Measurement Results

No.1-3977/22-03-25_Annex_MR_A1

Test logging

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2023.01.23 09:58:27 +01'00'

Andreas Luckenbill
Head of Department
Radio Communications

Table of Content

EUT Information

EUT DEFINITION

Manufacturer	Sagemcom Broadband SAS
Type	Fast 5688W
Serial Number	IMEI: 359509840061128
Setup Number	1.0
Version SW	SG520TMDAR02A02M4G_01.001.01.001_V01
Version FW	SG520TMDAR02A02M4G_01.001.01.001_V01
Version HW	1.2
Comment 1	
Comment 2	
Temperature [°C] Min	-30
Temperature [°C] Nom	20
Temperature [°C] Max	55
Voltage [V] Min	102
Voltage [V] Nom	120
Voltage [V] Max	138

FCC, ISED # Bandwidth 99PCT and 26dB ~ NR Band_77_48 Ant-1 SCS-30

Test References

TC Start	23.01.2023 09:40:37
Ambit Temp [°C] | Humidity [rel%]	23.3 | 27
System Version	3.3.4.3
Test Specification	FCC, ISED -
Test Method	
TC Version	0.0.1
My Description	FCC/ISED Bandwidths 99PCT and 26dB - NR Band_77_48
Add. Information	

Test Parameter

Technology to test	NR
Band	Band_77_48
SCS [kHz]	30
Waveform	CPOFDM
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True
Frequency mid to test	True
Frequency high to test	True
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0
Switched Path	None

Test Equipment

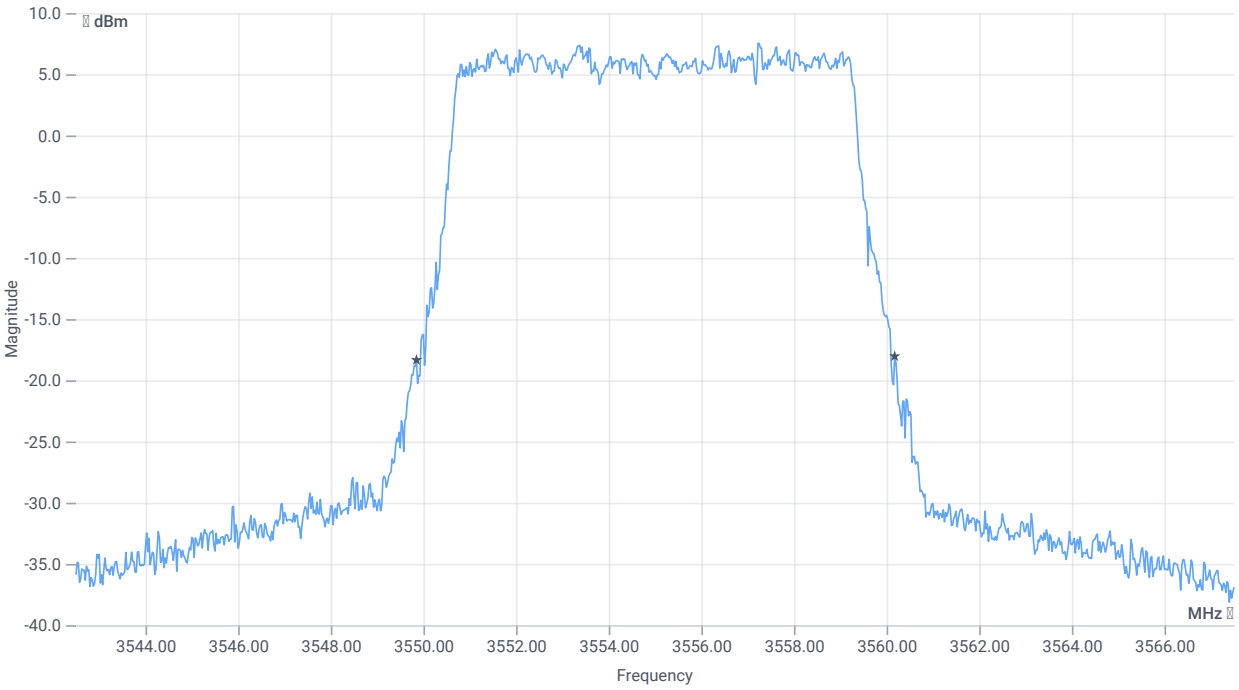
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70

Test at BW [MHz]: 10

Test freq: low, UL[MHz]/CH 3555/637000, CBW [MHz]: 10, RB_100PCT, Mod: QPSK

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	18.67 | 0 | 35
Start [MHz] | Stop [MHz]	3542.500 | 3567.500
RBW [MHz] | VBW [MHz]	0.200000 | 1.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	2 | 1500 | 1001 | SWE



