Annex 202: Conducted test results

April 03, 2025

Test Standard(s)	FCC 15.247 - NI

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Authorized

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FCC 15.247 # Maximum peak conducted output power ~ Generic 0G9

References

TC start	03.04.2025 08:46:51
Ambit temp (test rack) [°C]	humidity [rel%]	not enabled	not enabled
System version	5.1.9.0
Standard	Version	FCC 15.247	NI
Method	
Description	FCC 15.247 Maximum Peak Output Power Conducted DTS
Information	

Equipment

Signal analyzer,Rohde&Schwarz,FSV3030,1330.5000K30/101247,1.90
Switch matrix,cetecom advanced GmbH,USM,D001,1.0.0
Power supply,ROHDE&SCHWARZ,HMP2020,121649,HW50010003/SW2.72

Test Parameter

|	
Technology to test	Generic 0G9
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	False	Freq [MHz] 902.2
Frequency mid to test	True	Freq [MHz] 921.23
Frequency high to test	False	Freq [MHz] 927.8
Auto control enabled power supply	Climatic Box	Yes	No
Additional path loss [dB]	0
Full path type	EUT_SA_GEN_SIG
Full path name	EUT1.MP.SIG1/EUT1.SA/
Switch bits	00000001:00000001:00000000:00000110

TID001 Test at TX 921.23 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	17.87	dBm	INFO
Ref. frequency	---	---	921.030	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	22.87 | 1.92 | 31
Start [MHz] | Stop [MHz]	919.730 | 922.730
RBW [MHz] | VBW [MHz]	2.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: time [ms] | count | points per Section | type	200 | 500 | 1001 | SWE

Peak output power
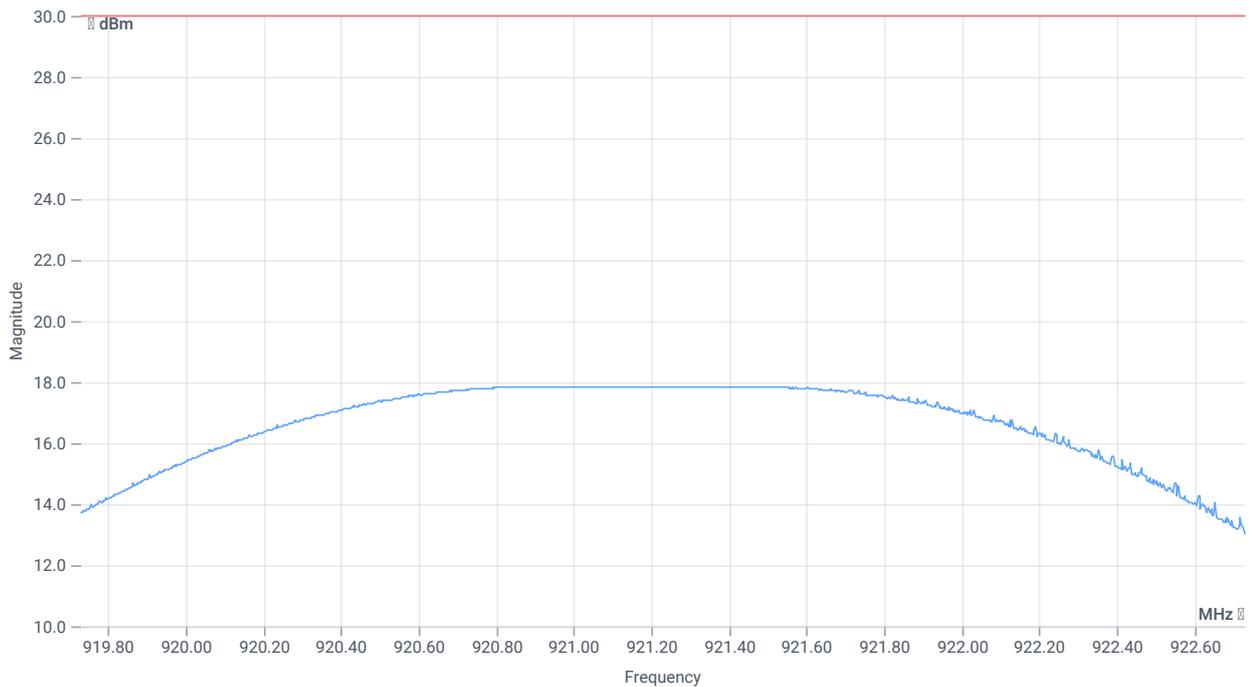
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Peak power	---	30	17.85	dBm	PASS
Frequency at peak	---	---	921.077	MHz	INFO

