373         32.350           5.181         29.464         34.645           6.450         27.708         34.158           -5.683         39.005         33.322	CorrectReadingMeasurementMarginFactorLevelLeveldBdBuVdBuV/mdB-10.23046.77836.548-6.952-6.53141.34734.816-11.184-1.09733.93332.836-13.1643.97728.37332.350-13.6505.18129.46434.645-11.3556.45027.70834.158-19.842-5.68339.00533.322-6.678

011720	51005	571005	00.011	0.070	10.000
105.660	-0.253	37.022	36.769	-6.731	43.500
264.740	-7.681	35.141	27.460	-18.540	46.000
499.480	-0.852	34.205	33.353	-12.647	46.000
749.740	2.510	30.716	33.226	-12.774	46.000
961.200	7.260	26.652	33.912	-20.088	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module				
Test Item	: General Radiated Emission				
Test Site	: No.3 OA	ATS			
Test Mode	de : Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)				
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
127.000	-10.017	46.860	36.843	-6.657	43.500
243.400	-6.441	39.946	33.505	-12.495	46.000
367.560	-1.205	34.094	32.889	-13.111	46.000
600.360	3.977	30.162	34.139	-11.861	46.000
792.420	5.209	30.268	35.477	-10.523	46.000
961.200	6.450	26.545	32.995	-21.005	54.000
Vertical					
Peak Detector					
64.920	-5.683	39.698	34.015	-5.985	40.000
103.720	-0.151	37.707	37.555	-5.945	43.500
272.500	-9.019	34.903	25.884	-20.116	46.000
499.480	-0.852	32.871	32.019	-13.981	46.000
749.740	2.510	29.099	31.609	-14.391	46.000
961.200	7.260	26.975	34.235	-19.765	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	General Radiated Emission
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5270MHz)

Frequency	Correct Reading Measurement		Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
127.000	-10.017	47.519	37.502	-5.998	43.500
241.460	-6.531	40.493	33.962	-12.038	46.000
499.480	0.048	36.485	36.533	-9.467	46.000
600.360	3.977	29.114	33.091	-12.909	46.000
784.660	4.452	29.072	33.524	-12.476	46.000
961.200	6.450	28.332	34.782	-19.218	54.000
Vertical					
<b>Peak Detector</b>					
64.920	-5.683	39.150	33.467	-6.533	40.000
103.720	-0.151	37.196	37.044	-6.456	43.500
272.500	-9.019	34.326	25.307	-20.693	46.000
499.480	-0.852	32.989	32.137	-13.863	46.000
749.740	2.510	29.500	32.010	-13.990	46.000
961.200	7.260	26.472	33.732	-20.268	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: 802.11 a/b/g/n RTL8192DU Module				
Test Item	: General Radiated Emission				
Test Site	: No.3 OA	ATS			
Test Mode	: Mode 3:	Transmit (802.11)	n-40BW 30Mbps) (53	550MHz)	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
134.760	-10.298	46.586	36.288	-7.212	43.500
270.560	-5.007	38.530	33.523	-12.477	46.000
499.480	0.048	35.351	35.399	-10.601	46.000
720.640	3.511	29.512	33.023	-12.977	46.000
794.360	5.181	29.243	34.424	-11.576	46.000
961.200	6.450	26.791	33.241	-20.759	54.000
Vertical					
<b>Peak Detector</b>					
64.920	-5.683	39.522	33.839	-6.161	40.000
103.720	-0.151	36.073	35.921	-7.579	43.500
266.680	-8.213	34.777	26.564	-19.436	46.000
499.480	-0.852	32.802	31.950	-14.050	46.000
796.300	2.831	28.874	31.705	-14.295	46.000
961.200	7.260	27.392	34.652	-19.348	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 7. Band Edge

\_

## 7.1. Test Equipment

## **RF** Conducted Measurement

The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2012

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

## **RF Radiated Measurement:**

The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3	Bilog Antenna S		Schaffner Chase	CBL6112B/2673	Sep., 2011
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	Pre-Amplifier		QTK	QTK-AMP-03 / 0003	May, 2012
	Х	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2011
		Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2012
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2012
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note:

1. All instruments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

## 7.2. Test Setup

## **RF** Conducted Measurement



## **RF Radiated Measurement:**



## 7.3. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

FCC Part 15 Subpart C Paragraph 15.209 Limits				
Frequency MHz	uV/m @3m	dBuV/m@3m		
30-88	100	40		
88-216	150	43.5		
216-960	200	46		
Above 960	500	54		

Remarks : 1. RF Voltage  $(dBuV) = 20 \log RF$  Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