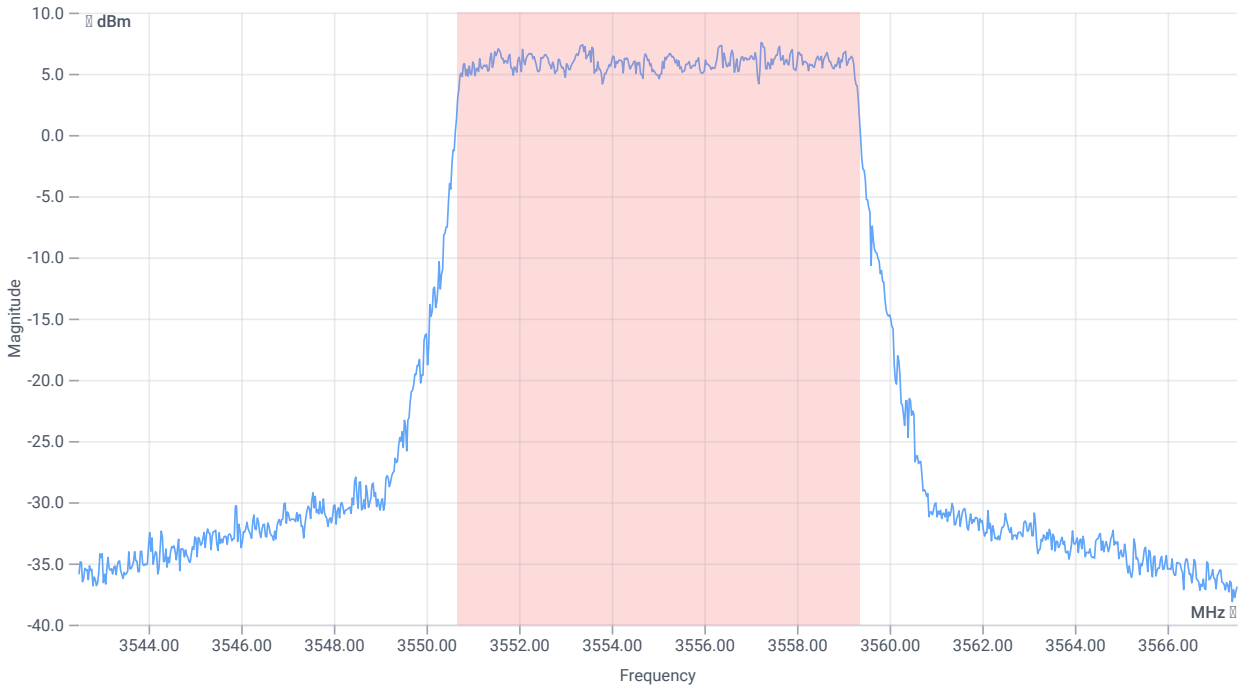
BW 26dB

RESULT 26 dB

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 26dB	---	---	10.325	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	18.67 | 0 | 35
Start [MHz] | Stop [MHz]	3542.500 | 3567.500
RBW [MHz] | VBW [MHz]	0.200000 | 1.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1 | 1500 | 1001 | SWE



