

Keysight Spectrum Analyzer - Occupied RF 50 Ω DC	BW	EXT REF	ALIGN AUTO	05-00-10 00	Jun 22, 2017	
Center Freq 5.78500000 ASS	Trig	ter Freq: 5.785000000 GHz	d: 100/100	Radio Std: Radio Devi	LTE/20M	Frequency
Ref Offset 20.8 0 dB/div Ref 27.80 dE						
0g 17.8						Center Fre 5.785000000 GH
2.20	han har	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~			
2.2						
2.2			Lane			
52.2						
enter 5.785 GHz Res BW 200 kHz		#VBW 1 MHz			n 40 MHz 1.333 ms	CF Ste 4.000000 MH
Occupied Bandwid		Total Power	23.2	dBm		Auto Ma
1	7.855 MHz					Freq Offs
Transmit Freq Error	37.476 kHz	OBW Power	99.	00 %		01
x dB Bandwidth	18.58 MHz	x dB	-26.0	0 dB		
G			STATUS			

Channel Position M - 256QAM / Bandwidth 20.0 MHz

Channel Position T - 256QAM / Bandwidth 20.0 MHz

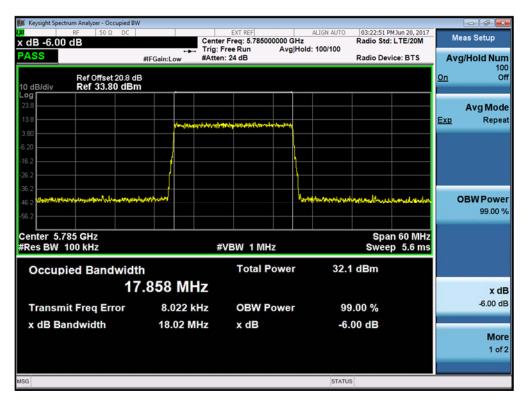
📕 Keysight Spectrum Analyzer - Occupied	BW				
RF 50 Ω DC Center Freq 5.82500000 PASS PASS		EXT REF ter Freq: 5.825000000 GHz g: Free Run Avg Ho ten: 24 dB	ALIGN AUTO	05:34:27 PM Jun 22, 201 Radio Std: LTE/20M Radio Device: BTS	7 Frequency
Ref Offset 20.8 10 dB/div Ref 27.80 dE					
17.8 7.80		and a state of the	~~~~~		Center Free 5.825000000 GHz
-2.20					
-22.2	{				
-52.2 -62.2				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Center 5.825 GHz #Res BW 200 kHz		#VBW 1 MHz		Span 40 MH Sweep 1.333 m	
Occupied Bandwig		Total Power	23.3	3 dBm	<u>Auto</u> Mar
1	7.864 MHz				Freq Offse
Transmit Freq Error	39.765 kHz	OBW Power	99	9.00 %	0 H:
x dB Bandwidth	18.57 MHz	x dB	-26.	00 dB	
ISG			STATU	s	



Keysight Spectrum Analyzer - Occupied BW RF 50 Ω DC		EXT REF	ALIGN AU	TO 03:31:25 PM Jun	20. 2017	
BW 100.00 kHz		Center Freq: 5.74500000		Radio Std: LTE		BW
ASS #IFGai	n:Low	#Atten: 24 dB		Radio Device:	втя	Res BV
					Auto	100.00 kH <u>Ma</u>
dB/div Ref 33.80 dBm						
3.8				_		Video BI 1.0000 MF
.8	Net was	مدغر ليطود تدور كالدوألات متوجعها ومعرجه اللواعة	<i>M</i>		Auto	
80						
20						
2						
.2						
2			understand	and the second second second	والم مراجع الم	
والاستحداد فعتقلين تعبيليس لأ	ř.					
.2						
enter 5.745 GHz				Span 6		-
Res BW 100 kHz		#VBW 1 MHz		Sweep 5	i.6 ms	Filter Type Gaussian
Occupied Bandwidth		Total Pow	er 3	2.0 dBm		Gaussian
17.85	7 MH	7				
Transmit Freq Error	7.179 kl	Iz OBW Pow	er	99.00 %		
x dB Bandwidth 1	8.03 M	lz x dB		-6.00 dB		
3			ST	ATUS		

Channel Position B - QPSK / -6dB Bandwidth 20.0 MHz

Channel Position M - QPSK / -6dB Bandwidth 20.0 MHz





RF 50 Ω DC enter Freq 5.82500000 ASS ASS	0 GHz Ce	EXT REF nter Freq: 5.825000000 GHz g: Free Run Avg Hol tten: 24 dB	ALIGN AUTO 03:25:43 PM Jun 20, 2 Radio Std: LTE/201 Id: 100/100 Radio Device: BTS	M Frequency
Ref Offset 20.8 0 dB/div Ref 33.80 dB				
og 3.8				Center Fre
.80	a fayall a salara			
6.2				
6.2				
6.2	wangled W		4.Mothalstance.com.exec.logiasisses	
enter 5.825 GHz Res BW 100 kHz		#VBW 1 MHz	Span 60 M Sweep 5.6 i	
Occupied Bandwid	lth	Total Power	32.5 dBm	Auto Ma
1	7.877 MHz			Freq Offs
Transmit Freq Error	22.147 kHz	OBW Power	99.00 %	01
x dB Bandwidth	18.03 MHz	x dB	-6.00 dB	

