

Agilen	t Spectrum Analyzer - Swept SA					
Cen	L RF 50Ω AC	GH7	SENSE:INT	ALIGN AU #Ava Type: RMS	TRACE 1 2 3 4 5 6	Frequency
Cen	10000000	PNO: Fast 🖵 IFGain:Low	┘ Trig: Free Run #Atten: 30 dB	M	TYPE A WWWWW DET A NNNNN kr1 5.181 45 GHz	Auto Tune
10 dE Log	3/div Ref 20.00 dBm				-10.45 aBm	
10.0						Center Freq 5.19000000 GHz
0.00						
-10.0	and the second	<b>1</b>	Annual Conneg	ightyraft an alais forman for the frances and age		Start Freq 5.165000000 GHz
-20.0			Y			Stop Freg
-30.0						5.215000000 GHz
-40.0						CF Step
-50.0					Jun	5.000000 MHz <u>Auto</u> Man
-30.0						
-60.0						Freq Offset 0 Hz
-70.0						
Cent #Res	ter 5.19000 GHz s BW 1.0 MHz	#VBW	3.0 MHz	Swee	Span 50.00 MHz p   1.00 ms (1001 pts)	
MSG				STA	TUS	

#### Channel 38 – Chain A

Channel 46 – Chain A





Agilent Sp	ectrum Analyzer - Swe	ept SA						50		
LXI RL	RF 50 Ω	AC		SEN	ISE:INT		ALIGN AUTO	04:26:34 A	MNov 12, 2013	
Center	r Freq 5.27000	0000 G	Hz PNO: Fast 😱	] Trig: Free	Run	#Avg Type	e: RMS	TRAC TYP DE	E 1 2 3 4 5 6 E A WWWWW T A N N N N N	Frequency
10 dB/di	iv Ref 20.00 d	" IBm	Gain:Low	#Atten: 50	40		Mki	r1 5.278 -9.	50 GHz 65 dBm	Auto Tune
10.0										Center Freq 5.270000000 GHz
-10.0		We share a state of the state o				<b>●</b> <sup>1</sup>				Start Freq 5.245000000 GHz
-20.0										<b>Stop Freq</b> 5.295000000 GHz
-40.0									5	<b>CF Step</b> 5.000000 MHz <u>Auto</u> Man
-60.0 —										Freq Offset 0 Hz
Center	5.27000 GHz W 1.0 MHz		#VBW	3.0 MHz			Sweep	Span 5 1.00 ms (	0.00 MHz 1001 pts)	
MSG							STATU	s		

#### Channel 54 – Chain A

### Channel 62 – Chain A



Agilent	t Spectru	n Analyzer - Sw	ept SA				T.				
Cent	ter Fro	eq 5.51000	AC 00000 G	Hz			#Avg Type	RMS	04:39:09 A TRAI TY	MNov 12, 2013 CE 1 2 3 4 5 6	Frequency
10 dB	3/div	Ref 20.00 (	¦F IF	NO: Fast 🖵 Gain:Low	#Atten: 30	) dB		Mkr	₀ 1 5.519 -9.	40 GHz 50 dBm	Auto Tune
10.0 -											Center Freq 5.51000000 GHz
0.00 - -10.0 -			The log and the second				•	1			<b>Start Freq</b> 5.485000000 GHz
-20.0 -30.0 -											<b>Stop Freq</b> 5.535000000 GHz
-40.0 -50.0 -		***								h	<b>CF Step</b> 5.000000 MHz <u>Auto</u> Man
-60.0 -											Freq Offset 0 Hz
Cent #Res	ter 5.5 8 BW 1	1000 GHz .0 MHz		#VBW	3.0 MHz			Sweep	Span 5 1.00 ms (	0.00 MHz (1001 pts)	

#### Channel 102 – Chain A

## Channel 110 – Chain A





	PE 50.0 AV	A L	CENCE INIT	ALTONIAL	TO 04:49:16 AMNov 12 2012	
nter F	req 5.6700000	OO GHZ PNO: Fast G	Trig: Free Run #Atten: 30 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WWWWM DET A N N N N N	Frequency
dB/div	Ref 20.00 dBn	n	<i>1</i>	М	kr1 5.678 50 GHz -9.30 dBm	Auto Tu
1						Center Fr
)		<u> </u>	5			5.670000000
				1		Start F
r		and the second secon			1000 martin	5.645000000
						Stop F
						5.695000000
, and						CF S
					www.	5.000000 I <u>Auto</u>
						FreqOn
L nter 5.	67000 GHz			554	Span 50.00 MHz	
es BW	1.0 MHz	#VBW	( 3.0 MHz	Swee	p 1.00 ms (1001 pts)	

#### Channel 134 – Chain A

Agilent Spectr	um Analyzer - Swept S	٨						
Center Fi	req 5.1900000	00 GHz	SENSE:INT	#Avg Type	RMS	07:13:40 A TRAC TYF	MNov 09, 2013 E 1 2 3 4 5 6 E A WWWWW	Frequency
10 dB/div	Ref 20.00 dBr	IFGain:Low	#Atten: 30 dB		Mkr1	.0 5.199 -9.0	50 GHz 09 dBm	Auto Tune
10.0								Center Freq 5.19000000 GHz
-10.0		Angel and the state of the stat		•	1			Start Freq 5.165000000 GHz
-20.0								<b>Stop Freq</b> 5.215000000 GHz
-40.0	and the second s					}	her	CF Step 5.000000 MHz <u>Auto</u> Man
-60.0								Freq Offset 0 Hz
Center 5.1 #Res BW	9000 GHz 1.0 MHz	#VBW	3.0 MHz		Sweep 1	Span 5 1.00 ms (	0.00 MHz 1001 pts)	
MSG					STATUS			