Verdict

FCC 15.247 # Peak power spectral density DTS ~ Generic 0G9

References

TC start	03.04.2025 08:49:00
Ambit temp (test rack) [°C] | humidity [rel%]	not enabled | not enabled
System version	5.1.9.0
Standard | Version	FCC 15.247 | NI
Method	ANSI C63.10-2013: 11.10.2 Method PKPSD (peak PSD)
Description	FCC 15.247 Peak Power Spectral Density
Information	

Equipment

Signal analyzer,Rohde&Schwarz,FSV3030,1330.5000K30/101247,1.90
Switch matrix,cetecom advanced GmbH,USM,D001,1.0.0
Power supply,ROHDE&SCHWARZ,HMP2020,121649,HW50010003/SW2.72

Test Parameter

|	
Technology to test	Generic 0G9
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 902.2
Frequency mid to test	True | Freq [MHz] 921.23
Frequency high to test	False | Freq [MHz] 927.8
Auto control enabled power supply | Climatic Box	Yes | No
Additional path loss [dB]	0
Full path type	EUT_SA_GEN_SIG
Full path name	EUT1.MP.SIG1/EUT1.SA/
Switch bits	00000001:00000001:00000000:00000110

TID002 Test at TX 921.23 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	17.86	dBm	INFO
Ref. frequency	---	---	921.030	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	22.86 | 1.92 | 31
Start [MHz] | Stop [MHz]	920.480 | 921.980
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: time [ms] | count | points per Section | type	200 | 500 | 1001 | SWE

Peak PSD
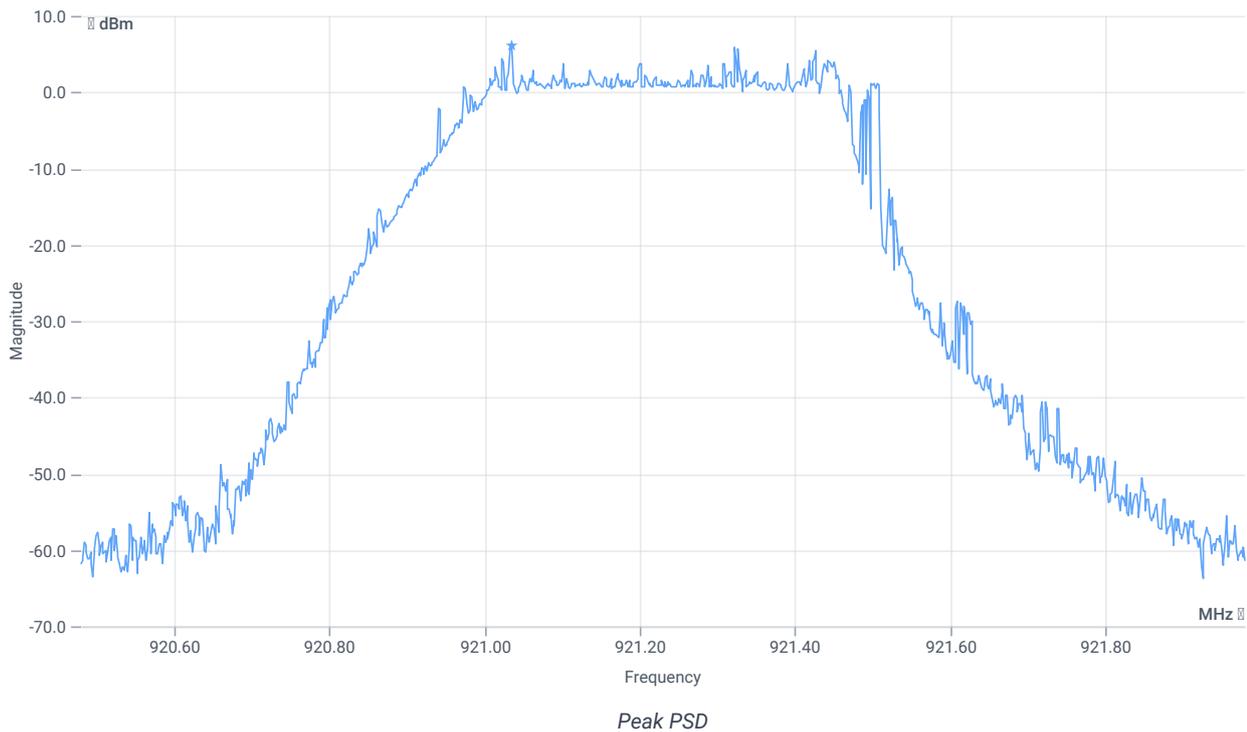
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Max peak power density	---	8	6.09	dBm/3KHz	PASS