## 7.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz. The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

## 7.5. Uncertainty

- $\pm$  3.8 dB below 1GHz
- ± 3.9 dB above 1GHz

## 7.6. Test Result of Band Edge

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps)-Channel 36

#### **RF Radiated Measurement (Horizontal):**

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Decult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
36 (Peak)	5150.000	3.340	65.028	68.368	74.00	54.00	Pass
36 (Peak)	5186.000	3.214	99.529	102.742			Pass
36 (Average)	5150.000	3.340	65.028	68.368	74.00	54.00	Pass
36 (Average)	5186.000	3.214	99.529	102.742			Pass





- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps)-Channel 36

## **RF Radiated Measurement (Vertical):**

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Docult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
36 (Peak)	5150.000	5.260	66.053	71.313	74.00	54.00	Pass
36 (Peak)	5177.600	5.336	100.525	105.860			Pass
36 (Average)	5150.000	5.260	47.094	52.354	74.00	54.00	Pass
36 (Average)	5177.600	5.336	91.398	96.733			Pass

#### Figure Channel 36:

#### Vertical (Peak)



#### Figure Channel 36:

#### Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11  a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) -Channel 64

. .

#### **RF Radiated Measurement (Horizontal):**

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
64 (Peak)	5317.200	3.821	102.524	106.345			Pass
64 (Peak)	5350.000	3.716	63.639	67.356	74.00	54.00	Pass
64 (Peak)	5352.600	3.708	66.486	70.194			
64 (Average)	5315.200	3.827	93.240	97.068			Pass
64 (Average)	5350.000	3.716	47.259	50.976	74.00	54.00	Pass





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) -Channel 64

## **RF Radiated Measurement (Vertical):**

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
64 (Peak)	5313.600	5.738	102.590	108.327			Pass
64 (Peak)	5350.000	5.691	63.388	69.080	74.00	54.00	Pass
64 (Peak)	5353.200	5.688	66.214	71.901	74.00	54.00	
64 (Average)	5315.000	5.736	93.541	99.277			Pass
64 (Average)	5350.000	5.691	47.544	53.236	74.00	54.00	Pass

#### Figure Channel 64:

#### Vertical (Peak)





#### Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) -Channel 100

## **RF Radiated Measurement (Horizontal):**

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Dogult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
100 (Peak)	5460.000	4.354	55.534	59.888	74.00	54.00	Pass
100 (Peak)	5503.000	4.835	104.141	108.976			Pass
100 (Average)	5460.000	4.354	39.439	43.793	74.00	54.00	Pass
100 (Average)	5504.400	4.845	94.731	99.576			Pass

## **Figure Channel 100:**

#### Horizontal (Peak)





## Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) -Channel 100

## **RF Radiated Measurement (Vertical):**

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Decult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
100 (Peak)	5460.000	6.041	55.051	61.092	74.00	54.00	Pass
100 (Peak)	5503.000	6.284	102.634	108.918			Pass
100 (Average)	5460.000	6.041	38.934	44.975	74.00	54.00	Pass
100 (Average)	5495.000	6.260	93.410	99.670			Pass

#### **Figure Channel 100:**

#### Vertical (Peak)





## Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) -Channel 100

## **RF Radiated Measurement:**

Horizontal

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
100	5470.000	18.334	-66.290	-47.956	-20.956	-27.000	Pass

Vertical

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
100	5470.000	19.335	-67.770	-48.435	-21.435	-27.000	Pass

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) -Channel 140

## **RF Radiated Measurement:**

Horizontal

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
140	5725.000	18.649	-69.880	-51.231	-24.231	-27.000	Pass

Vertical

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
140	5725.000	19.372	-70.700	-51.328	-24.328	-27.000	Pass

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 36

## **RF Radiated Measurement (Horizontal):**

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Docult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
36 (Peak)	5149.200	3.343	63.686	67.029	74.00	54.00	Pass
36 (Peak)	5150.000	3.340	62.076	65.416	74.00	54.00	Pass
36 (Peak)	5177.200	3.244	102.908	106.152			Pass
36 (Average)	5150.000	3.340	46.786	50.126	74.00	54.00	Pass
36 (Average)	5175.600	3.251	91.570	94.820			Pass



#### Horizontal (Peak)





## Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 36

## **RF Radiated Measurement (Vertical):**

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Dogult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
36 (Peak)	5150.000	5.260	64.100	69.360	74.00	54.00	Pass
36 (Peak)	5175.800	5.331	103.429	108.760			Pass
36 (Average)	5150.000	5.260	47.150	52.410	74.00	54.00	Pass
36 (Average)	5185.400	5.357	92.489	97.846			Pass

#### **Figure Channel 36:**

#### Vertical (Peak)





## Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 64

## **RF Radiated Measurement (Horizontal):**

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Docult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
64 (Peak)	5317.000	3.821	102.929	106.751			Pass
64 (Peak)	5350.000	3.716	54.578	58.295	74.00	54.00	Pass
64 (Average)	5315.600	3.826	91.169	94.995			Pass
64 (Average)	5350.000	3.716	38.062	41.779	74.00	54.00	Pass