#### Channel 38 – Chain B

## Channel 46 – Chain B



Agilent	Spectrun	1 Analyzer - Sw	ept SA								
Cent	er Fre	re 50 s	AC	GHz	Tria: Fre	e Run	#Avg Type	ALIGNAUTO RMS	07:20:09 / TRA TY	MNov 09, 2013 CE 1 2 3 4 5 6 PE A WWWWW	Frequency
10 dB/	div	Ref 20.00	dBm	IFGain:Low	#Atten: 3	0 dB		Mki	⊓ 1 5.261 -9.	50 GHz 38 dBm	Auto Tune
10.0 -			<u></u>								Center Freq 5.270000000 GHz
0.00 -				♦1				and the second s	www.weith		<b>Start Freq</b> 5.245000000 GHz
-20.0 -											<b>Stop Freq</b> 5.295000000 GHz
-40.0	a la	10 <sup>4</sup>								~	<b>CF Step</b> 5.000000 MHz <u>Auto</u> Man
-50.0 -											Freq Offset 0 Hz
Cente	er 5.27	000 GHz		#1/P1	M 2.0 MHz			Swaan	Span 5	0.00 MHz	
MSG	UVV 1.			#VD1	W 3.0 WINZ			зweeр statu	is is	(ivo i pis)	

#### Channel 54 – Chain B

Channel 62 – Chain B





Agilent Spe	ectrum Analyzer - Swej	pt SA								
XI RL	RF 50 Ω	AC		SE	NSE:INT		ALIGN AUTO	07:25:21 A	MNov 09, 2013	Fraguanay
Center	Freq 5.51000	0000	GHz			#Avg Type	e: RMS	TRAC	E123456	Frequency
			PNO: Fast 😱	Irig: Free	Run			IYI Di		
			IFGain:Low	#Atten: 30	a B				-11.	Auto Tuno
							Mki	1 5.505	85 GHz	Auto Tune
40 aD/aii	. Dof 20.00 d	Bm						-10	65 dBm	
	7 Rei 20.00 u	ыш						1		
										Center Frea
10.0										5 51000000 CH7
0.505									I	5.51000000 GH2
0.00										
0.00										Otort From
				<b>▲</b> 1					I I	StartFreq
-10.0			and the second s	- table to	al response	-	-			5.485000000 GHz
		and the states		N.	1			- my	I	
20.0	1				ľ.			1		
-20.0								1		Stop Freq
									I I	5 535000000 GHz
-30.0						-				0.0000000000000
	1							1		
40.0	· · · · · · · · · · · · · · · · · · ·									CF Step
40.0	hard								w	5.000000 MHz
										Auto Man
-50.0						-				
-60.0						+				Freq Offset
										0 Hz
70.0									_	
-70.0										
Center	5 51000 GHz						1	Snap 5	0.00 MHz	
#Res B	W 1.0 MHz		#VBW	3.0 MHz			Sweep	1.00 ms (	1001 pts)	
							P			
W3G							STATU	0		

#### **Channel 102 – Chain B**

**Channel 110 – Chain B** 



Agilent Spectrum Analyze	- Swept SA			us av				
LXI RL RF	50 Ω AC		SENSE:INT		ALIGN AUTO	07:35:01 A	MNov 09, 2013	Frequency
Center Freq 5.67	2 <u>0000000 GH</u> Pt IFG	IZ 10: Fast 😱 Tr Sain:Low #F	rig: Free Run Atten: 30 dB	#Avg Type	: RMS	TRAC TYF DE	E 1 2 3 4 5 6 E A WWWWW T A N N N N N	Trequency
10 dB/div Ref 20.	00 dBm				Mkr	1 5.679 -13.5	45 GHz 82 dBm	Auto Tune
10.0								Center Freq 5.670000000 GHz
-10.0				•	1			Start Freq 5.645000000 GHz
-20.0								Stop Freq 5.695000000 GHz
-40.0							$\sim$	CF Step 5.000000 MHz <u>Auto</u> Man
-60.0								Freq Offset 0 Hz
-70.0 Center 5.67000 Gl	Hz	#\/B\M 3 (			Swoon	Span 5	0.00 MHz	
		#VDVV J.(			STATUS	1.00 ms (	iou i pisj	

## Channel 134 – Chain B

# 5. Peak Excursion

## 5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

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.

# 5.2. Test Setup

## **Conduction Power Measurement**



# 5.3. Limits

The ratio of the peak excursion of the modulation envelope (measured suing a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

## 5.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

Step 1: Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.

Step 2: Find the maximum of the peak-max-hold spectrum.

(Set RBW = 1 MHz, VBW  $\geq$  3 MHz, Detector = peak, Trace mode = max-hold, Allow the sweeps to continue until the trace stabilizes,Use the peak search function to find the peak of the spectrum.)

Step 3: Use the procedure found under KDB-789033 F) to measure the PPSD.

