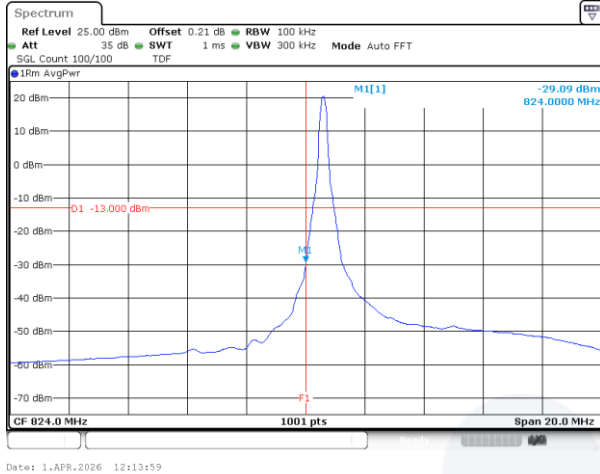
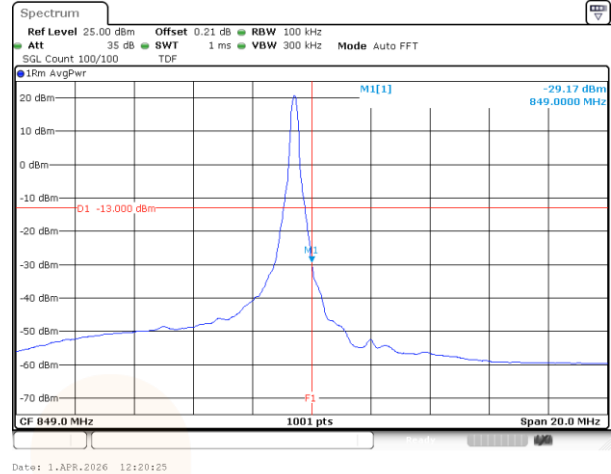


10M BW QPSK

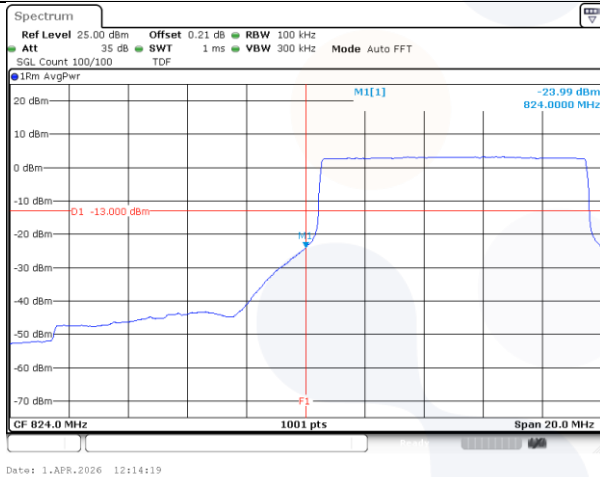
Low channel 1RB



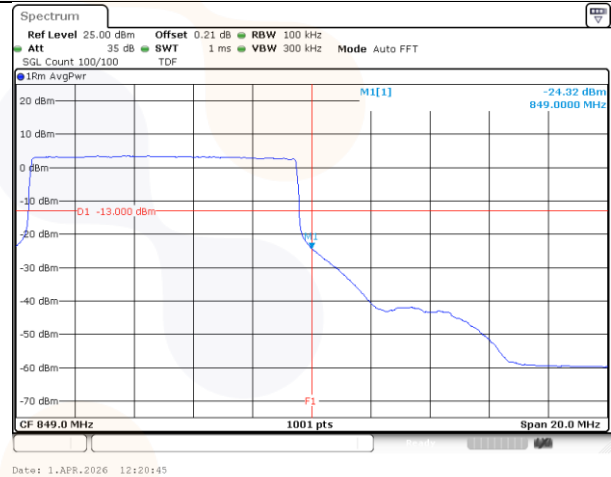
High channel 1RB



Low channel FRB

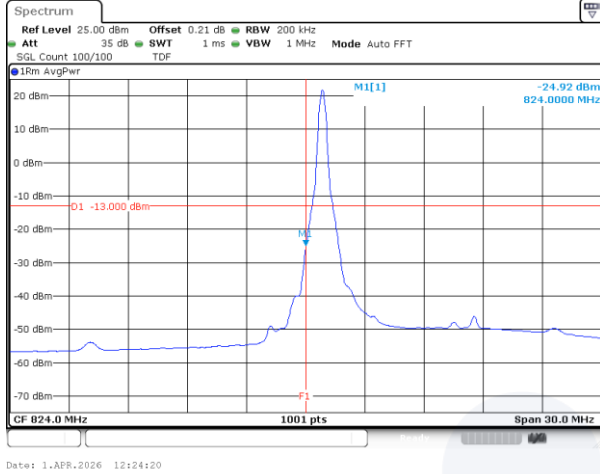


High channel FRB

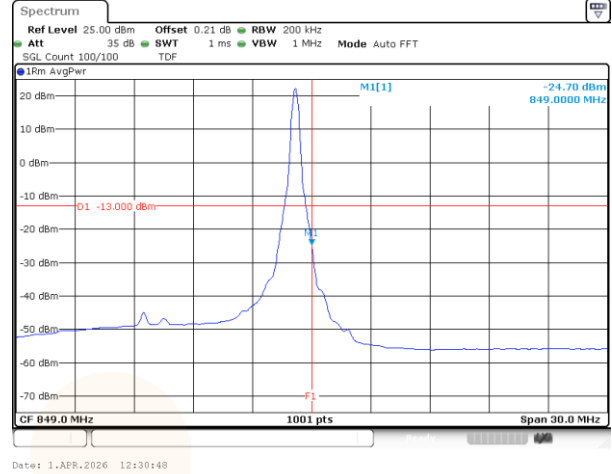


15M BW QPSK

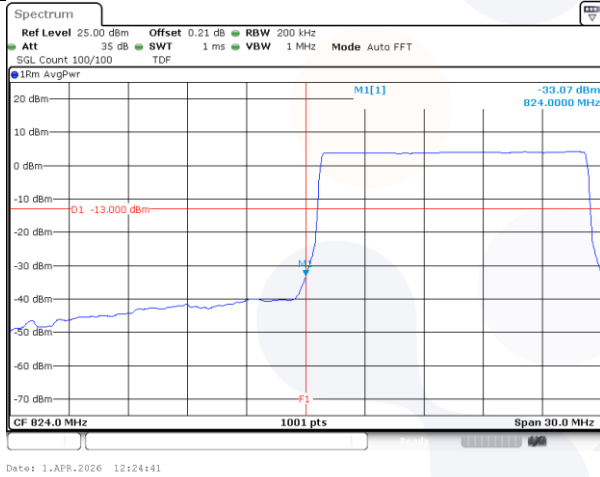
Low channel 1RB



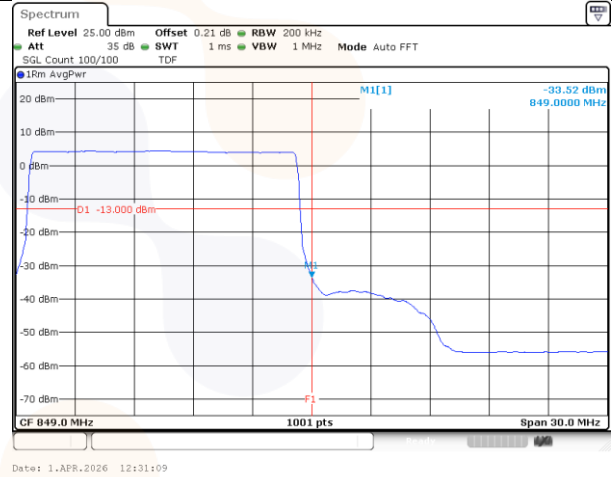
High channel 1RB



Low channel FRB

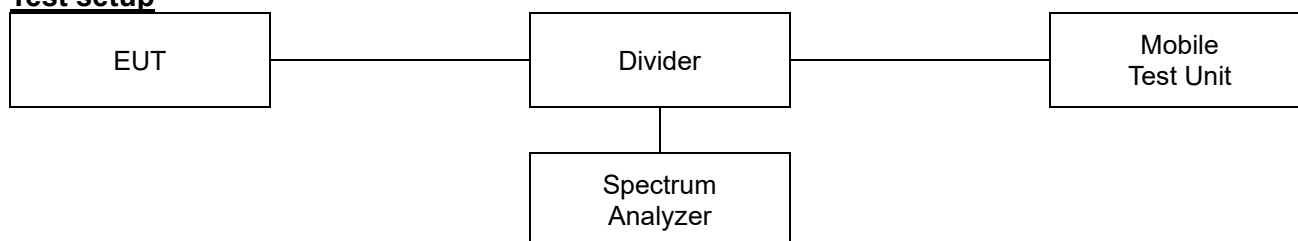


High channel FRB



7.4. Spurious Emissions at Antenna Terminal

Test setup



Limit

According to §22.917(a),

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

Test procedure

971168 D01 v03r01 - Section 6
 ANSI 63.26-2015 – Section 5.7

Test settings

- 1) Start frequency was set to 30 MHz and stop frequency was set to at least 10^{th} the fundamental frequency.
- 2) Detector = RMS
- 3) Sweep time = auto couple.
- 4) Trace mode = trace average
- 5) Allow trace to fully stabilize.
- 6) Please see test notes below RBW and VBW settings.