BW 99%

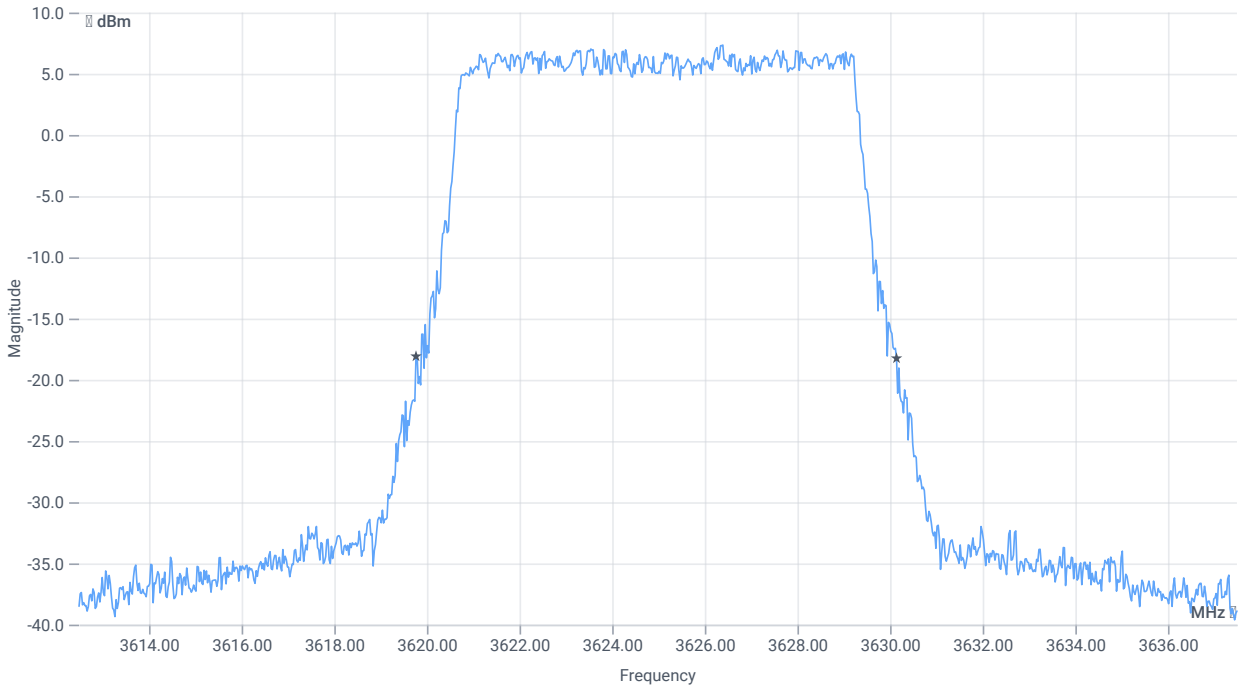
RESULT 99%

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	8.691	MHz	INFO

Test freq: mid, UL[MHz]/CH 3624.99/641666, CBW [MHz]: 10, RB_100PCT, Mod: QPSK

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.90 | 0 | 35
Start [MHz] | Stop [MHz]	3612.490 | 3637.490
RBW [MHz] | VBW [MHz]	0.200000 | 1.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	2 | 1500 | 1001 | SWE



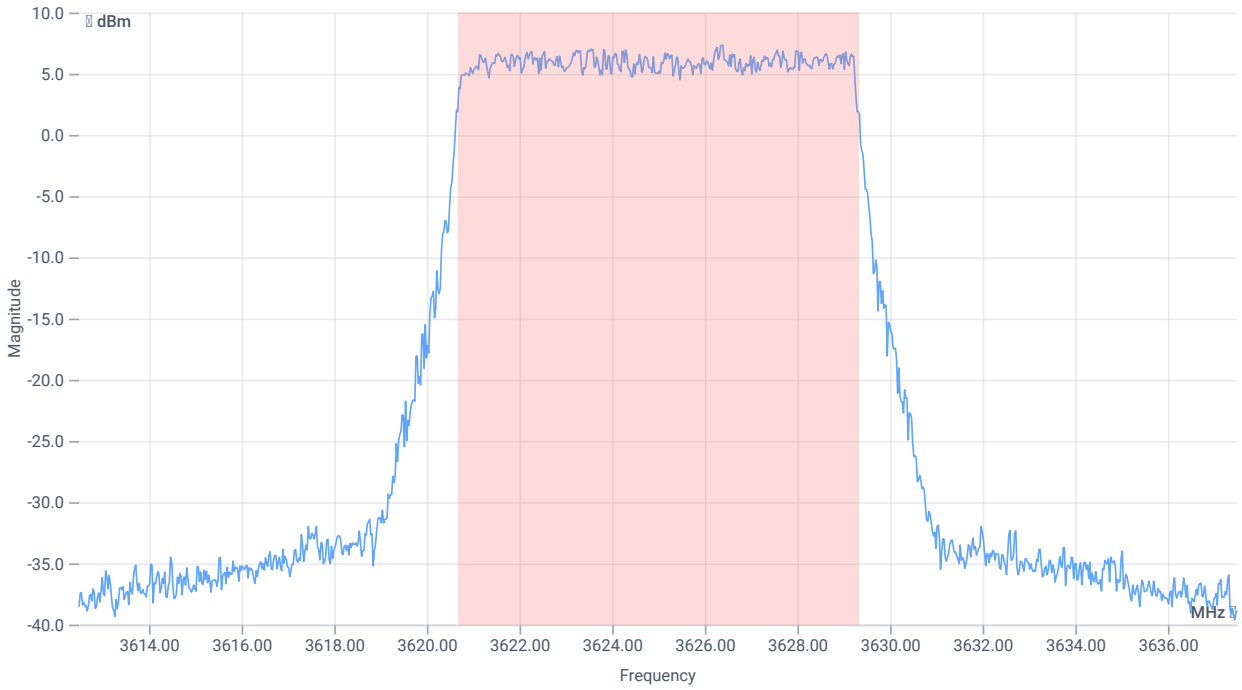
BW 26dB

RESULT 26 dB

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 26dB	---	---	10.375	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.90 | 0 | 35
Start [MHz] | Stop [MHz]	3612.490 | 3637.490
RBW [MHz] | VBW [MHz]	0.200000 | 1.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	2 | 1500 | 1001 | SWE