#### **Figure Channel 64:**

#### Horizontal (Peak)





## Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 64

## **RF Radiated Measurement (Vertical):**

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Degult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
64 (Peak)	5313.400	5.738	102.406	108.144			Pass
64 (Peak)	5350.000	5.691	52.202	57.894	74.00	54.00	Pass
64 (Average)	5316.600	5.733	91.316	97.049			Pass
64 (Average)	5350.000	5.691	37.121	42.813	74.00	54.00	Pass

#### **Figure Channel 64:**

#### Vertical (Peak)





## Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100

## **RF Radiated Measurement (Horizontal):**

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
100 (Peak)	5458.400	4.332	48.015	52.347	74.00	54.00	Pass
100 (Peak)	5460.000	4.354	46.742	51.096	74.00	54.00	Pass
100 (Peak)	5493.600	4.770	103.671	108.441			Pass
100 (Average)	5460.000	4.354	34.975	39.329	74.00	54.00	Pass
100 (Average)	5504.800	4.848	92.263	97.111			Pass

#### Figure Channel 100:

#### Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100

## **RF Radiated Measurement (Vertical):**

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Dogult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
100 (Peak)	5460.000	6.041	46.497	52.538	74.00	54.00	Pass
100 (Peak)	5494.800	6.259	102.311	108.570			Pass
100 (Average)	5460.000	6.041	34.854	40.895	74.00	54.00	Pass
100 (Average)	5505.400	6.287	91.574	97.861			Pass

## **Figure Channel 100:**

## Vertical (Peak)



## Figure Channel 100:

## Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100

## **RF Radiated Measurement:**

Horizontal

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
100	5470.000	18.334	-74.260	-55.926	-28.926	-27.000	Pass

#### Vertical

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
100	5470.000	19.335	-74.670	-55.335	-28.335	-27.000	Pass

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 140

## **RF Radiated Measurement:**

Horizontal

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
140	5725.000	18.649	-72.550	-53.901	-26.901	-27.000	Pass

Vertical

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
140	5725.000	19.372	-73.790	-54.418	-27.418	-27.000	Pass

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 38

## **RF Radiated Measurement (Horizontal):**

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
38 (Peak)	5148.600	3.345	65.018	68.363	74.00	54.00	Pass
38 (Peak)	5150.000	3.340	63.332	66.672	74.00	54.00	Pass
38 (Peak)	5197.800	3.161	96.839	100.000			Pass
38 (Average)	5150.000	3.340	49.047	52.387	74.00	54.00	Pass
38 (Average)	5174.400	3.254	85.601	88.855			Pass

#### Figure Channel 38:

#### Horizontal (Peak)





#### Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 38

## **RF Radiated Measurement (Vertical):**

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Dogult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
38 (Peak)	5146.200	5.249	64.063	69.313	74.00	54.00	Pass
38 (Peak)	5150.000	5.260	62.036	67.296	74.00	54.00	Pass
38 (Peak)	5197.800	5.381	96.565	101.946			Pass
38 (Average)	5150.000	5.260	47.654	52.914	74.00	54.00	Pass
38 (Average)	5199.600	5.387	85.995	91.381			Pass

## Figure Channel 38:

#### Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 62

## **RF Radiated Measurement (Horizontal):**

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Docult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
62 (Peak)	5317.600	3.820	98.152	101.972			Pass
62 (Peak)	5350.000	3.716	61.465	65.182	74.00	54.00	Pass
62 (Peak)	5353.000	3.707	63.151	66.858	74.00	54.00	Pass
62 (Average)	5300.600	3.871	87.587	91.458			Pass
62 (Average)	5350.000	3.716	48.771	52.488	74.00	54.00	Pass



#### Horizontal (Peak)





## Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 62

## **RF Radiated Measurement (Vertical):**

	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
62 (Peak)	5318.000	5.732	99.286	105.018			Pass
62 (Peak)	5350.000	5.691	61.575	67.267	74.00	54.00	Pass
62 (Average)	5300.600	5.752	87.849	93.602			Pass
62 (Average)	5350.000	5.691	47.368	53.060	74.00	54.00	Pass

#### **Figure Channel 62:**

#### Vertical (Peak)





## Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
| Product   | : | 802.11 a/b/g/n RTL8192DU Module                     |
|-----------|---|---|
| Test Item | : | Band Edge Data                                      |
| Test Site | : | No.3 OATS   |
| Test Mode | : | Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102 |

### **RF Radiated Measurement (Horizontal):**

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Dogult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
102 (Peak)	5460.000	6.041	56.645	62.686	74.00	54.00	Pass
102 (Peak)	5514.400	6.230	99.504	105.734			Pass
102 (Average)	5460.000	4.354	42.547	46.901	74.00	54.00	Pass
102 (Average)	5494.600	4.777	89.222	93.999			Pass