Notes:

1. Per 22.917(b), In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy, provided that the measured power is integrated over the full required reference bandwidth (i.e., 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
2. All modes of operation were investigated and the worst-case configuration results are reported.

Test results

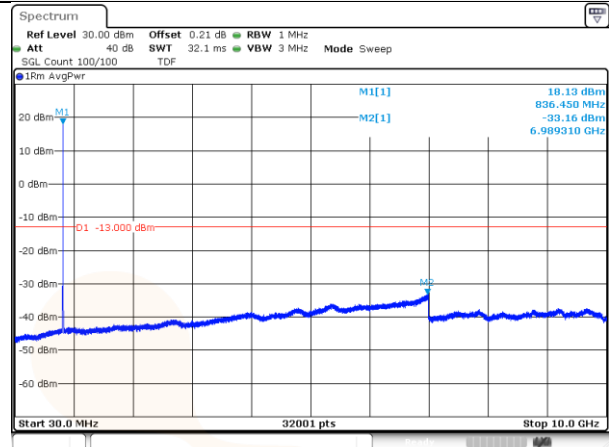
Test mode: WCDMA 850

RMC

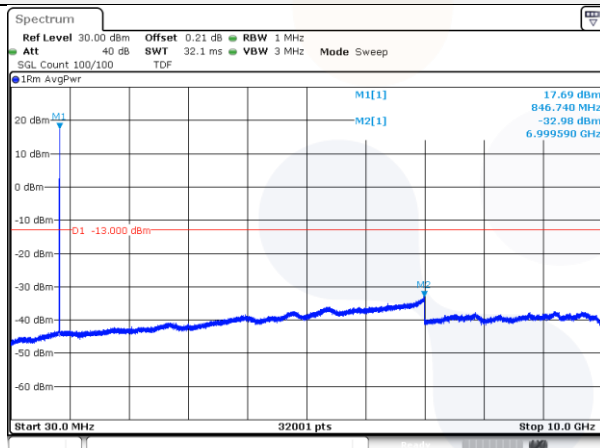
Low channel (30 MHz ~ 10 GHz)



Middle channel (30 MHz ~ 10 GHz)

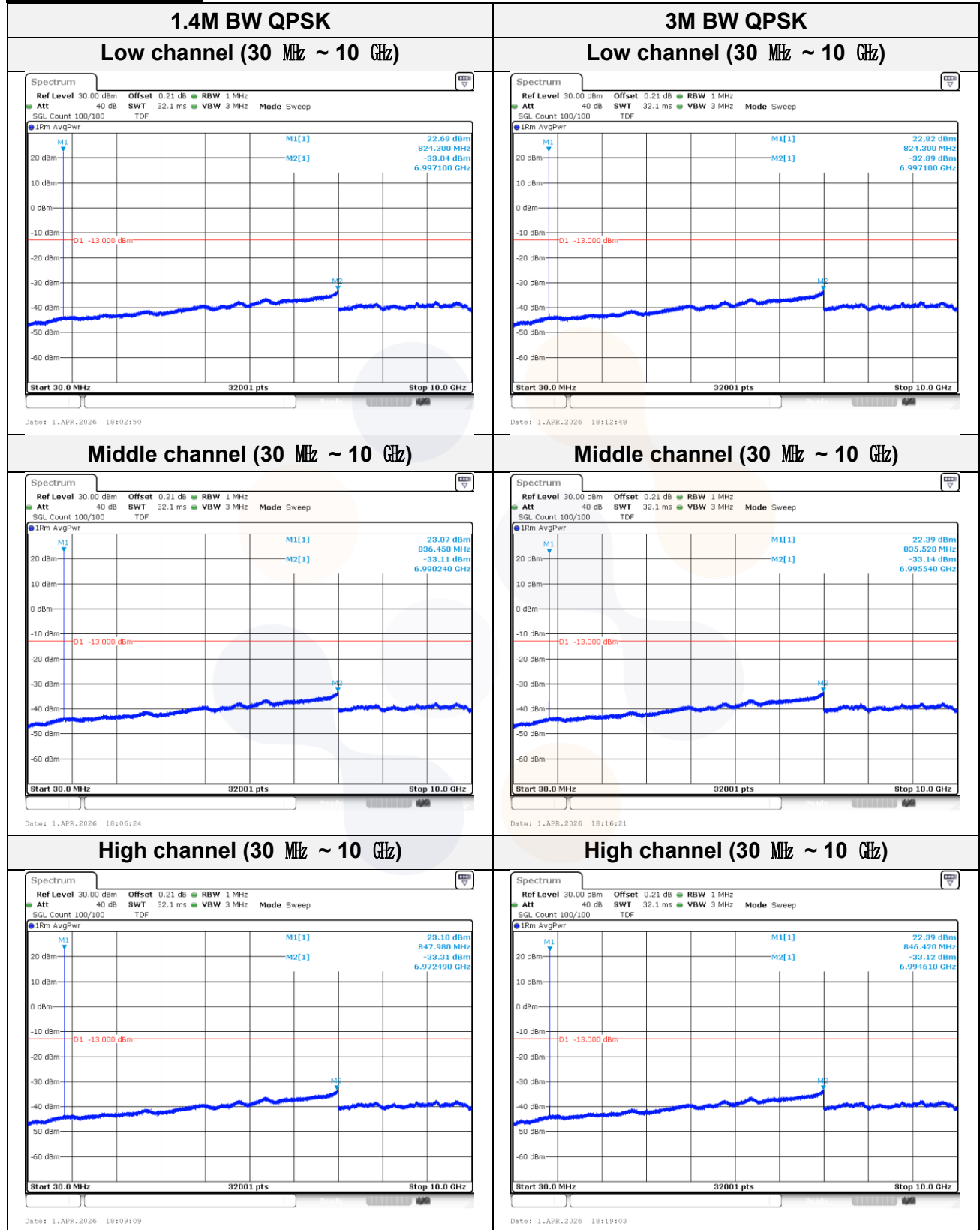


High channel (30 MHz ~ 10 GHz)



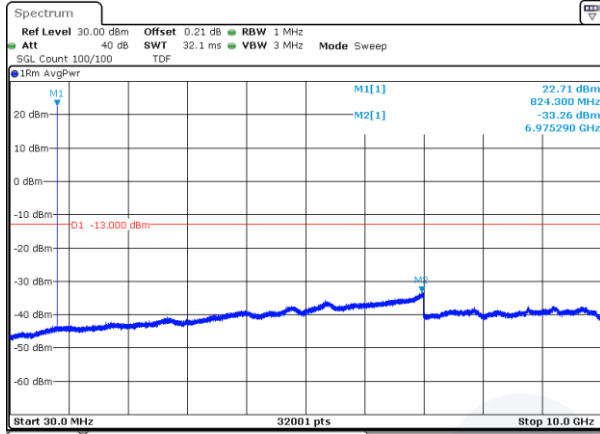
Blank

Test mode: LTE B5



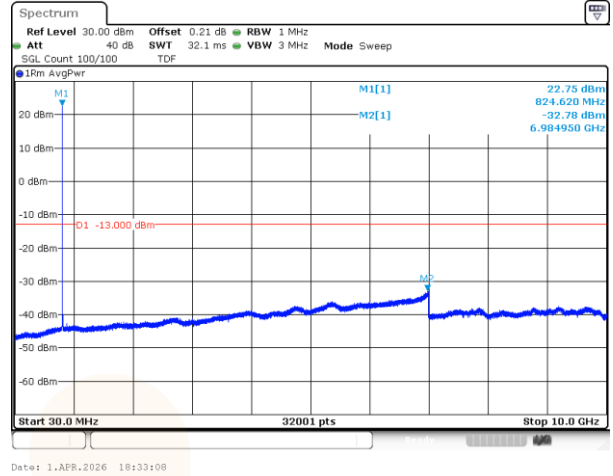
5M BW QPSK

Low channel (30 MHz ~ 10 GHz)

