

LTE band 26(824MHz-849MHz), 15MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)				
926 5	QPSK	16QAM	64QAM		
836.5	14.79	14.61	14.56		

LTE band 26(824MHz-849MHz), 15MHz Bandwidth, QPSK (-26dBc BW)



LTE band 26(824MHz-849MHz), 15MHz Bandwidth, 16QAM (-26dBc BW)





MultiView Spectrum Ref Level 25.00 dBm ● RBW 200 kHz Att 25 d TDF "1" I Frequency Sweep 25 dB SWT 1.01 ms = VBW 1 MHz Mode Auto Sweep O1Pk View 14.55 dBn 832.3640 MH M1[1] 20 dBmim 10 dBm 0 dBm Т -10 dBm W. M. Maranner -20 dBm-Mar warman marine -30 dBm 40 dr. -40 dBm -50 dBm man -60 dBm--70 dBm-Span 45.0 MHz CF 836.5 MHz 1001 pts 4.5 MHz/ 2 Marker Table Type Ref Trc X-Value 832.364 MHz Y-Value 14.55 dBm Eunction Function Result M1 T1 ndB ndB down BW 14.56 MHz 829.172 MHz 843.738 MHz -10.78 dBm -10.79 dBm Q Factor **30.09.20** 06:27: Measuring.

LTE band 26(824MHz-849MHz), 15MHz Bandwidth, 64QAM (-26dBc BW)



LTE band 38, 5MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)			
2505.0	QPSK	16QAM	64QAM	
2595.0	5.02	4.95	5.04	

LTE band 38, 5MHz Bandwidth, QPSK (-26dBc BW)



LTE band 38, 5MHz Bandwidth,16QAM (-26dBc BW)





LTE band 38, 5MHz Bandwidth,646QAM (-26dBc BW)





LTE band 38, 10MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)			
2505.0	QPSK	16QAM	64QAM	
2595.0	9.77	9.77	9.92	

LTE band 38, 10MHz Bandwidth, QPSK (-26dBc BW)



LTE band 38, 10MHz Bandwidth, 16QAM (-26dBc BW)





MultiView Spectrum ● **RBW** 100 kHz 25 dB **SWT** 1.04 ms ● **VBW** 300 kHz **Mode** Auto Sweep Ref Level 25.00 dBm Att 25 d TDF "1" I Frequency Sweep O1Pk View 14.38 dBn .5984770 GH: M1[1] 20 dBm-X mm Ammon 10 dBm Arm 0 dBm -10 dBm--20 dBmmmmmmmmm WWW twww -30 dBm WWW -50 dBm--60 dBm--70 dBm-Span 30.0 MHz CF 2.595 GHz 1001 pts 3.0 MHz/ 2 Marker Table Type Ref Trc Y-Value 14.38 dBm -11.60 dBm -11.32 dBm Eunction Function Result X-Value 2.598477 GHz M1 T1 ndB ndB down BW 26.0 dB 9.92 MHz 2.590115 GHz 2.600035 GHz Q Factor **30.09.2** Measuring..

LTE band 38, 10MHz Bandwidth, 64QAM (-26dBc BW)



LTE band 38, 15MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)				
2505.0	QPSK	16QAM	64QAM		
2595.0	14.74	14.61	14.61		

LTE band 38, 15MHz Bandwidth, QPSK (-26dBc BW)



LTE band 38, 15MHz Bandwidth, 16QAM (-26dBc BW)





Measuring..

30.09.20

MultiView Spectrum Ref Level 25.00 dBm ● RBW 200 kHz Att 25 dl TDF "1" I Frequency Sweep 25 dB SWT 1.01 ms = VBW 1 MHz Mode Auto Sweep O1Pk View 14.63 dBn .5891560 GH M1[1] 20 dBmnh man ŝ 10 dBm 0 dBm -10 dBm and more the the second and the second secon N. N -20 dBm--30 dBm -50 dBm -60 dBm--70 dBm-Span 45.0 MHz CF 2.595 GHz 1001 pts 4.5 MHz/ 2 Marker Table Type Ref Trc Y-Value 14.63 dBm Eunction Function Result X-Value 2.589156 GHz M1 T1 ndB ndB down BW 14.61 MHz 2.587717 GHz 2.602328 GHz -11.73 dBm -11.52 dBm Q Factor

LTE band 38, 15MHz Bandwidth, 64QAM (-26dBc BW)



LTE band 38, 20MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)			
2505.0	QPSK	16QAM	64QAM	
2595.0	19.12	19.30	19.12	

LTE band 38, 20MHz Bandwidth, QPSK (-26dBc BW)



LTE band 38, 20MHz Bandwidth, 16QAM (-26dBc BW)





MultiView Spectrum Ref Level 25.00 dBm ● RBW 200 kHz Att 25 d TDF "1" I Frequency Sweep 25 dB SWT 1.01 ms = VBW 1 MHz Mode Auto Sweep 1Pk View 13.18 dBn .5912240 GH M1[1] 20 dBm-М1 Jane 1 not 10 dBm 0 dBm -10 dBm mthom mun Mon man and m Ň and more marked 1 -20 dBm ApolaBin -50 dBm -60 dBm--70 dBm-Span 60.0 MHz CF 2.595 GHz 1001 pts 6.0 MHz/ 2 Marker Table Type Ref Trc Y-Value 13.18 dBm Eunction Function Result X-Value 2.591224 GHz M1 T1 ndB ndB down BW 19.12 MHz -14.15 dBm -13.68 dBm 2.585529 GHz 2.60465 GHz Q Factor **30.09.20** Measuring.

LTE band 38, 20MHz Bandwidth, 64QAM (-26dBc BW)



LTE band 41,5MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)			
2502	QPSK	16QAM	64QAM	
2090	5.02	4.97	4.99	

LTE band 41,5MHz Bandwidth, QPSK (-26dBc BW)

MultiView	Spectru	m					· ·
RefLevel 16.	.00 dBm Offs	et 1.00 dB • RBW 50	kHz				
🖷 Att	15 dB SW1	「 1.07 ms ● VBW 200	kHz Mode Auto Sweep				
TDF "1"							
1 Frequency S	weep		monter	han the hand		M1[1]	O IPK VIEW
10 dBm						MI[I]	16.88 dBm
							4.5957340 GHZ
0 dBm							
o dom		т1					
1.0.10		7			7		
-10 dBm					M.		
		anon			1 mm		
-20 dBm	n Mahn				· · · · · · · · · · · · · · · · · · ·	WW VVV	MADOO
M V m							
-30 dBm							
-40 dBm							
-50 dBm							
-60 dBm							
-70 dBm							
70 dbiii							
-80 dBm-							
CF 2.595 GHz			1001 pts	1.5 MHz	/	5	Span 15.0 MHz
2 Marker Table	e						
Type Ref	Trc	X-Value	Y-Value	Funct	tion	Function Re	esult
	1	2.393/34 GHZ	-8 56 dBm	nab ndB. down. BW		5.02 MH	3B 7
T2	1	2.597443 GHz	-9.08 dBm	Q Factor		517	.1
	~				- Measuring		01.10.2022

LTE band 41,5MHz Bandwidth,16QAM (-26dBc BW)

MultiView	Spectrun	n							
RefLevel 16. Att	.00 dBm Offse 15 dB SWT	t 1.00 dB ● RBV 1.07 ms ● VBV	V 50 kHz V 200 kHz M	Mode Auto Sweep					
1 Frequency S	weep								●1Pk View
			na	mmm	mantenn	un		M1[1]	16.43 dBr
10 dBm									2.5957940 GH
0 dBm									
			тı/			T2			
-10 dBm									
		hamm	\sim			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mm		
-20 dBm	man						~~~`	from .	
mmm	\sim								mont
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
-70 dBm									
ro ubiii									
00 d0m									
-ou ubiii									
CF 2.595 GHz			1001 p	ots	1	.5 MHz/			Span 15.0 MHz
2 Marker Table	e								
Type Ref		X-Value	7	Y-Value	e dP	Function		Function Re	esult
	1 4	2.393794 GR. 2.592512 GH	-	-9 47 dBm	nas ndB. down I	RW/		4.97 MH	
T2	1	2.597488 GH	Z	-9.18 dBm	Q Factor	D * *		521	.8
	Y					~	Measuring		() 01.10.2022



LTE band 41,5MHz Bandwidth,64QAM (-26dBc BW)





LTE band 41,10MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)			
2502	QPSK	16QAM	64QAM	
2595	9.80	9.65	9.65	

LTE band 41,10MHz Bandwidth, QPSK (-26dBc BW)

MultiView	Spectrum	1							
RefLevel 16.	00 dBm Offse	t 1.00 dB 🖷 RBW	100 kHz						
Att	15 dB SWT	1.04 ms 🖷 VBW 🗄	300 kHz 🛛 Mc	de Auto Sweep					
TDF "1"	110.00								O 1 Dk Mour
1 Frequency S	weep		or Min	un many alan	Mr. Mr. MN	mm		M1[1]	16.84 dRm
10 dBm					· · · · •			MILI	10.84 dBm
								-	
0 dBm						<u>├</u>			
			тι			12			
-10 dBm			7			<u> </u>			
		0.70	(١	A .		
-20 dBm		L MAY WYY	1			ννι	May May 1	A . An	0
0.00.00.00	my a my						- · · · ·	. w www.	mMurrow
f30/dBm	-								0 14 VIV
Yuu .									
-40 dBm									
-50 dBm									
-60 dBm									
-70 dBm									
-80 dBm									
CF 2.595 GHz		1	1001 pts	6	3	.0 MHz/	1	S	pan 30.0 MHz
2 Marker Table	2								
Type Ref	Trc	X-Value	-	Y-Value		Function		Function Re	esult
	1 4	2.391013 GHZ	1	-8 95 dBm	naB ndB down P	RW/		26.0 C 9.80 MH	IB Z
T2	<u>i</u>	2.599825 GHz		-8.69 dBm	Q Factor			264	.4
	~					~	Measuring		01.10.2022

LTE band 41,10MHz Bandwidth, 16QAM (-26dBc BW)

