

XMit 2019.09.05

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5171B-506	TEW	2-May-18	2-May-21
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	19-Mar-19	19-Mar-20

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in the available band. The channels closest to the band edges were selected. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge.

All limits were adjusted by a factor of [-10*log(4)] dB to account for the device operation as a 4 port MIMO transmitter, as per FCC KDB 622911.

Band 71: Per FCC section 27.53(g), the power of any emission outside of the authorized operating frequency range cannot exceed -13 dBm. The limit is adjusted to -19 dBm [-13 dBm -10 log (4)] per FCC KDB 662911D01 v02r01 because the BTS may operate as a 4 port MIMO transmitter.

FCC 27.53(g) requires a >100 kHz measurement bandwidth for emissions 100 kHz outside of the RRH operating frequency range. FCC 27.53(g) requires a >30 kHz measurement bandwidth for emissions between 100 kHz outside of the RRH operating frequency range and band edge of the operating frequency range.

Band 13: Per FCC section 27.53(c), the power of any emission outside of the authorized operating frequency range cannot exceed -13 dBm. The limit is adjusted to -19 dBm [-13 dBm -10 log (4)] per FCC KDB 662911D01 v02r01 because the BTS may operate as a 4 port MIMO transmitter.

FCC section 27.53(c) requires a >100 kHz measurement bandwidth for emissions 100 kHz outside of the RRH operating frequency range. FCC 27.53(c) requires a >30 kHz measurement bandwidth for emissions between 100 kHz outside of the RRH operating frequency range and band edge of the operating frequency range.

Section 27.53(c)(3) requires an emission limit of -46dBm for any 6.25 kHz bandwidth between frequency bands 763-775 MHz and 793-806MHz. Adjusting for the four port MIMO requirement the emission limit in these frequency ranges is -52 dBm [i.e.: Limit = -46 dBm/6.25kHz (FCC Limit) - 6dB (4 port MIMO)].



Mit 2019.09.0 EUT: AHBOA Remote Radio Head (RRH) Serial Number: BL1934X1001 Work Order: NOKI0003 Date: 28-Oct-19 Customer: Nokia Solutions and Networks Temperature Attendees: John Rattanavong, Mitchell Hill Humidity: Project: None Barometric Pres.: Tested by: Jonathan Kiefer TEST SPECIFICATIONS Power: 48VDC Test Method Job Site: TX03 FCC 27:2019 ANSI C63 COMMENTS Tested on highest power antenna port (Port 1). EUT is operated at 100% duty cycle. Band Edge measurements were made for a Band 71/Band 13 multiband multicarrier test case on four modulation types (QPSK, 16QAM, 64QAM, 256QAM). Three Band 71/Band 13 LTE5 carriers (based upon KDB 971168 D03v01) were enabled using two carriers (with minimum spacing between carrier frequencies) at the Band 71 ower band edge [619.5MHz and 624.5MHz] and a third carrier with maximum spacing between the other two carrier frequencies [753.5MHz] at the Band 13 upper band edge. DEVIATIONS FROM TEST STANDARD None Jonathan Kiefer Configuration # 1 Signature Value l imit (dBm) Result (dBm) Band 71/13 **QPSK** Modulation Band 71/13 Multicarrier Lower Band Edge Measurement 1 -23.679 -19 Pass Measurement 2 -26.071 -19 Pass Upper Band Edge Measurement 1 -25 291 -19 Pass -19 Measurement 2 -22.094 Pass -52 -52 Measurement 3 -56.121 Pass Measurement 4 -57.86 Pass 16QAM Modulation Band 71/13 Multicarrier Lower Band Edge Measurement 1 -24 131 -19 Pass Measurement 2 -26.151 -19 Pass Upper Band Edge Measurement 1 -24.809 -19 Pass Measurement 2 -21.876 -56.149 -19 -52 Pass Measurement 3 Pass Measurement 4 -57.851 -52 Pass 64QAM Modulation Band 71/13 Multicarrier Lower Band Edge Measurement 1 -23.802 -19 Pass -19 Measurement 2 -26.795 Pass Upper Band Edge Measurement 1 -25.479 -19 -19 Pass Measurement 2 -22.649 Pass -55.983 -57.891 -52 -52 Measurement 3 Pass Pass Measurement 4 256QAM Modulation Band 71/13 Multicarrier Lower Band Edge -24.313 Measurement 1 -19 Pass Measurement 2 -27.148 -19 Pass Upper Band Edge Measurement 1 -25.172 -19 Pass Measurement 2 -22 446 -19 Pass -56.245 -52 Measurement 3 Pass Measurement 4 -57.982 -52 Pass