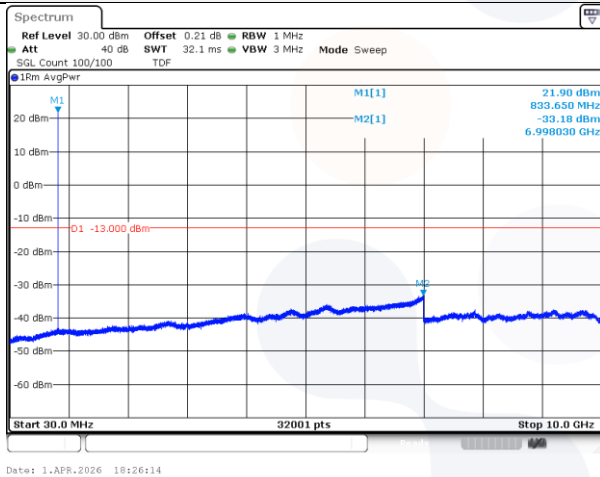


10M BW QPSK

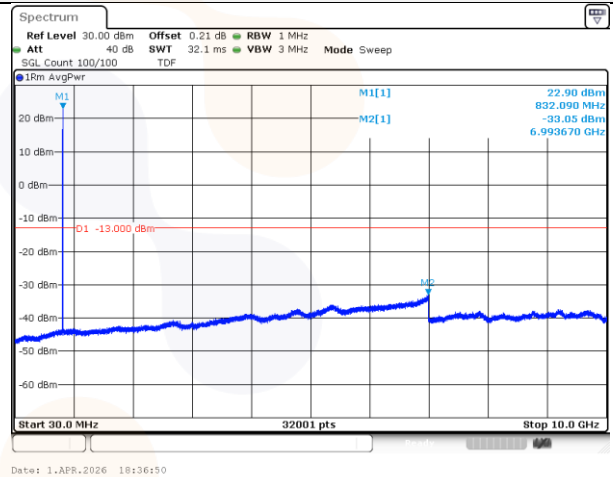
Low channel (30 MHz ~ 10 GHz)



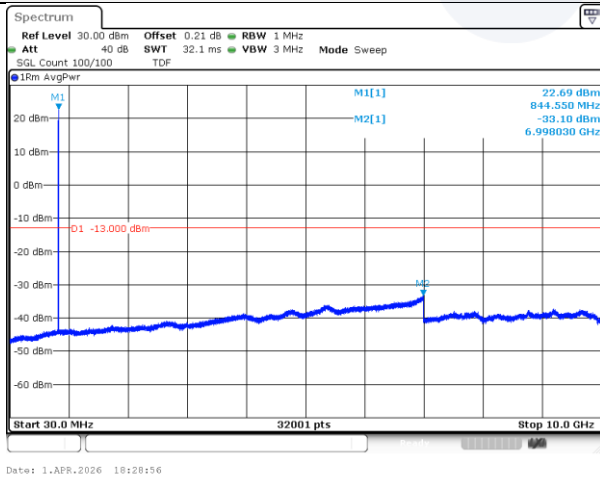
Middle channel (30 MHz ~ 10 GHz)



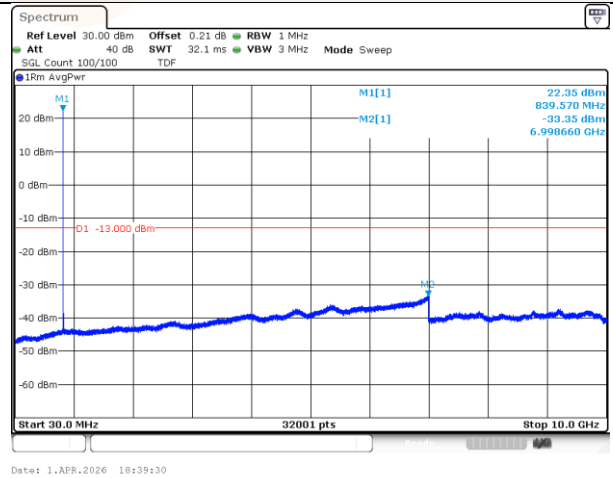
Middle channel (30 MHz ~ 10 GHz)



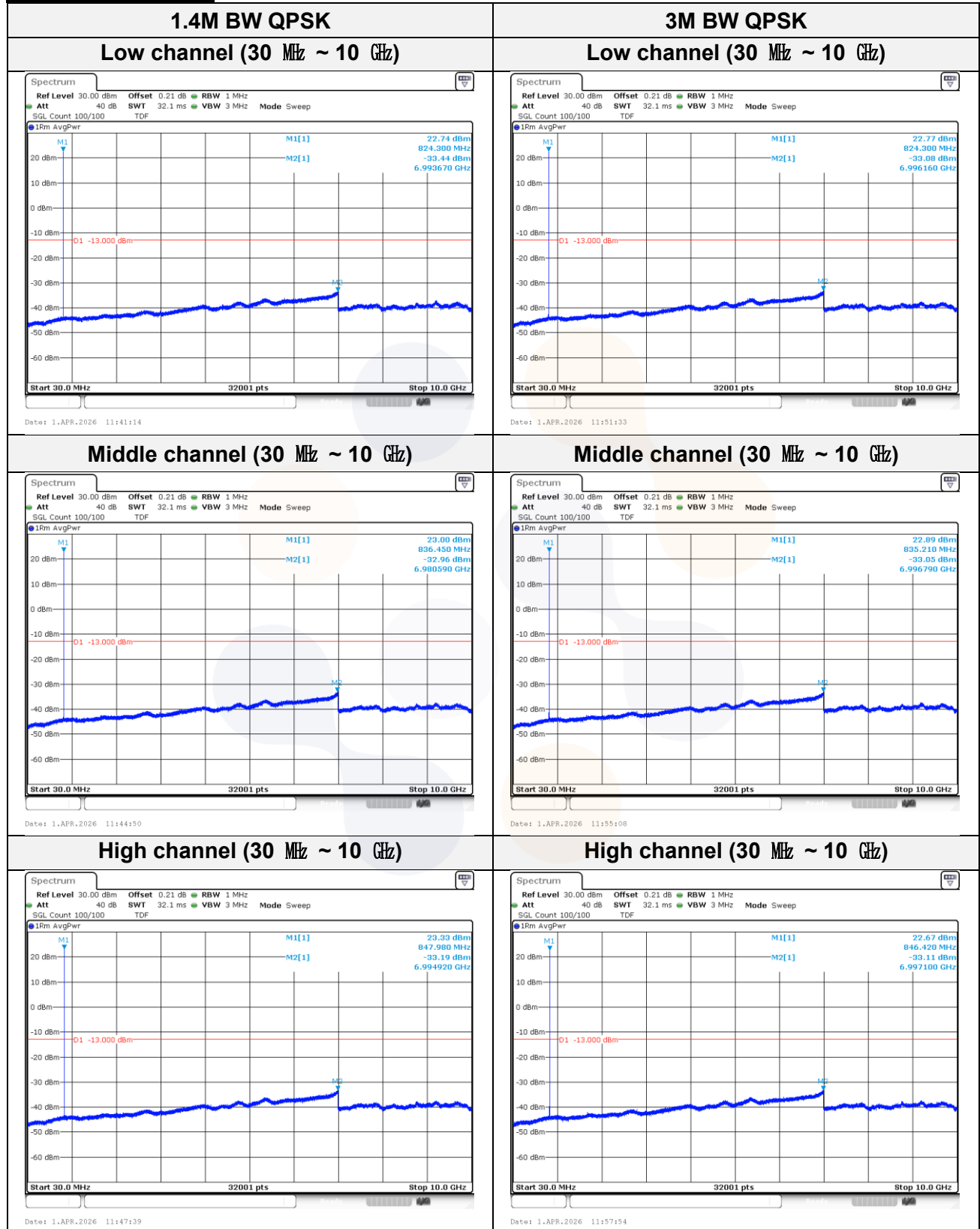
High channel (30 MHz ~ 10 GHz)



High channel (30 MHz ~ 10 GHz)

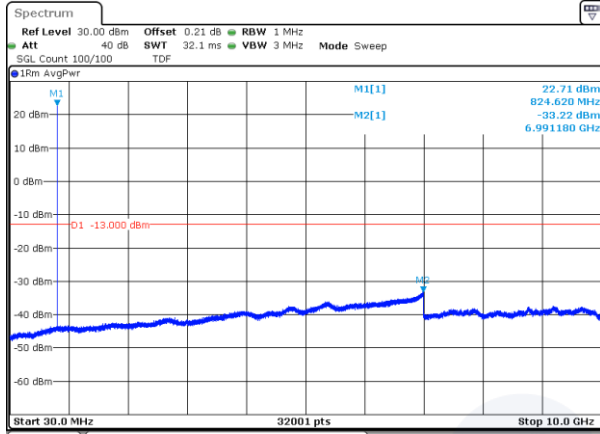


Test mode: LTE B26



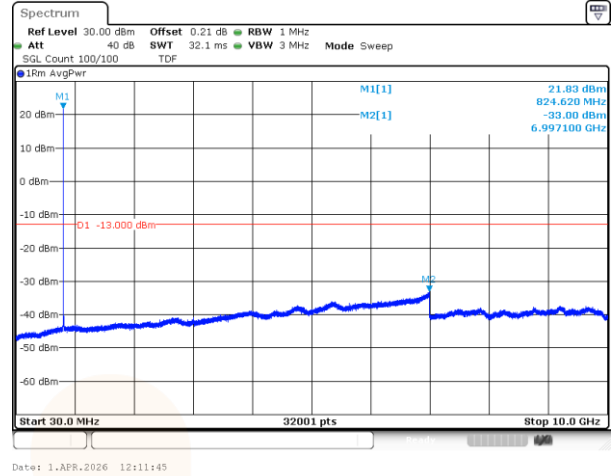
5M BW QPSK

Low channel (30 MHz ~ 10 GHz)