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ Generic 0G9

References

TC start	03.04.2025 09:11:28
Ambit temp (test rack) [°C] | humidity [rel%]	not enabled | not enabled
System version	5.1.9.0
Standard | Version	FCC 15.247 | NI
Method	
Description	FCC 15.247 6dB Bandwidth DTS
Information	

Equipment

Signal analyzer,Rohde&Schwarz,FSV3030,1330.5000K30/101247,1.90
Switch matrix,cetecom advanced GmbH,USM,D001,1.0.0
Power supply,ROHDE&SCHWARZ,HMP2020,121649,HW50010003/SW2.72

Test Parameter

|	
Technology to test	Generic 0G9
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 902.2
Frequency mid to test	True | Freq [MHz] 921.23
Frequency high to test	False | Freq [MHz] 927.8
Auto control enabled power supply | Climatic Box	Yes | No
Additional path loss [dB]	0
Full path type	EUT_SA_GEN_SIG
Full path name	EUT1.MP.SIG1/EUT1.SA/
Switch bits	00000001:00000001:00000000:00000110

TID003 Test at TX 921.23 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	17.77	dBm	INFO
Ref. frequency	---	---	921.130	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	22.77 | 1.92 | 31
Start [MHz] | Stop [MHz]	920.630 | 921.830
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: time [ms] | count | points per Section | type	50 | 2000 | 10001 | SWE

BW 6dB
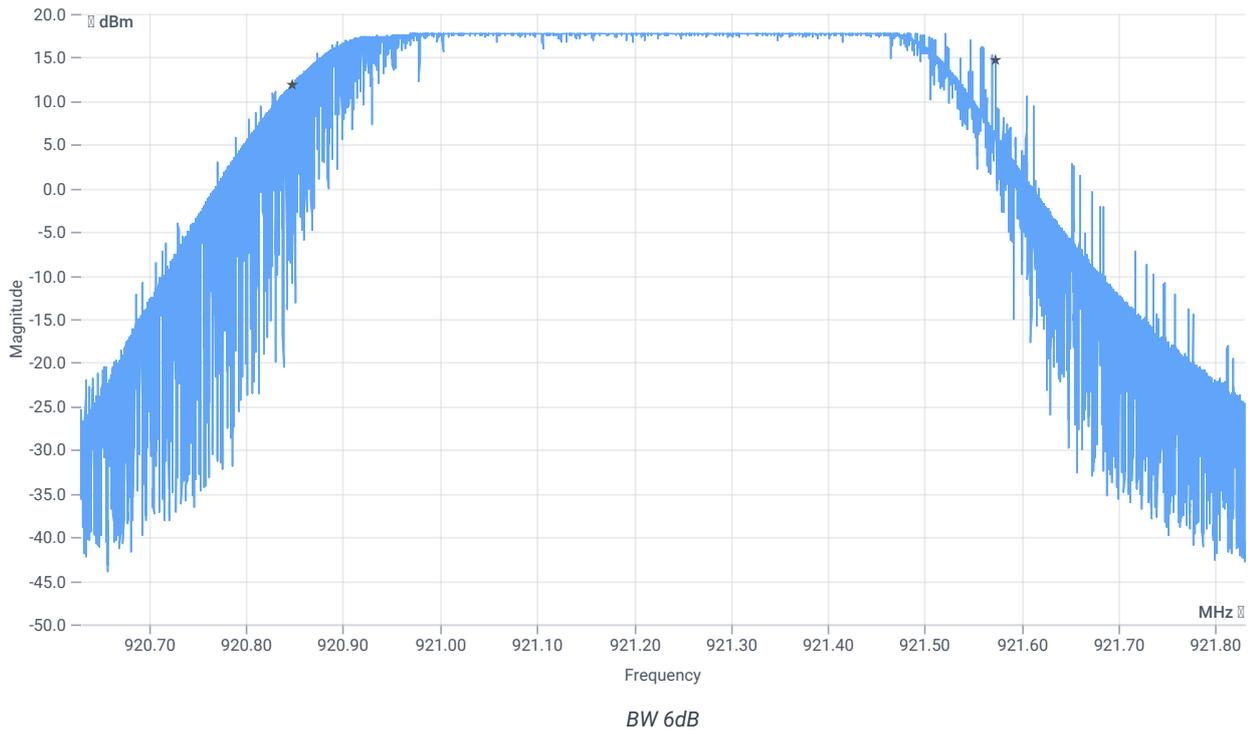
RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS bandwidth (6dB)	500	---	726	kHz	PASS