#### **Figure Channel 102:**

#### Horizontal (Peak)









Note:

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102

### **RF Radiated Measurement (Vertical):**

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Arerage Limit	Degult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
102 (Peak)	5460.000	6.041	56.645	62.686	74.00	54.00	Pass
102 (Peak)	5514.400	6.230	99.504	105.734			Pass
102 (Average)	5460.000	6.041	41.590	47.631	74.00	54.00	Pass
102 (Average)	5505.000	6.290	88.617	94.907			Pass

#### Figure Channel 102:

Vertical (Peak)









Note:

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102

#### **RF Radiated Measurement:**

Horizontal

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
102	5470.000	18.334	-62.400	-44.066	-17.066	-27.000	Pass

Vertical

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
102	5470.000	19.335	-65.320	-45.985	-18.985	-27.000	Pass

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 134

## **RF Radiated Measurement:**

Horizontal

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
134	5725.000	18.649	-76.760	-58.111	-31.111	-27.000	Pass

Vertical

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
134	5725.000	19.372	-77.450	-58.078	-31.078	-27.000	Pass

# 8. Frequency Stability

## 8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2012

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

## 8.2. Test Setup



# 8.3. Limits

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified

## 8.4. Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

# 8.5. Uncertainty

± 150 Hz

# 8.6. Test Result of Frequency Stability

Product	:	802.11 a/b/g/n RTL8192DU Module
Test Item	:	Frequency Stability
Test Site	:	Temperature Chamber
Test Mode	:	Carrier Wave

#### Chain A

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
		36	5180.0000	5180.0064	-0.0064
		38	5190.0000	5190.0089	-0.0089
		44	5220.0000	5220.0095	-0.0095
		46	5230.0000	5230.0085	-0.0085
		48	5240.0000	5240.0099	-0.0099
		52	5260.0000	5260.0085	-0.0085
		54	5270.0000	5270.0098	-0.0098
	M (120)M	60	5300.0000	5300.0089	-0.0089
Tnom (20) °C	V nom(120) V	62	5310.0000	5310.0100	-0.0100
		64	5320.0000	5320.0100	-0.0100
		100	5500.0000	5500.0096	-0.0096
		102	5510.0000	5510.0100	-0.0100
		110	5550.0000	5550.0100	-0.0100
		116	5580.0000	5580.0099	<ul> <li></li></ul>
		134	5670.0000	5670.0100	-0.0100
		140	5700.0000	5700.0095	-0.0095