Channel Position T - QPSK / -6dB Bandwidth 20.0 MHz

Channel Position B - 16QAM / -6dB Bandwidth 20.0 MHz

Keysight Spectrum Analyzer - Occupied BW		par acci			05-00-05 0	1 h = 20 - 20/2		X
RF 50 Ω DC Center Freq 5.745000000 GI PASS #IF	1	EXT REF Center Freq: 5.745000 Frig: Free Run Atten: 24 dB		ALIGN AUTO	Radio Std: Radio Dev		Frequency	
10 dB/div Ref 33.80 dBm								
23.8 13.8	موارد فرور	~~_;~******	d a (m)				Center F 5.745000000	
3.80 -6.20		and a second						
-16.2								
-36.2	n de la companya de l		4444	ni	a-Marsadow	innandature		
-56.2 Center 5.745 GHz					Spa	n 60 MHz	05.0	
#Res BW 100 kHz		#VBW 1 MHz				p 5.6 ms	CF S 6.000000 I	MH
Occupied Bandwidth		Total Po	ower	33.0	dBm		Auto	Mar
17.8	380 MHz	2					Freq Off	fsel
Transmit Freq Error	20.899 kH	Z OBW Po	wer	99	.00 %			0 H2
x dB Bandwidth	18.02 MH	z x dB		-6.	00 dB			
MSG JAlignment Completed				STATUS				



Keysight Spectrum Analyzer - Occupied BW		EXT REF	ALIGN AUTO 05:32:15 PM Jur	- 20, 2017
dB -6.00 dB	Trig:	er Freq: 5.785000000 GHz Free Run Avg Ho n: 24 dB	Radio Std: LT Id: 100/100 Radio Device:	E/20M Meas Setup BTS Avg/Hold Nun
10 dB/div Ref 33.80 dBm				0n 01
23.8	and the states at at	1-43.044.1-44.1469.141.1419.441.9419.		Avg Mod Exp Repea
3.80				
16.2 				
6.2 6.2 ml/ml/ml /ml/ml/ml/ml/ml/ml/ 6.2			Annonination	OBW Powe
enter 5.785 GHz Res BW 100 kHz	;	≠VBW 1 MHz	Span 6 Sweep	
Occupied Bandwidt		Total Power	33.4 dBm	
	.853 MHz			x d -6.00 d
Transmit Freq Error	30.187 kHz	OBW Power	99.00 %	-6.00 d
x dB Bandwidth	18.01 MHz	x dB	-6.00 dB	Moi 1 of
SG			STATUS	

Channel Position M - 16QAM / -6dB Bandwidth 20.0 MHz

Channel Position T - 16QAM / -6dB Bandwidth 20.0 MHz





Keysight Spectrum Analyzer - Occupied BW		EXT REF Center Freq: 5.74500 Trig: Free Run		ALIGN AUTO	Radio Std			eas Setup
PASS #IFC	Gain:Low	#Atten: 24 dB			Radio Dev	vice: BTS	Av	g/Hold Nun 10
10 dB/div Ref 33.80 dBm							<u>On</u>	Of
.og								
23.8								Avg Mod
13.8	water	herebely low webstrowership	arthony				Exp	Repe
.80								
20								
6.2								
6.2								
2 Marchard March March March March March	and a		l la	and the second and the second s	monut	unprover	(OBWPow
6.2								99.00
							·	
enter 5.745 GHz Res BW 100 kHz		#VBW 1 MH	17			n 60 MHz p 5.6 ms		
Kes Bw Too Khz			12		Swee	p 5.0 ms		
Occupied Bandwidth		Total F	ower	32.2	2 dBm			
17.8	27 MH	z						x d
Transmit Freq Error	12.308 kH	z OBW P	OWER	00	0.00 %			-6.00 d
			Ower					
x dB Bandwidth	18.02 MH	lz xdB		-6.	00 dB			Mo
								1 of
								101
G				STATU	6		_	
				51410			_	

Channel Position B - 64QAM / -6dB Bandwidth 20.0 MHz

Channel Position M - 64QAM / -6dB Bandwidth 20.0 MHz

Keysight Spectrum Analyzer - Occupied BW							
X RF 50 Ω DC Center Freq 5.785000000 GHz PASS #IFGa	T	EXT REF enter Freq: 5.7850000 rig: Free Run Atten: 24 dB	000 GHz Avg Hold	ALIGN AUTO	Radio Std		Frequency
10 dB/div Ref 33.80 dBm							
23.8	lui statute lui	Augustuskamilikaineks	Alman I a				Center Fre 5.785000000 GH
3.80							
16.2							
36.2 46.2 คนกระหว่านสมเสรรงการให้ส่วนสรโลปจากที่ที่ 56.2				rrontheasure	ntratut jujitikari	kondutspunder	
Center 5.785 GHz Res BW 100 kHz		#VBW 1 MHz				n 60 MHz p 5.6 ms	CF Ste 6.000000 MH
Occupied Bandwidth		Total Po	wer	32.3	dBm		<u>Auto</u> Ma
17.86	9 MHz						Freq Offse
	5.106 kHz		wer		.00 %		0 H
x dB Bandwidth	18.05 MHz	x dB		-6.	00 dB		
sg				STATUS	1		



