

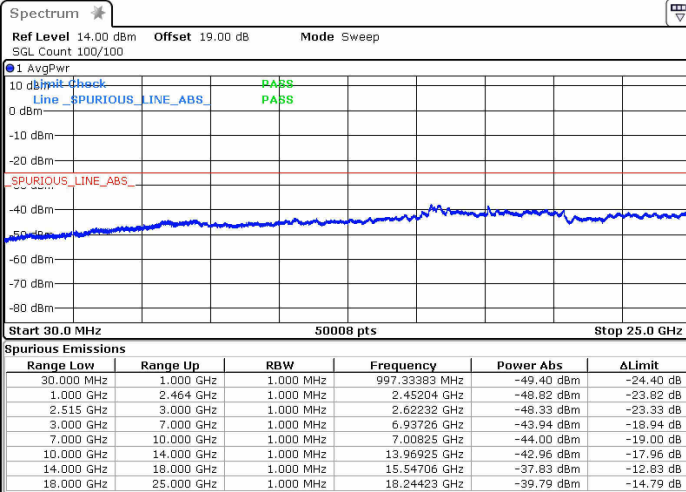


Conducted Spurious Emission

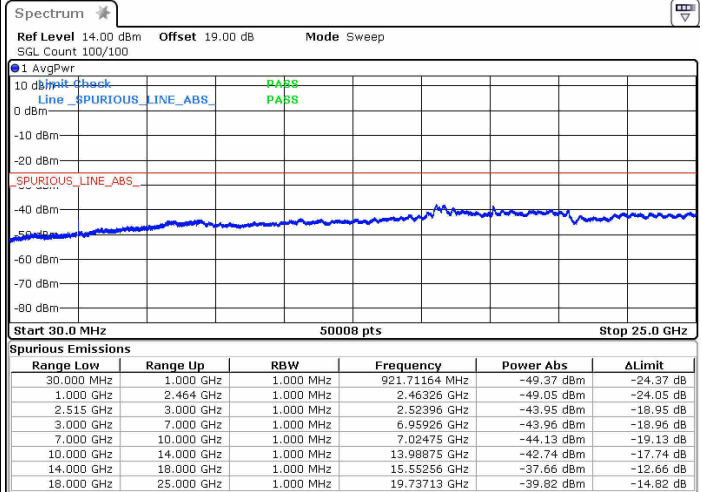
LTE Band 53 / 1.4MHz

Lowest Channel / QPSK

Middle Channel / QPSK

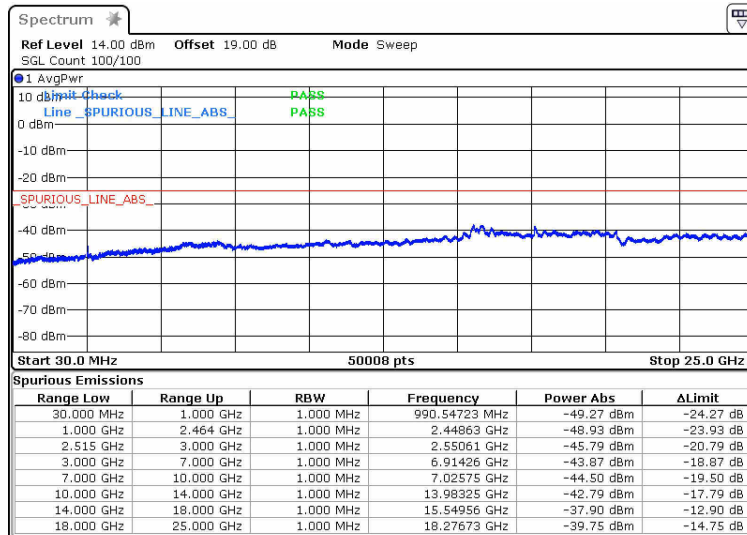


Date: 27.SEP.2025 14:24:41



Date: 27.SEP.2025 14:23:47

Highest Channel / QPSK



Date: 27.SEP.2025 14:22:51

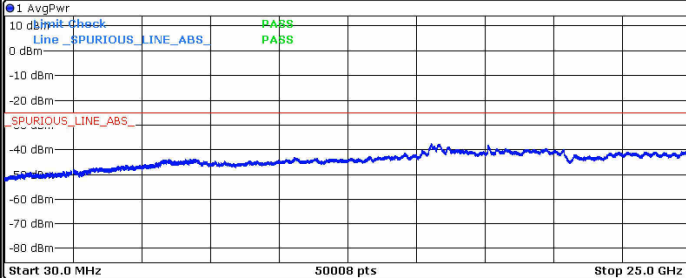


LTE Band 53 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK

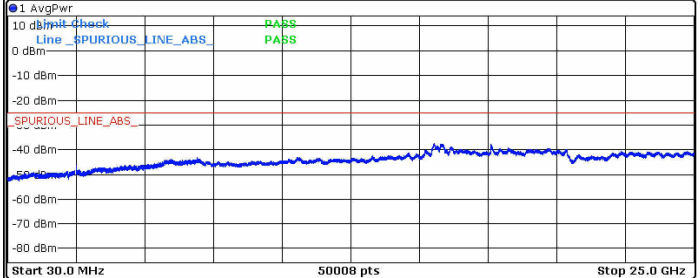
Spectrum

Ref Level 14.00 dBm Offset 19.00 dB Mode Sweep
SGL Count 100/100

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	979.39780 MHz	-49.12 dBm	-24.12 dB
1.000 GHz	2.464 GHz	1.000 MHz	2.44668 GHz	-48.28 dBm	-23.28 dB
2.515 GHz	3.000 GHz	1.000 MHz	2.52784 GHz	-48.05 dBm	-23.05 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99375 GHz	-43.67 dBm	-18.67 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.01975 GHz	-44.00 dBm	-19.00 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.89276 GHz	-42.53 dBm	-17.53 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.53556 GHz	-37.57 dBm	-12.57 dB
18.000 GHz	25.000 GHz	1.000 MHz	19.74463 GHz	-39.47 dBm	-14.47 dB

Date: 28.SEP.2025 09:13:14

Spectrum

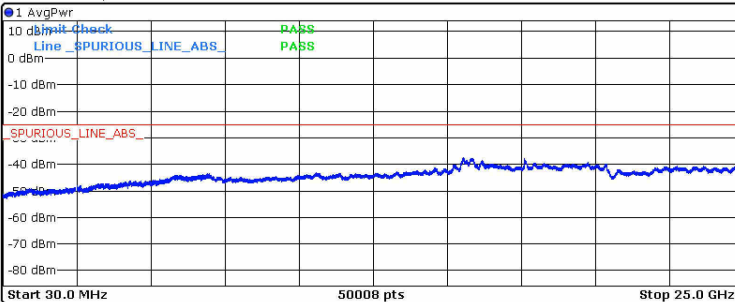
Ref Level 14.00 dBm Offset 19.00 dB Mode Sweep
SGL Count 100/100

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	966.79410 MHz	-49.03 dBm	-24.03 dB
1.000 GHz	2.464 GHz	1.000 MHz	2.44960 GHz	-48.46 dBm	-23.46 dB
2.515 GHz	3.000 GHz	1.000 MHz	2.51670 GHz	-46.07 dBm	-21.07 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92826 GHz	-43.19 dBm	-18.19 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.00325 GHz	-43.81 dBm	-18.81 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.89676 GHz	-42.32 dBm	-17.32 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.54156 GHz	-37.44 dBm	-12.44 dB
18.000 GHz	25.000 GHz	1.000 MHz	18.23773 GHz	-39.34 dBm	-14.34 dB

Date: 28.SEP.2025 09:09:33

Highest Channel / QPSK

Spectrum

Ref Level 14.00 dBm Offset 19.00 dB Mode Sweep
SGL Count 100/100

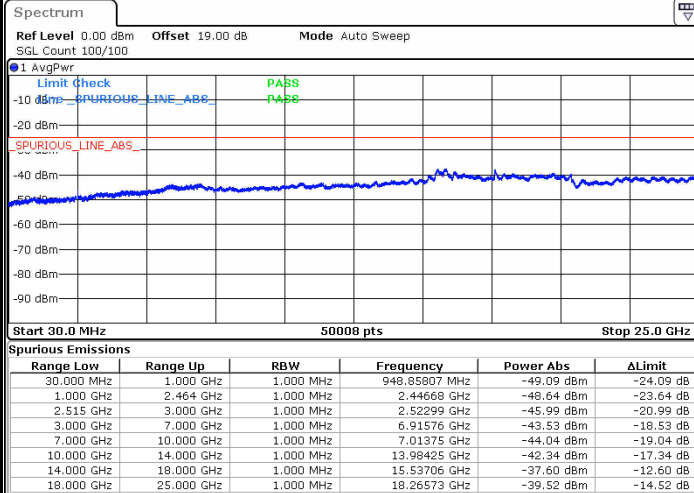
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	919.77261 MHz	-49.16 dBm	-24.16 dB
1.000 GHz	2.464 GHz	1.000 MHz	2.42961 GHz	-48.54 dBm	-23.54 dB
2.515 GHz	3.000 GHz	1.000 MHz	2.51718 GHz	-47.95 dBm	-22.95 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93626 GHz	-43.44 dBm	-18.44 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.02375 GHz	-43.92 dBm	-18.92 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.96275 GHz	-42.40 dBm	-17.40 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.55006 GHz	-37.53 dBm	-12.53 dB
18.000 GHz	25.000 GHz	1.000 MHz	19.74113 GHz	-39.20 dBm	-14.20 dB