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
		36	5180.0000	5180.0058	-0.0058
		38	5190.0000	5190.0099	-0.0099
		44	5220.0000	5220.0095	-0.0095
		46	5230.0000	5230.0085	-0.0085
		48	5240.0000	5240.0098	-0.0098
		52	5260.0000	5260.0085	-0.0085
		54	5270.0000	5270.0098	-0.0098
$T_{max}(50)^{0}C$	Vmor (126.5)V	60	5300.0000	5300.0085	-0.0085
1 max (50) C	$v \max(120.5)v$	62	5310.0000	5310.0100	-0.0100
		64	5320.0000	5320.0100	-0.0100
		100	5500.0000	5500.0068	-0.0068
		102	5510.0000	5510.0100	-0.0100
		110	5550.0000	5550.0098	-0.0098
		116	5580.0000	5580.0087	-0.0087
		134	5670.0000	5670.0099	-0.0099
		140	5700.0000	5700.0095	-0.0095
Test Conditions					
Test C	onditions	Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Test C	onditions	Channel 36	Frequency (MHz) 5180.0000	Frequency (MHz) 5180.0058	△F (MHz) -0.0058
Test C	onditions	Channel 36 38	Frequency (MHz) 5180.0000 5190.0000	Frequency (MHz) 5180.0058 5190.0099	△F (MHz) -0.0058 -0.0099
Test C	onditions	Channel 36 38 44	Frequency (MHz) 5180.0000 5190.0000 5220.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095	△F (MHz) -0.0058 -0.0099 -0.0095
Test C	onditions	Channel 36 38 44 46	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085	<ul> <li>△F (MHz)</li> <li>-0.0058</li> <li>-0.0099</li> <li>-0.0095</li> <li>-0.0085</li> </ul>
Test C	onditions	Channel 36 38 44 46 48	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000 5240.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085 5240.0098	<ul> <li>△F (MHz)</li> <li>-0.0058</li> <li>-0.0099</li> <li>-0.0095</li> <li>-0.0085</li> <li>-0.0098</li> </ul>
Test C	onditions	Channel 36 38 44 46 48 52	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000 5240.0000 5260.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085 5240.0098 5260.0085	<ul> <li>△F (MHz)</li> <li>-0.0058</li> <li>-0.0099</li> <li>-0.0095</li> <li>-0.0085</li> <li>-0.0098</li> <li>-0.0085</li> </ul>
Test C	onditions	Channel 36 38 44 46 48 52 54	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000 5240.0000 5260.0000 5270.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085 5240.0098 5260.0085 5270.0098	<ul> <li>△F (MHz)</li> <li>-0.0058</li> <li>-0.0099</li> <li>-0.0095</li> <li>-0.0085</li> <li>-0.0085</li> <li>-0.0098</li> <li>-0.0098</li> </ul>
Test C	onditions	Channel 36 38 44 46 48 52 54 60	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000 5240.0000 5260.0000 5270.0000 5300.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085 5240.0098 5260.0085 5270.0098 5300.0085	<ul> <li>△F (MHz)</li> <li>-0.0058</li> <li>-0.0099</li> <li>-0.0095</li> <li>-0.0085</li> <li>-0.0085</li> <li>-0.0098</li> <li>-0.0098</li> <li>-0.0085</li> </ul>
Test C Tmax (50) °C	onditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000 5240.0000 5260.0000 5270.0000 5310.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085 5240.0098 5260.0085 5270.0098 5300.0085 5310.0100	<ul> <li>△F (MHz)</li> <li>-0.0058</li> <li>-0.0099</li> <li>-0.0095</li> <li>-0.0085</li> <li>-0.0085</li> <li>-0.0098</li> <li>-0.0098</li> <li>-0.0085</li> <li>-0.0085</li> <li>-0.0100</li> </ul>
Test C Tmax (50) °C	onditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5220.0000 5230.0000 5260.0000 5270.0000 5310.0000 5310.0000 5320.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085 5240.0098 5260.0085 5270.0098 5300.0085 5310.0100 5320.0100	<ul> <li></li></ul>
Test C Tmax (50) °C	onditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64 100	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5220.0000 5240.0000 5240.0000 5270.0000 5310.0000 5310.0000 5320.0000 5320.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085 5240.0098 5260.0085 5270.0098 5300.0085 5310.0100 5320.0100 55500.0068	<ul> <li></li></ul>
Test C Tmax (50) °C	onditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64 100 102	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5220.0000 5240.0000 5260.0000 5270.0000 5310.0000 5310.0000 5320.0000 55500.0000 55510.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5220.0095 5230.0085 5240.0098 5260.0085 5270.0098 5300.0085 5310.0100 5320.0100 5500.0068 5510.0100	<ul> <li></li></ul>
Test C Tmax (50) °C	vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64 100 102 110	Frequency (MHz)         5180.0000         5190.0000         5220.0000         5220.0000         5230.0000         5240.0000         5260.0000         5270.0000         5310.0000         5320.0000         5310.0000         5550.0000         5550.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085 5240.0098 5260.0085 5270.0098 5300.0085 5310.0100 5320.0100 55500.0068 5510.0100	<ul> <li></li></ul>
Test C Tmax (50) °C	onditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64 100 102 110 116	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5220.0000 5230.0000 5240.0000 5260.0000 5310.0000 5310.0000 5310.0000 5550.0000 5550.0000 5550.0000 55580.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085 5240.0098 5260.0085 5270.0098 5300.0085 5310.0100 5320.0100 5550.0068 5510.0100 5550.0580 5580.0097	<ul> <li></li></ul>
Test C Tmax (50) °C	onditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64 100 102 110 116 134	Frequency (MHz)         5180.0000         5190.0000         5190.0000         5220.0000         5230.0000         5240.0000         5260.0000         5270.0000         5310.0000         5320.0000         5310.0000         5510.0000         5550.0000         5580.0000         5580.0000	Frequency (MHz) 5180.0058 5190.0099 5220.0095 5230.0085 5240.0098 5260.0085 5270.0098 5300.0085 5310.0100 5320.0100 55500.0068 5510.0100 5550.0580 5580.0097 56670.0099	<ul> <li></li></ul>