Keysight Spectrum Analyzer - Occup RF 50 Ω		EXT REF	ALIGN AUTO	05:14:27 PM Jun 22, 2017		
dB -6.00 dB	Trig	ter Freq: 5.825000000 GHz Free Run Avg Ho en: 24 dB	ld: 100/100	adio Std: LTE/20M adio Device: BTS		eas Setup g/Hold Nun 10
Ref Offset 20 0 dB/div Ref 27.80					<u>On</u>	0
-og 17.8 7.80					Exp	Avg Mod Repe
2.20		wanter and a second and the second	~~			
22.2						
2.2						DBWPowe
enter 5.825 GHz				Span 40 MHz		99.00
Res BW 100 kHz	,	#VBW 1 MHz		Sweep 4.8 ms		
Occupied Bandw	vidth 17.810 MHz	Total Power	23.3 d	Bm		x d
Transmit Freq Erro	r -6.684 kHz	OBW Power	99.0	0 %		-6.00 d
x dB Bandwidth	18.01 MHz	x dB	-6.00	dB		Mo 1 of
G			STATUS			

Channel Position T - 64QAM / -6dB Bandwidth 20.0 MHz

Channel Position B - 256QAM / -6dB Bandwidth 20.0 MHz

Keysight Spectrum Analyzer - Occupied B	w	EXT REF	ALIGN AUTO	05:23:39 PM Jun 22, 2017	
Center Freq 5.745000000 PASS	Trig	nter Freq: 5.745000000 GH		Radio Std: LTE/20M Radio Device: BTS	Frequency
Ref Offset 20.8 c 10 dB/div Ref 27.80 dB					
7.80			~~~~~		Center Fre 5.745000000 GH
2.20 12.2 22.2					
32.2					
62.2					
center 5.745 GHz Res BW 100 kHz		#VBW 1 MHz		Span 40 MH: Sweep 4.8 ms	4.000000 MH
Occupied Bandwid	th 7.828 MHz	Total Power	23.2	2 dBm	Auto Ma
Transmit Freq Error	7.075 kHz	OBW Power		9.00 %	01
x dB Bandwidth	18.04 MHz	x dB	-6.	00 dB	
sG			STATU	S	



Keysight Spectrum Analyzer - 0. RF 50 S dB -6.00 dB ASS	2 DC	EXT REF Center Freq: 5.7 Trig: Free Run #Atten: 24 dB		ALIGN AUTO		PM Jun 22, 2017		eas Setup
Ref Offse		#Atten: 24 dB			Radio De	VICE: BIS	On AV	g/Hold Nur 10 0
0 dB/div Ref 27.8	30 dBm			_				
7.8				\square				AvgMod
.80				+			Exp	Repe
20		************	*******	*****				
2.2	<u> </u>			+ 1				
2.2	<u> </u>			+				
2.2	+ <u>/</u> +			+				
2.2				++				OBWPow
2.2						1		99.00
2.2								
enter 5.785 GHz						an 40 MHz		
Res BW 100 kHz		#VBW 1	MHz		Swee	ep 4.8 ms		
Occupied Band	dwidth	Tot	al Power	23.3	3 dBm			
	17.822 N	1H7						
								-6.00 c
Transmit Freq Er	тог 14.57	kHz OB	N Power	99	0.00 %			-0.00 0
x dB Bandwidth	18.05	MHz x di	3	-6.	00 dB			
								Mo
								10
G				STATU	5			

Channel Position M - 256QAM / -6dB Bandwidth 20.0 MHz

Channel Position T - 256QAM / -6dB Bandwidth 20.0 MHz

Keysight Spectrum Analyzer - Occupied					
RF 50 Ω DC Center Freq 5.82500000 PASS	0 GHz	EXT REF enter Freq: 5.825000000 rig: Free Run Av Atten: 24 dB	ALIGN AUTO GHz g Hold: 100/100	05:33:13 PM Jun 22, 2017 Radio Std: LTE/20M Radio Device: BTS	Frequency
Ref Offset 20.8 10 dB/div Ref 27.80 dE					
7.80					Center Free 5.825000000 GH
2.20 12.2 22.2					
32.2	1				
-62.2					
Center 5.825 GHz #Res BW 100 kHz		#VBW 1 MHz		Span 40 MHz Sweep 4.8 ms	4.000000 MH
Occupied Bandwid	ath 7.839 MHz	Total Powe	r 23.3	3 dBm	Auto Ma Freg Offse
Transmit Freq Error	14.103 kHz	OBW Powe		9.00 %	0H
x dB Bandwidth	18.05 MHz	⊻ xdB	-6	.00 dB	
ISG			STATU	s	



Limit	Within the 5.725–5.85 GHz band, the minimum 6 dB bandwidth of U–NII devices shall be at least 500 kHz.
-------	--

Remarks

The minimum 6 dB bandwidth was greater than 500 kHz.



