

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.

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.

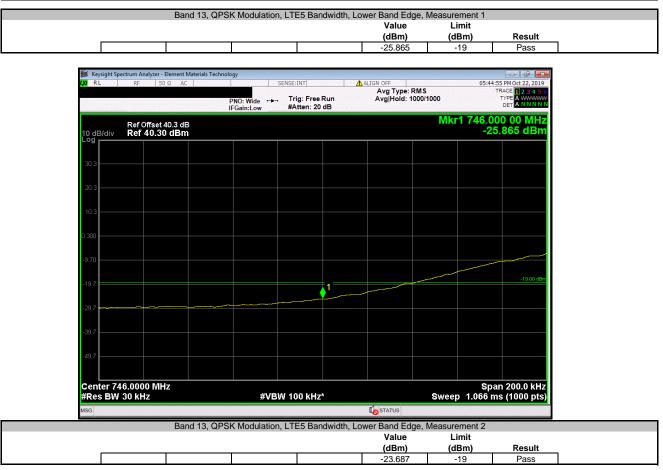
FCC section 27.53(c) requires a >100 kHz measurement bandwidth for emissions 100 kHz outside of the RRH operating frequency range. FCC 27.53(c) requires a >30 kHz measurement bandwidth for emissions between 100 kHz outside of the RRH operating frequency range and band edge of the operating frequency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

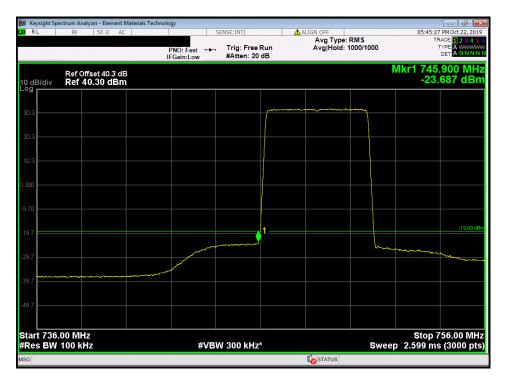
Section 27.53(c)(3) requires an emission limit of -46dBm for any 6.25 kHz bandwidth between frequency bands 763-775 MHz and 793-806MHz. Adjusting for the four port MIMO requirement the emission limit in these frequency ranges is -52 dBm [i.e.: Limit = -46 dBm/6.25kHz (FCC Limit) - 6dB (4 port MIMO)].



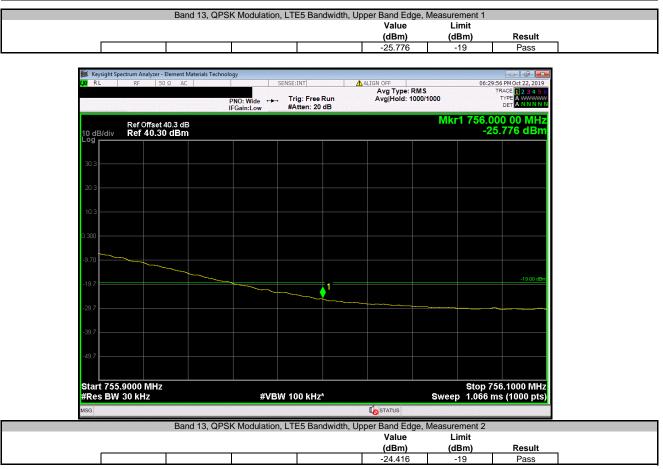
	AHBOA Remote Radio H BL1934X1001			Work Order: I Date: 2	28-Oct-19	
	Nokia Solutions and Net	works		Temperature:		
Attendees:	John Rattanavong, Mitch			Humidity:		
Project:			D	Barometric Pres.:	EV AA	
PECIFICAT	Jonathan Kiefer		Power: 48VDC Test Method	Job Site:	XU3	
:2019			ANSI C63.26:2015			
ENTS on highest	power antenna port (Port	1). EUT is operated at 100% duty cycle.				
FIONS FRO	M TEST STANDARD					
uration #	1	Sou	rethan Kiefer			
		Signature		Value	Limit	D
3				(dBm)	(dBm)	Resu
	QPSK Modulation LTE5 Bandw	idth				
		Lower Band Edge				
		Measurement 1		-25.865	-19	Pass
		Measurement 2 Upper Band Edge		-23.687	-19	Pass
		Measurement 1		-25.776	-19	Pass
		Measurement 2		-24.416	-19	Pass
		Measurement 3		-57.606	-52	Pass
	LTE10 Band	Measurement 4		-58.235	-52	Pass
		Lower Band Edge				
		Measurement 1		-27.65	-19	Pass
		Measurement 2		-24.102	-19	Pass
		Upper Band Edge Measurement 1		-29.409	-19	Pass
		Measurement 2		-29.409 -25.892	-19	Pass
		Measurement 3		-56.758	-52	Pass
		Measurement 4		-58.083	-52	Pass
	16QAM Modulation	idth				
	LTE5 Bandw	idth Lower Band Edge				
		Measurement 1		-25.963	-19	Pass
		Measurement 2		-23.503	-19	Pass
		Upper Band Edge			40	D-
		Measurement 1 Measurement 2		-26.498 -24.257	-19 -19	Pass Pass
		Measurement 3		-57.623	-19	Pass
		Measurement 4		-58.195	-52	Pass
	LTE10 Band					
		Lower Band Edge Measurement 1		-28.336	-19	Pass
		Measurement 2		-24.248	-19	Pass
		Upper Band Edge				
		Measurement 1		-29.497	-19	Pass
		Measurement 2 Measurement 3		-25.87 -56.768	-19 -52	Pass Pass
		Measurement 4		-58.12	-52	Pass
	64QAM Modulation					
	LTE5 Bandw					
		Lower Band Edge Measurement 1		-25.735	-19	Pass
		Measurement 2		-23.735 -23.88	-19	Pass
		Upper Band Edge				
		Measurement 1		-26.166	-19	Pass
		Measurement 2 Measurement 3		-23.806 -57.512	-19 -52	Pass Pass
		Measurement 3 Measurement 4		-57.512 -58.162	-52 -52	Pass Pass
	LTE10 Band				52	1 435
		Lower Band Edge				_
		Measurement 1		-27.953	-19 -19	Pass
		Measurement 2 Upper Band Edge		-24.215	-19	Pass
		Measurement 1		-28.889	-19	Pass
		Measurement 2		-25.53	-19	Pass
		Measurement 3		-56.895	-52	Pass
	256QAM Modulation	Measurement 4		-58.07	-52	Pass
	LTE5 Bandw	idth				
		Lower Band Edge				
		Measurement 1		-26.028	-19	Pass
		Measurement 2 Upper Band Edge		-24.035	-19	Pass
		Measurement 1		-25.861	-19	Pass
		Measurement 2		-24.416	-19	Pass
		Measurement 3		-57.572	-52	Pass
	LTE10 Band	Measurement 4		-58.101	-52	Pass
		width Lower Band Edge				
		Measurement 1		-27.372	-19	Pass
		Measurement 2		-24.164	-19	Pass
		Upper Band Edge		00.000	40	D-
		Measurement 1 Measurement 2		-29.039	-19 -19	Pass
		ivieasurement 2		-25.674	-19	Pass
		Measurement 3		-56.847	-52	Pass











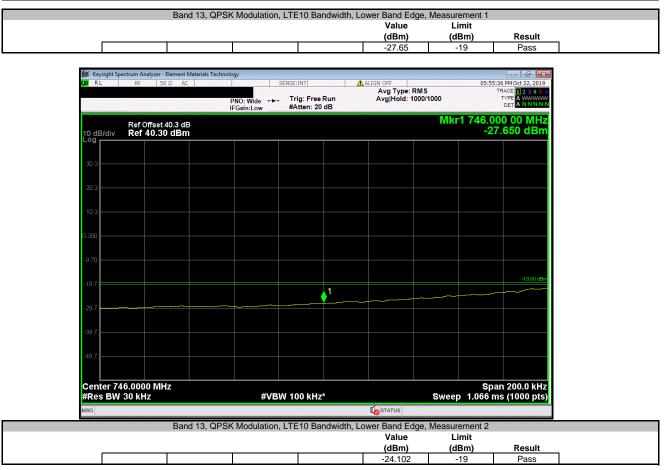
RL	ectrum Analyzer - RF 5	Ω AC			SENSE:INT	ALIGN OFF		06:43:35	PM Oct 22, 201
		o se AL	· I	PNO: Fast ↔ IFGain:Low		Avg Type: Avg Hold:		TR	AGE 1 2 3 4 5 TYPE A WWW DET A NNNN
dB/div	Ref Offset Ref 40.3	40.3 de 0 dBm	3				N	1kr1 756. -24.	.100 MH 416 dBr
3		<u>~</u>							
3									
3									
)									
,		1_							-19.00 dE
1		-							
,									
7									
	.00 MHz 100 kHz			#VE	W 300 kHz*		Sweep	Stop 8 7.797 ms	08.00 MH (3000 pt)
						STATUS			