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
		36	5180.0000	5180.0100	-0.0100
		38	5190.0000	5190.0089	-0.0089
		44	5220.0000	5220.0095	-0.0095
		46	5230.0000	5230.0098	-0.0098
		48	5240.0000	5240.0094	-0.0094
		52	5260.0000	5260.0085	-0.0085
		54	5270.0000	5270.0098	-0.0098
E : (0) <sup>0</sup> C		60	5300.0000	5300.0089	-0.0089
$1 \min(0) C$	$V \max(126.5)V$	62	5310.0000	5310.0100	-0.0100
		64	5320.0000	5320.0100	-0.0100
		100	5500.0000	5500.0093	-0.0093
		102	5510.0000	5510.0096	-0.0096
		110	5550.0000	5550.0100	-0.0100
		116	5580.0000	5580.0098	-0.0098
		134	5670.0000	5670.0100	-0.0100
		140	5700.0000	5700.0095	-0.0095
Test C	Test Conditions		Frequency (MHz)	Frequency (MHz)	△F (MHz)
		36	5180.0000	5180.0100	-0.0100
		38	5190.0000	5190.0089	-0.0089
		44	5220.0000	5220.0095	-0.0095
Tmin (0) °C		46	5230.0000	5230.0098	-0.0098
		48	5240.0000	5240.0094	-0.0094
		52	5260.0000	5260.0085	-0.0085
		54	5270.0000	5270.0098	-0.0098
		60	5300.0000	5300.0089	-0.0089
	$V\min(93.5)V$	62	5310.0000	5310.0100	-0.0100
		64	5320.0000	5320.0100	-0.0100
		100	5500.0000	5500.0093	-0.0093
		102	5510.0000	5510.0096	-0.0096
		110	5550.0000	5550.0100	-0.0100
		116	5580.0000	5580.0098	-0.0098
		-			
		134	5670.0000	5670.0100	-0.0100

## Chain B

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
		36	5180.0000	5180.0065	-0.0065
		38	5190.0000	5190.0091	-0.0091
		44	5220.0000	5220.0098	-0.0098
		46	5230.0000	5230.0087	-0.0087
		48	5240.0000	5240.0101	-0.0101
Tnom (20) °C		52	5260.0000	5260.0086	-0.0086
		54	5270.0000	5270.0101	-0.0101
	V (110)V	60	5300.0000	5300.0090	-0.0090
	Vnom (110)V	62	5310.0000	5310.0103	<ul> <li>△F (MHz)</li> <li>-0.0065</li> <li>-0.0091</li> <li>-0.0098</li> <li>-0.0087</li> <li>-0.0101</li> <li>-0.0086</li> <li>-0.0101</li> <li>-0.0090</li> <li>-0.0103</li> <li>-0.0102</li> <li>-0.0103</li> <li>-0.0102</li> <li>-0.0102</li> <li>-0.0102</li> <li>-0.0102</li> <li>-0.0102</li> <li>-0.0102</li> </ul>
		64	5320.0000	5320.0102	-0.0102
		100	5500.0000	5500.0098	-0.0098
		102	5510.0000	5510.0103	-0.0103
		110	5550.0000	5550.0102	-0.0102
		116	5580.0000	5580.0102	-0.0102
		134	5670.0000	5670.0102	-0.0102
		140	5700.0000	5700.0097	-0.0097