2.4 UNDESIRABLE EMISSION – CONDUCTED

2.4.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051 FCC CFR 47 Part 15, Clause 15.407 (b) FCC CFR 47 Part 15, Clause 15.209

2.4.2 Equipment Under Test

Radio 2205 B46, KRC 161 609/1, S/N: D825784303

2.4.3 Date of Test and Modification State

27 and 29 June 2017 - Modification State 0

2.4.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 4.1.

2.4.5 Environmental Conditions

Ambient Temperature	23.5 - 54.0°C
Relative Humidity	22.0 - 57.0%

2.4.6 Test Method

The test was applied in accordance with the test method requirements of FCC CFR 47 Part 15, clause 15.407 (b) and clause 15.209.

In accordance with FCC CFR 47 Part 15, Clause 15.407 (b), the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15–5.25 GHz band: All emissions outside of the 5.15 - 5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725–5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

The spurious emissions from the antenna terminal were measured. The transmitter output power was attenuated using an attenuator and the frequency spectrum investigated from 1MHz to 40GHz. The resolution bandwidth of 1MHz was employed for frequency band 1MHz to 40GHz. The spectrum analyzer was set to peak detection and max hold mode.

For MIMO mode configurations, the limit was adjusted with a correction of -3.01dB [10Log2] by using the Measure and Add 10Log(N) dB technique according to FCC KDB 662911 D01



Multiple Transmitter Output v02r01 accounting for simultaneous transmission from antenna ports RF A and RF B.

The measurements were performed on the output connector RF A. Limited complementary measurement were done at output conector RF B to verify identical performance for both transmitter chains in MIMO mode.

The maximum path loss across the measurement band was used as the reference level offset to ensure worst case.

The worst results are shown in the plots below.



2.4.7 Test Results

Configuration A1

L-MIMO-SC

Maximum Output Power 20.5dBm per port

Channel Position	Bandwidth	Channel Frequency
Channel Position B	20.0MHz	5180.0MHz
Channel Position M	20.0MHz	5220.0MHz
Channel Position T	20.0MHz	5240.0MHz



	m Analyzer - Swept SA					
	RF 50 Q DC		XT REF	ALIGN AUT		Peak Search
ASS	5.8595750001	PNO: Fast IFGain:Low #Atten: 6	eRun Av	g Hold:>100/100		
0 dB/div R	ef Offset 21.12 dB ef 0.12 dBm				Mkr1 785.84 MHz -64.470 dBm	NextPea
Trace 1	Pass					Next Pk Righ
9.88						
19.9						Next Pk Le
29.9						
39.9						Marker Delt
49.9						
59.9	- Deservatoria	a differenti da fari an farian tanà ha aran'i a	وسنانه بالسورال و	he see to carde the Pilet	d da atte da hi anda da filma ang p. atte	Mkr→C
69.9 1997			and the second states in the second	simulation in the second	an far an sea a state da a faite faite da sea a state a	
9.9						Mkr→RefL
39.9						Mor
tart 1.0 MH Res BW 10		#VBW 300 kHz		Swaan	Stop 1.0000 GHz	1 of
		#VBW 300 KH2			4.267 ms (32001 pts)	

Channel Position B - QPSK - 1MHz - 1GHz

Channel Position B - QPSK - 1GHz - 5.15GHz





Keysight Spe	RF 50 Q DC						
larker 1	RF 50 Ω DC 5.802318750000	GHz	EXT REF	#Avg Type: L Avg Hold:>10	og-Pwr	03:06:42 PM Jun 28, TRACE 2 3	4 5 6 Peak Search
ASS		PNO: Fast IFGain:Low #Atten: 6		Avg Hold:>10		DET PAN	
0 dB/div	Ref Offset 29.4 dB Ref 8.40 dBm				Mki	1 5.802 3 G -38.166 dl	iHz NextPea Bm
og Trace	e 1 Pass						
.60							Next Pk Rig
1.6							
							Next Pk Le
21.6							
1.6							
						sen Liden and the states	Marker Del
NYN						Arise and the second second	
i1.6							Mkr→C
51.6							
/1.6							Mkr→RefL
1.6							
							Mo 1 of
tart 5.350 Res BW		#VBW 3.0 MHz		Swe	ep 25.	Stop 20.000 C 60 ms (32001	GHz
ig					STATUS		