Step 4: Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

## 5.5. Uncertainty

± 1.27 dB

# 5.6. Test Result of Peak Excursion

Product	:	AerialCast
Test Item	:	Peak Excursion
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps)

Channal No.	Frequency	Data Rate	Measurement Level	Required Limit	Dogult	
Channel No.	(MHz)	(Mbps)	(dB)	(dB)	Kesuit	
		MCS (0)	7.480	<13	Pass	
100	5500	MCS (2)	8.370	<13	Pass	
100	5500	MCS (4)	8.430	<13	Pass	
		MCS (7)	9.480	<13	Pass	

#### Channel 100:

M RL RF 50 Ω AC	) GHz	SENSE:INT	ALI #Avg Type: F	IGN AUTO 05:58: RMS	24 AM Nov 09, 2013 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00 dBm	PNO: Fast 😱 IFGain:Low	#Atten: 30 dB		Mkr1 5.506	200 GHz 3.53 dBm	Auto Tune
10.0 0.00 -10.0			2	▲ <sup>1</sup>		Center Freq 5.500000000 GHz
-20.0 prepublik					Carlow Carrow Marca M.	<b>Start Freq</b> 5.487500000 GHz
-60.0						<b>Stop Freq</b> 5.512500000 GHz
Center 5.50000 GHz #Res BW 1.0 MHz	#VBW	3.0 MHz	S'	Spar weep 1.00 m	n 25.00 MHz s (1001 pts) Ichion value	CF Step 2.500000 MHz Auto Man
N         2         f         5.50           3         1         f         5.50           4         -         -         -           5         -         -         -           6         -         -         -           7         -         -         -           9         -         -         -           10         -         -         -           12         -         -         -	06 200 GHz 22 475 GHz	3.63 dBm -3.95 dBm				Freq Offset 0 Hz

Agilent Spectrum Analyzer -	Swept SA						
Center Freq 5.500	0000000 GHz	SENSE:I	NT #Avg Type	ALIGNAUTO e: RMS	06:12:48 A TRAC	MNov 09, 2013 E 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00	PNO: Fast IFGain:Low	#Atten: 30 dB		Mkr1	5.502 1 4.	25 GHz 54 dBm	Auto Tune
10.0 0.00 -10.0				2	and the second		Center Freq 5.500000000 GHz
-20.0					L. Margar	And and an and a second and a	Start Freq 5.487500000 GHz
-60.0							<b>Stop Freq</b> 5.512500000 GHz
Center 5.50000 GHz #Res BW 1.0 MHz	#V	BW 3.0 MHz		Sweep	Span 2 1.00 ms (	5.00 MHz 1001 pts)	CF Step 2.500000 MHz
MADE         HUDE         HUDE	× 5.502 125 GHz 5.504 875 GHz	4,54 dBm -3,83 dBm			FUNCTIO		Freq Offset 0 Hz

Agilent Spectrum Analyzer - Sw	vept SA					
Center Freq 5.5000	2 AC 00000 GHz		A #Avg Type	LIGNAUTO : RMS	11:03:21 AM Nov 20, 2013 TRACE 1 2 3 4 5 6 TYPE A MWMMMM	Frequency
10 dB/div Ref 20.00	IFGain:Low	#Atten: 30 dB		Mkr1 5.	500 000 GHz 2.79 dBm	Auto Tune
10.0 0.00 -10.0	and the second			- William Billion		Center Freq 5.50000000 GHz
-20.0						Start Freq 5.487500000 GHz
-50.0						<b>Stop Freq</b> 5.512500000 GHz
Center 5.50000 GHz #Res BW 1.0 MHz	#VBI	W 3.0 MHz	UNCTION FUNC	Sweep 1.0	Span 25.00 MHz 0 ms (1001 pts) FUNCTION VALUE	CF Step 2.500000 MHz Auto Man
N         2         f           2         N         1         f           3         -         -         -           4         -         -         -           5         -         6         -           6         -         -         -           8         -         -         -           9         -         -         -	5.502 100 GHz 5.504 150 GHz	6.20 dBm -2.23 dBm				Freq Offset 0 Hz
11 12 MSG				STATUS		

Agile	nt Spe	ctrur	n An	alyzer - Sw	ept SA										
<mark>ເ≫</mark> ι Cei	nter	Fre	RF	50 Ω	AC 00000 G	Hz		SEP	NSE:INT	#Avg	Туре	ALIGN AUTO	06:15:43 A TRAC	MNov 09, 2013 E 1 2 3 4 5 6	Frequency
10.			Pol	20.00	IF IF	'NO: Fast Gain:Lov	, <b>`</b> #/	Atten: 30	dB			Mkr1	5.503 3	00 GHz	Auto Tune
10.0 10.0 -10.0		/		20.00	*			ور بر مورد م				ىلىمەرىيە ھەرەپىيە يارىمەرىيە ھەرەپىيە بىر	The and the and		Center Freq 5.50000000 GHz
-20.0 -30.0 -40.0	)   	Calvera .	- auto										and the second s	and the second and	Start Freq 5.487500000 GHz
-50.0 -60.0 -70.0															<b>Stop Freq</b> 5.512500000 GHz
Cei #Re	nter es Bl	5.50 W 1	000 0 0	0 GHz VHz		#V	BW 3.0	0 MHz				Sweep ′	Span 2 1.00 ms (	5.00 MHz 1001 pts)	CF Step 2.500000 MHz
MKR 1	MODE N	TRC 2	f		× 5.503 30	00 GHz		5.38 dE	3m	UNCTION	FUN	CTION WIDTH	FUNCTIO	IN VALUE	<u>Auto</u> Man
23456	N	1	f		5.503 00	0 GHz		-4.10 dE	3m						Freq Offset 0 Hz
7 8 9 10 11															
12 MSG											L	STATUS			

# 

Product	:	AerialCast
Test Item	:	Peak Excursion
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps)

## Chain A

Channal Na	Frequency	Data Rate	Measurement Level	Required Limit	Dogult
Channel No.	(MHz)	(Mbps)	(dB)	(dB)	Kesult
		MCS (0)	8.430	<13	Pass
100	5500	MCS (2)	8.090	<13	Pass
100	5500	MCS (4)	8.970	<13	Pass
		MCS (7)	8.820	<13	Pass

