

TEST REPORT

of

FCC Part 2 Subpart J and Part 27 Subpart C
IC RSS-192 Issue 5, RSS-198 Issue 1,
RSS-199 Issue 4 and RSS-Gen Issue 5

FCC ID: YZP-AN2000
IC Certification: 7414C-AN2000

Equipment Under Test : Telematics Module
Model Name : LTD-AN2000
Variant Model Name(s) : -
Applicant : LG Innotek Co., Ltd.
Manufacturer : LG Innotek Co., Ltd.
Date of Receipt : 2025.11.06
Date of Test(s) : 2025.11.17 ~ 2026.03.27
Date of Issue : 2026.04.02

In the configuration tested, the EUT complied with the standards specified above. This test report does not assure KOLAS accreditation.

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We are responsible for all the information of this test report except for the data(※) provided by the customer.

Tested by:



Dave Kim

Technical
Manager:



Jinhyoung Cho

SGS Korea Co., Ltd. Gunpo Laboratory

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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)

- 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- Designation number: KR0150

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Phone No. : +82 31 688 0901

Fax No. : +82 31 688 0921

1.2. Details of Applicant

Applicant : LG Innotek Co., Ltd.

Address : 30, Magokjungang 10-ro, Gangseo-gu, Seoul, Korea, 07796

Contact Person : Jeong, In-chang

Phone No. : +82 62 950 0332

1.3. Details of Manufacturer

Company : LG Innotek Co., Ltd.

Address : 30, Magokjungang 10-ro, Gangseo-gu, Seoul, Korea, 07796

Factory 1 : LG Innotek Co., Ltd.

Factory 1 Address : 26, Hanamsandan 5beon-ro, Gwangsan-gu, Gwangju, Republic of Korea, 62229

Factory 2 : PT. LG INNOTEK INDONESIA

Factory 2 Address : Bekasi International Industrial Estate, Blok C8 No.12 & 12A,
Desa Cibatu, Cikarang Selatan, Bekasi 17750, Jawa Barat - Indonesia

1.4. Description of EUT

Kind of Product	Telematics Module	
Model Name	LTD-AN2000	
Serial Number	Conducted: C1 Radiated: R1	
Power Supply	DC 4.0 V	
Rated Power	NR Band 41, 77, 78: 26 dB m NR Band 48: 21 dB m	
Frequency Range	NR Band 41(FCC): 2 496 MHz ~ 2 690 MHz NR Band 41(IC): 2 500 MHz ~ 2 690 MHz NR Band 48(IC): 3 550 MHz ~ 3 700 MHz NR Band 77(FCC): 3 450 MHz ~ 3 550 MHz NR Band 77(FCC): 3 700 MHz ~ 3 980 MHz	NR Band 78(FCC): 3 450 MHz ~ 3 550 MHz NR Band 78(FCC): 3 700 MHz ~ 3 800 MHz NR Band 77(IC): 3 450 MHz ~ 3 900 MHz NR Band 77(IC): 3 900 MHz ~ 3 980 MHz NR Band 78(IC): 3 450 MHz ~ 3 800 MHz
Modulation Technique	BPSK, QPSK, 16QAM, 64QAM, 256QAM	
Antenna Type	Ant. 1: Dipole Antenna Ant. 2: Dipole Antenna	
Antenna Gain *	Refer to the clause 1.15	
H/W Version	06	
S/W Version	SMP1750BJKA02-5035573_QB6279223	
FVIN	N/A	

1.5. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
Signal Generator	R&S	SMA100B	106887	10/20/2025	Annual	10/20/2026
Spectrum Analyzer	R&S	FSV30	100955	04/28/2025	Annual	04/28/2026
Spectrum Analyzer	Agilent	N9020A	MY53421758	09/10/2025	Annual	09/10/2026
Communication Analyzer	Anritsu	MT8821C	6262192291	02/25/2026	Annual	02/25/2027
Communication test station	Anritsu	MT8000A	6261949671	11/03/2025	Annual	11/03/2026
Temperature Chamber	ESPEC CORP.	SU-242	93013003	09/18/2025	Annual	09/18/2026
Low Pass Filter	Mini-Circuits	NLP-1200+	V 8979400903-1	05/23/2025	Annual	05/23/2026
High Pass Filter	Wainwright Instrument GmbH	WHKX3.0/18G-6SS	4	06/09/202	Annual	06/09/2026
High Pass Filter	Wainwright Instrument GmbH	WLKX10-4600-5060-1800 0-40ST	1	10/22/2025	Annual	10/22/2026
High Pass Filter	Wainwright Instrument GmbH	WLKX10-6320-8000-2650 0-40CC	6	10/22/2025	Annual	10/22/2026
BRIDGE COUPLER	MARKI MICROWAVE INC	CBR16-0012	1542	05/15/2025	Annual	05/15/2026
Power Splitter	Weinschel	1534	499	10/24/2025	Annual	10/24/2026
Directional Coupler	KRYTAR	152613	122660	07/02/2025	Annual	07/02/2026
DC Power Supply	Agilent	U8002A	MY49030063	01/19/2026	Annual	01/19/2027
DC Power Supply	R&S	HMP2020	102133	04/28/2025	Annual	04/28/2026
Preamplifier	H.P.	8447F	2944A03909	08/07/2025	Annual	08/07/2026
Preamplifier	R&S	SCU 18F	101058	02/27/2025	Annual	02/27/2026
Preamplifier	R&S	SCU 18F	100959	01/05/2026	Annual	01/05/2027
Preamplifier	TESTEK	TK-PA1840H	130016	03/06/2026	Annual	03/06/2027
Test Receiver	R&S	ESU26	100109	01/21/2026	Annual	01/21/2027
Loop Antenna	Schwarzbeck Mess-Elektronik	FMZB 1519	1519-039	10/01/2025	Biennial	10/01/2027
Bilog Antenna	Schwarzbeck Mess-Elektronik	VULB9163	01126	03/09/2026	Biennial	03/09/2028
Horn Antenna	R&S	HF906	100326	03/03/2026	Annual	03/03/2027
Horn Antenna	Schwarzbeck Mess-Elektronik	BBHA 9170	9170-540	12/05/2025	Annual	12/05/2026
Antenna Master	Innco systems GmbH	MA4640-XP-ET	MA4640/536/383 30516/L	N.C.R.	N/A	N.C.R.
Turn Table	Innco systems GmbH	DS 1200S	N/A	N.C.R.	N/A	N.C.R.
Controller	Innco systems GmbH	CONTROLLER CO3000-4P	CO3000/963/383 30516/L	N.C.R.	N/A	N.C.R.
Anechoic Chamber	SY Corporation	L x W x H (9.6 m x 6.4 m x 6.6 m)	N/A	N.C.R.	N/A	N.C.R.
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-5 m	TPC2402190004	10/13/2025	Semi-Annual	04/13/2026
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-10 m	TPC2402190001	10/13/2025	Semi-Annual	04/13/2026
Coaxial Cable	Qualwave	QT50P-40-KK-1.5	24270074	10/10/2025	Semi-Annual	04/10/2026
Coaxial Cable	RADIALL	TESTPRO 3	182290	10/10/2025	Semi-Annual	04/10/2026
Coaxial Cable	RADIALL	TESTPRO 3	182291	10/10/2025	Semi-Annual	04/10/2026

Note;

- For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.

1.6. Summary of Test Results

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 2 and 27 IC RSS-Gen Issue 5, RSS-192 Issue 5, RSS-198 Issue 1 and RSS-199 Issue 4			
Section(s) in FCC	Section(s) in IC	Test Item	Result
§2.1046 §27.50(h)(2) §27.50(j)(3) §27.50(k)(3)	RSS-192 Issue 5 5.5 RSS-198 Issue 1 5.5 RSS-199 Issue 4 5.5	E.R.P. / E.I.R.P.	Pass
§27.53(l)(2) §27.53(m)(4) §27.53(n)(2)	RSS-192 Issue 5 5.6 RSS-198 Issue 1 5.6 RSS-199 Issue 4 5.6	Spurious Radiated Emission	Pass
§2.1046	RSS-Gen Issue 5 6.12	Conducted Output Power	Pass
§2.1049	RSS-Gen Issue 5 6.7	Occupied Bandwidth	Pass
§27.50(j)(4) §27.50(k)(4)	RSS-192 Issue 5 5.5 RSS-198 Issue 1 5.5 RSS-199 Issue 4 5.5	Peak-Average Ratio	Pass
§27.53(l)(2) §27.53(m)(4) §27.53(n)(2)	RSS-192 Issue 5 5.6 RSS-198 Issue 1 5.6 RSS-199 Issue 4 5.6	Spurious Emission at Antenna Terminal	Pass
§27.53(l)(2) §27.53(m)(4) §27.53(n)(2)	RSS-192 Issue 5 5.6 RSS-198 Issue 1 5.6 RSS-199 Issue 4 5.6	Band Edge	Pass
§2.1055 §27.54	RSS-Gen Issue 5 6.11 RSS-192 Issue 5 5.4 RSS-198 Issue 1 5.4 RSS-199 Issue 4 5.4	Frequency Stability	Pass

1.7. Sample Calculation for Offset

Where relevant, the following sample calculation is provided:

1.7.1. Conducted Test

Offset value (dB) = Directional Coupler (dB) + Cable loss (dB)

1.7.2. Radiation test

- E.I.R.P. (dB m) = Measured level (dB μ V) + Antenna factor (dB/m) + Cable loss (dB) + 20 Log D - 104.8;
where D is the measurement distance in meters.
- E.R.P. (dB m) = E.I.R.P. (dB m) - 2.15 (dB)

1.8. Manufacturer Declaration

The EUT is equipped with two antennas. Antenna 1 serves as the primary antenna for frequencies below 3 GHz, while providing support as a secondary antenna and enabling MIMO operation for frequency at or above 3 GHz. Antenna 2 acts as the primary for frequencies above 3 GHz.

MIMO operation is supported specifically for NR bands above 3 GHz. For LTE, the device supports SISO operation only. Additionally, in 5G NR MIMO mode, only CP-OFDM is supported.

1.9. Device Capabilities

This device contains the following capabilities;

NR Band 78 (3 450 MHz ~ 3 800 MHz) is covered by NR Band 77 (3 450 MHz ~ 3 980 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth. Therefore test data provided in this report covers NR Band 78 as well as Band 77.

1.10. ENDC Configuration

NR Band	SCS (kHz)	Bandwidth (MHz)	Waveform	Modulation	ENDC LTE Band
n77	30	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100	DFT-S OFDM, CP OFDM	BPSK, QPSK, 16QAM, 64QAM, 256QAM	2, 5, 12, 13, 14, 48, 66
n78	30	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100			2, 5, 7, 66

1.11. Worst Case Configuration and Mode

The worst-case was determined based on conducted output power investigation. While testing was generally performed across all modulations (BSPK, QPSK, 16QAM, 64QAM, and 256QAM), certain test items were conducted using specific modulations as required by the relevant standards. If both SA and NSA were supported, SA was tested as worst case and NSA was tested only radiated spurious emission for worst conducted output power combination.

However, the spurious radiated emission and spurious at antenna terminal were only performed on bandwidth and RB offset (with RB size 1) with the highest conducted power.

The radiation test of the EUT was investigated in three orthogonal orientations X, Y, and Z, and the worst case data is reported.

1.12. Measurement Configuration

NR_SISO

Test Items	Band	Test Channel			Bandwidth (MHz)																Modulation DFT-S-OFDM					Modulation CP-OFDM				RB #		
		Low	Mid	High	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100	BPSK	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	1	Half	Full	
Conducted Output Power	n41	V	V	V		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	
	n48	V	V	V		V	V	V		V										V	V	V	V	V	V	V	V	V	V	V	V	
	n77/78	V	V	V		V	V	V	V	V	V			V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	
Frequency Stability	n41	-	V	-		V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	V	-	-	-	-	-	-	-	-	-	-	V
	n48	-	V	-		V	-	-		-										-	V	-	-	-	-	-	-	-	-	-	-	V
	n77/78	-	V	-		V	-	-	-	-	-		-	-	-	-	-	-	-		V	-	-	-	-	-	-	-	-	-	-	V
Occupied Bandwidth	n41	V	V	V		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	V	V	-	-	-	-	-	V
	n48	V	V	V		V	V	V		V										V	V	V	-	-	V	V	-	-	-	-	-	V
	n77/78	V	V	V		V	V	V	V	V		V		V	V	V	V	V	V	V	V	V	-	-	V	V	-	-	-	-	-	V
Peak-to-Average Ratio	n41	V	V	V		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	V
	n48	V	V	V		V	V	V		V										V	V	V	V	V	V	V	V	V	-	-	-	V
	n77/78	V	V	V		V	V	V	V	V		V		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	V
Band edge	n41	V	-	V		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	V	-	-	V	V	-	-	V	-	-	V
	n48	V	-	V		V	V	V		V										V	-	V	-	-	V	V	-	-	V	-	-	V
	n77/78	V	-	V		V	V	V	V	V		V		V	V	V	V	V	V	V	-	V	-	-	V	V	-	-	V	-	-	V
Spurious at antenna terminal & Radiated Spurious Emissions	n41	V	V	V	Worst case																											
	n48	V	V	V	Worst case																											
	n77/78	V	V	V	Worst case																											

NR_MIMO

Test Items	Band	Test Channel			Bandwidth (MHz)														Modulation CP-OFDM				RB #								
		Low	Mid	High	10	15	20	25	30	35	40	45	50	60	70	80	90	100	QPSK	16QAM	64QAM	256QAM	1	Half	Full						
Conducted Output Power	n48	V	V	V	V	V	V		V		V								V	V	V	V	V	V	V						
	n77/78	V	V	V	V	V	V	V	V		V		V	V	V	V	V	V	V	V	V	V	V	V	V						
Frequency Stability	n48	-	V	-	V	-	-		-		-								V	-	-	-	-	-	V						
	n77/78	-	V	-	V	-	-	-	-	-	-	-	-	-	-	-	-	-	V	-	-	-	-	-	V						
Occupied Bandwidth	n48	V	V	V	V	V	V		V		V								V	V	-	-	-	-	V						
	n77/78	V	V	V	V	V	V	V	V		V		V	V	V	V	V	V	V	V	-	-	-	-	V						
Band edge	n48	V	-	V	V	V	V		V		V								V	V	-	-	V	-	V						
	n77/78	V	-	V	V	V	V	V	V		V		V	V	V	V	V	V	V	V	-	-	V	-	V						
Spurious at antenna terminal & Radiated Spurious Emission	n48	V	V	V	Worst case																										
	n77/78	V	V	V	Worst case																										

ENDC

Test Items	Band	Test Channel			Bandwidth (MHz)																Modulation DFT-S-OFDM				Modulation CP-OFDM				RB #		
		Low	Mid	High	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100	BPSK	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	1	Half	Full
Conducted Output Power	n77/78	V	V	V		V	V	V		V		V	V	V	V	V	V	V	V	V	V	-	-	-	-	-	-	-	V	-	-
Spurious Radiated Emission	n77/78	V	V	V	Worst case																										

Note;

- All measurement was performed with 1RB or FULL RB or both, we chosen RB condition for each test items as worst case.

Radiated Emission Test

SISO

NR Band	SCS (kHz)	Bandwidth (MHz)	Modulation	Resource Block Allocation
				RBs allocated
n41_FCC	30	25	DFT-S OFDM - BPSK	1
n41_IC	30	25	DFT-S OFDM - BPSK	1
n48_IC	30	20	DFT-S OFDM - BPSK	1
n77/78 Low Band_FCC	30	15	DFT-S OFDM - BPSK	1
n77/78 High Band_FCC	30	90	DFT-S OFDM - BPSK	1
n77/78 Low Band_IC	30	100	DFT-S OFDM - BPSK	1
n77 High Band_IC	30	70	DFT-S OFDM - BPSK	1

MIMO

NR Band	SCS (kHz)	Bandwidth (MHz)	Modulation	Resource Block Allocation
				RBs allocated
n48_IC	30	40	CP OFDM - QPSK	1
n77/78 Low Band_FCC	30	10	CP OFDM - QPSK	1
n77/78 High Band_FCC	30	90	CP OFDM - QPSK	1
n77/78 Low Band_IC	30	40	CP OFDM - QPSK	1
n77 High Band_IC	30	10	CP OFDM - QPSK	1

ENDC

NR Band	SCS (kHz)	Bandwidth (MHz)	Modulation	Resource Block Allocation
				RBs allocated
66A-n77A Low Band_FCC	30	5-10	DFT-S OFDM - BPSK	1
66A-n77A High Band_FCC	30	5-90	DFT-S OFDM - QPSK	1
66A-n77A Low Band_IC	30	5-100	DFT-S OFDM - BPSK	1
66A-n77A High Band_IC	30	5-70	DFT-S OFDM - QPSK	1

1.13. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty	
Conducted Output Power	1.43 dB	
Occupied Bandwidth	0.04 MHz	
Conducted Spurious Emissions	1.19 dB	
Peak to Average Ratio	0.65 dB	
Frequency Stability	107 Hz	
Radiated Emission, 9 kHz to 30 MHz	H	3.60 dB
	V	3.60 dB
Radiated Emission, below 1 GHz	H	5.50 dB
	V	5.10 dB
Radiated Emission, above 1 GHz	H	3.50 dB
	V	3.40 dB

All measurement uncertainty values are shown with a coverage factor of $k=2$ to indicate a 95 % level of confidence.

1.14. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL006833	2026.04.02	Initial

1.15. Antenna Information

Ant. No.	Ant. Type	Support Band		
		LTE	NR	WCDMA
Ant. 1	Dipole	2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 41, 66, 71	2, 5, 7, 12, 25, 26, 41, 48, 66, 71, 77, 78	II, IV, V
Ant. 2	Dipole	48	48, 77, 78	

Band	Operating Frequency (MHz)	Antenna Peak Gain (dB i)		
		Ant. 1	Ant. 2	Ant. 1+2
WCDMA II LTE 25/2 NR 25/2	1 850 ~ 1 915	0.46		
WCDMA IV LTE 66/4 NR 66	1 710 ~ 1 780	-0.37		
WCDMA V LTE 26/5 NR 26/5	824 ~ 849	0.60		
LTE 7 NR 7	2 500 ~ 2 570	0.22		
LTE 12/17 NR 12	699 ~ 716	-4.13		
LTE 13	777 ~ 787	-1.27		
LTE 14	788 ~ 798	0.13		
LTE 26	814 ~ 824	0.60		
LTE 71 NR 71	663 ~ 698	-7.25		
LTE 41 NR 41	2 496 ~ 2 690(FCC) 2 500 ~ 2 690(IC)	0.34		
LTE 48 NR 48	3 550 ~ 3 700	-2.11	-2.11	0.90
NR 77/78_FCC	3 450 ~ 3 550	-2.07	-2.07	0.94
	3 700 ~ 3 980	-2.44	-2.44	0.57
NR 77/78_IC	3 450 ~ 3 900	-2.07	-2.07	0.94
	3 900 ~ 3 980	-2.44	-2.44	0.57

Remark;

1) According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)d)(i),
 Port 1 + Port 2 Antenna Gain = $10 * \log[(10^{G_1/20} + 10^{G_2/20})^2 / N_{ANT}]$

Where,

G_1 = antenna gain of port 1,

G_2 = antenna gain of port 2,

N_{ANT} = the number of antennas

1.16. Emission Designator and Max Power

NR_SISO

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n41 FCC	10	DFT-S OFDM	BPSK	2 501.01	2 685.00	25.77	0.34	26.11	0.408	8M63G7D
			QPSK			25.74		26.08	0.406	8M63G7D
			16QAM			24.85		25.19	0.330	8M61D7D
		CP OFDM	QPSK			24.17		24.51	0.282	8M63G7D
			16QAM			23.69		24.03	0.253	8M59D7D
	15	DFT-S OFDM	BPSK	2 503.5	2 682.48	25.89		26.23	0.420	13M0G7D
			QPSK			25.87		26.21	0.418	13M0G7D
			16QAM			24.99		25.33	0.341	13M0D7D
		CP OFDM	QPSK			24.39		24.73	0.297	13M6G7D
			16QAM			23.83		24.17	0.261	13M8D7D
	20	DFT-S OFDM	BPSK	2 506.02	2 679.99	25.75		26.09	0.406	18M0G7D
			QPSK			25.73		26.07	0.405	17M9G7D
			16QAM			24.83		25.17	0.329	17M9D7D
		CP OFDM	QPSK			24.21		24.55	0.285	18M3G7D
			16QAM			23.73		24.07	0.255	18M3D7D
	25	DFT-S OFDM	BPSK	2 508.51	2 677.50	25.93		26.27	0.424	23M0G7D
			QPSK			25.86		26.20	0.417	22M9G7D
			16QAM			25.00		25.34	0.342	23M0D7D
		CP OFDM	QPSK			24.16		24.50	0.282	23M2G7D
			16QAM			23.92		24.26	0.267	23M3D7D
	30	DFT-S OFDM	BPSK	2 511.00	2 674.98	25.85		26.19	0.416	26M9G7D
			QPSK			25.83		26.17	0.414	26M9G7D
			16QAM			24.92		25.26	0.336	26M9D7D
		CP OFDM	QPSK			24.23		24.57	0.286	27M9G7D
			16QAM			23.92		24.26	0.267	27M9D7D
	35	DFT-S OFDM	BPSK	2 513.51	2 672.49	25.65		25.99	0.397	32M3G7D
			QPSK			25.60		25.94	0.393	32M3G7D
			16QAM			24.80		25.14	0.327	32M3D7D
		CP OFDM	QPSK			23.98		24.32	0.270	33M0G7D
			16QAM			23.40		23.74	0.237	33M1D7D
	40	DFT-S OFDM	BPSK	2 516.01	2 670.00	25.79		26.13	0.410	35M9G7D
			QPSK			25.80		26.14	0.411	35M9G7D
			16QAM			24.83		25.17	0.329	35M9D7D
		CP OFDM	QPSK			24.11		24.45	0.279	38M0G7D
			16QAM			23.59		23.93	0.247	38M0D7D
	45	DFT-S OFDM	BPSK	2 518.52	2 667.49	25.45		25.79	0.379	38M8G7D
			QPSK			25.45		25.79	0.379	38M8G7D
			16QAM			24.47		24.81	0.303	38M8D7D
		CP OFDM	QPSK			23.78		24.12	0.258	42M6G7D
			16QAM			23.27		23.61	0.230	42M7D7D
	50	DFT-S OFDM	BPSK	2 521.02	2 664.99	25.85		26.19	0.416	45M9G7D
			QPSK			25.86		26.20	0.417	45M9G7D
			16QAM			24.69		25.03	0.318	45M9D7D
		CP OFDM	QPSK			24.06		24.40	0.275	47M5G7D
			16QAM			23.53		23.87	0.244	47M7D7D

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n41 FCC	60	DFT-S OFDM	BPSK	2 526.00	2 659.98	25.79	0.34	26.13	0.410	57M5G7D
			QPSK			25.78		26.12	0.409	57M4G7D
			16QAM			24.62		24.96	0.313	57M5D7D
		CP OFDM	QPSK			23.96		24.30	0.269	58M0G7D
			16QAM			23.44		23.78	0.239	58M0D7D
	70	DFT-S OFDM	BPSK	2 531.01	2 655.00	25.71		26.05	0.403	64M8G7D
			QPSK			25.68		26.02	0.400	64M6G7D
			16QAM			24.65		24.99	0.316	64M6D7D
		CP OFDM	QPSK			24.06		24.40	0.275	67M8G7D
			16QAM			23.52		23.86	0.243	67M6D7D
	80	DFT-S OFDM	BPSK	2 536.02	2 649.99	25.71		26.05	0.403	77M7G7D
			QPSK			25.70		26.04	0.402	77M5G7D
			16QAM			24.40		24.74	0.298	77M5D7D
		CP OFDM	QPSK			23.80		24.14	0.259	77M5G7D
			16QAM			23.25		23.59	0.229	77M8D7D
	90	DFT-S OFDM	BPSK	2 541.00	2 644.98	25.43		25.77	0.378	86M0G7D
			QPSK			25.40		25.74	0.375	86M0G7D
			16QAM			24.58		24.92	0.310	86M0D7D
		CP OFDM	QPSK			23.92		24.26	0.267	87M6G7D
			16QAM			23.31		23.65	0.232	87M6D7D
	100	DFT-S OFDM	BPSK	2 546.01	2 640.00	25.59		25.93	0.392	96M7G7D
			QPSK			25.58		25.92	0.391	96M9G7D
			16QAM			24.34		24.68	0.294	96M7D7D
		CP OFDM	QPSK			23.71		24.05	0.254	97M7G7D
			16QAM			23.25		23.59	0.229	97M7D7D

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n41 IC	10	DFT-S OFDM	BPSK	2 505.00	2 685.00	25.79	0.34	26.13	0.410	8M63G7D
			QPSK			25.80		26.14	0.411	8M61G7D
			16QAM			24.73		25.07	0.321	8M61D7D
		CP OFDM	QPSK			24.05		24.39	0.275	8M63G7D
			16QAM			23.42		23.76	0.238	8M61D7D
	15	DFT-S OFDM	BPSK	2 507.50	2 682.48	25.76		26.10	0.407	13M0G7D
			QPSK			25.83		26.17	0.414	13M0G7D
			16QAM			24.74		25.08	0.322	13M0D7D
		CP OFDM	QPSK			24.01		24.35	0.272	13M6G7D
			16QAM			23.49		23.83	0.242	13M8D7D
	20	DFT-S OFDM	BPSK	2 510.01	2 679.99	25.73		26.07	0.405	18M0G7D
			QPSK			25.72		26.06	0.404	17M9G7D
			16QAM			24.82		25.16	0.328	17M9D7D
		CP OFDM	QPSK			24.18		24.52	0.283	18M3G7D
			16QAM			23.66		24.00	0.251	18M3D7D
	25	DFT-S OFDM	BPSK	2 512.50	2 677.50	25.91		26.25	0.422	22M9G7D
			QPSK			25.75		26.09	0.406	22M9G7D
			16QAM			24.67		25.01	0.317	22M9D7D
		CP OFDM	QPSK			24.07		24.41	0.276	23M2G7D
			16QAM			23.50		23.84	0.242	23M3D7D
	30	DFT-S OFDM	BPSK	2 515.02	2 674.98	25.86		26.20	0.417	26M9G7D
			QPSK			25.83		26.17	0.414	26M9G7D
			16QAM			24.92		25.26	0.336	26M9D7D
		CP OFDM	QPSK			24.30		24.64	0.291	27M9G7D
			16QAM			23.85		24.19	0.262	27M9D7D
	35	DFT-S OFDM	BPSK	2 517.51	2 672.49	25.65		25.99	0.397	32M4G7D
			QPSK			25.60		25.94	0.393	32M4G7D
			16QAM			24.80		25.14	0.327	32M3D7D
		CP OFDM	QPSK			23.98		24.32	0.270	33M0G7D
			16QAM			23.40		23.74	0.237	33M0D7D
	40	DFT-S OFDM	BPSK	2 520.00	2 670.00	25.78		26.12	0.409	35M9G7D
			QPSK			25.78		26.12	0.409	35M9G7D
			16QAM			24.58		24.92	0.310	35M9D7D
		CP OFDM	QPSK			24.11		24.45	0.279	38M0G7D
			16QAM			23.62		23.96	0.249	38M0D7D
	45	DFT-S OFDM	BPSK	2 522.51	2 667.49	25.45		25.79	0.379	38M8G7D
			QPSK			25.45		25.79	0.379	38M8G7D
			16QAM			24.47		24.81	0.303	38M8D7D
		CP OFDM	QPSK			23.78		24.12	0.258	42M7G7D
			16QAM			23.27		23.61	0.230	42M7D7D
	50	DFT-S OFDM	BPSK	2 525.01	2 664.99	25.83		26.17	0.414	45M9G7D
			QPSK			25.85		26.19	0.416	45M9G7D
			16QAM			24.74		25.08	0.322	46M0D7D
		CP OFDM	QPSK			23.99		24.33	0.271	47M5G7D
			16QAM			23.50		23.84	0.242	47M6D7D

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n41 IC	60	DFT-S OFDM	BPSK	2 530.02	2 659.98	25.79	0.34	26.13	0.410	57M5G7D
			QPSK			25.78		26.12	0.409	57M5G7D
			16QAM			24.50		24.84	0.305	57M4D7D
		CP OFDM	QPSK			23.98		24.32	0.270	58M0G7D
			16QAM			23.33		23.67	0.233	58M0D7D
	70	DFT-S OFDM	BPSK	2 535.00	2 655.00	25.68		26.02	0.400	64M8G7D
			QPSK			25.67		26.01	0.399	64M6G7D
			16QAM			24.46		24.80	0.302	64M6D7D
		CP OFDM	QPSK			23.72		24.06	0.255	67M8G7D
			16QAM			23.63		23.97	0.158	67M6D7D
	80	DFT-S OFDM	BPSK	2 540.01	2 649.99	25.69		26.03	0.401	77M5G7D
			QPSK			25.69		26.03	0.401	77M4G7D
			16QAM			24.41		24.75	0.299	77M7D7D
		CP OFDM	QPSK			23.85		24.19	0.262	77M7G7D
			16QAM			23.38		23.97	0.249	77M5D7D
	90	DFT-S OFDM	BPSK	2 545.02	2 644.98	25.47		25.81	0.381	86M0G7D
			QPSK			25.44		25.78	0.378	86M0G7D
			16QAM			24.58		24.92	0.310	86M1D7D
		CP OFDM	QPSK			23.90		24.24	0.265	87M6G7D
			16QAM			23.23		23.57	0.228	87M6D7D
	100	DFT-S OFDM	BPSK	2 550.00	2 640.00	25.58		25.92	0.391	96M7G7D
			QPSK			25.58		25.92	0.391	96M9G7D
			16QAM			24.33		24.67	0.293	96M7D7D
		CP OFDM	QPSK			23.74		24.08	0.256	97M7G7D
			16QAM			23.26		23.60	0.229	97M7D7D

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n48 IC	10	DFT-S OFDM	BPSK	3 555.00	3 694.98	20.99	-2.11	18.88	0.077	8M61G7D
			QPSK			20.99		18.88	0.077	8M61G7D
			16QAM			20.95		18.84	0.077	8M61D7D
		CP OFDM	QPSK			20.90		18.79	0.076	8M61G7D
			16QAM			20.89		18.78	0.076	8M59D7D
	15	DFT-S OFDM	BPSK	3 557.52	3 692.49	21.13		19.02	0.080	13M0G7D
			QPSK			21.09		18.98	0.079	13M0G7D
			16QAM			20.99		18.88	0.077	13M0D7D
		CP OFDM	QPSK			20.97		18.86	0.077	13M6G7D
			16QAM			20.95		18.84	0.077	13M7D7D
	20	DFT-S OFDM	BPSK	3 560.01	3 690.00	21.18		19.07	0.081	18M0G7D
			QPSK			21.00		18.89	0.077	17M9G7D
			16QAM			20.96		18.85	0.077	17M9D7D
		CP OFDM	QPSK			20.92		18.81	0.076	18M3G7D
			16QAM			20.86		18.75	0.075	18M3D7D
	30	DFT-S OFDM	BPSK	3 565.02	3 684.99	20.99		18.88	0.077	26M9G7D
			QPSK			20.99		18.88	0.077	26M9G7D
			16QAM			20.75		18.64	0.073	26M9D7D
		CP OFDM	QPSK			20.70		18.59	0.072	27M9G7D
			16QAM			20.75		18.64	0.073	27M9D7D
	40	DFT-S OFDM	BPSK	3 570.00	3 679.98	20.99		18.88	0.077	35M8G7D
			QPSK			21.00		18.89	0.077	35M8G7D
			16QAM			20.80		18.69	0.074	35M8D7D
		CP OFDM	QPSK			20.82		18.71	0.074	37M9G7D
			16QAM			20.75		18.64	0.073	37M9D7D

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77/78 Low Band FCC	10	DFT-S OFDM	BPSK	3 455.01	3 544.98	25.71	-2.07	23.64	0.231	8M61G7D
			QPSK			25.71		23.64	0.231	8M63G7D
			16QAM			24.73		22.66	0.185	8M61D7D
		CP OFDM	QPSK			24.25		22.18	0.165	8M61G7D
			16QAM			23.68		21.61	0.145	8M59D7D
			16QAM			23.68		21.61	0.145	8M59D7D
	15	DFT-S OFDM	BPSK	3 457.50	3 542.49	25.93		23.86	0.243	13M0G7D
			QPSK			25.92		23.85	0.243	13M0G7D
			16QAM			24.94		22.87	0.194	13M0D7D
		CP OFDM	QPSK			24.37		22.30	0.170	13M6G7D
			16QAM			23.74		21.67	0.147	13M8D7D
			16QAM			23.74		21.67	0.147	13M8D7D
	20	DFT-S OFDM	BPSK	3 460.02	3 540.00	25.83		23.76	0.238	17M9G7D
			QPSK			25.84		23.77	0.238	17M9G7D
			16QAM			24.77		22.70	0.186	17M9D7D
		CP OFDM	QPSK			24.33		22.26	0.168	18M3G7D
			16QAM			23.80		21.73	0.149	18M3D7D
			16QAM			23.80		21.73	0.149	18M3D7D
	25	DFT-S OFDM	BPSK	3 462.51	3 537.48	25.83		23.76	0.238	22M9G7D
			QPSK			25.73		23.66	0.232	22M9G7D
			16QAM			24.54		22.47	0.177	22M9D7D
		CP OFDM	QPSK			23.84		21.77	0.150	23M2G7D
			16QAM			23.33		21.26	0.134	23M3D7D
			16QAM			23.33		21.26	0.134	23M3D7D
	30	DFT-S OFDM	BPSK	3 465.00	3 534.99	25.84		23.77	0.238	26M9G7D
			QPSK			25.84		23.77	0.238	26M8G7D
			16QAM			24.84		22.77	0.189	26M8D7D
		CP OFDM	QPSK			24.27		22.20	0.166	27M9G7D
			16QAM			23.59		21.52	0.142	27M9D7D
			16QAM			23.59		21.52	0.142	27M9D7D
	40	DFT-S OFDM	BPSK	3 470.01	3 529.98	25.83		23.76	0.238	35M9G7D
			QPSK			25.77		23.70	0.234	35M9G7D
			16QAM			24.67		22.60	0.182	35M8D7D
		CP OFDM	QPSK			23.92		21.85	0.153	38M0G7D
			16QAM			23.49		21.42	0.139	38M0D7D
			16QAM			23.49		21.42	0.139	38M0D7D
	50	DFT-S OFDM	BPSK	3 475.02	3 525.00	25.82		23.75	0.237	45M9G7D
			QPSK			25.75		23.68	0.233	45M9G7D
			16QAM			24.47		22.40	0.174	45M9D7D
		CP OFDM	QPSK			23.84		21.77	0.150	47M5G7D
			16QAM			23.26		21.19	0.132	47M6D7D
			16QAM			23.26		21.19	0.132	47M6D7D
	60	DFT-S OFDM	BPSK	3 480.00	3 519.99	25.80		23.73	0.236	57M3G7D
			QPSK			25.76		23.69	0.234	57M4G7D
			16QAM			24.46		22.39	0.173	57M3D7D
		CP OFDM	QPSK			23.93		21.86	0.153	58M1G7D
			16QAM			23.36		21.29	0.135	58M0D7D
			16QAM			23.36		21.29	0.135	58M0D7D
	70	DFT-S OFDM	BPSK	3 485.01	3 514.98	25.76		23.69	0.234	64M6G7D
			QPSK			25.72		23.65	0.232	64M5G7D
			16QAM			24.55		22.48	0.177	64M3D7D
		CP OFDM	QPSK			23.84		21.77	0.150	67M8G7D
			16QAM			23.45		21.38	0.137	67M6D7D
			16QAM			23.45		21.38	0.137	67M6D7D

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77/78 Low Band FCC	80	DFT-S OFDM	BPSK	3 490.02	3 510.00	25.78	-2.07	23.71	0.235	77M4G7D
			QPSK			25.78		23.71	0.235	77M4G7D
			16QAM			24.54		22.47	0.177	77M2D7D
		CP OFDM	QPSK			23.84		21.77	0.150	77M7G7D
			16QAM			23.37		21.30	0.135	77M5D7D
			16QAM			25.90		23.83	0.242	85M8G7D
	90	DFT-S OFDM	BPSK	3 495.00	3 504.99	25.81		23.74	0.237	85M6G7D
			QPSK			24.56		22.49	0.177	85M6D7D
			16QAM			23.89		21.82	0.152	87M6G7D
		CP OFDM	QPSK			23.38		21.31	0.135	87M6D7D
			16QAM			25.90		23.83	0.242	96M3G7D
			QPSK			25.87		23.80	0.240	96M5G7D
	100	DFT-S OFDM	16QAM	3 500.01	3 500.01	24.45		22.38	0.173	96M5D7D
			QPSK			23.82		21.75	0.150	97M5G7D
			16QAM			23.31		21.24	0.133	97M3D7D
		CP OFDM	QPSK							
			16QAM							
			16QAM							

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77/78 High Band FCC	10	DFT-S OFDM	BPSK	3 705.00	3 975.00	26.09	-2.44	23.65	0.232	8M63G7D
			QPSK			26.10		23.66	0.232	8M63G7D
			16QAM			25.15		22.71	0.187	8M61D7D
		CP OFDM	QPSK			24.52		22.08	0.161	8M61G7D
			16QAM			24.05		21.61	0.145	8M59D7D
			16QAM			26.09		23.65	0.232	13M0G7D
	15	DFT-S OFDM	BPSK	3 707.52	3 972.48	26.09		23.65	0.232	13M0G7D
			QPSK			26.09		23.65	0.232	13M0G7D
			16QAM			25.10		22.66	0.185	13M0D7D
		CP OFDM	QPSK			24.53		22.09	0.162	13M6G7D
			16QAM			23.94		21.50	0.141	13M8D7D
			16QAM			26.03		23.59	0.229	17M9G7D
	20	DFT-S OFDM	BPSK	3 710.01	3 969.99	26.03		23.59	0.229	17M9G7D
			QPSK			26.03		23.59	0.229	17M9G7D
			16QAM			25.00		22.56	0.180	17M9D7D
		CP OFDM	QPSK			24.36		21.92	0.156	18M3G7D
			16QAM			23.95		21.51	0.142	18M3D7D
			16QAM			26.06		23.62	0.230	23M0G7D
	25	DFT-S OFDM	BPSK	3 712.50	3 967.50	26.06		23.62	0.230	23M0G7D
			QPSK			26.07		23.63	0.231	22M9G7D
			16QAM			24.89		22.45	0.176	22M9D7D
		CP OFDM	QPSK			24.39		21.95	0.157	23M2G7D
			16QAM			23.74		21.30	0.135	23M2D7D
			16QAM			26.04		23.60	0.229	26M9G7D
	30	DFT-S OFDM	BPSK	3 715.02	3 964.98	26.04		23.60	0.229	26M9G7D
			QPSK			26.04		23.60	0.229	26M9G7D
			16QAM			24.90		22.46	0.176	26M9D7D
		CP OFDM	QPSK			24.37		21.93	0.156	27M8G7D
			16QAM			23.78		21.34	0.136	27M9D7D
			16QAM			26.02		23.58	0.228	35M9G7D
	40	DFT-S OFDM	BPSK	3 720.00	3 960.00	26.02		23.58	0.228	35M9G7D
			QPSK			26.00		23.56	0.227	35M9G7D
			16QAM			24.95		22.51	0.178	35M9D7D
		CP OFDM	QPSK			24.36		21.92	0.156	38M0G7D
			16QAM			23.75		21.31	0.135	38M0D7D
			16QAM			26.03		23.59	0.229	45M9G7D
	50	DFT-S OFDM	BPSK	3 725.01	3 954.99	26.03		23.59	0.229	45M9G7D
			QPSK			26.02		23.58	0.228	45M8G7D
			16QAM			24.83		22.39	0.173	45M8D7D
		CP OFDM	QPSK			24.31		21.87	0.154	47M5G7D
			16QAM			23.73		21.29	0.135	47M5D7D
			16QAM			26.07		23.63	0.231	57M4G7D
	60	DFT-S OFDM	BPSK	3 730.02	3 949.98	26.07		23.63	0.231	57M4G7D
			QPSK			26.02		23.58	0.228	57M4G7D
			16QAM			24.79		22.35	0.172	57M3D7D
		CP OFDM	QPSK			24.30		21.86	0.153	58M1G7D
			16QAM			23.77		21.33	0.136	58M0D7D
			16QAM			26.39		23.95	0.248	64M6G7D
	70	DFT-S OFDM	BPSK	3 735.00	3 945.00	26.39		23.95	0.248	64M6G7D
			QPSK			26.30		23.86	0.243	64M5G7D
			16QAM			24.98		22.54	0.179	64M5D7D
		CP OFDM	QPSK			24.40		21.96	0.157	67M7G7D
			16QAM			23.78		21.34	0.136	67M7D7D
			16QAM							

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77/78 High Band FCC	80	DFT-S OFDM	BPSK	3 740.01	3 939.99	26.32	-2.44	23.88	0.244	77M4G7D
			QPSK			26.29		23.85	0.243	77M2G7D
			16QAM			24.98		22.54	0.179	77M2D7D
		CP OFDM	QPSK			24.38		21.94	0.156	77M5G7D
			16QAM			23.77		21.33	0.136	77M7D7D
			16QAM			26.44		24.00	0.251	86M0G7D
	90	DFT-S OFDM	BPSK	3 745.02	3 934.98	26.40		23.96	0.249	85M8G7D
			QPSK			25.23		22.79	0.190	85M8D7D
			16QAM			24.49		22.05	0.160	87M8G7D
		CP OFDM	QPSK			24.11		21.67	0.147	87M6D7D
			16QAM			26.21		23.77	0.238	96M5G7D
			QPSK			26.17		23.73	0.236	96M7G7D
	100	DFT-S OFDM	16QAM	3 750.00	3 930.00	25.33		22.89	0.195	96M5D7D
			QPSK			24.67		22.23	0.167	97M5G7D
			16QAM			24.16		21.72	0.149	97M5D7D
		CP OFDM	QPSK							
			16QAM							
			16QAM							

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77/78 Low Band IC	10	DFT-S OFDM	BPSK	3 455.01	3 894.99	25.70	-2.07	23.63	0.231	8M61G7D
			QPSK			25.68		23.61	0.230	8M63G7D
			16QAM			24.78		22.71	0.187	8M61D7D
		CP OFDM	QPSK			24.16		22.09	0.162	8M61G7D
			16QAM			23.64		21.57	0.144	8M59D7D
			16QAM			25.76		23.69	0.234	13M0G7D
	15	DFT-S OFDM	BPSK	3 457.50	3 892.50	25.71		23.64	0.231	13M0G7D
			QPSK			24.74		22.67	0.185	13M0D7D
			16QAM			24.27		22.20	0.166	13M6G7D
		CP OFDM	QPSK			23.58		21.51	0.142	13M8D7D
			16QAM			25.71		23.64	0.231	18M0G7D
			QPSK			25.64		23.57	0.228	17M9G7D
	20	DFT-S OFDM	16QAM	3 460.02	3 889.98	24.78		22.71	0.187	17M9D7D
			QPSK			24.12		22.05	0.160	18M3G7D
			16QAM			23.57		21.50	0.141	18M3D7D
		CP OFDM	QPSK			25.77		23.70	0.234	23M0G7D
			QPSK			25.74		23.67	0.233	22M9G7D
			16QAM			24.77		22.70	0.186	23M0D7D
	25	DFT-S OFDM	QPSK	3 462.51	3 887.49	24.13		22.06	0.161	23M2G7D
			16QAM			23.56		21.49	0.141	23M3D7D
			QPSK			25.72		23.65	0.232	26M9G7D
		CP OFDM	QPSK			25.69		23.62	0.230	26M9G7D
			16QAM			24.72		22.65	0.184	26M8D7D
			16QAM			24.20		22.13	0.163	27M9G7D
	30	DFT-S OFDM	QPSK	3 465.00	3 885.00	23.61		21.54	0.143	27M9D7D
			16QAM			25.83		23.76	0.238	35M9G7D
			QPSK			25.81		23.74	0.237	35M9G7D
		CP OFDM	16QAM			24.93		22.86	0.193	35M8D7D
			QPSK			24.33		22.26	0.168	38M0G7D
			16QAM			23.75		21.68	0.147	38M0D7D
	50	DFT-S OFDM	BPSK	3 475.02	3 874.98	25.99		23.92	0.247	45M9G7D
			QPSK			25.96		23.89	0.245	45M9G7D
			16QAM			25.06		22.99	0.199	45M9D7D
		CP OFDM	QPSK			24.47		22.40	0.174	47M5G7D
			16QAM			23.93		21.86	0.153	47M6D7D
			16QAM			25.86		23.79	0.239	57M4G7D
	60	DFT-S OFDM	QPSK	3 480.00	3 870.00	25.81		23.74	0.237	57M3G7D
			16QAM			24.99		22.92	0.196	57M3D7D
			QPSK			24.27		22.20	0.166	58M0G7D
		CP OFDM	16QAM			23.81		21.74	0.149	58M0D7D
			BPSK			25.88		23.81	0.240	64M5G7D
			QPSK			25.86		23.79	0.239	64M5G7D
	70	DFT-S OFDM	16QAM	3 485.01	3 864.99	24.98		22.91	0.195	64M5D7D
			QPSK			24.36		22.29	0.169	67M7G7D
			16QAM			23.84		21.77	0.150	67M7D7D

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77/78 Low Band IC	80	DFT-S OFDM	BPSK	3 490.02	3 859.98	25.85	-2.07	23.78	0.239	77M4G7D
			QPSK			25.86		23.79	0.239	77M2G7D
			16QAM			24.93		22.86	0.193	77M2D7D
		CP OFDM	QPSK			24.23		22.16	0.164	77M7G7D
			16QAM			23.68		21.61	0.145	77M5D7D
			16QAM			25.85		23.78	0.239	85M6G7D
	90	DFT-S OFDM	BPSK	3 495.00	3 855.00	25.79		23.72	0.236	85M8G7D
			QPSK			24.81		22.74	0.188	85M6D7D
			16QAM			24.33		22.26	0.168	87M6G7D
		CP OFDM	QPSK			23.66		21.59	0.144	87M6D7D
			16QAM			26.04		23.97	0.249	96M5G7D
			QPSK			26.00		23.93	0.247	96M5G7D
	100	DFT-S OFDM	16QAM	3 500.01	3 849.99	25.12		23.05	0.202	96M5D7D
			QPSK			24.52		22.45	0.176	97M7G7D
			16QAM			23.93		21.86	0.153	97M5D7D
		CP OFDM	QPSK							
			16QAM							
			16QAM							

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77/78 High Band IC	10	DFT-S OFDM	BPSK	3 905.01	3 975.00	25.74	-2.44	23.30	0.214	8M63G7D
			QPSK			25.76		23.32	0.215	8M63G7D
			16QAM			24.83		22.39	0.173	8M61D7D
		CP OFDM	QPSK			24.21		21.77	0.150	8M61G7D
			16QAM			23.73		21.29	0.135	8M59D7D
			16QAM			25.76		23.32	0.215	13M0G7D
	15	DFT-S OFDM	BPSK	3 907.50	3 972.48	25.75		23.31	0.214	13M0G7D
			QPSK			24.85		22.41	0.174	13M0D7D
			16QAM			24.20		21.76	0.150	13M7G7D
		CP OFDM	QPSK			23.65		21.21	0.132	13M7D7D
			16QAM			25.71		23.27	0.212	17M9G7D
			QPSK			25.68		23.24	0.211	17M9G7D
	20	DFT-S OFDM	16QAM	3 910.02	3 969.99	24.78		22.34	0.171	17M9D7D
			QPSK			24.22		21.78	0.151	18M3G7D
			16QAM			23.68		21.24	0.133	18M3D7D
		CP OFDM	QPSK			25.74		23.30	0.214	22M9G7D
			BPSK			25.73		23.29	0.213	22M9G7D
			16QAM			24.83		22.39	0.173	23M0D7D
	25	DFT-S OFDM	QPSK	3 912.51	3 967.50	24.17		21.73	0.149	23M2G7D
			16QAM			23.64		21.20	0.132	23M3D7D
			QPSK			25.69		23.25	0.211	26M9G7D
		CP OFDM	BPSK			25.67		23.23	0.210	26M9G7D
			QPSK			24.70		22.26	0.168	26M9D7D
			16QAM			24.22		21.78	0.151	27M9G7D
	30	DFT-S OFDM	16QAM	3 915.00	3 964.98	23.63		21.19	0.132	27M9D7D
			BPSK			25.71		23.27	0.212	35M9G7D
			QPSK			25.69		23.25	0.211	35M9G7D
		CP OFDM	16QAM			24.77		22.33	0.171	35M9D7D
			QPSK			24.15		21.71	0.148	38M0G7D
			16QAM			23.67		21.23	0.133	38M0D7D
	50	DFT-S OFDM	BPSK	3 925.02	3 954.99	25.81		23.37	0.217	45M9G7D
			QPSK			25.77		23.33	0.215	45M8G7D
			16QAM			24.75		22.31	0.170	45M8D7D
		CP OFDM	QPSK			24.21		21.77	0.150	47M5G7D
			16QAM			23.65		21.21	0.132	47M5D7D
			BPSK			25.73		23.29	0.213	57M5G7D
	60	DFT-S OFDM	QPSK	3 930.00	3 949.98	25.72		23.28	0.213	57M5G7D
			16QAM			24.71		22.27	0.169	57M3D7D
			QPSK			24.16		21.72	0.149	58M1G7D
		CP OFDM	16QAM			23.61		21.17	0.131	58M0D7D
			BPSK			25.82		23.38	0.218	64M6G7D
			QPSK			25.80		23.36	0.217	64M5G7D
	70	DFT-S OFDM	16QAM	3 935.01	3 945.00	24.66		22.22	0.167	64M5D7D
			QPSK			24.06		21.62	0.145	67M7G7D
			16QAM			23.65		21.21	0.132	67M6D7D
		CP OFDM	BPSK			25.66		23.22	0.210	77M5G7D
			QPSK			25.66		23.22	0.210	77M2G7D
			16QAM			24.62		22.18	0.165	77M2D7D
	80	DFT-S OFDM	QPSK	3 939.99	3 939.99	24.08		21.64	0.146	77M4G7D
			16QAM			23.61		21.17	0.131	77M7D7D
		CP OFDM	QPSK							
			16QAM							

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NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n48 IC	10	CP OFDM	QPSK	3 555.00	3 694.98	20.99	0.90	21.89	0.155	8M59G7D
			16QAM			20.93		21.83	0.152	8M61D7D
	15	CP OFDM	QPSK	3 557.52	3 692.49	21.04		21.94	0.156	13M7G7D
			16QAM			20.95		21.85	0.153	13M7D7D
	20	CP OFDM	QPSK	3 560.01	3 690.00	21.08		21.98	0.158	18M3G7D
			16QAM			20.92		21.82	0.152	18M3D7D
	30	CP OFDM	QPSK	3 565.02	3 684.99	21.13		22.03	0.160	27M9G7D
			16QAM			21.02		21.92	0.156	27M9D7D
	40	CP OFDM	QPSK	3 570.00	3 679.98	21.15		22.05	0.160	37M9G7D
			16QAM			21.07		21.97	0.157	38M0D7D
NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77/78 Low Band FCC	10	CP OFDM	QPSK	3 455.01	3 544.98	24.88	0.94	25.82	0.382	8M65G7D
			16QAM			24.22		25.16	0.328	8M63D7D
	15	CP OFDM	QPSK	3 457.50	3 542.49	24.78		25.72	0.373	13M8G7D
			16QAM			24.31		25.25	0.335	13M7D7D
	20	CP OFDM	QPSK	3 460.02	3 540.00	24.70		25.64	0.366	18M3G7D
			16QAM			24.11		25.05	0.320	18M3D7D
	25	CP OFDM	QPSK	3 462.51	3 537.48	24.70		25.64	0.366	23M3G7D
			16QAM			24.08		25.02	0.318	23M3D7D
	30	CP OFDM	QPSK	3 465.00	3 534.99	24.78		25.72	0.373	27M9G7D
			16QAM			24.24		25.18	0.330	27M9D7D
	40	CP OFDM	QPSK	3 470.01	3 529.98	24.62		25.56	0.360	38M0G7D
			16QAM			24.18		25.12	0.325	38M0D7D
	50	CP OFDM	QPSK	3 475.02	3 525.00	24.66		25.60	0.363	47M6G7D
			16QAM			23.99		24.93	0.311	47M6D7D
	60	CP OFDM	QPSK	3 480.00	3 519.99	24.71		25.65	0.367	58M0G7D
			16QAM			24.06		25.00	0.316	58M1D7D
	70	CP OFDM	QPSK	3 485.01	3 514.98	24.67		25.61	0.364	67M7G7D
			16QAM			24.00		24.94	0.312	67M8D7D
	80	CP OFDM	QPSK	3 490.02	3 510.00	24.75		25.69	0.371	77M7G7D
			16QAM			24.10		25.04	0.319	77M7D7D
	90	CP OFDM	QPSK	3 495.00	3 504.99	24.77		25.71	0.372	87M8G7D
			16QAM			24.08		25.02	0.318	87M6D7D
	100	CP OFDM	QPSK	3 500.01	3 500.01	24.72		25.66	0.368	97M5G7D
			16QAM			24.14		25.08	0.322	97M5D7D

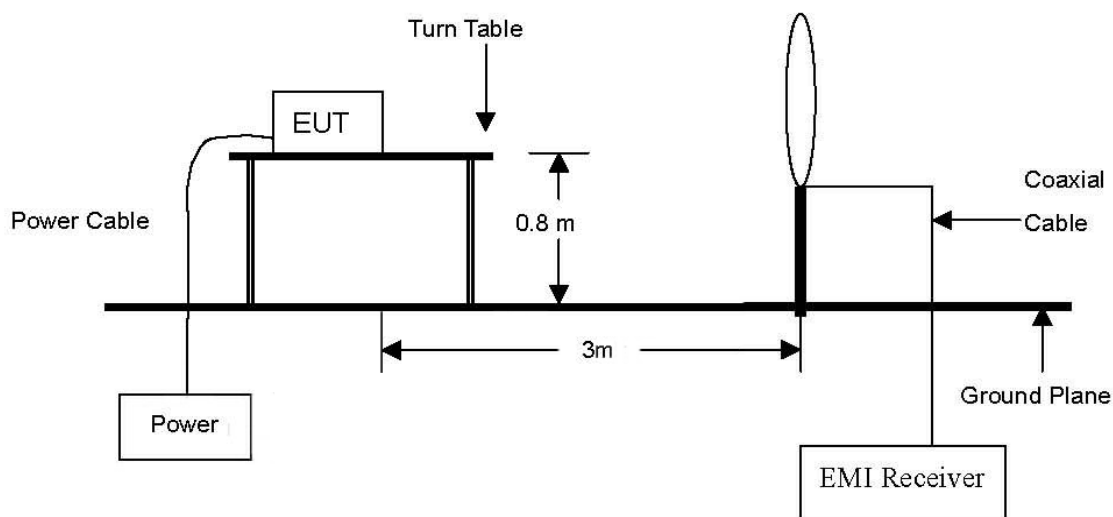
NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77/78 High Band FCC	10	CP OFDM	QPSK	3 705.00	3 975.00	24.98	0.57	25.55	0.359	8M61G7D
			16QAM			24.50		25.07	0.321	8M61D7D
	15	CP OFDM	QPSK	3 707.52	3 972.48	25.00		25.57	0.361	13M7G7D
			16QAM			24.48		25.05	0.320	13M7D7D
	20	CP OFDM	QPSK	3 710.01	3 969.99	24.97		25.54	0.358	18M3G7D
			16QAM			24.69		25.26	0.336	18M3D7D
	25	CP OFDM	QPSK	3 712.50	3 967.50	24.96		25.53	0.357	23M3G7D
			16QAM			24.55		25.12	0.325	23M3D7D
	30	CP OFDM	QPSK	3 715.02	3 964.98	24.99		25.56	0.360	27M9G7D
			16QAM			24.45		25.02	0.318	27M9D7D
	40	CP OFDM	QPSK	3 720.00	3 960.00	24.89		25.46	0.352	38M0G7D
			16QAM			24.47		25.04	0.319	38M0D7D
	50	CP OFDM	QPSK	3 725.01	3 954.99	24.97		25.54	0.358	47M6G7D
			16QAM			24.43		25.00	0.316	47M6D7D
	60	CP OFDM	QPSK	3 730.02	3 949.98	24.98		25.55	0.359	58M3G7D
			16QAM			24.50		25.07	0.321	58M1D7D
	70	CP OFDM	QPSK	3 735.00	3 945.00	25.15		25.72	0.373	67M7G7D
			16QAM			24.39		24.96	0.313	67M7D7D
	80	CP OFDM	QPSK	3 740.01	3 939.99	25.08		25.65	0.367	77M7G7D
			16QAM			24.47		25.04	0.319	77M7D7D
	90	CP OFDM	QPSK	3 745.02	3 934.98	25.17		25.74	0.375	87M8G7D
			16QAM			24.51		25.08	0.322	87M6D7D
	100	CP OFDM	QPSK	3 750.00	3 930.00	25.00		25.57	0.361	97M5G7D
			16QAM			24.53		25.10	0.324	97M7D7D

NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77/78 Low Band IC	10	CP OFDM	QPSK	3 455.01	3 894.99	24.61	0.94	25.55	0.359	8M61G7D
			16QAM			24.01		24.95	0.313	8M61D7D
	15	CP OFDM	QPSK	3 457.50	3 892.50	24.57		25.51	0.356	13M7G7D
			16QAM			23.94		24.88	0.308	13M7D7D
	20	CP OFDM	QPSK	3 460.02	3 889.98	24.51		25.45	0.351	18M3G7D
			16QAM			23.86		24.80	0.302	18M3D7D
	25	CP OFDM	QPSK	3 462.51	3 887.49	24.48		25.42	0.348	23M3G7D
			16QAM			23.96		24.90	0.309	23M3D7D
	30	CP OFDM	QPSK	3 465.00	3 885.00	24.50		25.44	0.350	27M9G7D
			16QAM			23.99		24.93	0.311	27M9D7D
	40	CP OFDM	QPSK	3 470.01	3 879.99	24.89		25.83	0.383	38M0G7D
			16QAM			24.32		25.26	0.336	38M0D7D
	50	CP OFDM	QPSK	3 475.02	3 874.98	24.85		25.79	0.379	47M6G7D
			16QAM			24.32		25.26	0.336	47M6D7D
	60	CP OFDM	QPSK	3 480.00	3 870.00	24.85		25.79	0.379	58M1G7D
			16QAM			24.16		25.10	0.324	58M1D7D
	70	CP OFDM	QPSK	3 485.01	3 864.99	24.81		25.75	0.376	67M8G7D
			16QAM			24.06		25.00	0.316	67M7D7D
	80	CP OFDM	QPSK	3 490.02	3 859.98	24.86		25.80	0.380	77M7G7D
			16QAM			24.08		25.02	0.318	77M7D7D
	90	CP OFDM	QPSK	3 495.00	3 855.00	24.87		25.81	0.381	87M6G7D
			16QAM			24.03		24.97	0.314	87M6D7D
	100	CP OFDM	QPSK	3 500.01	3 849.99	24.67		25.61	0.364	97M7G7D
			16QAM			24.32		25.26	0.336	97M7D7D
NR Band	Band width (MHz)	Modulation		Low Freq. (MHz)	Upper Freq. (MHz)	Conducted Average (dB m)	Ant. Gain (dB i)	E.I.R.P. Average (dB m)	E.I.R.P. Average (W)	Emission Designator
n77 High Band IC	10	CP OFDM	QPSK	3 905.01	3 975.00	24.68	0.57	25.25	0.335	8M59G7D
			16QAM			24.11		24.68	0.294	8M63D7D
	15	CP OFDM	QPSK	3 907.50	3 972.48	24.61		25.18	0.330	13M7G7D
			16QAM			24.00		24.57	0.286	13M7D7D
	20	CP OFDM	QPSK	3 910.02	3 969.99	24.62		25.19	0.330	18M3G7D
			16QAM			24.27		24.84	0.305	18M3D7D
	25	CP OFDM	QPSK	3 912.51	3 967.50	24.66		25.23	0.333	23M3G7D
			16QAM			24.08		24.65	0.292	23M3D7D
	30	CP OFDM	QPSK	3 915.00	3 964.98	24.62		25.19	0.330	27M9G7D
			16QAM			24.12		24.69	0.294	27M9D7D
	40	CP OFDM	QPSK	3 920.01	3 960.00	24.62		25.19	0.330	38M0G7D
			16QAM			24.15		24.72	0.296	38M0D7D
	50	CP OFDM	QPSK	3 925.02	3 954.99	24.57		25.14	0.327	47M6G7D
			16QAM			23.94		24.51	0.282	47M6D7D
	60	CP OFDM	QPSK	3 930.00	3 949.98	24.60		25.17	0.329	58M3G7D
			16QAM			23.98		24.55	0.285	58M1D7D
	70	CP OFDM	QPSK	3 935.01	3 945.00	24.67		25.24	0.334	67M7G7D
			16QAM			24.02		24.59	0.288	67M7D7D
	80	CP OFDM	QPSK	3 939.99	3 939.99	24.57		25.14	0.327	77M7G7D
			16QAM			24.03		24.60	0.288	77M5D7D

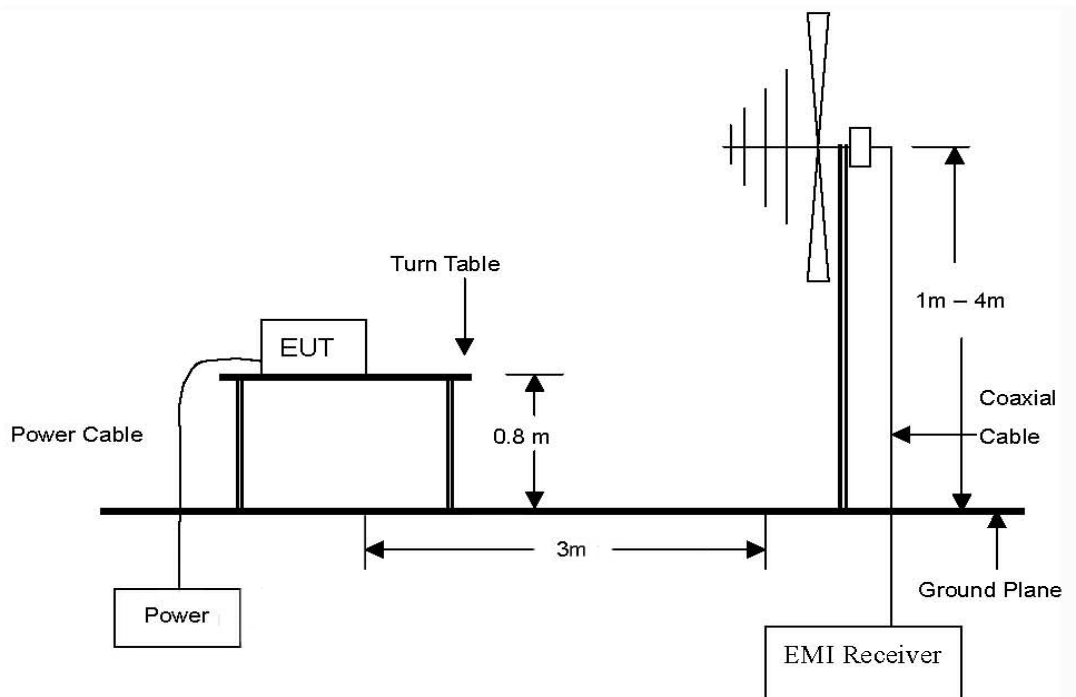
2. E.R.P. / E.I.R.P. & Radiated Spurious Emissions

2.1. Test setup

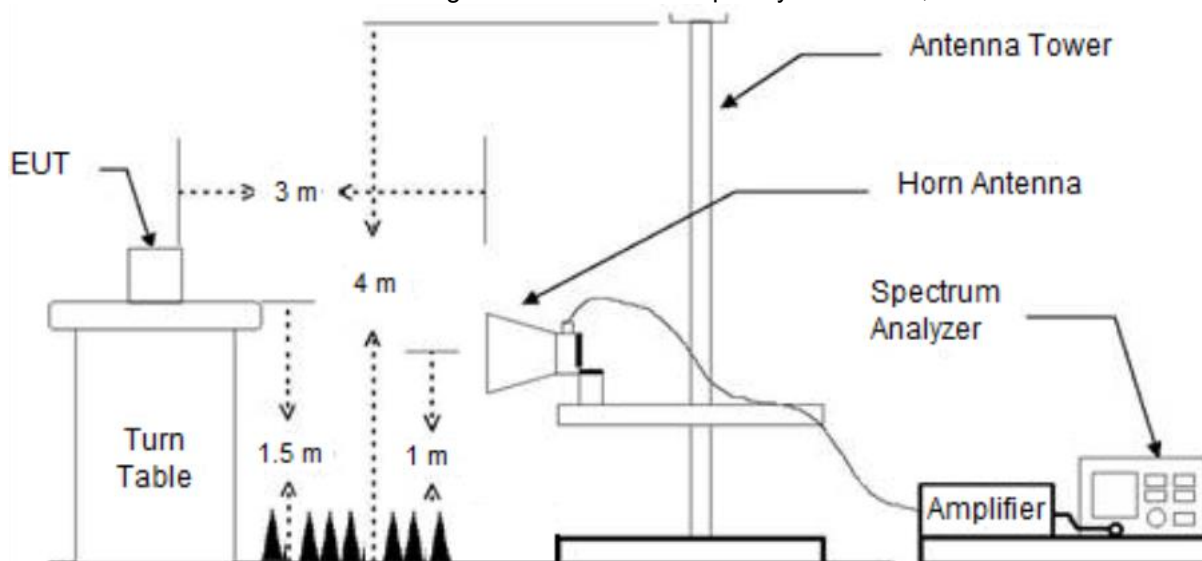
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 kHz to 30 MHz.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 GHz Emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 1 GHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.



2.2. Limit

2.2.1. Limit of E.R.P. / E.I.R.P.

FCC

- §27.50(h)(2), Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

- §27.50(j)(3), Mobile and portable stations are limited to 1 Watt EIRP. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

- §27.50(k)(3), Mobile devices are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

IC

- RSS-192 Issue 5

5.5, the maximum output power of the equipment measured in terms of average values shall comply with the limits specified in table 1.

Table 1 : Maximum power of equipment

Equipment type	Maximum Power
Non-AAS: base station (outdoor), fixed P-P station, P-MP hub station	68 dBm e.i.r.p./5 MHz
AAS: base station (outdoor), P-MP hub station	47 dBm TRP/5 MHz
Indoor base station	39 dBm TRP/channel bandwidth
Fixed subscriber equipment	39 dBm e.i.r.p./channel bandwidth
Subscriber equipment other than fixed subscriber equipment	30 dBm e.i.r.p./channel bandwidth

- RSS-198 Issue 1

5.5, the maximum power spectral density per antenna (considering all radiation patterns) of the equipment, measured in terms of average values, shall comply with the limits specified in table 1.

Table 1 : Maximum power spectral density of equipment

Equipment type	Maximum power spectral density (per antenna)
Outdoor base station, fixed service equipment	37 dBm/MHz e.i.r.p.
Indoor base station	20 dBm/MHz e.i.r.p.
Fixed subscriber equipment	20 dBm/MHz e.i.r.p.
Subscriber equipment other than fixed subscriber equipment	30 dBm /channel bandwidth e.i.r.p.

- RSS-199 Issue 4

5.5, the maximum output power of the equipment shall comply with the limits specified in table 3. In this table, maximum power refers to the equivalent isotropically radiated power (e.i.r.p.) or total radiated power (TRP), measured in terms of average values.

Subscriber equipment other than fixed subscriber equipment shall not exceed an e.i.r.p of 2W per channel bandwidth.

Fixed subscriber equipment shall not exceed the following:

- I. conducted power of 2W per channel bandwidth for all ports
- II. e.i.r.p of 40 W per channel bandwidth

The maximum power limits for fixed station and base station are provided in Table 3. The limits in this RSS are specified for the purpose of certification and may not apply to all deployment scenarios. Consult SRSP-517 for more deployment details in the band 2 500-2 690 MHz.

Table 3: Maximum power of fixed station and base station in the band 2 500-2 690 MHz

Equipment type	Maximum power
Non-AAS fixed station and base station	e.i.r.p of 1 640 W / MHz
AAS fixed station and base station	TRP of 43 dB m / MHz

2.2.2. Limit of Radiated Spurious Emissions

FCC

- §27.53(l)(2), for mobile operations in the 3 700-3 980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm /MHz. Compliance with this paragraph (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. 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.

- §27.53(m)(4), for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log_{10} (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log_{10} (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log_{10} (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log_{10} (P)$ dB on all frequencies between 2 490.5 MHz and 2 496 MHz and $55 + 10 \log_{10} (P)$ dB at or below 2 490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2 495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

- §27.53(n)(2), for mobile operations in the 3 450-3 550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm /MHz.. Compliance with this paragraph (n)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. 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.

IC

- RSS-192 Issue 5

5.6, unwanted emissions shall be measured in terms of average values when the transmitter is operating at the manufacturer's rated power and modulated as specified in RSS-Gen.

Equipment shall meet the unwanted emission limits, specified below, outside each frequency block group. For each channel bandwidth supported by the equipment under test, the unwanted emissions shall be measured and reported for two channel frequencies: one located as close as possible to the low end and one located as close as possible to the high end of the equipment's operating frequency range.

If the transmitter is designed for multi-carrier operation, the tests shall be carried out using both the maximum and minimum number of carriers intended for the equipment.

5.6.3, subscriber equipment shall have the TRP or conducted power (per antenna), where applicable, of unwanted emission not exceeding the following:

a. the limits in table 6

b. a limit of -30 dBm/MHz in the frequency range greater than (B+5) MHz from the edge of the frequency band

Table 6: Unwanted emission limits for subscriber equipment

Frequency block group (B)	Offset frequency from the edge of the frequency block group (MHz)			
	0-1	1-5	5-B	>B
10 MHz, 20 MHz, 30 MHz and 40 MHz	-13 dBm/1% of B	-10 dBm/MHz	-13 dBm/MHz	-25 dBm/MHz
> 40 MHz	-13 dBm/400 kHz	-10 dBm/MHz	-13 dBm/MHz	-25 dBm/MHz

- RSS-198 Issue 1

5.6, unwanted emissions shall be measured in term of average value when the transmitter is operating at the manufacturer's rated power and modulated as specified in RSS-Gen.

Equipment shall meet the unwanted emission limits, specified below, outside each frequency block group. For each channel bandwidth supported by the equipment under test, the unwanted emissions shall be measured and reported for two channel frequencies: one located as close as possible to the low end and one located as close as possible to the high end of the equipment's operating frequency range.

5.6.1, the unwanted emission outside the frequency block group shall not exceed the TRP or total conducted power (sum of conducted power across all antenna connectors) limits as specified in table 2.

Table 2: Unwanted emission limits for all equipment

Offset frequency from the edge of the frequency block group (MHz)	Unwanted emission limits for all equipment
≤1	-13 dBm/1% OB*
>1	-13 dBm/MHz

*OB is the occupied bandwidth

5.6.2, for frequencies between 4 200 MHz and 4 400 MHz, the unwanted emission of outdoor base station, indoor base station and fixed service equipment shall not exceed a TRP or total conducted power (sum of conducted power across all antenna connectors) limit of -30 dBm/MHz.

- RSS-199 Issue 4

5.6, unwanted emissions shall be measured in terms of average values when the transmitter is operating at the manufacturer's rated power and modulated as specified in RSS-Gen.

Equipment shall meet the unwanted emission limits, specified below, outside each frequency block group. For each channel bandwidth supported by the equipment under test, the unwanted emissions shall be measured and reported for two channel frequencies: one located as close as possible to the low end and one located as close as possible to the high end of the equipment's operating frequency range.

For the unwanted emission limits, in the 1 MHz band immediately outside and adjacent to the frequency block group, the power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth for fixed stations, base stations, and fixed subscriber equipment, and 2 % for subscriber equipment other than fixed subscriber equipment. Beyond this 1 MHz band, a resolution bandwidth of 1 MHz shall be used. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz, or 1 % or 2 % of the occupied bandwidth, as applicable.

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors), where applicable, of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in the tables below.

Table 4: Unwanted emission limits for fixed station, base station and fixed subscriber equipment

Offset from the edge of the frequency block or frequency block group (MHz)	Unwanted emission limit
≤1	-13 dB m/(1% of OB*)
>1	-13 dB m/MHz

* OB is the occupied bandwidth

Table 5: Unwanted emission limits for subscriber equipment other than fixed subscriber equipment

Offset from the edge of the frequency block or frequency block group (MHz)	Unwanted emission limit
0-1	-10 dB m/(2% of OB*)
1-5	-10 dB m/MHz
5-X**	-13 dB m/MHz
≥X	-25 dB m/MHz

* OB is the occupied bandwidth

** X is 6 MHz or the equipment occupied bandwidth, whichever is greater

In addition to complying with the limits in table 5, subscriber equipment other than fixed subscriber equipment shall not exceed -13 dB m/MHz on all frequencies between 2 490.5 MHz and 2 496 MHz, and -25 dB m/MHz at or below 2 490.5 MHz.

2.3. Test Procedure

2.3.1. E.R.P. or E.I.R.P. from conducted RF output power

According to subclause 5.2.5.5 of ANSI C63.26-2015 E.R.P. and E.I.R.P. are defined as the product of the power supplied to the antenna and its gain.

The relevant equation for determining the E.R.P. or E.I.R.P. from the conducted RF output power measured using the guidance provided above is:

$$\text{E.R.P. or E.I.R.P.} = P_{\text{Meas}} + G_T$$

where:

E.R.P. or E.I.R.P. = effective radiated power or equivalent isotropically radiated power, respectively
(expressed in the same units as P_{Meas} , typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

2.3.2. Radiated Spurious Emissions

The test based on ANSI C63.26-2015 and KDB 971168 D01 Power Meas License Digital Systems v03r01.

1. On a test site, the EUT shall be placed at 0.8 m or 1.5 m height on a turn table, and in the position close to normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to correspond to the fundamental frequency of the transmitter.
3. The output of the test antenna shall be connected to the measuring receiver and the peak detector is used for the measurement.
4. Radiated spurious emissions measurement method was set as follows:
RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz, VBW $\geq 3 \times$ RBW,
Detector = RMS, trace mode = max hold, per the guidelines of KDB 971168 D01 Power Meas License Digital Systems v03r01.
5. The transmitter shall be switched on, the measuring receiver shall be tuned to the frequency of the transmitter under test.
6. The test antenna shall be raised and lowered through the specified range of height until the maximum signal level is detected by the measuring receiver.
7. The transmitter shall be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
8. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
9. The maximum signal level detected by the measuring receiver shall be noted.
10. In necessary, the input attenuator setting on the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
11. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
12. The measurement shall be repeated with the test antenna orientated for horizontal polarization.

2.4. Test Results

Ambient temperature : (23 ± 1) °C
Relative humidity : 47 %

2.4.1. E.I.R.P.

NR_SISO

Band	Frequency (MHz)	Maximum Conducted Power (dB m)	Maximum Conducted Power (W)	Antenna Gain (dB i)	Maximum E.I.R.P. (dB m)	Maximum E.I.R.P. (W)	Maximum E.R.P. (dB m)	Maximum E.R.P. (W)	Limit
n41 FCC	2 496 ~ 2 690	25.93	0.392	0.34	26.27	0.424			2 W E.I.R.P.
n41 IC	2 500 ~ 2 690	25.91	0.390	0.34	26.25	0.422			2 W E.I.R.P.
n48 IC	3 550 ~ 3 700	21.18	0.131	-2.11	19.07	0.081			30 dB m / E.I.R.P.
n77/78 Low band FCC	3 450 ~ 3 550	25.93	0.392	-2.07	23.86	0.243			1 W E.I.R.P.
n77/78 High band FCC	3 700 ~ 3 980	26.44	0.441	-2.44	24.00	0.251			1 W E.I.R.P.
n77/78 Low band IC	3 450 ~ 3 900	26.04	0.402	-2.07	23.97	0.249			30 dB m / E.I.R.P.
n77 High band IC	3 900 ~ 3 980	25.82	0.382	-2.44	23.38	0.218			30 dB m / E.I.R.P.

NR_MIMO

Band	Frequency (MHz)	Maximum Conducted Power (dB m)	Maximum Conducted Power (W)	Antenna Gain (dB i)	Maximum E.I.R.P. (dB m)	Maximum E.I.R.P. (W)	Maximum E.R.P. (dB m)	Maximum E.R.P. (W)	Limit
n48 IC	3 550 ~ 3 700	21.15	0.130	0.90	22.05	0.160			30 dB m / E.I.R.P.
n77/78 Low band FCC	3 450 ~ 3 550	24.88	0.308	0.94	25.82	0.382			1 W E.I.R.P.
n77/78 High band FCC	3 700 ~ 3 980	25.17	0.329	0.57	25.74	0.375			1 W E.I.R.P.
n77/78 Low band IC	3 450 ~ 3 900	24.89	0.308	0.94	25.83	0.383			30 dB m / E.I.R.P.
n77 High band IC	3 900 ~ 3 980	24.68	0.294	0.57	25.25	0.335			30 dB m / E.I.R.P.

Remark;

1. E.I.R.P. (dB m) = Maximum Conducted Power (dB m) + Antenna Gain (dB i)

2.4.2. Radiated Spurious Emissions

- NR_SISO

NR Band 41 (25 MHz - DFT-S-OFDM BPSK)_FCC

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 508.51 MHz)									
7 491.61	43.75	H	36.10	-25.41	54.44	-95.26	-40.82	-25	15.82
7 491.52	53.29	V	36.10	-25.41	63.98	-95.26	-31.28	-25	6.28
9 988.46	46.26	H	37.68	-20.17	63.77	-95.26	-31.49	-25	6.49
Above 10 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (2 592.99 MHz)									
5 173.25	43.11	H	33.65	-28.08	48.68	-95.26	-46.58	-25	21.58
5 173.62	39.82	V	33.65	-28.09	45.38	-95.26	-49.89	-25	24.89
7 759.91	49.43	V	35.92	-24.22	61.13	-95.26	-34.13	-25	9.13
Above 7 800.00	Not detected	-	-	-	-	-	-	-	-
High Channel (2 677.50 MHz)									
5 352.21	60.05	H	34.00	-28.31	65.74	-95.26	-29.52	-25	4.52
5 352.16	53.20	V	34.00	-28.31	58.89	-95.26	-36.37	-25	11.37
8 028.77	38.73	H	36.16	-23.52	51.37	-95.26	-43.89	-25	18.89
8 028.52	43.85	V	36.16	-23.52	56.49	-95.26	-38.77	-25	13.77
Above 8 100.00	Not detected	-	-	-	-	-	-	-	-

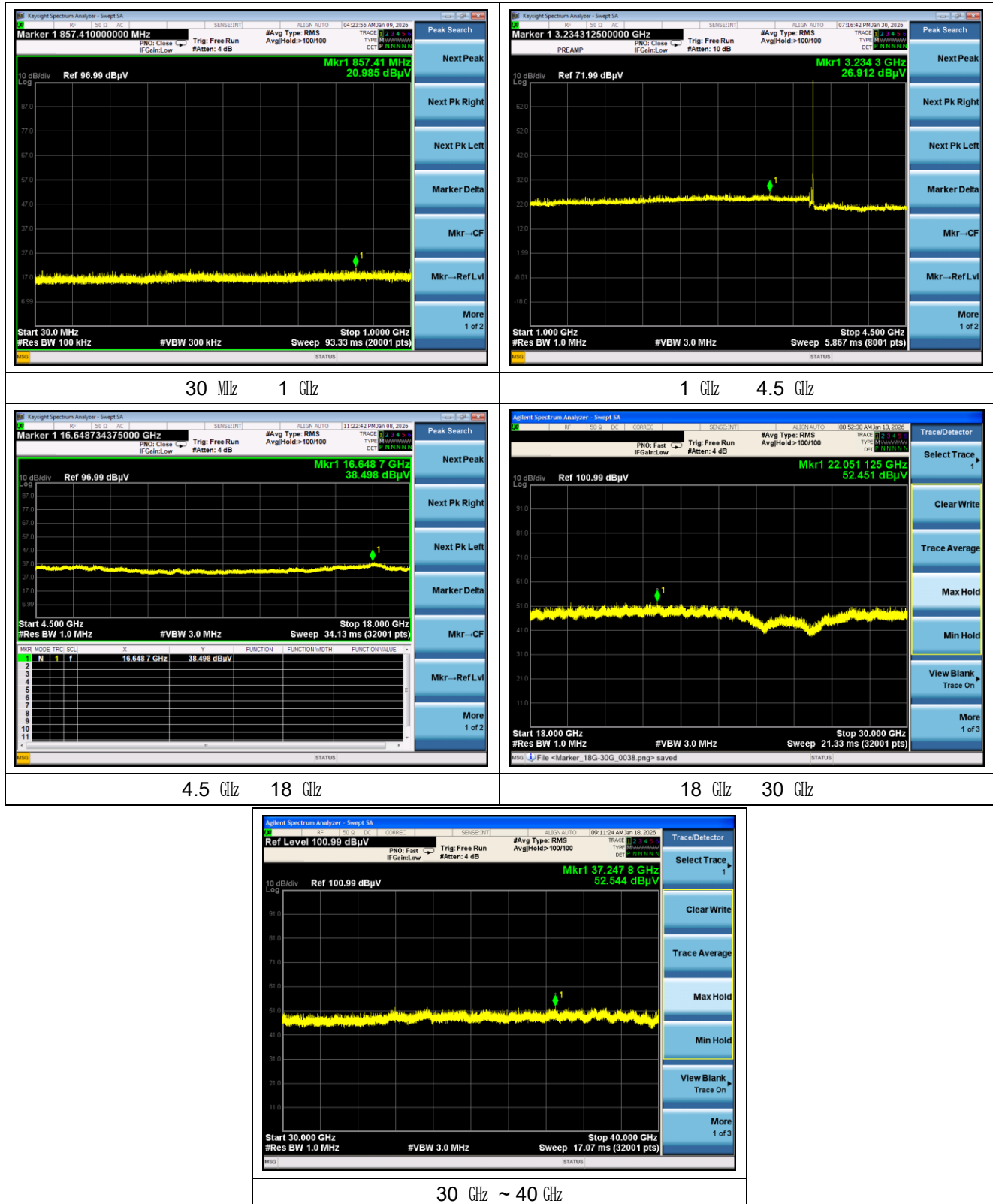
NR Band 41 (25 MHz - DFT-S-OFDM BPSK)_IC

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 512.50 MHz)									
7 504.41	52.91	V	36.09	-25.32	63.68	-95.26	-31.58	-25	6.58
Above 7 600.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (2 595.00 MHz)									
5 162.71	44.92	H	33.63	-27.68	50.87	-95.26	-44.39	-25	19.39
7 744.39	40.33	H	35.90	-24.37	51.86	-95.26	-43.40	-25	18.40
7 744.54	47.14	V	35.90	-24.37	58.67	-95.26	-36.59	-25	11.59
Above 7 800.00	Not detected	-	-	-	-	-	-	-	-
High Channel (2 677.50 MHz)									
5 322.83	60.25	H	33.95	-28.37	65.83	-95.26	-29.43	-25	4.43
Above 5 400.00	Not detected	-	-	-	-	-	-	-	-

NR Band 48 (20 MHz - DFT-S-OFDM BPSK)_IC

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 560.01 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (3 624.99 MHz)									
**857.41	20.99	-	27.47	4.42	52.88	-95.26	-42.38	-30	12.38
**16 648.70	38.50	-	41.60	-17.37	62.73	-95.26	-32.53	-30	2.53
**22 051.13	52.45	-	38.80	-39.96	51.29	-95.26	-43.97	-30	13.97
**37 247.80	52.54	-	42.50	-33.86	61.18	-95.26	-34.08	-30	4.08
High Channel (3 690.00 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

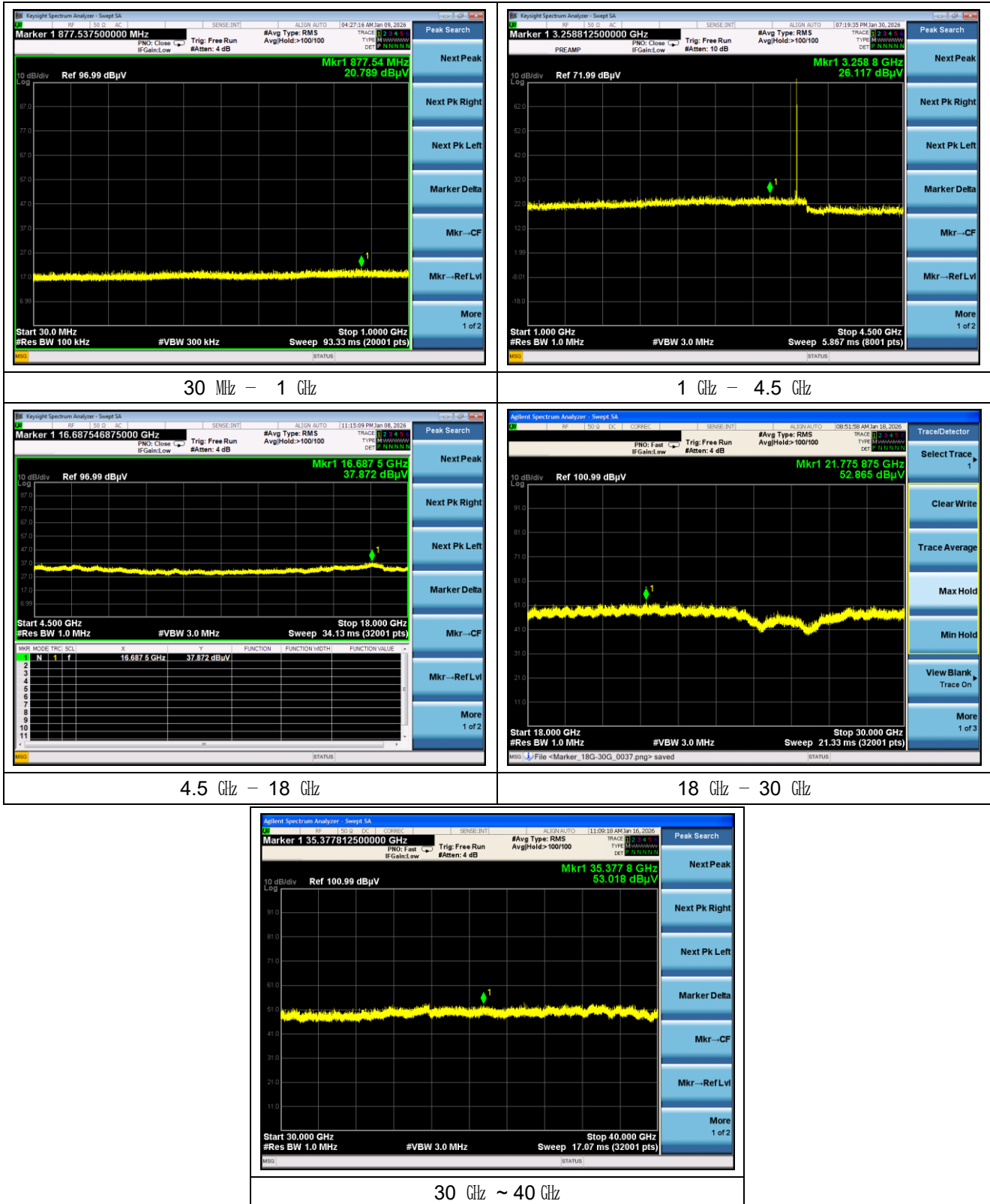
NR Band 48_IC



NR Band 77/78 Low Band (15 MHz - DFT-S-OFDM BPSK)_FCC

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 457.50 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (3 500.01 MHz)									
**877.54	20.79	-	27.60	4.52	52.91	-95.26	-42.35	-13	29.35
**16 687.50	37.87	-	41.68	-17.43	62.12	-95.26	-33.14	-13	20.14
**21 775.88	52.87	-	38.78	-39.92	51.73	-95.26	-43.53	-13	30.53
**35 377.80	53.02	-	41.38	-32.11	62.29	-95.26	-32.97	-13	19.97
High Channel (3 542.49 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

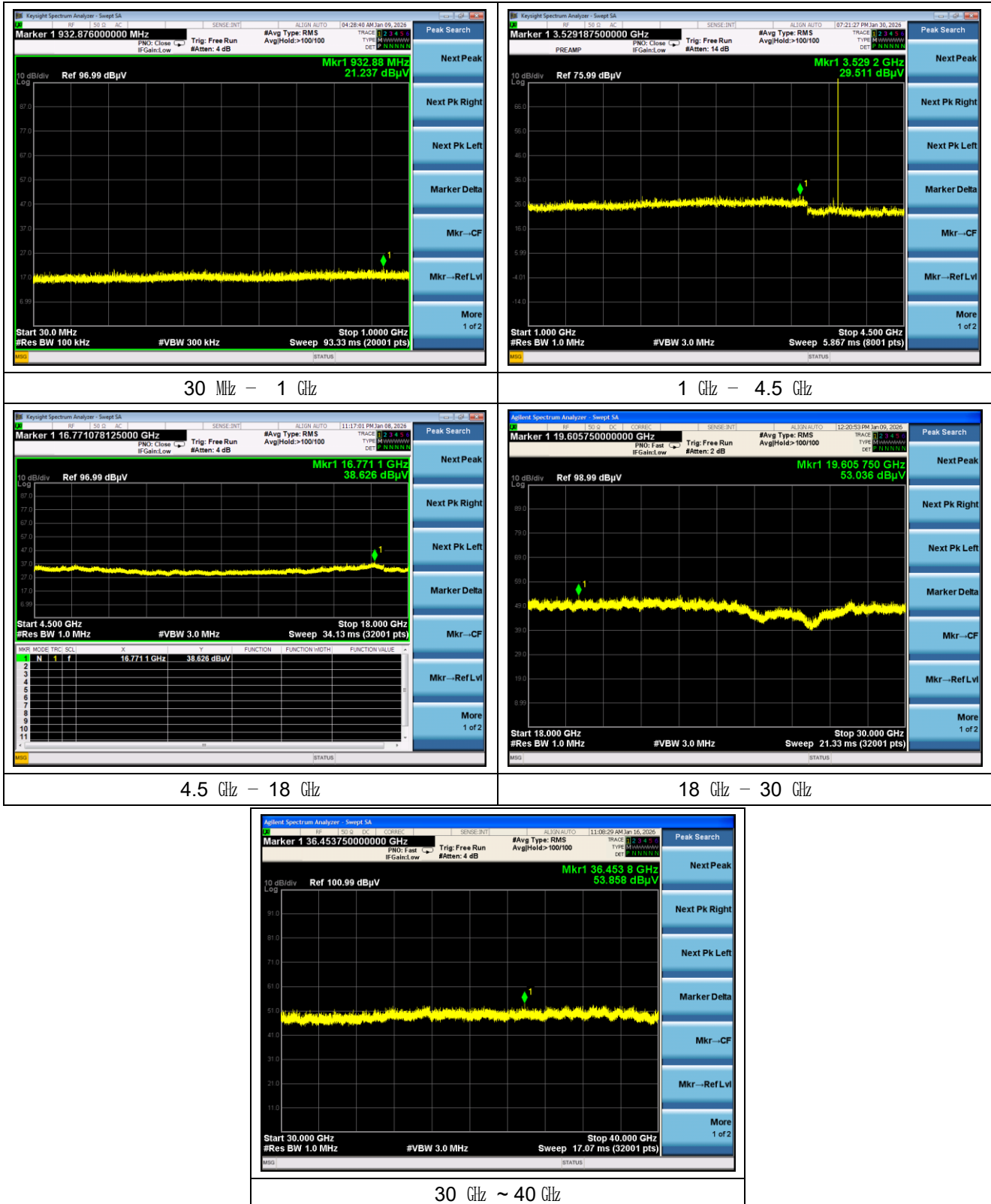
NR Band 77/78 Low Band_FCC



NR Band 77/78 High Band (90 MHz - DFT-S-OFDM BPSK)_FCC

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 745.02 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (3 840.00 MHz)									
**932.88	21.24	-	28.36	4.60	54.20	-95.26	-41.06	-13	28.06
**16 777.10	38.63	-	41.90	-17.29	63.24	-95.26	-32.02	-13	19.02
**19 605.75	53.04	-	37.90	-41.10	49.84	-95.26	-45.42	-13	32.42
**36 453.80	53.86	-	42.46	-34.72	61.60	-95.26	-33.66	-13	20.66
High Channel (3 934.98 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

NR Band 77/78 High Band_FCC



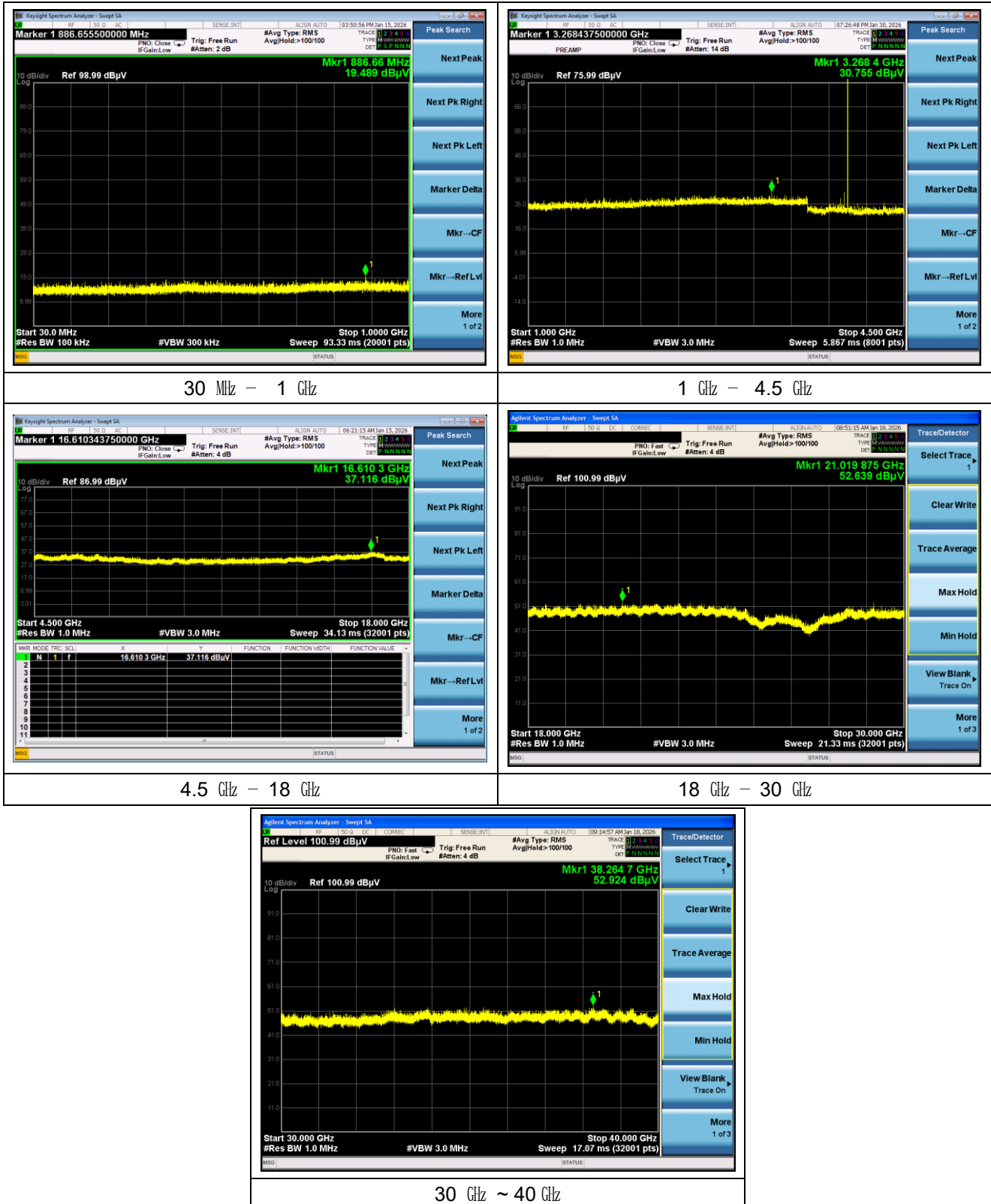
NR Band 77/78 Low Band (100 MHz - DFT-S-OFDM BPSK)_IC

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 500.01 MHz)									
Below 1 000.00	Not detected	–	–	–	–	–	–	–	–
Above 1 000.00	Not detected	–	–	–	–	–	–	–	–
Middle Channel (3 675.00 MHz)									
Below 1 000.00	Not detected	–	–	–	–	–	–	–	–
Above 1 000.00	Not detected	–	–	–	–	–	–	–	–
High Channel (3 849.99 MHz)									
7 602.80	44.33	H	35.99	-25.11	55.21	-95.26	<u>-40.05</u>	-30	10.05
7 602.68	39.26	V	35.99	-25.11	50.14	-95.26	-45.12	-30	15.12
Above 7 700.00	Not detected	–	–	–	–	–	–	–	–

NR Band 77 High Band (70 MHz - DFT-S-OFDM BPSK)_IC

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 935.01 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (3 939.99 MHz)									
**886.66	19.49	-	27.80	4.51	51.80	-95.26	-43.46	-13	30.46
**16 610.30	37.12	-	41.60	-16.99	61.73	-95.26	-33.53	-13	20.53
**21 019.88	52.64	-	38.32	-39.83	51.13	-95.26	-44.13	-13	31.13
**38 264.70	52.92	-	43.16	-32.91	63.17	-95.26	-32.09	-13	19.09
High Channel (3 945.00 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

NR Band 77 High Band_IC

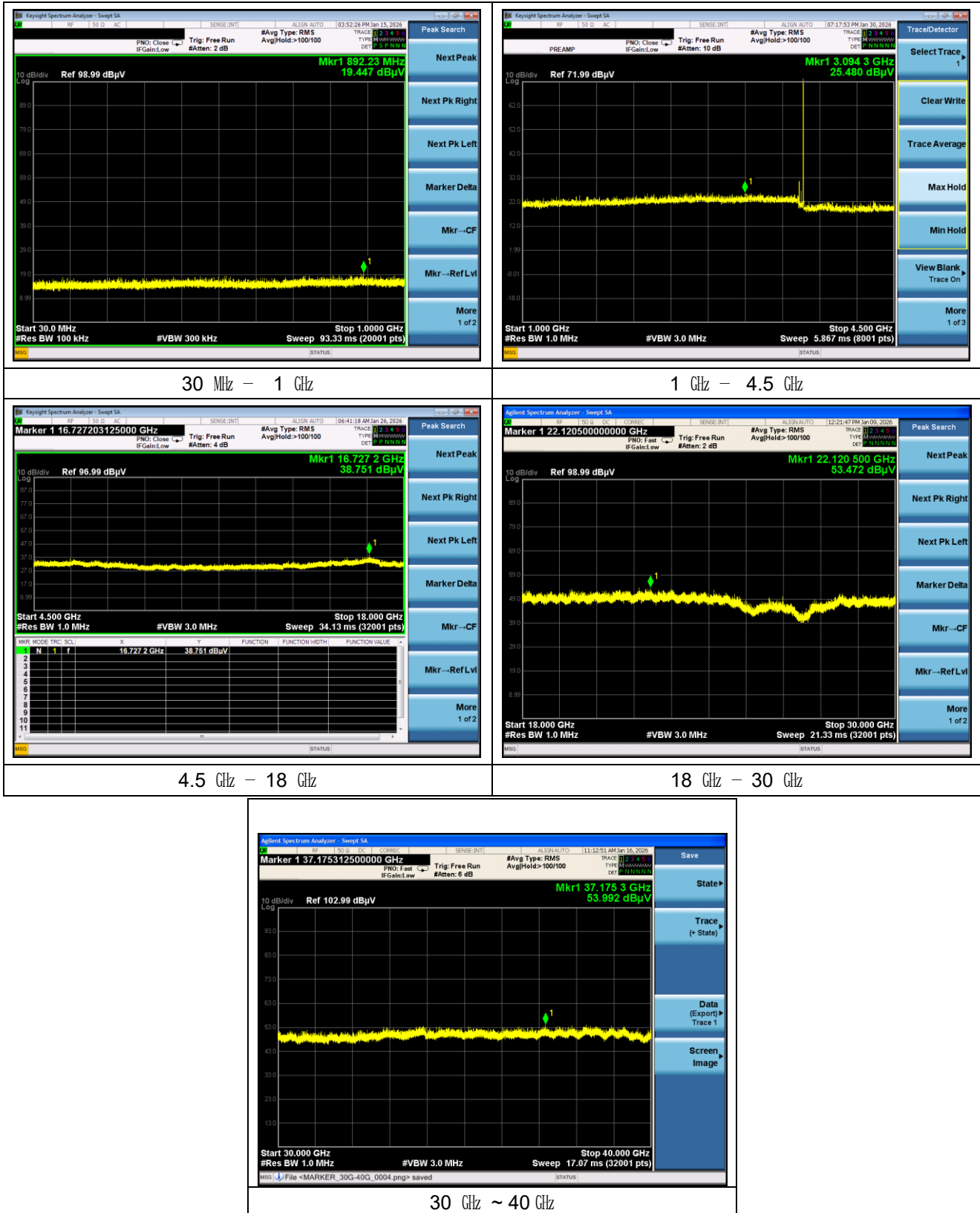


- NR_MIMO

NR Band 48 (40 MHz - CP-OFDM QPSK)_IC

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 570.00 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (3 624.99 MHz)									
**892.23	19.45	-	27.90	4.49	51.84	-95.26	-43.42	-30	13.42
**16 727.20	38.75	-	41.81	-17.07	63.49	-95.26	-31.77	-30	1.77
**22 120.50	53.47	-	38.80	-39.84	52.43	-95.26	-42.83	-30	12.83
**37 175.30	53.99	-	42.50	-33.23	63.26	-95.26	-32.00	-30	2.00
High Channel (3 679.98 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

NR Band 48_IC



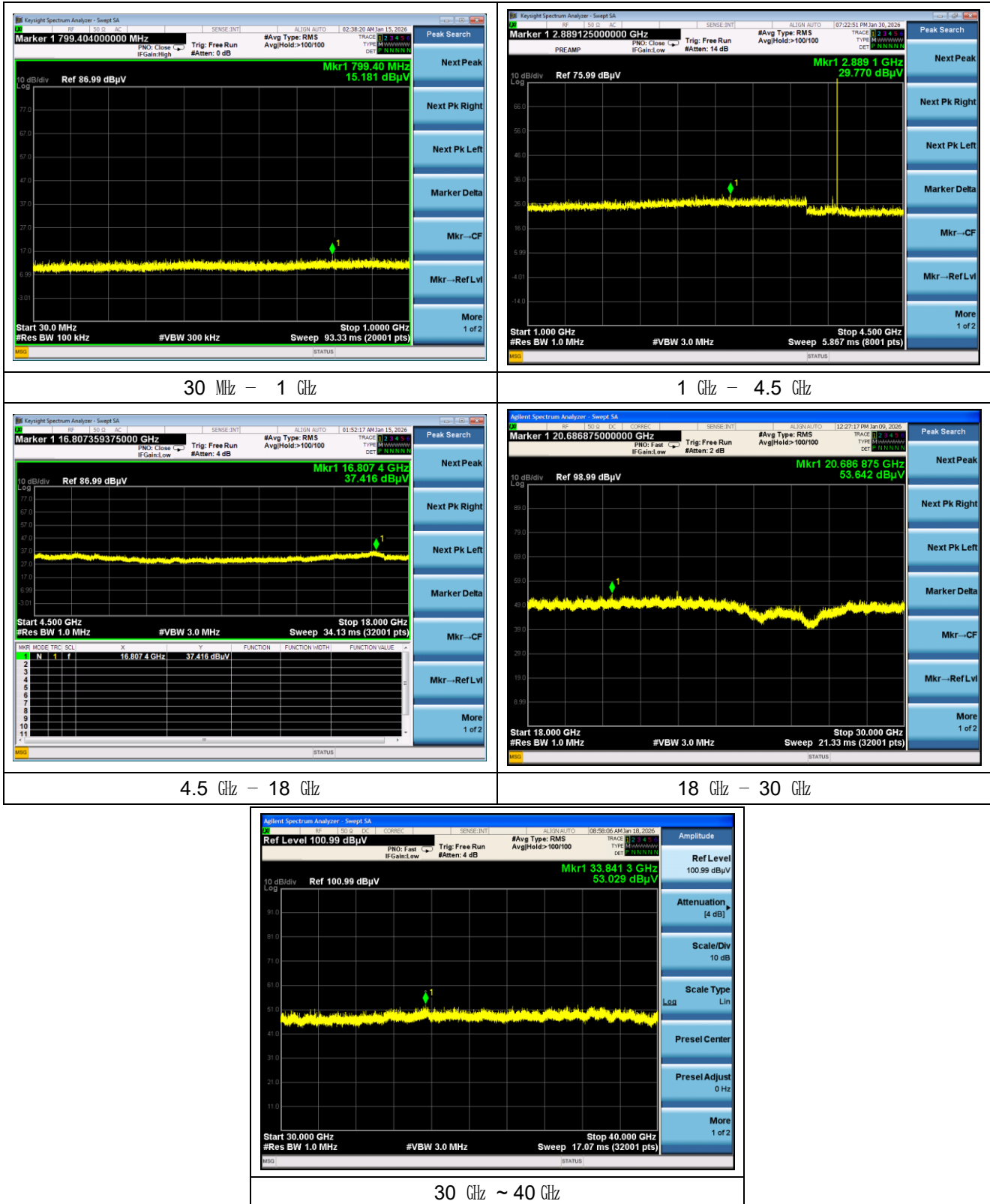
NR Band 77/78 Low Band (10 MHz - CP-OFDM QPSK)_FCC

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 455.01 MHz)									
6 902.41	43.91	V	35.50	-25.38	54.03	-95.26	-41.23	-13	28.23
Above 7 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (3 500.01 MHz)									
6 992.59	44.57	V	35.50	-25.01	55.06	-95.26	<u>-40.20</u>	-13	27.20
Above 7 000.00	Not detected	-	-	-	-	-	-	-	-
High Channel (3 544.98 MHz)									
7 082.46	41.21	V	35.66	-24.47	52.40	-95.26	-42.86	-13	29.86
Above 7 100.00	Not detected	-	-	-	-	-	-	-	-

NR Band 77/78 High Band (90 MHz - CP-OFDM QPSK)_FCC

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 745.02 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (3 840.00 MHz)									
**799.40	15.18	-	26.90	4.23	46.31	-95.26	-48.95	-13	35.95
**16 807.40	37.42	-	41.91	-17.22	62.11	-95.26	-33.15	-13	20.15
**20 686.88	53.64	-	38.19	-39.60	52.23	-95.26	-43.03	-13	30.03
**33 841.30	53.03	-	41.35	-39.16	55.22	-95.26	-40.04	-13	27.04
High Channel (3 934.98 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

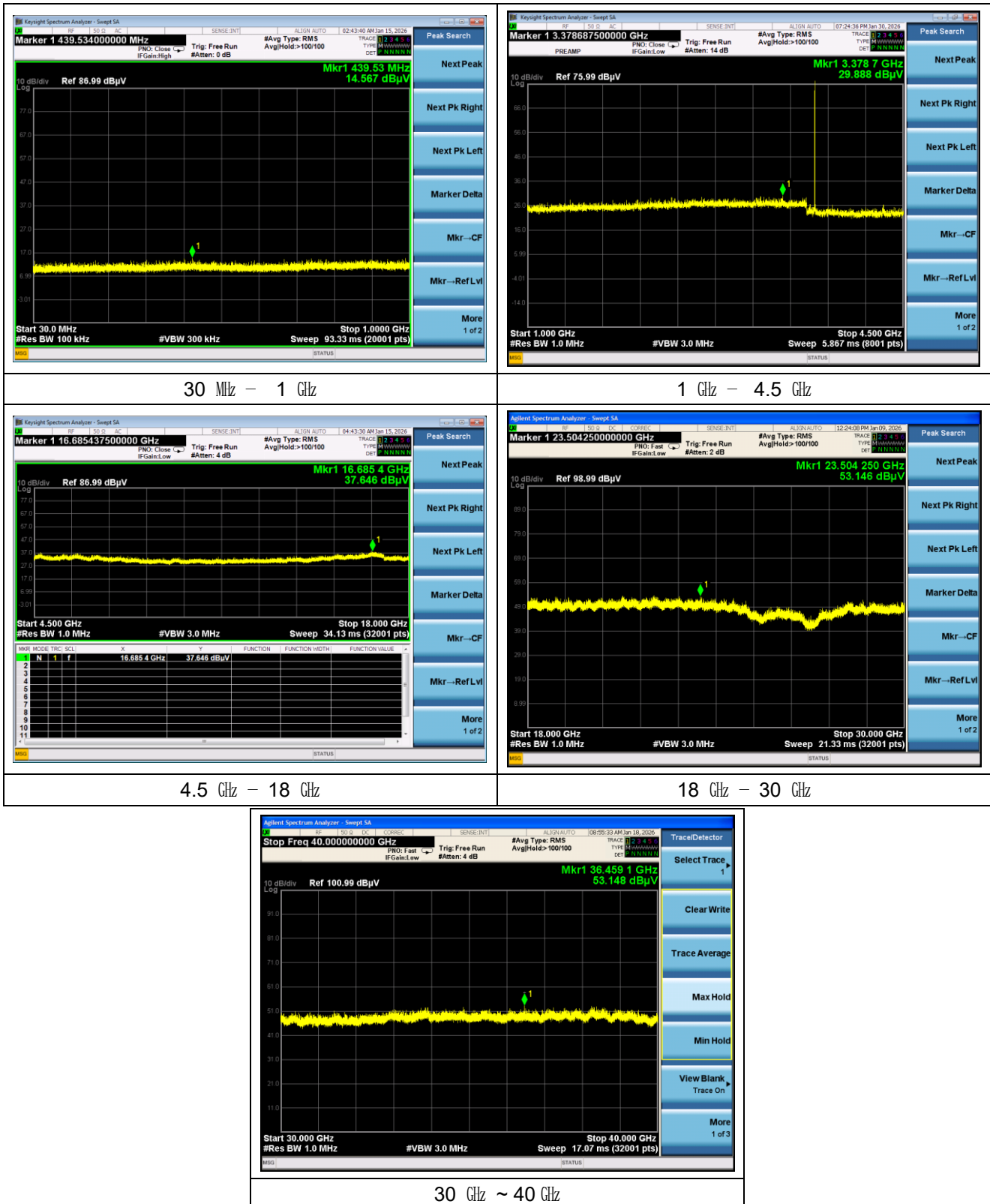
NR Band 77/78 High Band_FCC



NR Band 77/78 Low Band (40 MHz - CP-OFDM QPSK)_IC

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 470.01 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (3 675.00 MHz)									
**439.53	14.57	-	22.22	3.12	39.91	-95.26	-55.35	-30	25.35
**16 685.40	37.65	-	41.67	-17.46	61.86	-95.26	-33.40	-30	3.40
**23 504.25	53.15	-	38.80	-37.17	54.78	-95.26	-40.48	-30	10.48
**36 459.10	53.15	-	42.48	-34.77	60.86	-95.26	-34.40	-30	4.40
High Channel (3 879.99 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

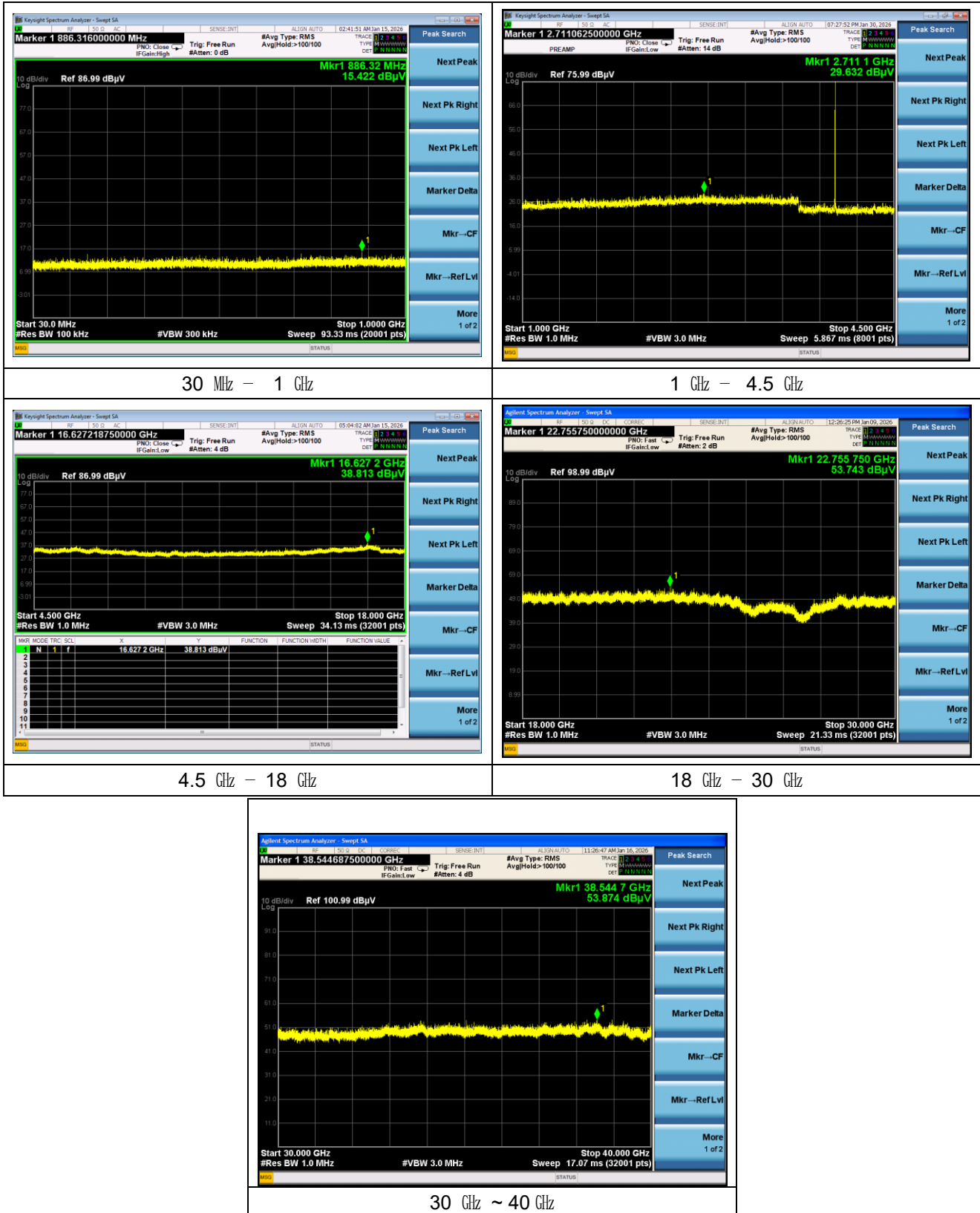
NR Band 77/78 Low Band_IC



NR Band 77 High Band (10 MHz - CP-OFDM QPSK)_IC

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 905.01 MHz)									
Below 1 000.00	Not detected	–	–	–	–	–	–	–	–
Above 1 000.00	Not detected	–	–	–	–	–	–	–	–
Middle Channel (3 939.99 MHz)									
**886.32	15.42	–	27.80	4.51	47.73	-95.26	-47.53	-13	34.53
**16 627.20	38.81	–	41.60	-17.05	63.36	-95.26	-31.90	-13	18.90
**22 755.75	53.74	–	38.90	-37.87	54.77	-95.26	-40.49	-13	27.49
**38 544.70	53.87	–	43.78	-34.42	63.23	-95.26	-32.03	-13	19.03
High Channel (3 975.00 MHz)									
Below 1 000.00	Not detected	–	–	–	–	–	–	–	–
Above 1 000.00	Not detected	–	–	–	–	–	–	–	–

NR Band 77 High Band_IC



ENDC

66A-n77A Low Band (10 MHz - DFT-S-OFDM BPSK)_FCC

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (3 455.01 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
Middle Channel (3 500.01 MHz)									
**835.15	19.77	-	27.06	4.34	51.17	-95.26	-44.09	-13	31.09
**16 737.80	37.60	-	41.85	-17.10	62.35	-95.26	-32.91	-13	19.91
**22 738.88	53.04	-	38.90	-37.92	54.02	-95.26	-41.24	-13	28.24
**36 453.80	53.86	-	42.46	-34.72	61.60	-95.26	-33.66	-13	20.66
High Channel (3 544.98 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-