Channel Position B - QPSK - 5.35GHz - 20GHz

Channel Position B - QPSK - 20GHz - 40GHz





🚺 Keysight Sp m Analyzer - Swent SA EXT REE IGN A 03:27:49 PM Jun 28, 2017 Marker 1 894.449406250 MHz PASS PASS #Avg Type: Log-Pwr Avg|Hold:>100/100 Peak Search TRACE 1 2 3 4 TYPE MMWW DET PANNI Trig: Free Run #Atten: 6 dB Mkr1 894.45 MHz -64.382 dBm Next Peak Ref Offset 21.12 dB Ref 0.12 dBm 10 dB/div Trace 1 Pass Next Pk Right Next Pk Left Marker Delta Mkr→CF Mkr-RefLvl More 1 of 2 Start 1.0 MHz #Res BW 100 kHz Stop 1.0000 GHz Sweep 4.267 ms (32001 pts) #VBW 300 kHz STATUS

Channel Position M - QPSK - 1MHz - 1GHz

Channel Position M - QPSK - 1GHz - 5.15GHz





Keysight Spe	ectrum Analyzer - Swept SA						
larker 1	RF 50 Ω DC 5.73959843750	0 GHz	EXT REF	ALIGN AL #Avg Type: Log-I	Wr TRACI	1 Jun 28, 2017 E 1 2 3 4 5 6	Peak Search
ASS	0.10000040100	PNO: Fast Trig: Fre IFGain:Low #Atten:	e Run	Avg Hold:>100/10	0 TYP		
0 dB/div	Ref Offset 29.4 dB Ref 8.40 dBm				Mkr1 5.739 -37.77	6 GHz 77 dBm	NextPea
og Trace	e 1 Pass						Next Pk Righ
.60							Next PK Rigi
1.6							
1.6							Next Pk Le
1.6							
1.6	the shows the second second	Antipute on color to built store balloop or		and an and a state of the	معادليه المعدول عنو	and the fallence	Marker Del
1.6							Mkr→C
1.6							
1.6							Mkr→RefL
1.6							
					04.5.00	000.011	Moi 1 of
tart 5.35 Res BW	0 GHZ 1.0 MHz	#VBW 3.0 MH	z	Sweep	Stop 20. 25.60 ms (3)	000 GHz 2001 pts)	
G					ATUS		

Channel Position M - QPSK - 5.35GHz - 20GHz

Channel Position M - QPSK - 20GHz - 40GHz





Keysight Spec	RF 50 S	2 DC			EXT REF		ALIGN AUTO	03:11:16	M Jun 28, 2017	
larker 1 ASS	830.66950		HZ PNO: Fast G	Trig: Fre #Atten: 6		#Avg Typ Avg Hold	e: Log-Pv :>100/100	VI TRA TI D	CE 1 2 3 4 5 6 PE MMWWWW ET P A N N N N	Peak Search
0 dB/div	Ref Offset 21 Ref 0.12 d							Mkr1 830 -64.3	.67 MHz 53 dBm	NextPea
og Trace	e 1 Pass									Next Pk Rigi
9.9										Next Pk Le
9.9										Marker Del
9.9	an de la secondad de la secondad	usa Helaidad	den die geligt tere tit ner eliter stat	de statistica e	yi dana ilaan	dada anta kalist	t familie seiter		liter kel bis disa yang ji Andala kanang kanang	Mkr→C
9.9			in a sina ic si insi							Mkr→RefL
tart 1.0 M			#\/B\A	300 kHz			Waan	Stop 1.	0000 GHz 32001 pts)	Moi 1 of
G	100 KH2		#VDVV	300 KH2		6	stat		200 Ppts/	

Channel Position T - QPSK - 1MHz - 1GHz

Channel Position T - QPSK - 1GHz - 5.15GHz





Keysight Spe	ectrum Analyzer - Swept SA					
larkor 1	RF 50 Ω DC 19.30732968750		XT REF	ALIGN AU AVg Type: Log-F		
ASS	19.30732908750	PNO: Fast IFGain:Low Trig: Free #Atten: 6	Run /	Avg Hold:>100/10		
0 dB/div	Ref Offset 29.4 dB Ref 8.40 dBm			N	lkr1 19.307 3 GH -37.256 dBr	
og Traci	e 1 Pass					Next Pk Rigi
1.6						Next Pk Le
1.6						
1.6			Annual			Marker De
1.6						Mkr→C
1.6						Mkr→RefL
1.6						Мо
tart 5.35 Res BW	0 GHz 1.0 MHz	#VBW 3.0 MHz		Sweep	Stop 20.000 GH 25.60 ms (32001 pt	z s)
G					ATUS	

Channel Position T - QPSK - 5.35GHz - 20GHz

Channel Position T - QPSK - 20GHz - 40GHz





L-MIMO-MC 1 (2C)