## Channel 100:

Agilent Spectrum	Analyzer - Swept SA				
Center Fre	RF 50 Ω AC q 5.500000000 GHz	SENSE:II	ALIGNAUT #Avg Type: RMS	<ul> <li>06:15:43 AM Nov 09, 2013</li> <li>TRACE 1 2 3 4 5 6</li> <li>TVPE A MIANATANI</li> </ul>	Frequency
10 dB/div	PNO IFGai Ref 20.00 dBm	: Fast ( ) Thy. The Ku in:Low #Atten: 30 dB	Mkr	1 5.503 300 GHz 5.38 dBm	Auto Tune
Log 10.0 0.00 -10.0	and and the second seco		1	and a second and a	Center Freq 5.500000000 GHz
-20.0 100 100 100 100 100 100 100 100 100	award -				Start Freq 5.487500000 GHz
-60.0					<b>Stop Freq</b> 5.512500000 GHz
Center 5.50 #Res BW 1.	000 GHz 0 MHz	#VBW 3.0 MHz	Sweep	Span 25.00 MHz 1.00 ms (1001 pts)	CF Step 2.500000 MHz
1         N         2           2         N         1           3         -         -           4         -         -           5         -         -           6         -         -           7         -         -           9         -         10           11         -         -           12         -         -	f 5.503 300 f f 5.503 000 f	GHz 5.38 dBm GHz -4.10 dBm			Freq Offset 0 Hz



Agile	nt Spe	ctru	n An	alyzer - Sw	ept SA			SE	NSE:INT			ALIGNAUTO	h3:53:37.4	MNov 12, 2013	
Cer	nter	Fre	eq (	5.50000	00000	SHz			_	#/	Avg Typ	e: RMS	TRA	E 123456	Frequency
					ļ	PNO: Fast IFGain:Lov	ົຼ	Trig: Free #Atten: 30	e Run )dB				D	ET A P N N N N	Auto Tupo
10 c	IB/div	,	Ref	20.00	dBm							Mkr1	5.496 C 3.	00 GHz 45 dBm	Auto Tune
Log 10.0						1	_								Contor From
0.00			_		-	man and the	2	و حمر الرسيد الياية					- me		5.50000000 GHz
-10.0	-	1.000	~	Charles and a start of the star		X	·····					······································	with the	DU AND	
-20.0	Difference	and the second	1			_							7	" WILDWERK	Start Freq
-30.0	man	-	dear											A sal manuferration	5.487500000 GHz
-40.0	í 🗌														
-60.0	_				-	_				_					Stop Freq
-70.0			_		1										5.512500000 GHz
Cer	nter	5.5	000	0 GHz								175	Span 2	5.00 MHz	
#Re	es Bl	W 1	.0 1	ЛНz		#V	BW 3	3.0 MHz				Sweep	1.00 ms (	1001 pts)	2 50000 MHz
MKR	MODE	TRC	SCL		×			Y		FUNCTIO	N FL	JNCTION WIDTH	FUNCTI	ON VALUE	Auto Man
1	N	2	f	-	5.496 (	000 GHz		3.45 dl	Bm						
2	-19	1	1		5.490	29 GHZ		-5.39 0	BIII						5 Off
4							2								FreqOffset
5			_				-								0 Hz
7							2								
8									1						
9			_								_				
10							-				-				
12									-						
MSG												STATUS			

Agile	nt Spe	ctrum	Analyz	er - Sw	ept SA										
ux∥ ⊪ Cer	nter	Fred	RF <b>1 5.5</b>	50 Ω 50000	AC	GHz		SE Tria: Fra		#Av	д Тур	ALIGNAUTO e: RMS	03:55:16 TRA	AM Nov 12, 2013 CE 1 2 3 4 5 6 PE 6 Michael	Frequency
10 d	B/div	R	ef 2	0.00 (	dBm	PNO: I IFGain:	⊦ast ∟ :Low	#Atten: 3	0 dB			Mkr1	5.507 <sup>-</sup> 3.	et A P NNNN 175 GHz 13 dBm	Auto Tune
10.0 0.00			a ward	Area		9° 11- 70	State of the second	and the second descent			2	······	1		Center Freq 5.500000000 GHz
-20.0 -30.0 -40.0		VanNuh												and the second second	Start Freq 5.487500000 GHz
-50.0 -60.0 -70.0															Stop Freq 5.512500000 GHz
Cer #Re	nter : es Bl	5.500 N 1.0	000 C	GHz z	×		#VBW	3.0 MHz		FUNCTION	FU	Sweep	Span 3 1.00 ms	25.00 MHz (1001 pts) ION VALUE	CF Step 2.500000 MHz Auto Man
1 2 3 4 5 6 7 8 9 10 11 11 12	N	2	f		5.503	175 GI 325 GI		3.13 d -4.96 d	Bm Bm 						Freq Offset
MSG												STATUS	5		