BW 99%

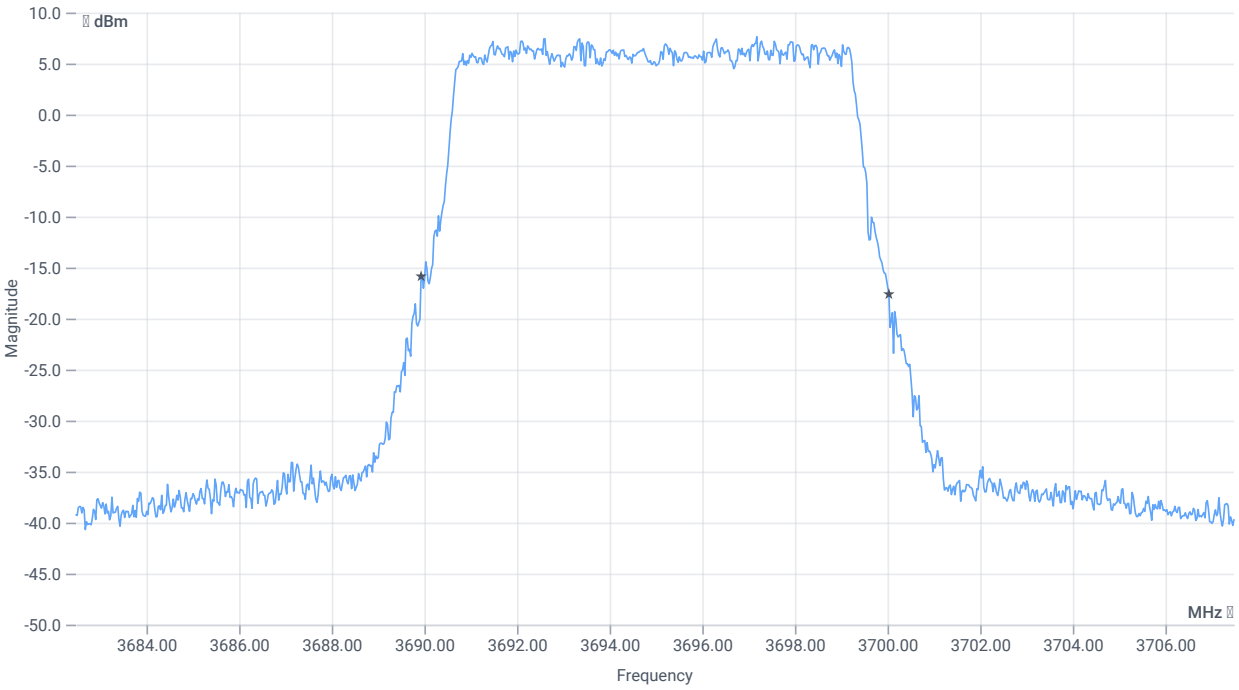
RESULT 99%

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	8.641	MHz	INFO

Test freq: high, UL[MHz]/CH 3694.98/646332, CBW [MHz]: 10, RB_100PCT, Mod: QPSK

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	20.03 | 0 | 35
Start [MHz] | Stop [MHz]	3682.480 | 3707.480
RBW [MHz] | VBW [MHz]	0.200000 | 1.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	2 | 1500 | 1001 | SWE



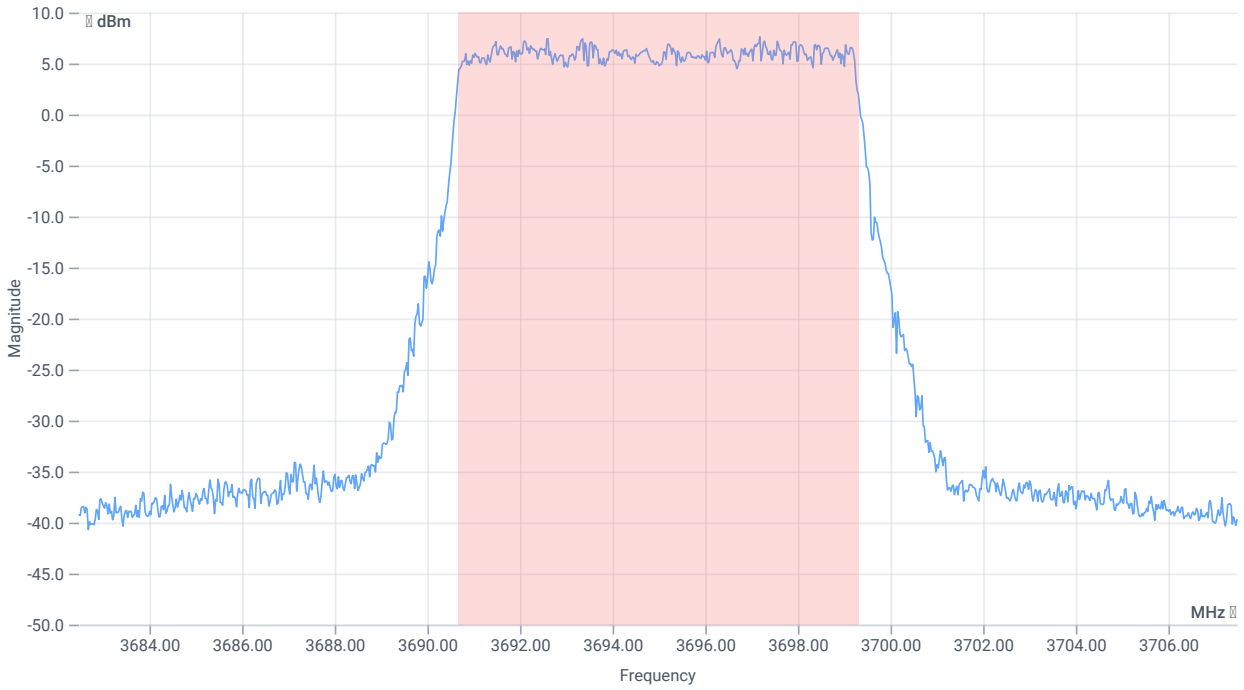
BW 26dB

RESULT 26 dB

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 26dB	---	---	10.1	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	20.03 | 0 | 35
Start [MHz] | Stop [MHz]	3682.480 | 3707.480
RBW [MHz] | VBW [MHz]	0.200000 | 1.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	2 | 1500 | 1001 | SWE