				Value (dBm)	Limit (dBm)	Result
				-57.606	-52	Pass
I				01.000	02	1 400
鱦 Keysight Spectrum Analyzer - Element	Materials Technology					
LXI RL RF 50 Ω A		SENSE:INT	<u> </u>	ALIGN OFF	06:3	2:13 PM Oct 22, 2019
	PNO: W IFGain:L		Free Run n: 10 dB	Avg Type: RMS Avg Hold: 200/2	; 00	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A N N N N N
Ref Offset 40.3 d 10 dB/div Ref 0.30 dBm	В				Mkr1 7 -{	65.509 MHz 57.606 dBm
Log						
-9.70						
-5.70						
-19.7						
-29.7						
-39.7						
-49.7	A1					-52.00 dBm
- Parries - Mailanna an Island a ta da shuuraan a shulaan	•					
-59.7						
-69.7						
-79.7						
-89.7						
Start 763.000 MHz					Stop	775.000 MHz
#Res BW 6.2 kHz		#VBW 30 kl	Hz*		Sweep 376.3	ms (2000 pts)
MSG				STATUS		
Ba	nd 13, QPSK Mod	dulation, LTE5	Bandwidth, Up	oper Band Edge,	Measurement 4	
				Value (dBm)	Limit (dBm)	Result

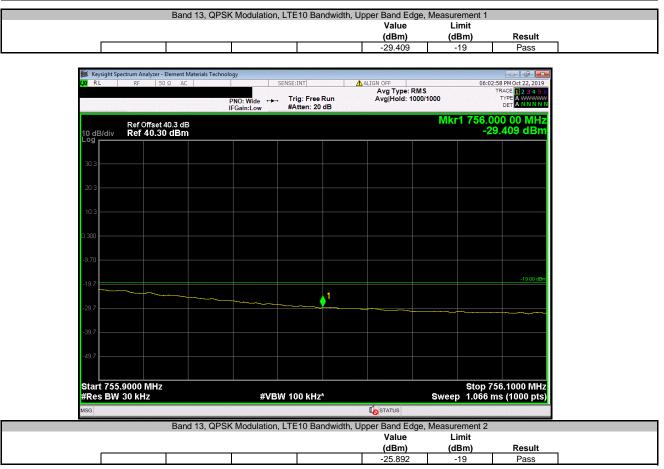
RL RF 50 Ω AC		SENSE:INT	ALIGN OFF	terra de la companya	06:33	3:53 PM Oct 22, 2019
	PNO: Fast ↔→ IFGain:Low	Trig: Free Run #Atten: 10 dB		Гуре: RMS lold: 200/200		TRACE 12345 TYPE A WWWW DET A NNNN
Ref Offset 40.3 dB dB/div Ref 0.30 dBm					Mkr1 80 -5	0.596 MH 8.235 dBn
70						
.7						
.7						
.7						
7						-52.00 d
7	and the second state of the second state of the second states of the second states of the second states of the		<u> </u>	une souther the standing of the standing of		
7						
.7						
.7						
art 793.000 MHz tes BW 6.2 kHz	#VB	W 30 kHz*		Sw	Stop veep 407.7	806.000 MH ns (2000 pt
	<i>"</i>		I STAT			ne (et a c pte











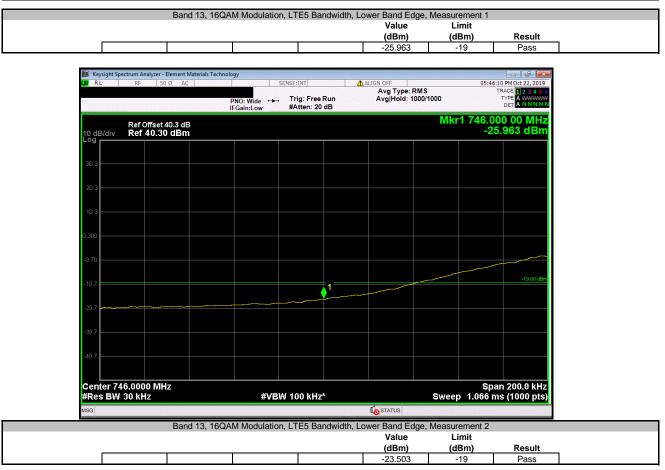
RL	RF 50 Ω AC	terials Technology		ENSE:INT	ALIGN OFF		06:00:48	3 PM Oct 22, 201
			IO: Fast ↔→ Sain:Low	Trig: Free Run #Atten: 20 dB	Avg Type Avg Hold:		TF	ACE 12345 TYPE A DET A NNNN
dB/div	Ref Offset 40.3 dB Ref 40.30 dBm					Ν	/kr1 756 -25.	.100 MH 892 dBn
.3								
3								
3								
0								
D <mark></mark>								
7	1							-19.00 dB
7								
7				**************************************				
7								
	00 MHz 100 kHz		#VBV	/ 300 kHz*		Sweep	Stop 8 7.797 ms	308.00 MH s (3000 pt
					STATUS			



		Value	Limit	Desult
[]		(dBm) -56.758	(dBm) -52	Result Pass
		-30.738	-52	F d S S
Keysight Spectrum Analyzer - Element Materials	Technology			
XIRL RF 50Ω AC	SENSE:INT	ALIGN OFF	06:02	:35 PM Oct 22, 2019
	PNO: Wide 🗭 Trig: Free Run IFGain:Low #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/20	00	TRACE 123456 TYPE A WWWWW DET A NNNNN
Ref Offset 40.3 dB 10 dB/div Ref 0.30 dBm Log			Mkr1 76 -5	3.030 MHz 6.758 dBm
-9.70				
-19.7				
-29.7				
-39.7				
-49.7				-52.00 dBm
-59.7				
-69.7				
-79.7				
-89.7				
Start 763.000 MHz			Stop	775.000 MHz
#Res BW 6.2 kHz	#VBW 30 kHz*	4	Sweep 376.3 r	ns (2000 pts)
MSG		STATUS		
Band 13,	QPSK Modulation, LTE10 Bandwidth,			
		Value (dBm)	Limit (dBm)	Result
		(dBm) -58.083	(dBm) -52	Result Pass

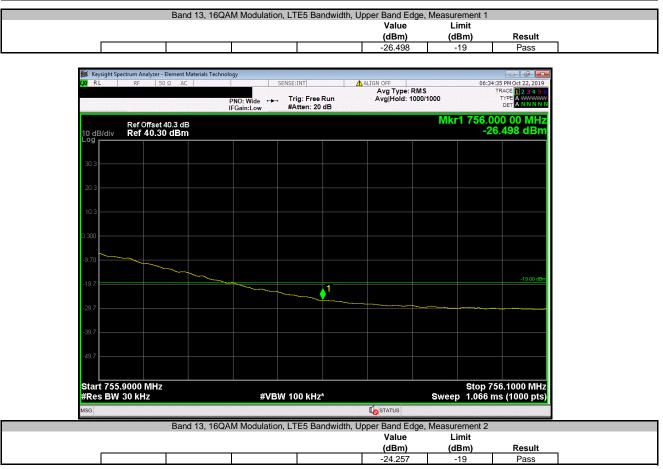
RL RF 50 \$	2 AC	S	ENSE:INT	ALIGN OFF	a sea a s		50 PM Oct 22, 201
		PNO: Fast ↔↔ FGain:Low	Trig: Free Run #Atten: 10 dB	Avg Type Avg Hold:	: RMS 200/200		TRACE 1 2 3 4 5 TYPE A WWW DET A NNNN
Ref Offset 40 dB/div Ref 0.30 d).3 dB Bm					Mkr1 79 -58	5.088 MH 3.083 dBr
70							
7							
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7							
7							
7							
art 793.000 MHz les BW 6.2 kHz		#VBV	V 30 kHz*		Sw	Stop 8 eep 407.7 m	806.000 MH ns (2000 pt
3				STATUS			











RL	ctrum Analyzer - Elemen RF 50 Ω			ENSE:INT	ALIGN OFF		06:34:5	9 PM Oct 22, 201
			PNO: Fast ↔→ IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type Avg Hold:	: RMS 1000/1000	т	RACE 12345 TYPE A WWWM DET A NNNN
dB/div	Ref Offset 40.3 o Ref 40.30 dB	iB m				N	1kr1 756 -24	.100 MH .257 dBr
3	mm							
3								
)								
)								
								-19.00 dł
		-						
,								
	00 MHz 100 kHz		#VB\	N 300 kHz*		Sweep	Stop 3 7.797 m	808.00 MH s (3000 pt
					STATUS			



Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Element Materials Technology Image: Sector Analyzer - Trace - Tra			Value (dBm)	Limit (dBm)	Result
Keysigint Spectrum Analyzer - Bement Materials Technology ALIGN OFF 06:36:29 PM OC 122,2015 PNO: Wide					
RL RF 50 Ω AC SENSE:INT ALIGN OFF 06:36:29 M OCt 22, 2015 PNO: Wide Trig: Free Run IFGaint.ow Trig: Free Run #Atten: 10 dB AvgType: RMS AvgIVe: CMS Trig: 2, 34 004B/div Ref Offset 40.3 dB Mkr1 763, 1566 MH; -57, 623 dB Mkr1 763, 1566 MH; -57, 623 dB 970 Image: Comparison of the comparison o			51.025	52	1 435
QX RF 50.2 AC SENSE:INT ALIGN OFF 06:38:29 Mod 12:2015 PNO: Wide → Trig: Free Run #Atten: 10 dB Avg Type: RNS Avg Type: RNS Trig: 12:34 Nkr11 763:156 MH;r ALIGN OFF 06:38:29 Mod 12:2015 Trig: 12:34 Nkr11 763:156 MH;r 763:156 MH;r 763:156 MH;r 10 GB/div Ref 0:ffset 40.3 dB Mkr11 763:156 MH;r 763:156 MH;r 10 GB/div Ref 0:ffset 40.3 dB Stop 775:000 MH;r Stop 775:000 MH;r Stop 775:000 MH;r	aht Spectrum Analyzer - Flement Materials Tech	hnology			
Ref Offset 40.3 dB Mkr1 763.156 MH; -57.623 dBn 9.70 - 9.70 - 19.7 - 10					5:29 PM Oct 22, 2019
OddBultiv Ref 0.30 dBm 57.623 dBn 9.70			Avg Type: RMS Avg Hold: 200/20	00	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNN
3.70	Ref Offset 40.3 dB div Ref 0.30 dBm			Mkr1 76 -5	3.156 MHz 7.623 dBm
1.137					
197 Image: Stop 775.000 MHz					
-297					
-39.7 -4					
.337					
43 7 1					
437 1					
49.7 1 1 1 1 189.7 1 1 1 1 19.7 1 1 1 1 <td></td> <td></td> <td></td> <td></td> <td></td>					
1 1					
-69.7 - <td>1</td> <td></td> <td></td> <td></td> <td>-52.00 dBm</td>	1				-52.00 dBm
-79.7 -89.7 			*****		
-79 7 -89 7 					
-89.7 Start 763.000 MHz Stop 775.000 MHz					
-89.7 Start 763.000 MHz Stop 775.000 MHz					
Start 763.000 MHz Stop 775.000 MH:					
Start 763.000 MHz Stop 775.000 MH:					
Start 763.000 MHz Stop 775.000 MHz					
Start 763.000 MHz Stop 775.000 MHz					
#Doc BM/ 6.2 kHz #V/BM/ 20 kHz*		#VBW 30 kHz*		Stop	775.000 MHz
	-)W 0.2 KHZ	#VOW JUKHZ*	CTATING	Sweep 376.31	ns (2000 pts)
Band 13, 16QAM Modulation, LTE5 Bandwidth, Upper Band Edge, Measurement 4 Value Limit	Band 13, 160	QAM Modulation, LTE5 Bandwidt			
(dBm) (dBm) Result			value	LIIIIL	

RL RF	50 Ω AC		SENSE:INT	ALIGN OFF	06:38:06 PM Oct 22, 2019
		PNO: Fast ↔ IFGain:Low	. Trig: Free Run #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200	TRACE 12345 TYPE A WWWW DET A NNNN
	set 40.3 dB 30 dBm			I	Mkr1 798.781 MH -58.195 dBr
70					
.7					
.7					
.7					
.7			▲ ¹		-52.00 dE
7	**************************************	arilet-aplitesetroact-ode-article		an a	gager ag hills genere annag dear thaistige fyr is fann
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7					
.7					
art 793.000 MH tes BW 6.2 kHz			W 30 kHz*		Stop 806.000 MH
Kes BW 6.2 KHZ		#VB	W 30 KHZ	Swee	o 407.7 ms (2000 pts



		Value	Limit	Desult
		(dBm) -28.336	(dBm) -19	Result Pass
		20.000	15	1 433
🚺 Keysight Spectrum Analyzer - Element Materials Technolog	n/			
X/ RL RF 50 Ω AC		ALIGN OFF	06:06	:56 PM Oct 22, 2019
P	NO: Wide 🛶 Trig: Free Run Gain:Low #Atten: 20 dB	Avg Type: RMS Avg Hold: 1000/10	000	TRACE 123456 TYPE A WWWWW DET A NNNNN
Ref Offset 40.3 dB 10 dB/div Ref 40.30 dBm			Mkr1 746.0 -2	00 00 MHz 8.336 dBm
30.3				
20.3				
10.3				
0.300				
0.300				
-9.70				
-19.7				-19.00 dBm
	1			
-29.7				
-39.7				
-49.7				
Center 746.0000 MHz			Sn	an 200.0 kHz
#Res BW 30 kHz	#VBW 100 kHz*		Sweep 1.066 r	ns (1000 pts)
MSG		STATUS		
Band 13, 16QAM	Modulation, LTE10 Bandwidth,	Lower Band Edge,	Measurement 2	
		Value (dBm)	Limit (dBm)	Result

📜 Keysight Spectru 📈 RL	um Analyzer - Element Mat RF 50 Ω AC		ENSE:INT	ALIGN OFF	06:07:31 PM Oct 22, 2019
A RL	R- 50 92 AC	PNO: Fast IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: RMS Avg Hold:>1000/1000	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A N N N N
R 0 dB/div R	Ref Offset 40.3 dB Ref 40.30 dBm				Mkr1 745.900 MHz -24.248 dBm
30.3					
20.3					
10.3					
300					
9.70					
19.7			1		-19.00 dBr
29.7					
39.7					
49.7					
tart 736.00 Res BW 10	MHz 10 kHz	#VB\	V 300 kHz*	Swe	Stop 756.00 MHz eep 2.599 ms (3000 pts
SG				STATUS	



		Value (dBm)	Limit (dBm)	Result
		-29.497	-19	Pass
	I	20.107	10	1 400
📕 Keysight Spectrum Analyzer - Element Materials T	echnology			
XIRL RF 50Ω AC	SENSE:INT	ALIGN OFF		7:53 PM Oct 22, 2019
		Avg Type: Ri Free Run Avg Hold: 10 I: 20 dB	MS 00/1000	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN
Ref Offset 40.3 dB 10 dB/div Ref 40.30 dBm			Mkr1 756.(-2	000 00 MHz 9.497 dBm
30.3				
20.3				
10.3				
0.300				
-9.70				
-19.7				-19.00 dBm
		1		
-29.7				
-39.7				
-39.7				
-49.7				
Start 755.9000 MHz			Ston	256.1000 MHz
#Res BW 30 kHz	#VBW 100 k	(Hz*	Sweep 1.066	
MSG		I STATUS		
Band 13. 1	6QAM Modulation, LTE10) Bandwidth, Upper Band Ed	ge. Measurement 2	
	,,	Value	Limit	

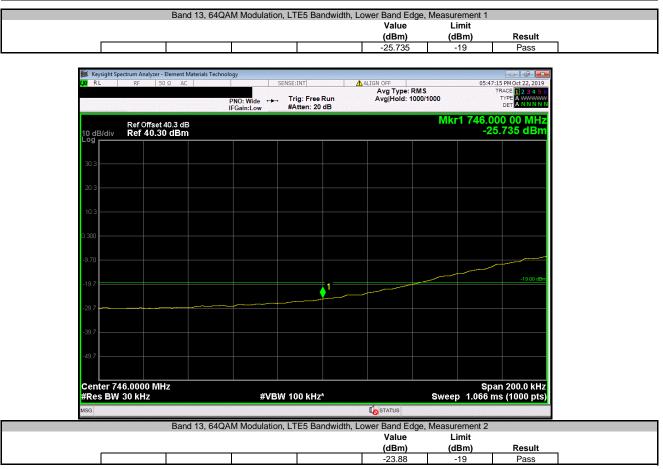
RL	RF	50 Ω AC	a la companya da companya d		SENSE:INT	ALIGN OFF		06:08:17	PM Oct 22, 2019
				PNO: Fast	Trig: Free Run #Atten: 20 dB	Avg Type: Avg Hold:	RMS 1000/1000	т	ACE 12345 YPE A WWWW DET A NNNN
dB/div	Ref Offse Ref 40.3	t 40.3 dE 30 dBm	3 1				N	lkr1 756. -25.	100 MH 870 dBn
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	∽.							
D.3									
.3									
10									
70									
.7		<b>_</b> 1=							-19.00 dB
.7									
.7				<u></u>					
.7									
	6.00 MHz V 100 kHz			#VB	W 300 kHz*		Sweep	Stop 8 7.797 ms	08.00 MH (3000 pt
3						STATUS			



	24.14 10, 1				Value	e, Measurement Limit	-
					(dBm)	(dBm)	Result
					-56.768	-52	Pass
	trum Analyzer - Element Materials	Technology					
KI RL	RF 50 Ω AC		SENSE:INT	<u> </u>	LIGN OFF Avg Type: RM	S	TRACE 1 2 3 4 5 6
		PNO: Wide IFGain:Low	→ Trig: Free #Atten: 10		Avg Hold: 200/		TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN
10 dB/div Log	Ref Offset 40.3 dB Ref 0.30 dBm					Mkr1	763.126 MHz -56.768 dBm
°g							
-9.70							
-19.7							
-29.7							
39.7							
-49.7							-52.00 dBm
	a Manada and Annala and a balance and a state and a state of the state		terretes all the sector data				
-59.7							
-69.7							
-79.7							
-89.7							
Start 763.0	00 MHz		L	I.		Sto	p 775.000 MHz
Res BW 6		#\	/BW 30 kHz*				3 ms (2000 pts)
SG					STATUS		
	Band 13, 1	6QAM Modulat	ion, LTE10 Ba	andwidth, Up	per Band Edg	e, Measurement	4
	,				Value	Limit	
					(dBm)	(dBm)	Result
					-58.12	-52	Pass

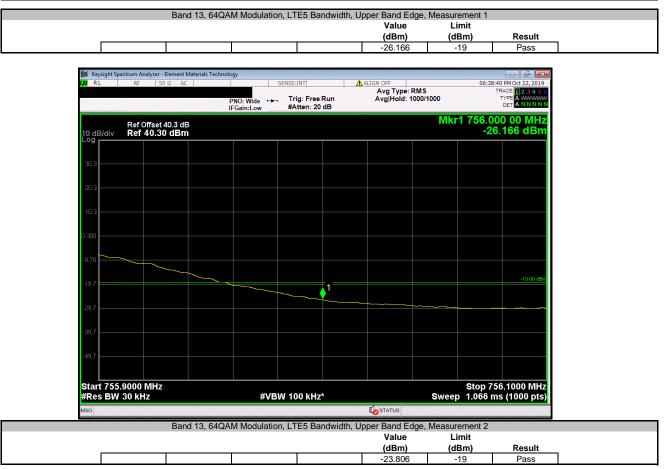
RL RF	50 Ω AC		SENSE:INT	ALIGN OFF	06:11:28 PM Oct 22, 201
		PNO: Fast ↔ IFGain:Low	→ Trig: Free Run #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200	TRACE 1 2 3 4 5 TYPE A WWWW DET A NNNN
	set 40.3 dB 30 dBm				Mkr1 793.904 MH -58.120 dBr
70					
.7					
7					
7					
7					-52.00 d
7	un an				analis - ita a dia mata a
.7					
.7					
7					
art 793.000 MH Res BW 6.2 kHz		#VE	3W 30 kHz*	Sw	Stop 806.000 MH eep 407.7 ms (2000 pt
}				STATUS	











RL	ctrum Analyzer - El				SENSE:INT	<b>A</b> A	LIGN OFF		06:20:	04 PM Oct 22, 201
NC		ic AC		PNO: Fast IFGain:Low		un	Avg Type Avg Hold:	RMS 1000/1000		TYPE A WWWW DET A NNNN
dB/div	Ref Offset 4 Ref 40.30	0.3 dB dBm							Mkr1 756 -23	6.100 MH .806 dBr
.3										
3										
3										
0										
0										
7		1=								-19.00 dE
	-	-	7. <b>x</b>							
			L							
7										
7										
	00 MHz 100 kHz			#	VBW 300 kHz*			Swee	Stop p 7.797 m	808.00 MH is (3000 pts
							STATUS			



				Value (dBm)	Limit	Result
		1		-57.512	(dBm) -52	Pass
				-07.012	-02	F d 55
Mary Karalahat Carantarian	Analyzer - Element Materials Tech					
IXI RL RI			SENSE:INT	ALIGN OFF		10:37 PM Oct 22, 2019
		PNO: Wide ↔ IFGain:Low	Trig: Free Run #Atten: 10 dB	Avg Type: RM Avg Hold: 200	1S /200	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNNN
Ret 10 dB/div Re Log	f Offset 40.3 dB f <b>0.30 dB</b> m				Mkr1 7 -{	64.579 MHz 57.512 dBm
-9.70						
-19.7						
-29.7						
-39.7						
-49.7						
-49.7	1					-52.00 dBm
-59.7	**************************************	****			๛๚ <i>๚๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛</i>	
-69.7						
-79.7						
-89.7						
-09.7						
Start 763.000 #Res BW 6.2		#\/D	W 30 kHz*		Stop Sweep 376.3	775.000 MHz
#Res DW 0.2	MNZ	#VD	W 30 KHZ	STATUS	Sweep 370.3	ms (2000 pts)
Mog	B 142					
	Band 13, 640	JAM Modulatio	n, LTE5 Bandwidt	h, Upper Band Edge		
				Value (dBm)	Limit (dBm)	Result
				-58.162	-52	Pass

RL RF	50 Ω AC		SENSE:INT	ALIGN OFF		06:42:2	3 PM Oct 22, 2019
				Avg Type:	RMS	т	RACE 1 2 3 4 5
		PNO: Fast ↔ IFGain:Low	. Trig: Free Run #Atten: 10 dB	Avg Hold:	200/200		
Ref Offs	set 40.3 dB					Mkr1 799	.334 MH .162 dBn
dB/div Ref 0.	30 dBm					-00	. 102 abi
.70							
9.7							
3.7							
5.7							
3.7							
5.7							
9.7			1				-52.00 dB
			• • • • • • • • • • • • • • • • • • •				
3.7 <b>Annal Annal Anna</b>							
3.7							
9.7							
9.7							
tart 793.000 MH	7					Stop 8	06.000 MH
Res BW 6.2 kHz		#VB	W 30 kHz*		Swee	ep 407.7 m	s (2000 pts
G				STATUS			



Keysight Spectrum Analyzer - Element Materials Ter RL RF 50 Ω AC	chnology SENSE:IN		(dBm) -27.953	<b>(dBm)</b> -19	Result Pass
			-27.953	-19	Pass
<b>KL</b> RF 50Ω AC	SENSE:IN				
		1	ALIGN OFF Avg Type: RM	06:	12:04 PM Oct 22, 2019 TRACE 1 2 3 4 5 6
		: Free Run en: 20 dB	Avg Hold: 1000		TRACE 123456 TYPE A WWWWW DET A NNNN
Ref Offset 40.3 dB 10 dB/div Ref 40.30 dBm				Mkr1 746. -	000 00 MHz 27.953 dBm
30.3					
20.3					
10.3					
0.300					
-9.70					
-19.7					-19.00 dBm
-19.7		<u>1</u>			
-29.7					
-39.7					
-49.7					
Center 746.0000 MHz	1-7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1			S	oan 200.0 kHz
#Res BW 30 kHz	#VBW 100	kHz*		Sweep 1.066	ms (1000 pts)
MSG			STATUS		
Band 13, 64	QAM Modulation, LTE	10 Bandwidth	, Lower Band Edge	, Measurement 2	2
			Value (dBm)	Limit (dBm)	Result

α RL RF 50 Ω AC	S	ENSE:INT	ALIGN OFF	06:12:39 PM Oct 22, 2019
	PNO: Fast 😱 IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: RMS Avg Hold:>1000/100	TRACE 2 3 4 5 TYPE A WWWW DET A NNNN
Ref Offset 40.3 dB dB/div Ref 40.30 dBm				Mkr1 745.900 MH -24.215 dBn
0.3			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
0.3				
300				
.70				-19.00 dE
9.7	~~~~	1		-19.00 02
9.7				
9.7				
9.7				
tart 736.00 MHz Res BW 100 kHz	#VBV	V 300 kHz*	S	Stop 756.00 MH weep 2.599 ms (3000 pts
SG			STATUS	



			Value (dBm)	Limit (dBm)	Result
			-28.889	-19	Pass
			20.000	15	1 433
📜 Keysight Spectrum Analyzer - Element Ma	terials Technology				
XIRL RF 50Ω AC	55	SENSE:INT	ALIGN OFF	06:1	2:59 PM Oct 22, 2019
	PNO: Wide IFGain:Low	++ Trig: Free Run #Atten: 20 dB	Avg Type: RMS Avg Hold: 1000	s /1000	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN
Ref Offset 40.3 dB 10 dB/div Ref 40.30 dBm				Mkr1 756.( -2	000 00 MHz 8.889 dBm
.og					
30.3					
20.3					
10.3					
0.000					
0.300					
-9.70					
-19.7					-19.00 dBm
		<b>\</b> 1			
-29.7					
-39.7					
-49.7					
Start 755.9000 MHz			1	Stop	756.1000 MHz
#Res BW 30 kHz	#	≠VBW 100 kHz*		Sweep 1.066	ms (1000 pts)
MSG					
Band 1	13, 64QAM Modula	ation, LTE10 Bandwidt			
			Value	Limit	Desuk
r			(dBm) -25.53	(dBm) -19	Result Pass

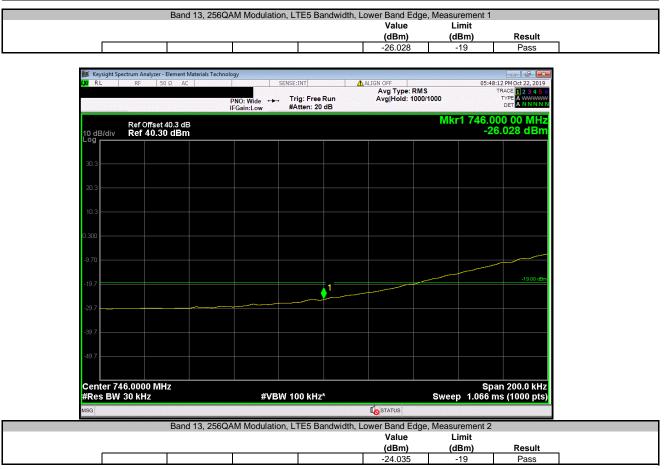
RL	RF	50 Ω AC		1	SENSE:INT	ALIGN OFF			9 PM Oct 22, 2019
				PNO: Fast ↔→ Gain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: Avg Hold:	1000/1000		RACE 1 2 3 4 5 TYPE A WWW DET A NNNN
dB/div	Ref Offse Ref 40.3	t 40.3 dB 10 dBm						Mkr1 756 -25	.100 MH: .530 dBn
0.3									
0.3									
0.3									
70									
9.7		1							-19.00 dB
9.7		- Marine	~~~~						
9.7			(		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
9.7									
	6.00 MHz / 100 kHz			#VB	W 300 kHz*		Swee	Stop p 7.797 m	808.00 MH s (3000 pts
G						STATUS			



				Value (dBm)	Limit (dBm)	Result
				-56.895	-52	Pass
				50.055	52	1 435
Keysight Spectrum Analy	yzer - Element Materials Techr	ology				
	50 Ω AC		SENSE:INT	ALIGN OFF		5:19 PM Oct 22, 2019
		PNO: Wide ↔→ IFGain:Low	Trig: Free Run #Atten: 10 dB	Avg Type: RM Avg Hold: 200/2	S 200	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN
Ref Off 10 dB/div Ref 0.	set 40.3 dB .30 dBm					63.000 MHz 56.895 dBm
-9.70						
-19.7						
-29.7						
-39.7						
-39.7						
-49.7						-52.00 dBm
1						-52.00 dbm
-59.7		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	adronent in the special spectrum of the spectr	ngunan la print part in print part of the		
-69.7						
-79.7						
-89.7						
Start 763.000 MH	Iz				Ston	775.000 MHz
#Res BW 6.2 kHz		#VB	W 30 kHz*		Sweep 376.3	ms (2000 pts)
MSG						
	Band 13, 64Q	AM Modulation	, LTE10 Bandwidt	h, Upper Band Edge		
				Value	Limit	
<b></b>		-		(dBm)	(dBm)	Result
_				(dBm) -58.07	(dBm) -52	Result Pass

RL R	8F 50 Ω AC		SENSE:INT	ALIGN OFF	06:16:58 PM Oct 22, 2019
		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
	f Offset 40.3 dB ef 0.30 dBm				Mkr1 805.733 MH -58.070 dBn
.70					
9.7					
9.7					
9.7					
3.7					-52.00 d ^e
3.7		for free for the formation for the second			
3.7					
9.7					
9.7					
tart 793.000 Res BW 6.2		#VE	30 kHz*	Six	Stop 806.000 MH veep 407.7 ms (2000 pts
G				STATUS	eep room me proop pro









		Value	Limit	
		(dBm)	(dBm)	Result
		-25.861	-19	Pass
M. M. S. M. C. M.	T			
Keysight Spectrum Analyzer - Element Materials  KR RF 50 Ω AC	SENSE:INT	ALIGN OFF	06:4	3:09 PM Oct 22, 2019
	PNO: Wide ↔ Trig: Free R IFGain:Low #Atten: 20 c		s /1000	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNN
Ref Offset 40.3 dB 10 dB/div Ref 40.30 dBm				000 00 MHz 5.861 dBm
.0g				
30.3				
20.3				
10.3				
-9.70				
				-19.00 dBm
-19.7		1		
-29.7				
-39.7				
10.7				
-49.7				
Start 755.9000 MHz #Res BW 30 kHz	#VBW 100 kHz*		Stop 7 Sweep 1.066	256.1000 MHz ms (1000 pts)
AKes DW JO KITZ		STATUS		ne (1000 pre)
	256QAM Modulation, LTE5 Bar	<b></b>	Measurement 2	
Danu 13, 2		Value	Limit	
		(dBm)	(dBm)	Result

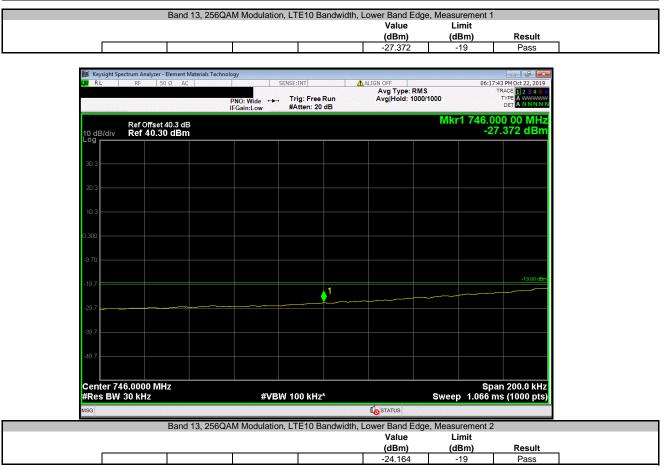
Keysight Spectrum Analyzer - Element Materials Tech						
RL RF 50 Ω AC	PNO: Fast +++ IFGain:Low	NSE:INT Trig: Free Run #Atten: 20 dB	ALIGN OFF Avg Type: Avg Hold:	1000/1000	T	5 PM Oct 22, 2019 RACE 1 2 3 4 5 TYPE A WWWW DET A N N N N
Ref Offset 40.3 dB 0 dB/div Ref 40.30 dBm					Mkr1 756 -24	.100 MHz 416 dBm
10.3						
0.3						
0.3						
300						
.70						
9.7						-19.00 dBr
9.7						
9.7						
9.7						
tart 746.00 MHz					Stop 8	308.00 <u>MH</u>
Res BW 100 kHz	#VBW	300 kHz*	STATUS	Swee	Stop 8 p 7.797 m	s (3000 pts



Keyzight Spectrum Analyzer - Element Materials Technology     RL RF 50 Ω AC SENSE:INT     PNO: Wide → Trig: Free Run     IF Gain:Low #Atten: 10 dB     Ref Offset 40.3 dB     Ref 0.30 dBm     9     9.70	-57.572 -5	Sm)         Result           52         Pass           06:45:11 PM ort 22, 2019         TRACE 12 3 4 5 6 TYPE 2 3 5 7 6 TYPE 2 3 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Od     RL     RF     50 Ω     AC     SENSE:INT       PNO: Wide     →     Trig: Free Run IFGein:Low     Trig: Free Run #Atten: 10 dB       10 dB/div     Ref Offset 40.3 dB       Log     Control and Contro	ALIGN OFF Avg Type: RMS Avg Hold: 200/200	06:45:11 PM Oct 22, 2019 TRACE 12 3 4 5 6 TYPE A NINNIN DET A NINNIN 1kr1 763,528 MHz
Image: NRL     RF     50 Ω     AC     SENSE:INT       PNO: Wide     →     Trig: Free Run IFGein:Low     Trig: Free Run #Atten: 10 dB       10 dB/div     Ref Offset 40.3 dB Ref 0.30 dBm     B	Avg Type: RMS Avg Hold: 200/200	06:45:11 PM Oct 22, 2019 TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNNN 1Kr1 763.528 MHz
Dd     RL     RF     50 Ω     AC     SENSE:INT       PNO: Wide     →     Trig: Free Run IFGein:Low     Trig: Free Run #Atten: 10 dB       10 dB/div     Ref Offset 40.3 dB       Log     Control = 100 dB	Avg Type: RMS Avg Hold: 200/200	06:45:11 PM Oct 22, 2019 TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNNN 1Kr1 763.528 MHz
IFGain:Low #Atten: 10 dB Ref Offset 40.3 dB 10 dB/div Ref 0.30 dBm	Avg Hold: 200/200	TYPE A WWWWW DET A NNNNN
10 dB/div Ref 0.30 dBm		lkr1 763.528 MHz -57.572 dBm
.9 70		
-19.7		
-29.7		
-39.7		
-39.7		
-49.7		-52 00 dBm
-59.7 marcan fasterete any state terms and a state of a state of the s	a na mana na mana ang kanang kanang na manang na na manang na manang na manang na manang na manang na manang na	*****
-69.7		
-79.7		
-89.7		
Start 763.000 MHz		Stop 775.000 MHz
#Res BW 6.2 kHz #VBW 30 kHz*		376.3 ms (2000 pts)
MSG	STATUS	
Band 13, 256QAM Modulation, LTE5 Bandwidth		
		mit 3m) Result

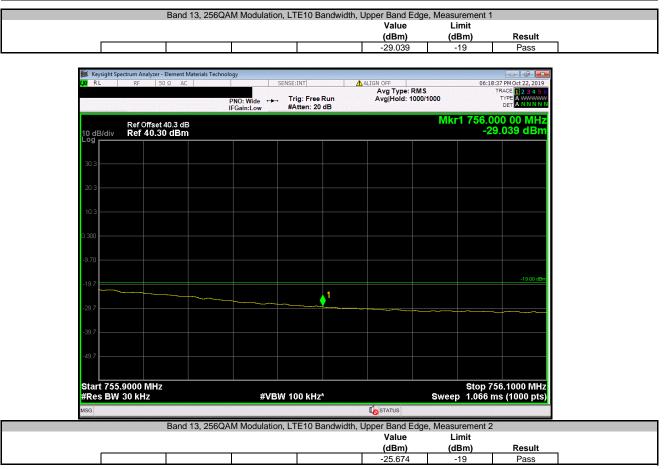
Avg Type: RMS Avg Hold: 200/200	TRACE [] 2 3 4 5 TYPE DET ANNUM DET ANNUM -58,101 dBm
M	lkr1 800.810 MH; -58.101 dBn
	-58.101 dBn
1	-52.00 dBr
ad 1994 - a construction of the second s	
	Stop 806.000 MHz 407.7 ms (2000 pts
Outcom	407.7 ms (2000 pts
	Sweep











	ctrum Analyzer -			nology						
RL	RF 50	<b>Ω</b> AC			SENSE:INT		GN OFF Avg Type:	DMC		07 PM Oct 22, 2019
					Trig: Free R	lun	Avg Type: Avg Hold:			TYPE A WAAAAAAA
				PNO: Fast IFGain:Low	#Atten: 20 d	B	Arginola.			DET A NNNN
				II Gam.cow						
	Ref Offset 4	40.3 dE	3						MKr1 750	6.100 MH: 6.674 dBn
dB/div	Ref 40.30	dBm							-25	.674 dBn
^{,g} [		********								
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00		-								
70										
70										
										-19.00 dB
9.7		<b>+</b> ₁=								-19.00 dB
		• ' · ·								
		Lange and								
3.7			Mr.							
9.7										
1.7										
tart 746.									Stop	808.00 MH
Res BW	100 kHz			#	VBW 300 kHz*			Swee	p 7.797 m	808.00 MH s (3000 pts
3	*****					F	STATUS			



		Value	Limit	Bacult
ГТ		(dBm) -56.847	(dBm) -52	Result Pass
I I I		30.047	52	1 433
🎉 Keysight Spectrum Analyzer - Element Mate	rials Technology			
LXI RL RF 50Ω AC	SENSE:INT	ALIGN OFF		0:44 PM Oct 22, 2019
	PNO: Wide 🗭 Trig: Free Run IFGain:Low #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/2	00	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A N N N N N
Ref Offset 40.3 dB 10 dB/div Ref 0.30 dBm Log			Mkr1 76 -5	6.847 dBm
Log				
-9.70				
-19.7				
-29.7				
-39.7				
-49.7				-52.00 dBm
-59.7				
-69.7				
-79.7				
00.7				
-89.7				
Start 763.000 MHz #Res BW 6.2 kHz	#VBW 30 kHz*		Stop Sweep 376.3	775.000 MHz
MSG		STATUS	Sheep or 0.5	ine (Econo pre)
	3, 256QAM Modulation, LTE10 Bandwi	<b>-</b>	e Measurement /	
Danu IX		Value	Limit	r
		(dBm)	(dBm)	Result

RL RF 50 Ω AC		SENSE:INT	ALIGN OFF	06:22:26 PM Oct 22, 2019
	PNO: Fast ↔ IFGain:Low	Trig: Free Run #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200	TRACE 12345 TYPE A WWWW DET A N N N N
Ref Offset 40.3 dB dB/div Ref 0.30 dBm				Mkr1 799.646 MH -58.101 dBn
70				
9.7				
.7				
.7				
.7				-52.00 at
		↓ ¹		
.7				
7				
.7				
.7				
				Stop 206 000 MU
art 793.000 MHz Res BW 6.2 kHz	#VB	W 30 kHz*	Swe	Stop 806.000 MH eep 407.7 ms (2000 pts
G			STATUS	



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.

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.

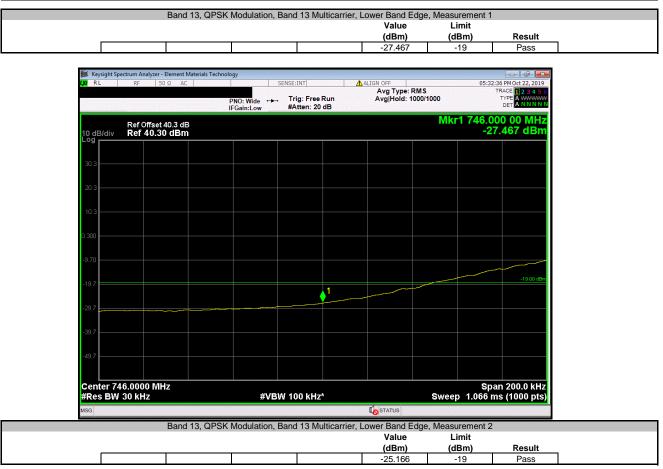
FCC section 27.53(c) requires a >100 kHz measurement bandwidth for emissions 100 kHz outside of the RRH operating frequency range. FCC 27.53(c) requires a >30 kHz measurement bandwidth for emissions between 100 kHz outside of the RRH operating frequency range and band edge of the operating frequency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

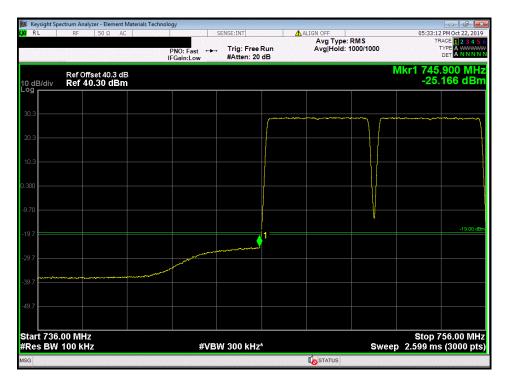
Section 27.53(c)(3) requires an emission limit of -46dBm for any 6.25 kHz bandwidth between frequency bands 763-775 MHz and 793-806MHz. Adjusting for the four port MIMO requirement the emission limit in these frequency ranges is -52 dBm [i.e.: Limit = -46 dBm/6.25kHz (FCC Limit) - 6dB (4 port MIMO)].



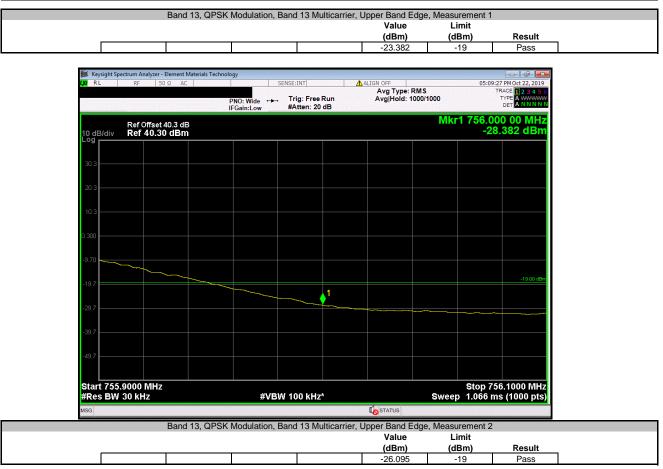
				XMit 2019.09.05
	AHBOA Remote Radio Head (RRH)	Work Order:		
Serial Number:			28-Oct-19	
	Nokia Solutions and Networks	Temperature:		
Attendees:		Humidity:		
Project:		Barometric Pres.:		
Tested by:	Jonathan Kiefer Power: 48VDC	Job Site:	TX03	
TEST SPECIFICAT				
FCC 27:2019	ANSI C63.26:2015			
COMMENTS				
Tested on highest	power antenna port (Port 1). EUT is operated at 100% duty cycle. Band Edge measurements were may	de for a Band 13 multicarrier test case on four modula	tion types (QPSK,	16QAM, 64QAM,
256QAM). Two LTE available.	5 carriers were enabled at the lower and upper Band 13 band edge channels [748.5MHz and 753.5MHz	]. Two LTE5 carriers cover the entire channel bandwid	th so three carrier	operation is not
	M TEST STANDARD			
None				
Configuration #	1 Jonathan Kiefer			
1	Signature			
		Value	Limit	
		(dBm)	(dBm)	Result
Band 13				
	QPSK Modulation			
	Band 13 Multicarrier			
	Lower Band Edge			
	Measurement 1	-27.467	-19	Pass
	Measurement 2	-25.166	-19	Pass
	Upper Band Edge			
	Measurement 1	-23.382	-19	Pass
	Measurement 2	-26.095	-19	Pass
	Measurement 3	-55.668	-52	Pass
	Measurement 4	-58.045	-52	Pass
	16QAM Modulation			
	Band 13 Multicarrier			
	Lower Band Edge			
	Measurement 1	-27.411	-19	Pass
	Measurement 2	-25.356	-19	Pass
	Upper Band Edge			
	Measurement 1	-28.751	-19	Pass
	Measurement 2	-26.65	-19	Pass
	Measurement 3	-55.583	-52	Pass
	Measurement 4	-58.184	-52	Pass
	64QAM Modulation			
	Band 13 Multicarrier			
	Lower Band Edge			
	Measurement 1	-27.863	-19	Pass
	Measurement 2	-25.187	-19	Pass
	Upper Band Edge			
	Measurement 1	-28.036	-19	Pass
	Measurement 2	-26.315	-19	Pass
	Measurement 3	-55.6	-52	Pass
	Measurement 4	-58.134	-52	Pass
	256QAM Modulation			
	Band 13 Multicarrier			
	Lower Band Edge			
	Measurement 1	-27.124	-19	Pass
	Measurement 2	-25.188	-19	Pass
	Upper Band Edge			
	Measurement 1	-28.693	-19	Pass
	Measurement 2	-26.466	-19	Pass
	Measurement 3	-55.677	-52	Pass
	Measurement 4	-58.017	-52	Pass
	Weddulomont +	-58.015	02	1 455











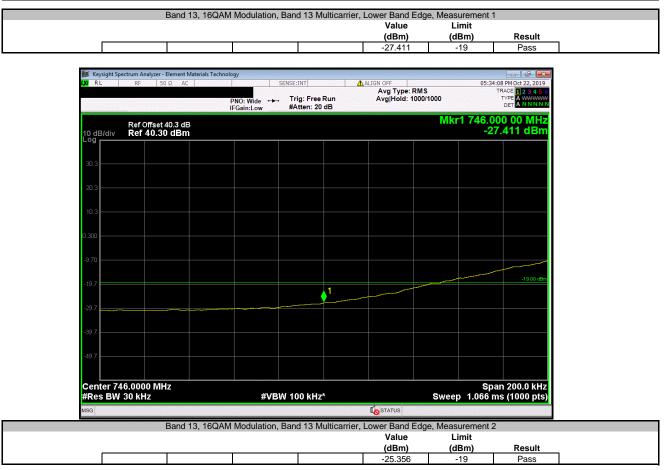
Keysight Spectrum Analyzer - Element Materials T RL RF 50 Ω AC		ENSE:INT	ALIGN OFF	05:10:29 PM Oct 22, 201
	PNO: Fast ↔ IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: RMS Avg Hold: 1000/1000	TRACE 1 2 3 4 5 TYPE A WWW DET A NNNN
Ref Offset 40.3 dB dB/div Ref 40.30 dBm				Mkr1 756.100 MH -26.095 dBr
3				
3				
3				
7 <b></b> 1 <b></b>				-19.00 dł
7				
7				
art 746.00 MHz es BW 100 kHz	#VBV	V 300 kHz*	Swe	Stop 808.00 MH ep   7.797 ms (3000 pt
			STATUS	



				ilue 3m)	Limit (dBm)	Result
				.668	-52	Pass
			-55	.000	-52	1 833
📁 Keysight Spectrum Analyzer - Eleme	nt Materials Technology					
IXI RL RF 50 Ω		SENSE:INT	ALIGN OFF		05:1	2:13 PM Oct 22, 2019
	PNO: W IFGain:	/ide ↔→ Trig: Fro Low #Atten:	eeRun Avg H	Type: RMS Iold: 200/200		TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN
Ref Offset 40.3 10 dB/div Ref 0.30 dBr	dB n				Mkr1 76 -5	63.054 MHz 5.668 dBm
-9.70						
-19.7						
-29.7						
-39.7						
001						
-49.7						-52.00 dBm
and the second design of the						
-59.7						
-69.7						
-79.7						
-89.7						
Start 763.000 MHz		#VDW 20-64	-*		Stop	775.000 MHz
#Res BW 6.2 kHz		#VBW 30 kHz	2^		Sweep 376.3	ms (2000 pts)
MSG						
Ba	nd 13, QPSK Modu	ilation, Band 13 I	Multicarrier, Upper Ba	and Edge, I I <b>lue</b>	Measurement 4 Limit	ļ
				Bm)	(dBm)	Result

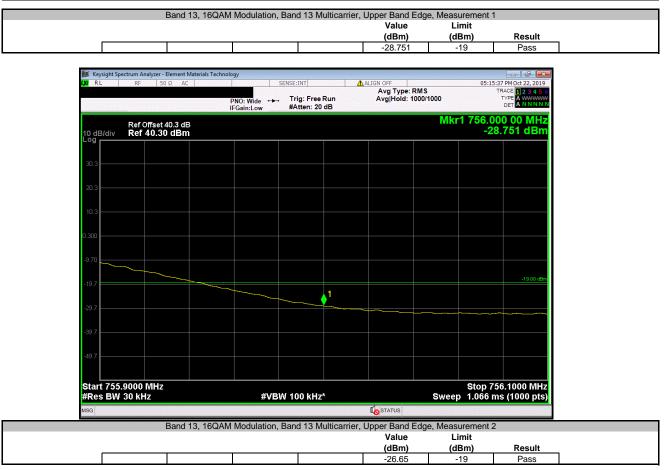
RL RF 50 Ω AC		SENSE:INT	ALIGN OFF	05:14:14 PM Oct 22, 201
	PNO: Fast ↔ IFGain:Low	→ Trig: Free Run #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200	TRACE 12345 TYPE A WWWW DET A NNNN
Ref Offset 40.3 dB dB/div Ref 0.30 dBm				Mkr1 798.118 MH -58.045 dBr
2				
.7				
7				
7				
.7		1		-52.00 dE
7			สุดกรุ่มสารแก่งสูงมีการสารสร้างการสี่รู้แล้วเป็ดสองให้กรุงสัญหารู่การสารแก่งการสารส่งกำลังการสารไก่	
.7				
7				
.7				
art 793.000 MHz tes BW 6.2 kHz	#\/E	30 kHz*	Swe	Stop 806.000 MH ep  407.7 ms (2000 pts
	#11	JWY JU KIIZ	Swe	ep 407.7 his (2000 pt











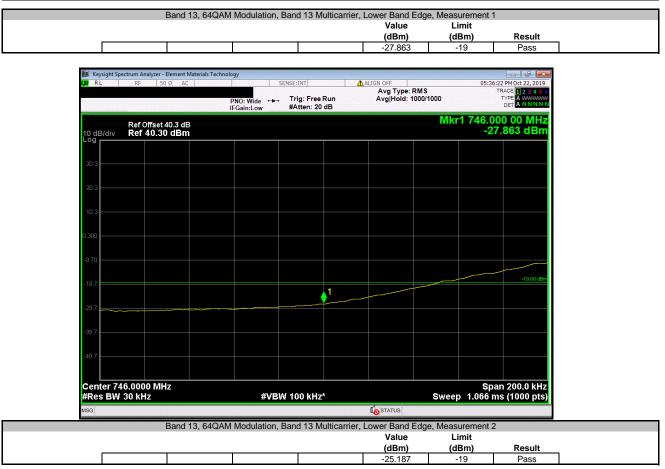
RL	ctrum Analyzer - E RF 50	Ω AC		55	SENSE:INT		ALIGN OFF		05:17	17 PM Oct 22, 201
				PNO: Fast IFGain:Low		ree Run 20 dB	Avg Type	: RMS 1000/1000		TRACE 12345 TYPE A WWWW DET A NNNN
dB/div	Ref Offset 4 Ref 40.30	0.3 dE dBm	3						Mkr1 75 -20	6.100 MH 6.650 dBr
.3										
.3	Jum									
3										
0										
0										
7										-19.00 dB
7		<b>1</b>								
7										
7										
art 746. es BW	00 MHz 100 kHz			#	VBW 300 k	Hz*		Swee	Stop p 7.797 n	808.00 MH ns (3000 pt:
							STATUS			



	Band 13, 16	QAM Modula	ation, Band 13	Multicarrie	r, Upper Band E Value		surement	3	
					(dBm)	(	dBm)	Result	
					-55.583		-52	Pass	
	ım Analyzer - Element Materials T	echnology							
L <mark>XI</mark> RL	RF 50 Ω AC		SENSE:INT		ALIGN OFF Avg Type: R		05:1	8:49 PM Oct 22, 2019	
		PNO: Wide	斗 Trig: Fre		Avg Hold: 20	00/200		TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNN	
		IFGain:Lov	v #Atten: 1	0 dB					
Б	tef Offset 40.3 dB						Mkr1 7	63.042 MHz	
10 dB/div	tef 0.30 dBm							5.583 dBm	
209									
-9.70									
0.10									
-19.7									
-29.7									
-39.7									
-49.7 - 1								-52.00 dBm	
-59.7	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	***	*******			*****			
-69.7									
-79.7									
-89.7									
Start 763.00	0 MHz						Stop	775.000 MHz	
#Res BW 6.			#VBW 30 kHz	*		Swee	ep 376.3	ms (2000 pts)	
MSG					STATUS				
	Band 13, 16	OAM Modula	tion Band 13	Multicarrie	, Upper Band E	- dae Mea	surement	4	
	Bana 10, 10		and to the	nanoumo	Value		_imit		
					(dBm)		dBm)	Result	
					-58.184		-52	Pass	

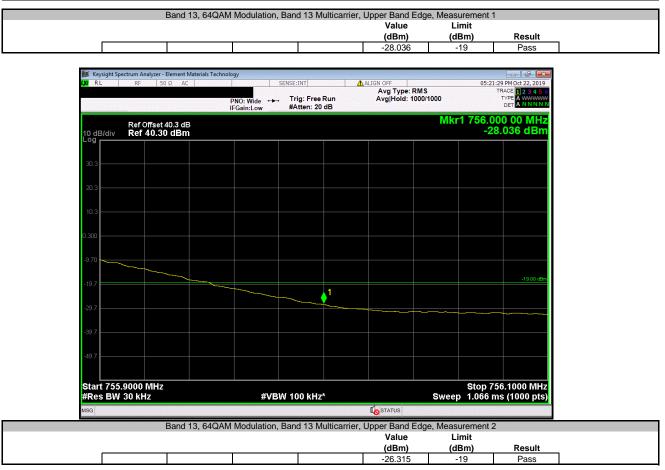
RL RF 50 Ω AC		SENSE:INT	ALIGN OFF		05:20:40 PM Oct 22, 201
	PNO: Fast ↔ IFGain:Low		Avg Type: F Avg Hold: 2	00/200	TRACE 1 2 3 4 5 TYPE A WWW DET A NNNN
Ref Offset 40.3 dB				Mk	r1 803.165 MH -58.184 dBn
70					
.7					
.7					
.7					
.7					-52.00 dt
.7		<b></b>	والمالية المحافر موسوطون فلترز مراور وال	<b>1</b>	An and the second se
7					
7					
.7					
art 793.000 MHz tes BW 6.2 kHz	#VB	W 30 kHz*		Sweep	Stop 806.000 MH 407.7 ms (2000 pt
3			STATUS		











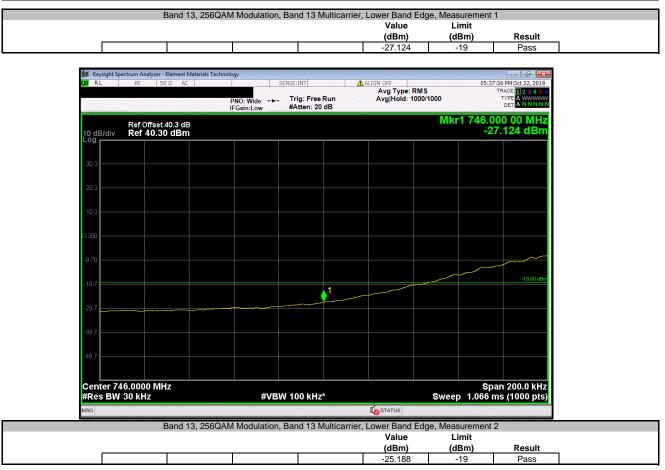
RL	RF 50 Ω AC	Materials Technol		ENSE:INT	ALIGN OFF		05:22:0	2 PM Oct 22, 201
			PNO: Fast ↔ IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Type: Avg Hold:	RMS 1000/1000	TI	RACE 1 2 3 4 5 TYPE A WWW DET A NNN
dB/div	Ref Offset 40.3 dE Ref 40.30 dBm	3				Ν	1kr1 756 -26	.100 MH .315 dBi
3								
3								
	1							-19.00 d
	<b>\</b>							
·								
7								
	00 MHz 100 kHz		#VBV	N 300 kHz*		Sweep	Stop 3 7.797 m	308.00 MH s (3000 pt
					<b>STATUS</b>			



				Value	Limit	Basali	
				(dBm) -55.6	(dBm) -52	Result Pass	1
				-55.6	-52	Pass	
Keysight Spectrum An	alyzer - Element Materials Tecl	anology					
RL RF	50 Ω AC	lineitegy	SENSE:INT	ALIGN OFF	05:	23:35 PM Oct 22, 2019	
		PNO: Wide ↔ IFGain:Low	. Trig: Free Run #Atten: 10 dB	Avg Type: RI Avg Hold: 200		TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN	
Ref C 10 dB/div Ref Log	offset 40.3 dB <b>0.30 dBm</b>				Mkr1 7	63.000 MHz 55.600 dBm	
-9.70							
-19.7							
-29.7							
-20-1							
-39.7							
-49.7						-52.00 dBm	
-59.7			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
-69.7							
-79.7							
-89.7							
Start 763.000 N						o 775.000 MHz	
#Res BW 6.2 kH	IZ	#VE	W 30 kHz*	Ø OTATIO	Sweep 376.3	ms (2000 pts)	
MSG	D 140. 010		Devide M #	<b>K</b> STATUS			
	Band 13, 64Q	AM Modulation	Band 13 Multica	rier, Upper Band Eo Value	dge, Measurement Limit	: 4	
				(dBm)	(dBm)	Result	_
				-58.134	-52	Pass	]

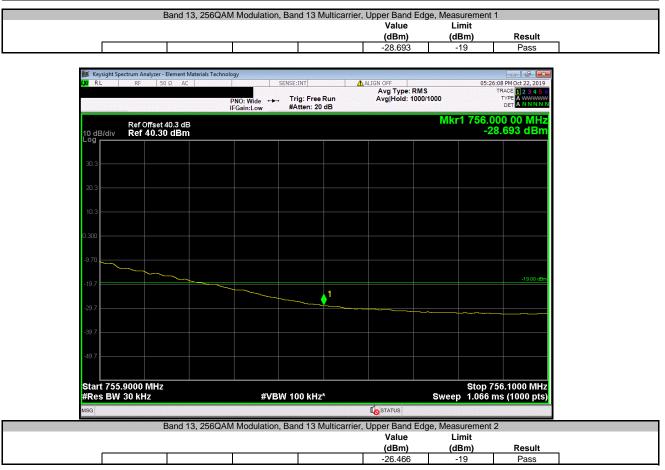
RL RF 50 Ω AC		SENSE:INT	ALIGN OFF	05:25:18 PM Oct 22, 20	
	PNO: Fast ↔→→ IFGain:Low	Trig: Free Run #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200	TRACE 1 2 3 TYPE A W DET A N N	VWW
Ref Offset 40.3 dB dB/div Ref 0.30 dBm 9				Mkr1 803.678 M -58.134 d	ЛН Br
70					
.7					
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7 <b>entropense producer a de este de este de este de la constante de la constan</b>		and a second second second second	n Martin any All stay described on the orthogonal star	-52. -52.	.00 d
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art 793.000 MHz les BW 6.2 kHz	#VBI	N 30 kHz*	s	Stop 806.000 I weep 407.7 ms (2000	MH pt











RL	ctrum Analyzer - RF 50	Ω AC		SENSE:INT	A	LIGN OFF		05:26:	44 PM Oct 22, 201
			PNO: Fast • IFGain:Low		tun	Avg Type: Avg Hold:			TYPE A WWWA
dB/div	Ref Offset Ref 40.30					1		Mkr1 750 -26	6.100 MH 6.466 dBr
.3									
3									
3									
) <mark></mark>									
7		1							-19.00 d
7		Manut							
7			 						
7									
urt 746. es BW	00 MHz 100 kHz		#\	/BW 300 kHz*			Swee	Stop p 7.797 m	808.00 MH is (3000 pt
						STATUS			



· · ·		Value	Limit		
· · · · · ·		(dBm)	(dBm)	Result	
		-55.677	-52	Pass	
🎉 Keysight Spectrum Analyzer - Element Materials T	echnology				
LX/RL RF 50Ω AC	SENSE:INT	ALIGN OFF	05:28	1:25 PM Oct 22, 2019	
	PNO: Wide ↔ Trig: Free Run IFGain:Low #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200		TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN	
Ref Offset 40.3 dB			Mkr1 76	3.072 MHz 5.677 dBm	
10 dB/div Ref 0.30 dBm			-9	5.677 GBM	
-9.70					
-19.7					
-29.7					
-39.7					
-49.7				-52.00 dBm	
-59.7		nganaga Alapatan Salatan Salat			
-69.7					
-79.7					
-89.7					
Start 763.000 MHz #Res BW 6.2 kHz	#VBW 30 kHz*	s	Stop Sweep 376.3 r	775.000 MHz ns (2000 pts)	
MSG		STATUS			
Band 13, 256	6QAM Modulation, Band 13 Multicarri			4	
		Value (dBm)	Limit (dBm)	Result	
<b></b>		-58.013	-52	Pass	

RL RF	50 Ω AC	2	SENSE:INT	ALIGN OFF	05:30:05 PM Oct 22, 2019
		PNO: Fast ↔→	Trig: Free Run #Atten: 10 dB	Avg Type: RMS Avg Hold: 200/200	TRACE 1 2 3 4 5 TYPE A WWWW DET A N N N N
Ref Offs dB/div Ref 0.3	et 40.3 dB 3 <b>0 dBm</b>				Mkr1 805.506 MH
			1		
.70					
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9.7					-52.01 49
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9.7 <b>Mary and Allowing Almon</b>		**************************************	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	, and a set of the set	re- de la particulación de la p
3.7					
9.7					
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tart 793.000 MH					Stop 806.000 MH
Res BW 6.2 kHz		#VB	N 30 kHz*	Swe	ep 407.7 ms (2000 pts
G				STATUS	