				Value (dBm)	Limit (dBm)	Result	
				-23.679	-19	Pass	٦
	Analyzer - Element Materials Te	chnology		•			
XVIRL RF	50 Ω AC	PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run #Atten: 20 dB	ALIGN OFF Avg Type: RM Avg Hold: 1000	S	41:35 PM Oct 22, 2019 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN	
Ref 10 dB/div Ref Log	Offset 40.3 dB 40.30 dBm				Mkr1 -:	616.90 MHz 23.679 dBm	
30.3							
20.3							
10.3							
0.300							
-9.70						-19.00 dBm	
-19.7					Landana		
-29.7							
-39.7							
-49.7							
Start 597.00 M #Res BW 100			¢VBW 300 kHz*		Sto Sweep 4.995	p 637.00 MHz ms (1000 pts)	
MSG			5	STATUS			
	Band 71/13, QP	SK Modulati	on, Band 71/13 Multic	Value	Limit		
·				(dBm) -26.071	(dBm) -19	Result Pass	7

RL RF	50 Ω AC		SENSE:INT	ALIGN OFF	03:42:31 PM Oct 22, 201
		PNO: Wide ↔→→ IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: RMS Avg Hold: 1000/1000	TRACE 12345 TYPE A WWWW DET A NNNN
	set 40.3 dB .30 dBm			М	kr1 617.000 00 MH -26.071 dBr
1.3					
).3					
70					
.7			1		-19.00 dł
.7					
.7					
.7					
art 616.9000 Mi tes BW 30 kHz	Hz	#VB	W 100 kHz*	Swe	Stop 617.1000 MH ep 1.066 ms (1000 pts
				STATUS	op note no (note pr



			Value	Limit	
I			(dBm)	(dBm)	Result
			-25.291	-19	Pass
🍺 Keysight Spectrum Analyzer - Element Material	- Teshaalaan				
X RL RF 50 Ω AC		SE:INT	ALIGN OFF	04:0	5:56 PM Oct 22, 2019
		Trig: Free Run #Atten: 20 dB	Avg Type: RM Avg Hold: 1000	s /1000	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNNN
Ref Offset 40.3 dB 10 dB/div Ref 40.30 dBm				Mkr1 756. -2	000 00 MHz 25.291 dBm
=09					
30.3					
20.3					
10.3					
0.300					
-9.70					
					-19.00 dBm
-19.7		\			
-29.7					
-39.7					
-49.7					
451					
Start 755.9000 MHz				Ctore:	756.1000 MHz
#Res BW 30 kHz	#VBW	100 kHz*		Stop Sweep 1.066	
MSG			STATUS		
Band 71/13, 0	QPSK Modulation, Bar	nd 71/13 Multicar	rier, Upper Band E	dge, Measureme	ent 2
			Value	Limit	
			(dBm) -22.094	(dBm) -19	Result Pass

RL	RF 50 Ω	AC	S	ENSE:INT	ALIGN OFF			PM Oct 22, 2019
			PNO: Fast ↔→ IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: Avg Hold:	RMS 1000/1000	1	ACE 1 2 3 4 5 YPE A WWWW DET A NNNN
dB/div	Ref Offset 40 Ref 40.30 c	3 dB IBm				N	1kr1 756. -22.	100 MH 094 dBn
	[]							
).3								
).3								
70								
7								-19.00 dE
.7								
.7								······
.7								
art 746.0 tes BW	00 MHz 100 kHz		#VBV	V 300 kHz*		Sweep	Stop 8 7.797 ms	08.00 MH (3000 pt
3					STATUS			