Maximum Output Power 20.5dBm per port

Channel Position Bandwidth		Channel Frequency
Channel Position B _{RFBW}	20 MHz	5180.0MHz + 5220.0MHz
Channel Position M _{RFBW}	20 MHz	-
Channel Position T _{RFBW}	20 MHz	5200.0MHz + 5240.0MHz



a	rum Analyzer - Swept SA RF 50 Ω DC		EXT REF	ALIGN AUT		Peak Search
larker 1 6 ASS	97.802500000	PNO: Fast IFGain:Low	Trig: Free Run #Atten: 6 dB	#Avg Type: Log-P Avg Hold:>100/100		
0 dB/div	Ref Offset 21.12 dB Ref 0.12 dBm				Mkr1 697.80 MHz -64.809 dBm	NextPea
9.88 Trace	1 Pass					Next Pk Righ
9.9						Next Pk Le
19.9						Marker Del
9.9	المراجع المحمطات ومحلفه	. Indian Mar Managara Mater	an and taken to state	1-	s to 11 of 1 2 2000 million million and the second states of the se	Mkr→C
9.9	n og en en kan stade en stade					Mkr→RefL
19.9					Stop 1.0000 GHz	Mor 1 of
Res BW 10	00 kHz	#VBW	300 kHz		4.267 ms (32001 pts)	

Channel Position BRFBW - QPSK - 1MHz - 1GHz

Channel Position BRFBW - QPSK - 1GHz - 5.15GHz

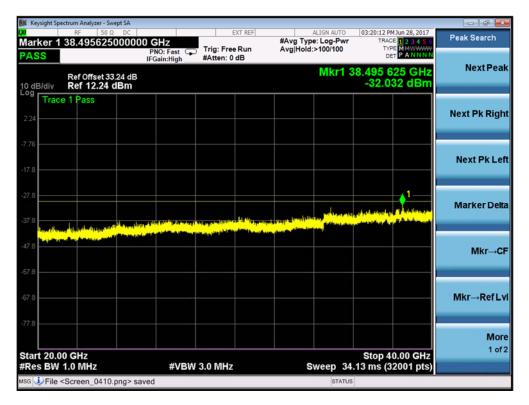




Keysight Spectrum Analyzer - Swept SA			-
arker 1 19.251018750000 ASS	EXT REF PNO: Fast Trig: Free Run IFGain:Low #Atten: 6 dB	ALIGN AUTO 02:57:21 PM Jun 28 #Avg Type: Log-Pwr TRACE 12 Avg Hold:>100/100 TYPE MAY DET P A	456 Peak Search
Ref Offset 29.4 dB		Mkr1 19.251 0 0 -37.160 d	
60 Trace 1 Pass			Next Pk Rig
1.6			Next Pk Le
1.6	teringthamend ¹¹¹ specific tering to a state	New drives a second with data to drive the second shifted	1 Marker Del
			Mkr→C
1.6			Mkr→RefL
tart 5.350 GHz Res BW 1.0 MHz	#VBW 3.0 MHz	Stop 20.000 Sweep 25.60 ms (32001	
G G	#VBV 5.0 WI12	status	

Channel Position B_{RFBW} - QPSK - 5.35GHz - 20GHz

Channel Position BRFBW - QPSK - 20GHz - 40GHz





	n Analyzer - Swept SA RF 50 Ω DC		EXT REF	ALIGN AU		Peak Search
larker 1 91 ASS	1.557281250	PNO: Fast IFGain:Low	Trig: Free Run #Atten: 6 dB	#Avg Type: Log-P Avg Hold:>100/10		
Re dB/div R	ef Offset 21.12 dB ef 0.12 dBm				Mkr1 911.56 MHz -64.138 dBm	NextPea
Trace 1	Pass					Next Pk Rigi
9.9						Next Pk Le
9.9						Marker De
	alahi setilah per dara li	l. t. a. Markada and a state of the state of t	dulutu dan dirad	chard familia the series of the state	1-	Mkr→C
9.9		ale parte d'arrange d'ay de distri d'ar	iten (fillinkeking) teken			Mkr→RefL
9.9 tart 1.0 MHz	2				Stop 1.0000 GHz	Mo 1 of
Res BW 100) kHz	#VBW	300 kHz	Sweep	4.267 ms (32001 pts)	

Channel Position T_{RFBW} - QPSK - 1MHz - 1GHz

Channel Position TRFBW - QPSK - 1GHz - 5.15GHz





Keysight Spectrum Analyzer - Swept SA				
RF 50 Ω DC arker 1 19.3979765625 ASS			VT TRACE 1 2 3 4 5 6	Peak Search
Ref Offset 29.4 dB	IFGain.Low		kr1 19.398 0 GHz -37.651 dBm	NextPea
60 Trace 1 Pass				Next Pk Righ
1.6				Next Pk Le
1.6	. By Hydro Architel Webster Jacobier, Jacobier	a un un th <mark>a branch ann an star ann ann an star ann ann an star ann an star ann an star ann an star ann an star</mark>		Marker Del
1.6				Mkr→C
1.6				Mkr→RefL
tart 5.350 GHz Res BW 1.0 MHz	#VBW 3.0 MHz	Swoon	Stop 20.000 GHz 25.60 ms (32001 pts)	Mo 1 of
	#VBVV 5.0 IVIN2	Sweep	23.00 ms (3200 mpts)	

Channel Position T_{RFBW} - QPSK - 5.35GHz - 20GHz

Channel Position TRFBW - QPSK - 20GHz - 40GHz





L-MIMO-MC 2 (3C)

Maximum Output Power 20.5dBm per port

Channel Position Bandwidth		Channel Frequency
Channel Position B _{RFBW}	20 MHz	5180.0MHz + 5200.0MHz + 5220.0MHz
Channel Position M _{RFBW}	20 MHz	-
Channel Position T _{RFBW}	20 MHz	5200.0MHz + 5220.0MHz + 5240.0MHz



Keysight Spectrum Analyzer -	• Swept SA 0 Ω DC		XT REF	ALIGN AUTO	09:18:22 PM Jun 27, 2017	
Marker 1 769.4495	531250 MHz	ast 😱 Trig: Free	#Av Run Avg	g Type: Log-Pw Hold:>100/100		Peak Search
Ref Offset 0 dB/div Ref 0.12	21.12 dB dBm			N	lkr1 769.45 MHz -64.339 dBm	Next Pea
og Trace 1 Pass						Next Pk Righ
9.9						Next Pk Le
9.9						Marker Del
	Sined (1) this former and all leave	فارجع فأفقت الأرق فرار الأرقاء مرياوين	laanse and blade agenesis		l	Mkr→C
9.9						Mkr→RefL
estart 1.0 MHz Res BW 100 kHz		#\/B\W(200 H1		Swaar	Stop 1.0000 GHz	Mor 1 of
Res BW 100 KHZ		#VBW 300 kHz		Sweep 4	.267 ms (32001 pts)	

Channel Position BRFBW - QPSK - 1MHz - 1GHz

Channel Position BRFBW - QPSK - 1GHz - 5.15GHz





Keysight Spectrum Analyzer - Swept SA				- 6
arker 1 18.632056250000	PNO: Fast Free Run IFGain:Low #Atten: 6 dB	ALIGN AUTO #Avg Type: Log-Pwr Avg Hold:>100/100	09:20:33 PM Jun 27, 2017 TRACE 2 3 4 5 6 TYPE MMWWWW DET P A N N N N	Peak Search
Ref Offset 29.4 dB OdB/div Ref 8.40 dBm		Mkr	1 18.632 1 GHz -37.893 dBm	Next Pea
60 Trace 1 Pass				Next Pk Rigl
1.6				Next Pk Le
1.6	n fer er of fandt og kjørte stærte sott for føre statte for sott f	lines where a subscription of the largest sectors	ul lutheless of interflicit its st	Marker De
				Mkr→C
1.6				Mkr→RefL
tart 5.350 GHz Res BW 1.0 MHz	#VBW 3.0 MHz	Sweep 25	Stop 20.000 GHz .60 ms (32001 pts)	Mo 1 of
		Sweep 25	00 ms (3200 pts)	

Channel Position B_{RFBW} - QPSK - 5.35GHz - 20GHz

Channel Position BRFBW - QPSK - 20GHz - 40GHz





Keysight Spectrum Analyzer - Sv RF 50 G		EXT REF	ALIGN AUTO	09:27:57 PM Jun 27, 2017	╺╴₽
larker 1 930.94412		Trig: Free Run	#Avg Type: Log-Pwr Avg Hold:>100/100	09:27:57 PM Jun 27, 2017 TRACE 1 2 3 4 5 6 TYPE MMWWWW DET P A N N N	Peak Search
Ref Offset 21 0 dB/div Ref 0.12 d	1.12 dB Bm		MI	r1 930.94 MHz -63.876 dBm	Next Pea
og Trace 1 Pass					Next Pk Righ
9.9					Next Pk Le
9.9					Marker Del
9.9	م و الله على الله مع الم الله مع الله م	for a finite hill the first state	والإرابة والمراجع والمتحافظ والمحافظ والمحافظ والمحافظ		Mkr→C
9.9	aan diga medi Kun vili daa on ber verdel if dea				Mkr→RefL
tart 1.0 MHz Res BW 100 kHz		BW 300 kHz		Stop 1.0000 GHz	Moi 1 of
	#V	BW 300 KH2	Sweep 4.2	267 ms (32001 pts)	

Channel Position T_{RFBW} - QPSK - 1MHz - 1GHz

Channel Position TRFBW - QPSK - 1GHz - 5.15GHz





Keysight Spectrum Analyzer - Swept S RF 50 Ω D		EXT REF	ALIGN AUTO	09:25:16 PM Jun 27, 2017	
larker 1 19.229501562 ASS	2500 GHz PNO: Fast IFGain:Low	#Avg T ree Run Avg Ho	ype: Log-Pwr old:>100/100	TRACE 123456 TYPE MMWWWWW DET PANNNN	Peak Search
Ref Offset 29.4 d 0 dB/div Ref 8.40 dBm			Mkr1	19.229 5 GHz -37.154 dBm	NextPea
og Trace 1 Pass					Next Pk Rig
1.6					Next Pk Le
1.6	त्रा के दिशता के फोर्ट का जिल्ला का जिस्साल के स्ट्राल्य	Medwant of Paul of Million	there are the second	ateric a site a site left the site of	Marker De
					Mkr→C
1.6					Mkr→RefL
tart 5.350 GHz Res BW 1.0 MHz	#VBW 3.0 MH			Stop 20.000 GHz 60 ms (32001 pts)	Mo 1 o