MultiView	Spectrum	1							-
Ref Level 16	.00 dBm Offse	t 1.00 dB 🖷 RB	₩ 100 kHz						
 Att TDF "1" 	15 dB SWI	1.04 ms 🖷 VB	N 300 kHz M	ode Auto Sweep					
1 Frequency S	weep							1	●1Pk View
			mon	phin mark	mon	wine /		M1[1]	18.24 dBm
10 dBm-								1	1.5987460 GHz
0 dBm						to			
			4			¥.			
-10 dBm						<u> </u>			
	٥	. AND	N.			ሌ	0.00		
-20 dBm	ma mark	and the a	1.57			· · · ·	1. Aver We	mon the	
	Mar Maria							- must M	man an
-80 dBm									
V '									
-40 dBm									
-50 dBm									
-60 dBm									
-70 dBm									
10 00.00									
-90 dBm-									
CF 2.595 GHz			1001 pt	S	3	.u MHz/		5	ipan 30.0 MHz
2 Marker Tabl	e Tree	V. Value		V Value		Europiero		Function D	a a dh
Ret		2.598746 GH	7 1	L8.24 dBm	ndB	Function		Punction Re	B
T1	1	2.590145 GH	lz l	-8.45 dBm	ndB down I	BW		9.65 MI	Īz
T2	1	2.599795 GH	łz	-7.63 dBm	Q Factor			269	.3
	7					~	Measuring		01.10.2022 17:08:17



LTE band 41,10MHz Bandwidth, 64QAM (-26dBc BW)





LTE band 41,15MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)			
2502	QPSK	16QAM	64QAM	
2595	14.88	14.79	14.61	

LTE band 41,15MHz Bandwidth, QPSK (-26dBc BW)



LTE band 41,15MHz Bandwidth,16QAM (-26dBc BW)

MultiView RefLevel 16	Spectru	im set 1.00 dB ● RB¥	/ 200 kHz						•
 Att TDF "1" 	15 dB SW	/T 1.01 ms 🗢 VBW	/ 1 MHz M	ode Auto Sweep					
1 Frequency S	Sweep								o1Pk View
			ערוט אייניין	monorman	M. M. W.	mony		M1[1]	16.91 dBn
10 dBm									2.5984620 GH
0 dBm									
o abiii			т			T2			
-10 dBm			<u> </u>			Y .			
		a a manimum	WW			L W	mar .	1 R .	
-20 dBm	Marshow	me Way was 1					- VIANNY	white may may	. Result
-30 dBm	a www.								w. and why
man Marine									
-40 dBm									
50 ID									
-50 dBm									
-60 dBm									
-70 dBm									
-80 dBm									
CF 2.595 GHz			1001 pt	<u> </u>	4	.5 MHz /			Span 45.0 MHz
2 Marker Tab	le		· · ·			/			
Type Re	f Trc	X-Value		Y-Value		Function		Function Re	esult
M1	1	2.598462 GH	z 1	.6.91 dBm	ndB			26.0	dB
T1 T2	1	2.587627 GH: 2.602418 GH:	Z Z	-8.37 dBm -8.04 dBm	ndB down I O Factor	BW		14.79 M 17	nz 5.7
	~					~	Measuring		01.10.2022 17:09:09



LTE band 41,15MHz Bandwidth,64QAM (-26dBc BW)





LTE band 41,20MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)					
2502	QPSK	16QAM	64QAM			
2595	19.36	19.18	19.18			

LTE band 41,20MHz Bandwidth, QPSK (-26dBc BW)

MultiView	Spectrur	n							-
RefLevel 16.	.00 dBm Offs	et 1.00 dB 🖷 RBW 3	200 kHz						
Att	15 dB SWT	1.01 ms 🖷 VBW	1 MHz Me	ode Auto Sweep					
TDF "1"									O 1 Dk Miour
1 Frequency 5	weep		harton	Mannon Ma	mannah	Nava		M1[1]	16.25 dRm
10 dBm			MANN	0.401.11.00000.00		V		wifil	2 5911640 GHz
									100110-10 0112
0 dBm			_						
			т1			L +			
-10 dBm			7						
			nd -						
-20 dBm		to the manufull	V'			- MA	Arraha da		
	a. My My	A. a. a. a. a. a.					CONTRACTION OF CONTRACT	mm	
-30 dBm	ahma .							- V~	han a la co
MARANAM									WWW ALL N. A
-40 dBm									AN MAN
-50 dBm									
-60 dBm									
-70 dBm									
-80 dBm									
CE 2 595 GHz			1001 nt	s	6				Spap 60.0 MHz
2 Marker Table	٩		1001 pt	~	0	13.11127			.pair 0010 11112
Type Ref	Trc	X-Value		Y-Value		Function		Function Re	esult
M1	1	2.591164 GHz		16.25 dBm	ndB			26.0	dB
T1 T2	1	2.58517 GHz		-8.80 dBm	ndB down f	ЗW		19.36 M	HZ
12	L	2.00433 GH2		-10.50 UDIII	Qiractor			13	
							Measuring		17,00,40

LTE band 41,20MHz Bandwidth, 16QAM (-26dBc BW)

MultiView	Spectrum	1							-
Ref Level 16	00 dBm Offse	t 1.00 dB • RB	W 200 kHz	- d- 0.4- C					
TDF "1"	15 dB SWI	1.01 ms 🖷 VB	WY 1 MHZ MI	ode Auto Sweep					
1 Frequency S	Sweep	-						-	●1Pk View
1.0.10			Month	monon	manna	mm		M1[1]	15.47 dBm
10 dBm								2	2.6008140 GHz
0 dBm									
						12			
-10 dBm						<u>₹</u>			
			/						
-20 dBm	a mamm	man	mb			pulling	the water the	man	
	Now were							many	Α.
-30 dBm									man a
NW dam									- mary
- 40 abiii									
-50 dBm									
-60 dBm									
-70 dBm									
-80 dBm									
CF 2.595 GHz			1001 pt	S	6	.0 MHz/			pan 60.0 MHz
2 Marker Tab	le								
M1		X-Value 2.600814 GH	7	Y-Value 15.47 dBm	ndB	Function		Function Re	dB
T1	1	2.58547 Gł	-Iz	-12.04 dBm	ndB down I	BW		19.18 M	Hz
T2	1	2.60465 Gł	Hz	-9.98 dBm	Q Factor			13	5.6
							Measuring		01.10.2022 17:10:01



LTE band 41,20MHz Bandwidth, 64QAM (-26dBc BW)





LTE band 66, 1.4MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)					
1745 0	QPSK	16QAM	64QAM			
1745.0	1.25	1.25	1.25			

LTE band 66, 1.4MHz Bandwidth, QPSK (-26dBc BW)



LTE band 66, 1.4MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 66, 1.4MHz Bandwidth, 64QAM (-26dBc BW)

MultiView	Spectrun	1							
Ref Level 26.	.50 dBm Offse	et 1.50	dB • RBW 20) kHz					
 Att 	25 dB SWT	210 µs (~7.2 r	ms) = VBW 100	OkHz Mode Au	to FFT				
1 Erequency S	ween								o 1 Pk View
								M1[1]	17.94 dBm
20 dBm					MI			1.	74520560 GHz
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	hours	man	m			
10 dBm									
0 dBm			-						
						₩			
-10 dBm									
00.45%		1 m	~ ~			↓ ~~	$\sim$		
-20 uBm	m	~~~~						mm	
-30 dam								$\sim$	man
Jog goin b									
-40 dBm									
-50 dBm									
-60 dBm									
-70 dBm									
CF 1.745 GHz			1001 pt	ts	42	20.0 kHz/			Span 4.2 MHz
2 Marker Table	e								
Type Ref		X-Value	Hz	Y-Value	pdB	Function		Function Re	sult
T1	i <b>-</b>	1.7443748 0	GHz .	-8.00 dBm	ndB down	BW		1.25 Mł	iz
T2	1	1.7456252 0	GHz	-8.01 dBm	Q Factor			1395	.8
							Measuring		30.09.2022



### LTE band 66, 3MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)				
1745 0	QPSK	16QAM	64QAM		
1743:0	3.05	3.01	3.02		

### LTE band 66, 3MHz Bandwidth, QPSK (-26dBc BW)



### LTE band 66, 3MHz Bandwidth, 16QAM (-26dBc BW)

MultiView	Spectru	m							-
Ref Level 26	5.50 dBm Offe	set 1.50	dB 🗢 RBW 30	) kHz					
<ul> <li>Att TDF "1"</li> </ul>	25 dB SW	Γ 140 μs (~7.4 r	ns) 🖶 VBW 100	) kHz Mode Au	ito FFT				
1 Frequency S	Sweep	1	1		T	1	1	1	o1Pk View
								M1[1]	16.51 dBm
20 dBm				Xo.		0.		1.	74453250 GHz
10 d0m			~~~~	munum	www.	1mg			
10 0811									
0 dBm									
o dom			т						
-10 dBm						₹			
-20 dBm			$\sim$			4	AAAA		
	mmm	mmm.					1 . walnut	mon	n
/30.dBm								· · · v.	Javan
									ľ
-40 dBm									
-50 dBm									
-60 dBm									
-70 dBm									
CF 1.745 GHz			1001 pt	S	90	00.0 kHz/			Span 9.0 MHz
2 Marker Tab	le								
M1		x-value 1.7445325 G	Hz	V-Value	ndB	Function		Function Re	B
T1	1	1.7434985 @	Hz	-8.67 dBm	ndB down	BW		3.01 MH	Īz
T2	1	1.7465105 G	βHz	-9.78 dBm	Q Factor			579	.2
							Measuring		<b>30.09.2022</b> 06:37:37



# LTE band 66, 3MHz Bandwidth, 64QAM (-26dBc BW)





### LTE band 66, 5MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)				
1745 0	QPSK	16QAM	64QAM		
1745.0	5.07	4.99	4.97		

### LTE band 66, 5MHz Bandwidth, QPSK (-26dBc BW)



### LTE band 66, 5MHz Bandwidth,16QAM (-26dBc BW)

MultiView	Spectrun	n							•
Ref Level 26 Att	5.50 dBm Offse 25 dB SWT	et 1.50 dB • RB 1.07 ms • VB	₩ 50 kHz ₩ 200 kHz M	ode Auto Sweep					
1 Frequency S	Sweep								●1Pk View
				101				M1[1]	18.52 dBm
20 dBm				111					1.7446100 GHz
			m	manh	mon	mm			
10 dBm			·						
			1						
0 dam									
o ubili			т1			T2			
			7			y			
-10 dBm						5	0		
		1	$\sqrt{2}$			۲ ۲	mar		
-20 dBm		Nor AND						n	
ann	www							mon	mmm
Y30 dBm									
-40 dBm									
-50 dBm									
-60 d8m									
00 0011									
-70 dBm-									
CF 1.745 GHz			1001 pt	s	1	.5 MHz/		5	Span 15.0 MHz
2 Marker Tabl	le								
Type Re	f Trc	X-Value		Y-Value		Function		Function Re	esult
M1	1	1.74461 GH	IZ 1	.8.52 dBm	ndB			26.0	dB
	1	1.742542 GH	HZ	-7.57 dBm	ndB down I	3VV		4.99 MI	1Z
12	±	1.747332 GF	12	-7.53 QBIN	ų ractor			345	.0
							Measuring		06:38:24



# LTE band 66, 5MHz Bandwidth,64QAM (-26dBc BW)

MultiView	Spectrum	1							•
Ref Level 26	.50 dBm Offse	t 1.50 dB 🖷 RB	W 50 kHz						
<ul> <li>Att</li> </ul>	25 dB <b>SWT</b>	1.07 ms 🖷 VB	<b>W</b> 200 kHz M	ode Auto Sweep					
IDF "1"	ween								
I requercy o	меер							M1[1]	18.53 dBm
20 dBm				MI					1.7446100 GHz
			m	homent	mon	mm			
10 dBm									
0 dBm									
			Ţ			12			
-10 dBm						× ×			
			~				$\Lambda_{\alpha}$		
-20 dBm	,	~~~~					mmm		
	mm	~					ŭ,	1 Marian	ha .
√30 dBm	·							0.	mont
									Ň
-40 dBm									
-50 dBm									
-60 dBm									
oo abiii									
-70 dBm									
			1001			E MULE /			
CF 1.745 GHZ	ā		1001 pt	\$	1	is MITZ/		2	span 15.0 MHZ
Type Ref	E Trc	X-Value		V-Value		Function		Eunction Re	esult
M1	1	1.74461 GH	lz 1	.8.53 dBm	ndB			26.0	dB
T1	1	1.742557 GH	Ηz	-7.43 dBm	ndB down l	BW		4.97 MI	iz
T2	1	1.747532 GF	Hz	-7.66 dBm	Q Factor			350	).7
							Measuring		<b>40</b> 30.09.2022 06:38:38



#### LTE band 66, 10MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)					
1745 0	QPSK	16QAM	64QAM			
1745.0	9.68	9.80	9.83			

# LTE band 66, 10MHz Bandwidth, QPSK (-26dBc BW)



### LTE band 66, 10MHz Bandwidth, 16QAM (-26dBc BW)





# LTE band 66, 10MHz Bandwidth, 64QAM (-26dBc BW)

MultiView • Spectrum											
Ref Level 26	.50 dBm Offse	et 1.50 dB 🖷 RB	<b>W</b> 100 kH:	z							
Att	25 dB SWT	1.04 ms 🖷 VB	<b>W</b> 300 kH:	z Mod	e Auto Sweep						
TDF "1"											
I Frequency S	weep										O IPK VIEW
20. d0m					1					MILI	16.18 dBm
20 ubiii											.7423030 GHZ
			ſ	m	manne	mmmmm	m				
10 dBm											
0 dBm											
			τ¥					12			
-10 dBm			<u> </u>					<u> </u>			
			ſ					10.			
-20 dBm			$\sim$					AND			
20 0011		man	V						mm	hus. a	
	mma.									monthly	mm
130 dBm											ma maria
-40 dBm											
-50 dBm											
-60 dBm											
CC GDIN											
70.10											
-70 dBm-											
CF 1.745 GHz			10	01 pts		3	.0 MHz,	/		5	Span 30.0 MHz
2 Marker Tabl	e										
Type Ref	f Trc	X-Value			Y-Value		Functi	on		Function Re	esult
M1 T1	1	1.742303 GH		16	.18 dBm	ndB adB dawa (	2547			26.0 ¢	3B
	1	1.740065 GF	12 17		-0.00 UDITI -9.88 dBm	O Eactor	244			<b>9.00 FI</b> 177	2
L 14	+	1.7 49910 01	16		5.00 dbin	Q I decor				1//	
									Measuring		06:39:25



#### LTE band 66, 15MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)				
1745 0	QPSK	16QAM	64QAM		
1745.0	14.74	14.79	14.88		

# LTE band 66, 15MHz Bandwidth, QPSK (-26dBc BW)



# LTE band 66, 15MHz Bandwidth, 16QAM (-26dBc BW)





# LTE band 66, 15MHz Bandwidth, 64QAM (-26dBc BW)

MultiView Spectrum									
Ref Level 26	50 dBm Offse	t 1.50 dB 🖷 RB	<b>W</b> 200 kHz						
Att TDE "1"	25 dB <b>SWT</b>	1.01 ms 🗢 VB	W 1 MHz Mo	ode Auto Sweep					
1 Frequency S	Sweep								●1Pk View
						101		M1[1]	18.10 dBm
20 dBm						0. A		1	.7497200 GHz
			mm	mon	monor	man			
10 dBm									
0 dBm						<del>                                     </del>			
			T1						
-10 dBm									
			M			۸ M	0		
-20 dBm	. Nh	monton	walk .			- IVV	Whiteman		
proMyth	man							full when the second	mm
130.4BW									month
-40 dBm									
-50 dBm									
-60 dBm									
-70 dBm									
CF 1.745 GHz			1001 pt	S	4	.5 MHz/		S	pan 45.0 MHz
2 Marker Tabl	le								
Type Re	f Trc	X-Value		Y-Value		Function		Function Re	esult
M1	1	1.74972 GH	iz 1	.8.10 dBm	ndB	3547		26.0 14 99 M	dB
T2	1 1	1.737337 GF	72 17	-7.91 abm -8.01 dBm	O Factor	⊃vv		11 ¹	7.6
	-	112 110 01				-	Measuring		30.09.2022
									06:40:12



#### LTE band 66, 20MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)				
1745 0	QPSK	16QAM	64QAM		
1745.0	19.30	19.36	19.36		

# LTE band 66, 20MHz Bandwidth, QPSK (-26dBc BW)



### LTE band 66, 20MHz Bandwidth, 16QAM (-26dBc BW)







### LTE band 66, 20MHz Bandwidth, 64QAM (-26dBc BW)

Note: Expanded measurement uncertainty is U = 3428 Hz, k = 2



# A.6 BAND EDGE COMPLIANCE

### Reference

FCC: CFR Part 2.1051, 22.917, 24.238, 27.53, 90.691.

## A.6.1 Measurement limit

Part 22.917 For operations in the 824–849MHz band, the FCC limit is 43 +10 log (P)dB below the transmitter power(P) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Part 24.238 and Part 27.53(h) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P) dB$ .

Part 27.53(m) specifies for mobile digital stations, the attenuation factor shall be not less than 40+ 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Part 27.53(g) states for operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 +10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Part 90.691 states that out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is greater than 37.5 kHz.

# A.6.2Measurement Procedure

The testing follows ANSI C63.26 ©Copyright. All rights reserved by SAICT.



a) The EUT was connected to spectrum analyzer and system simulator via a power divider.

b) The band edges of low and high channels for the highest RF powers were measured.

c) Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.

d) Set spectrum analyzer with RMS detector.

e) The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

f) Checked that all the results comply with the emission limit line.

## A.6.3 Measurement result

Only worst case result is given below



### LTE band 2

# OBW: 1RB-LOW_offset



# LOW BAND EDGE BLOCK-1RB-LOW_offset



OBW: 1RB-HIGH_offset

# No.I22N01939-RF LTE



MultiViev	v Specti	rum						•
Ref Level	15.00 dBm	• R	BW 5 kHz					
TDF "1"	15 dB 5	₩I 2.51 ms (~27 ms) ● V	BW 20 KHZ Mode Auto	FFI				
1 Occupied	Bandwidth					I		●1Pk View
10 dBm				801			M1[1]	16.63 dBm
				TP			1	.9089340 GHz
0 d9m				l ₹				
0 ubiii								
-10 dBm								
-20 dBm								
				1 \				
-30 dBm								
		- I and the second second		$  \rangle \rangle$				
-40 dBm				× ×				
and the second s					man			
-50 dBm					- August	w.,		
						mun M		
-60 dBm						- Variation of	hun.	
							" noremythere	
-70 dBm							·	
							v v	Warmer Blerrow Mit
-80 dBm								
05 1 0075	<b>a</b> u		1001					05.01.01
CL 1'90\2			1001 pts	3	.5 MHZ/			pan 35.0 MHZ
Z Marker I	able Ref Tro	V-Value	V-Value		Eupction		Eupction Pe	eult
M1		1.908934 GHz	16.63 dBm	Occ Bw	1 uncauti	3	28.9305220	62 kHz
Τ1	ĩ	1.9087243 GHz	-4.99 dBm	Occ Bw Cer	ntroid	_	1.90888	8794 GHz
T2	1	1.9090533 GHz	0.95 dBm	Occ Bw Fre	q Offset		1.38879	4434 MHz
						Measuring		01.10.2022

# HIGH BAND EDGE BLOCK-1RB-HIGH_offset



### LOW BAND EDGE BLOCK-20M-100%RB

# No.I22N01939-RF LTE



MultiView	Spectrum								
Ref Level 27.	00 dBm	• RBW 2	200 kHz						
Att	37 dB 🖷 SWT	50 ms 🖷 VBW	1 MHz Mode	Auto Sweep					
1 Frequency S	weep								●1Rm View
								M1[1]	-29.51 dBm
20 dBm									8500000 GHz
10 dBm									
						~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
0 dBm									
-10 dBm									
limit1_for_trace1									
-20 dBm									
					. f				
-30 dBm					7				
				\sim					
-40 dBm		mm							
,	wmm								
-50 dBm									
-60 dBm									
S‡70 dBm				5	2				
CF 1.85 GHz	1		501 pts		2	.0 MHz/		5	pan 20.0 MHz
							Measuring		01.10.2022 18:04:39

HIGH BAND EDGE BLOCK-20M-100%RB





LTE band 4

OBW: 1RB-LOW_offset



LOW BAND EDGE BLOCK-1RB-LOW_offset



OBW: 1RB-HIGH_offset


MultiView	- Spectru	um						•
Ref Level 1	5.00 dBm	• RBW	5 kHz					
TDF "1"	15 GD 54	VI 2.51 ms (~27 ms) - VBV	20 KHZ MODE AUTO P					
1 Occupied B	andwidth			105				O1Pk View
10 dBm							M1[1]	19.25 dBm
				12			1	.7538990 GHZ
0 dBm								
-10 dBm				-/ \				
-20 dBm								
-30 dBm								
		- In the second	~~~~	λ				
-40/dBm	- man man man	man man		Ju Ju	www.			
and a					wind	A (
-50 dBm					- Annes	and providence way	Manual I	
								menunder
-60 dBm								a de la competition de la comp
-70 dBm								
10 abiii								
-80 dBm								
CE 1 7525 CL		10	01 ptc		5 MUz /			non 25 0 MHz
2 Marker Tak	le	10	01 pt3				C	pari 55.0 Miliz
Type Re	ef Trc	X-Value	Y-Value		Function		Function Re	esult
M1	1	1.753899 GHz	19.25 dBm	Occ Bw		2	99.6248341	17 kHz
T1 T2	1	1.7537502 GHz	-1.17 dBm	Occ Bw Cer	ntroid a Offect		1.75389	9999 GHz
14	1	1.7546498 GHz	2.24 UDITI	OCC DW HIE	y onser		1.39999	0710 0110 2022

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



LOW BAND EDGE BLOCK-20M-100%RB



MultiView	Spectrum								
Ref Level 27.	00 dBm	• RBW 2	200 kHz						
Att	37 dB 🖷 SWT	50 ms 🗢 VBW	1 MHz Mode	Auto Sweep					
1 Frequency S	weep								o1Rm View
								M1[1]	-28.95 dBm
20 dBm									1.7100000 GHz
10 dBm									
						~~~~~~			~~~~~
0 dBm									
-10 dBm									
limit1_for_trace1									
-20 dBm									
20 000									
-20 d8m					1				
-30 UBm			~	~~~~					
		mm	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
_40 dBm									
-50 dBm									
-60 dBm									
				e					
5170 dBm					E				
CF 1.71 GHz	·		501 pts		2	.0 MHz/		5	pan 20.0 MHz
							Measuring		<b>W</b> 01.10.2022 18:08:16

#### HIGH BAND EDGE BLOCK-20M-100%RB





#### LTE band 5

## OBW: 1RB-LOW_offset



## LOW BAND EDGE BLOCK-1RB-LOW_offset



OBW: 1RB-HIGH_offset



MultiView	Spectrum	I							•
RefLevel 15	.00 dBm		● RBW 5 kH	lz					
<ul> <li>Att TDF "1"</li> </ul>	15 dB SWT	2.51 ms (~27 m	s) 🗢 VBW 20 kH	Iz Mode Auto	FFT				
1 Occupied Ba	indwidth								●1Pk View
10. dBm					MT1			M1[1]	16.09 dBm
10 0011									848.7380 MHz
0.dBm					22				
0 0011					т				
-10 d9m					, Ţ				
10 0.011									
-20 dBm					N				
20 0011									
-20 dBm									
-30 UBIII						٨			
40. 40.0					V V	1 /			
-40 aBm					4	/ \			
50.10				and the second se		۲ <u>۱</u>			
-50 dBm				have the		h.			
				A MAN WAVE		· "\			
-60 dBm			1 July N	June of the second s		M.			
			mannahola						
-70 dBm		Mumph Worr and Con							
warmanne	when when a second						Man mar work	monterman	mannanthorn
-80 dBm									
CF 846.5 MHz			1001 pts	5 5	3	.5 MHz/		5	pan 35.0 MHz
2 Marker Tabl	е					·			
Type Ref	Trc	X-Value		Y-Value		Function		Function Re	esult
M1	1	848.738 MH	IZ 1	6.09 dBm	Occ Bw	straid	2	98.9471979	
T2	1	848.8748 M	72 Hz	-7.24 dBm	Occ Bw Cel	a Offset		048.72034	2470 MHz
•	~						Measuring		01.10.2022

#### HIGH BAND EDGE BLOCK-1RB-HIGH_offset



#### LOW BAND EDGE BLOCK-10M-100%RB



MultiView	Spectrum								
Ref Level 27.0	00 dBm	● RBW 1	.00 kHz						
Att TDF "1"	37 dB 🖷 SWT	50 ms 🗢 VBW 5	i00 kHz Mode	Auto Sweep					
1 Frequency S	weep								o1Rm View
20 dBm								M1[1]	-25.63 dBm 824.0000 MHz
10 dBm						~~~~~			
0 dBm									
-10 dBm									
limit1_for_trace1									
-20 dBm				W	1				
					7				
-30 dBm		~~~~~	~~~~~	~~~~					
-40 dBm									
-50 dBm									
-60 dBm									
				s	2				
5470 dBm									
CF 824.0 MHz			501 pts		1	.0 MHz/		5	Span 10.0 MHz
							Measuring		<b>40</b> 01.10.2022 18:12:02

#### HIGH BAND EDGE BLOCK-10M-100%RB





#### LTE band 7

## OBW: 1RB-LOW_offset



## LOW BAND EDGE BLOCK-1RB-LOW_offset



## LOW BAND EDGE BLOCK-1RB-LOW_offset



MultiView = Spectrum									
Ref Level 27.	00 dBm	• RBW 1	. MHz						
Att	37 dB 🖷 SWT	50 ms 🗢 VBW 5	5 MHz Mode A	uto Sweep					
1 Frequency S	weep						-		●1Rm View
								M1[1]	-12.49 dBm
20 dBm									2.4989910 GHz
10 dBm									
0 dBm									
-10 dBm									M1
-20 dBm									
limit1_for_trace1	ł								
-30 dBm									
~40 dBm									
-50 dBm									
-60 dBm									
-70 dBm									
2.4895 GHz	1	1	501 pts		95	0.0 kHz/		1	2.499 GHz
							Measuring		01.10.2022 18:14:39

## OBW: 1RB-HIGH_offset



### HIGH BAND EDGE BLOCK-1RB-HIGH_offset



MultiView 📍 Spectrum									
Ref Level 27.0	00 dBm	• RBW :	l0 kHz						
Att TDF "1"	37 dB 😑 SWT	50 ms 🗢 VBW 5	50 kHz Mode A	Auto Sweep					
1 Frequency S	weep								O1Rm View
								M1[1]	-23.83 dBm
20 dBm								Zı	57000300 GHZ
10 d0m									
TO UBII									
0 dBm									
-10-dBm limit1_for_trace1									
M20 dBm									
m	·····								
-30 dBm			······		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
10.10								~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mar and a second
-40 dBm-									
-50 dBm									
-60 dBm									
-70 dBm									
2.57 GHz		•	501 pts		10	0.0 kHz/			2.571 GHz
							Measuring		<b>01.10.2022</b> 18:15:46

### HIGH BAND EDGE BLOCK-1RB-HIGH_offset



### Channel power



MultiView	Spectrum											•
Ref Level 25.	00 dBm		• RBW	10 kHz								
Att TDF "1"	25 dB 🖷 SW I	50 ms -	● VRW	30 kHz N	1ode A	uto Sweep						
1 ACLR												●1Rm View
20 dBm												
20 00.0												
10 dBm						Т	*1					
0 dBm												
-10 dBm												
-20 dBm												
mm												
-30 dBm	mann											
					~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~.	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
-40 dBm							, i i i i i i i i i i i i i i i i i i i			······	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	harrowen
-50 dBm										<u> </u>		
-60 dBm												
-70 dBm												
CF 2.571 GHz				50	0 pts		20	0.0 kHz/				Span 2.0 MHz
2 Result Summ	nary					No	ne					
Channe	el	Band	dwidth			Offset		Power				
Tx1 (Re	†) al	1.000) MHz					-15.41 dBm -15.41 dBm				
17 1010	AT							23.71 uDm				110 01 10 2022
									Measu	uring		18:16:42

LOW BAND EDGE BLOCK-20M-100%RB

MultiView	MultiView • Spectrum									
Ref Level 27	.00 dBm	• RBW S	500 kHz						_	
Att TDF "1"	37 dB 🖷 SWT	50 ms 🖷 VBW	3 MHz Mode	Auto Sweep						
1 Frequency	Sweep	I	I						●1Rm View	
								M1[1]	-21.31 dBm	
20 dBm								2	19990000 0112	
10 dBm										
0. 40.00										
U UBM										
-10 d9m										
limit1_for_trace1										
-20 dBm									M1	
······										
-30 dBm										
-40 dBm										
-50 dBm										
-60 dBm										
-70 dBm										
2.499 GHz	·		501 pts		10	0.0 kHz/			2.5 GHz	
							Measuring		19:20:43	

LOW BAND EDGE BLOCK-20M-100%RB



MultiView = Spectrum									
Ref Level 27. Att	00 dBm 37 dB = SWT	• RBW : 50 ms • VBW 5	. MHz 5 MHz Mode A	uto Sweep					_
TDF "1" 1 Frequency S	weep								●1Rm View
00 d0m								M1[1]	-20.78 dBm 4988960 GHz
20 UBM									
10 dBm									
0 dBm									
-10 dBm									
-20 dBm	1								M1
limit1_for_trace1			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		· · · · · · · · · · · · · · · · · · ·			
-30 dBm									
-40 dBm									
-50 dBm									
00 000									
-60 dBm									
-70 dBm									
2.4895 GHz			501 pts		95	50.0 kHz/			2.499 GHz
							Measuring		40 01.10.2022 19:21:23

HIGH BAND EDGE BLOCK-20M-100%RB

MultiView	MultiView • Spectrum										
Ref Level 27	.00 dBm	• RBW S	500 kHz								
Att TDF "1"	37 dB 🖷 SWT	50 ms 🖷 VBW	3 MHz Mode	Auto Sweep							
1 Frequency	Sweep	1						1	●1Rm View		
								M1[1]	-20.70 dBm		
20 dBm								2	57000500 0112		
10.10											
10 dBm											
0. d0m											
U UBIII											
-10 dBm											
limit1_for_trace1											
M1 5-20 dBm											
-30 dBm											
-40 dBm											
-50 dBm											
-60 dBm											
-70 dBm											
2.57 GHz			501 pts		10	0.0 kHz/			2.571 GHz		
							Measuring		18:19:18		

HIGH BAND EDGE BLOCK-20M-100%RB



MultiView	Spectrum	1							
Ref Level 27.	00 dBm	• RBW :	1 MHz	the Courses					
TDF "1"	37 UD 🖶 5WT	SU HIS - VEVY :	DIMINZ MIDDE A	uto sweep					
1 Frequency S	weep	1							●1Rm View
								M1[1]	-21.32 dBm
20 dBm								· · · · ·	1.57 11450 012
10 dBm									
0 dBm									
-10-dBm limit1 for trace1	1								
	L								
M1 <u>▼</u> 20 dBm									
-30 dBm									
-40 dBm									
10 dbiii									
FO dDm									
-50 UBM									
-60 dBm									
-70 dBm									
2.571 GHz			501 pts		2	.9 MHz/	÷		2.6 GHz
							Measuring		01.10.2022



LTE band 12

OBW: 1RB-LOW_offset



LOW BAND EDGE BLOCK-1RB-LOW_offset



OBW: 1RB-HIGH_offset





HIGH BAND EDGE BLOCK-1RB-HIGH_offset



LOW BAND EDGE BLOCK-10M-100%RB



MultiView	Spectrum									
Ref Level 27.0	00 dBm	RBW	30 kHz							
Att TDF "1"	37 dB 🖷 SWT	50 ms 🗢 VBW 1	.00 kHz Mode	Auto Sweep						
1 Frequency S	weep									●1Rm View
20 dBm									M1[1]	-28.52 dBm 98.92000 MHz
20 0011										
10 dBm										
0 dBm							mm	Munn	m	mm
-10 dBm					-	/				
limit1_for_trace1						N				
-20 dBm				IV	11	- And - Contraction - Contract				
-30 dBm					6	\sim				
mm	mum	www	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~	Ì					
-40 dBm										
-50 dBm										
-60 dBm					_					
					s	2				
-70 dBm				SJ						
CF 699.0 MHz			501 pts			50	0.0 kHz/			Span 5.0 MHz
								Measuring		01.10.2022 18:23:05

HIGH BAND EDGE BLOCK-10M-100%RB





LTE band 17

OBW: 1RB-LOW_offset



LOW BAND EDGE BLOCK-1RB-LOW_offset



OBW: 1RB-HIGH_offset



MultiVie	w Spectru	um				
Refleve	el 20.00 dBm	BBW	5 kHz			_
Att	20 dB SV	VT 837 µs (~11 ms) • VBW :	20 kHz Mode Auto FF	т		
TDF "1"						
1 Occupie	d Bandwidth		M			●1Pk View
			Min		M1[1]	18.09 dBm
10 dBm						/15.41560 MHz
0 dBm		ті	2			
			N I			
-10 dBm						
		and the second second	J.			
-20 dBm			M No.			
-30 dBm						
-40 dBm						
						manne .
-50 dBm						
-60 dBm						
-70 dBm						
CE 716.0	MH7	10	01 pte	500.0 kHz/		Spap 5.0 MHz
2 Marker	Table	10	51 pt3	50010 KHZ7		Span 5.0 Miliz
Type	Ref Trc	X-Value	Y-Value	Function	Function R	esult
M1	1	715.4156 MHz	18.09 dBm	Occ Bw	252.510755	353 kHz
T1 T2	1	715.27573 MHz 715.52824 MHz	-3.63 dBm	Occ Bw Centroid	715.4019	85006 MHz
12	1	713.32024 MILZ	1.12 UDIII	Occ by heg Offset	-598.0149	0 1 10 2022
					Measuring	10:25:00

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



LOW BAND EDGE BLOCK-10M-100%RB



MultiView	Spectrum									
Ref Level 27.0	00 dBm	● RB₩	30 kHz							
Att	37 dB 🖷 SWT	50 ms 🖷 VBW :	.00 kHz Mode	Auto Sweep						
1 Frequency S	weep									●1Rm View
									M1[1]	-30.89 dBm
20 dBm										03.95000 MHz
10 dBm										
0 dBm							mm	mm	mm	mun
-10 dBm										
limit1_for_trace1						/				
-20 dBm										
-30 dBm					M1					
man	mm	mm	mm	m	\sim					
-40 dBm										
50 d0m										
-50 08/1										
-60 dBm										
					s	2				
-70 dBm				S	1_					
CF 704.0 MHz			501 pts			50	0.0 kHz/			Span 5.0 MHz
								Measuring		U1.10.2022 18:26:28

HIGH BAND EDGE BLOCK-10M-100%RB





LTE band 25

OBW: 1RB-LOW_offset



LOW BAND EDGE BLOCK-1RB-LOW_offset



OBW: 1RB-HIGH_offset



MultiView	y Spectru	m							•
Ref Level	15.00 dBm	T O F I	● RBW 5 kH	lz					
TDF "1"	15 dB SW	2.51 ms (~2/ m	s) 🖶 VBW 20 km	1Z Mode Auto	FFI				
1 Occupied	Bandwidth								●1Pk View
10 dBm						M	1	M1[1]	17.67 dBm
							12	1	.9143530 GHz
0 dBm						T			
-10 dBm							1		
-20 dBm									
20. d0m									
-30 UBM		٨		<u> </u>	har				
-40 dBm									
io dalli							- Mark		
-50 dBm		1	part and a start of the start o					m	
		hummenter						Marrie a	
-60 dBm	a show we								
-	honouring							<u>`````````````````````````````````````</u>	<u></u>
10 0011									Mr. Manden
-80 dBm									
05 1 0075 (L				
CF 1.9075 (JHZ		1001 pts	5	3	.5 MHZ/			pan 35.0 MHz
	able Ref Tro	X-Value		V-Value		Function		Eunction Re	sult
M1	1	1.914353 G	Hz 1	7.67 dBm	Occ Bw		2	98.7935979	48 kHz
T1 TO	1	1.9142442 G	Hz	-2.09 dBm	Occ Bw Ce	ntroid a Offeet		1.91439	3552 GHz
12	1	1.9145429 G	Π2	4.11 QBM	OLC BW Fre	y onset		0,89355.	2421 MITZ
							Measuring		10:22:00

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



LOW BAND EDGE BLOCK-20M-100%RB



MultiView	Spectrum								
Ref Level 27.	00 dBm	• RBW 2	200 kHz						
Att TDF "1"	37 dB 🖷 SWT	50 ms 🖷 VBW	1 MHz Mode	Auto Sweep					
1 Frequency S	weep	_				_		_	●1Rm View
								M1[1]	-27.61 dBm
20 dBm									1.8500000 GHz
10 dBm									
					m				
0 dBm									
-10 dBm									
limit1_for_trace1									
-20 dBm									
				IV.	1				
-30 dBm				/					
			~~~~	and the second s					
-40 dBm		a man							
	m	,							
-50 dBm									
-60 dBm									
				s	>				
5170 dBm									
CF 1.85 GHz			501 pts		2	.0 MHz/			pan 20.0 MHz
							Measuring		<b>4</b> 01.10.2022 19:24:41

#### HIGH BAND EDGE BLOCK-20M-100%RB





### LTE band 26(824MHz-849MHz)

### OBW: 1RB-LOW_offset



### LOW BAND EDGE BLOCK-1RB-LOW_offset



OBW: 1RB-HIGH_offset



MultiVie	w Spectrum	1						-
Ref Leve Att	el 15.00 dBm 15 dB SWT	<ul> <li>RBW</li> <li>2.51 ms (~27 ms)</li> <li>VBW</li> </ul>	5 kHz 20 kHz <b>Mode</b> Auto I	FFT				
TDF "1"	d Rondwidth							o t Dk View
T Occupie	u bahuwiuu i			ML			M1[1]	16.07 dBm
10 dBm							MILI	249 7290 MHz
				172				04017300 MI12
0 dBm				TAT				
				<u>†</u> ]				
-10 dBm								
-20 d8m				N				
-20 ubiii				$\Lambda$				
				$(\Lambda ( - \Lambda ))$				
-30 dBm					d			
					M.			
-40 dBm					<del>/ 1</del>			
				N N	r \			
-50 dBm			- M					
			an and the		Yn_			
-60 dBm			adawan w		h,			
00 00111		. inni	www		Marys			
70 10	No	he salatahan the all			N 1			
-70 asm	warrante March March	WAR VARIANI						
MAN MANY A	dear and a second					muranhow	gymenter man	Anterit company and
-80 dBm								
CF 846.5	MHz	10	01 pts	3.	5 MHz/		S	pan 35.0 MHz
2 Marker	Table		· ·		•			
Туре	Ref Trc	X-Value	Y-Value		Function		Function Re	esult
M1	1	848.738 MHz	16.07 dBm	Occ Bw		2	87.1045390	43 kHz
T1	1	848.5882 MHz	-4.25 dBm	Occ Bw Cer	itroid		848.7317	8151 MHz
12	1	848.8753 MHz	0.64 dBm	Occ Bw Fre	q Offset		2.2317	8151 MHz
						Measuring		<b>10:20:57</b>

#### HIGH BAND EDGE BLOCK-1RB-HIGH_offset



#### LOW BAND EDGE BLOCK-15M-100%RB



MultiView • Spectrum										
Ref Level 27.0 Att TDF "1"	00 dBm 37 dB <b>= SWT</b>	1 ms (~16 ms)	RBW 200 kHz VBW 1 MHz	Mode Auto FF	т					
1 Frequency S	weep								●1Rm View	
20 dBm								M1[1]	-29.79 dBm 824.0000 MHz	
10 dBm										
0 dBm										
-10 dBm										
-10 080										
-20 dBm										
				м	1					
-30 dBm					<i>v</i>					
-40 dBm										
-50 dBm										
-60 dBm										
5470 d8m				s	2					
CE 824 0 MHz	[		1001 pts	3	1	5 MHz /	[	<b>(</b>	Spap 15.0 MHz	
			1001 pts	, 	1	10 1411 12/			19,10,2022	
							measuring		15:00:51	

#### HIGH BAND EDGE BLOCK-15M-100%RB





## LTE band 26(814MHz-824MHz)

### OBW: 1RB-LOW_offset



## LOW BAND EDGE BLOCK-1RB-LOW_offset



## LOW BAND EDGE BLOCK-1RB-LOW_offset



MultiView	Spectru	m							
Ref Level 27.0 Att TDF "1"	00 dBm 37 dB <b>SWT</b>	1.4 ms (~16 ms)	<ul> <li>RBW 3 kHz</li> <li>VBW 20 kHz</li> </ul>	Mode Auto FF	Т				
1 Frequency S	weep								●1Rm View
20 dBm								M1[1]	-28.06 dBm 13.96070 MHz
10 dBm									
0 dBm									
-10 dBm									
LIMIT1_FOR_TRACE	1								
-20 dBm									
-30 dBm									M1 Joseff Mark
-40 dBm						who with	hanna a	Audultether	purchastan
-50 dBm					and a second in the first of the	and West W	WP Wenter	al apply the providence of the	
-60 dBm	stradionalization	ere water and the and the by	when any one of the second	ubarennibrituituterkorenti	ne a fraaileet ook oor oo				
-70 dBm									
808.9625 MH	Z	1	1399 pts	] ;	50	0.0 kHz/	1		813.9625 MHz
	v						Measuring		10.10.2022 14:02:09

## OBW: 1RB-HIGH_offset



### HIGH BAND EDGE BLOCK-1RB-HIGH_offset



MultiView	Spectrum	1							
Ref Level 27.0 Att	00 dBm 37 dB <b>SWT</b>	1.4 ms (~9.4 ms)	● RBW 3 kHz ) ● VBW 20 kHz	Mode Auto Ff	-T				
1 Frequency S	weep								01Rm View
20 dBm								M1[1]	-24.81 dBm 24.00000 MHz
10 dBm			Multime Ma	M.,					
0.40 m				1					
U dBm			M	h					
-10 dBm	J. warm	warn warne war		- M					
imit1+tor-trace1\M	Wardologia and a second sec			hw	1 m				
-30 dBm					- WWWWWW	monorm			
-40 dBm						nuclus	mount	MMMMMMM	mana
-50 dBm									e vis editori Are
-60 dBm									
-70 dBm				s	1				
CF 824.0 MHz		1	1399 pts	6	2	00.0 kHz/			Span 2.0 MHz
							Measuring		10.10.2022 14:06:35

#### HIGH BAND EDGE BLOCK-1RB-HIGH_offset



### LOW BAND EDGE BLOCK-10M-100%RB



MultiView	Spe	ctrum										
Ref Level 27.0	00 dBm			•	RBW 100	<hz< td=""><td></td><td></td><td></td><td></td><td></td><td></td></hz<>						
Att TDF "1"	37 dB	SWI 4	1.89 µs (~6	5.6 ms) •	• VBW 5001	KHZ Moo	de Auto					
1 Frequency S	weep				1						1	●1Rm View
											M1[1]	-15.09 dBm
20 dBm											-	814.00000 MHz
10 dBm											$h \sim$	<u> </u>
10 0.011												
								(				
0 dBm												
-10 dBm												
limit1 for trace1							M	1				
mmer_nor_cracer						~						
-20 dBm	_		~			~~~						
$\sim$		_	$\sim$									
-30 dBm												
-40 dBm												
-50 dBm												
-60 dBm												
-70 dBm							S1	2				
CE 814.0 MHz	1				501 nts			50	0.0 kHz/	1	1	Span 5.0 MHz
0. 01 10 1112					001 pt3				51510127	Monsuring		10.10.2022
										measuring		14:08:02

#### LOW BAND EDGE BLOCK-10M-100%RB



#### HIGH BAND EDGE BLOCK-10M-100%RB



MultiView = Spectrum											
Ref Level 27.0 Att TDF "1"	00 dBm 37 dB	SWT 4:	84 µs (~7.	• RBN 1 ms) • VBN	₩ 100 k ₩ 500 k	Hz Hz <b>Mode</b> Auto	o FFT				
1 Frequency S	weep										●1Rm View
20 dBm										M1[1]	-17.92 dBm 24.00000 MHz
10-d8m			~ ~ ~ ~								
0.40 m			~~		$\sim$	$\backslash$					
U dBm						W					
-10 dBm											
limit1_for_trace1						N N					
-20 080										·	
-30 dBm											
-40 dBm											
-50 dBm											
-60 dBm											
-70 dBm						s	52				
CF 824.0 MHz				10	001 pts		50	00.0 kHz/			Span 5.0 MHz
									Measuring		<b>09.10.2022</b>

## HIGH BAND EDGE BLOCK-10M-100%RB

MultiView 🔳 S	pectrum							•
Ref Level 27.00 dBn	n	<ul> <li>RBW 100 kHz</li> </ul>						
Att 37 dt	B 🖷 SWT 1 ms (~12 m	is) 🖷 VBW 500 kHz	Mode Auto Ff	-T				
1 Frequency Sweep								●1Rm View
							M1[1]	-31.76 dBm
20 dBm								24.04000 MHz
10 dBm								
0 dBm								
-10 dBm								
limit1_for_trace1								
-20 dBm								
M1 -30 dBm								
-40 d8m								
-40 0011								
-50 dBm								
-60 dBm								
-70 dBm								
824.0375 MHz	1	1001 pts	3	50	0.0 kHz/	1		829.0375 MHz
~						Measuring		09.10.2022 14:55:36



#### LTE band 38

## OBW: 1RB-LOW_offset



## LOW BAND EDGE BLOCK-1RB-LOW_offset



## LOW BAND EDGE BLOCK-1RB-LOW_offset



MultiView Spectrum										
Ref Level 27.	00 dBm 37 dB <b>= SWT</b>	• RBW 1 MI 3 s • VBW 5 MI	Hz Hz <b>Mode</b> Auto	Sween						
TDF "1"	0, 00 - 0111		1.1000 1.000	oncop						
1 Frequency S	weep	1				1		I	●1Rm View	
								M1[1]	-10.93 dBm	
20 dBm									2.568910 GHz	
10 dBm-										
0 dBm										
									M1	
-10 dBm										
-20 dBm										
imiti_ior_tracei										
-30 dBm										
									1	
									$\sim$	
-40 dBm										
	~~~~								$\sim$	
EQ dQm										
-50 UBM										
-60 dBm										
-70 dBm										
2.48 GHz		•	501 pts		8	.9 MHz/		·	2.569 GHz	
							Measuring		400 01.10.2022	

OBW: 1RB-HIGH_offset



HIGH BAND EDGE BLOCK-1RB-HIGH_offset



MultiView Spectrum										
Ref Level 27.	00 dBm	 RBW 10 k RBW 50 k 	Hz Hz Mode Auto	Swoon						
TDF "1"	57 ab • 341	5.5 6 6647 50 k	Inz Mode Add	5 Sweep					A Day Marca	
1 Frequency S	weep							M1[1]	O IRM VIEW	
								MI[1]	52000100 GHz	
20 dBm								2,	52000100 002	
10 dBm										
0.dBm										
0 00.00										
limit1_for_trace1										
-20 dBm										
-20 d0m										
MIO UBIII										
m										
-40 dBm	- mana									
		m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~							
-50 dBm							~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~	
-60 d8m										
00 0011										
-70 dBm										
2.62 GHz			501 pts		10	0.0 kHz/			2.621 GHz	
							Measuring		01.10.2022 19:44:20	

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



Channel power



MultiView	Spectrum	l.									•
Ref Level 25 Att	.00 dBm 25 dB = SWT	• R 3 s • V	. BW 10 kH: BW 30 kH:	z z Mode Auti	o Sweep						
TDF "1" 1 ACLR											01Rm View
20 dBm											
20 0011					-						
10 dBm						< 1					
0 dBm											
-10 d9m											
-10 0800											
-20 dBm											
-30 dBm						-					
40, 4000											
-40 0811	·····										
-50 dBm		m		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	······						
							~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	·····	~~~~	·······	
-60 dBm											
-70 dpm-											
				F00 .							
CF 2.621 GHz				500 pts	N.I	21	JU.U KHZ/				Span 2.0 MHz
Z Result Summ	el	Band	lwidth		Offset		Power				
Tx1 (Re	f)	1.000	MHz		onoot		-31.44 dBm				
Tx Tota	al						-31.44 dBm				
								Measu	ring		01.10.2022 19:45:18

## LOW BAND EDGE BLOCK-20M-100%RB

MultiView	Spectrum								•
Ref Level 27.0	0 dBm	• RBW 500	kHz						_
Att TDF "1"	37 dB 🖷 SWT	3 s 🗢 VBW 3	MHz Mode Au	to Sweep					
1 Frequency Sv	veep							1	●1Rm View
								M1[1]	-26.45 dBm
20 dBm								2,	56999700 GHZ
10 dBm									
0 dBm									
-10.dBm									
limit1_for_trace1									
-20 dBm									
20 0011									M1
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
-70 dBm									
2.569 GHz			501 pts		10	0.0 kHz/	I	1	2.57 GHz
	~					~	Measuring		01.10.2022

## LOW BAND EDGE BLOCK-20M-100%RB



MultiView Spectrum											
Ref Level 27.00 dBm • RBW 1 MHz											
TDF "1"											
1 Frequency S	weep	1				1		1	●1Rm View		
								M1[1]	-25.06 dBm		
20 dBm									2.568910 GHz		
10 10											
TO OBM											
0 dBm											
10.10											
-10 dBm-											
-20 dBm											
limit1_for_trace1									MI		
-30 dBm											
-40 dBm											
-50 dBm											
-60 dBm											
-70 dBm											
2.48 GHz			501 pts		8	.9 MHz/			2.569 GHz		
							Measuring		01.10.2022 19:46:57		

## HIGH BAND EDGE BLOCK-20M-100%RB

MultiView Spectrum										
Ref Level 27.00 dBm • RBW 500 kHz										
Att TDF "1"	37 dB 🖷 SWT	3 s 🗢 VBW 3	MHz Mode Au	to Sweep						
1 Frequency S	weep								O1Rm View	
								M1[1]	-27.01 dBm	
20 dBm								Z,	62000500 GHZ	
10 dBm										
0 dBm										
-10-d8m										
limit1_for_trace1										
-20 dBm										
X										
-30 dBm										
-40 dBm										
-50 dBm										
-60 dBm										
-70 d9m										
2.62.647			501 pts		10				2.621.042	
2.02 0112					10		Monguring		01.10.2022	
							measuring		19:47:45	

## HIGH BAND EDGE BLOCK-20M-100%RB



MultiView Spectrum									
Ref Level 27. Att	00 dBm 37 dB <b>= SWT</b>	● RBW 1 MH 3 s ● VBW 5 MH	Hz Hz <b>Mode</b> Auto	Sweep					_
TDF "1" 1 Frequency S	Sweep								o1Rm View
								M1[1]	-25.96 dBm
20 dBm								2	2.6210720 GHz
10 dBm									
0 dBm									
-10 d8m									
limīt1_fór_trace1									
-20 dBm									
							L		
-30 dBm									
-40 dBm					- mark				
-50 dBm									
-60 dBm									
-70 dBm									
2 621 GH-			501 pte		· · ·	4 MHz /			2 645 CH2
2.021 0112			501 pts		Z		54		01.10.2022





#### LTE band 41

#### LOW BAND EDGE BLOCK-1RB-LOW_offset



### HIGH BAND EDGE BLOCK-1RB-HIGH_offset



#### LOW BAND EDGE BLOCK-20M-100%RB



MultiView 📑 Spectrum	× Sp	ectrum 3	×					•
Ref Level 25.00 dBm Offset	t 6.50 dB	Mode Auto Swee	*p					SGL
								Count 20/20
1 Spurious Emissions								o1 Max
SPURIOUS_LINE_ABS_00225.000 dBm	1	PA	SS				M1[1]	-30.02 dBm
Line SPURIOUS LINE	ABS 003	PA	ss I				2.6	5500000 CH2
Line SPURIOUS LINE	ABS 002	PA	ss				2.0	53000000 GHZ
10 dBm	_							
			1					
0 dBm								
-10 dBm			/\					
			/ 1	1				
-20 dBm			/					
20 00.00			- I I					
				l'h n				
-30 dBm		lu.	and					
40 d0m		and a start and a start and a start	(and the second s					
40 0000								
-50 dBm					- Alexandre	mannen		
		ad and the second se						
-60 dBm	and and any all have be							
were and an entry of the state								
-70 dBm								
CE 2.655 GHz		5005 nts		13	2.0 MHz/		St	an 120.0 MHz
2 Pesult Summany		0000 pt	,					
Paper Low	Pange Un	DB	w.	Frequen	001	Dower Ab	c	AL instit
2 595 GHz	2 655 GHz	50.000		2.65389	GHZ	18.77 dB	- m	6.23 dB
2.555 GHz	2.656 GHz	50.000		2.65500	GHZ	-29.51 dB	m -1	9.51 dB
2.656 GHz	2.660 GHz	1 000	MHz	2.65600	GHz	-26.53 dB	m -1	6.53 dB
2.660 GHz	2.661 GHz	1.000	MHz	2.66000	GHZ	-35.63 dB	m -2	2.63 dB
2.661 GHz	2.715 GHz	1.000	MHz	2.66103	GHz	-37.12 dB	m -1	2.12 dB
					~	Ready		09.10.2022 15:12:43

## HIGH BAND EDGE BLOCK-20M-100%RB




# OBW: 1RB-LOW_offset



# LOW BAND EDGE BLOCK-1RB-LOW_offset



#### OBW: 1RB-HIGH_offset



MultiView	Spectrum	1							-
RefLevel 16	.50 dBm Offse	t 1.50 dB	• RBW 5 kHz						
TDF "1"	15 dB SWI	2.51 ms (~2/ ms)	• VBW 20 KHZ M	lode Auto FFT					
1 Occupied Ba	ndwidth	1					T	I	●1Pk View
10.10								M1[1]	20.46 dBm
10 dBm				1	2				1.7789340 GHz
0 dBm					7				
				/'					
-10 dBm									
					$\backslash$				
-20 dBm					$\rightarrow$				
-30 dBm				-					
I A									
-40/dBm									
-50 dBm						and and			
30 0011							mannan	l	
-60 dBm								menuly	
								- mult	we.
-70 dBm									mythem
-80 dBm									
CF 1.7775 GHz	2		1001 pts		3	.5 MHz/		ę	Span 35.0 MHz
2 Marker Tabl	e Tro	V Value	V-Val			Eunction		Eupstion D	poult
M1	1	1.778934 GHz	20.46	dBm Oc	сBw	Function	2	91.3337016	91 kHz
T1	1	1.7787541 GHz	-0.07	dBm Oc	c Bw Cer	ntroid		1.77889	9758 GHz
L 12	1	1.7790454 GHz	2.92	asm Oc	C BW Fre	q utrset		1.39975	8497 MHZ
							Measuring		10:57:55

# HIGH BAND EDGE BLOCK-1RB-HIGH_offset



# LOW BAND EDGE BLOCK-20M-100%RB



MultiView	Spectrum	I							
Ref Level 27.	00 dBm Offse	t 1.50 dB 🖷 RBN	<b>V</b> 200 kHz						
Att TDF "1"	35 dB 🖷 SWT	50 ms 🖷 VBV	N 1 MHz Mo	de Auto Sweep					
1 Frequency S	weep		1				1		IRm View
20 dBm								M1[1]	-25.50 dBm 1.7100000 GHz
20 0011									
10 dBm						**************************************	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
0 dBm									
-10 dBm									
limit1_for_trace1									
-20 dBm				M	1				
-30 dBm				_~~~					
		mm	~~~~						
-40 dBm									
-50 dBm									
00 40.00									
-60 dBm									
				s	2				
5470 dBm									
CF 1.71 GHz			501 pts		2	.0 MHz/		5	Span 20.0 MHz
							Measuring		01.10.2022 18:59:15

#### HIGH BAND EDGE BLOCK-20M-100%RB



Note: Expanded measurement uncertainty is U = 0.49dB(100KHz-2GHz)/1.21dB(2GHz-26.5GHz), k = 1.96



# A.7 CONDUCTED SPURIOUS EMISSION

# Reference

FCC: CFR Part 2.1051, 22.917, 24.238, 27.53, 90.691.

# A.7.1 Measurement Method

The following steps outline the procedure used to measure the conducted emissions from the EUT.

- Determine frequency range for measurements: From CFR 2.1051 the spectrum should be investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency. For the mobile station equipment tested, this equates to a frequency range of 13 MHz to 9 GHz, data taken from 10 MHz to 25 GHz.
- 2. Determine EUT transmit frequencies: below outlines the band edge frequencies pertinent to conducted emissions testing.
- 3. The number of sweep points of spectrum analyzer is set to 30001 which is greater than span/RBW.

# A. 7.2 Measurement Limit

Part 22.917, Part 24.238 and Part 27.53(h) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P) dB$ .

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

Part 27.53(m)(4) specifies for mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Part 27.53(a) states for mobile and portable stations operating in the 2305–2315 MHz and 2350– 2360 MHz bands: By a factor of not less than: 43 +10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB onall frequencies between 2328 and 2337MHz; By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 ©Copyright. All rights reserved by SAICT.





+ 10 log (P) dB on all frequencies between 2296 and 2300MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz; By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

Part 90.691 states that out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is greater than 37.5 kHz.

A. 7.3 Measurement resultOnly worst case result is given belowA. 7.3 Measurement resultOnly worst case result is given below



# LTE band 2 : 30MHz – 19.1GHz

Spurious emission limit -13dBm.

## NOTE: peak above the limit line is the carrier frequency.



## LTE band 4 : 30MHz – 17.55GHz

Spurious emission limit -13dBm.

#### NOTE: peak above the limit line is the carrier frequency.



# LTE band 5 20MHz QPSK: 30MHz – 8.49GHz

Spurious emission limit -25dBm.



MultiView	Spectrum								
Ref Level 20	00 dBm	e prw	1 MHz						
Att	30 dB <b>SWT</b> 3	33.9 ms • VBW	3 MHz Mode /	Auto Sweep					
TDF "1"									
1 Frequency S	weep							M1[1]	01Rm View
								MILI	825.350 MHz
10 dBm									020100011112
0.40.0									
U dBm									
-10 dBm	U1 12 000 d0								
	HI -13.000 08	m							
-20 dBm									
-30 dBm									
00 00.0									
-40 dBm	ц., I	الطور و	ى بى يى يىلىغان س	and the second second	والمتعالية والمتعادية		سوافل به	أنفأهرى وإوا أعطا الليرغون ويرقعه	1.10 ⁰⁰⁰⁰⁰
	Confidence at the last	A DESCRIPTION OF A DESC	In the state of the second	P. Carlos	and the second	متعل وللساطرية والمطالعات المقطر	A shirt was a second se	Manual manufacture and a second s	President of the second
50 dBm	and a latit a second state in the late	A DEPARTMENT			<u>//</u>	A STATE OF CONTRACT OF CONT	And band of		Statistics, or produced in
-60 dBm									
-70 dBm									
30.0 MHz			30001 pt	s	84	6.0 MHz/			8.49 GHz
							Measuring		03.10.2022

# NOTE: peak above the limit line is the carrier frequency.

## LTE band 7 20MHz QPSK: 30MHz – 25.7GHz

Spurious emission limit -25dBm.

# NOTE: peak above the limit line is the carrier frequency.



# LTE band 12: 30MHz – 7.16GHz

Spurious emission limit –13dBm.



· • • • • •						<b>.</b>			_
MultiView	Spectrum								
Ref Level 20.	00 dBm	RBW	1 MHz						
Att	30 dB <b>SWT</b> 3	30.1 ms 👄 VBW	3 MHz Mode /	Auto Sweep					
TDF "1"									
1 Frequency S	weep								●1Rm View
, in the second s	Î							M1[1]	28.18 dBm
									714.810 MHz
10 dBm									
0 dBm									
o abiii									
-10 dBm									
	H1 -13.000 dB	m							
00.40									
-20 dBm-									
-30 dBm									
-40 dBm			يبايد بداد بين	سلامي المحال	Which are a second second	and the manufall			العادية المعالية معري
and dependence of the second	and a Million of the state of the	الطفائقي ومسالعهم	Profiling a second second		any state of the second second	and the state of t	محصيره وإياه لتشطيحون	water of the second second second second	In the second
-50 dBm	and a substitution of the	and the state of the		- shallon a con	a page and a page of the page		a a fritter of the stand of the st	The difference is not only in the second	
-60 dBm									
=70 dBm									
ro ubiii									
30.0 MHz	I		30001 pt	· · · · · · · · · · · · · · · · · · ·	71	3.0 MHz/			7 16 GHz
0010 10112			50001 pt		/1	010 111127			03.10.2022
							Measuring		- 00,27,26

### NOTE: peak above the limit line is the carrier frequency.

# LTE band 17: 30MHz – 7.16GHz

Spurious emission limit –13dBm.

#### NOTE: peak above the limit line is the carrier frequency.



# LTE band 25: 30MHz – 19.15GHz

Spurious emission limit -13dBm.



MultiView	Spectrum								
Ref Level 20.	00 dBm	RBW	1 MHz						
Att	30 dB SWT 7	76.5 ms 🗢 VBW	3 MHz Mode #	Auto Sweep					
TDF "1"	woon								0.1 Pm Viow
I Frequency S	i i							M1[1]	28 17 dBm
								mit[1]	1.896370 GHz
10 dBm									
0 dBm									
-10 dBm									
	H1 -13.000 dB	m							
-20 dBm									
-30 dBm									
40 d0m									
-40 uBm	L			العلى				and the states	adequation delevers of the
and the second second	page internation	Jan Mar Market		the factor to an address	مرحل فالأعير واعلطه ومغرابا وكالأدراك	dekoundara da adda	فليطلقون بابري أتربه بالمعاد		No linguistica agenting a fillional
=50 dBm	And a second	Marcal Marcal	and the second se	Second Space of players	مى يەلىلىكى _{ئىلى} يىرى مەلكىمىرى	and the second	And a state of the second second	pri traver	
-60 dBm									
-70 dBm									
			00001						10.15.015
30.0 MHZ			30001 pt	S	1.	91 GHZ/			19.15 GHz
							Measuring		00:28:33

## LTE band 26(814MHz-824MHz): 30MHz - 8.24GHz

Spurious emission limit –13dBm.

#### NOTE: peak above the limit line is the carrier frequency.



#### LTE band 26(824MHz-849MHz): 30MHz – 8.49GHz

Spurious emission limit -13dBm.



RefLevel 20.00 dBm • RBW 1 MHz	
Att 30 dB SWT 33.9 ms ● VBW 3 MHz Mode Auto Sweep TDF "1"	
1 Frequency Sweep	●1Rm View
M1[1]	26.98 dBm
	848.760 MHz
10 dBm	
U GBM	
-10 dBm	
H1 -13.000 dBm	
-20 dBm	
-30 dBm	
	al ta bil
	A Market Street Street
	the barrow, the shades
-60 dBm	
-70.40m	
30.0 MHz 30001 pts 846.0 MHz/	8.49 GHz
	03.10.2022

# LTE band 38: 30MHz – 26.2GHz

Spurious emission limit -25dBm.

#### NOTE: peak above the limit line is the carrier frequency.



#### LTE band 41: 30MHz – 26.9GHz

Spurious emission limit -25dBm.



MultiView	Spectrum								
Ref Level 20.	00 dBm Offset	1.00 dB • RBW	/ 1 MHz / 3 MHz Mode	Auto Sween					
TDF "1"		100 113 - 101		Auto Sweep					o 1 Pm View
Thequency a	1							M1[1]	28.58 dBm
10 dBm									2.544500 GHz
10 dbiii									
0 dBm									
-10 dBm									
-20 dBm									
20 000	H1 -25.000 dB	m							
-30 dBm									
-40 dBm	الاسان ببلغان	المعربا على				المريضين وبرار الأراطي والر	and the second	مرد المرد الم مرد المرد	
-50 dBm			hanna aika jaraa laitta meth	يعليون والعاد والعد والعد	and the second secon				
			ing and the second s	and the second	Negara sector				
-60 dBm									
-70 dBm									
			00001						
30.0 MHZ	~		30001 pt	5	2.	.09 GHZ/	Measuring		20.9 GHZ

# LTE Band 66: 30MHz – 17.8GHz

Spurious emission limit –13dBm.

MultiView	Spectrum								•
Ref Level 20. Att	00 dBm Offset 28 dB SWT	1.50 dB • RBV	VIMHz VIMHz Mode	: Auto Sweep					
TDF "1"									
1 Frequency S	weep								●1Rm View
N 1	1							M1[1]	29.91 dBm
									1.710100 GHz
10 dBm									
0 dBm									
-10 dBm									
	H1 -13.000 dB	m							
-20 dBm									
-30 dBm									
-40 dBm									
dia.	الاربيانية بعرين	and south of	لىلىي <mark>اللىغى</mark> بى	Constant and Constant					متواقعنا القلعلية أعراده أعراده
and a state of the			ng eliller and and and	and the second second	فالتباري والماسية الماسية وريال	a standard ball ball along the second	antha Indiana antikana ana		allow and a second second second
1-50 dBm			h, attend and	Constraints of the second s	and a second	and the second second second	and a strength of the second second	and the second	
-60 d0m									
-00 ubiii-									
-70 dBm									
30.0 MHz	1	1	30001 pt	S	1.	78 GHz/	1	1	17.8 GHz
	~					~	Measuring		03.10.2022
									00:32:40





# A.8 PEAK-TO-AVERAGE POWER RATIO

#### Reference

FCC: CFR Part 24.232, 27.50(d), KDB971168 D01(5.7).

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

a)Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;

b) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;

c) Set the number of counts to a value that stabilizes the measured CCDF curve;

d) Set the measurement interval to 1 ms

e)Record the maximum PAPR level associated with a probability of 0.1%

A.8.1 Measurement limit

not exceed 13 dB

A.8.2 Measurement results

Only worst case result is given below



Frequency(MHz)		PAPR(dB)				
	Danuwiutii(ivinz)	QPSK	16QAM	64QAM		
1880.0	20	5.78	6.52	6.42		

# LTE band 2, 20MHz Bandwidth, QPSK (PAPR)





#### LTE band 2, 20MHz Bandwidth, 16QAM (PAPR)



#### LTE band 2, 20MHz Bandwidth, 64QAM (PAPR)





Frequency(MHz)	Pondwidth(MHz)	PAPR(dB)				
	banuwiutii(ivinz)	QPSK	16QAM	64QAM		
1732.5	20	4.90	5.60	5.62		

# LTE band 4, 20MHz Bandwidth, QPSK (PAPR)



# LTE band 4, 20MHz Bandwidth, 16QAM (PAPR)





LTE band 4, 20MHz Bandwidth, 64QAM (PAPR)





	Pandwidth(MHz)	PAPR(dB)				
Frequency(MHZ)	Bandwidth(IVIHZ)	QPSK	16QAM	64QAM		
826.5	10	5.32	6.10	6.10		

# LTE band 5, 10MHz Bandwidth, QPSK (PAPR)



# LTE band 5, 10MHz Bandwidth, 16QAM (PAPR)





LTE band 5, 10MHz Bandwidth, 64QAM (PAPR)





Frequency(MHz)	Pondwidth(MHz)	PAPR(dB)				
	banuwiutii(ivinz)	QPSK	16QAM	64QAM		
2535.0	20	5.10	5.06	5.90		

## LTE band 7, 20MHz Bandwidth, QPSK (PAPR)



# LTE band 7, 20MHz Bandwidth, 16QAM (PAPR)





## LTE band 7, 20MHz Bandwidth, 64QAM (PAPR)





Frequency(MHz)		PAPR(dB)		
	Danuwiutii(ivinz)	QPSK 16QAM 640	64QAM	
707.5	10	6.12	6.84	6.84

# LTE band 12, 10MHz Bandwidth, QPSK (PAPR)



# LTE band 12, 10MHz Bandwidth, 16QAM (PAPR)





LTE band 12, 10MHz Bandwidth, 64QAM (PAPR)





Frequency(MHz)	Pondwidth(MHz)	PAPR(d		
	Danuwiutii(ivinz)	QPSK 16QAM 6	64QAM	
1882.5	20	5.80	6.38	6.46

# LTE band 25, 20MHz Bandwidth, QPSK (PAPR)



# LTE band 25, 20MHz Bandwidth, 16QAM (PAPR)





LTE band 25, 20MHz Bandwidth, 64QAM (PAPR)





## LTE band 26(814MHz -824MHz)

Frequency(MHz)	Pondwidth(MH=)		PAPR(dB)		
	Danuwiutii(ivinz)	QPSK 16QAM 64	64QAM		
819.0	10	5.56	6.30	6.34	

#### LTE band 26(814MHz -824MHz), 10MHz Bandwidth, QPSK (PAPR)



LTE band 26(814MHz -824MHz), 10MHz Bandwidth, 16QAM (PAPR)







# LTE band 26(814MHz -824MHz), 10MHz Bandwidth, 64QAM (PAPR)



## LTE band 26(824MHz -849MHz)

Frequency(MHz)			PAPR(dB)		
	Danuwiutii(ivinz)	QPSK	16QAM	64QAM	
836.5	15	5.58	6.20	6.14	

#### LTE band 26(824MHz -849MHz), 15MHz Bandwidth, QPSK (PAPR)



LTE band 26(824MHz -849MHz), 15MHz Bandwidth, 16QAM (PAPR)







# LTE band 26(824MHz -849MHz), 15MHz Bandwidth, 64QAM (PAPR)



Frequency(MHz)	Pondwidth(MHz)	PAPR(dB)		
	banuwiutii(ivinz)	QPSK 16QAM 640	64QAM	
2595.0	20	8.62	9.28	9.40

## LTE band 38, 20MHz Bandwidth, QPSK (PAPR)



# LTE band 38, 20MHz Bandwidth, 16QAM (PAPR)





LTE band 38, 20MHz Bandwidth, 64QAM (PAPR)





### LTE band 41

	Dandwidth (MUL-)		PAPR(dB)	
	Bandwidth(IVIHZ)	QPSK	16QAM	64QAM
2335	20	8.34	9.10	9.14
E band 41, 20MHz Ba	ndwidth, QPSK (PA	PR)	1	
MultiView 📑 Spectrum				
Ref Level 16.00 dBm Offset Att 15 dB Meas Time	1.00 dB ● <b>AnBW</b> 28 MHz 3.6 ms			SGI
1 CCDF				o1Sa Clrw
1E-01				
1E-02				
1E-03				
1E-04				
15.05				
16-00				
CF 2.593 GHz			N	1ean Pwr + 20.00 d
2 Result Summary			Samples: 100000	
Mean	Peak	Crest 10%	1% 0.1%	0.01%
Turner 1 10 62 dBm	20.77 dBm 10		6 TO 10 0.01	D 0.00 ID

# LTE band 41, 20MHz Bandwidth, 16QAM (PAPR)





LTE band 41, 20MHz Bandwidth, 64QAM (PAPR)





Frequency(MHz)	Pandwidth(MHz)	PAPR(dB)		
	Bandwidth(IVIHZ)	QPSK 16QAM 64	64QAM	
1745.0	20	5.26	6.02	6.04

## LTE band 66, 20MHz Bandwidth, QPSK (PAPR)



# LTE band 66, 20MHz Bandwidth, 16QAM (PAPR)





LTE band 66, 20MHz Bandwidth, 64QAM (PAPR)



Note: Expanded measurement uncertainty is *U* = 0.48, *k* = 2 *****END OF REPORT*****