	,			arrier, Upper Band E Value	Limit	
				(dBm)	(dBm)	Result
				-56.121	-52	Pass
鱦 Keysight Spectrum Analy		echnology				
KARL RF	50 Ω AC		SENSE:INT	ALIGN OFF Avg Type: RM	04: S	08:46 PM Oct 22, 2019
		PNO:Wide ↔ IFGain:Low	. Trig: Free Run #Atten: 10 dB	Avg Hold: 200/	200	TRACE 123456 TYPE A WWWW DET A NNNNN
RefOff 10 dB/div Ref0.	set 40.3 dB 30 dBm				Mkr1 7 -{	63.018 MHz 56.121 dBm
-9.70						
-19.7						
-29.7						
-39.7						
-49.7						-52.00 dBm
-59.7	1			بوادرا ويعامدوه جوالمعرومة يرود فود المطالب القرو		and the second
-69.7						
-79.7						
-89.7						
-89.7						
Start 763.000 MH #Res BW 6.2 kHz			SW 30 kHz*			775.000 MHz
		#VE	W JU KHZ	STATUS	Sweep 376.3	ms (2000 pts)
MSG						
	Band 71/13, QF	PSK Modulation,	Band 71/13 Multic	arrier, Upper Band E Value	Edge, Measureme Limit	ent 4
				(dBm)	(dBm)	Result
				-57.86	-52	Pass

RL RF 50 Ω AC		SENSE:INT	ALIGN OFF	04:10:43 PM Oct 22, 201
	PNO: Fast ← IFGain:Low	►. Trig: Free Run #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200	TRACE 1 2 3 4 5 TYPE A WWWW DET A NNNN
Ref Offset 40.3 dB dB/div Ref 0.30 dBm				Mkr1 804.160 MH -57.860 dBr
70				
0.7				
.7				
.7				
.7				1
.7	۲۰۰۰ به می این می این این این این این این این این این ای		900	
7				
.7				
.7				
art 793.000 MHz Res BW 6.2 kHz	#V	'BW 30 kHz*	Sw	Stop 806.000 MH eep 407.7 ms (2000 pt
3			STATUS	



				Value	Limit	Result
				(dBm) -24.131	(dBm) -19	Pass
				-24.131	-13	1 835
📕 Keysight Spectrum Analyzer - Element Mate	vials Technology					
RL RF 50 Ω AC		SENSE:INT		ALIGN OFF	03:	43:45 PM Oct 22, 2019
	PNO: Fast IFGain:Low	↔ Trig: Free #Atten: 20	Run dB	Avg Type: RM Avg Hold: 100		TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNNN
Ref Offset 40.3 dB 10 dB/div Ref 40.30 dBm					Mkr1 -	616.90 MHz 24.131 dBm
-og						
30.3						
			m	mon	γ	
20.3						
10.3						
).300						
9.70				ì		
			4			-19.00 dBm
.19.7			·		lana and	
-29.7						
39.7						
49.7						
-43.7						
Start 597.00 MHz #Res BW 100 kHz	#	VBW 300 kHz	*			op 637.00 MHz ms (1000 pts)
ISG				STATUS		
	160AM Modulat	ion Band 71/1	Multicar		Edge, Measurem	ent 2
Dand / 1/13		ion, Dana 71/10	munican	Value	Limit	
				(dBm) -26.151	(dBm) -19	Result Pass

RL RF 50 Ω AC		SENSE:INT	ALIGN OFF	03:44:14 PM Oct 22, 2019
	PNO: Wide ↔ IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: RMS Avg Hold: 1000/1000	TRACE 1 2 3 4 5 TYPE A WWWW DET A NNNN
Ref Offset 40.3 dB dB/div Ref 40.30 dBm			Mkr	1 617.000 00 MH -26.151 dBn
 D.3				
.3				
0				
·o				
.7		1		-19.00 dE
7				
.7				
3.7				
art 616.9000 MHz Res BW 30 kHz	#VB	W 100 kHz*	Sweep	Stop 617.1000 MH 1.066 ms (1000 pts
3			STATUS	