Date: 28.SEP.2025 09:15:01



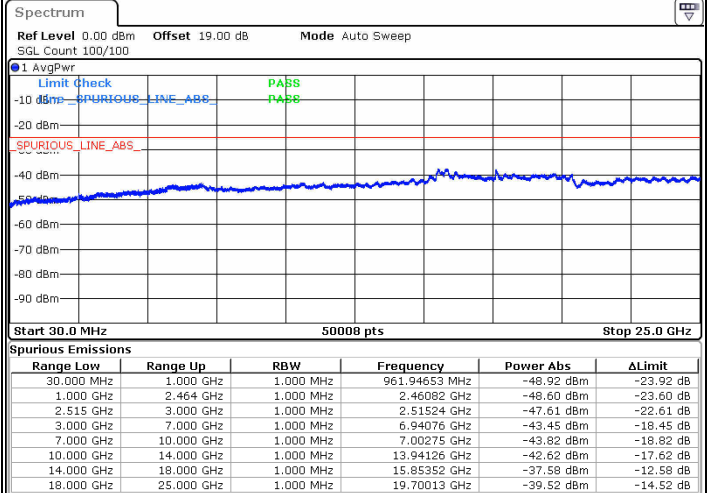
LTE Band 53 / 5MHz

Lowest Channel / QPSK



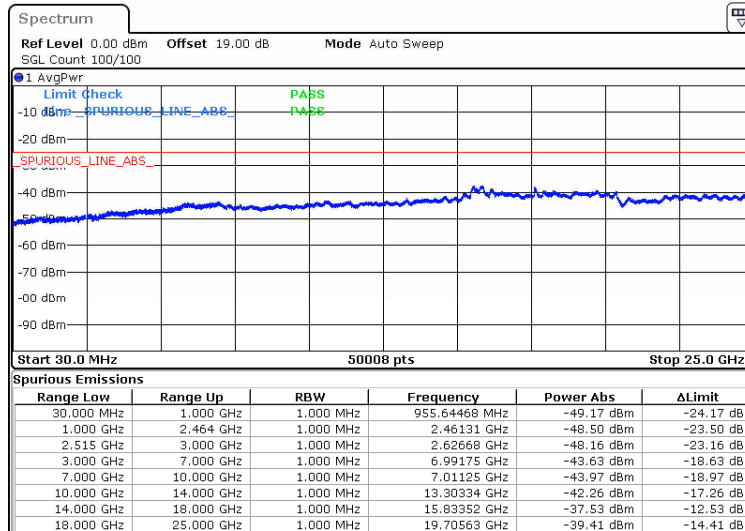
Date: 28.SEP.2025 11:59:10

Middle Channel / QPSK



Date: 28.SEP.2025 12:02:46

Highest Channel / QPSK

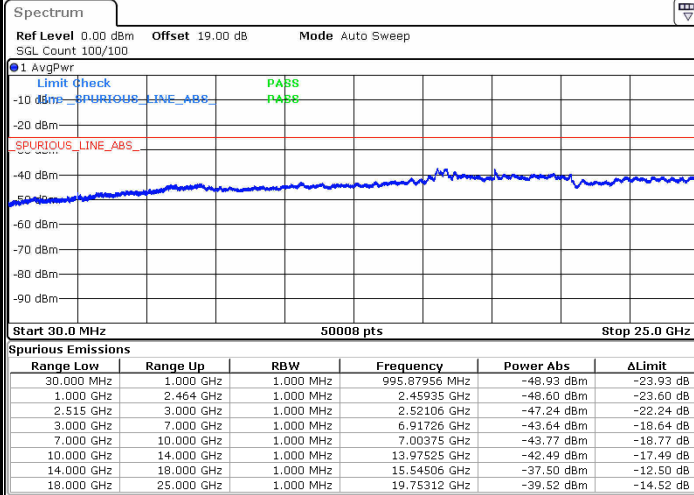


Date: 28.SEP.2025 12:03:52



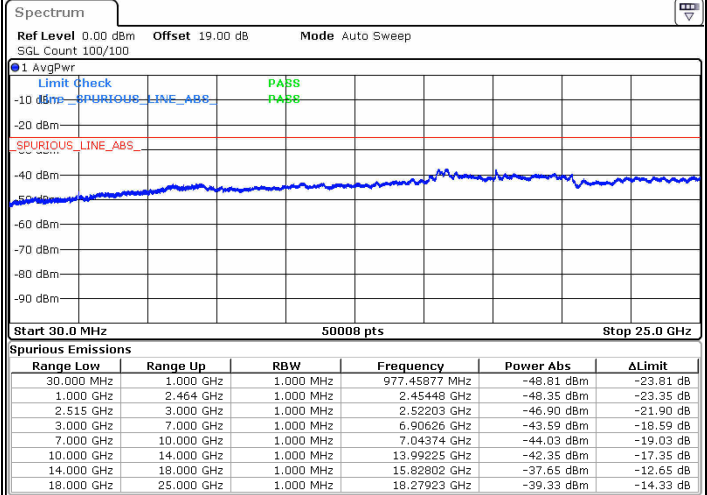
LTE Band 53 / 10MHz

Lowest Channel / QPSK



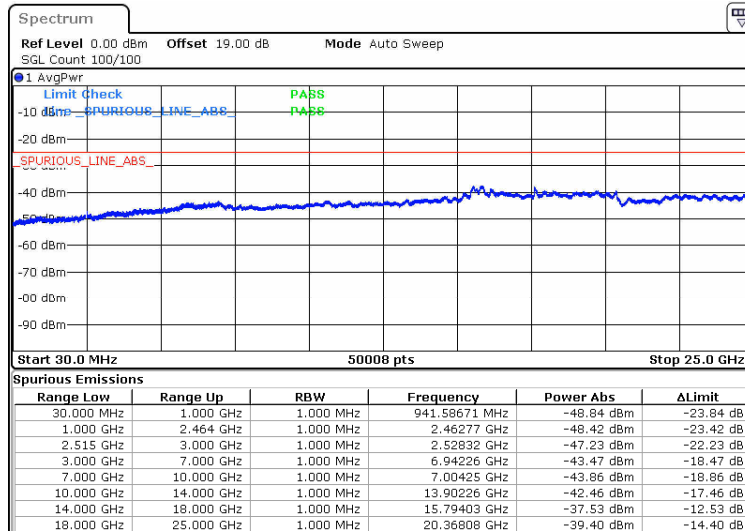
Date: 28.SEP.2025 13:07:53

Middle Channel / QPSK



Date: 28.SEP.2025 13:11:55

Highest Channel / QPSK



Date: 28.SEP.2025 13:12:59

Frequency Stability

Test Conditions		LTE Band 53 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 1.4MHz	Note 2.
		Frequency Offset (Δf) (Hz)	Result
50	Normal Voltage	4.8	PASS
40	Normal Voltage	3.1	
30	Normal Voltage	5.3	
20(Ref.)	Normal Voltage	3.2	
10	Normal Voltage	3.5	
0	Normal Voltage	3.3	
-10	Normal Voltage	2.8	
-20	Normal Voltage	2.9	
-30	Normal Voltage	4.4	
20	Maximum Voltage	3.6	
20	Normal Voltage	3.2	
20	Battery End Point	4.1	

Note:

1. Normal Voltage = 3.91 V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage = 4.45 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

$$|\text{MAX}(\Delta f)| = 5.3\text{Hz}$$

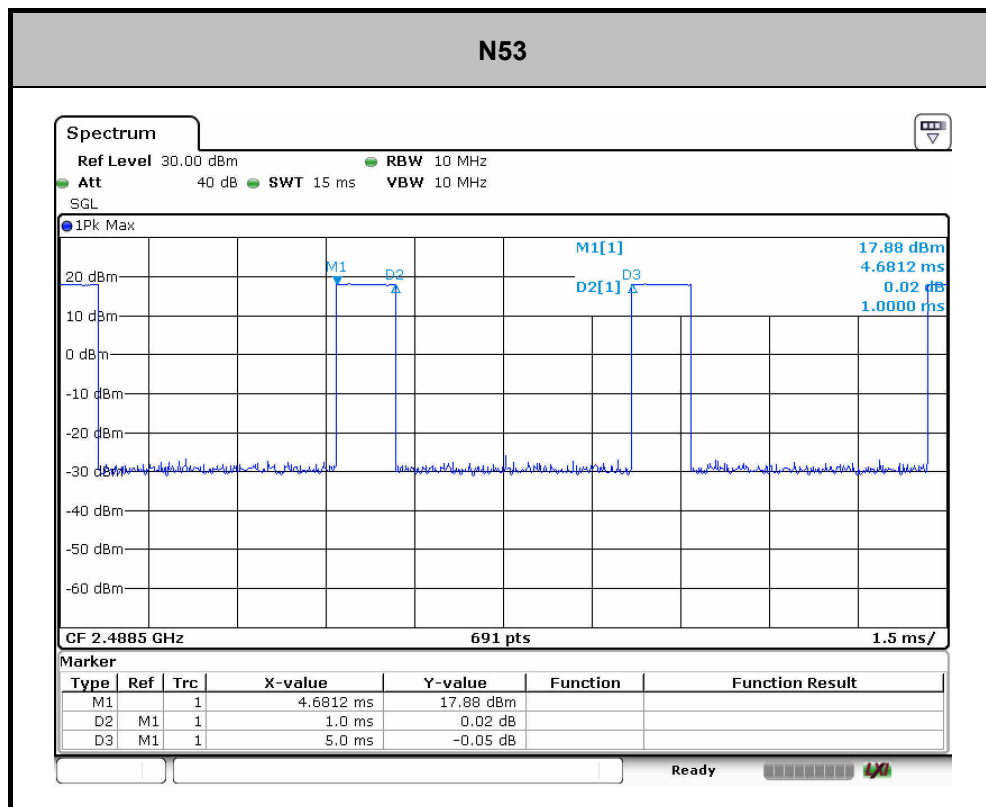
Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - \text{MAX}(\Delta f) $	2483.646145	$\geq 2483.5 \text{ MHz}$	PASS
$f_H + \text{MAX}(\Delta f) $	2494.856645	$\leq 2495 \text{ MHz}$	



NR n53

Duty Cycle

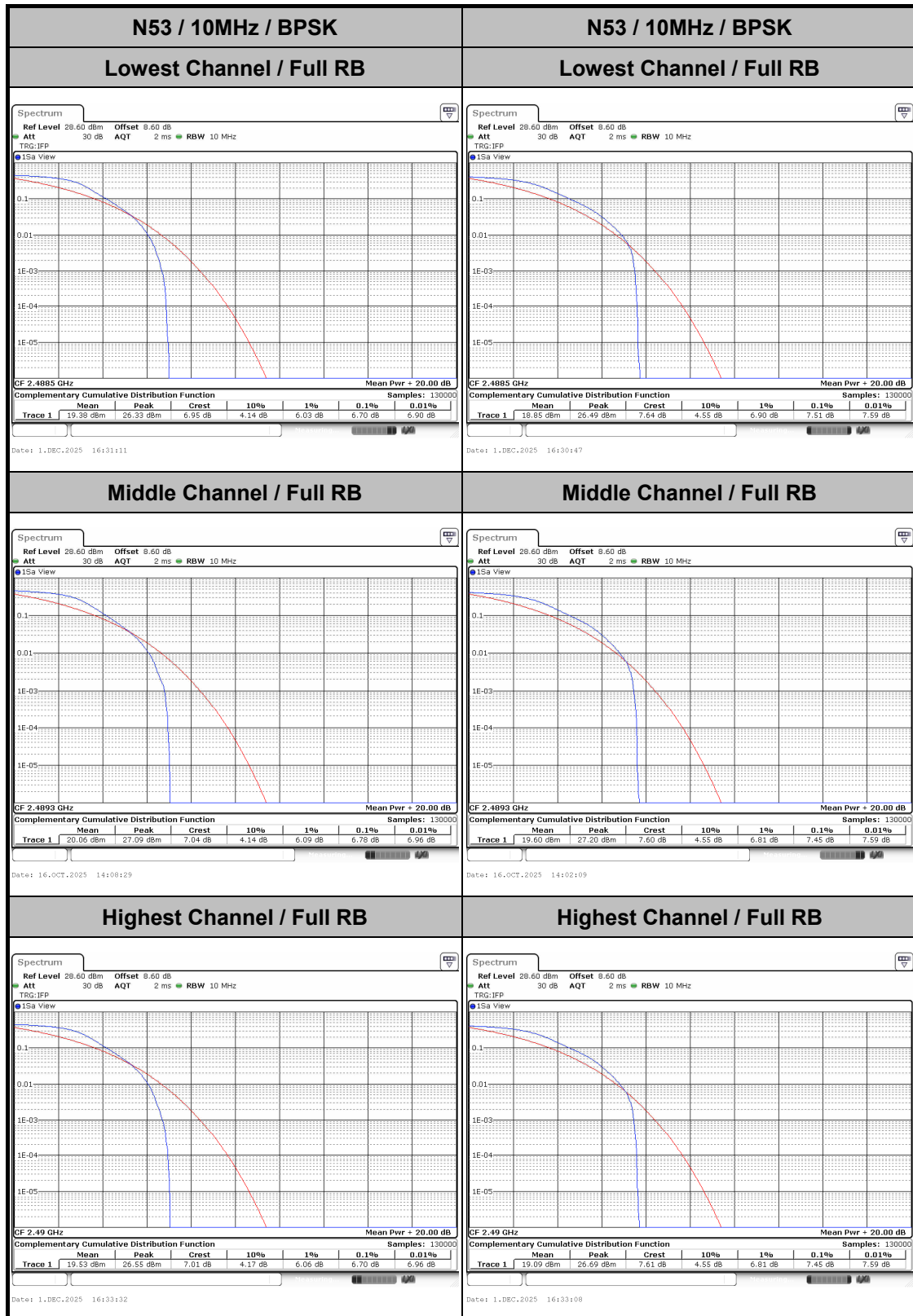
Mode	N53 : Duty Cycle	
BW	-	10MHz
Middle CH	D2 (ms)	1
	D3 (ms)	5
	Duty Cycle (%)	20
	Duty Cycle Offset(dB)	7





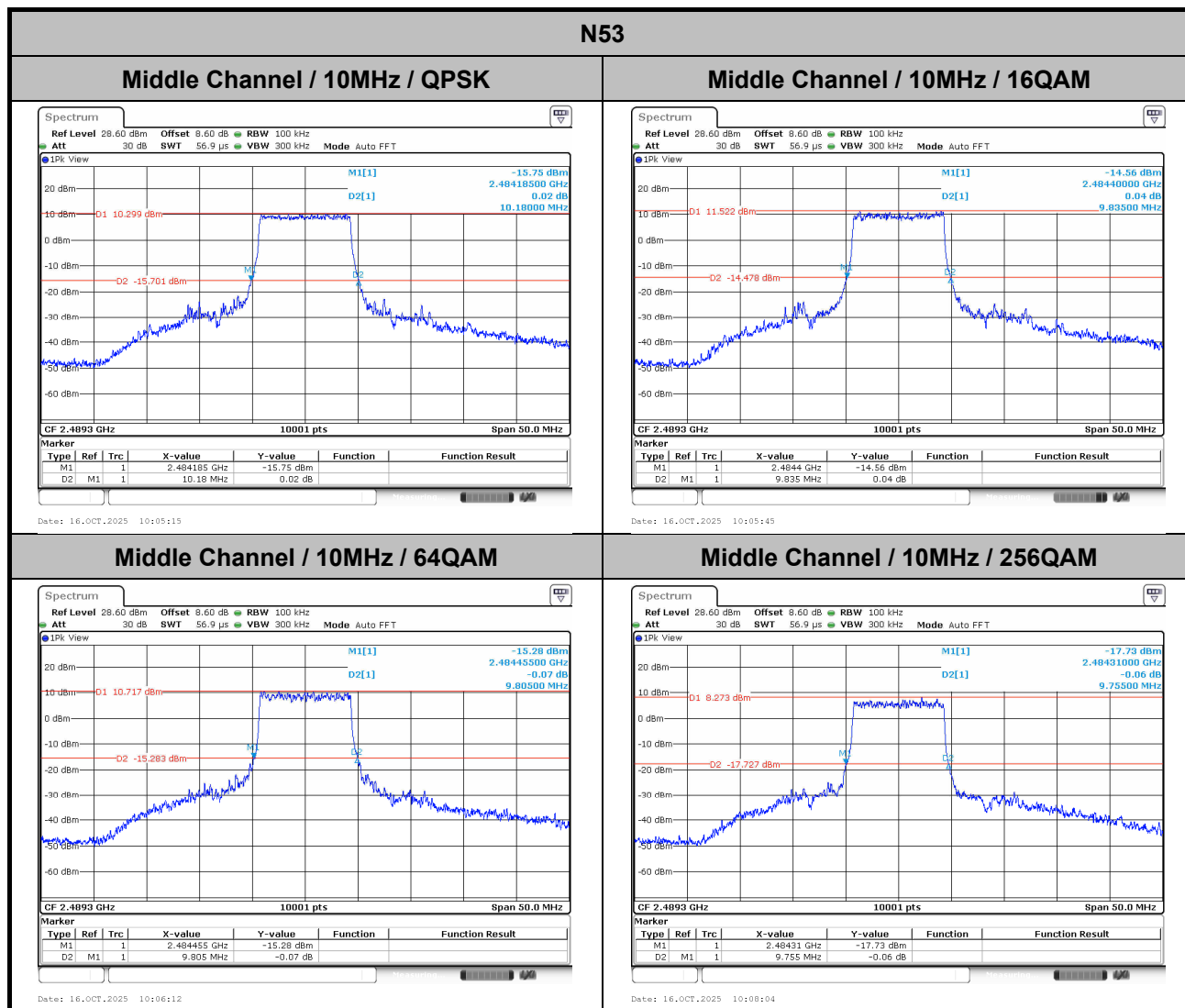
Peak-to-Average Ratio

Mode	N53 / 10MHz			
Mod.	BPSK	QPSK		Limit: 13dB
RB Size	Full RB	Full RB		Result
Lowest CH	6.7	7.51		PASS
Middle CH	6.78	7.45		PASS
Highest CH	6.7	7.45		PASS



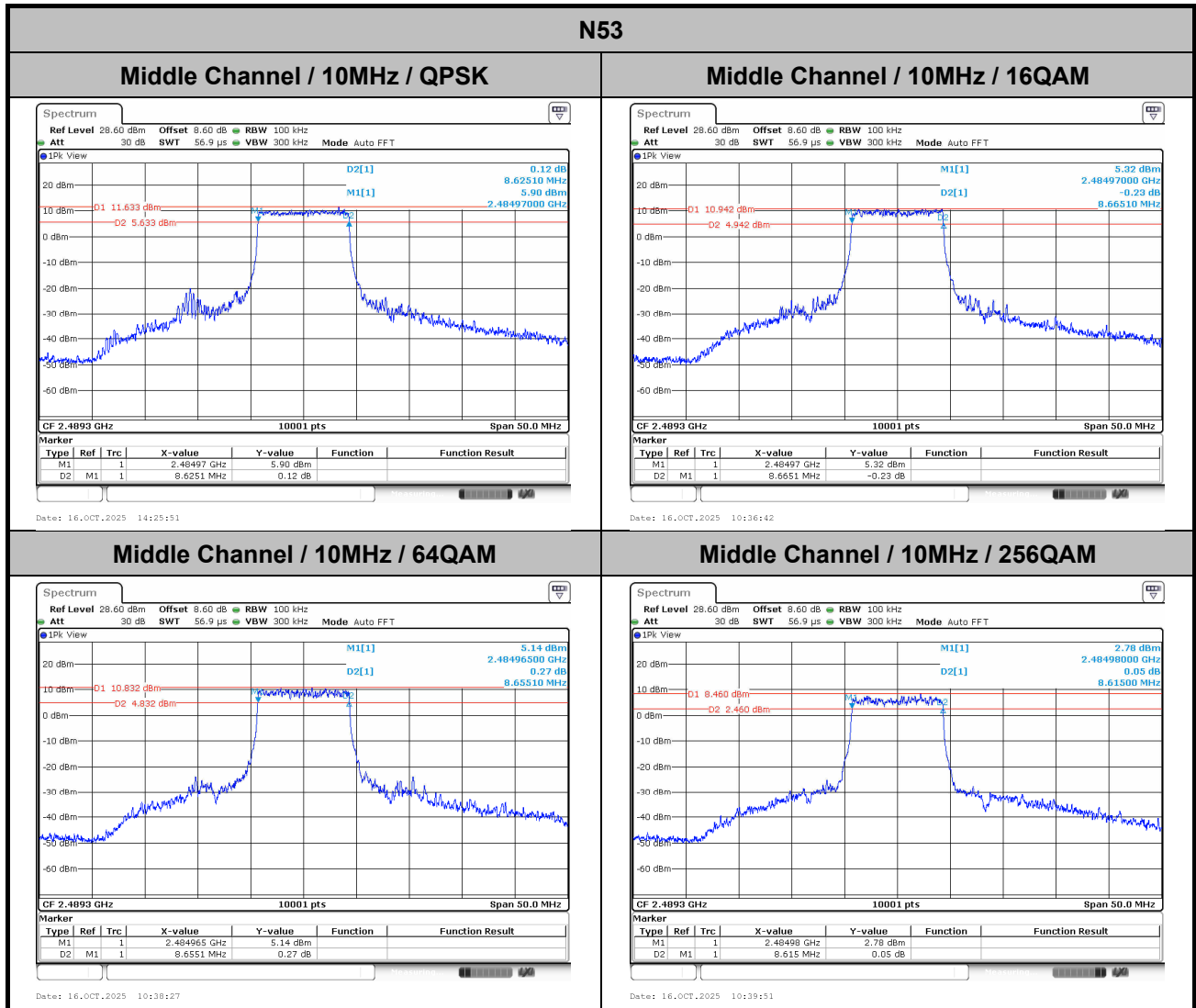
**26dB Bandwidth**

Mode	N53 : 26dB BW(MHz)									
BW	10MHz									
Mod.	QPSK	16QAM	64QAM	256QAM						
Middle CH	10.18	9.84	9.81	9.76						



**6dB Bandwidth**

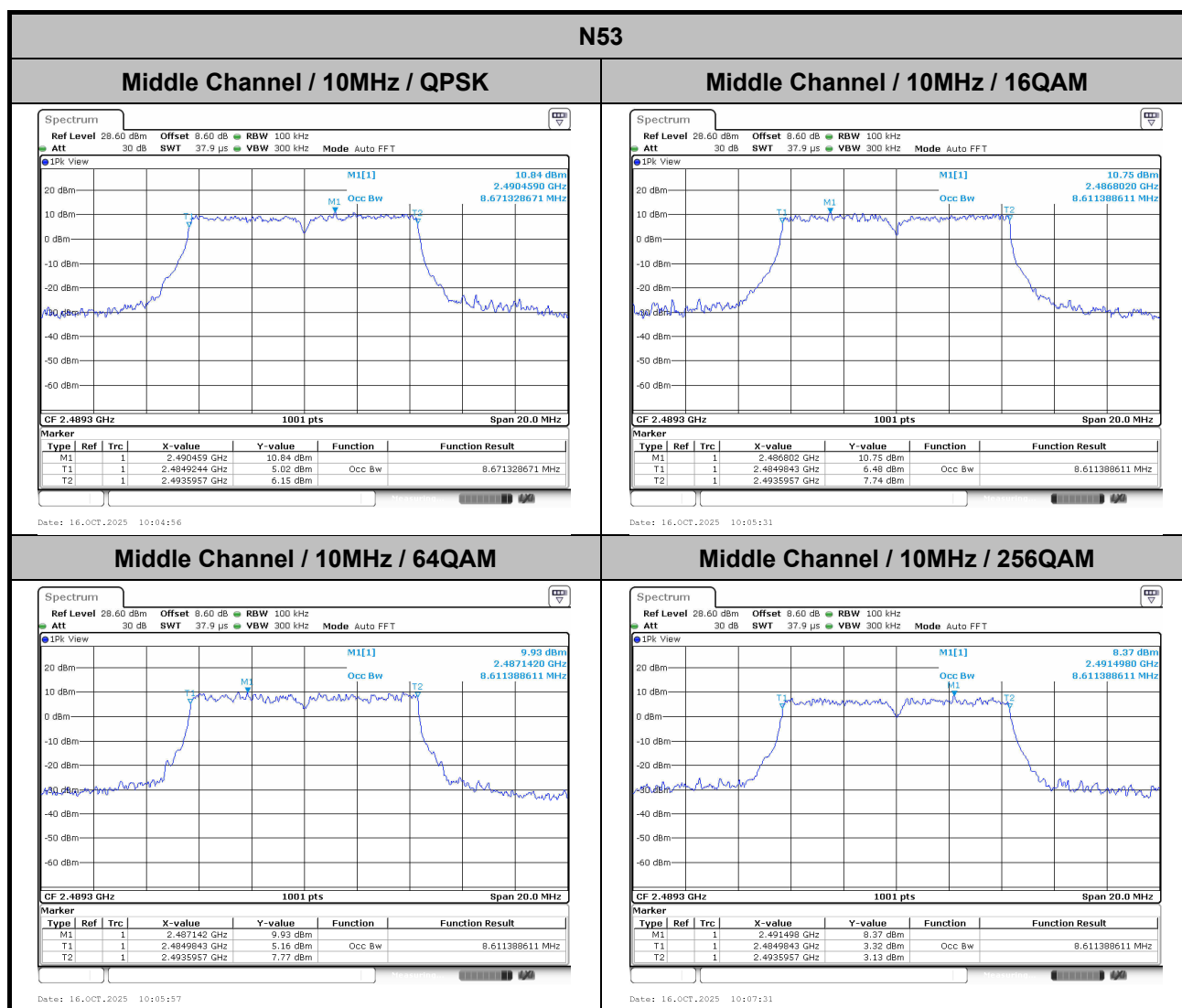
Mode	N53 : 6dB BW(MHz)							
BW	10MHz							Limit:>0.5MHz
Mod.	QPSK	16QAM	64QAM	256QAM				Result
Middle CH	8.63	8.67	8.67	8.62				Pass





Occupied Bandwidth

Mode	N53 : 99%OBW(MHz)											
BW	10MHz											
Mod.	QPSK	16QAM	64QAM	256QAM								
Middle CH	8.67	8.61	8.61	8.61								



PSD

BW MHz	Channel	Modulation	RB Allocation/RB Offset	PSD dBm/3KHz	PSD Limit dBm/3KHz	Result
10	Low	BPSK	1/1	7.35	8	PASS
		QPSK	1/1	6.78	8	PASS
	Mid	BPSK	1/1	7.32	8	PASS
		QPSK	1/1	6.66	8	PASS
	High	BPSK	1/1	7.51	8	PASS
		QPSK	1/1	7.22	8	PASS

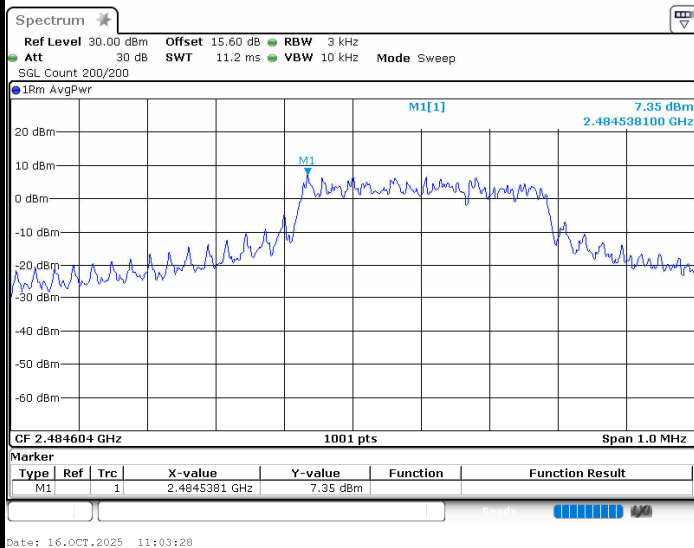
Note : The Duty Cycle Factor is compensated in the graph.



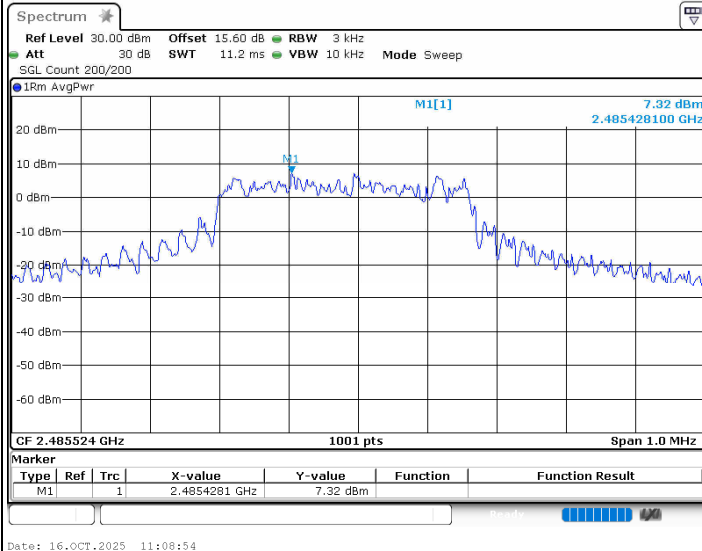
N53 / 10MHz /

BPSK

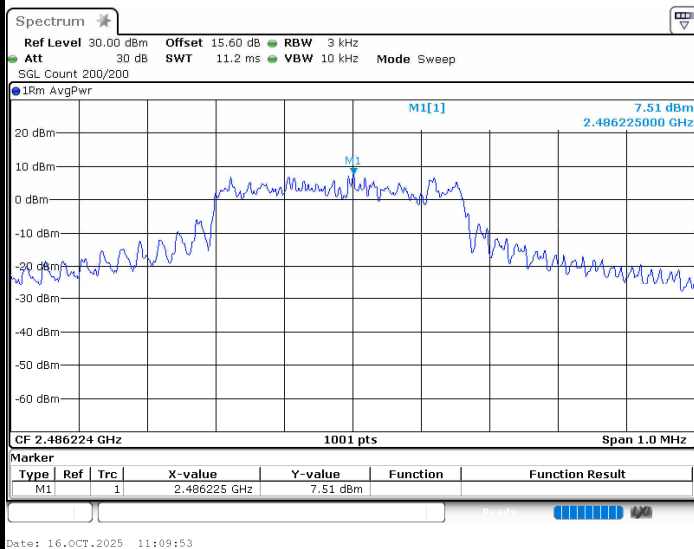
Lowest Band Edge / 1RB



Middle Band Edge / 1RB



Highest Band Edge / 1RB



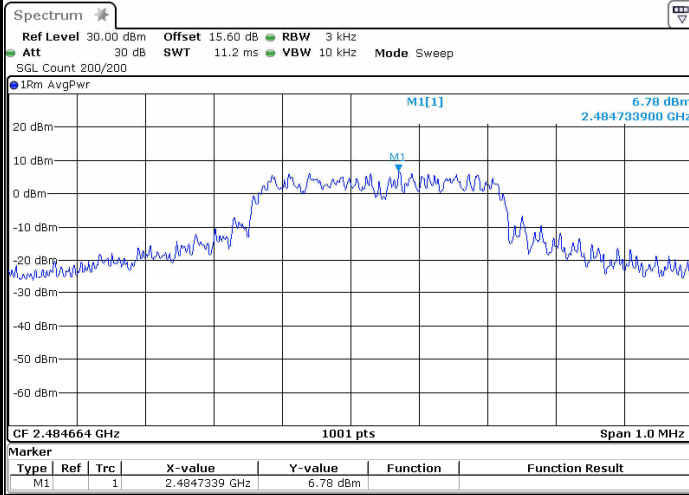
N/A



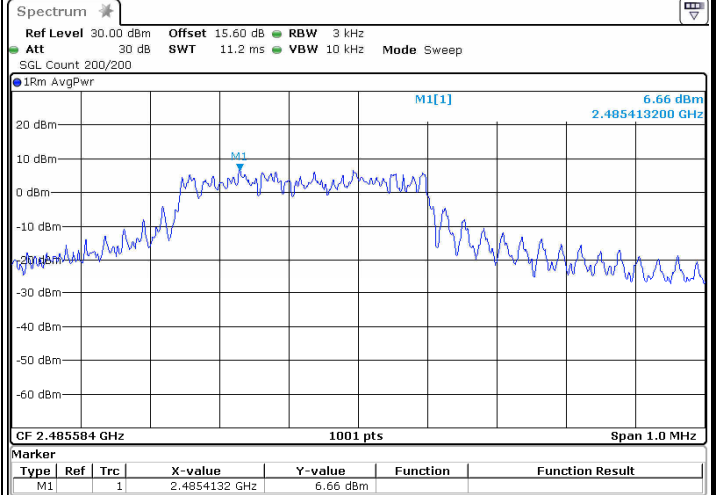
N53 / 10MHz

QPSK

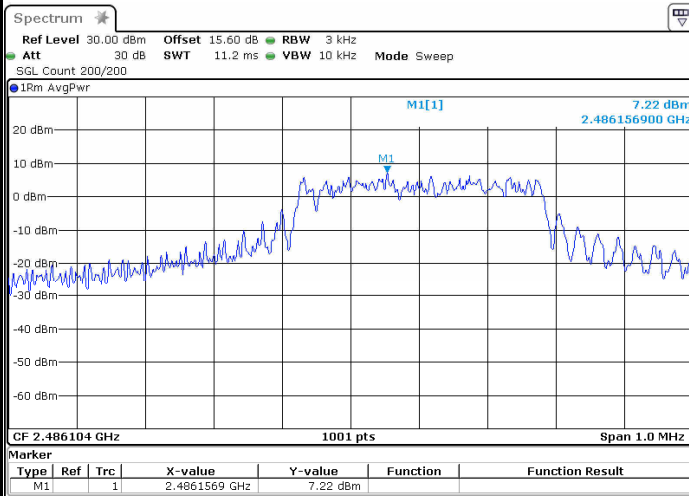
Lowest Band Edge / 1RB



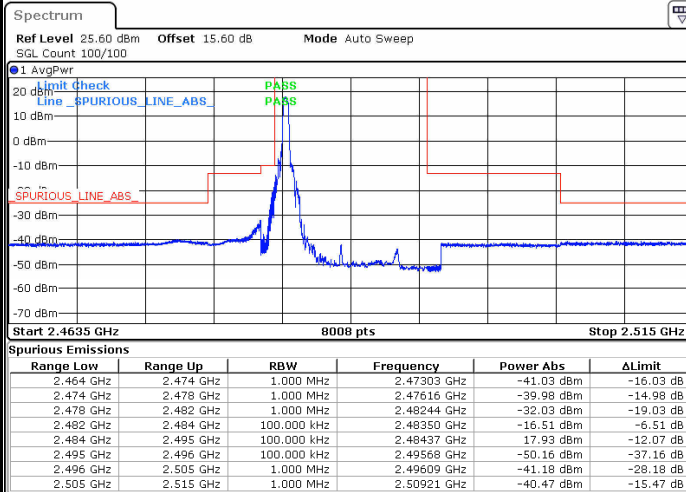
Middle Band Edge / 1RB



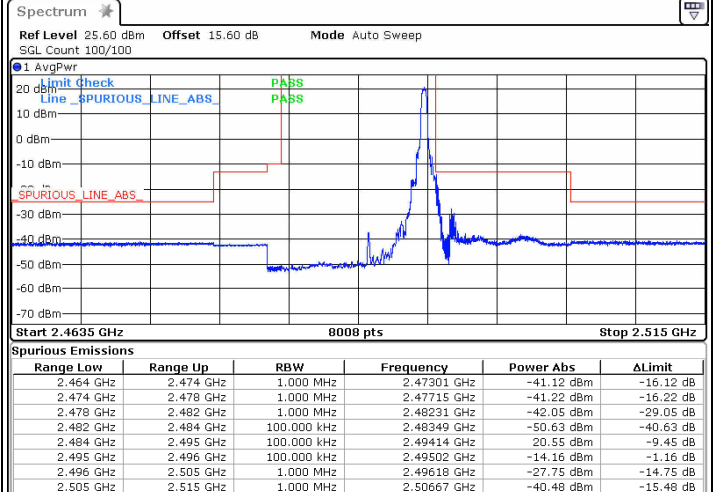
Highest Band Edge / 1RB



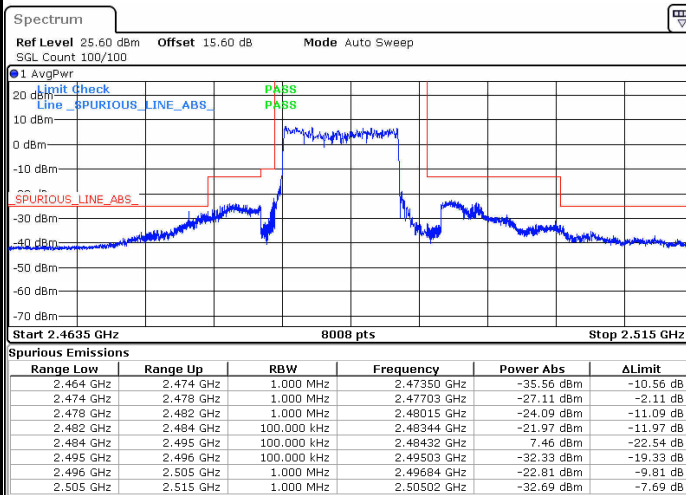
N/A

**Conducted Band Edge****N53 / 10MHz / BPSK****Lowest Band Edge / 1RB**

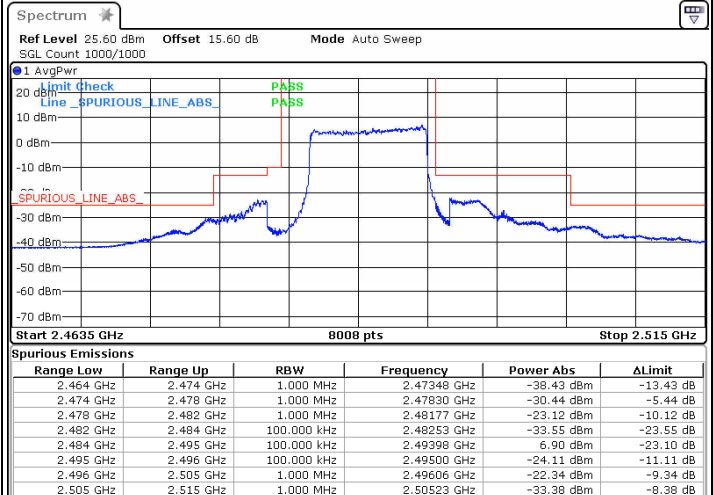
Date: 16.OCT.2025 09:51:51

Highest Band Edge / 1RB

Date: 16.OCT.2025 10:18:57

Lowest Band Edge / Full RB

Date: 16.OCT.2025 09:51:14

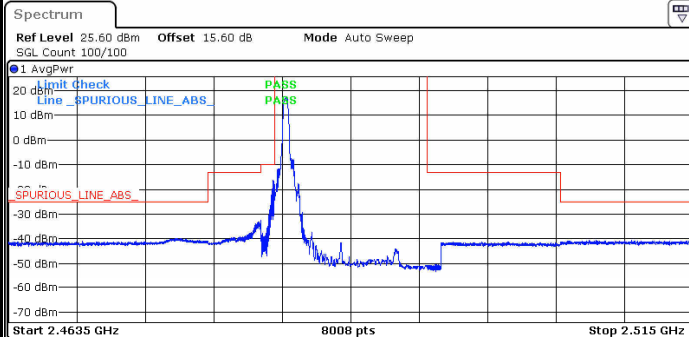
Highest Band Edge / Full RB

Date: 16.OCT.2025 10:20:25



N53 / 10MHz / QPSK

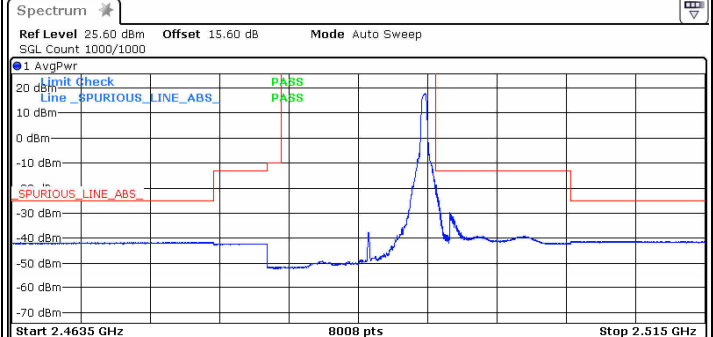
Lowest Band Edge / 1 RB



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.464 GHz	2.474 GHz	1.000 MHz	2.47307 GHz	-40.92 dBm	-15.92 dB
2.474 GHz	2.478 GHz	1.000 MHz	2.47606 GHz	-39.80 dBm	-14.80 dB
2.478 GHz	2.482 GHz	1.000 MHz	2.48248 GHz	-32.54 dBm	-19.54 dB
2.482 GHz	2.484 GHz	100.000 kHz	2.48339 GHz	-16.36 dBm	-6.36 dB
2.484 GHz	2.495 GHz	100.000 kHz	2.48438 GHz	17.41 dBm	-12.59 dB
2.495 GHz	2.496 GHz	100.000 kHz	2.49567 GHz	-50.44 dBm	-37.44 dB
2.496 GHz	2.505 GHz	1.000 MHz	2.49910 GHz	-41.39 dBm	-28.39 dB
2.505 GHz	2.515 GHz	1.000 MHz	2.50719 GHz	-40.60 dBm	-15.60 dB

Date: 16.OCT.2025 09:52:07

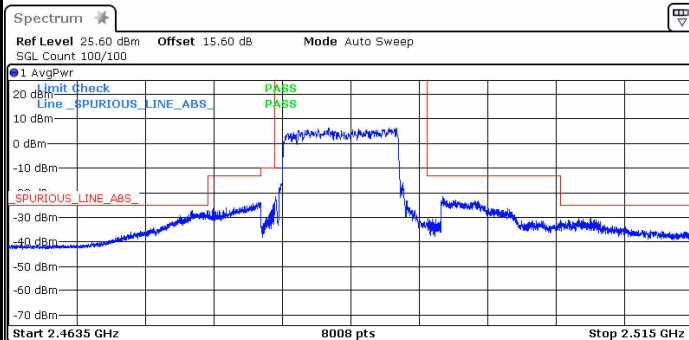
Highest Band Edge / 1 RB



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.464 GHz	2.474 GHz	1.000 MHz	2.47239 GHz	-41.72 dBm	-16.72 dB
2.474 GHz	2.478 GHz	1.000 MHz	2.47841 GHz	-41.67 dBm	-16.67 dB
2.478 GHz	2.482 GHz	1.000 MHz	2.48245 GHz	-42.24 dBm	-29.24 dB
2.482 GHz	2.484 GHz	100.000 kHz	2.48278 GHz	-51.35 dBm	-41.35 dB
2.484 GHz	2.495 GHz	100.000 kHz	2.49421 GHz	17.99 dBm	-12.01 dB
2.495 GHz	2.496 GHz	100.000 kHz	2.49501 GHz	-18.74 dBm	-5.74 dB
2.496 GHz	2.505 GHz	1.000 MHz	2.49605 GHz	-29.80 dBm	-16.80 dB
2.505 GHz	2.515 GHz	1.000 MHz	2.50853 GHz	-41.20 dBm	-16.20 dB

Date: 16.OCT.2025 10:18:35

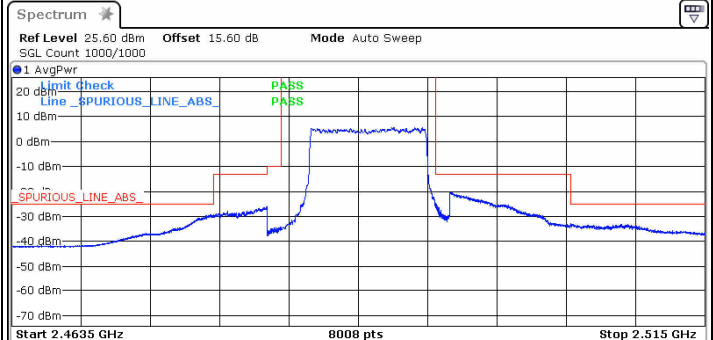
Lowest Band Edge / Full RB



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.464 GHz	2.474 GHz	1.000 MHz	2.47339 GHz	-35.66 dBm	-10.66 dB
2.474 GHz	2.478 GHz	1.000 MHz	2.47730 GHz	-27.05 dBm	-2.05 dB
2.478 GHz	2.482 GHz	1.000 MHz	2.48245 GHz	-23.91 dBm	-10.91 dB
2.482 GHz	2.484 GHz	100.000 kHz	2.48342 GHz	-24.32 dBm	-14.32 dB
2.484 GHz	2.495 GHz	100.000 kHz	2.49266 GHz	6.27 dBm	-23.73 dB
2.495 GHz	2.496 GHz	100.000 kHz	2.49506 GHz	-30.20 dBm	-17.20 dB
2.496 GHz	2.505 GHz	1.000 MHz	2.49615 GHz	-21.61 dBm	-8.61 dB
2.505 GHz	2.515 GHz	1.000 MHz	2.50637 GHz	-30.03 dBm	-5.03 dB

Date: 16.OCT.2025 09:49:39

Highest Band Edge / Full RB



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.464 GHz	2.474 GHz	1.000 MHz	2.47348 GHz	-36.89 dBm	-11.89 dB
2.474 GHz	2.478 GHz	1.000 MHz	2.47822 GHz	-29.35 dBm	-4.35 dB
2.478 GHz	2.482 GHz	1.000 MHz	2.48244 GHz	-26.06 dBm	-13.06 dB
2.482 GHz	2.484 GHz	100.000 kHz	2.48350 GHz	-34.25 dBm	-24.25 dB
2.484 GHz	2.495 GHz	100.000 kHz	2.49399 GHz	5.49 dBm	-24.51 dB
2.495 GHz	2.496 GHz	100.000 kHz	2.49501 GHz	-24.66 dBm	-11.66 dB
2.496 GHz	2.505 GHz	1.000 MHz	2.49603 GHz	-20.09 dBm	-7.09 dB
2.505 GHz	2.515 GHz	1.000 MHz	2.50501 GHz	-32.92 dBm	-7.92 dB

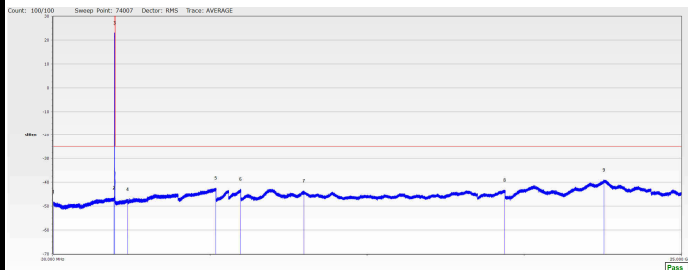
Date: 16.OCT.2025 10:21:57



Conducted Spurious Emission

N53 / 10MHz

Lowest Channel / BPSK

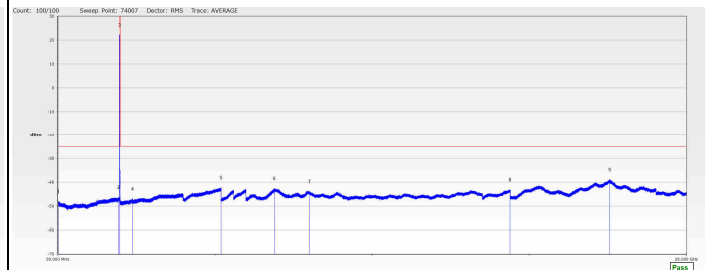


Item	Range Low	Range Up	RBW	VBW	Frequency	Power Abs	Limit	Limit	Path Loss Factor	DCC	APS
1	30.000 MHz	1.000 GHz	1 MHz	3 MHz	45.76250 MHz	-48.134 dBm	-23.134 dB	-25.000 dBm	7.505 dB	---	---
2	1.000 GHz	2.464 GHz	1 MHz	3 MHz	2.36356 GHz	-46.400 dBm	-21.400 dB	-25.000 dBm	8.577 dB	---	---
3	2.464 GHz	3.000 GHz	1 MHz	3 MHz	2.48592 GHz	-24.445 dBm	-15.555 dB	-40.000 dBm	8.602 dB	---	---
4	3.000 GHz	7.000 GHz	1 MHz	3 MHz	2.96988 GHz	-46.879 dBm	-21.879 dB	-25.000 dBm	8.673 dB	---	---
5	7.000 GHz	10.000 GHz	1 MHz	3 MHz	6.50633 GHz	-42.218 dBm	-17.218 dB	-25.000 dBm	9.580 dB	---	---
6	10.000 GHz	14.000 GHz	1 MHz	3 MHz	8.81400 GHz	-43.871 dBm	-17.871 dB	-25.000 dBm	10.007 dB	---	---
7	14.000 GHz	18.000 GHz	1 MHz	3 MHz	10.00280 GHz	-43.627 dBm	-18.627 dB	-25.000 dBm	10.415 dB	---	---
8	18.000 GHz	25.000 GHz	1 MHz	3 MHz	17.95640 GHz	-42.950 dBm	-17.950 dB	-25.000 dBm	10.810 dB	---	---
9	25.000 GHz	30.000 GHz	1 MHz	3 MHz	21.92805 GHz	-39.018 dBm	-14.018 dB	-25.000 dBm	11.780 dB	---	---

Note: DCC = Duty Cycle Correction / APS = Antenna Port Summation
Ver 1.1(20241209)

2025-11-22 10:47:42

Middle Channel / BPSK

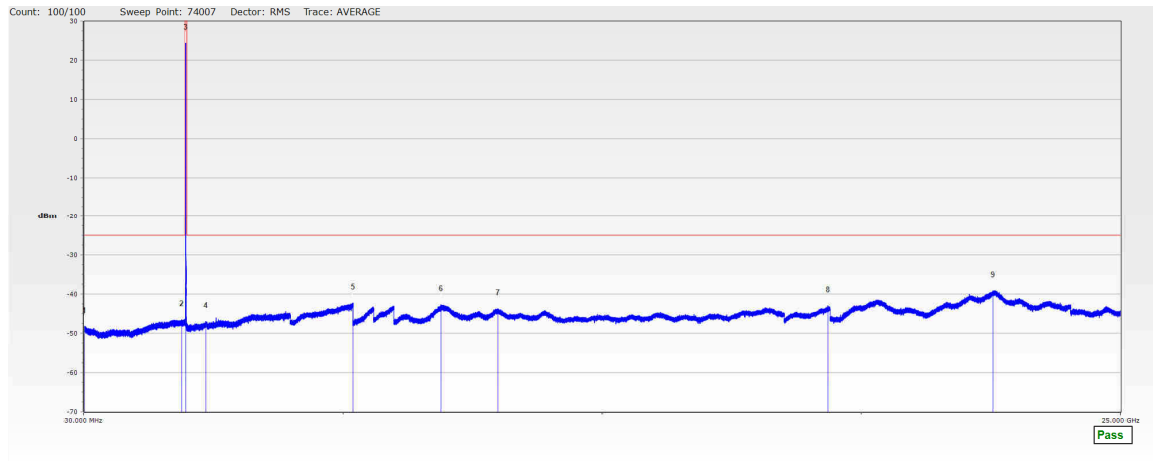


Item	Range Low	Range Up	RBW	VBW	Frequency	Power Abs	Limit	Limit	Path Loss Factor	DCC	APS
1	30.000 MHz	1.000 GHz	1 MHz	3 MHz	45.76250 MHz	-48.134 dBm	-23.134 dB	-25.000 dBm	7.505 dB	---	---
2	1.000 GHz	2.464 GHz	1 MHz	3 MHz	2.36356 GHz	-46.400 dBm	-21.400 dB	-25.000 dBm	8.577 dB	---	---
3	2.464 GHz	3.000 GHz	1 MHz	3 MHz	2.48592 GHz	-24.445 dBm	-15.555 dB	-40.000 dBm	8.602 dB	---	---
4	3.000 GHz	7.000 GHz	1 MHz	3 MHz	2.96988 GHz	-46.879 dBm	-21.879 dB	-25.000 dBm	8.673 dB	---	---
5	7.000 GHz	10.000 GHz	1 MHz	3 MHz	6.50633 GHz	-42.218 dBm	-17.218 dB	-25.000 dBm	9.580 dB	---	---
6	10.000 GHz	14.000 GHz	1 MHz	3 MHz	8.81400 GHz	-43.871 dBm	-17.871 dB	-25.000 dBm	10.007 dB	---	---
7	14.000 GHz	18.000 GHz	1 MHz	3 MHz	10.00280 GHz	-43.627 dBm	-18.627 dB	-25.000 dBm	10.415 dB	---	---
8	18.000 GHz	25.000 GHz	1 MHz	3 MHz	17.95640 GHz	-42.950 dBm	-17.950 dB	-25.000 dBm	10.810 dB	---	---
9	25.000 GHz	30.000 GHz	1 MHz	3 MHz	21.92805 GHz	-39.018 dBm	-14.018 dB	-25.000 dBm	11.780 dB	---	---

Note: DCC = Duty Cycle Correction / APS = Antenna Port Summation
Ver 1.1(20241209)

2025-11-22 10:47:52

Highest Channel / BPSK



Item	Range Low	Range Up	RBW	VBW	Frequency	Power Abs	Limit	Limit	Path Loss Factor	DCC	APS
1	30.000 MHz	1.000 GHz	1 MHz	3 MHz	45.76250 MHz	-48.134 dBm	-23.134 dB	-25.000 dBm	7.505 dB	---	---
2	1.000 GHz	2.464 GHz	1 MHz	3 MHz	2.36356 GHz	-46.400 dBm	-21.400 dB	-25.000 dBm	8.577 dB	---	---
3	2.464 GHz	3.000 GHz	1 MHz	3 MHz	2.48592 GHz	-24.445 dBm	-15.555 dB	-40.000 dBm	8.602 dB	---	---
4	3.000 GHz	7.000 GHz	1 MHz	3 MHz	2.96988 GHz	-46.879 dBm	-21.879 dB	-25.000 dBm	8.673 dB	---	---
5	7.000 GHz	10.000 GHz	1 MHz	3 MHz	6.50633 GHz	-42.218 dBm	-17.218 dB	-25.000 dBm	9.580 dB	---	---
6	10.000 GHz	14.000 GHz	1 MHz	3 MHz	8.81400 GHz	-43.871 dBm	-17.871 dB	-25.000 dBm	10.007 dB	---	---
7	14.000 GHz	18.000 GHz	1 MHz	3 MHz	10.00280 GHz	-43.627 dBm	-18.627 dB	-25.000 dBm	10.415 dB	---	---
8	18.000 GHz	25.000 GHz	1 MHz	3 MHz	17.95640 GHz	-42.950 dBm	-17.950 dB	-25.000 dBm	10.810 dB	---	---
9	25.000 GHz	30.000 GHz	1 MHz	3 MHz	21.92805 GHz	-39.018 dBm	-14.018 dB	-25.000 dBm	11.780 dB	---	---

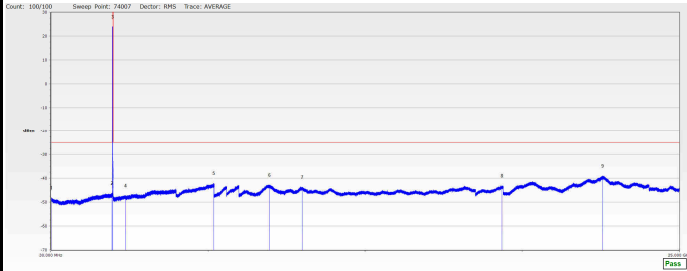
Note: DCC = Duty Cycle Correction / APS = Antenna Port Summation
Ver 1.1(20241209)

2025-11-22 10:48:03



N53 / 10MHz

Lowest Channel / QPSK

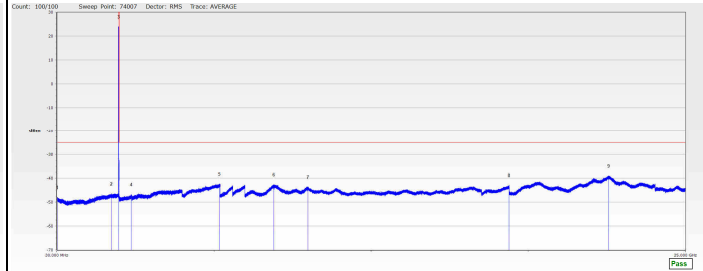


Item	Range Low	Range Up	RBW	VBW	Frequency	Power Abs	Limit	Path Loss Factor	DCC	APS
1	30.000 MHz	1.000 GHz	1 MHz	1 MHz	41.76100 MHz	-48.000 dBm	-10.000 dBm	7.505 dB	---	---
2	1.000 GHz	2.464 GHz	1 MHz	1 MHz	2.46400 GHz	-26.000 dBm	-22.100 dBm	8.577 dB	---	---
3	2.464 GHz	3.000 GHz	1 MHz	1 MHz	2.46400 GHz	-26.000 dBm	-22.100 dBm	8.577 dB	---	---
4	3.000 GHz	7.000 GHz	1 MHz	1 MHz	6.48600 GHz	-42.000 dBm	-17.380 dBm	9.580 dB	---	---
5	7.000 GHz	10.000 GHz	1 MHz	1 MHz	8.76867 GHz	-42.000 dBm	-17.380 dBm	10.000 dB	---	---
6	10.000 GHz	14.000 GHz	1 MHz	1 MHz	10.00000 GHz	-43.723 dBm	-18.723 dBm	10.415 dB	---	---
7	14.000 GHz	18.000 GHz	1 MHz	1 MHz	17.84120 GHz	-43.237 dBm	-18.237 dBm	10.810 dB	---	---
8	18.000 GHz	25.000 GHz	1 MHz	1 MHz	21.93855 GHz	-38.972 dBm	-13.972 dBm	11.780 dB	---	---
9	25.000 GHz	30.000 GHz	1 MHz	1 MHz	21.93855 GHz	-38.972 dBm	-13.972 dBm	11.780 dB	---	---

Note: DCC = Duty Cycle Correction / APS = Antenna Port Summation
Ver 1.1(20241209)

2025-11-22 10:47:47

Middle Channel / QPSK

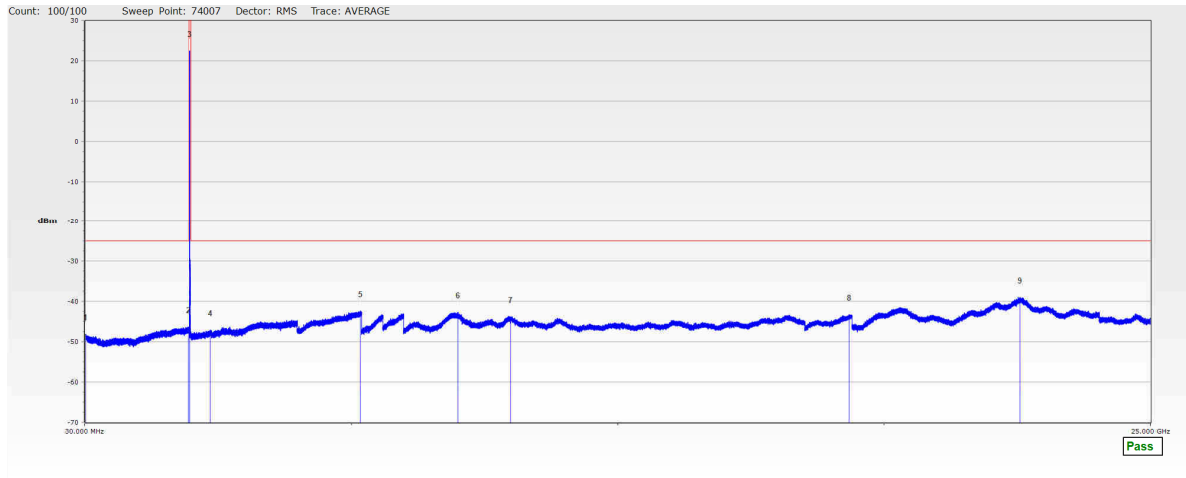


Item	Range Low	Range Up	RBW	VBW	Frequency	Power Abs	Limit	Path Loss Factor	DCC	APS
1	30.000 MHz	1.000 GHz	1 MHz	1 MHz	41.76100 MHz	-48.000 dBm	-10.000 dBm	7.505 dB	---	---
2	1.000 GHz	2.464 GHz	1 MHz	1 MHz	2.46400 GHz	-26.000 dBm	-22.100 dBm	8.577 dB	---	---
3	2.464 GHz	3.000 GHz	1 MHz	1 MHz	2.46400 GHz	-26.000 dBm	-22.100 dBm	8.577 dB	---	---
4	3.000 GHz	7.000 GHz	1 MHz	1 MHz	6.48600 GHz	-42.000 dBm	-17.380 dBm	9.580 dB	---	---
5	7.000 GHz	10.000 GHz	1 MHz	1 MHz	8.76867 GHz	-42.000 dBm	-17.380 dBm	10.000 dB	---	---
6	10.000 GHz	14.000 GHz	1 MHz	1 MHz	10.00000 GHz	-43.723 dBm	-18.723 dBm	10.415 dB	---	---
7	14.000 GHz	18.000 GHz	1 MHz	1 MHz	17.84120 GHz	-43.237 dBm	-18.237 dBm	10.810 dB	---	---
8	18.000 GHz	25.000 GHz	1 MHz	1 MHz	21.93855 GHz	-38.972 dBm	-13.972 dBm	11.780 dB	---	---
9	25.000 GHz	30.000 GHz	1 MHz	1 MHz	21.93855 GHz	-38.972 dBm	-13.972 dBm	11.780 dB	---	---

Note: DCC = Duty Cycle Correction / APS = Antenna Port Summation
Ver 1.1(20241209)

2025-11-22 10:47:57

Highest Channel / QPSK



Item	Range Low	Range Up	RBW	VBW	Frequency	Power Abs	Limit	Path Loss Factor	DCC	APS
1	30.000 MHz	1.000 GHz	1 MHz	3 MHz	41.64000 MHz	-49.069 dBm	-23.069 dBm	7.505 dB	---	---
2	1.000 GHz	2.464 GHz	1 MHz	3 MHz	2.45410 GHz	-46.231 dBm	-21.231 dBm	8.577 dB	---	---
3	2.464 GHz	3.000 GHz	1 MHz	3 MHz	2.45598 GHz	-22.426 dBm	-17.572 dBm	8.562 dB	---	---
4	3.000 GHz	7.000 GHz	1 MHz	3 MHz	2.96236 GHz	-47.053 dBm	-22.053 dBm	8.673 dB	---	---
5	7.000 GHz	10.000 GHz	1 MHz	3 MHz	6.48600 GHz	-42.380 dBm	-17.380 dBm	9.580 dB	---	---
6	10.000 GHz	14.000 GHz	1 MHz	3 MHz	8.76867 GHz	-42.638 dBm	-17.638 dBm	10.000 dB	---	---
7	14.000 GHz	18.000 GHz	1 MHz	3 MHz	10.00000 GHz	-43.723 dBm	-18.723 dBm	10.415 dB	---	---
8	18.000 GHz	25.000 GHz	1 MHz	3 MHz	17.84120 GHz	-43.237 dBm	-18.237 dBm	10.810 dB	---	---
9	25.000 GHz	30.000 GHz	1 MHz	3 MHz	21.93855 GHz	-38.972 dBm	-13.972 dBm	11.780 dB	---	---

Note: DCC = Duty Cycle Correction / APS = Antenna Port Summation
Ver 1.1(20241209)

2025-11-22 10:48:08

Frequency Stability

Test Conditions		N53 (QPSK) /			Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz			Note 2.
		Frequency Offset (Δf) (Hz)			Result
		Lowest Channel	Middle Channel	Highest Channel	
50	Normal Voltage	12.6	13.6	14.1	PASS
40	Normal Voltage	12.5	18.1	18.1	
30	Normal Voltage	16.4	18.3	12.4	
20(Ref.)	Normal Voltage	16.6	17.7	16.5	
10	Normal Voltage	14.3	11	14.8	
0	Normal Voltage	18.8	17.5	17.7	
-10	Normal Voltage	16.5	15.8	18.6	
-20	Normal Voltage	14.5	12.4	18.2	
-30	Normal Voltage	15.6	11.1	18.3	
20	Maximum Voltage	12.4	13.1	17.6	
20	Normal Voltage	16.6	17.7	16.5	
20	Battery End Point	14.3	16.6	17.4	

Note:

1. Normal Voltage = 3.91 V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage = 4.45 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

$$|\text{MAX}(\Delta f)| = 18.8\text{Hz}$$

Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - \text{MAX}(\Delta f) $	2483.633708	$\geq 2483.5 \text{ MHz}$	PASS
$f_H + \text{MAX}(\Delta f) $	2494.323592	$\leq 2495 \text{ MHz}$	



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	LiangPingZhou	Temperature :	22~25°C
		Relative Humidity :	48~52%

Band 53 / 10MHz / QPSK(ANT8) for Sample 1									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4968.00	-59.71	-13	-46.71	-81.58	-65.27	7.12	12.68	H
	7452.00	-47.28	-13	-34.28	-73.28	-50.61	8.26	11.59	H
	9936.00	-47.81	-13	-34.81	-78.41	-49.34	10.45	11.98	H
	4968.00	-59.90	-13	-46.90	-81.88	-65.46	7.12	12.68	V
	7452.00	-41.90	-13	-28.90	-67.9	-45.23	8.26	11.59	V
	9936.00	-53.96	-13	-40.96	-82.95	-55.49	10.45	11.98	V
Middle	4969.00	-59.88	-13	-46.88	-81.75	-65.44	7.14	12.70	H
	7454.00	-44.47	-13	-31.47	-70.47	-47.77	8.30	11.60	H
	9939.00	-48.35	-13	-35.35	-78.90	-49.87	10.48	12.00	H
	4969.00	-59.43	-13	-46.43	-81.41	-64.99	7.14	12.70	V
	7454.00	-40.29	-13	-27.29	-66.29	-43.59	8.30	11.60	V
	9939.00	-53.77	-13	-40.77	-82.71	-55.29	10.48	12.00	V
Highest	4971.00	-59.86	-13	-46.86	-81.74	-65.42	7.16	12.72	H
	7456.00	-45.65	-13	-32.65	-71.65	-48.95	8.33	11.63	H
	9942.00	-48.31	-13	-35.31	-78.86	-49.91	10.50	12.10	H
	4971.00	-59.90	-13	-46.90	-81.86	-65.46	7.16	12.72	V
	7456.00	-40.87	-13	-27.87	-66.87	-44.17	8.33	11.63	V
	9942.00	-53.48	-13	-40.48	-82.42	-55.08	10.50	12.10	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



N53 SA / NR 10MHz / QPSK(ANT8) for Sample 1									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4969.00	-59.96	-13	-46.96	-81.83	-65.52	7.12	12.68	H
	7453.50	-43.75	-13	-30.75	-69.75	-47.08	8.26	11.59	H
	9938.00	-51.82	-13	-38.82	-82.37	-53.35	10.45	11.98	H
	4969.00	-59.70	-13	-46.70	-81.68	-65.26	7.12	12.68	V
	7453.50	-45.87	-13	-32.87	-71.87	-49.20	8.26	11.59	V
	9938.00	-50.92	-13	-37.92	-79.86	-52.45	10.45	11.98	V
Middle	4969.00	-59.71	-13	-46.71	-81.58	-65.27	7.14	12.70	H
	7453.50	-43.25	-13	-30.25	-69.25	-46.55	8.30	11.60	H
	9938.00	-51.32	-13	-38.32	-81.87	-52.84	10.48	12.00	H
	4969.00	-59.59	-13	-46.59	-81.57	-65.15	7.14	12.70	V
	7453.50	-45.76	-13	-32.76	-71.76	-49.06	8.30	11.60	V
	9938.00	-50.81	-13	-37.81	-79.75	-52.33	10.48	12.00	V
Highest	4972.00	-59.99	-13	-46.99	-81.87	-65.55	7.16	12.72	H
	7458.00	-44.31	-13	-31.31	-70.31	-47.61	8.33	11.63	H
	9944.00	-51.74	-13	-38.74	-82.29	-53.34	10.50	12.10	H
	4972.00	-59.86	-13	-46.86	-81.82	-65.42	7.16	12.72	V
	7458.00	-45.31	-13	-32.31	-71.31	-48.61	8.33	11.63	V
	9944.00	-50.93	-13	-37.93	-79.87	-52.53	10.50	12.10	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Band 53 / 10MHz / QPSK(ANT8) for Sample 2									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4968.00	-59.72	-13	-46.72	-81.59	-65.28	7.12	12.68	H
	7452.00	-41.53	-13	-28.53	-67.53	-44.86	8.26	11.59	H
	9936.00	-50.39	-13	-37.39	-80.99	-51.92	10.45	11.98	H
	4968.00	-59.78	-13	-46.78	-81.76	-65.34	7.12	12.68	V
	7452.00	-41.14	-13	-28.14	-67.14	-44.47	8.26	11.59	V
	9936.00	-50.93	-13	-37.93	-79.92	-52.46	10.45	11.98	V
Middle	4969.00	-59.49	-13	-46.49	-81.36	-65.05	7.14	12.70	H
	7454.00	-41.48	-13	-28.48	-67.48	-44.78	8.30	11.60	H
	9939.00	-51.46	-13	-38.46	-82.01	-52.98	10.48	12.00	H
	4969.00	-59.34	-13	-46.34	-81.32	-64.90	7.14	12.70	V
	7454.00	-40.50	-13	-27.50	-66.5	-43.80	8.30	11.60	V
	9939.00	-51.76	-13	-38.76	-80.7	-53.28	10.48	12.00	V
Highest	4971.00	-59.73	-13	-46.73	-81.61	-65.29	7.16	12.72	H
	7456.00	-41.19	-13	-28.19	-67.19	-44.49	8.33	11.63	H
	9942.00	-50.01	-13	-37.01	-80.56	-51.61	10.50	12.10	H
	4971.00	-59.48	-13	-46.48	-81.44	-65.04	7.16	12.72	V
	7456.00	-41.49	-13	-28.49	-67.49	-44.79	8.33	11.63	V
	9942.00	-51.67	-13	-38.67	-80.61	-53.27	10.50	12.10	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.