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
		36	5180.0000	5180.0059	-0.0059
		38	5190.0000	5190.0101	-0.0101
		44	5220.0000	5220.0098	-0.0098
		46	5230.0000	5230.0087	-0.0087
		48	5240.0000	5240.0100	-0.0100
		52	5260.0000	5260.0086	-0.0086
		54	5270.0000	5270.0101	-0.0101
$T_{\rm max} (50) {}^{0}C$	V	60	5300.0000	5300.0086	-0.0086
$1 \max(50)$ C	vmax (126.5)v	62	5310.0000	5310.0103	-0.0103
		64	5320.0000	5320.0102	-0.0102
		100	5500.0000	5500.0070	-0.0070
		102	5510.0000	5510.0103	-0.0103
		110	5550.0000	5550.0100	-0.0100
		116	5580.0000	5580.0100	-0.0100
		134	5670.0000	5670.0101	-0.0101
		140	5700.0000	5700.0097	-0.0097
Test Conditions					
Test C	Conditions	Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Test C	Conditions	Channel 36	Frequency (MHz) 5180.0000	Frequency (MHz) 5180.0059	△F (MHz) -0.0059
Test C	Conditions	Channel 36 38	Frequency (MHz) 5180.0000 5190.0000	Frequency (MHz) 5180.0059 5190.0101	△F (MHz) -0.0059 -0.0101
Test C	Conditions	Channel 36 38 44	Frequency (MHz) 5180.0000 5190.0000 5220.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098	△F (MHz) -0.0059 -0.0101 -0.0098
Test C	Conditions	Channel 36 38 44 46	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087	<ul> <li>△F (MHz)</li> <li>-0.0059</li> <li>-0.0101</li> <li>-0.0098</li> <li>-0.0087</li> </ul>
Test C	Conditions	Channel 36 38 44 46 48	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000 5240.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100	<ul> <li>△F (MHz)</li> <li>-0.0059</li> <li>-0.0101</li> <li>-0.0098</li> <li>-0.0087</li> <li>-0.0100</li> </ul>
Test C	Conditions	Channel 36 38 44 46 48 52	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000 5240.0000 5260.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100 5260.0086	<ul> <li>△F (MHz)</li> <li>-0.0059</li> <li>-0.0101</li> <li>-0.0098</li> <li>-0.0087</li> <li>-0.0100</li> <li>-0.0086</li> </ul>
Test C	Conditions	Channel 36 38 44 46 48 52 54	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000 5240.0000 5260.0000 5270.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100 5260.0086 5270.0101	<ul> <li>△F (MHz)</li> <li>-0.0059</li> <li>-0.0101</li> <li>-0.0098</li> <li>-0.0087</li> <li>-0.0100</li> <li>-0.0086</li> <li>-0.0101</li> </ul>
Test C	Conditions	Channel 36 38 44 46 48 52 54 60	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000 5240.0000 5260.0000 5270.0000 5300.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100 5260.0086 5270.0101 5300.0086	
Test C Tmax (50) °C	Conditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5230.0000 5240.0000 5260.0000 5270.0000 5300.0000 5310.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100 5260.0086 5270.0101 5300.0086 5310.0103	
Test C Tmax (50) °C	Conditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5220.0000 5230.0000 5260.0000 5270.0000 5310.0000 5310.0000 5320.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100 5260.0086 5270.0101 5300.0086 5310.0103 5320.0102	<ul> <li>△F (MHz)</li> <li>-0.0059</li> <li>-0.0101</li> <li>-0.0098</li> <li>-0.0087</li> <li>-0.0100</li> <li>-0.0086</li> <li>-0.0101</li> <li>-0.0086</li> <li>-0.0103</li> <li>-0.0102</li> </ul>
Test C Tmax (50) °C	Conditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64 100	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5220.0000 5240.0000 5260.0000 5270.0000 5310.0000 5310.0000 5320.0000 5320.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100 5260.0086 5270.0101 5300.0086 5310.0103 5320.0102 5500.0070	<ul> <li>△F (MHz)</li> <li>-0.0059</li> <li>-0.0101</li> <li>-0.0098</li> <li>-0.0087</li> <li>-0.0100</li> <li>-0.0086</li> <li>-0.0101</li> <li>-0.0086</li> <li>-0.0103</li> <li>-0.0102</li> <li>-0.0070</li> </ul>
Test C Tmax (50) °C	Conditions	Channel 36 38 44 46 48 52 54 60 62 64 100 102	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5220.0000 5240.0000 5240.0000 5270.0000 5310.0000 5310.0000 5320.0000 5510.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100 5260.0086 5270.0101 5300.0086 5310.0103 5320.0102 5500.0070 5510.0103	<ul> <li>△F (MHz)</li> <li>-0.0059</li> <li>-0.0101</li> <li>-0.0098</li> <li>-0.0087</li> <li>-0.0100</li> <li>-0.0086</li> <li>-0.0101</li> <li>-0.0086</li> <li>-0.0103</li> <li>-0.0102</li> <li>-0.0070</li> <li>-0.0103</li> </ul>
Test C Tmax (50) °C	Conditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64 100 102 110	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5220.0000 5240.0000 5260.0000 5270.0000 5310.0000 5310.0000 5320.0000 5550.0000 55510.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100 5260.0086 5270.0101 5300.0086 5310.0103 5320.0102 55500.0070 5510.0103	<ul> <li>△F (MHz)</li> <li>-0.0059</li> <li>-0.0101</li> <li>-0.0098</li> <li>-0.0087</li> <li>-0.0100</li> <li>-0.0086</li> <li>-0.0101</li> <li>-0.0086</li> <li>-0.0103</li> <li>-0.0103</li> <li>-0.0103</li> <li>-0.0103</li> <li>-0.0100</li> </ul>
Test C Tmax (50) °C	Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64 100 102 110 116	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5220.0000 5220.0000 5240.0000 5260.0000 5270.0000 5310.0000 5310.0000 5320.0000 55500.0000 5550.0000 5550.0000 55580.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100 5260.0086 5270.0101 5300.0086 5310.0103 5320.0102 5550.0100 5550.0100	<ul> <li>△F (MHz)</li> <li>-0.0059</li> <li>-0.0101</li> <li>-0.0098</li> <li>-0.0087</li> <li>-0.0100</li> <li>-0.0086</li> <li>-0.0101</li> <li>-0.0086</li> <li>-0.0103</li> <li>-0.0103</li> <li>-0.0103</li> <li>-0.0100</li> <li>79.9900</li> </ul>
Test C Tmax (50) °C	Conditions Vmin (93.5)V	Channel 36 38 44 46 48 52 54 60 62 64 100 102 110 116 134	Frequency (MHz) 5180.0000 5190.0000 5220.0000 5220.0000 5230.0000 5240.0000 5270.0000 5310.0000 5310.0000 5310.0000 55500.0000 5550.0000 55580.0000 55580.0000 55670.0000	Frequency (MHz) 5180.0059 5190.0101 5220.0098 5230.0087 5240.0100 5260.0086 5270.0101 5300.0086 5310.0103 5320.0102 55500.0070 5510.0103 55550.0100 55500.0100 5670.0101	<ul> <li>△F (MHz)</li> <li>-0.0059</li> <li>-0.0101</li> <li>-0.0098</li> <li>-0.0087</li> <li>-0.0100</li> <li>-0.0086</li> <li>-0.0101</li> <li>-0.0086</li> <li>-0.0103</li> <li>-0.0102</li> <li>-0.0103</li> <li>-0.0103</li> <li>-0.0103</li> <li>-0.0103</li> <li>-0.0100</li> <li>79.9900</li> <li>-0.0101</li> </ul>