BW 99%

RESULT 99%

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	8.641	MHz	INFO

Verdict
PASS

FCC, ISED # TX Emissions conducted ~ NR Band_77_48 Ant-1 SCS-30

Test References

TC Start	22.01.2023 21:57:50
Ambit Temp [°C] | Humidity [rel%]	23.1 | 27
System Version	3.3.4.3
Test Specification	FCC, ISED -
Test Method	
TC Version	0.0.1
My Description	FCC/ISED MobileRadio TX Emissions conducted - NR Band_77_48
Add. Information	

Test Parameter

Technology to test	NR
Band	Band_77_48
SCS [kHz]	30
Waveform	CPOFDM
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True
Frequency mid to test	True
Frequency high to test	True
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0
Switched Path	None

Test Equipment

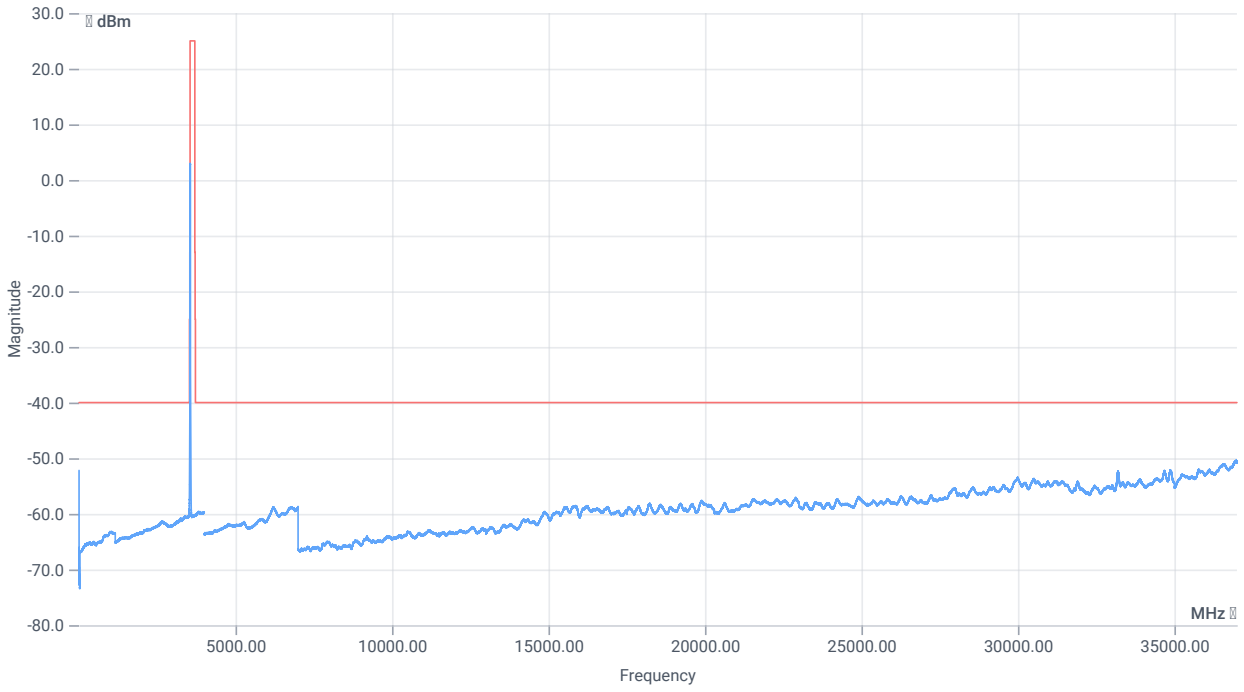
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70