Verdict
PASS

FCC 15.247 # Bandwidths ~ Generic 0G9

References

TC start	03.04.2025 09:07:48
Ambit temp (test rack) [°C]	humidity [rel%]	not enabled	not enabled
System version	5.1.9.0
Standard	Version	FCC 15.247	NI
Method	
Description	FCC 15.247 Bandwidths DTS
Information	

Equipment

Signal analyzer,Rohde&Schwarz,FSV3030,1330.5000K30/101247,1.90
Switch matrix,cetecom advanced GmbH,USM,D001,1.0.0
Power supply,ROHDE&SCHWARZ,HMP2020,121649,HW50010003/SW2.72

Test Parameter

|	
Technology to test	Generic 0G9
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	False	Freq [MHz] 902.2
Frequency mid to test	True	Freq [MHz] 921.23
Frequency high to test	False	Freq [MHz] 927.8
Auto control enabled power supply	Climatic Box	Yes	No
Additional path loss [dB]	0
Full path type	EUT_SA_GEN_SIG
Full path name	EUT1.MP.SIG1/EUT1.SA/
Switch bits	00000001:00000001:00000000:00000110

# TID004 Test at TX 921.23 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	17.78	dBm	INFO
Ref. frequency	---	---	921.030	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	22.78 | 1.92 | 31
Start [MHz] | Stop [MHz]	919.730 | 922.730
RBW [MHz] | VBW [MHz]	0.010000 | 0.030000
Detector | TraceMode	POS | MAXH
Sweep: time [ms] | count | points per Section | type	50 | 2000 | 10001 | SWE

BW 99PCT
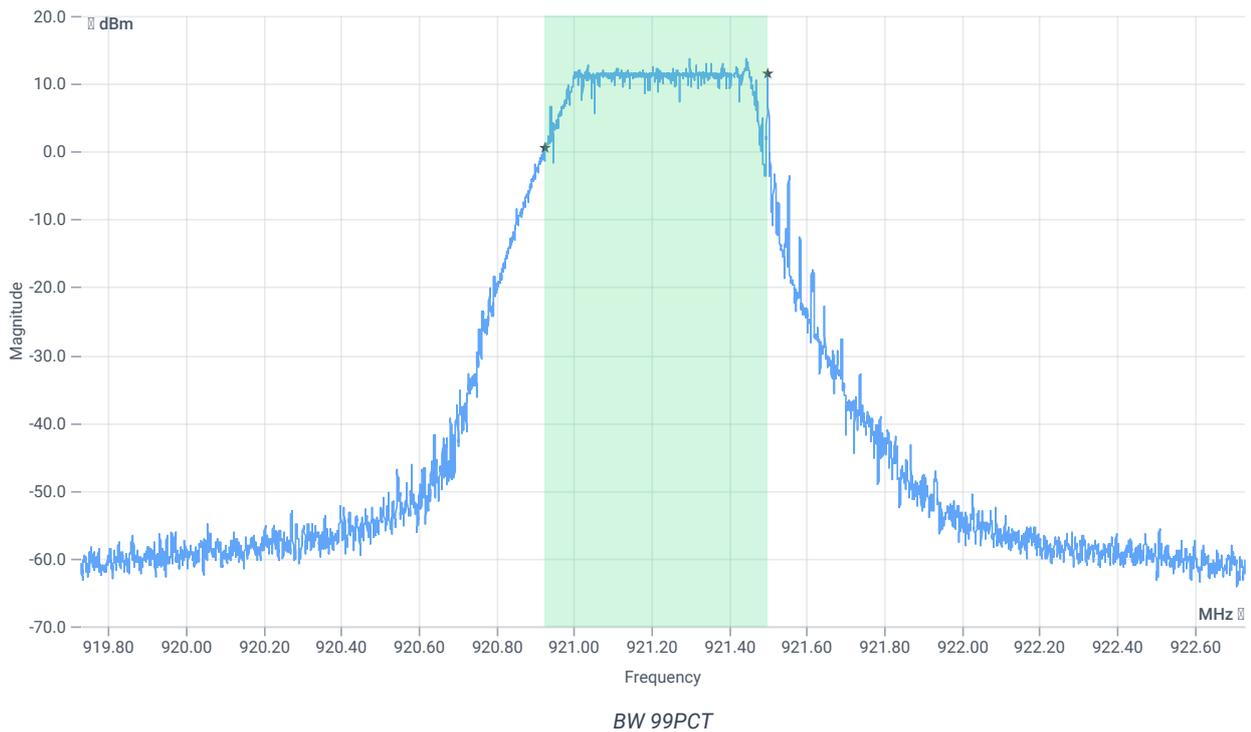
Plot: Bandwidth within Band
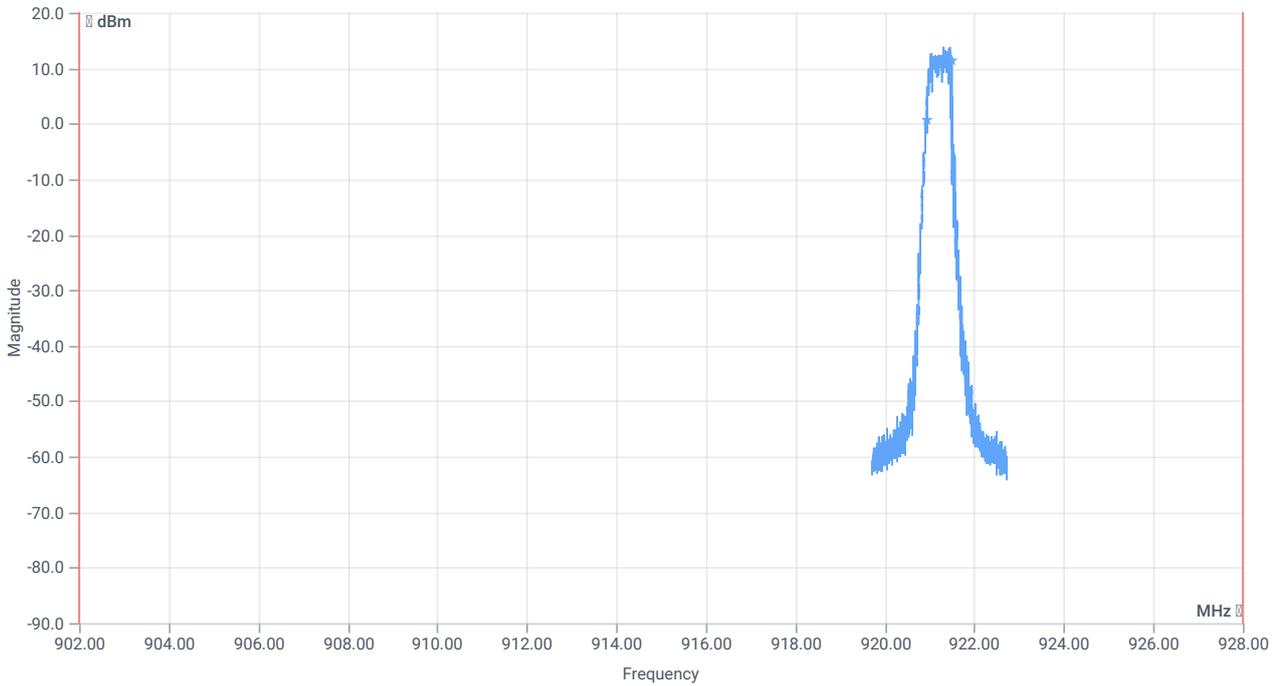
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	572.373	kHz	INFO
T1 99%	902.000000	---	920.9277	MHz	PASS
T2 99%	---	928.000000	921.5000	MHz	PASS
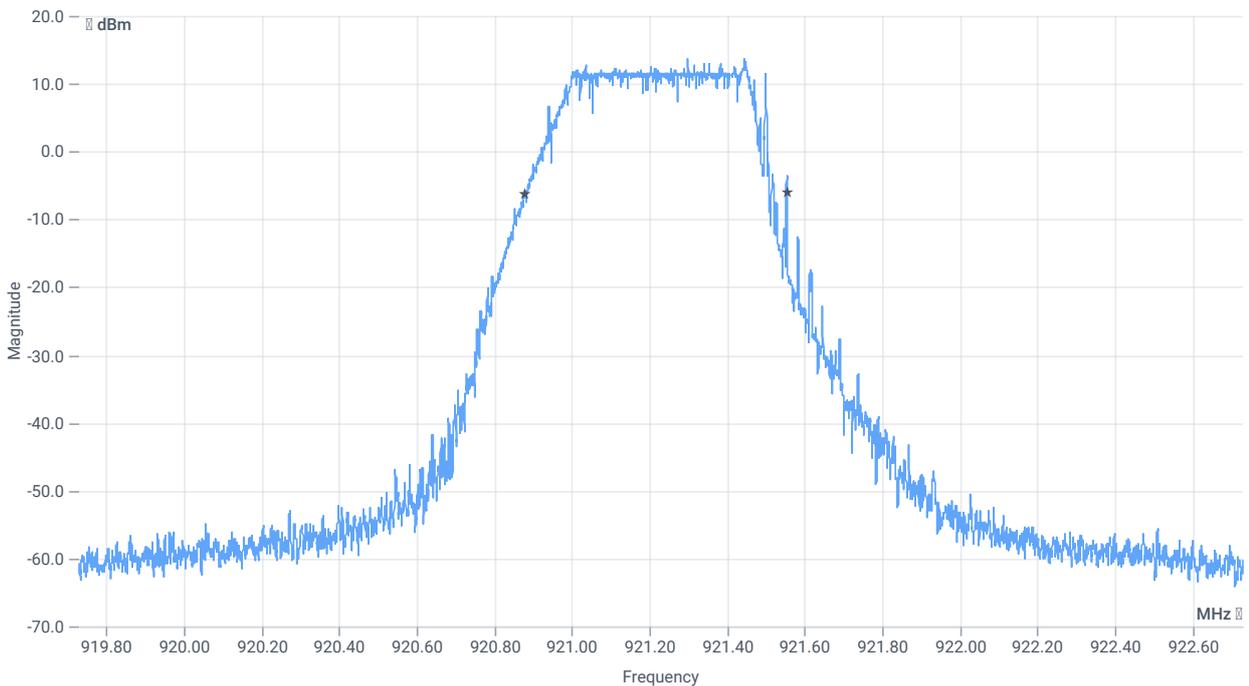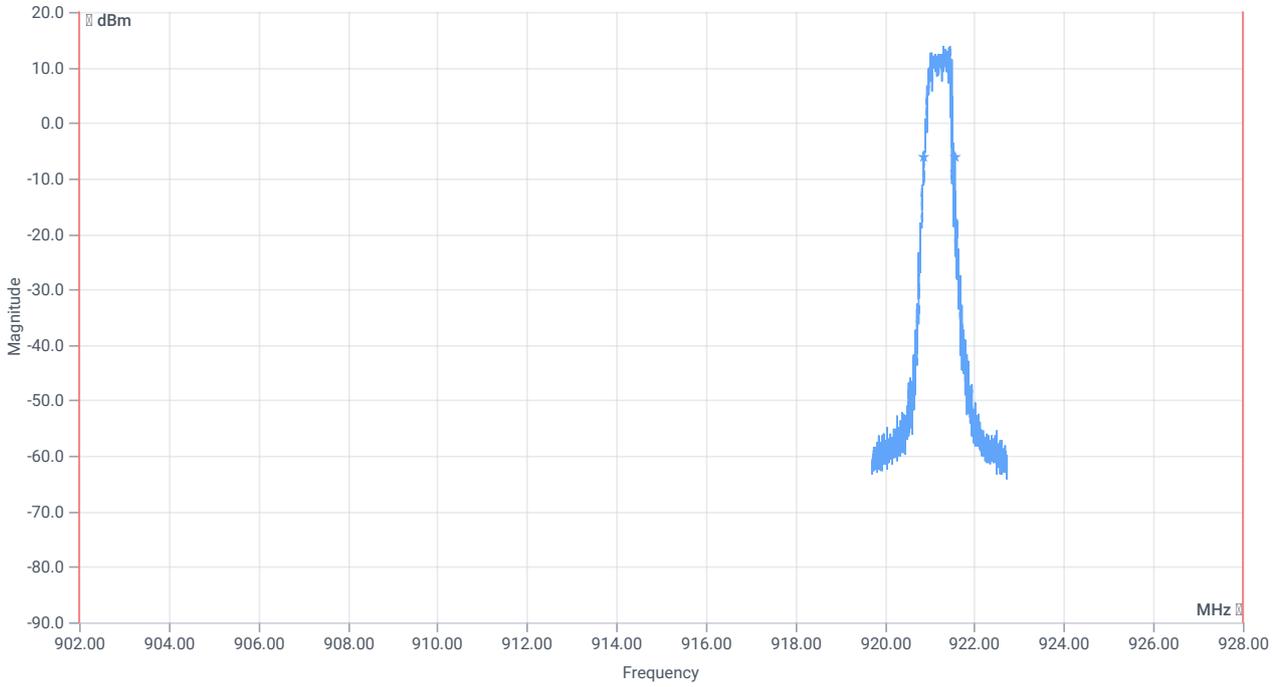
BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	500	---	676	kHz	PASS
T1 20dB	902.000000	---	920.8799	MHz	PASS
T2 20dB	---	928.000000	921.5558	MHz	PASS

Verdict
PASS

FCC 15.247 # TX spurious conducted 20dBc ~ Generic 0G9

References

TC start	03.04.2025 09:14:41
Ambit temp (test rack) [°C]	humidity [rel%]	not enabled	not enabled
System version	5.1.9.0
Standard	Version	FCC 15.247	NI
Method	
Description	FCC 15.247 TX Emissions conducted DTS
Information	

Equipment

| |
|---|
| Signal analyzer,Rohde&Schwarz,FSV3030,1330.5000K30/101247,1.90 |
| Switch matrix,cetecom advanced GmbH,USM,D001,1.0.0 |
| Power supply,ROHDE&SCHWARZ,HMP2020,121649,HW50010003/SW2.72 |

Test Parameter

|	
Technology to test	Generic 0G9
EUT port	EUT1
Temperature	nom
Voltage	nom
Frequency low to test	False	Freq [MHz] 902.2
Frequency mid to test	True	Freq [MHz] 921.23
Frequency high to test	False	Freq [MHz] 927.8
Auto control enabled power supply	Climatic Box	Yes	No
Additional path loss [dB]	0
Full path type	EUT_SA_GEN_SIG
Full path name	EUT1.MP.SIG1/EUT1.SA/
Switch bits	00000001:00000001:00000000:00000110

TID005 Test at TX 921.23 MHz

RESULT: Reference power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. power 1MHz/1MHz cond.	---	---	17.77	dBm	INFO
Ref. frequency	---	---	921.030	MHz	INFO
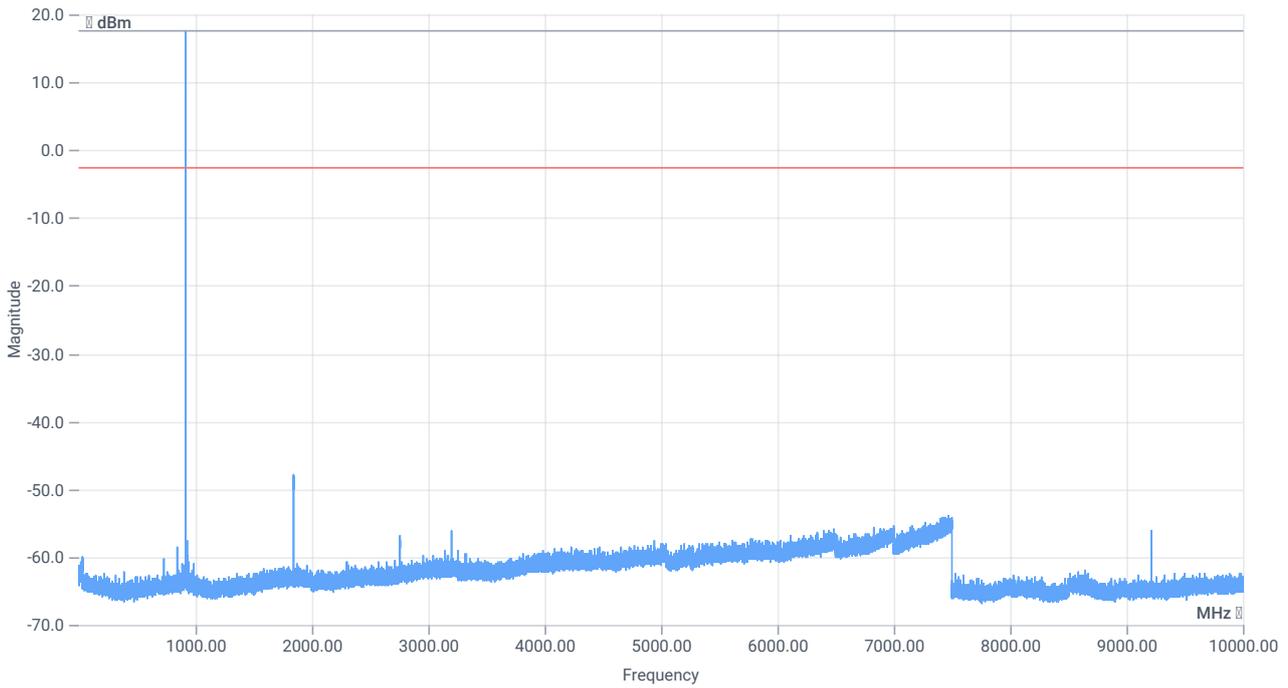
TX emissions