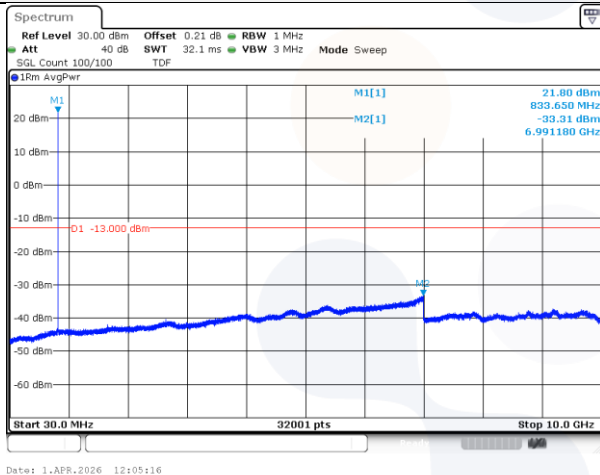


10M BW QPSK

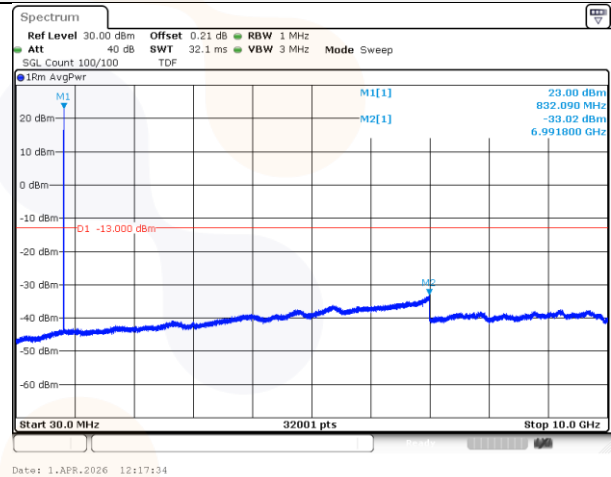
Low channel (30 MHz ~ 10 GHz)



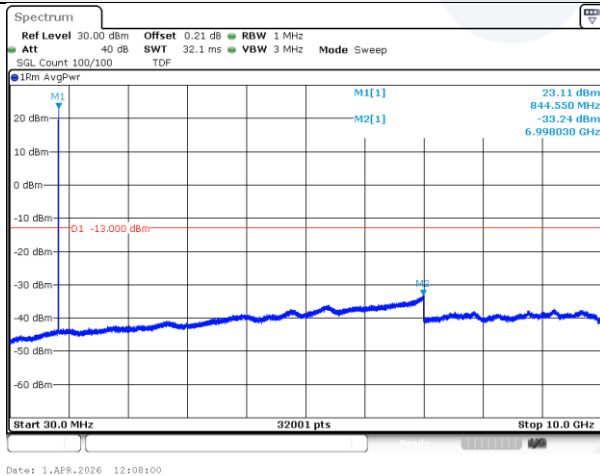
Middle channel (30 MHz ~ 10 GHz)



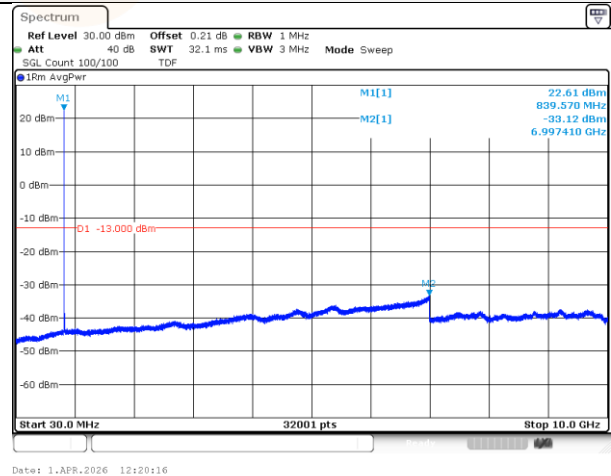
Middle channel (30 MHz ~ 10 GHz)



High channel (30 MHz ~ 10 GHz)

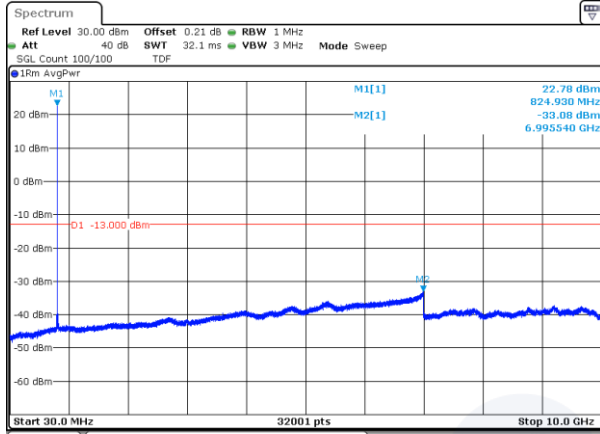


High channel (30 MHz ~ 10 GHz)



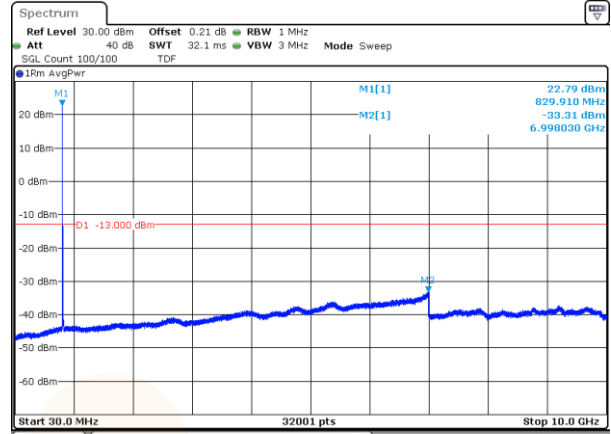
15M BW QPSK

Low channel (30 MHz ~ 10 GHz)



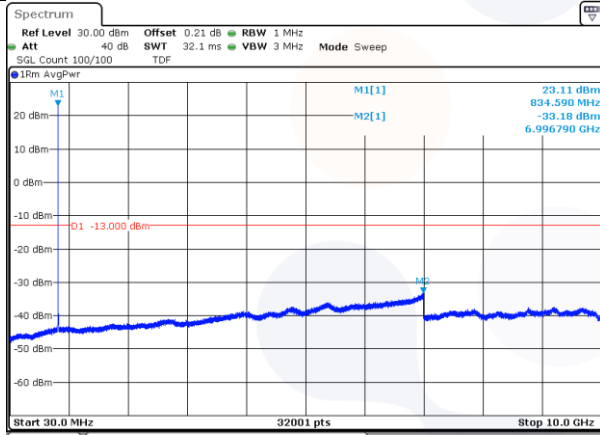
Date: 1.APR.2026 12:24:10

Middle channel (30 MHz ~ 10 GHz)



Date: 1.APR.2026 12:27:56

High channel (30 MHz ~ 10 GHz)

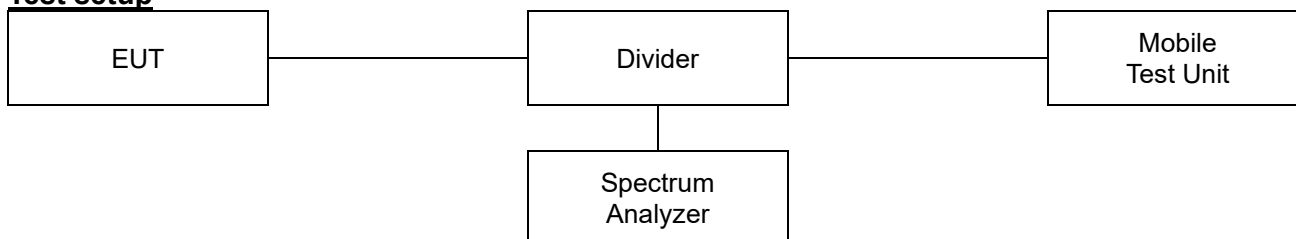


Date: 1.APR.2026 12:30:37

Blank

7.5. Peak to Average Power Ratio (PAPR)

Test setup



Limit

The peak-to-average ratio(PAR) of the transmission must not exceed 13 dB.