Test at BW [MHz]: 10

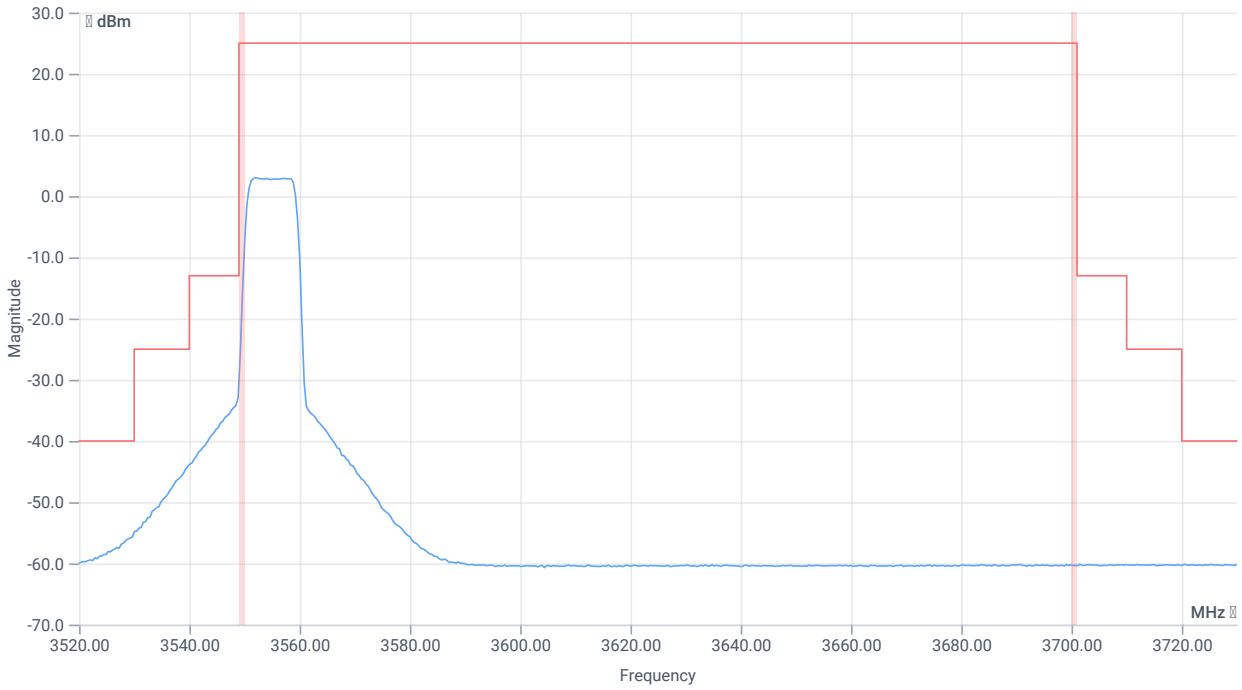
Test freq: low, UL[MHz]/CH 3555/637000, CBW [MHz]: 10, RB_100PCT, Mod: QPSK

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.15 | 0 | 20
Start [MHz] | Stop [MHz]	1.000 | 401.000
RBW [MHz] | VBW [MHz]	1.000000 | 3.000000
Detector | TraceMode	RMS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1600 | 4 | 1001 | SWE



TX emissions



TX emissions band zoomed

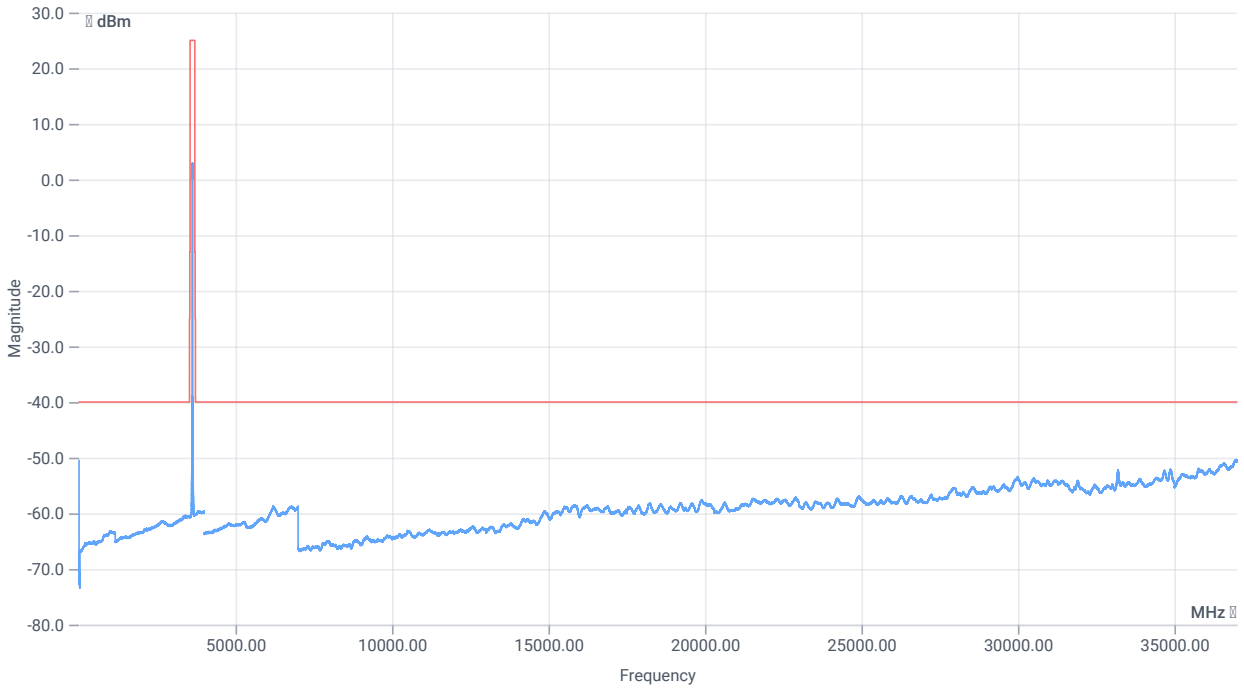
RESULT Test freq: low, UL[MHz]/CH 3555/637000, CBW [MHz]: 10, RB_100PCT, Mod: QPSK