Agile	nt Spe	ctrur	n Ana	alyzer - Swe	ept SA										
Ce	nter	Fre	RF	50 Ω 5.50000	AC	z	Tri	SENS	E:INT	#Avg	ALIGN A	AUTO S	03:56:45 / TRAI	MNov 12, 2013 CE 1 2 3 4 5 6	Frequency
_					PI IFG	IO: Fast ain:Lov	, #At	ten: 30 d	3B			land.	D		Auto Tune
10 0	B/div	,	Ref	20.00 c	lBm						IVI	KI I	3.3014	96 dBm	
10.	-								1						Center Freq
0.0				AL COMPANY				Managar	with		wala hip and		and all and all all all all all all all all all al		5.50000000 GHz
-10.0 -20.0	)	weet	and a	1									1	Margan Markan Ba	
-30.0		marker	and											A server and	Start Freq
-40.0				e e											3.487300000 GHZ
-50.0															Stop Freq
-70.0								_							5.512500000 GHz
Ce	nter :	5.50	000	0 GHz									Span 2	5.00 MHz	
#R(	es Bl	N 1	.0 N	ЛНz		#V	BW 3.0	MHz			Swe	ep 1	1.00 ms (	1001 pts)	CF Step 2.500000 MHz
MKR 1	MODE	TRC 2	SCL f		× 5.501 42	5 GHz	3	7 8.96 dBi	FUN m	CTION	FUNCTION \	WIDTH	FUNCTI	ON VALUE	<u>Auto</u> Man
23	N	1	f		5.503 65	) GHz	÷	5.01 dBi	n			i.			E
4									-						
6															
8															
<u>9</u> 10															
11											0	l.			
MSG										I	s	STATUS			

Agile	nt Spe	ctru	n An	alyzer - Swo	ept SA									
Cei	nter	Fre	RF eq (	50 Ω 5.50000	AC 00000 GH	Ηz	Tri	SENS	E:INT	#Avg T	ALIGNAUT ype: RMS	0 03:58:11 / TRA	MNov 12, 2013 CE 1 2 3 4 5 6	Frequency
_					P IF(	NO: Fast Gain:Low	, ₩At	ten: 30 d	iB		Mkr	□ 1 5.503 6	50 GHz	Auto Tune
10 0	B/div	,	Ref	20.00	dBm							3.	96 dBm	
10.0 0.0				W				www.	marken	<b>1</b>	2	and		Center Freq 5.50000000 GHz
-10.0 -20.0	) , , , , , , , , , , , , , , , , , , ,	equent	unit of							· · · · · · · · · · · · · · · · · · ·			Art Marghan Marghan	Start Freg
-30.0 -40.0	) ••••••	and a start	and the second										and and a second se	5.487500000 GHz
-50.0 -60.0														Stop Freq
-70.0	Ë											2. 		5.512500000 GHz
Cei #Re	nter es Bl	5.50 W 1	000 1 0.	0 GHZ /HZ		#V	BW 3.0	MHz			Sweep	Span 2 1.00 ms (	25.00 MHz (1001 pts)	CF Step 2.500000 MHz
MKR	MODE	TRC	SCL		х			ſ	FUI		FUNCTION WID	TH FUNCTI	ON VALUE	<u>Auto</u> Man
1	N	2	f		5.503 65	0 GHz	3	86 dB	n			-		
3					0.000 40	0 01 12								Fred Offset
4														
6														0 112
7														
8	_		_											
10			-	2										
11														
12														
MSG											STAT	rus		

Channal No.	Frequency	Data Rate	Measurement Level	Required Limit	Dogult
Channel No.	(MHz)	(Mbps)	(dB)	(dB)	Result
		MCS (0)	8.540	<13	Pass
100	5500	MCS (2)	9.060	<13	Pass
100	5500	MCS (4)	9.378	<13	Pass
		MCS (7)	8.060	<13	Pass

## Chain B

### Channel 100:

Agilent Spectrum Analyzer - Swept SA					
🗶 RL   RF   50 Ω AC   Center Freq 5.500000000	GHz	SENSE:INT	ALIGNAUTO #Avg Type: RMS	06:57:27 AM Nov 09, 2013 TRACE 1 2 3 4 5 6 TYPE A MIANANA	Frequency
10 dB/div Ref 20.00 dBm	PNO: Fast 🕞 IFGain:Low	#Atten: 30 dB	Mkr1	5.503 475 GHz 1.80 dBm	Auto Tune
Log 10.0 0.00 -10.0	***				Center Free 5.500000000 GH
-20.0 +++++++++++++++++++++++++++++++++++				and the second s	Start Fre 5.487500000 GH
-50.0					<b>Stop Fre</b> 5.512500000 GH
Center 5.50000 GHz #Res BW 1.0 MHz	#VBV	/ 3.0 MHz	Sweep	Span 25.00 MHz 1.00 ms (1001 pts)	CF Ster 2.500000 MH
I         N         2         f         5.50           2         N         1         f         5.50           3         4         4         4         4	3 475 GHz 3 875 GHz	1.80 dBm -6.74 dBm			Freq Offse
5 6 7 8 9					0Н
10 11 12					

Agilen	it Spe	ctrun	n Ana	alyzer - Sw	ept SA			T.U.	10					
Cen	L Iter	Fre	RF	50 Ω 5.50000	AC	) GHz		SE	NSE:INT	#Avg	ALIGN AUTO Type: RMS	06:58:45 . TRA	AM Nov 09, 2013 CE 1 2 3 4 5 6	Frequency
						PNO: IFGai	:Fast ⊆ n:Low	#Atten: 3	o dB		Mkr1	5 497 7		Auto Tune
10 di	B/div		Ref	20.00	dBm						IVII.	2.	50 dBm	
10.0 0.00				mar	ne BITLE		എപ്ര, പില്	1	CAR-The second		2			Center Freq 5.50000000 GHz
-20.0 -30.0 -40.0	- Mar	and the second											Mar Wilder a for sa	Start Freq 5.487500000 GHz
-50.0 -60.0 -70.0												2		Stop Freq 5.512500000 GHz
Cen #Re	ter : s B\	5.50 N 1	000 0 P	0 GHz /IHz	2°		#VBV	V 3.0 MHz			Sweep	Span 2 1.00 ms	25.00 MHz (1001 pts)	CF Step 2,500000 MHz
MKR 1	MODE	TRC 2	SCL f		× 5.49	7 775 0	GHz	¥ 2.50 d	Bm	UNCTION	FUNCTION WIDTH	FUNCT	ION VALUE	<u>Auto</u> Man
2 3 4 5 6	_N	1	T		5.50	15 825 0	JHZ	-6.56 d	Bm					Freq Offset 0 Hz
7 8 9 10														
12 MSG											STATU	5		