Test procedure

971168 D01 v03r01 - Section 5.7.2 or 5.7.3

971168 D02 v02r02 – Section VII

ANSI 63.26-2015 – Section 5.2.3.4 or 5.2.6

Test settings

5.2.3.4 Measurement of peak power in a broadband noise-like signal using CCDF

- 1) Set resolution/measurement Bandwidth $\geq$ OBW or specified reference Bandwidth
- 2) Set the number of counts to a value that stabilizes the measured CCDF curve.
- 3) Set the measurement interval as follows:
 - a) For continuous transmissions, set to the greater of $[10 \times (\text{number of points in sweep}) \times (\text{transmission symbol period})]$ or 1 ms.
 - b) For burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize. Set the measurement interval to a time that is less than or equal to the burst duration.
 - c) If there are several carriers in a single antenna port, the peak power shall be determined for each individual carrier (by disabling the other carriers while measuring the required carrier) and the total peak power calculated from the sum of the individual carrier peak powers.
- 4) Record the maximum PAPR level associated with a probability of 0.1%

5.2.6 Peak-to-average power ratio

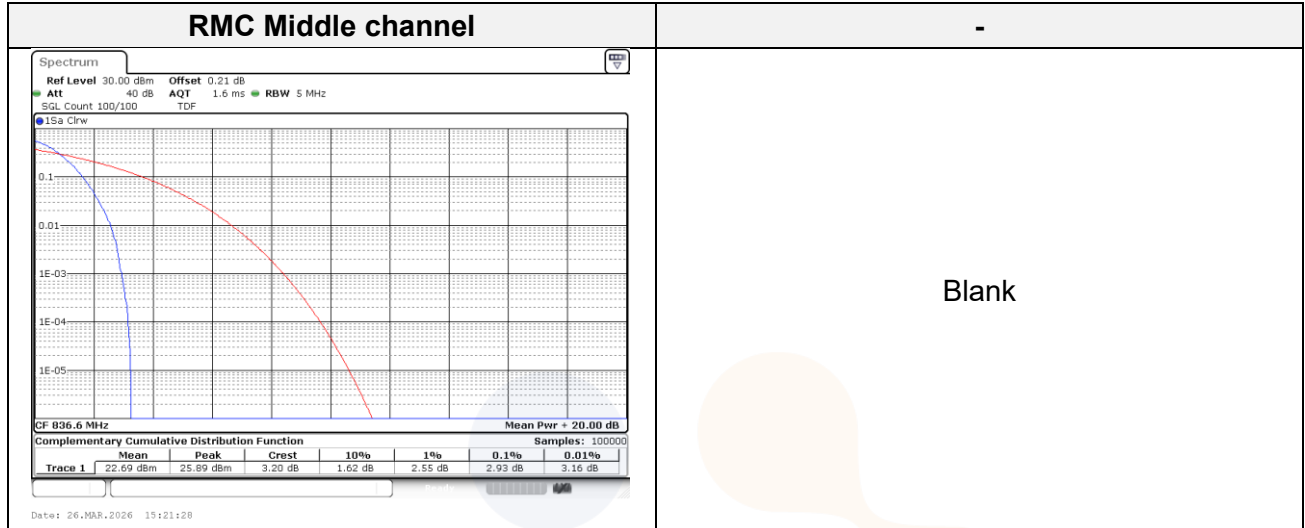
Use one of the procedures presented in 5.2(ANSI C63.26-2015) to measure the total peak power and record as P_{PK} .

Use one of the applicable procedure presented 5.2(ANSI C63.26-2015) to measure the total average power and record as P_{AG} . Determine the P.A.P.R from:

$$PAPR(dB) = P_{PK}(dBm \text{ or } dBW) - P_{AG}(dBm \text{ or } dBW)$$

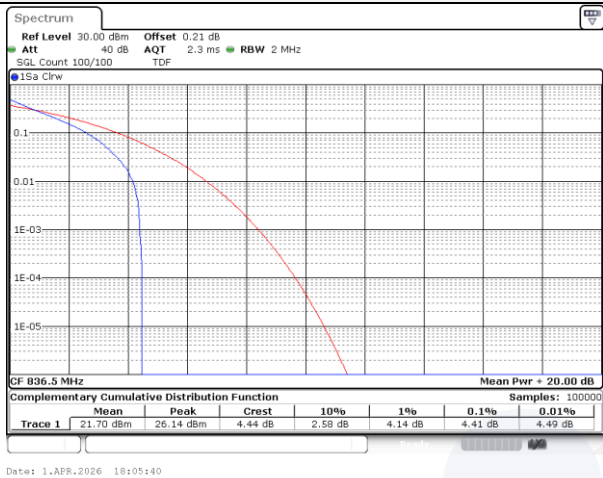
Test results

Test mode: WCDMA 850

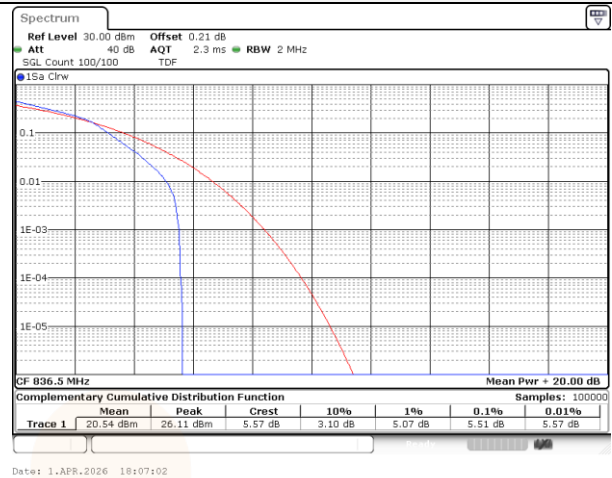


Test mode: LTE B5

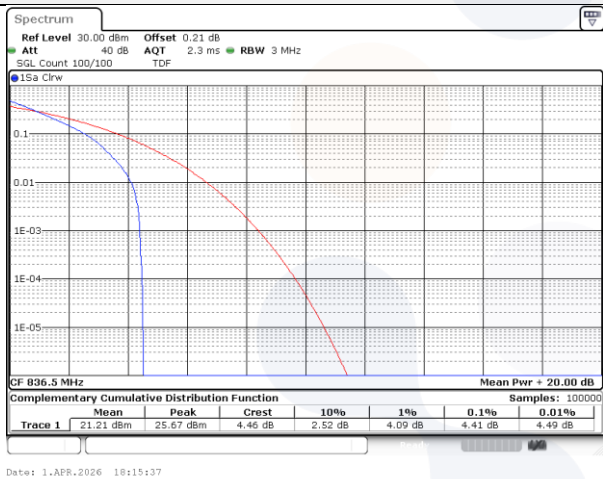
1.4M BW QPSK Middle channel



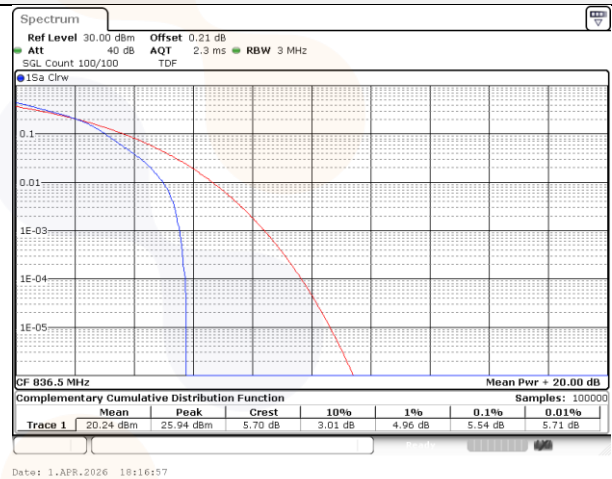
1.4M BW 16QAM Middle channel



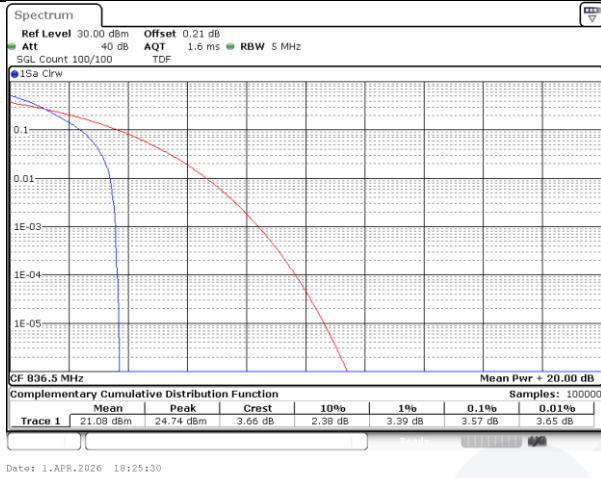
3M BW QPSK Middle channel



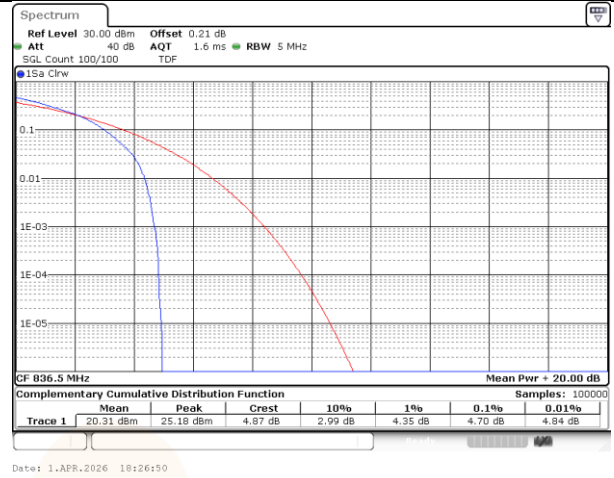
3M BW 16QAM Middle channel



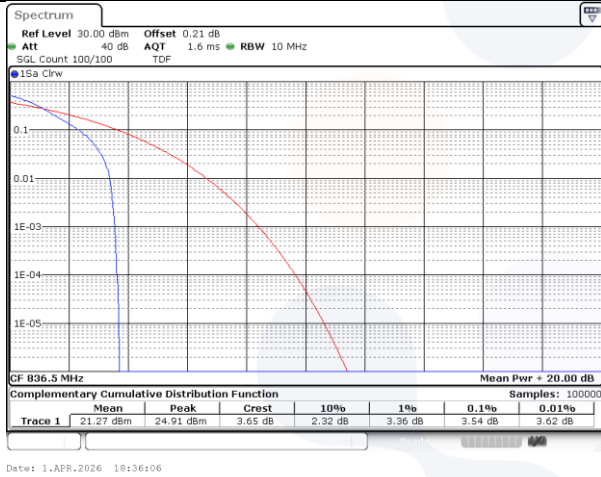
5M BW QPSK Middle channel



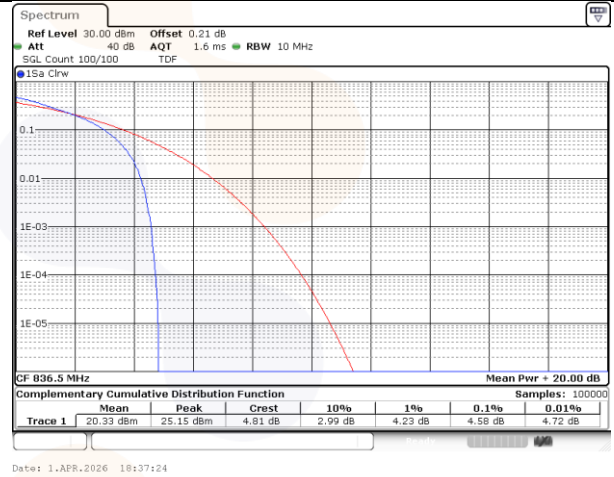
5M BW 16QAM Middle channel



10M BW QPSK Middle channel

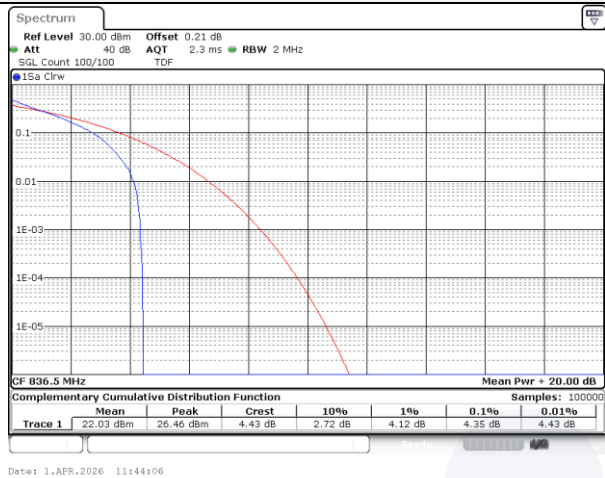


10M BW 16QAM Middle channel

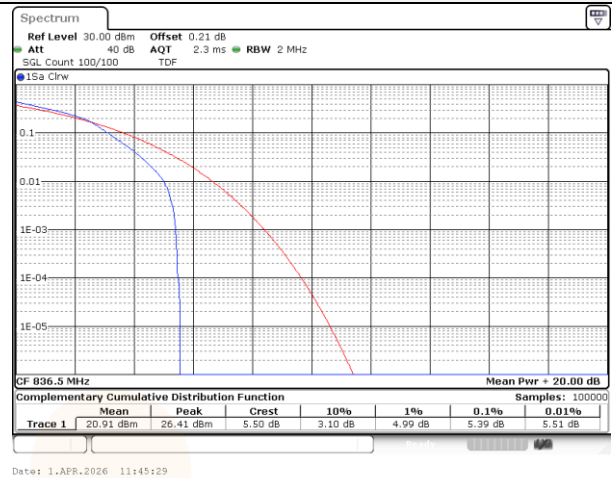


Test mode: LTE B26

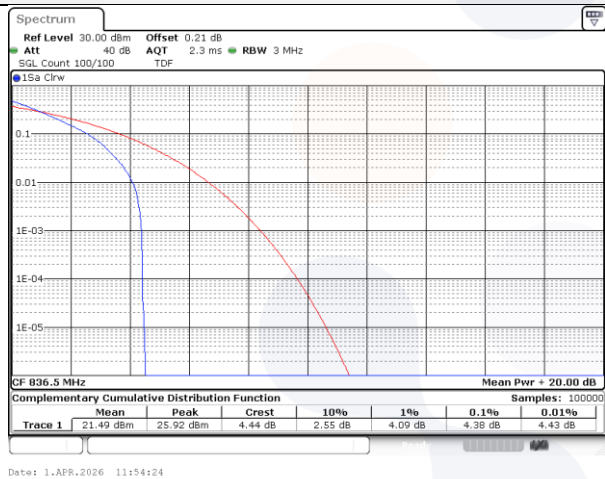
1.4M BW QPSK Middle channel



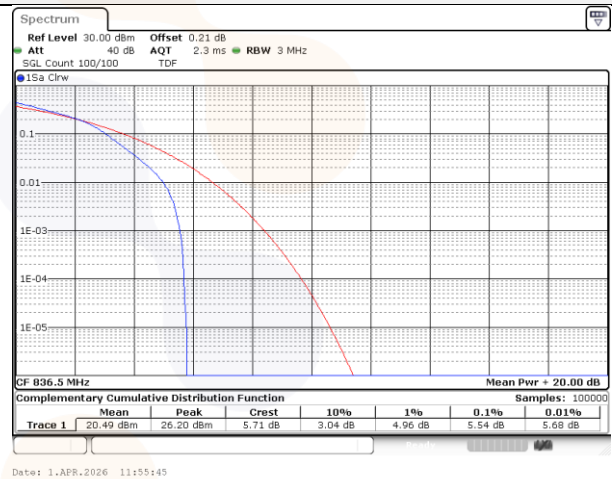
1.4M BW 16QAM Middle channel



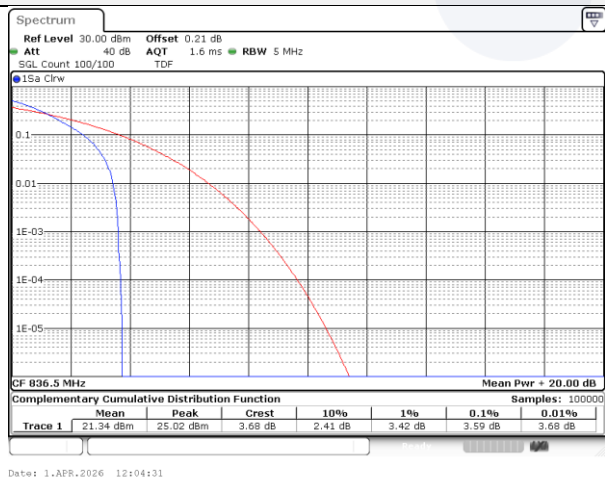
3M BW QPSK Middle channel



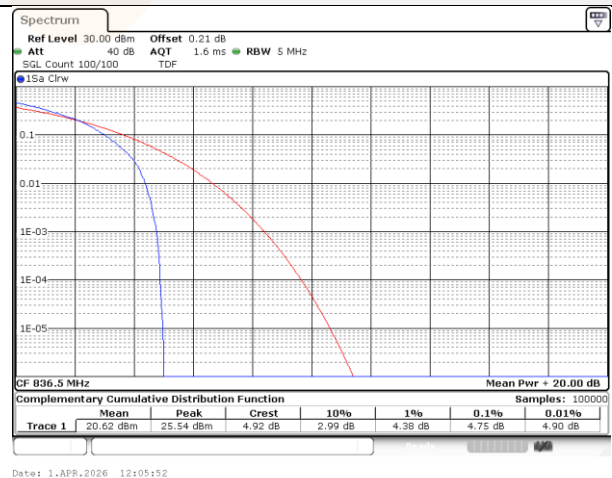
3M BW 16QAM Middle channel



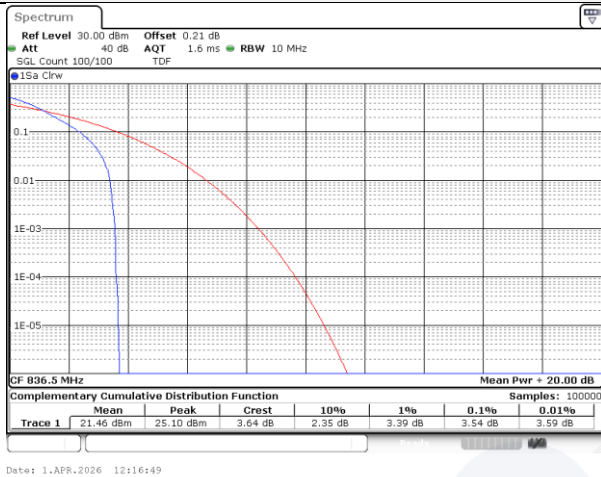
5M BW QPSK Middle channel



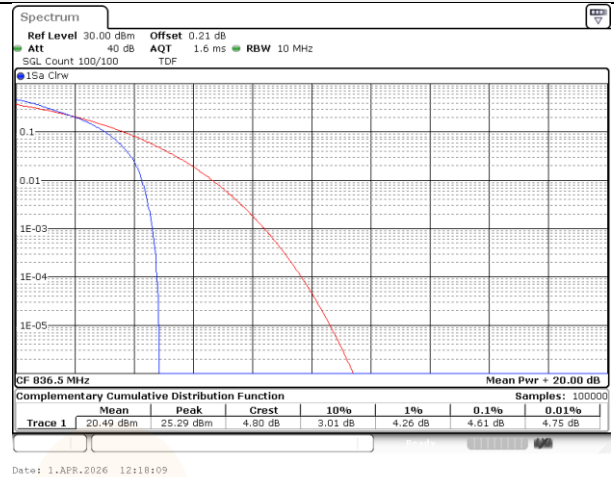
5M BW 16QAM Middle channel



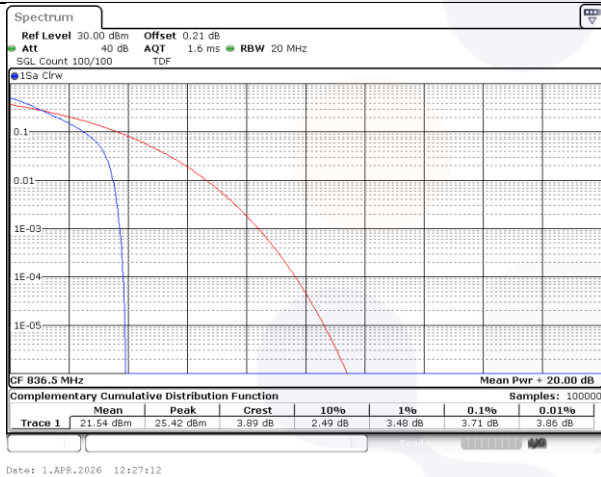
10M BW QPSK Middle channel



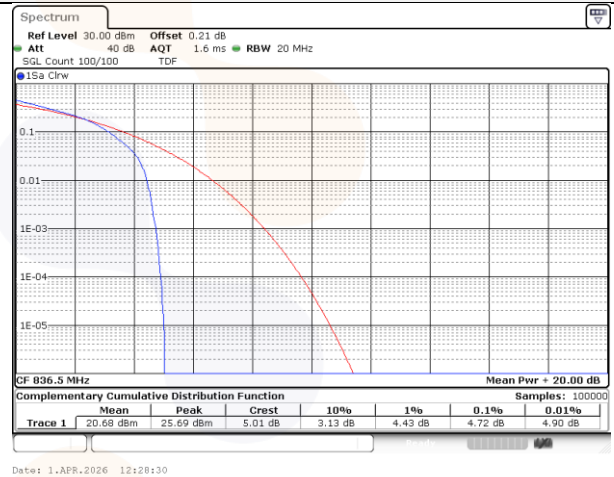
10M BW 16QAM Middle channel



15M BW QPSK Middle channel

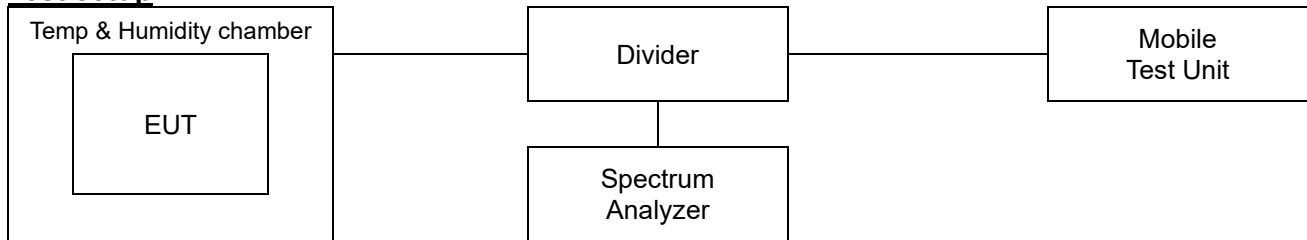


15M BW 16QAM Middle channel



7.6. Frequency stability

Test setup



Limit

According to §2.1055(a),

The frequency stability shall be measured with variation of ambient temperature as follows:

- 1) From -30° to + 50° centigrade for all equipment except that specified in paragraphs (a) (2) and (3) of this section.
- 2) From -20° to + 50° centigrade for equipment to be licensed for use in the maritime services under part 80 of this chapter, except for class A, B, and S emergency position indicating radiobeacons (EPIRBS), and equipment to be licensed for use above 952 MHz at operational fixed stations in all services, stations in the local television transmission service and point-to-point microwave radio service under part 21 of this chapter, equipment licensed for use aboard aircraft in the aviation services under part 87 of this chapter, and equipment authorized for use in the family radio service under part 95 of this chapter.
- 3) From 0° to + 50° centigrade for equipment to be licensed for use in the radio broadcast Services under part 73 of this chapter.

According to §2.1055(d),

The frequency stability shall be measured with variation of primary supply Voltage as follows:

- 1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.
- 2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating and point which shall be specified by the manufacturer.
- 3) The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided. Effects on frequency of transmitter keying (except for broadcast transmitters) and any heating element cycling at the nominal supply voltage and at each extreme also shall be shown.

According to §22.355,

The carrier frequency of each transmitter in the public mobile services must be maintained within the tolerances given in Table of this section.

For mobile devices operating in the 824 to 849 MHz B at a power level than or equal to 3 Watts, the limit specified in Table C-1 is ± 2.5 ppm.

Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-70-4904-0113 FAX: 82-505-299-8311 www.kctl.co.kr	Report No.: KR26-SRF0058 Page (60) of (75)	 
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Test procedure

ANSI 63.26-2015 – Section 5.6

Test settings

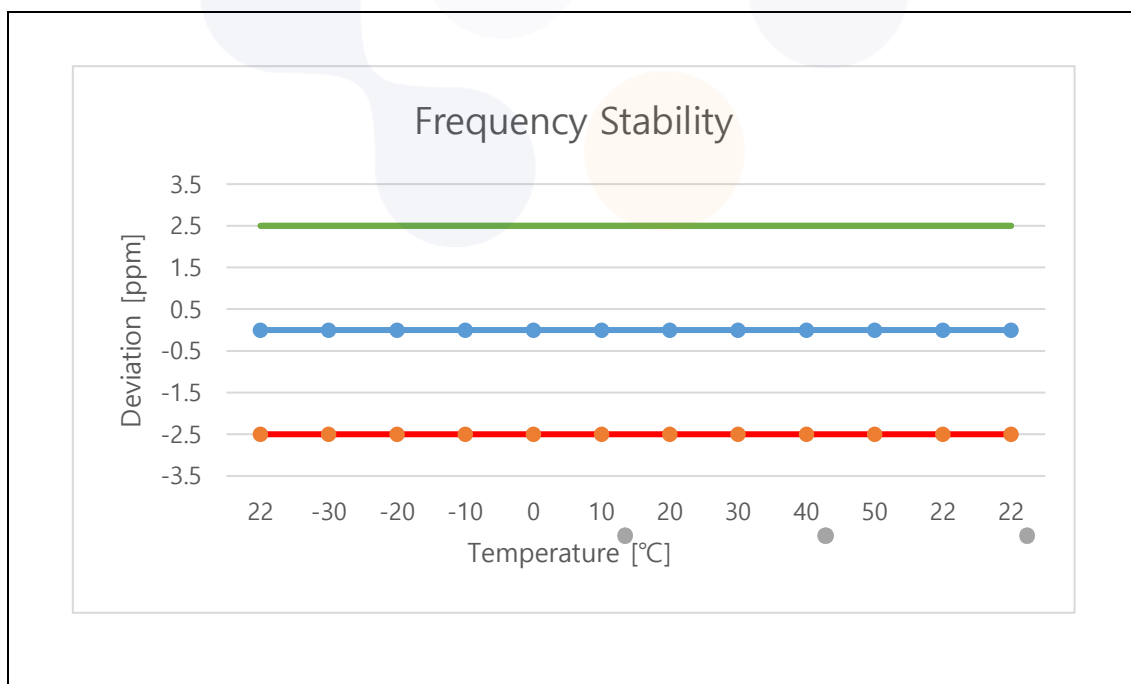
- 1) The carrier frequency of the transmitter is measured at room temperature.
(20°C to provide a reference)
- 2) The equipment is turned on in a “standby” condition for one minute before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
- 3) Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C.
A period of at least one half-hour is provided to allow stabilization of the equipment at each Temperature level.