Channel Position T_{RFBW} - QPSK - 5.35GHz - 20GHz

Channel Position TRFBW - QPSK - 20GHz - 40GHz





Configuration A2

L-MIMO-SC

Maximum Output Power 20.5dBm per port

Channel Position	Bandwidth	Channel Frequency
Channel Position B	20.0MHz	5745.0MHz
Channel Position M	20.0MHz	5785.0MHz
Channel Position T	20.0MHz	5825.0MHz



🚺 Keysight S EXT REF ALTGN A 08:56:49 PM Jun 28, 2017
 Marker 1
 970.498281250
 MHz

 PASS
 IFGain:Low
Avg Type: Log-Pw Avg|Hold:>100/100 Peak Search TRACE 2 3 4 TYPE MWWW DET P N N N Trig: Free Run #Atten: 6 dB Next Peak Mkr1 970.50 MHz -64.275 dBm Ref Offset 21.12 dB Ref 0.12 dBm 10 dB/div Trace 1 Pass Next Pk Right Next Pk Left Marker Delta Mkr→CF Mkr→RefLvl More 1 of 2 Start 1.0 MHz #Res BW 100 kHz Stop 1.0000 GHz Sweep 4.267 ms (32001 pts) #VBW 300 kHz STATUS

Channel Position B - QPSK - 1MHz - 1GHz

Channel Position B - QPSK - 1GHz - 5.650GHz





tart 5.92 Res BW	5 GHz 1.0 MHz		#VBW	3.0 MHz		Swee	s p 23.47	top 20. 7 ms (32	000 GHz 2001 pts)	
	15 OUT							ton 20		Moi 1 of
1.6										Mkr→RefL
1.6										
1.6										Mkr→C
					al <mark>tini andari</mark>	and a defense of a	ni din <mark>bin</mark>	In Initial I		Marker Del
1.6										
1.6										Next Pk Le
.60										Next Pk Rig
o dB/div	Ref Offset 2 Ref 8.40 d e 1 Pass	9.4 dB IBm							5 GHz 2 dBm	
ASS	19.283494		PNO: Fast FGain:Low	Trig: Free Ru #Atten: 6 dB	un Av	vg Hold:>100/	100	TYPE DE1	PNNNN	NextPea
				EXT		ALIGN			Jun 28, 2017	Peak Search

Channel Position B - QPSK - 5.925GHz - 20GHz

Channel Position B - QPSK - 20GHz - 40GHz





🚺 Keysight S EXT REF ALTGN AL 09:11:56 PM Jun 28, 2017 Avg Type: Log-Pw Avg|Hold:>100/100 Peak Search Marker 1 871.160218750 MHz PASS TRACE 1 2 3 4 TYPE M Trig: Free Run #Atten: 6 dB Next Peak Mkr1 871.16 MHz -64.713 dBm Ref Offset 21.12 dB Ref 0.12 dBm 10 dB/div Trace 1 Pass Next Pk Right Next Pk Left Marker Delta Mkr→CF Mkr→RefLvl More 1 of 2 Start 1.0 MHz #Res BW 100 kHz Stop 1.0000 GHz Sweep 4.267 ms (32001 pts) #VBW 300 kHz STATUS

Channel Position M - QPSK - 1MHz - 1GHz

Channel Position M - QPSK - 1GHz - 5.650GHz





tart 5.92 Res BW			#VBW	3.0 MHz		Sweep 2		0.000 GHz 32001 pts)	
									Mor 1 of
71.6									Mkr→RefL
51.6									
51.6			and all all all and			and particular designed and play	and a state of the second s		Mkr⊸C
1.6	on alter the set ^{bi} fficients	a) do as sente	alan ak dinin talan s	ind hydrifts frigue, y tilget og	Santan Santan Jugaran Santa	an san dan banda jer	المحما القابا المطعي	1 Analiticana	Marker Del
1.6									Next Pk Le
.60									Next Pk Rig
) dB/div	Ref Offset 2 Ref 8.40 d	9.4 dB IBm				MI	(r1 19.24 -38.2	4 8 GHz 67 dBm	NextFea
arker 1 ASS	19.244788		CHZ PNO: Fast IFGain:Low	Trig: Free Run #Atten: 6 dB		ype: Log-Pwi old:>100/100	TY D	CE 1 2 3 4 5 6 PE MWWWWWW ET P NNNNN	NextPea
	RF 50 9	Ω DC		EXT REF		ALIGN AUTO		M Jun 28, 2017	Peak Search

Channel Position M - QPSK - 5.925GHz - 20GHz

Channel Position M - QPSK - 20GHz - 40GHz