Agilent Spectr	um Analyzer - Sv	wept SA						<u> </u>		
Center F	RF 50 s	Ω AC   1000000 GHz	Z	SENS	E:INT	#Avg Typ	ALIGNAUTO e: RMS	11:25:40 A	MNov 20, 2013 CE 1 2 3 4 5 6 PE A MIANANAN	Frequency
10 dB(div	Ref 20.00	PNC IFGa	U: Fast 🕞 ain:Low	#Atten: 30	dB		Mkr1	□ 5.503 4 3.	00 GHz	Auto Tune
Log 10.0 0.00			2			<b>↓</b> <sup>1</sup>	ant Wood out o			Center Freq 5.50000000 GHz
-20.0 -30.0 -40.0									And a start of the	<b>Start Freq</b> 5.487500000 GHz
-50.0 -60.0 -70.0										<b>Stop Freq</b> 5.512500000 GHz
Center 5.: #Res BW	50000 GHz 1.0 MHz	X	#VBW	/ 3.0 MHz*	FUN	CTION FUN	Sweep	Span 2 1.00 ms (	5.00 MHz 1001 pts)	CF Step 2.500000 MHz <u>Auto</u> Man
1 N 2 2 N 3 4 5 6 7	f	5.503 400 5.495 800	GHz GHz	3.55 dBi -5.828 dBi	m n					Freq Offset 0 Hz
8 9 10 11 12										
MSG							STATUS	6		

Agile	nt Spe	ectru	m Ani	alyzer - Sw	ept SA									
Ce	nter	Fre	RF	50 Ω 5.50000	AC	łz	Tria: E	SENSE:I	NT  #	Avg Ty	ALIGNAUTO	07:01:15 A TRAC	MNov 09, 2013	Frequency
					Р IF(	NO: Fast Gain:Low	#Atter	: 30 dB			Mkr1	5.502 8	75 GHz	Auto Tune
10 c Log 10.1 0.0		V	Rei	20.00						1 ^2		and the second s		Center Freq 5.50000000 GHz
-20.0 -30.0 -40.0	) , ) ,		and a										Mar Martin Sta	Start Freq 5.487500000 GHz
-50.1 -60.1 -70.1														<b>Stop Freq</b> 5.512500000 GHz
Cei #Re	nter es B	5.5 W 1	000 .0 M	0 GHz /IHz		#V	BW 3.0 M	Hz			Sweep	Span 2 1.00 ms (	5.00 MHz 1001 pts)	CF Step 2.500000 MHz
	MODE N	1 TRC	SCL f		× 5.502 87	5 GHz	1.90	) dBm	FUNCTIO	N F	UNCTION WIDTH	FUNCTIO	DN VALUE	<u>Auto</u> Man
3 4 5 6					0.000 00	0 0112	-0.1							Freq Offset 0 Hz
7 8 9 10 11														
12 MSG		<u> </u>								_	STATUS			

Product	:	AerialCast
Test Item	:	Peak Excursion
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps)

## Chain A

Channal No.	Frequency	Data Rate	Measurement Level	Required Limit	Dogult
Channel No.	(MHz)	(Mbps)	(dB)	(dB)	Kesuit
		MCS (0)	8.480	<13	Pass
103	5510	MCS (2)	8.730	<13	Pass
102	5510	MCS (4)	9.140	<13	Pass
		MCS (7)	8.810	<13	Pass

									-				
Agiler	it Spe	ctrur	n An	alyzer - Swo	ept SA								
LXI R	L		RF	50 Ω	AC			SENSE:INT		ALIGN AUTO	04:39:39 A	MNov 12, 2013	English
Cen	iter	Fre	eq (	5.51000	00000 GH PN IFG	<b>Z</b> 10: Fast iain:Low	Trig: Fr #Atten:	ee Run 30 dB	#Avg	Type: RMS	TRAC TYI D	<sup>ЭЕ</sup> 1 2 3 4 5 6 РЕ А М <del>WWWW</del> ЕТ А Р N N N N	Frequency
10 d	B/div	,	Ref	f 20.00 (	dBm					Mkr	1 5.505 -1.	50 GHz 02 dBm	Auto Tune
10.0 0.00 -10.0							1		and a second second	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	- Ja		Center Freq 5.510000000 GHz
-20.0 -30.0 -40.0			~~~										<b>Start Freq</b> 5.485000000 GHz
-50.0 -60.0 -70.0						3							<b>Stop Freq</b> 5.535000000 GHz
Cen #Re	ter s Bl	5.5 <sup>.</sup> N 1	100 .0 P	0 GHz VIHz		#V	BW 3.0 MH	z		Sweep	Span 5 1.00 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz
MKR 1	N	TRC 2	f		× 5.505 50	) GHz	-1.02	dBm	FUNCTION	FUNCTION WIDTH	FUNCTI	ON VALUE	<u>Auto</u> Man
2 3 4 5 6		-			5.5194		-9.50						Freq Offset 0 Hz
7 8 9 10 11													
12													
MSG										STATUS			