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Peaks higher limit	---	0	0	no	PASS

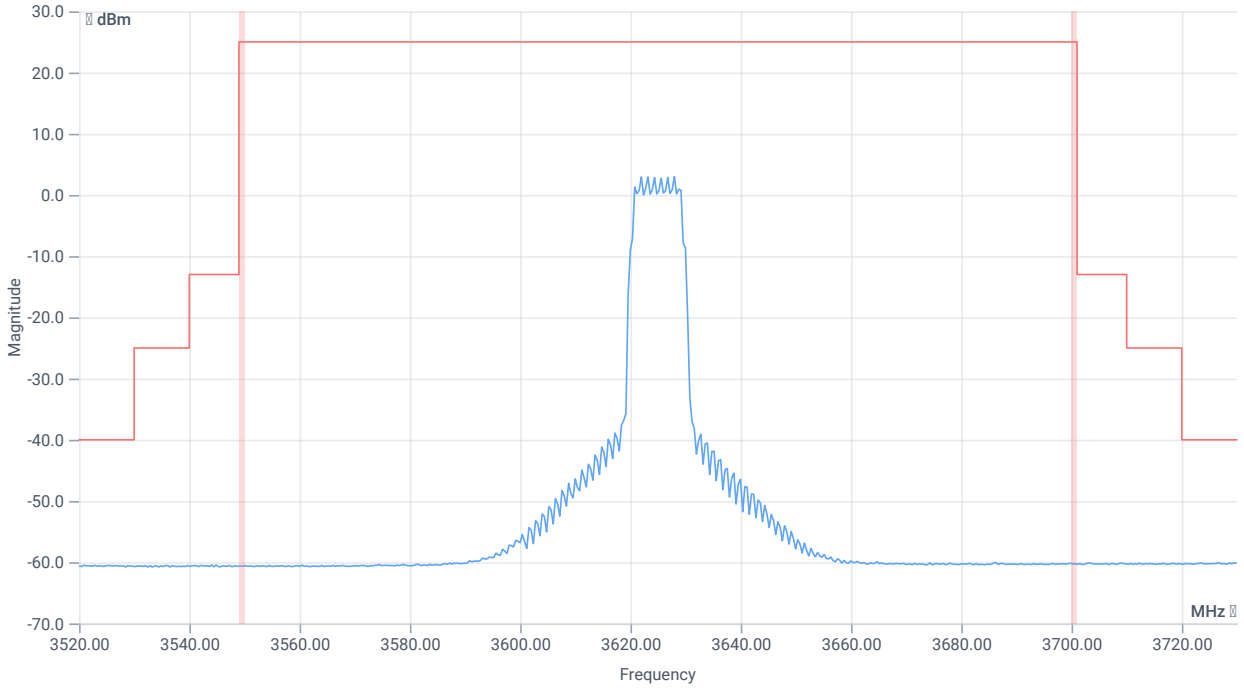
Test freq: mid, UL[MHz]/CH 3624.99/641666, CBW [MHz]: 10, RB_100PCT, Mod: QPSK

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	4.08 | 0 | 20
Start [MHz] | Stop [MHz]	1.000 | 401.000
RBW [MHz] | VBW [MHz]	1.000000 | 3.000000
Detector | TraceMode	RMS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1600 | 4 | 1001 | SWE



TX emissions



TX emissions band zoomed

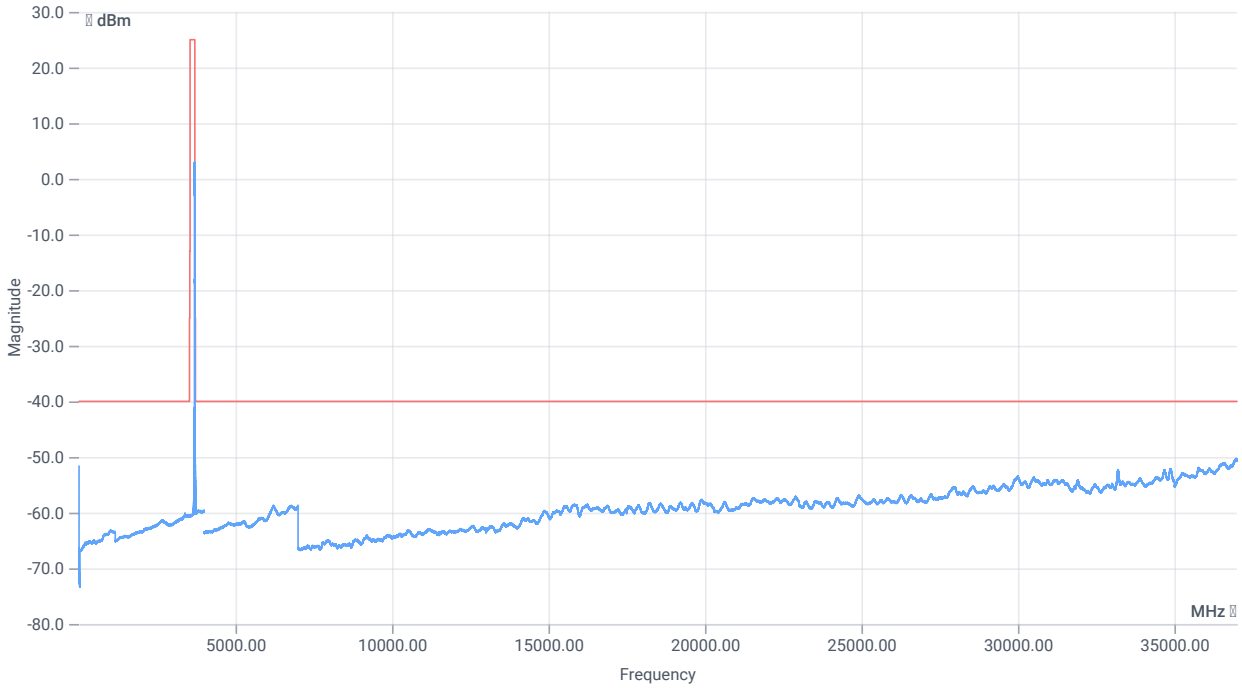
RESULT Test freq: mid, UL[MHz]/CH 3624.99/641666, CBW [MHz]: 10, RB_100PCT, Mod: QPSK

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Peaks higher limit	---	0	0	no	PASS

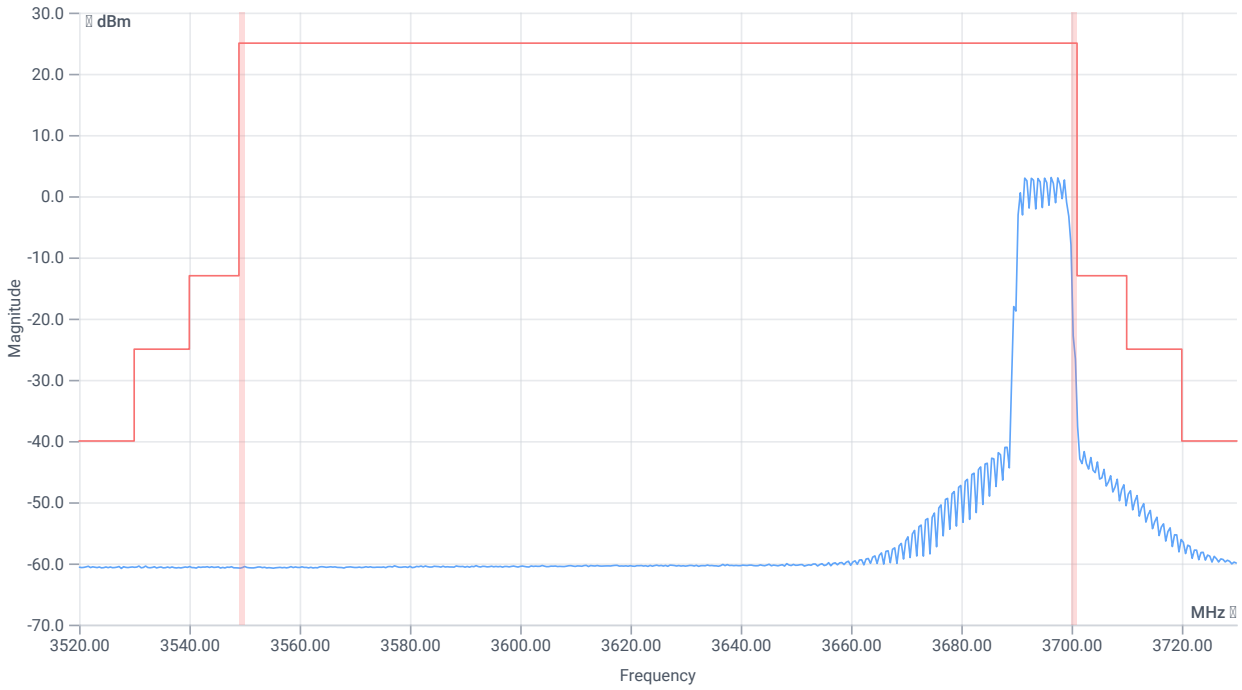
Test freq: high, UL[MHz]/CH 3694.98/646332, CBW [MHz]: 10, RB_100PCT, Mod: QPSK

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	4.00 | 0 | 20
Start [MHz] | Stop [MHz]	1.000 | 401.000
RBW [MHz] | VBW [MHz]	1.000000 | 3.000000
Detector | TraceMode	RMS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1600 | 4 | 1001 | SWE



TX emissions



TX emissions band zoomed

RESULT Test freq: high, UL[MHz]/CH 3694.98/646332, CBW [MHz]: 10, RB_100PCT, Mod: QPSK

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Peaks higher limit	---	0	0	no	PASS

Verdict

PASS

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