		Value (dBm)	Limit (dBm)	Result
		-24.809	-19	Pass
		24.003	15	1 435
📕 Keysight Spectrum Analyzer - Element Materia	Is Technology			
X RL RF 50Ω AC	SENSE:INT	ALIGN OFF	04:1	2:03 PM Oct 22, 2019
	PNO: Wide ↔ Trig: Free Run IFGain:Low #Atten: 20 dB	Avg Type: RMS Avg Hold: 1000		TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNNN
Ref Offset 40.3 dB 10 dB/div Ref 40.30 dBm Log			Mkr1 756. -2	000 00 MHz 24.809 dBm
-og				
30.3				
20.3				
10.3				
0.000				
0.300				
-9.70				
-19.7	1			-19.00 dBm
-29.7				
-39.7				
-49.7				
Start 755.9000 MHz			Stop	756.1000 MHz
#Res BW 30 kHz	#VBW 100 kHz*		Sweep 1.066	
MSG		STATUS		
Band 71/13, 1	6QAM Modulation, Band 71/13 Multica	rrier, Upper Band I	Edge, Measureme	ent 2
		Value	Limit	
	I	(dBm) -21.876	(dBm) -19	Result Pass

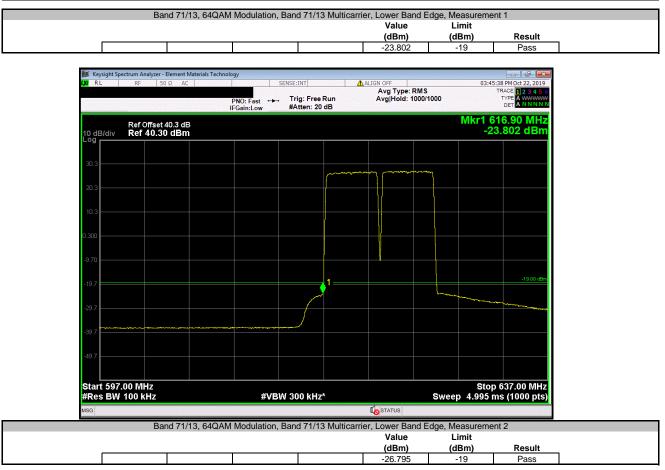
Keysight Spectrum Analyzer - Element Materials T RL RF 50 Ω AC	echnology SENSE:INT		04:12:42 PM Oct 22, 2019
	PNO: Fast Trig: Free Run IFGain:Low #Atten: 20 dB	ALIGN OFF Avg Type: RMS Avg Hold: 1000/1000	TRACE 1 2 3 4 5 TYPE A WWW DET A N N N N
Ref Offset 40.3 dB dB/div Ref 40.30 dBm		N	lkr1 756.100 MHz -21.876 dBn
0.3			
0.3			
0.3			
70			
9.7			-19.00 dB
3.7			
3.7			
3.7			
art 746.00 MHz Res BW 100 kHz	#VBW 300 kHz*	Sweep	Stop 808.00 MH 7.797 ms (3000 pts
G		STATUS	



			,	Iticarrier, Upper Ban Value	Limit		
				(dBm)	(dBm)	Result	_
				-56.149	-52	Pass	
📕 Keysight Spectrum An	alyzer - Element Materials Te 50 Ω AC	chnology	SENSE:INT	ALIGN OFF		4:14:23 PM Oct 22, 2019	
KL RF	50 52 AC			Avg Type: R	RMS	TRACE 1 2 2 4 5 6	
		PNO: Wide ↔ IFGain:Low	⊷ Trig: Free Run #Atten: 10 dB	Avg Hold: 20			
Ref 0 10 dB/div Ref 0 Log	ffset 40.3 dB 0 .30 dBm				Mkr1	763.150 MHz -56.149 dBm	
-9.70							
-19.7							
-29.7							
-39.7							
-49.7						-52.00 dBm	
···· ♦ ¹						-52.00 dbm	
-59.7	**********			******			
-69.7							
-79.7							
-89.7							
Start 763.000 M						op 775.000 MHz	
#Res BW 6.2 kH	Iz	#V	BW 30 kHz*		Sweep 376.	.3 ms (2000 pts)	
MSG				STATUS			
	Band 71/13, 160	QAM Modulation	n, Band 71/13 Mu	Iticarrier, Upper Ban		ment 4	
				Value	Limit (dBm)	Beault	
				(dBm) -57.851	-52	Result Pass	-