### Channel 102:

Agilent Spectrum Analyzer - Swept SA				
LX/ RL RF 50Ω AC	SENSE:INT	ALIGNAUTO	04:40:50 AM Nov 12, 2013	Frequency
Center Freq 5.510000000 GHz	Trig: Free Run	#Avg Type: RMS	TYPE A MWMMM	
IFGain:Low	#Atten: 30 dB		DET A PINININI	Auto Turo
		Mkr	1 5.518 20 GHz	Auto Tune
10 dB/div Ref 20.00 dBm		1	-0.59 dBm	
10.0		1		Contor From
0.00		<u> </u>		5 51000000 CH-
-10.0	man man	realized the war with	have	5.51000000 GH2
20.0	Y		March 1	
-20.0			1 m	Start Freq
-30.0			1 mm	5.485000000 GHz
-40.0			have	
-50.0				
-60.0				Stop Freq
-70.0				5.535000000 GHZ
Center 5.51000 GHz			Span 50.00 MHz	
#Res BW 1.0 MHz #VBV	N 3.0 MHz	Sweep	1.00 ms (1001 pts)	CF Step
MKRI MODEL TRCI SCL X	Y	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Man
1 N 2 f 5.518 20 GHz	-0.59 dBm			
2 N 1 f 5.51780 GHz	-9.32 dBm			5 Off
4				FreqOffset
6				0 HZ
7				
9				
10				
12				
MSG		STATUS		

Agilent Spect	rum Analyzer - Sv	wept SA						
Center F	RF 50 Freq 5.5100	Ω AC 1000000 GHz	SENSE:	#Avg Typ	ALIGNAUTO e: RMS	04:41:44 A TRAC	MNov 12, 2013 E 1 2 3 4 5 6	Frequency
10 dB/div	Ref 20.00	PNO: Fast IFGain:Low	#Atten: 30 dB	n 	Mkr	0 1 5.498 -0.1	95 GHz 63 dBm	Auto Tune
10.0 0.00 -10.0		Hard Une of the second se			2	and the second		Center Freq 5.510000000 GHz
-20.0 -30.0	and a second and a					J.		<b>Start Freq</b> 5.485000000 GHz
-50.0 -60.0 -70.0								<b>Stop Freq</b> 5.535000000 GHz
Center 5. #Res BW	.51000 GHz 1.0 MHz	#V × 5.498 95 GHz	BW 3.0 MHz -0.63 dBm	FUNCTION FU	Sweep '	Span 5 1.00 ms ( EUNOIR	0.00 MHz 1001 pts) INVALUE	CF Step 5.000000 MHz <u>Auto</u> Man
2 N 3 4 5 6 7	1 f	5.519 60 GHz	-9.77 dBm					Freq Offset 0 Hz
8 9 10 11 12								
MSG					STATUS			



Agilent	Spec	ctrun	n Ani	alyzer - Sw	ept SA														
Cent	ter	Fre	RF	50 Ω 5.5100	AC	0 GH	lz		SE Tui au Eas	INSE:IN	1T	#Avg	Туре	ALIGNAUTO RMS	04:4	2:41 A TRAC	MNov 12, 201	3 6	Frequency
10 dB	3/div		Ref	20.00	dBm	PN IFG	10: Fasi Gain:Lov	t 😱 w	#Atten: 3	0 dB				Mkı	1 5.5	525 -0.4	80 GHz		Auto Tune
Log 10.0 - 0.00 - -10.0 -				( mus	- mare	Unan - Vall	mod	2	and all the second second		ay-1733-24134			and a state of the	<b>●</b> <sup>1-</sup>	1		5	Center Fred 510000000 GH2
-20.0 -30.0 -40.0		mannth	marked and												-	14		5	Start Fred 485000000 GH2
-50.0 - -60.0 - -70.0 -																		5	<b>Stop Fred</b> .535000000 GH2
Cent #Res MKE M	ter ( BV 1000El	5.51 N 1	100 .0 P SCE	0 GHz /IHz	× 5.	.525 80	#V 0 GHz	/BW	3.0 MHz -0.45 d	Bm	FUN	CTION	FUN	Sweep	Sp: 1.00 r	an 5 ms ( unan	0.00 MHz 1001 pts] IN VALUE	Aut	<b>CF Step</b> 5.000000 MHz <u>o</u> Mar
2 3 4 5 6 7 8	N	1	f		5.	.502 8	0 GHz		-9.26 d	Bm									Freq Offse 0 Hz
9 10 11 12 MSG														STATU	s				



Chain B					
Channel Ma	Frequency	Data Rate	Measurement Level	Required Limit	Degult
Channel No.	(MHz)	(Mbps)	(dB)	(dB)	Result
		MCS (0)	8.970	<13	Pass
102	5510	MCS (2)	7.610	<13	Pass
102	5510	MCS (4)	8.520	<13	Pass
		MCS (7)	8.920	<13	Pass