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	∆F (MHz)
		36	5180.0000	5180.0101	-0.0101
		38	5190.0000	5190.0091	-0.0091
		44	5220.0000	5220.0098	-0.0098
		46	5230.0000	5230.0100	-0.0100
		48	5240.0000	5240.0096	-0.0096
		52	5260.0000	5260.0086	-0.0086
		54	5270.0000	5270.0101	-0.0101
T · (0) <sup>0</sup> C		60	5300.0000	5300.0090	-0.0030 -0.0101 -0.0090 -0.0103 -0.0102 -0.0095
Tmin $(0)$ <sup>a</sup> C	Vmax (126.5)V	62	5310.0000	5310.0103	
		64	5320.0000	5320.0102	-0.0102
		100	5500.0000	5500.0095	-0.0101 -0.0090 -0.0103 -0.0102 -0.0095 -0.0099 -0.0102
		102	5510.0000	5510.0099	-0.0099
		110	5550.0000	5550.0102	-0.0102
		116	5580.0000	5580.0100	-0.0100
		134	5670.0000	5670.0102	-0.0102
		140	5700.0000	5700.0097	-0.0097
Test C	Test Conditions		Frequency (MHz)	Frequency (MHz)	△F (MHz)
		36	5180.0000	5180.0101	-0.0101
		38	5190.0000	5190.0091	-0.0091
		44	5220.0000	5220.0098	-0.0098
		46	5230.0000	5230.0100	$ \bigtriangleup F (MHz) $ $ -0.0101  -0.0091  -0.0098  -0.0100  -0.0096  -0.0086  -0.0101  -0.0102  -0.0102  -0.0102  -0.0102  -0.0102  -0.0102  -0.0102  -0.0102  -0.0107  -0.0101  -0.0097  \sigma F (MHz)  -0.0101  -0.0091  -0.0098  -0.0100  -0.0098  -0.0100  -0.0098  -0.0100  -0.0096  -0.0096  -0.0096  -0.0096  -0.0090  -0.0103  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0095  -0.0055  -0$
Tmin (0) °C		48	5240.0000	5240.0096	
		52	5260.0000	5260.0086	
		54	5270.0000	5270.0101	-0.0101
		60	5300.0000	5300.0090	-0.0090
	Vmin (93.5)V	62	5310.0000	5310.0103	$ \bigtriangleup F (MHz) $ $ -0.0101  -0.0091  -0.0098  -0.0100  -0.0096  -0.0086  -0.0101  -0.0090  -0.0102  -0.0102  -0.0099  -0.0102  -0.0102  -0.0102  -0.0102  -0.0102  -0.0097  \bigtriangleup F (MHz)  -0.0101  -0.0091  -0.0098  -0.0100  -0.0098  -0.0100  -0.0098  -0.0096  -0.0096  -0.0096  -0.0096  -0.0096  -0.0096  -0.0096  -0.0090  -0.0103  -0.0102  -0.0103  -0.0102  -0.0095  -0.0102  -0.0090  -0.0103  -0.0102  -0.0102  -0.0095  -0.0103  -0.0102  -0.0103  -0.0102  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0090  -0.0103  -0.0090  -0.0103  -0.0090  -0.0090  -0.0090  -0.0095  -0.005  -0$
		64	5320.0000	5320.0102	-0.0102
		100	5500.0000	5500.0095	$ \bigtriangleup F (MHz) $ $ -0.0101  -0.0091  -0.0098  -0.0100  -0.0096  -0.0086  -0.0101  -0.0090  -0.0102  -0.0102  -0.0102  -0.0102  -0.0102  -0.0102  -0.0102  -0.0097  \bigtriangleup F (MHz)  -0.0101  -0.0091  -0.0098  -0.0100  -0.0098  -0.0100  -0.0098  -0.0100  -0.0096  -0.0096  -0.0096  -0.0096  -0.0096  -0.0096  -0.0090  -0.0103  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0103  -0.0102  -0.0095  -0.0055$
		102	5510.0000	5510.0099	-0.0099
		110	5550.0000	5550.0102	-0.0102
		116	5580.0000	5580.0100	-0.0100
		134	5670.0000	5670.0102	-0.0102
		140	5700.0000	5700.0097	-0.0097

# 9. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs