

# 11.2.5 Block edge compliance

# **Description:**

The spectrum at the band edges must comply with the spurious emissions limits.

#### Measurement:

Measuremer	nt parameters
Detector:	RMS
Sweep time:	30s
Resolution bandwidth:	> 1% of the emission bandwidth
Video bandwidth:	> 3xRBW
Span:	5 MHz
Trace mode:	Max Hold
Measurement function:	1 MHz band power
Used equipment:	See chapter 7.2 setup A
Measurement uncertainty:	See chapter 8
Measurement procedure:	FCC: § 2.1051

## <u>Limits:</u>

FCC
§ 22.917(a) & (b)
<ul> <li>(a) 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.</li> <li>(b)(1) In the spectrum below 1 GHz, instrumentation should employ a reference bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block, a RBW of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy, provided that the measured power is integrated over the full required reference bandwidth (i.e., 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.</li> </ul>
(b)(2) In the spectrum above 1 GHz, instrumentation should employ a reference bandwidth of 1 MHz.
-13 dBm
Correction factor according to KDB 890810 if RBW < 1 % emission bandwidth: ⊠N/A here
$\Box$ 10 log (RBW1/RBW2) = X dB; whereas: RBW1 = Y, RBW2 = Z



# <u>Results:</u>

#### Plot 1: 1.4 MHz – QPSK - Lowest channel

Spectrum						R
Ref Level	10.50 c	IBm Offset 0.50 dB	👄 RBW 20 kHz			
Att	30	dB 👄 SWT 🛛 30 s	👄 <b>VBW</b> 100 kHz	Mode Auto S	weep	
SGL Count 1	/1	TDF				
ontrolled by	CTC ac	ivanced LTE Tester, Tes	t Case Verdict: PAS	55 😑 1 Rm Max		
				M1[1]		-24.11 dBr
) dBm						823.992256 MH
				M2[1]		-39.64 dBr
10 dBm —						823.500000 MH
20 dBm						
20 ubiii						
-30 dBm —						
						M2
40 dBm					M3	Contraction of the local division of the loc
50 dBm —			M4	A CONTRACTOR OF THE OWNER		
So abiii		MS	Statement of the local division of the local	Contraction of the local division of the loc		
-60 dBm <del>- M</del>						
70 dBm						
70 aBm						
.80 dBm —						
Start 819.0	MHz		10001 pt	ts		Stop 824.0 MHz
larker						
Type   Ref	Trc	X-value	Y-value	Function	Func	tion Result
M1	1	823.992256 MHz	-24.11 dBm			
M2	1	823.5 MHz	-39.64 dBm	Band Power		-18.97 dBm
MЗ	1	822.5 MHz	-47.46 dBm	Band Power		-29.33 dBm
M4	1	821.5 MHz	-52.01 dBm	Band Power		-37.79 dBm
M5	1	820.5 MHz	-61.13 dBm	Band Power		-44.60 dBm
M6	1	819.5 MHz	-65.10 dBm	Band Power		-48.75 dBm

Date: 14.NOV.2022 14:06:40

#### Plot 2: 1.4 MHz – QPSK - Highest channel

Spect	um						E C
Ref Lo	evel	10.50 dE		😑 RBW 20 kHz			
Att		30	dB 😑 SWT 🛛 30 s	😑 🛛 🛛 🖉 👄 🖉	Mode Auto	o Sweep	
SGL Co	unt 1	/1	TDF				
ontrolle	ed by	CTC adv	vanced LTE Tester, Te:	st Case Verdict: PA	SS 😑 1Rm Ma:	ĸ	
					M1[1]		-25.48 dB
) dBm—							849.003264 MH
abiii					M2[1]		-40.48 dB
10 dBm							849.500000 MH
20 dBm							
30 dBm							
	. M2						
40 dBri		and the second second	M3				
			and the second s	M4			
50 dBm				The second se			
60 dBm	-					M5	
						Statement of the local division of the local	M6
70 dBm							
80 dBm							
SU UBII							
start 8	40.0			10001 p	•		Stop 854.0 MHz
	49.0	чнz		10001 b	15		Stup 834.0 MHz
larker	Ref	Trc	X-value	Y-value	Function	1	ction Result
Type M1	Ref	1	849.003264 MHz	-25,48 dBm	Function	Fun	ction Result
M1 M2		1	849.003264 MHz 849.5 MHz	-25.48 uBm	Band Powe	ar l	-19.83 dBm
M3		1	850.5 MHz	-46.53 dBm	Band Powe		-19.65 dBn
M3		1	851.5 MHz	-53.87 dBm	Band Powe		-38.70 dBm
M5		1	852.5 MHz	-63.08 dBm	Band Powe		-46.18 dBm
M6		1	853.5 MHz	-67.94 dBm	Band Powe		-51.09 dBm

Date: 14.NOV.2022 14:16:05



### Plot 3: 3 MHz – QPSK - Lowest channel

Spect	um									₩
Ref Le	vel	10.50	dBm Offset	0.50 dB (	RBW 30 kHz					
Att		3	) dB 😑 SWT	30 s (	<b>VBW</b> 100 kHz	Mode /	Auto S	weep		
SGL Co	unt 1	/1	TDF							
ontrolle	d by	CTC a	dvanced LTE Te	ester, Test	Case Verdict: PA	SS 😑 1Rm	Max			
						M1	[1]		-24.6	i5 dBn
) dBm—									823.9822	72 MH
						M2	[1]		-38.5	i2 dBn
-10 dBm	-								823.5000	00 MH
-20 dBm										
-20 ubii										
-30 dBm	_									
								мз	M2	ware and
40 dBm	M6		N	15	M4			No. of Concession, Name		
Survey			the second s	C. C. State				· · · · · · · · · · · · · · · · · · ·		
- Off										
-60 dBm										
-70 dBm										
-70 aBr										
-80 dBm										
Start 8	19.0	MHz			10001 p	ts			Stop 824.0	) MHz
1arker										
Type	Ref	Trc	X-valu	e	Y-value	Functi	ion (	Fu	nction Result	
M1		1	823.9822		-24.65 dBm					
M2		1	823	.5 MHz	-38.52 dBm	Band P	ower		-20.5	2 dBm
MЗ		1		.5 MHz	-42.15 dBm	Band P				9 dBm
M4		1		.5 MHz	-45.19 dBm	Band P				0 dBm
M5		1		1.5 MHz	-49.11 dBm	Band P				0 dBm
M6		1	819	.5 MHz	-48.80 dBm	Band P	ower		-34.3	4 dBm

Date: 14.NOV.2022 14:21:32

#### Plot 4: 3 MHz – QPSK - Highest channel

Spect							Ţ
	evel	10.50 dE		🔵 RBW 30 kHz			
Att				🔵 <b>VBW</b> 100 kHz	Mode Auto S	Sweep	
SGL Co			TDF				
Controlle	d by	CTC adv	anced LTE Tester, Tes	t Case Verdict: PAS	-		
					M1[1]		-25.77 dBr
) dBm—							849.004224 MH
					M2[1]		-38.39 dBi
-10 dBm						1	849.500000 MH
20 dBm							
30 dBm	M2						
-40 dBm			МЗ				
·40 ubii				M4		M5	
-50 dBm					Statistics of the local division of the loca		e M6
							The second se
-60 dBm							
-70 dBm							
-80 dBm	-						
Start 8	49.0	MHz		10001 pt	s		Stop 854.0 MHz
larker							
Type	Ref	Trc	X-value	Y-value	Function	Fun	ction Result
M1		1	849.004224 MHz	-25.77 dBm			
M2		1	849.5 MHz	-38.39 dBm	Band Power		-21.35 dBm
MЗ		1	850.5 MHz	-43.03 dBm	Band Power		-27.87 dBm
M4 M5		1	851.5 MHz	-48.62 dBm	Band Power		-32.90 dBm
M5 M6		1	852.5 MHz 853.5 MHz	-50.89 dBm -56.61 dBm	Band Power Band Power		-35.83 dBm -41.48 dBm
1410			655.5 MHz	-30.01 UBIII	banu Power		-41,48 UBIII

Date: 14.NOV.2022 14:30:57



### Plot 5: 5 MHz – QPSK - Lowest channel

Spectru	ım						Ē
Ref Lev	vel 1	0.50 d	Bm Offset 0.50 df	3 🖷 RBW 50 kHz			( °
Att				5 🖷 <b>VBW</b> 200 kHz	Mode Auto S	ween	
SGL Cou	nt 1/	1	TDF				
ontrolled	by C	CTC ad	vanced LTE Tester, Te	st Case Verdict: PA	3S 😑 1Rm Max		
					M1[1]		-25.62 dBn
) dBm—	_						823.999232 MH
					M2[1]		-38.56 dBn
-10 dBm-							823.500000 MH
-20 dBm-	_						
-30 dBm-	_						M2
-40 dBm-	мо		M	M4		MЗ	W2
-50 dBm-	1						
-60 dBm-							
-70 dBm-							
-70 ubiii-							
-80 dBm-	+						
Start 81	9.0 N	1Hz		10001 p	ts		Stop 824.0 MHz
/larker							
	Ref	Trc	X-value	Y-value	Function	Fun	iction Result
M1		1	823.999232 MHz	-25.62 dBm			
M2		1	823.5 MHz	-38.56 dBm	Band Power		-21.87 dBm
M3 M4		1	822.5 MHz 821.5 MHz	-40.71 dBm -43.03 dBm	Band Power Band Power		-27.68 dBm -29.94 dBm
M5		1	820.5 MHz	-44.43 dBm	Band Power		-31.52 dBm
M6		1	819.5 MHz	-45.75 dBm	Band Power		-32.63 dBm
		(			Ready		14.11.2022

Date: 14.NOV.2022 14:36:23

#### Plot 6: 5 MHz – QPSK - Highest channel

Spect							T T
	evel	10.50 dB		👄 RBW 50 kHz			
Att				👄 <b>VBW</b> 200 kHz	Mode Auto S	Sweep	
SGL Co			TDF				
Controlle	ed by	CTC adv	anced LTE Tester, Tes	t Case Verdict: PA	SS 😑 1 Rm Max		
					M1[1]		-26.93 dBi
) dBm—							849.002240 MF
					M2[1]		-39.37 dB
10 dBm							849.500000 MF
20 dBm							
🕄 🖸 dBm	<u> </u>						
	M2		мз				
40 dBri			The subscription of the su	M4		M5	
50 dBm							
60 dBm							
70 dBm							
80 dBm							
80 UBII							
Start 8	40.0	MI 1		10001 p	• ~		Stop 854.0 MH;
	49.0	11HZ		10001 b	15		Stop 834.0 MHz
1arker							
Туре	Ref		X-value	Y-value	Function	Fi	Inction Result
M1 M2		1	849.00224 MHz	-26.93 dBm	Band Power		-22.61 dBm
M2 M3		1	849.5 MHz 850.5 MHz	-39.37 dBm -41.16 dBm	Band Power		-22.61 dBn -27.76 dBn
M3 M4		1	850.5 MHz 851.5 MHz	-41.16 uBm	Band Power		-27.76 UBr -30.47 dBr
M5		1	852.5 MHz	-48.12 dBm	Band Power		-34.52 dBn
M6		1	853.5 MHz	-53.52 dBm	Band Power		-40.90 dBn
	_	-				1	

Date: 14.NOV.2022 14:45:48



#### Plot 7: 10 MHz – QPSK - Lowest channel

Spectru	um									
Ref Le	vel	10.50	dBm Offset 0.5	50 dB 😑	RBW 100 kH:	z				
🛛 Att		30	)dB 👄 SWT	30 s 👄	<b>VBW</b> 300 kH:	z Mode	Auto S	weep		
SGL Cou			TDF							
Controlled	1 by	CTC a	dvanced LTE Teste	er, Test C	ase Verdict: P	-				
						M	1[1]			30.93 dBm
0 dBm	+									95776 MHz
-10 dBm-						M	2[1]			38.64 dBm 00000 MHz
-10 UBIII-								1	823.3	10000 MHZ
-20 dBm-	+									
-30 dBm-										M
	Me		MS		M4			мз	M	2
-40 dBm-										
-50 dBm-	_									
-60 dBm-										
-ou ubiii-										
-70 dBm-	+									
-80 dBm-										
-80 uBIII-										
Start 81	9.0	MHz			10001	pts		I	Stop 8	24.0 MHz
Marker						-				
Type	Ref	Trc	X-value		Y-value	Funct	tion	Fur	nction Result	
M1		1	823.995776 N	MHz	-30.93 dBm					
M2		1	823.5 M		-38.64 dBm					27.11 dBm
M3		1	822.5 1		-40.61 dBm					30.62 dBm
M4 M5		1	821.5 M 820.5 M		-41.50 dBm -42.17 dBm					31.87 dBm 32.71 dBm
M6		1	819.5		-42.93 dBm					33.44 dBm
		][				-   R	eady		4,40	4.11.2022

Date: 14.NOV.2022 14:51:14

#### Plot 8: 10 MHz – QPSK - Highest channel

0 dBm M2[1] 849.001720 -20 dBm 849.50000 -20 dBm 849.50000 -20 dBm 849.50000 -20 dBm 849.50000 -30 dBm 849.50000 -20 dBm 849.50000 -20 dBm 849.50000 -20 dBm 849.50000 -20 dBm 849.50000 -40 dBm 849.50000 -50 dBm 840.50000 -50 dBm 840.50000 -50 dBm 840.50000 -50 dBm 840.50000 -50 dBm	Spectr	um										
SGL Count 1/1         Type         Ref         Tro         X-value         Y-value         Function         Function         SGL Count 1/1         Type         Ref         Tro         X-value         Y-value         Function         Function Result           0 dBm	Ref Le	vel	10.50 0	IBm Offset	0.50 dB	RBW 100 kH;	2					
Controlled by CTC advanced LTE Tester, Test Case Verdict: PASS ●1Rm Max         M1[1]         -32.52           0 dBm         M2[1]         -38.17           -10 dBm         M2[1]         -38.17           -20 dBm         M3         M4         M5           -40 dBm         M3         M4         M5           -50 dBm         M3         M4         M5           -60 dBm         M3         M4         M5           -70 dBm         M3         M4         M5           -80 dBm         M3         M4         M5           -70 dBm         M3         M4         M5           -80 dBm         M3         M4         M6           -70 dBm         M3         M4         M5           -80 dBm         M3         M4         M3           -80 dBm         M3         1         849.01728 MH2         -32.52 dBm           M1         1         849.01728 MH2         -32.52 dBm         M1           M1         1         849.01728 MH2         -32.52 dBm         M1           M1         1         849.01728 MH2         -38.17 dBm         Band Power         -27.34           M3         1         851.5 MH2         <	Att		30	dB 👄 SWT	30 s	👄 <b>VBW</b> 300 kH:	Mode	Auto S	weep			
0 dBm     M1[1]     -32.52       0 dBm     M2[1]     849.00172       -10 dBm     M2[1]     849.00172       -20 dBm     M3     M4       -20 dBm     M3     M4       -30 dBm     M3     M4       -40 dBm     M3     M4       -50 dBm     M3     M4       -60 dBm     M3     M4       -70 dBm     M6       -80 dBm     10001 pts       Start 849.0 MHz     10001 pts       Stop 854.0       Marker       Type     Ref     Tr       M1     1       849.50 MHz     -32.52 dBm       M2     1     849.50 MHz       -38.17 dBm     Band Power       -27.34       M3     1       851.5 MHz     -40 dBm       -29.94       M4     1       851.5 MHz     -41.49 dBm       Band Power     -27.34	SGL Co	unt 1	/1	TDF					•			
0 dBm M2[1] 849.001720 -38.17 849.50000 -20 dBm 849.50000 -20 dBm 8400000 -20 dBm 84000000 -20 dBm 84000000	ontrolle	d by	CTC ac	ivanced LTE Te	ster, Test	t Case Verdict: P	ASS 🔵 1 Rr	n Max				
0 0 0 m     -38.17       -10 0 m     -38.17       -20 0 m     -30.00 m       -20 0 m     -30.00 m       -30 0 m     -30.00 m       -40 0 m     -30.00 m       -50 0 m     -30.00 m       -50 0 m     -30.00 m       -50 0 m     -30.00 m       -60 0 m     -30.00 m       -70 0 m     -30.00 m       -80 0 m     -30.00 m       -80 0 m     -30.00 m       -70 1 m     -30.00 m       -80 0 m     -30.00 m       -90 0 m     -30.00 m       -9							M	1[1]			-	32.52 dBr
10 dBm     M2[1]     -38.17       20 dBm     1     849.50000       -20 dBm     1     40.01728       -30 dBm     1     849.01728       -40 dBm     1     849.50000       -40 dBm     1     1       -40 dBm     1     -40.01728       -40 dBm     1     -40.01728       -50 dBm     -     -       -60 dBm     -     -       -60 dBm     -     -       -70 dBm     -     -       -80 dBm     -     -       -70 dBm     -     -       -70 dBm     -     -       -80 dBm     -     -       -90 dBm     -     -       -90 dBm     -     -       -10 dBm     -     -       -90 dBm     -     -	) dBm—							1			849.0	01728 MH
20 dBm	abiii						M	2[1]			-	38.17 dBr
30 dBm     M2     M3     M4     M5       40 dBm     M3     M4     M5       50 dBm     M6     M6       50 dBm     M6     M6       60 dBm     M6     M6       60 dBm     M6     M6       70 dBm     M1     M1       70 dBm     M1     M1       80 dBm     M1     M1       70 dBm     M1     M1       70 dBm     M1       1     849.001728 MHz       703.17 dBm     Band Power       703.11     850.5 MHz       703.34 dBm     Band Power       727.34 dBm     Band Power       729.94 dBm     Band Power	10 dBm	_									849.5	00000 MH
30 dBm     M2     M3     M4     M5       -40 dBm     -50 dBm     -50 dBm     -60 dBm     -60 dBm     -60 dBm       -60 dBm     -60 dBm     -70 dBm     -60 dBm     -60 dBm     -70 dBm       -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     1     849.5 MHz     -32.52 dBm     -727.34       M1     1     849.5 MHz     -39.34 dBm     Band Power     -27.34 </td <td></td>												
M2     M3     M4     M5       -40 dBm     -50 dBm     -50 dBm     M6       -50 dBm     -60 dBm     -60 dBm     -60 dBm       -60 dBm     -60 dBm     -60 dBm     -60 dBm       -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm       M1     1     849.001728 MHz     -32.52 dBm       M2     1     849.50 MHz     -38.17 dBm     Band Power       M2     1     849.50 MHz     -39.34 dBm     Band Power       M3     1     851.5 MHz     -41.49 dBm     Band Power	20 aBm											
Here     Mit     Mit     Mit       -50 dBm     -50 dBm     -50 dBm     -50 dBm     -50 dBm       -60 dBm     -60 dBm     -60 dBm     -60 dBm     -60 dBm       -70 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     -70 dBm     -70 dBm     -70 dBm     -70 dBm       -80 dBm     1     849.001728 MHz     -32.52 dBm     -72.34       M1     1     849.051 MHz     -39.34 dBm     Band Power     -27.34       M3     1     851.5 MHz     -41.49 dBm     Band Power     -29.94       M4     1     851.5 MHz     -41.49 dBm     Band Power     -21.75	30 dBm											
-50 dBm -50 dBm -60 dBm -70 dBm -7	No. of Concession, name	M2		M	3	M4			ME			
-60 dBm -70 dBm -70 dBm -80 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -77	40 dBm										м	6
60 dBm     70 dBm <td>50 dBm</td> <td></td>	50 dBm											
-70 dBm -80 dBm -70	00 00											
Bit and Band         Stop 854.0           Start 849.0 MHz         10001 pts         Stop 854.0           Marker         Type         Ref         Trc         X-value         Y-value         Function         Function Result           M1         1         849.001728 MHz         -32.52 dBm         -         -         -           M2         1         849.50 MHz         -38.17 dBm         Band Power         -27.34           M3         1         850.5 MHz         -39.34 dBm         Band Power         -29.94           M4         1         851.5 MHz         -41.49 dBm         Band Power         -21.75	60 dBm	-										
Bit and Band         Stop 854.0           Start 849.0 MHz         10001 pts         Stop 854.0           Jarker         Trype         Ref         Trc         X-value         Y-value         Function         Function Result           M1         1         849.001728 MHz         -32.52 dBm         -32.17 dBm         Band Power         -27.34           M2         1         849.5 MHz         -39.34 dBm         Band Power         -29.94           M3         1         851.5 MHz         -41.49 dBm         Band Power         -31.75	70 dBm											
Start 849.0 MHz         10001 pts         Stop 854.0           Aarker         Trype         Ref         Trc         X-value         Y-value         Function         Function Result           M1         1         849.001728 MHz         -32.52 dBm         Function         Function Result           M2         1         849.50 MHz         -38.17 dBm         Band Power         -27.34           M3         1         850.5 MHz         -39.34 dBm         Band Power         -29.94           M4         1         851.5 MHz         -41.49 dBm         Band Power         -29.94	70 ubiii											
Marker           Type         Ref         Trc         X-value         Y-value         Function         Function Result           M1         1         849.001728 MHz         -32.52 dBm         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         1         8         5         5         M + M + M + M + M + M + M + M + M + M +	80 dBm	_										
Marker           Type         Ref         Trc         X-value         Y-value         Function         Function Result           M1         1         849.001728 MHz         -32.52 dBm         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         1         8         5         5         M + M + M + M + M + M + M + M + M + M +												
Type         Ref         Trc         X-value         Y-value         Function         Function Result           M1         1         849.001728 MHz         -32.52 dBm         -         -         -           M2         1         849.5 MHz         -38.17 dBm         Band Power         -27.34           M3         1         850.5 MHz         -39.34 dBm         Band Power         -29.94           M4         1         851.5 MHz         -41.49 dBm         Band Power         -31.75	Start 84	<del>1</del> 9.0	MHz			10001	pts				Stop 8	54.0 MHz
M1         1         849.001728 MHz         -32.52 dBm           M2         1         849.5 MHz         -38.17 dBm         Band Power         -27.34           M3         1         850.5 MHz         -39.34 dBm         Band Power         -29.94           M4         1         851.5 MHz         -41.49 dBm         Band Power         -31.75	larker											
M2         1         849.5 MHz         -38.17 dBm         Band Power         -27.34           M3         1         850.5 MHz         -39.34 dBm         Band Power         -29.94           M4         1         851.5 MHz         -41.49 dBm         Band Power         -31.75	Type	Ref	Trc	X-value	.	Y-value	Func	tion		Functio	n Result	
M3         1         850.5 MHz         -39.34 dBm         Band Power         -29.94           M4         1         851.5 MHz         -41.49 dBm         Band Power         -31.75	M1		1	849.00172	28 MHz	-32.52 dBm						
M4 1 851.5 MHz -41.49 dBm Band Power -31.75												27.34 dBm
												29.94 dBm
												31.75 dBm
	M5		1			-43.34 dBm						33.71 dBm
M6 1 853.5 MHz -49.10 dBm Band Power -39.51	M6		1	853	.5 MHz	-49.10 dBm	Band	Power				39.51 dBm

Date: 14.NOV.2022 15:00:39



#### Plot 9: 15 MHz – QPSK - Lowest channel

Spectru	m	ן										
Ref Lev	el 10.			.50 dB 🧉	• RBW 200 k	Hz						
Att 🗧		30 d	B 😑 SWT	30 s 🧉	<b>VBW</b> 1 M	Hz	Mode	Auto S	weep			
SGL Coun			TDF									
Controlled	by СТ(	C adv	anced LTE Test	ter, Test	Case Verdict:	PAS	-					
							M	1[1]				-32.10 dBm
0 dBm	+				-	-					823	.996224 MHz
-10 dBm—							M	2[1]				-36.55 dBm .500000 MHz
-10 aBm—									1		823	.500000 MHZ
-20 dBm—	-											
												M
-30 dBm—	Me		MS		N	4			MЗ			M2
40 d0m						×						
10 00.00												
-50 dBm—	-					-						
-60 dBm—												
-00 ubiii—												
-70 dBm—	+					-						
-80 dBm—												
					1000	<u> </u>						
Start 819	.0 MH	z			1000	1 pt	LS				Sto	p 824.0 MHz
/larker	61-7	1								-		
Type R M1	ef Tr	1 1	X-value 823.996224		<u>Y-value</u> -32.10 dB	-	Funct	tion		Fun	ction Res	ult
M1 M2		1	823.996224		-32.10 de		Band F	lowor				-28.93 dBm
M3		1	822.5		-37.19 dt		Band R					-30.58 dBm
M4		1	821.5		-38.67 di		Band F					-31.58 dBm
M5		1	820.5		-39.53 dt		Band F					-32.91 dBm
M6		1	819.5	5 MHz	-39.89 dB	3m	Band F	Power				-33.11 dBm
	][						] R	eady			4,40	14.11.2022

Date: 14.NOV.2022 15:06:05

#### Plot 10: 15 MHz – QPSK - Highest channel

Spectrum	·					
Ref Level	10.50 dB	m Offset 0.50 dB	🔵 RBW 200 kHz			
Att	30 d	B 👄 SWT 🛛 30 s	VBW 1 MHz	Mode Auto S	Sweep	
SGL Count		TDF				
Controlled by	/ CTC adv	anced LTE Tester, Tes	t Case Verdict: PAS	3S 😑 1Rm Max		
				M1[1]		-32.30 dBr
) dBm						849.006720 MH
				M2[1]		-36.17 dBr
-10 dBm						849.500000 MH
-20 dBm						
-30 dBm	2	M3	M4		M5	
-40 dBm						MB
50 dBm						
-60 dBm						
.70 dBm						
-80 dBm						
-80 aBm						
Start 849.0	) MHz		10001 pt	ts		Stop 854.0 MHz
1arker						
Type   Ref	Trc	X-value	Y-value	Function	Fu	nction Result
M1	1	849.00672 MHz	-32.30 dBm			
M2	1	849.5 MHz	-36.17 dBm	Band Power		-28.74 dBm
M3	1	850.5 MHz	-36.63 dBm	Band Power		-29.76 dBm
M4	1	851.5 MHz	-38.57 dBm	Band Power		-31.15 dBm
M5 M6	1	852.5 MHz 853.5 MHz	-40.67 dBm -46.27 dBm	Band Power Band Power		-33.98 dBm -38.69 dBm
1410	1 1	655.5 MHZ	-10.27 Ubiii	bana Power	1	-36.69 dbm

Date: 14.NOV.2022 15:15:30



### Plot 11: 1.4 MHz – 16-QAM - Lowest channel

Spect	um						[₩
Ref Le	evel	10.50	dBm Offset 0.50 dB	🛛 👄 RBW 🛛 20 kHz			
🗎 Att		30	) dB 👄 SWT 🛛 30 s	: 👄 <b>VBW</b> 100 kHz	Mode Auto S	weep	
SGL Co	unt 1	./1	TDF				
Controlle	ed by	CTC a	dvanced LTE Tester, Te	st Case Verdict: PA	3S 🔵 1 Rm Max		
					M1[1]		-24.85 dBm
0 dBm—							823.997760 MHz
					M2[1]		-38.31 dBm
-10 dBm							823.500000 MHz
-20 dBm	-						M
-30 dBm							
-40 dBm							M2
						M3	
-50 dBm				M4	the second se		
-60 dBm	- M6		M5	Construction of the local division of the lo			
	to get the						
-70 dBm							
-80 dBm	-						
Start 8	19.0	MHZ		10001 p	ts		Stop 824.0 MHz
Marker							
Туре	Ref	Trc	X-value	Y-value	Function	Func	tion Result
M1		1	823.99776 MHz	-24.85 dBm	Devel Deve		10.00
M2		1	823.5 MHz	-38.31 dBm	Band Power		-19.36 dBm
M3 M4		1	822.5 MHz 821.5 MHz	-48.10 dBm -54.27 dBm	Band Power Band Power		-30.58 dBm -39.12 dBm
M4 M5		1	820.5 MHz	-62.39 dBm	Band Power		-45.83 dBm
M6		1	819.5 MHz	-66.36 dBm	Band Power		-49.38 dBm
		Π			Ready		14.11.2022

Date: 14.NOV.2022 14:09:17

#### Plot 12: 1.4 MHz – 16-QAM - Highest channel

Spect	rum						
	evel	10.50 0					
Att				s 👄 <b>VBW</b> 100 kHz	Mode Auto S	Sweep	
SGL Co			TDF				
Controlle	ed by	CTC ac	dvanced LTE Tester, T	est Case Verdict: PA	SS 🔵 1 Rm Max		
					M1[1]		-25.37 dBr
) dBm—							849.000768 MH
					M2[1]		-40.13 dBr
-10 dBr	י <u> </u> ו						849.500000 MH
00 ID							
-20 dBr	ד-י						
30 dBrr	-						
-	_ M2						
40 dBn			Ma Ma				
		1.000	Manus M3				
-50 dBr	ד ו			M4			
-60 dBm						M5	
00 001	'					Contraction of the Owner of the	M6
70 dBm	η <del></del>						
-80 dBrr							
Start 8	49.0	MHz		10001 p	ts		Stop 854.0 MHz
1arker							
Type	Ref	Trc	X-value	Y-value	Function	Fund	tion Result
M1		1	849.000768 MH;	-25.37 dBm			
M2		1	849.5 MH		Band Power		-20.15 dBm
MЗ		1	850.5 MH;		Band Power		-30.72 dBm
M4		1	851.5 MH;		Band Power		-39.67 dBm
M5		1	852.5 MH;		Band Power		-47.08 dBm
M6		1	853.5 MHz	-68.35 dBm	Band Power		-51.30 dBm

Date: 14.NOV.2022 14:18:42



#### Plot 13: 3 MHz – 16-QAM - Lowest channel

Spectrum						
Ref Level	10.50 dB	m Offset 0.50 dB	🔵 RBW 30 kHz			•
Att	30 d	B 👄 SWT 🛛 30 s i	👄 <b>VBW</b> 100 kHz	Mode Auto S	weep	
SGL Count 1	/1	TDF				
ontrolled by	CTC adv	anced LTE Tester, Test	: Case Verdict: PAS	3S 🔵 1Rm Max		
				M1[1]		-25.51 dBn
0 dBm						823.992768 MH
				M2[1]		-37.98 dBn
-10 dBm —						823.500000 MH
-20 dBm						
-20 ubiii						
-30 dBm						M2 /
					мз	17 2
-40 dBm		M5		No. of Concession, Name	No. of Concession, Name	
-50 dBm		A DESCRIPTION OF TAXABLE PARTY.		******		
-60 dBm						
-70 dBm						
, o abiii						
-80 dBm						
Start 819.0	MHz		10001 pi	ts		Stop 824.0 MHz
1arker						
Type Ref		X-value	Y-value	Function	Fu	nction Result
M1	1	823.992768 MHz	-25.51 dBm			
M2	1	823.5 MHz	-37.98 dBm	Band Power		-21.04 dBm
M3	1	822.5 MHz	-41.84 dBm	Band Power		-26.75 dBm
M4 M5	1	821.5 MHz 820.5 MHz	-45.04 dBm -49.08 dBm	Band Power Band Power		-30.66 dBm -33.58 dBm
M6	1	820.5 MHz 819.5 MHz	-49.08 dBm	Band Power		-33.58 dBm -36.41 dBm
110		019.0 MHZ	51.27 Ubin	band POWEI		-30.41 0000

Date: 14.NOV.2022 14:24:09

#### Plot 14: 3 MHz – 16-QAM - Highest channel

Spectrum						R
Ref Level	10.50 dB	im Offset 0.50 dB	🔵 RBW 🛛 30 kHz			· · · ·
Att	30 0	dB 😑 SWT 👘 30 s	🔵 <b>VBW</b> 100 kHz	Mode Auto S	weep	
SGL Count :	L/1	TDF				
Controlled by	CTC adv	anced LTE Tester, Tes	t Case Verdict: PAS	55 😑 1Rm Max		
ĺ				M1[1]		-26.85 dBr
0 dBm						849.004224 MH
JUBIII				M2[1]		-39.28 dBr
-10 dBm						849.500000 MH
20 dBm						
30 dBm						
M2						
40 übm			M4			
50 dBm			No. of Concession, Name		M5	
-50 aBm					Contraction of the local division of the loc	M6
.60 dBm						
-70 dBm —						
.80 dBm						
-ou ubiii						
Start 849.0	MHZ		10001 pt	+e		Stop 854.0 MHz
larker			10001 p			0000 001101112
Type   Ref	Trc	X-value	Y-value	Function	Eup	ction Result
M1	1	849.004224 MHz	-26.85 dBm	runction		Stion Result
M2	1	849.5 MHz	-39.28 dBm	Band Power		-22.16 dBm
M3	1	850.5 MHz	-43.31 dBm	Band Power		-27.74 dBm
M4	1	851.5 MHz	-47.05 dBm	Band Power		-32.53 dBm
M5	1	852.5 MHz	-50.99 dBm	Band Power		-36.10 dBm
M6	1	853.5 MHz	-59.59 dBm	Band Power		-43.07 dBm
	1			1		14.11.2022

Date: 14.NOV.2022 14:33:33



#### Plot 15: 5 MHz – 16-QAM - Lowest channel

Spectrum						Ē
Ref Level	10.50 dB	m Offset 0.50 dB (	RBW 50 kHz			· · · · ·
Att	30 d	iB 👄 SWT 🛛 30 s (	VBW 200 kHz	Mode Auto S	weep	
SGL Count 1		TDF				
ontrolled by	CTC adv	anced LTE Tester, Test	Case Verdict: PAS	3S 🔵 1Rm Max		
				M1[1]		-27.60 dBn
						823.996224 MH
				M2[1]		-38.57 dBn
-10 dBm —						823.500000 MH
-20 dBm						
-30 dBm						
					MЗ	M2
-40 dBm – 📊 🗗		M5		the state of the s		
50 dBm						
-60 dBm —						
-70 dBm						
-80 dBm						
oo abiii						
Start 819.0	MHz		10001 pt	ts		Stop 824.0 MHz
1arker						
Type   Ref	Trc	X-value	Y-value	Function	Fu	Inction Result
M1	1	823.996224 MHz	-27.60 dBm			
M2	1	823.5 MHz	-38.57 dBm	Band Power		-22.98 dBm
MЗ	1	822.5 MHz	-39.76 dBm	Band Power		-27.61 dBm
M4	1	821.5 MHz	-43.18 dBm	Band Power		-29.65 dBm
M5	1	820.5 MHz	-44.05 dBm	Band Power		-31.38 dBm
M6	1	819.5 MHz	-46.46 dBm	Band Power		-33.41 dBm

Date: 14.NOV.2022 14:39:00

#### Plot 16: 5 MHz – 16-QAM - Highest channel

Spectr	um									
	vel 1	0.50 dB			🔵 RBW 🛛 50 kHz					
Att		30 c	ib 😑 SWT	30 s	🔵 <b>VBW</b> 200 kHz	Mode	Auto S	Sweep		
SGL Cou			TDF							
:ontrolle	d by C	CTC adv	anced LTE Tes	ter, Test	Case Verdict: PA	.SS 🔵 1 Rm	n Max			
						M	1[1]			-27.46 dBr
) dBm—									849	.002240 MH
						M	2[1]			-39.05 dB
10 dBm-					-				849	.500000 MH
-20 dBm-										
30 dBm-										
S GDIII	M2		M	3						
40 dBm	-		and the second se		M4			MS		
50 dBm-									and the owner of the	
60 dBm-										
70 dBm-	-									
80 dBm-										
-80 aBm-										
Start 84					10001 g				01-	p 854.0 MHz
	9.0 1	IHZ			10001 b	ots			sto	p 854.0 MHz
larker	Ref	Trc		- 1	V	Func			unction Res	
Type M1	Ref	1	X-value 849.0022	4. 541.1-	<u>Y-value</u> -27.46 dBm	Func	tion	ŀ	-unction Res	uit
M1 M2		1		5 MHz	-27.46 dBm	Band I	Dowor			-23.74 dBm
M2 M3		1		5 MHZ	-40.63 dBm	Band I				-23.74 uBm
M4		1		5 MHz	-44.18 dBm	Band I				-30.78 dBm
M5		1		5 MHz	-46.74 dBm	Band I				-34.08 dBm
M6		1		5 MHz	-54.65 dBm	Band I				-41.02 dBm
	-	· ·								

Date: 14.NOV.2022 14:48:24



### Plot 17: 10 MHz – 16-QAM - Lowest channel

Spectrum						
Ref Level	10.50 dBr	m Offset 0.50 dB (	■ RBW 100 kHz			· · ·
Att	30 d	B 👄 SWT 🛛 30 s (	● <b>VBW</b> 300 kHz	Mode Auto S	weep	
SGL Count 1		TDF				
Controlled by	CTC adva	anced LTE Tester, Test	Case Verdict: PAS	55 🔵 1 Rm Max		
				M1[1]		-31.93 dBr
) dBm						823.966784 MH
				M2[1]		-39.64 dBr
-10 dBm —						823.500000 MH
-20 dBm						
						N
-30 dBm					мз	M2
-40 dBm <u>6</u>		M5	M4			
50 dBm						
-60 dBm						
-70 dBm						
-80 dBm						
Start 819.0	MHz		10001 pt	ts		Stop 824.0 MHz
1arker						
Type   Ref	Trc	X-value	Y-value	Function	Fu	nction Result
M1	1	823.966784 MHz	-31.93 dBm			
M2	1	823.5 MHz	-39.64 dBm	Band Power		-27.83 dBm
MЗ	1	822.5 MHz	-40.24 dBm	Band Power		-30.68 dBm
M4	1	821.5 MHz	-41.56 dBm	Band Power		-31.73 dBm
M5	1	820.5 MHz	-42.21 dBm	Band Power Band Power		-32.59 dBm
M6	1	819.5 MHz	-42.57 dBm	Bariu Power		-33.08 dBm

Date: 14.NOV.2022 14:53:51

#### Plot 18: 10 MHz – 16-QAM - Highest channel

Spectr	um						
	vel :	10.50 di		dB 👄 RBW 100 kHz			
Att		30	dB 😑 SWT 🛛 30	) s 👄 <b>VBW</b> 300 kHz	Mode Auto	Sweep	
SGL Cou	int 1,	/1	TDF				
Controlled	d by i	CTC adv	vanced LTE Tester, 1	Test Case Verdict: P	ASS 🔵 1 Rm Max		
					M1[1]		-33.27 dBi
) dBm—							849.027264 MH
					M2[1]		-39.04 dBi
-10 dBm-	-						849.500000 MH
-20 dBm-							
-20 uBm-							
30 dBm-	_						
	M2		M3	M4		MS	
40 dBm-				the second se			M6
50 dBm-							
SO GDIII							
60 dBm-	_						-
70 dBm-							
VU UBIII-							
-80 dBm-							
Start 84	9.01	МНz		10001	pts	1	Stop 854.0 MHz
larker							
Type	Ref	Trc	X-value	Y-value	Function	Fu	nction Result
M1		1	849.027264 MH	z -33.27 dBm			
M2		1	849.5 MH	z -39.04 dBm	Band Powe	r	-28.42 dBm
MЗ		1	850.5 MH				-30.55 dBm
M4		1	851.5 MH				-32.08 dBm
M5		1	852.5 MH				-34.00 dBm
M6		1	853.5 MH	z -49.51 dBm	Band Power	r	-39.36 dBm
					Deady		14.11.2022

Date: 14.NOV.2022 15:03:15



### Plot 19: 15 MHz – 16-QAM - Lowest channel

Spectrun	ı					l≣ ⊽
Ref Leve	l 10.50 d	Bm Offset 0.50 dB	💿 RBW 200 kHz			
Att	30	dB 👄 SWT 👘 30 s	👄 VBW 🛛 1 MHz	Mode Auto S	weep	
SGL Count		TDF				
Controlled b	y CTC ad	vanced LTE Tester, Tes	t Case Verdict: PA	3S 😑 1Rm Max		
				M1[1]		-32.86 dBn
0 dBm						823.999744 MH
				M2[1]		-36.62 dBn
-10 dBm—						823.500000 MH
-20 dBm						
-30 dBm						
M	6	M5	M4		M3	10/2
40 dBm						
-50 dBm						
-60 dBm						
-70 dBm						
-70 aBm						
-80 dBm						
Start 819.	D MHz		10001 p	ts		Stop 824.0 MHz
/larker						•
Type   Re	f   Trc	X-value	Y-value	Function	Fu	nction Result
M1	1	823.999744 MHz	-32.86 dBm			
M2	1	823.5 MHz	-36.62 dBm	Band Power		-29.68 dBm
M3	1	822.5 MHz	-38.65 dBm	Band Power		-31.90 dBm
M4	1	821.5 MHz	-39.99 dBm	Band Power		-32.77 dBm
M5 M6	1	820.5 MHz 819.5 MHz	-40.21 dBm -40.79 dBm	Band Power Band Power		-33.34 dBm -34.19 dBm
1910	1	819.5 MH2	-40.79 UBM	banu Power		-34.19 uBm

Date: 14.NOV.2022 15:08:41

#### Plot 20: 15 MHz – 16-QAM - Highest channel

Specti	rum						
Ref Le	evel	10.50 dB	m Offset 0.50 c	B 😑 RBW 200 kHz			
Att		30 0	ів 😑 <b>SWT</b> — 30	s 👄 VBW 🛛 1 MHz	Mode Auto S	Sweep	
SGL Co	unt 1	/1	TDF				
ontrolle	ed by	CTC adv	anced LTE Tester, T	est Case Verdict: PA	SS 🔵 1 Rm Max		
					M1[1]		-33.52 dBr
0 dBm—							849.003776 MH
o abiii					M2[1]		-36.66 dBr
10 dBm	∩—						849.500000 MH
-20 dBm							
30 dBm							
	. I <u>M</u> ≥		MB	M4		MS	
-40 dBm	∩—						M6
-50 dBm							
-60 dBm	)———						
-70 dBm	)- <b> </b> -						
-80 dBm							
-ou ubii							
Start 8	49 0	MHZ		10001 p	ts		Stop 854.0 MHz
1arker	1510			10001 P			
Type	Ref	Trc	X-value	Y-value	Function	Fu	Inction Result
M1		1	849.003776 MHz	-33.52 dBm			
M2		1	849.5 MHz	-36.66 dBm	Band Power		-29.60 dBm
MЗ		1	850.5 MHz	-38.29 dBm	Band Power		-31.25 dBm
M4		1	851.5 MHz		Band Power		-32.29 dBm
M5		1	852.5 MHz		Band Power		-34.15 dBm
M6		1	853.5 MHz	-46.75 dBm	Band Power		-39.42 dBm

Date: 14.NOV.2022 15:18:06

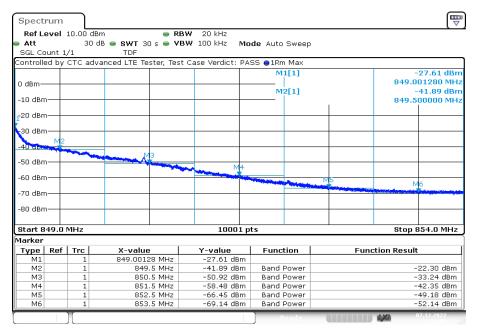


#### Plot 21: 1.4 MHz - 64-QAM - Lowest channel

Spectru	m	٦					F
Ref Lev	<b>el</b> 10.	00 dB	m 😑 I	RBW 20 kHz			
Att		30 d	B 👄 SWT 30 s 👄 '	VBW 100 kHz – Mo	de Auto Swee	ep	
SGL Cour			TDF				
ontrolled	by СТ	C adv	anced LTE Tester, Te	st Case Verdict: PA	SS 😑 1 Rm Max		
					M1[1]		-27.41 dBr
) dBm—	-						823.998272 MH
					M2[1]		-41.88 dBr
-10 dBm—						1	823.500000 MH
-20 dBm—	_						
-30 dBm—	_						
-40 dBm—							M2
						M3	
-50 dBm—	-			M4			
-60 dBm—			MG				
	мь		and the second				
70 aBm—	-						
-80 dBm—							
00 00111							
Start 819	.0 MF	łz		10001 p	ts		Stop 824.0 MHz
1arker							
Type 🛛 🖡	ef T	rc 📃	X-value	Y-value	Function	Fun	ction Result
M1		1	823.998272 MHz	-27.41 dBm			
M2		1	823.5 MHz	-41.88 dBm	Band Power		-21.60 dBm
M3		1	822.5 MHz	-50.02 dBm	Band Power		-32.91 dBm
M4 M5		1	821.5 MHz 820.5 MHz	-56.89 dBm -65.10 dBm	Band Power Band Power		-41.53 dBm -48.15 dBm
M6		1	819.5 MHz	-67.50 dBm	Band Power		-48.15 UBM -50.81 dBm
	20						

Date: 7.DEC.2022 12:28:14

#### Plot 22: 1.4 MHz - 64-QAM - Highest channel



Date: 7.DEC.2022 12:33:00



#### Plot 23: 3 MHz - 64-QAM - Lowest channel

Spectru	ım							
Ref Lev	vel 1			🔵 RE				
Att			) dB 👄 SWT 30	) s 👄 🛛 E	3W 100 kHz Mc	de Auto Swee	р	
SGL Cou			TDF		: Case Verdict: PA	00 010 Mar		
controllet	- Dy C	JICa	uvariceu LTE Te:	ster, iest	. case veruict; PA	M1[1]		-27.45 dBm
0 dBm						(IIII)		823.995776 MHz
o ubiii—						M2[1]		-40.88 dBm
-10 dBm-	_					[		823.500000 MHz
-20 dBm-								N
-30 dBm-								
-40 dBm-					M4		MR	M2
-50 dBm-	M6	. Linda	M	5 				
-60 dBm-								
-70 dBm-								
-80 dBm-								
Start 81	9.0 N	1Hz			10001 p	its		Stop 824.0 MHz
Marker								
	Ref		X-value		Y-value	Function	Fui	nction Result
M1 M2		1	823.99577	5 MHz	-27.45 dBm -40.88 dBm	Band Power		-23.32 dBm
M3		1		5 MHz	-44.09 dBm	Band Power		-29.02 dBm
M4		1		5 MHz	-47.89 dBm	Band Power		-33.14 dBm
M5		1		5 MHz	-50.26 dBm	Band Power		-35.97 dBm
M6		1	819	5 MHz	-53.45 dBm	Band Power		-39.04 dBm
		(				Ready		07.12.2022

Date: 7.DEC.2022 12:35:57

#### Plot 24: 3 MHz – 64-QAM - Highest channel

Spectrum						
Ref Level	10.00 dBr	n 😑 RE	SW 30 kHz			
Att 🗧		8 👄 SWT 30 s 👄 VI	3W 100 kHz Mo	<b>de</b> Auto Sweep		
SGL Count 1		TDF				
Controlled by	CTC adva	anced LTE Tester, Tes	t Case Verdict: PAS	65 😑 1 Rm Max		
				M1[1]		-28.68 dBn
0 dBm						849.002240 MH
				M2[1]		-41.79 dBn
-10 dBm						849.500000 MHz
-20 dBm						
1						
-30 dBm						
-40 dBm		MB				
		Statistics and a little statistics	M4			
-50 dBm				The second s	M5	
-60 dBm						M6
-60 UBIII						
-70 dBm						
-80 dBm						
Start 849.0	MHz		10001 pt	s		Stop 854.0 MHz
Marker						
Type Ref		X-value	Y-value	Function	Fun	ction Result
M1	1	849.00224 MHz	-28.68 dBm			
M2	1	849.5 MHz	-41.79 dBm	Band Power		-24.43 dBm
M3 M4	1	850.5 MHz 851.5 MHz	-44.99 dBm -49.25 dBm	Band Power Band Power		-30.16 dBm -34.79 dBm
M4 M5	1	851.5 MHz 852.5 MHz	-49.25 dBm	Band Power Band Power		-34.79 dBm -38.36 dBm
M6	1	853.5 MHz	-60.29 dBm	Band Power		-45.24 dBm
	T			Ready		07.12.2022

Date: 7.DEC.2022 12:40:43



#### Plot 25: 5 MHz - 64-QAM - Lowest channel

0 dBm	30 1/1	dB e SWT 30 s TDF	RBW 50 kHz VBW 200 kHz Mo	de Auto Sweep SS ●1Rm Max M1[1]  M2[1]		-28.39 dBm 823.993728 MHz
SGL Count Controlled b 0 dBm	1/1	TDF		SS ●1Rm Max M1[1]		823.993728 MHz
Controlled E 0 dBm -10 dBm			est Case Verdict: PA	M1[1]		823.993728 MHz
0 dBm	y CTC ac	vanced LTE Tester, 1	est Case Verdict: PA	M1[1]		823.993728 MHz
-10 dBm						823.993728 MHz
-10 dBm				 M2[1]		
				M2[1]		
						-41.93 dBm
					1	823.500000 MHz
-20 dBm—	1					N
-30 dBm						
					мз	M2
-40 dBm	16	M5	104		NAME AND ADDRESS OF TAXABLE PARTY.	Construction of the local division of the lo
- Jo dom -	Sector Sector					
-60 dBm—						
-70 dBm						
yo abiii						
-80 dBm						
Start 819.	0 MHz		10001 p	ts		Stop 824.0 MHz
Marker						
	f Trc	X-value	Y-value	Function	Fund	ction Result
M1	1	823.993728 MH:				
M2	1	823.5 MH:		Band Power		-24.93 dBm
M3 M4	1	822.5 MH: 821.5 MH:		Band Power Band Power		-30.13 dBm -32.41 dBm
M5	1	820.5 MH		Band Power		-34.36 dBm
M6	1	819.5 MH		Band Power		-36.33 dBm
	1			Ready		07.12.2022

Date: 7.DEC.2022 12:43:33

#### Plot 26: 5 MHz – 64-QAM - Highest channel

Spectr	um						R
Ref Le Att SGL Co			3m	RBW 50 kHz /BW 200 kHz Mo	<b>de</b> Auto Sweep	1	<b>.</b>
ontrolle	d by	CTC adv	/anced LTE Tester, Te	st Case Verdict: PA	SS 😑 1 Rm Max		
) dBm— -10 dBm					M1[1]   M2[1]	1	-29.66 dBr 849.004224 MH -43.32 dBr 849.500000 MH
-20 dBm 							
-40 as m	M2	فيراد المحجا والعادي	МЗ	M4			
-50 dBm	_					M5	M6
-60 dBm							
-70 dBm							
-80 dBm							
Start 84	10.01	мнz		10001 p	ts		Stop 854.0 MHz
1arker				· · ·			·
Type	Ref	Trc	X-value	Y-value	Function	Fu	nction Result
M1		1	849.004224 MHz	-29.66 dBm			
M2		1	849.5 MHz	-43.32 dBm	Band Power		-25.94 dBm
MЗ		1	850.5 MHz	-43.99 dBm	Band Power		-31.42 dBm
M4		1	851.5 MHz	-46.86 dBm	Band Power		-33.97 dBm
M5		1	852.5 MHz	-50.84 dBm	Band Power		-37.15 dBm
M6		1	853.5 MHz	-56.90 dBm	Band Power		-43.76 dBm

Date: 7.DEC.2022 12:48:26



### Plot 27: 10 MHz – 64-QAM - Lowest channel

Spectrum	ı					l≣
Ref Level			RBW 100 kHz			
SGL Count		dB      SWT 30 s      N     TDF	VBW 3UU KHZ Mo	de Auto Sweep		
		IVanced LTE Tester. Te	st Case Verdict: PA	SS 🗛 1 Rm Max		
	,			M1[1]		-33.90 dBr
) dBm						823.988224 MH
				M2[1]		-42.07 dBr
10 dBm						823.500000 MH
-20 dBm—						
-30 dBm						
-40 dBm—M	6		M4		MЗ	M2
50 dBm—						
60 dBm						
70 dBm—						
-80 dBm						
Start 819.0	D MHz		10001 p	ts		Stop 824.0 MHz
1arker						
Type Ret		X-value	Y-value	Function	Fun	ction Result
M1	1	823.988224 MHz	-33.90 dBm			
M2 M3	1	823.5 MHz 822.5 MHz	-42.07 dBm -43.21 dBm	Band Power Band Power		-30.25 dBm -33.25 dBm
M4	1	822.5 MHZ 821.5 MHz	-43.21 uBm	Band Power		-33.25 UBM -34.21 dBm
M5	1	820.5 MHz	-44.78 dBm	Band Power		-34.97 dBm
M6	1	819.5 MHz	-44.35 dBm	Band Power		-35.29 dBm
	1			Ready		07.12.2022

Date: 7.DEC.2022 12:51:16

#### Plot 28: 10 MHz – 64-QAM - Highest channel

Spectrum	ı					E
Ref Level Att SGL Count	30	3m 🛛 🖷 R dB 👄 SWT 30 s 👄 V TDF	BW 100 kHz BW 300 kHz Mo	<b>de</b> Auto Sweep		
Controlled b	y CTC adv	vanced LTE Tester, Tes	t Case Verdict: PAS	3S 🔵 1 Rm Max		
0 dBm				M1[1]		-35.21 dBn 849.017280 MH
-10 dBm				M2[1]	1	-41.70 dBn 849.500000 MH
-20 dBm						
130 dBm						
-40 d2m	2	M3	M4-		MIS	
-50 dBm						- M6
-60 dBm						
-70 dBm						
-80 dBm						
Start 849.0	D MHz		10001 pt	ts		Stop 854.0 MHz
larker						
Type Ret		X-value	Y-value	Function	Fur	nction Result
M1 M2	1	849.01728 MHz 849.5 MHz	-35.21 dBm -41.70 dBm	Band Power		-30.83 dBm
M3	1	849.5 MHz 850.5 MHz	-41.70 uBm	Band Power		-30.83 uBm -33.22 dBm
M4	1	851.5 MHz	-44.99 dBm	Band Power		-34.71 dBm
M5	1	852.5 MHz	-46.85 dBm	Band Power		-36.58 dBm
M6	1	853.5 MHz	-51.80 dBm	Band Power		-41.67 dBm
	)[			Ready		07.12.2022

Date: 7.DEC.2022 12:56:02



### Plot 29: 15 MHz – 64-QAM - Lowest channel

Spectrum						R
Ref Level	10.00 dBr	n 🖷 RB	W 200 kHz			
Att	30 d	B 👄 SWT 30 s 👄 VB	W 1 MHz Mo	de Auto Sweep		
SGL Count 1	/1	TDF				
ontrolled by	CTC adva	anced LTE Tester, Test	Case Verdict: PAS	65 😑 1 Rm Max		
				M1[1]		-34.81 dBr
) dBm						823.992768 MH
				M2[1]		-38.86 dBr
-10 dBm						823.500000 MH
-20 dBm						
-30 dBm						
40 Jp. M6		M5	M4		мз	M2
-40 dBm						
-50 dBm						
-60 dBm						
-70 dBm						
-80 dBm						
-80 UBIII						
Start 819.0	MHz	1	10001 pt	ts	1	Stop 824.0 MHz
1arker						
Type   Ref	Trc	X-value	Y-value	Function	Fu	nction Result
M1	1	823.992768 MHz	-34.81 dBm			
M2	1	823.5 MHz	-38.86 dBm	Band Power		-31.57 dBm
MЗ	1	822.5 MHz	-40.98 dBm	Band Power		-34.02 dBm
M4	1	821.5 MHz	-41.49 dBm	Band Power		-35.04 dBm
M5	1	820.5 MHz	-42.28 dBm	Band Power		-35.49 dBm
M6	1	819.5 MHz	-43.17 dBm	Band Power		-36.53 dBm

Date: 7.DEC.2022 12:58:59

#### Plot 30: 15 MHz – 64-QAM - Highest channel

Spect	rum						
Ref Lo Att SGL Co			IBm = I dB = SWT 30 s = 1 TDF	RBW 200 kHz VBW 1 MHz Mo	o <b>de</b> Auto Sweep		
			Ivanced LTE Tester, Te	st Case Verdict: DA	SS A1Pm May		
0 dBm—					M1[1]		-34.38 dBm 849.000256 MH
-10 dBm	η				M2[1]		-38.28 dBm 849.500000 MHz
-20 dBm	<u>ا</u> ر						
1-30 dBm	M2		M3	Ma			
-40 dBm						IV S	- M6
-50 dBm	<u>ا</u> ل-						
-60 dBm	η						
-70 dBm	۱ <del></del>						
-80 dBm	η						
Start 8	49.0	MHz		10001 p	its		Stop 854.0 MHz
Marker				•			•
Туре	Ref	Trc	X-value	Y-value	Function	Fun	ction Result
M1		1	849.000256 MHz	-34.38 dBm			
M2		1	849.5 MHz	-38.28 dBm	Band Power		-31.39 dBm
M3		1	850.5 MHz	-40.64 dBm	Band Power		-33.65 dBm
M4 M5		1	851.5 MHz 852.5 MHz	-41.77 dBm	Band Power Band Power		-34.92 dBm
M6		1	852.5 MHz 853.5 MHz	-43.10 dBm -48.55 dBm	Band Power Band Power		-36.43 dBm -41.64 dBm
					Ready		07.12.2022

Date: 7.DEC.2022 13:03:44



# 11.2.6 Occupied bandwidth

#### **Description:**

Measurement of the occupied bandwidth of the transmitted signal.

#### Measurement:

Data were taken at the extreme and middle frequencies of the LTE bands 5 + 26a. The table below lists the measured 99% power and -26dBc occupied bandwidths. Spectrum analyzer plots are included on the following pages.

Measurement parameters				
Detector:	Peak			
Sweep time:	180s			
Resolution bandwidth:	30 kHz			
Video bandwidth:	100 kHz			
Span:	2 x nominal BW			
Trace mode:	Max Hold			
Used equipment:	See chapter 7.2 setup A			
Measurement uncertainty:	See chapter 8			
Measurement procedure:	FCC: § 2.1049			

### <u>Limits:</u>

FCC	
§ 2.1049	
Reporting only	



# <u>Results:</u>

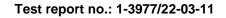
Occupied Bandwidth – QPSK – LTE 26a						
Bandwidth	Channel	99% OBW (MHz)	-26 dBc BW (MHz)			
	low	1.10	1.35			
1.4	mid	1.10	1.40			
	high	1.10	1.36			
	low	2.74	3.16			
3.0	mid	2.75	3.15			
	high	2.74	3.16			
	low	4.52	5.18			
5.0	mid	4.52	5.20			
	high	4.52	5.17			
	low	9.04	10.23			
10.0	mid	9.07	10.27			
	high	9.03	10.23			
	low	13.46	15.36			
15.0	mid	13.50	15.08			
	high	13.45	14.97			

Occupied Bandwidth – 16-QAM						
Bandwidth	Channel	99% OBW (MHz)	-26 dBc BW (MHz)			
	low	1.10	1.38			
1.4	mid	1.10	1.37			
	high	1.11	1.39			
	low	2.75	3.15			
3.0	mid	2.75	3.16			
	high	2.75	3.16			
	low	4.51	5.17			
5.0	mid	4.52	5.20			
	high	4.52	5.15			
	low	9.04	10.21			
10.0	mid	9.07	10.25			
	high	9.03	10.24			
	low	13.45	14.95			
15.0	mid	13.50	15.07			
	high	13.46	14.95			



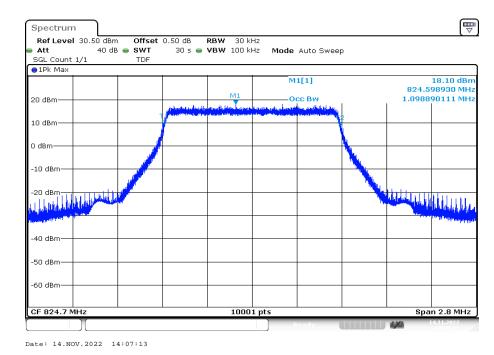
Occupied Bandwidth – 64-QAM						
Bandwidth	Channel	99% OBW (MHz)	-26 dBc BW (MHz)			
	low	1.10	1.36			
1.4	mid	1.11	1.40			
	high	1.10	1.37			
	low	2.74	3.15			
3.0	mid	2.74	3.17			
	high	2.74	3.15			
	low	4.52	5.19			
5.0	mid	4.52	5.18			
	high	4.52	5.19			
	low	9.03	10.24			
10.0	mid	9.07	10.33			
	high	9.02	10.20			
	low	13.46	14.91			
15.0	mid	13.49	15.11			
	high	13.45	15.00			

CTC I advanced



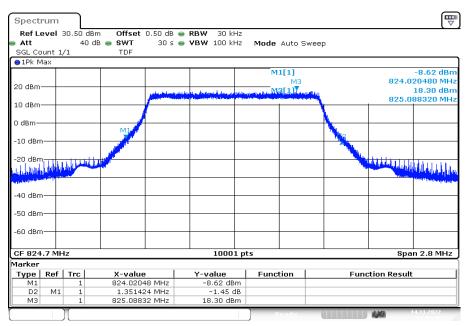


### Plots: LTE band 26a



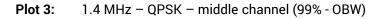
Plot 1: 1.4 MHz – QPSK - lowest channel (99% - OBW)

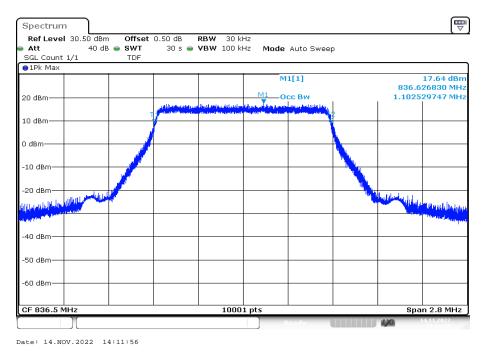
Plot 2: 1.4 MHz – QPSK - lowest channel (-26 dBc BW)



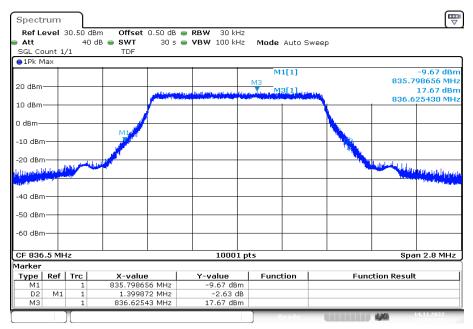
Date: 14.NOV.2022 14:07:46





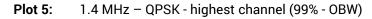


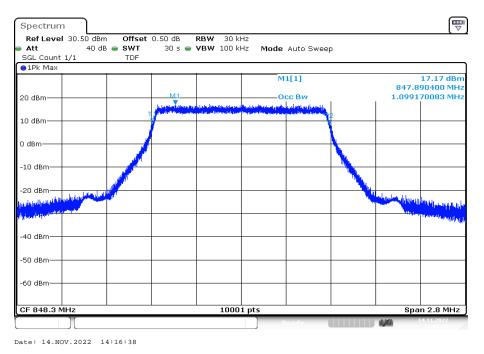
Plot 4: 1.4 MHz – QPSK – middle channel (-26 dBc BW)



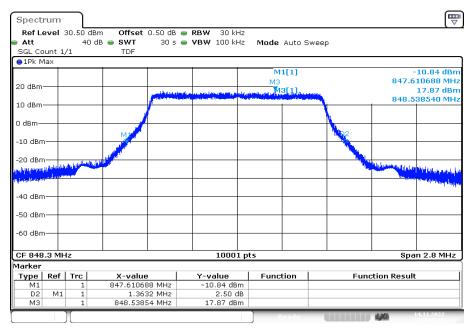
Date: 14.NOV.2022 14:12:29





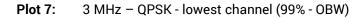


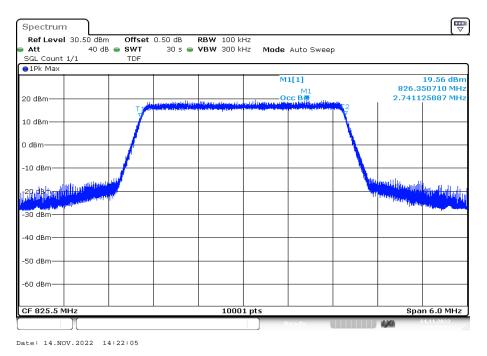
**Plot 6:** 1.4 MHz – QPSK - highest channel (-26 dBc BW)



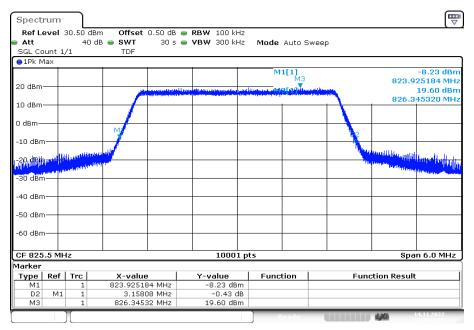
Date: 14.NOV.2022 14:17:11





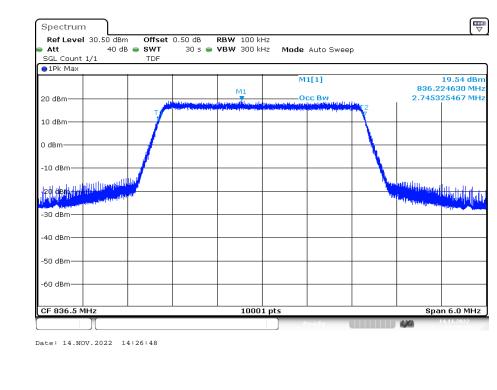


Plot 8: 3 MHz – QPSK - lowest channel (-26 dBc BW)



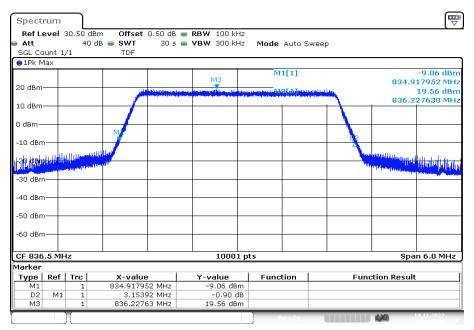
Date: 14.NOV.2022 14:22:37





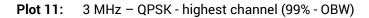
#### Plot 9: 3 MHz – QPSK - middle channel (99% - OBW)

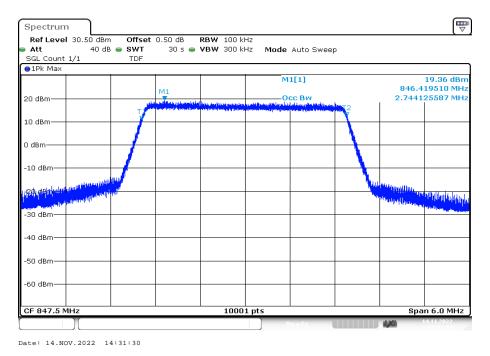
Plot 10: 3 MHz – QPSK - middle channel (-26 dBc BW)



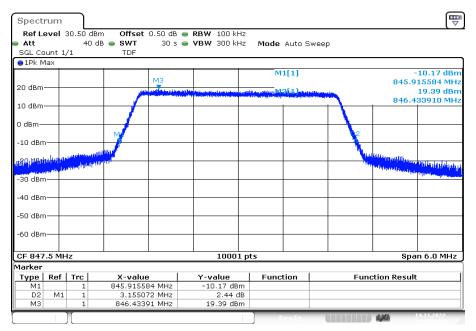
Date: 14.NOV.2022 14:27:20





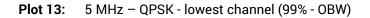


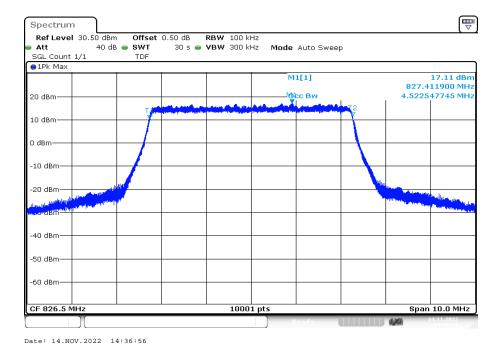
Plot 12: 3 MHz – QPSK - highest channel (-26 dBc BW)



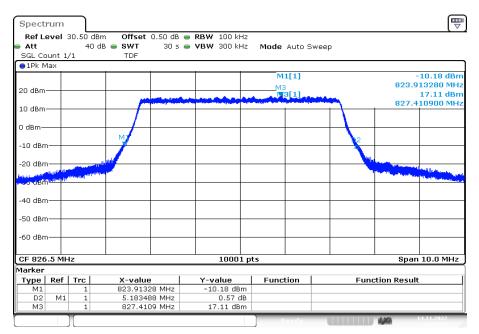
Date: 14.NOV.2022 14:32:03





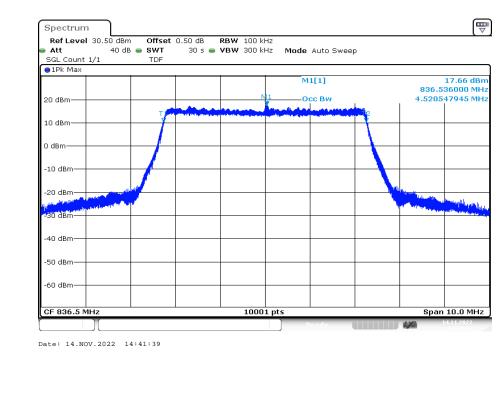


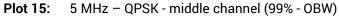
Plot 14: 5 MHz – QPSK - lowest channel (-26 dBc BW)



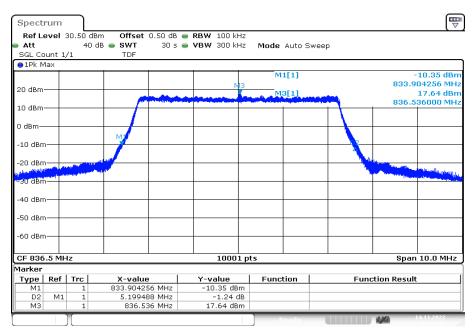
Date: 14.NOV.2022 14:37:29





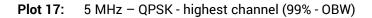


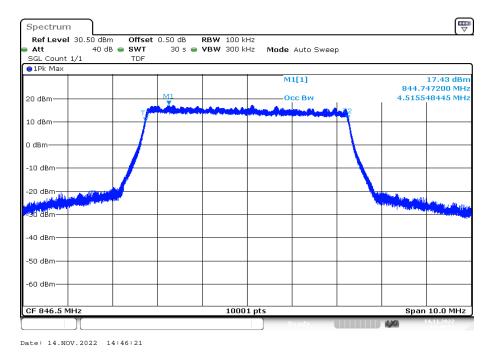
Plot 16: 5 MHz – QPSK - middle channel (-26 dBc BW)



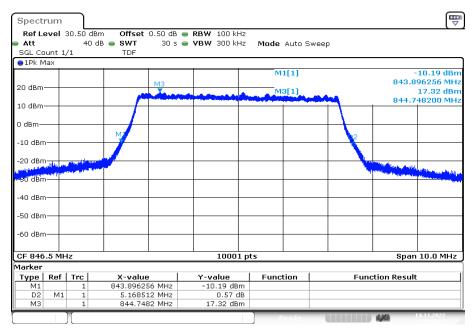
Date: 14.NOV.2022 14:42:12





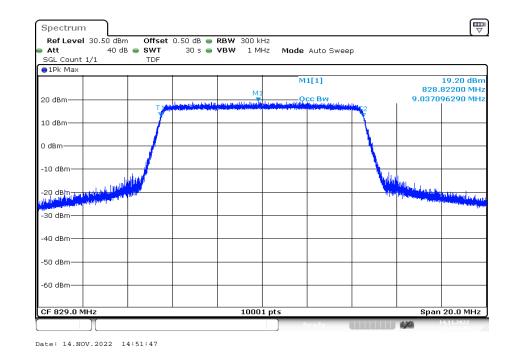


Plot 18: 5 MHz – QPSK - highest channel (-26 dBc BW)



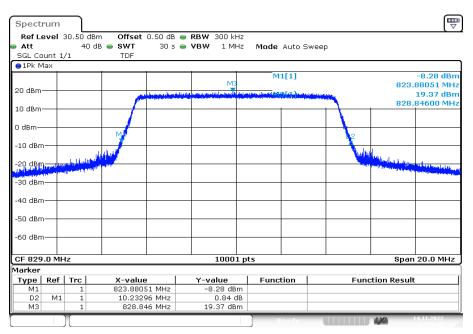
Date: 14.NOV.2022 14:46:54





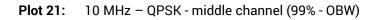
Plot 19: 10 MHz – QPSK - lowest channel (99% - OBW)

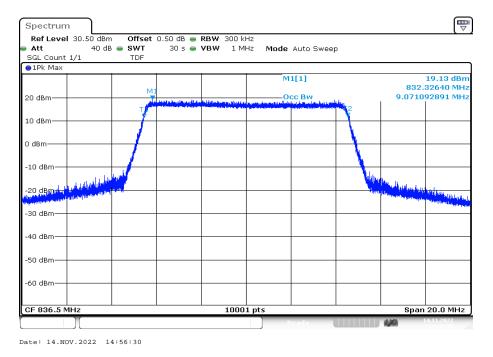
Plot 20: 10 MHz – QPSK - lowest channel (-26 dBc BW)



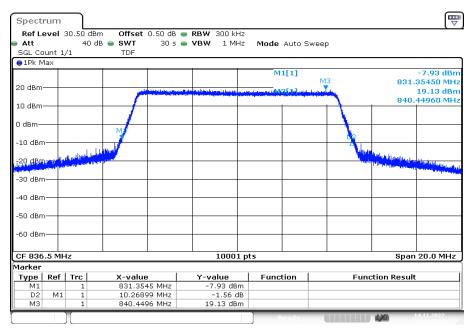
Date: 14.NOV.2022 14:52:19





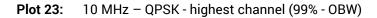


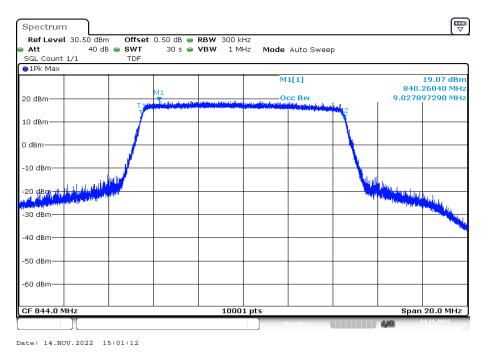
Plot 22: 10 MHz – QPSK - middle channel (-26 dBc BW)



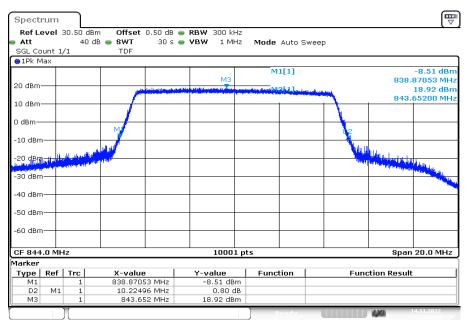
Date: 14.NOV.2022 14:57:03





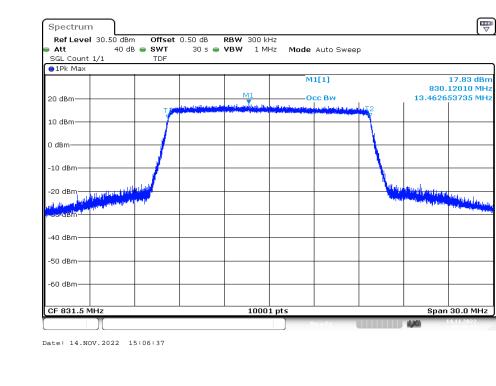


Plot 24: 10 MHz – QPSK - highest channel (-26 dBc BW)



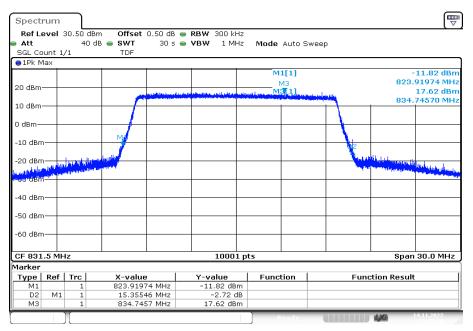
Date: 14.NOV.2022 15:01:44





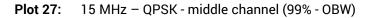
Plot 25: 15 MHz – QPSK - lowest channel (99% - OBW)

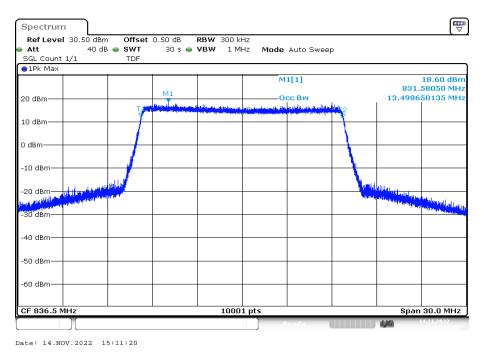
Plot 26: 15 MHz – QPSK - lowest channel (-26 dBc BW)



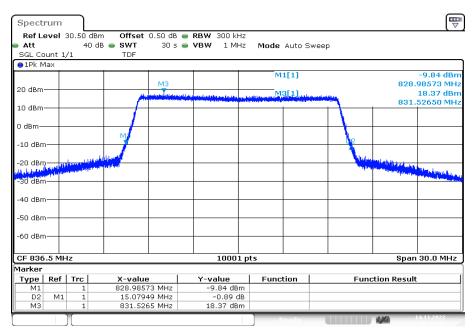
Date: 14.NOV.2022 15:07:10





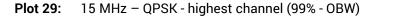


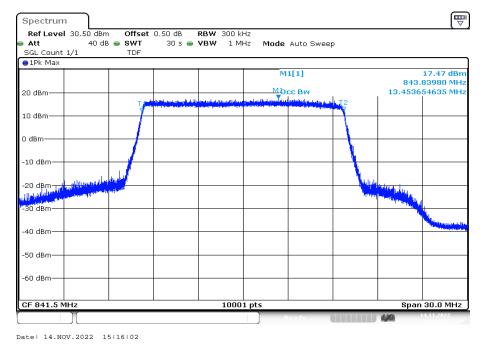
Plot 28: 15 MHz – QPSK - middle channel (-26 dBc BW)



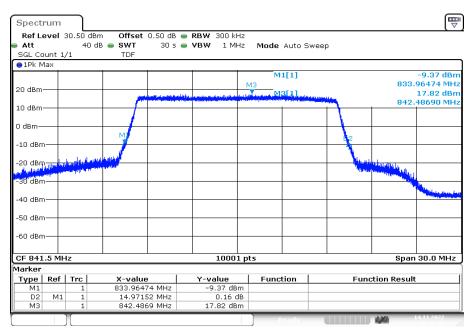
Date: 14.NOV.2022 15:11:53







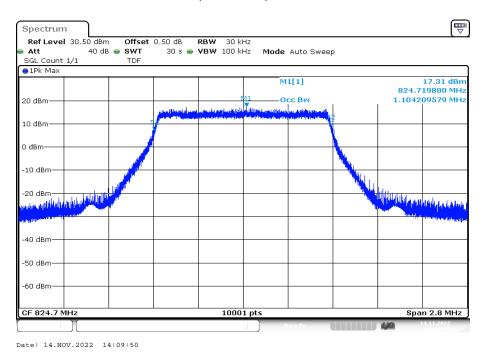
Plot 30: 15 MHz – QPSK - highest channel (-26 dBc BW)



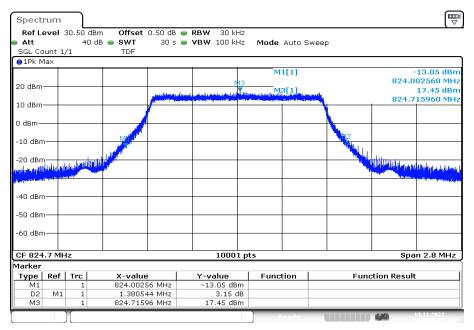
Date: 14.NOV.2022 15:16:35



Plot 31: 1.4 MHz – 16-QAM - lowest channel (99% - OBW)

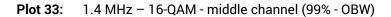


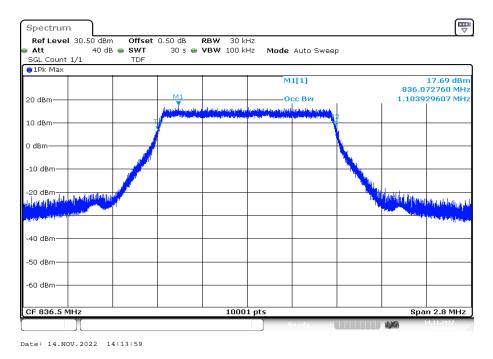
Plot 32: 1.4 MHz – 16-QAM - lowest channel (-26 dBc BW)



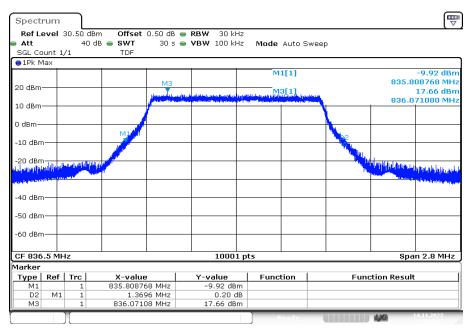
Date: 14.NOV.2022 14:10:22





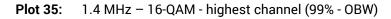


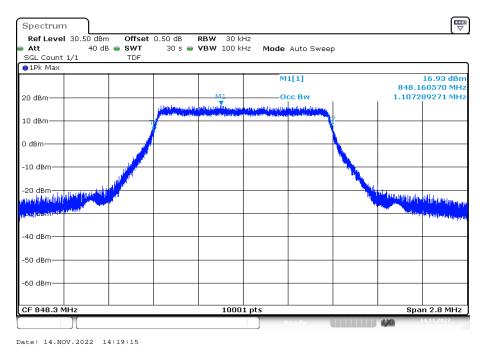
Plot 34: 1.4 MHz – 16-QAM - middle channel (-26 dBc BW)



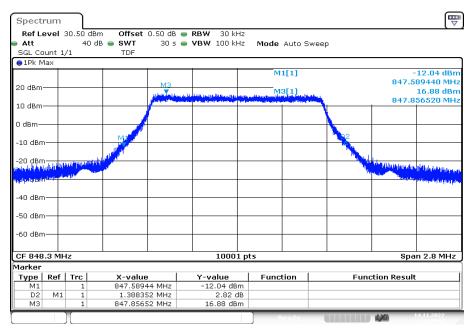
Date: 14.NOV.2022 14:14:32





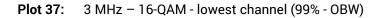


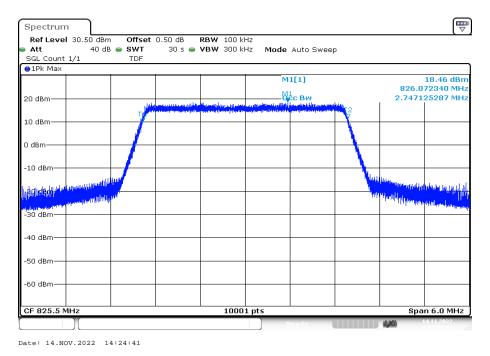
**Plot 36:** 1.4 MHz – 16-QAM - highest channel (-26 dBc BW)



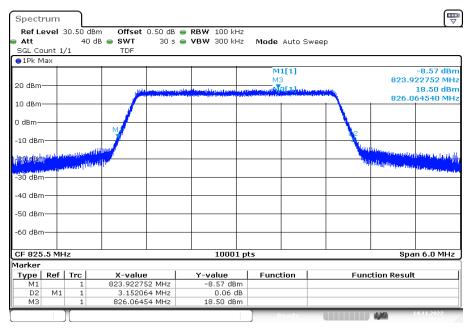
Date: 14.NOV.2022 14:19:48





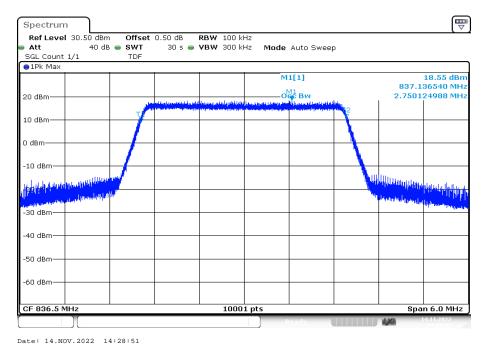


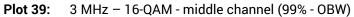
Plot 38: 3 MHz – 16-QAM - lowest channel (-26 dBc BW)



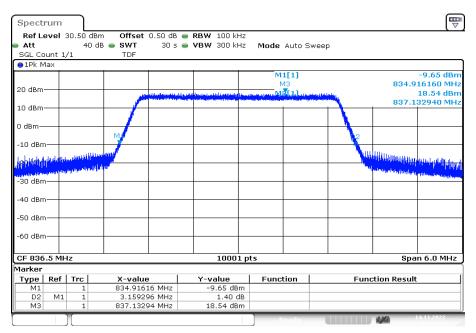
Date: 14.NOV.2022 14:25:14





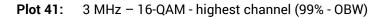


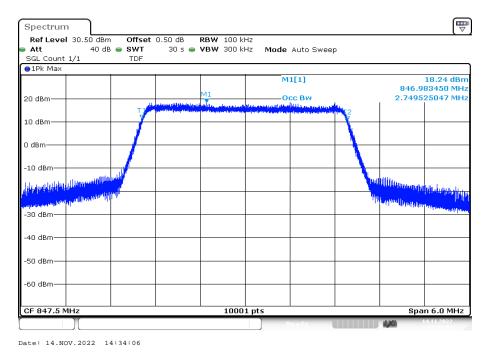
Plot 40: 3 MHz – 16-QAM - middle channel (-26 dBc BW)



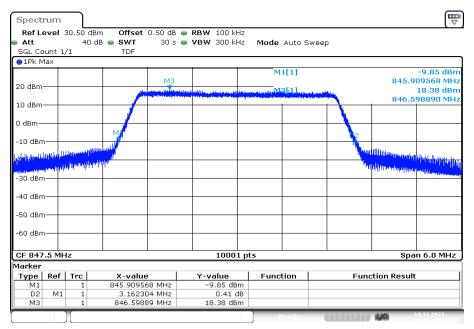
Date: 14.NOV.2022 14:29:24





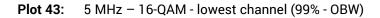


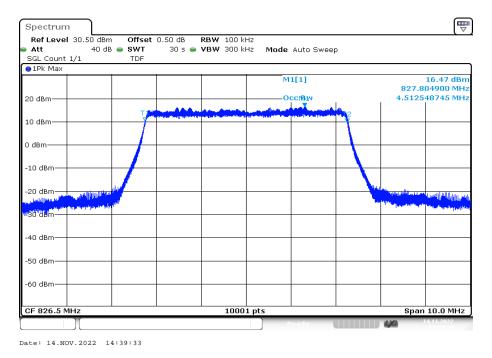
Plot 42: 3 MHz – 16-QAM - highest channel (-26 dBc BW)



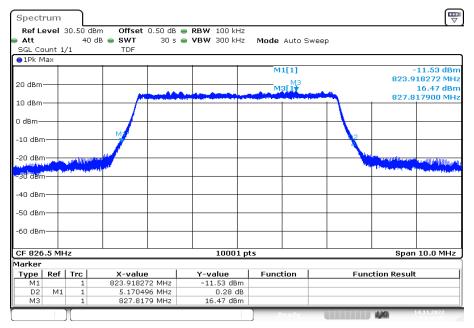
Date: 14.NOV.2022 14:34:39





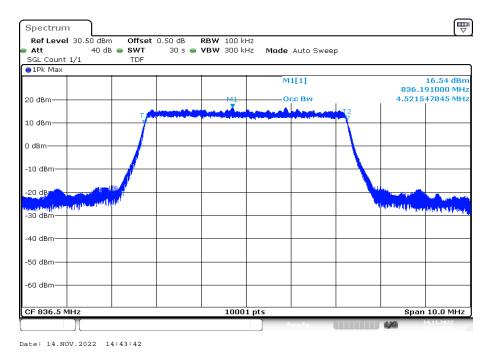


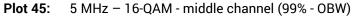
Plot 44: 5 MHz – 16-QAM - lowest channel (-26 dBc BW)



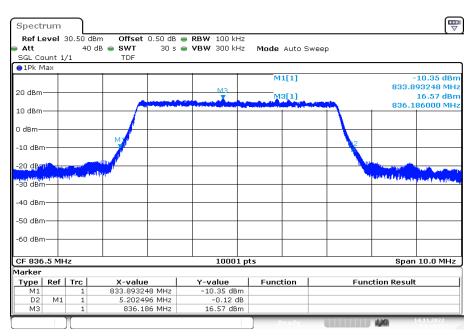
Date: 14.NOV.2022 14:40:06





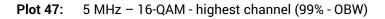


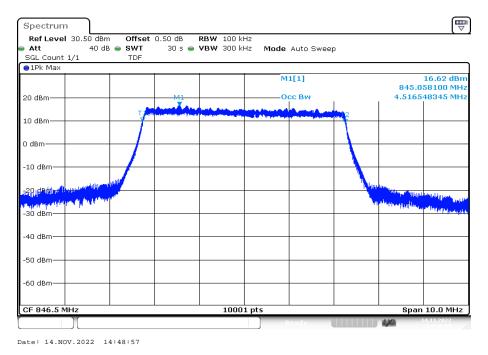
Plot 46: 5 MHz – 16-QAM - middle channel (-26 dBc BW)



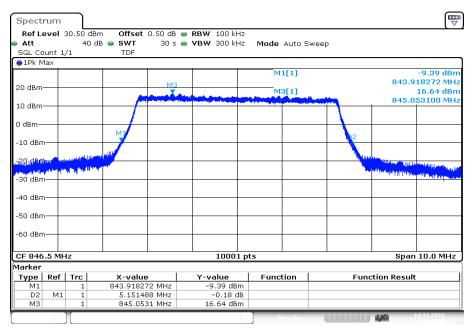
Date: 14.NOV.2022 14:44:15





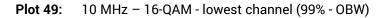


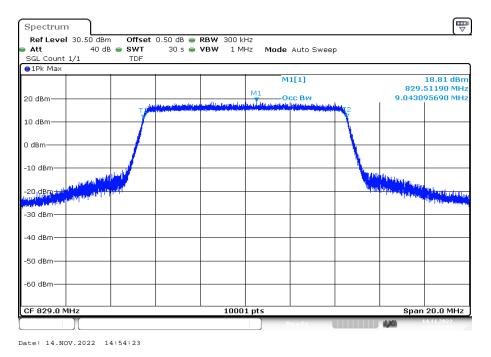
Plot 48: 5 MHz – 16-QAM - highest channel (-26 dBc BW)



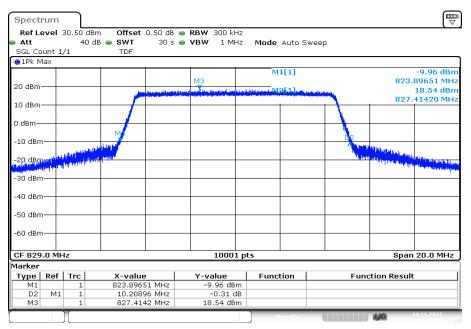
Date: 14.NOV.2022 14:49:30





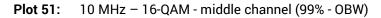


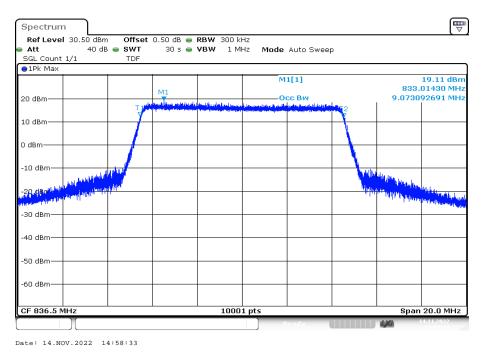
Plot 50: 10 MHz – 16-QAM - lowest channel (-26 dBc BW)



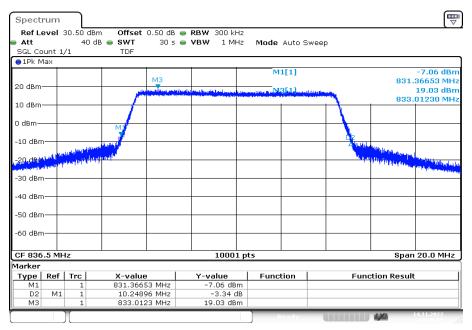
Date: 14.NOV.2022 14:54:56





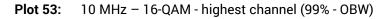


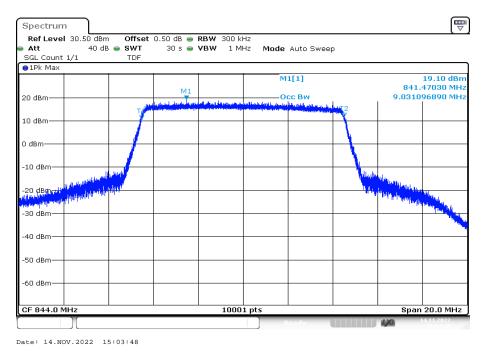
Plot 52: 10 MHz – 16-QAM - middle channel (-26 dBc BW)



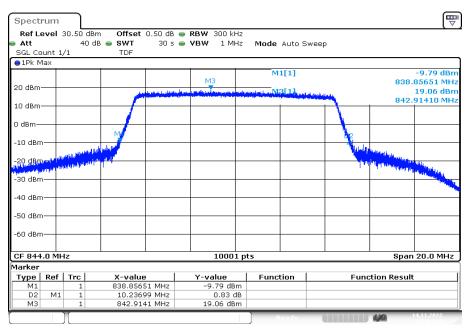
Date: 14.NOV.2022 14:59:05





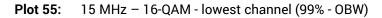


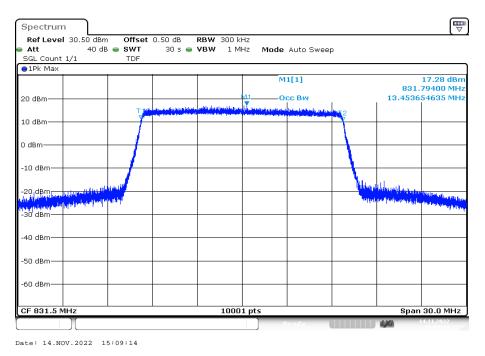
Plot 54: 10 MHz – 16-QAM - highest channel (-26 dBc BW)



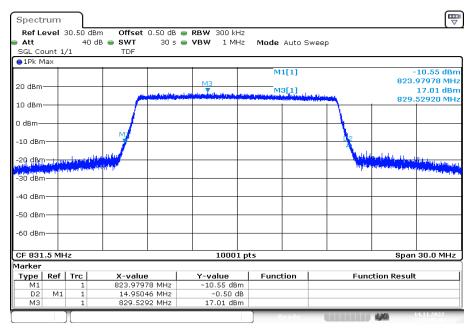
Date: 14.NOV.2022 15:04:20





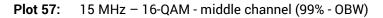


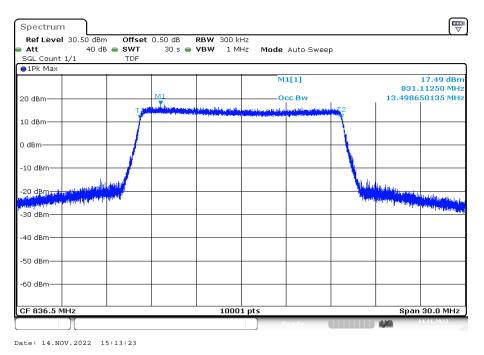
Plot 56: 15 MHz – 16-QAM - lowest channel (-26 dBc BW)



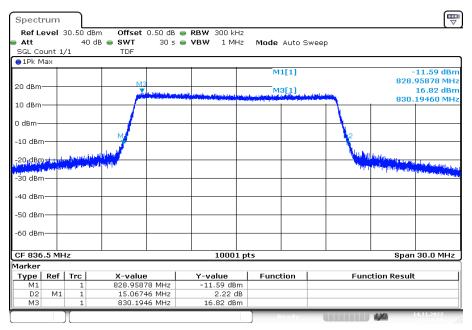
Date: 14.NOV.2022 15:09:47





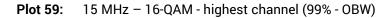


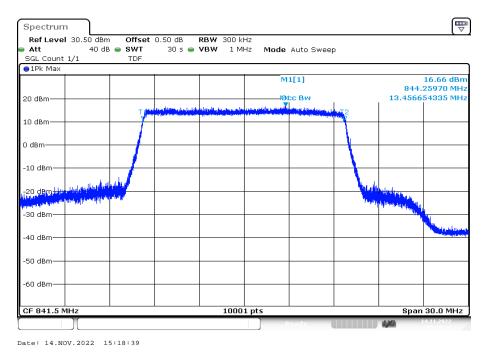
Plot 58: 15 MHz – 16-QAM - middle channel (-26 dBc BW)



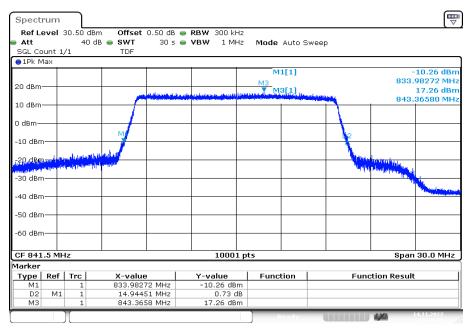
Date: 14.NOV.2022 15:13:56





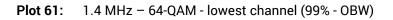


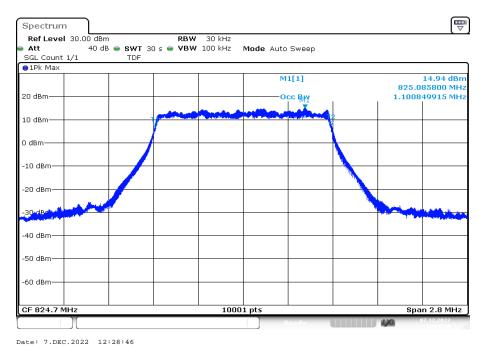
Plot 60: 15 MHz – 16-QAM - highest channel (-26 dBc BW)



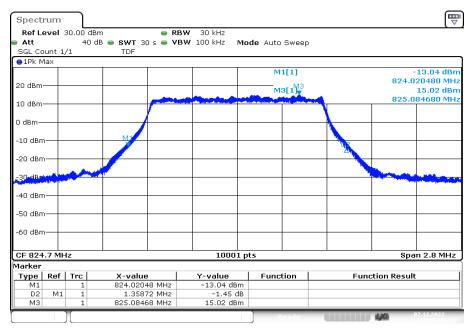
Date: 14.NOV.2022 15:19:11





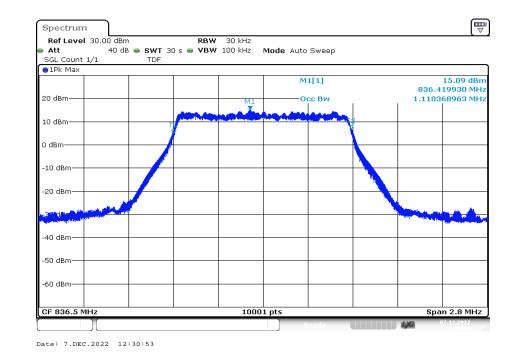


Plot 62: 1.4 MHz – 64-QAM - lowest channel (-26 dBc BW)



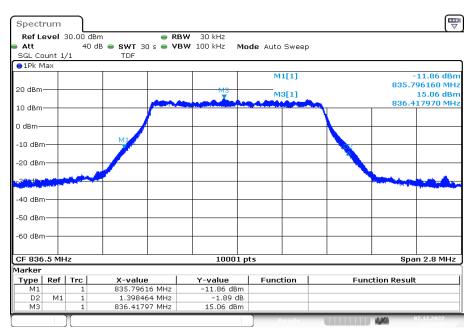
Date: 7.DEC.2022 12:29:19





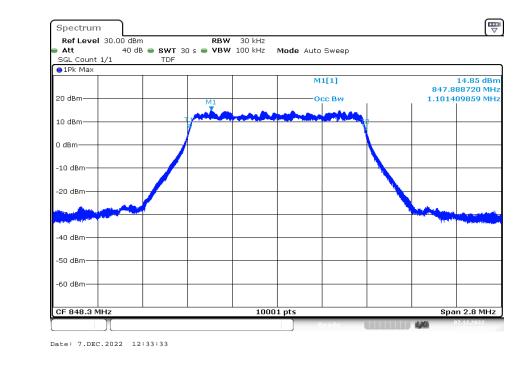
Plot 63: 1.4 MHz - 64-QAM - middle channel (99% - OBW)

Plot 64: 1.4 MHz – 64-QAM - middle channel (-26 dBc BW)



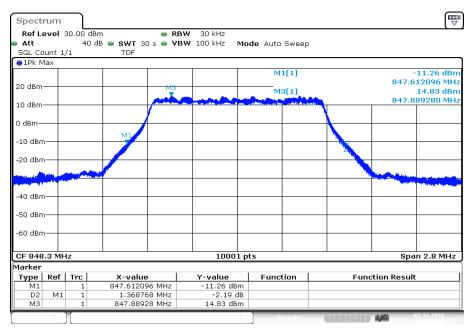
Date: 7.DEC.2022 12:31:26





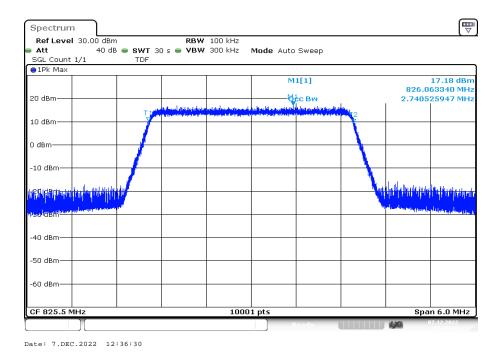
Plot 65: 1.4 MHz – 64-QAM - highest channel (99% - OBW)

Plot 66: 1.4 MHz – 64-QAM - highest channel (-26 dBc BW)

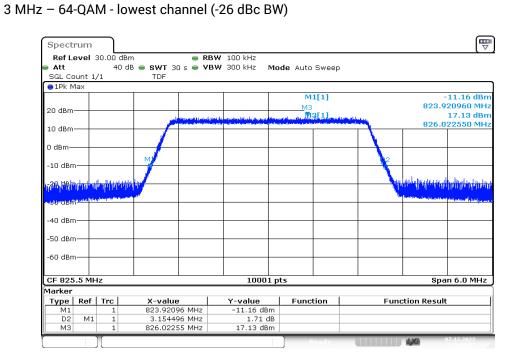


Date: 7.DEC.2022 12:34:06





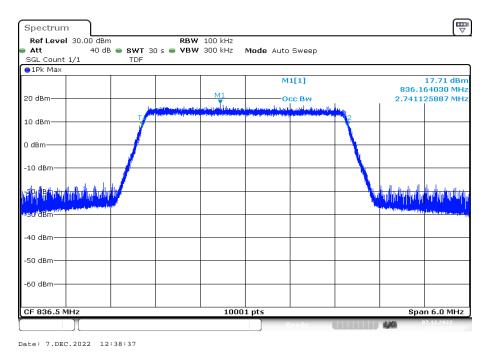
Plot 67: 3 MHz – 64-QAM - lowest channel (99% - OBW)

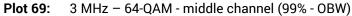


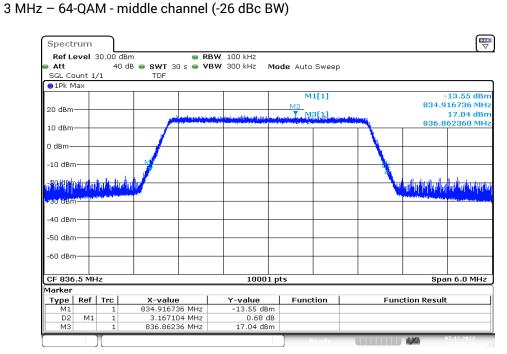
Date: 7.DEC.2022 12:37:03

Plot 68:





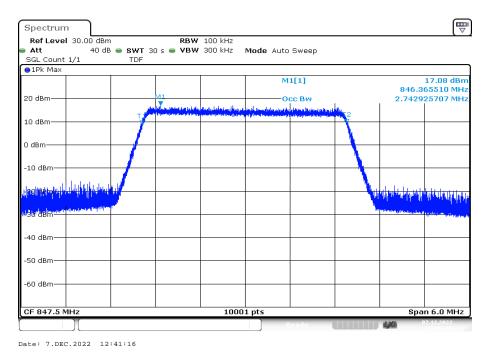




Date: 7.DEC.2022 12:39:09

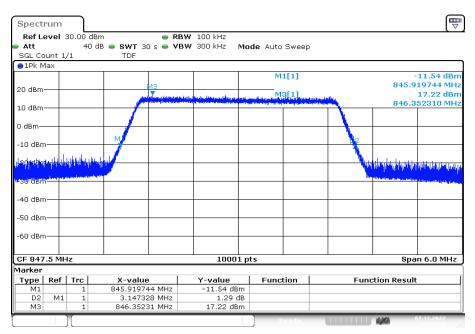
Plot 70:





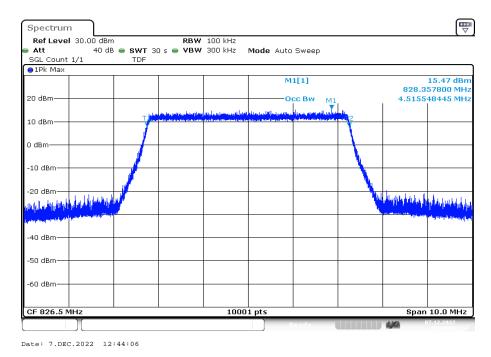
Plot 71: 3 MHz - 64-QAM - highest channel (99% - OBW)

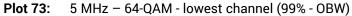
Plot 72: 3 MHz – 64-QAM - highest channel (-26 dBc BW)



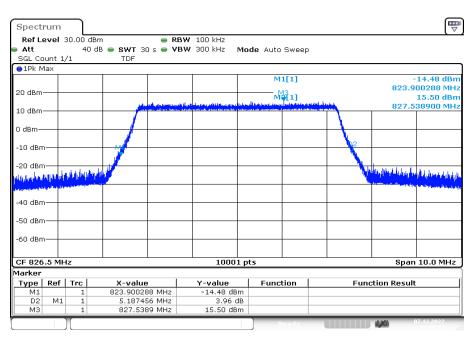
Date: 7.DEC.2022 12:41:49







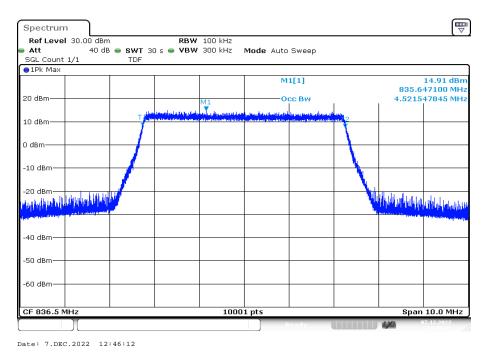
5 MHz - 64-QAM - lowest channel (-26 dBc BW)



Date: 7.DEC.2022 12:44:39

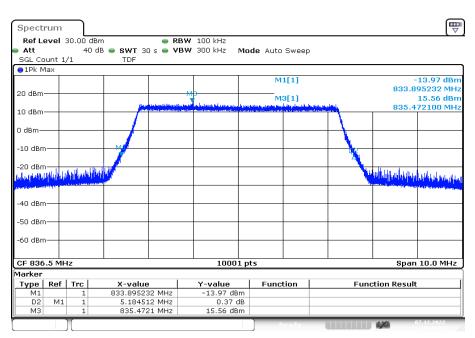
Plot 74:





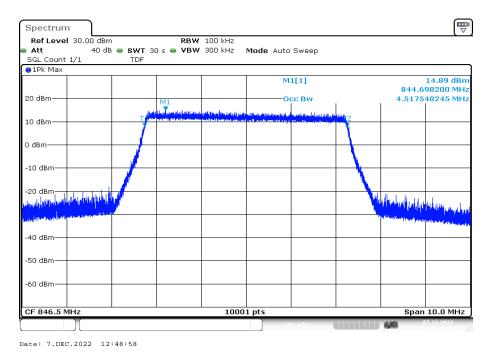
Plot 75: 5 MHz - 64-QAM - middle channel (99% - OBW)

Plot 76: 5 MHz – 64-QAM - middle channel (-26 dBc BW)



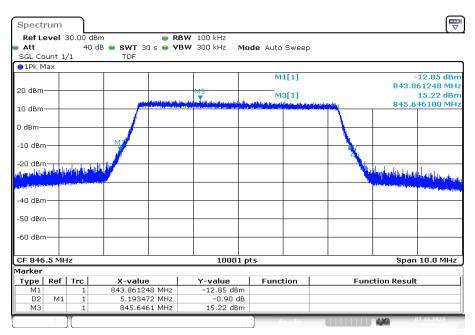
Date: 7.DEC.2022 12:46:52





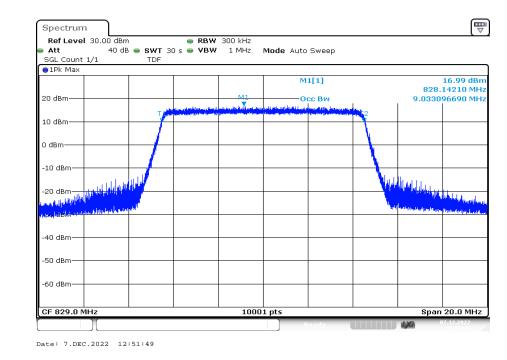
Plot 77: 5 MHz - 64-QAM - highest channel (99% - OBW)

Plot 78: 5 MHz – 64-QAM - highest channel (-26 dBc BW)



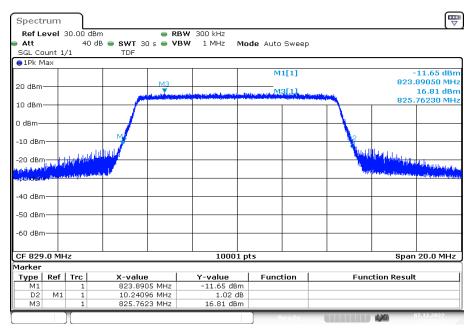
Date: 7.DEC.2022 12:49:31





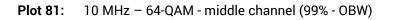
## Plot 79: 10 MHz - 64-QAM - lowest channel (99% - OBW)

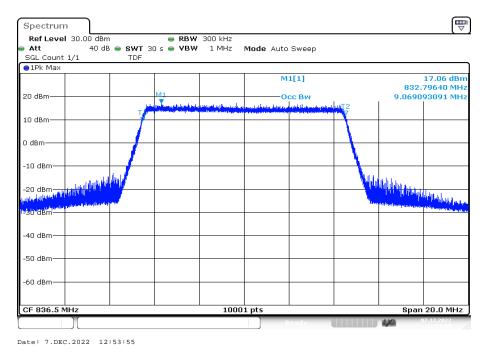
Plot 80: 10 MHz - 64-QAM - lowest channel (-26 dBc BW)



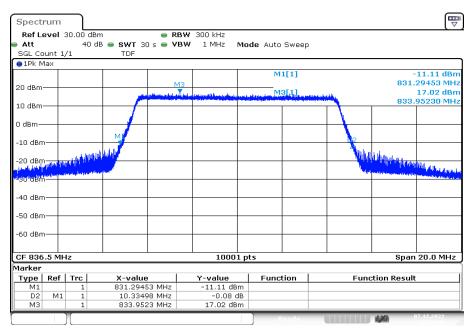
Date: 7.DEC.2022 12:52:22





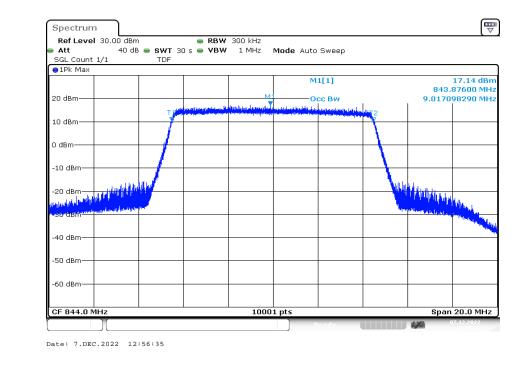


Plot 82: 10 MHz – 64-QAM - middle channel (-26 dBc BW)



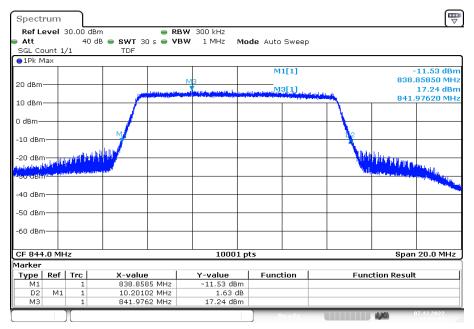
Date: 7.DEC.2022 12:54:28





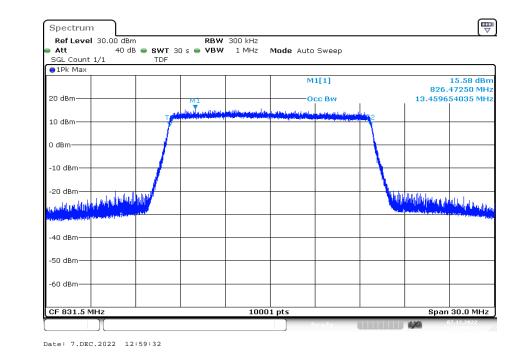
Plot 83: 10 MHz – 64-QAM - highest channel (99% - OBW)

Plot 84: 10 MHz - 64-QAM - highest channel (-26 dBc BW)



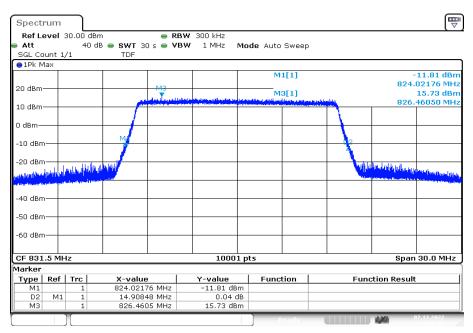
Date: 7.DEC.2022 12:57:07





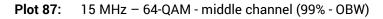
## Plot 85: 15 MHz – 64-QAM - lowest channel (99% - OBW)

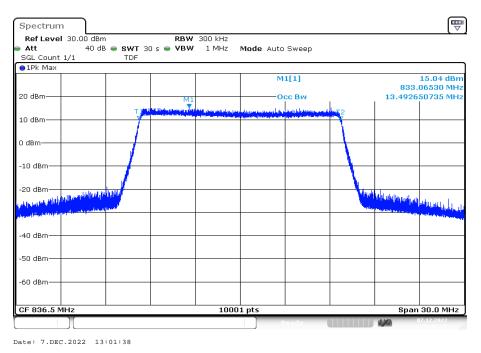
Plot 86: 15 MHz – 64-QAM - lowest channel (-26 dBc BW)



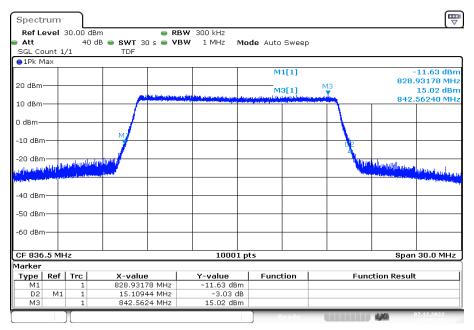
Date: 7.DEC.2022 13:00:05





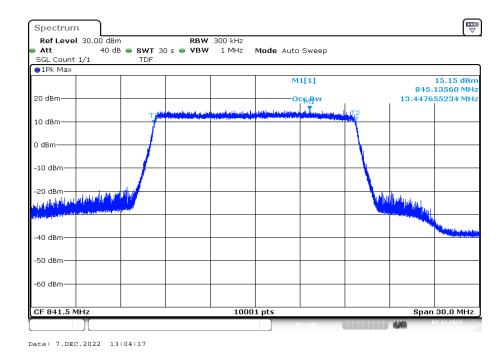


Plot 88: 15 MHz – 64-QAM - middle channel (-26 dBc BW)



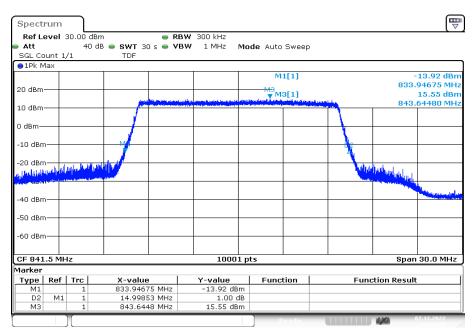
Date: 7.DEC.2022 13:02:11





Plot 89: 15 MHz – 64-QAM - highest channel (99% - OBW)

Plot 90: 15 MHz – 64-QAM - highest channel (-26 dBc BW)



Date: 7.DEC.2022 13:04:50



#### 12 Glossary

EUT	Equipment under test	
DUT	Device under test	
UUT		
	Unit under test	
GUE	GNSS User Equipment	
ETSI	European Telecommunications Standards Institute	
EN	European Standard	
FCC	Federal Communications Commission	
FCC ID	Company Identifier at FCC	
IC	Industry Canada	
PMN	Product marketing name	
HMN	Host marketing name	
HVIN	Hardware version identification number	
FVIN	Firmware version identification number	
EMC	Electromagnetic Compatibility	
HW	Hardware	
SW	Software	
Inv. No.	Inventory number	
S/N or SN	Serial number	
C	Compliant	
NC	Not compliant	
NA	Not applicable	
NP	Not performed	
PP	Positive peak	
QP	Quasi peak	
AVG	Average	
00	Operating channel	
OCW	Operating channel bandwidth	
OBW	Occupied bandwidth	
OOB	Out of band	
DFS	Dynamic frequency selection	
CAC	Channel availability check	
OP	Occupancy period	
NOP	Non occupancy period	
DC	Duty cycle	
PER	Packet error rate	
CW	Clean wave	
MC	Modulated carrier	
WLAN	Wireless local area network	
RLAN	Radio local area network	
DSSS	Dynamic sequence spread spectrum	
OFDM	Orthogonal frequency division multiplexing	
FHSS	Frequency hopping spread spectrum	
GNSS	Global Navigation Satellite System	
C/N <sub>0</sub>	Carrier to noise-density ratio, expressed in dB-Hz	

## **13 Document history**

Version	Applied changes	Date of release
-/-	Initial release	2023-01-16

# 14 Accreditation Certificate – D-PL-12076-01-05

first page	last page
Eventsche versche versc	Deutsche Akkreditierungsstelle GmbH Office Beeln Spittelmarkt 10 10117 Berlin Office Frankfurt am Main Office Braunschweig S0327 Frankfurt am Main Sissi Braunschweig 38116 Braunschweig
The accreditation certificate shall only apply in connection with the notice of accreditation of 09.06.2020 with the accreditation number D-PL-12076-01.1t Comprises the cover sheet, the reverse side of the cover sheet and the following annex with table of 05 pages. Registration number of the certificate: D-PL-12076-01-05 Frankfurt am Main, 09.06.2020 The certificate space of the cover sheet at the following of busices for cover sheet and the score of cover sheet and the following in the without space.	The publication of extracts of the accreditation certificate is subject to the prior written approval by Deutsche Akkreditierungsstelle GmbH (DAkk5). Exempted is the unchanged form of separate disseminations of the cover sheet by the conformity assessment body methoded overleal. No impression shall be made that the accreditation also extends to fields beyond the scope of accreditation attesied by DAkk5. The accreditation actesied by DAkk5. The accreditation actesied by DAkk5. The accreditation accessife in 26251 and the fequation (E(N to 752008 of the European Parliament and of the Council of 51July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (Official Journal of the European Inton 128 of 51July 2008, p. 30). DAkk5 is a signatory to the Multilateral Agreements for Mutual Recognition of the European co-operation for Accreditation [QL], Inter signatories to these agreements recognise each other's accreditations. The up-to-date state of membership can be retrieved from the following websites: EAC: www.lac.org UAC: www.lac.org UAC: www.lac.org UAC: www.lac.org

Note: The current certificate annex is published on the websites (link see below).

https://www.dakks.de/files/data/as/pdf/D-PL-12076-01-05e.pdf

or

https://ctcadvanced.com/app/uploads/2020/06/D-PL-12076-01-05\_TCB\_USA.pdf