# Channel 102:

Agilen	it Spe	ctrum	ı Ana	ılyzer - Sw	ept SA													
	L	Fro	RF	50 Ω	AC		1-1		3	ENSE:IN1	Г	#Ava		IGN AUTO	07:25	:52 A TRAC	MNov 09, 2013	Frequency
Cen	ller	FIE	q :	0.5100	0000	PN IFG	IZ IO: Fast Jain:Lov	v P	Trig: Fre #Atten: 3	e Run 80 dB		mig	Type.	1410		TYF	TAPNNN	
10 di	B/div		Ref	20.00	dBm									Mkr	1 5.5 <sup>.</sup>	14 -1.0	85 GHz 68 dBm	Auto Tun
10.0 0.00 -10.0				$ \subset $			مين محمولاس م	alaan doola	2 mm	~		1	بعد ملا دوار بعد	<b>1</b>	man	<u> </u>		Center Fre 5.510000000 G⊢
-20.0 -30.0 -40.0	and and a		and a													1 and	Contraction of the second seco	Start Fre 5.485000000 G⊦
-50.0 -60.0 -70.0												-						Stop Fre 5.535000000 G⊢
Cen #Re	ter : s B\	5.51 N 1.	000 0 N	0 GHz /IHz			#V	вw	3.0 MHz	2			s	weep	Spa 1.00 m	n 5 1s (	0.00 MHz 1001 pts)	CF Ste 5.000000 MH
MKR 1	N	TRC 2	SCL f		× 5.	514 8	5 GHz		-1.68 c	lBm	FUNC	TION	FUNC	TION WIDTH	FU	NCTIC	IN VALUE	Auto Ma
2 3 4 5 6 7 8 9 10	N	1	T		5.		> GHZ		-10.65 d									Freq Offse 0 ⊦
11 12 MSG														STATUS	3	_		

Agile	nt Spe	ctrur	n An	alyzer - Swo	ept SA									
LXI R	L	-	RF	50 Ω	AC	NI-		SEN	NSE:INT	#Aug Ti	ALIGN AUTO	07:27:02 / TRA	AM Nov 09, 2013	Frequency
Cer	ner	FIE	eq :	5.51000	00000	PNO: Fast	Tri	g: Free	Run	morg 1	We. Kino	TY	PEAMWWWW	
					96	FGain:Lov	/ #A	ten: 30	dB					
											Mk	r1 5.518	30 GHz	Auto Tune
10 d Loa	B/di	1	Ref	20.00	dBm							-Z.	75 aBm	
10.0			_			_						_		Center Fred
0.00						_			-	•	2			5.51000000 GHz
-10.0				June	h			and the	A standing and a stand of the		- and a second	manora		
-20.0				10			2	1				12		
-30.0			1	/								1	No.	Start Freq
-40.0	man	-re	John	/								1	m	5.485000000 GHz
70.0	-	have	sand .										~	
-00.0														Stop Fred
-60.0														5 535000000 GHz
-70.0														
Cer	nter	5.5	100	0 GHz							1012 - 2017-0	Span :	50.00 MHz	
#Re	s Bl	W 1	.0 P	VIHz		#V	BW 3.0	MHz			Sweep	1.00 ms	(1001 pts)	5 00000 MHz
MKR	MODE	TRC	SCL		×			Y	FL	INCTION	FUNCTION WIDT	H FUNCTI	ION VALUE	Auto Man
1	N	2	f	3	5.518	30 GHz		2.75 dE	3m			-		
3	13	1			0.010	55 6112	-14	7.50 uL	2111					Fred Offset
4			_											0.47
6														
8			-											
9														
11										0				
12														
MSG											STATU	IS		

Agilent Spectr	um Analyzer - Swep	ot SA	0.9							
	RF 50 Ω		SENSE:I	NT #Ava	ALIGNAUTO 07		AM Nov 09, 2013	Frequency		
	PNO: Fast IFGain:Low			n	and grype. Take		PE A MWWWWW ET A P N N N N			
10 dB/div	Auto Tune									
Log 10.0 0.00 -10.0		Allander and an and a state of the state of		1	مروسی میکور می مروب میکور میکو مروب میکور میکو			Center Freq 5.510000000 GHz		
-20.0 -30.0 -40.0						1	the second	Start Freq 5.48500000 GHz		
-60.0								<b>Stop Freq</b> 5.535000000 GHz		
Center 5.4 #Res BW	Center 5.51000 GHz Span 50.00 MHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.00 ms (1001 pts)									
1 N 2 2 N 1 3 4 5 6	f	5.512 75 GHz 5.516 55 GHz	-1.65 dBm -10.17 dBm				_	Freq Offset 0 Hz		
7 8 9 10 11 12										
MSG					STATUS					

Agilent Spectrum Analyzer - Swept SA															
ки Се	nter	Fre	RF eq {	50 Ω 5.51000	AC 00000 G	Hz		SE	NSE:INT	##	vg Typ	ALIGNAUTO e: RMS	07:28:45 / TRA	MNov 09, 2013 CE 1 2 3 4 5 6	Frequency
10	PNO: FastIng. Free Run IFGain:Low #Atten: 30 dB Mkr1 5.517 95 GHz 10 dB/div Ref 20.00 dBm1.23 dBm										Auto Tune				
Lōg 10. 0.0 -10.					Berner of the second		-	w.m.s.	June	ht	↓1 2	and the second	arreasing		Center Freq 5.510000000 GHz
-20. -30. -40.		Wanne -											1	a shint with the	Start Freq 5.485000000 GHz
-50. -60. -70.															<b>Stop Freq</b> 5.535000000 GHz
Ce #R	nter es B	5.5′ W 1	00 .0 N	0 GHz /IHz		#V	/BW	3.0 MHz		CUNCTION		Sweep	Span 5 1.00 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz
1 2 3 4	N	2	f		5.517 5.518	<u>95 GHz</u> 15 GHz		-1.23 d -10.15 d	Bm Bm	FONCTION			PONCTI		Freq Offset
5 6 7 8 9															0 Hz
10 11 12 MSG												STATUS			

## 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	Х	Loop Antenna	Teseq	HLA6120 / 26739	Jul., 2013
	Х	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
	X Pre-Amplifier		QTK	QTK-AMP-03 / 0003	May, 2013
	Х	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2013
	Х	Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2013
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2013
	Х	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Х	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