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	17.77 | 6.66 | 22
Start [MHz] | Stop [MHz]	9755.000 | 10000.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: time [ms] | count | points per Section | type	200 | 500 | 1501 | SWE
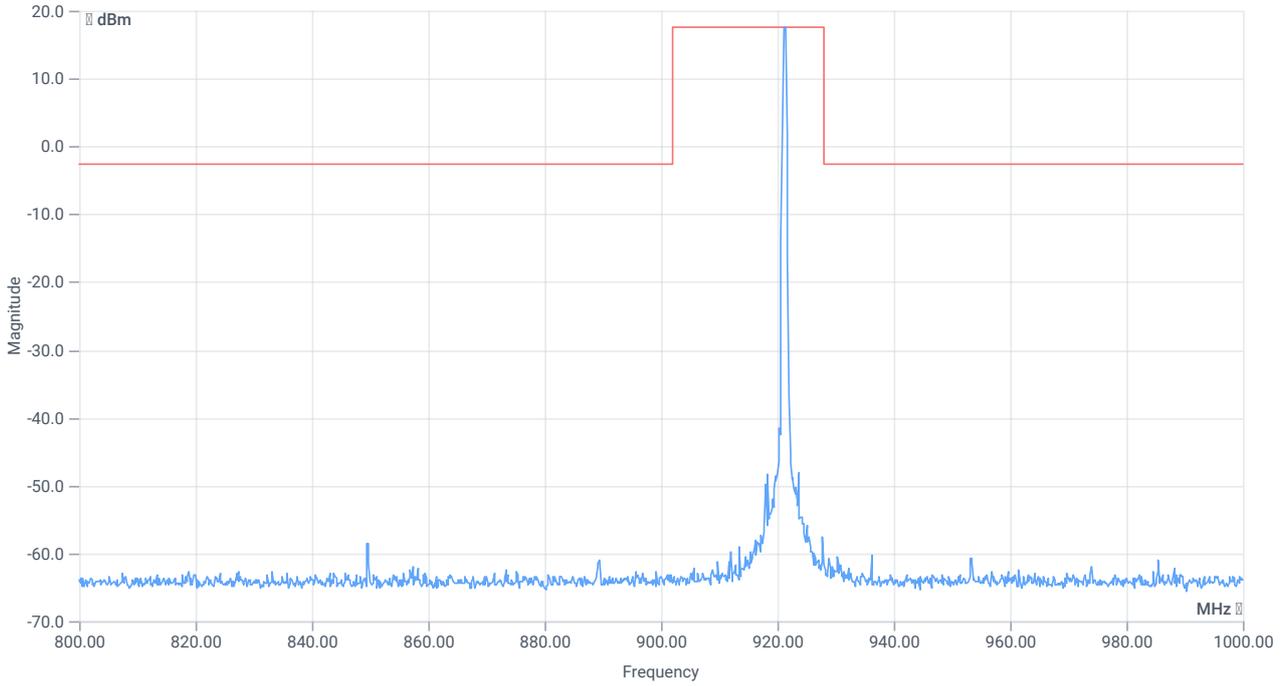
TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 921.00 MHz	---	---	17.50	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 1842.5 MHz	0	---	45.34	dB	INFO

Verdict
PASS

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