RL RF 50 Ω AC		SENSE:INT	ALIGN OFF	04:16:14 PM Oct 22, 201
	PNO: Fast ↔ IFGain:Low	➡ Trig: Free Run #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200	TRACE 1 2 3 4 5 TYPE A WWWW DET A NNNN
Ref Offset 40.3 dB dB/div Ref 0.30 dBm				Mkr1 801.077 MH -57.851 dBr
70				
.7				
.7				
7				
.7				-52.00 di
.7				and a feature of the second
.7				
.7				
.7				
art 793.000 MHz				Stop 806.000 MH
tes BW 6.2 kHz	#V	BW 30 kHz*	Swe	eep 407.7 ms (2000 pt





RL	RF 50 Ω AC	2	ENSE:INT	ALIGN OFF	03:46:08 PM Oct 22, 201
		PNO: Wide ↔→ IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: RMS Avg Hold: 1000/1000	TRACE 1 2 3 4 5 TYPE A WWWW DET A NNNN
dB/div	Ref Offset 40.3 dB Ref 40.30 dBm	1		Mkr	1 617.000 00 MH -26.795 dBr
.3					
.3					
3					
7			1		-19.00 d
7					
7					
7					
art 616 es BW	.9000 MHz 30 kHz	#VBI	№ 100 kHz*	Sweep	Stop 617.1000 MH 1.066 ms (1000 pt
				STATUS	



		(-10)		Desult
		(dBm) -25.479	(dBm) -19	Result Pass
		-25.475	-19	1 833
🎽 Keysight Spectrum Analyzer - Element Materials T	Technology			
RL RF 50Ω AC	SENSE:INT	ALIGN OFF	04::	7:39 PM Oct 22, 2019
	PNO: Wide ↔ Trig: Free Run IFGain:Low #Atten: 20 dB		5 0/1000	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNNN
Ref Offset 40.3 dB 10 dB/div Ref 40.30 dBm -09			Mkr1 756.	000 00 MHz 25.479 dBm
.0g				
30.3				
20.3				
49.2				
10.3				
).300				
9.70				
.19.7	<u></u>			-19.00 dBm
-19.7				
29.7				
39.7				
49.7				
Start 755.9000 MHz			Ston	756.1000 MHz
Res BW 30 kHz	#VBW 100 kHz*		Sweep 1.066	
ISG		I o status		
Band 71/13, 64	QAM Modulation, Band 71/13 M	ulticarrier, Upper Band	Edge, Measurem	ent 2
		Value (dBm)	Limit (dBm)	Result

Keysight Spectrum Analyzer - Eleme RL RF 50 Ω			SENSE:INT	ALIGN OFF		04:19	.06 PM Oct 22, 2019
		PNO: Fast ↔→ IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: Avg Hold:			TRACE 1 2 3 4 5 TYPE A WWWM DET A NNNN
Ref Offset 40.3 dB/div Ref 40.30 dB	dB Sm					Mkr1 75 -2:	6.183 MH: 2.649 dBn
0.3							
0.3							
3.3							
00							
70							
a.7 1							-19.00 dB
2.7							
9.7						***	
3.7							
art 746.00 MHz Res BW 100 kHz		#VBI	N 300 kHz*		Swe	Stop eep 7.797 n	808.00 MH
iG				I STATUS			



		(dBm)	Limit (dBm)	Result
		-55.983	-52	Pass
		55.565	52	1 433
Keysight Spectrum Analyzer - Element Materials	Technology			
RL RF 50 Ω AC	SENSE:INT	ALIGN OFF	04: MS	19:57 PM Oct 22, 2019
		Free Run Avg Hold: 20 n: 10 dB	00/200	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN
Ref Offset 40.3 dB 10 dB/div Ref 0.30 dBm -09			Mkr1 7 -{	63.042 MHz 55.983 dBm
-og				
9.70				
19.7				
29.7				
-23.1				
39.7				
49.7				-52.00 dBm
59.7	unitere president pythe peter and an and an alter the the data			
69.7				
79.7				
89.7				
Start 763.000 MHz	(B)(L 00)		Stop	775.000 MHz
#Res BW 6.2 kHz	#VBW 30 k	HZ*	Sweep 376.3	ms (2000 pts)
	OAM Modulation Bond	71/13 Multicarrier, Upper Ban	d Edgo Mooguram	opt 4
Band 71/13, 64	ANI NOULIATION, Band I	Value	Limit	ent 4

RL RF	50 Ω AC		SENSE:INT	ALIGN OFF	04:21:47 PM Oct 22, 201
		PNO: Fast ++ IFGain:Low	. Trig: Free Run #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200	TRACE 1 2 3 4 5 TYPE A WWW DET A NNNN
	set 40.3 dB 30 dBm	il Guineou			Mkr1 795.835 MH -57.891 dBr
.70					
9.7					
9.7					
),7					
9.7	 ♦ ¹				-52.00 at
7	and the same the same the state of the same state of the same state of the same state of the same state of the	ternisley.com terpigenetin segesythioregic	an a	n fan ferster - Fallen ferse ferse stere of de en d	ala an an ann an Anna a
.7					
.7					
9.7					
art 793.000 MH Res BW 6.2 kHz		#\/B	W 30 kHz*		Stop 806.000 MH Sweep 407.7 ms (2000 pt
G		#96	W 50 MH2	STATUS	5weep 407.7 ms (2000 pt



			,		Value	0	Limit	
					(dBm) -24.313		(dBm) -19	Result Pass
	m Analyzer - Element Materials Tech RF 50 Ω AC	inology	SENSE:INT		ALIGN OFF			:47:28 PM Oct 22, 2019
B	tef Offset 40.3 dB	PNO: Fast ↔ IFGain:Low	A Trig: Free F #Atten: 20	Run dB	Avg Type: F Avg Hold: 1	000/1000	Mkr1	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN 616.90 MHZ
10 dB/div R	lef 40.30 dBm				,		-	24.313 dBm
30.3					[~~~~~		
20.3								
10.3								
0.300								
-9.70								
-19.7				1		t		-19.00 dBm
-29.7								
-39.7								
-49.7								
Start 597.00 #Res BW 10		#VI	300 kHz*			Sw	Sto ep 4.995	op 637.00 MHz i ms (1000 pts)
MSG					STATUS			
	Band 71/13, 256Q	AM Modulatio	n, Band 71/13	3 Multicarri	er, Lower Ba Value	nd Edge	Measurer Limit	ment 2
					(dBm)		(dBm)	Result
					-27.148		-19	Pass

RL	RF 50	Ω AC		SENSE:INT	ALIGN OFF			M Oct 22, 2019
			PNO: Wide ↔ IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: Avg Hold:		TY	CE 1 2 3 4 5 PE A WWWM ET A NNNN
dB/div	Ref Offset Ref 40.30					Mkr1	617.000 -27.1	00 MH 48 dBn
0.3								
).3								
).3								
70								
.7								-19.00 dE
.7								
.7								
.7								
art 616 les BW	.9000 MHz 30 kHz		#VB	W 100 kHz*		Sweep	Stop 617. 1.066 ms	1000 MH (1000 pts
3					STATUS			



RL RF 50 Ω AC SENSE:INT ALIGN OFF 04:23:09 PI PNO: Wide IFGain:Low → Trig: Free Run #Atten: 20 dB Avg Type: RMS Avg Iybe: 1000/1000 Trick Trick 00 dB/div Ref Offset 40.3 dB Mkr1 756.0000 -255.11 03 0 0 0 -255.11 03 0 0 0 -255.11 10.3 0 0 0 0 -255.11 10.3 0 0 0 0 0 -255.11 10.3 0 0 0 0 0 0 0 10.3 0 <	Result Pass 10ct 22, 2019 12 3 4 5 6 ANNUMN 00 MHz 72 dBm
Keysight Spectrum Analyzer - Element Materials Technology ALIGN OFF 04:23:09 PR RL RF 50 Ω AC SENSE:INT Auton OFF 04:23:09 PR PNO: Wide IFGain:Low → Trig: Free Run #Atten: 20 dB Avg Type: RNS Avg Hoid: 1000/1000 TRAC 0 0B/div Ref Offset 40.3 dB Mkr1 756.000 -255.1; 0 0B/div Ref 40.30 dB -255.1; 0 0 0 -255.1; 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <t< th=""><th>00 MHz</th></t<>	00 MHz
RL RF 50 Ω AC SENSE:INT Avg Type: RMS Avg Type	10ct 22, 2019 1 2 3 4 5 6 4 WWWWW T A NNNNN 00 MHZ
PNO: Wide IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: RMS Avg Hoid: 1000/1000 Triko Triko PC Ref Offset 40.3 dB Mkr1 756.000 -25.1 0 dB/div Ref 40.30 dBm -25.1 30 3	E 1 2 3 4 5 6 E A WWWW T A N N N N N OO MHZ
PNO: Wide IFGein:Low Trig: Free Run #Atten: 20 dB AvgiHoid: 1000/1000 Tvp De Mkr1 756.000 -25.1 Mkr1 756.000 -25.1 -25.1 -25.1 00 0 0 0 -25.1 03 0 0 0 0 -25.1 03 0 0 0 0 0 0 03 0 <td< td=""><td></td></td<>	
Ref 40.30 dBm 25.1 90	00 MHz 72 dBm
203	
9.70	
9.70	
.197	
.197	
-29.7	
-39.7	-19.00 dBm
-397	
-49.7	
Start 755.9000 MHz Stop 756.1	000 MHz
#Res BW 30 kHz #VBW 100 kHz* Sweep 1.066 ms (
MSG to STATUS	
Band 71/13, 256QAM Modulation, Band 71/13 Multicarrier, Upper Band Edge, Measurement 2	
Value Limit (dBm) (dBm)	

📕 Keysight Spectrum Analyzer - Element Materials Te			
X RL RF 50Ω AC	PNO: Fast ++ Trig: Free Run IFGain:Low #Atten: 20 dB	ALIGN OFF Avg Type: RMS Avg Hold: 1000/1000	04:23:37 PM Oct 22, 2019 TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNN
Ref Offset 40.3 dB I0 dB/div Ref 40.30 dBm			Mkr1 756.100 MHz -22.446 dBm
30.3			
20.3			
10.3			
300			
9.70			-19.00 dBr
19.7			
99.7			
19.7			
tart 746.00 MHz Res BW 100 kHz	#VBW 300 kHz*	Swee	Stop 808.00 MHz p 7.797 ms (3000 pts)
SG		STATUS	



				Value (dBm)		.imit IBm)	Result	
				-56.245		-52	Pass	٦
Keysight Spectrum Analyz	er - Element Materials Techno 50 Ω AC		ENSE:INT	ALIGN OFF		04-3	25:16 PM Oct 22, 2019	
		PNO: Wide ↔→ IFGain:Low	Trig: Free Run #Atten: 10 dB	Avg Type: Avg Hold: 2	200/200		TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN	
Ref Offs 10 dB/div Ref 0.3	et 40.3 dB 10 dBm					Mkr1 7 -{	63.012 MHz 56.245 dBm	
-9.70								
-19.7								
-29.7								
-39.7								
-49.7							-52.00 dBm	
The second second second second								
-59.7								
-69.7								
-79.7								
-89.7								
Start 763.000 MHz	2					Stop	775.000 MHz	
#Res BW 6.2 kHz		#VBV	V 30 kHz*		Swee	p 376.3	ms (2000 pts)	
MSG	1=4/40 0==0.1		D 17///0111	STATUS				
В	and 71/13, 256QA	M Modulation,	Band 71/13 Mult	ticarrier, Upper Ba Value		/leasurem .imit	ient 4	
		•		(dBm)		IBm) -52	Result Pass	_

RL RF 50 Ω	AC	S	ENSE:INT	ALIGN OFF		59 PM Oct 22, 2019
		PNO: Fast ↔→ IFGain:Low	Trig: Free Run #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200	1	TYPE A WWWW DET A NNNN
Ref Offset 40 dB/div Ref 0.30 dB					Mkr1 803 -57	3.230 MH '.982 dBn
70						
7						
.7						
7						
7						-52.00 dt
7				ung har and an address of the address of the second second	♦ 1	
7						
7						
.7						
art 793.000 MHz					Stop 8	06.000 MH
Res BW 6.2 kHz		#VBV	V 30 kHz*	STATUS	Sweep 407.7 m	s (2000 pt