Test results

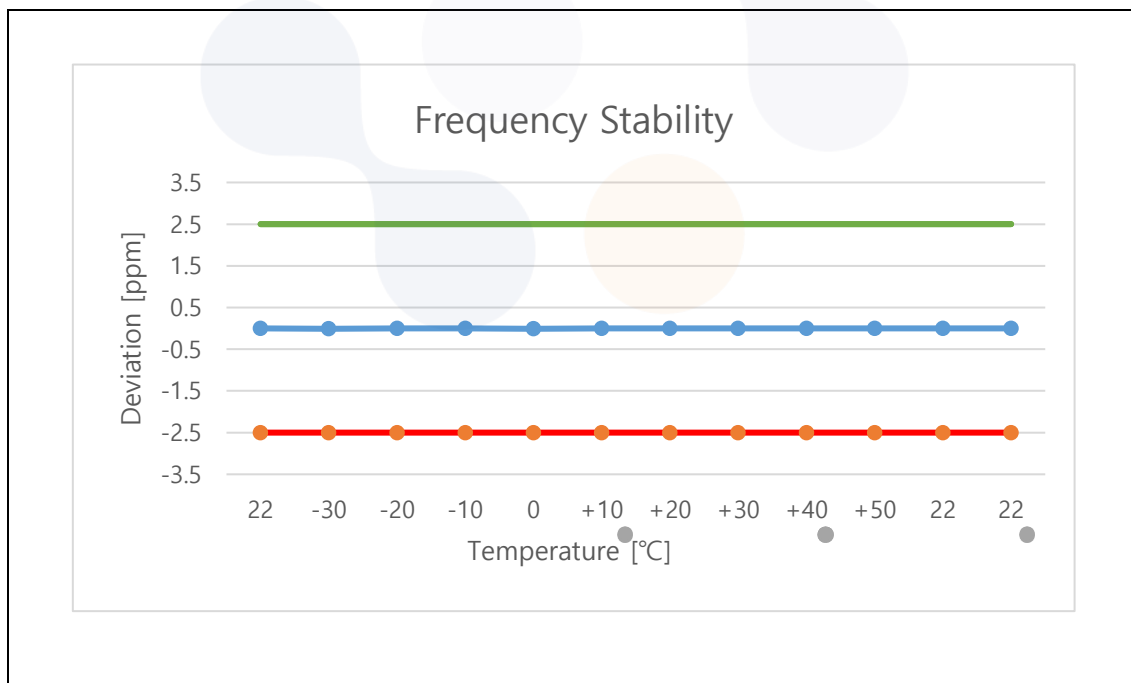
Test mode : WCDMA 850
 Frequency (Hz) : 836 600 000
 Channel : 4183
 Deviation limit : ± 0.000 25% or 2.5 ppm

Voltage (%)	Power (V)	Temp. (°C)	Frequency (Hz)	Frequency error (Hz)	Deviation	
					(ppm)	(%)
100%	3.86	+22.0(Ref)	836,599,998	-2.05	0.0	0.000000
		-30	836,599,999	-1.49	0.0	0.000000
		-20	836,599,998	-1.75	0.0	0.000000
		-10	836,599,999	-1.06	0.0	0.000000
		0	836,599,999	-0.71	0.0	0.000000
		+10	836,599,998	-1.82	0.0	0.000000
		+20	836,599,997	-2.72	0.0	0.000000
		+30	836,599,999	-1.35	0.0	0.000000
		+40	836,599,999	-1.21	0.0	0.000000
		+50	836,599,998	-2.50	0.0	0.000000
115%	4.44	+22.0(Ref)	836,599,999	-0.78	0.0	0.000000
End point	3.50	+22.0(Ref)	836,599,999	-0.62	0.0	0.000000



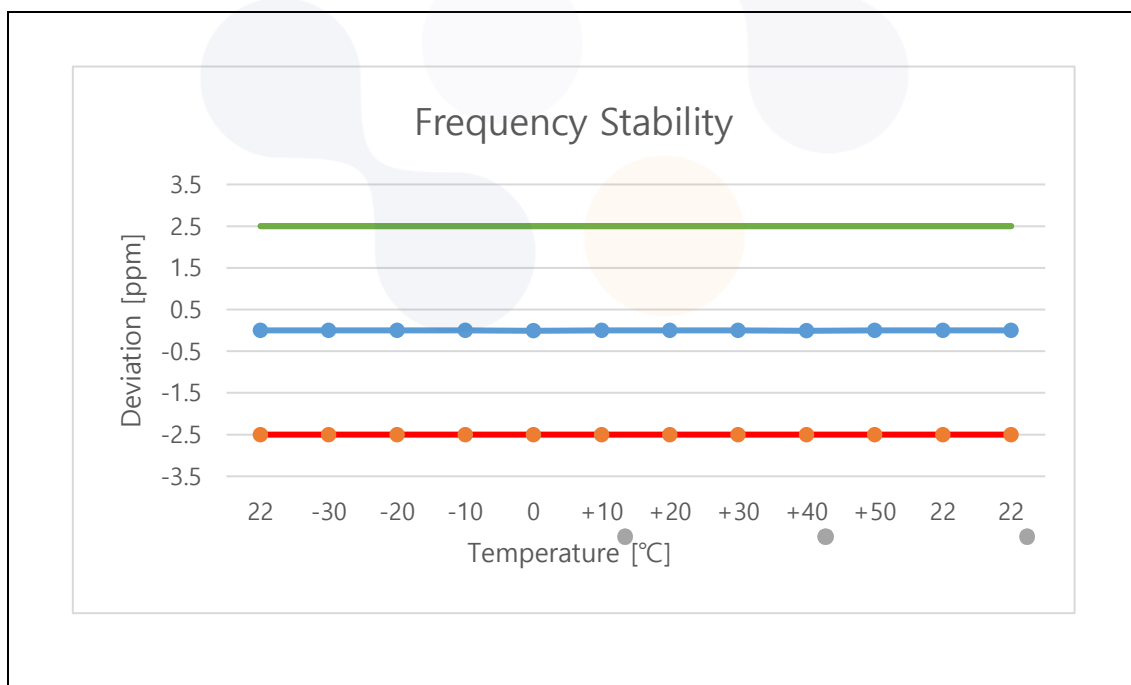
Test mode : LTE B5
 Frequency (Hz) : 836 500 000
 Channel : 20525
 Deviation limit : ± 0.00025% or 2.5ppm

Voltage (%)	Power (V)	Temp. (°C)	Frequency (Hz)	Frequency error (Hz)	Deviation	
					(ppm)	(%)
100%	3.86	+22.0(Ref)	836,500,004	3.88	0.0	0.000000
		-30	836,499,996	-4.21	0.0	-0.000001
		-20	836,499,998	-1.62	0.0	0.000000
		-10	836,500,000	0.17	0.0	0.000000
		0	836,499,994	-6.25	0.0	-0.000001
		+10	836,500,000	-0.23	0.0	0.000000
		+20	836,499,999	-0.54	0.0	0.000000
		+30	836,499,999	-1.27	0.0	0.000000
		+40	836,500,001	0.56	0.0	0.000000
		+50	836,499,996	-3.68	0.0	0.000000
115%	4.44	+22.0(Ref)	836,500,000	0.30	0.0	0.000000
End point	3.50	+22.0(Ref)	836,500,001	1.19	0.0	0.000000



Test mode : LTE B26
 Frequency (Hz) : 836 500 000
 Channel : 26915
 Deviation limit : ± 0.00025% or 2.5ppm

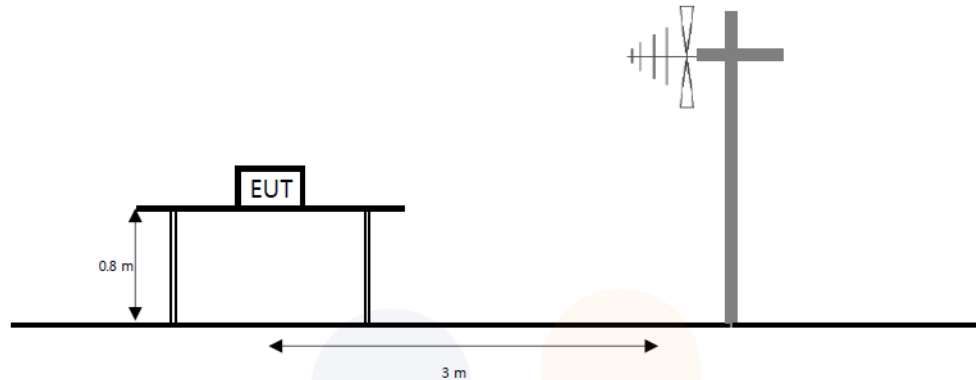
Voltage (%)	Power (V)	Temp. (°C)	Frequency (Hz)	Frequency error (Hz)	Deviation	
					(ppm)	(%)
100%	3.86	+22.0(Ref)	836,499,999	-0.96	0.0	0.000000
		-30	836,500,002	1.80	0.0	0.000000
		-20	836,499,998	-1.62	0.0	0.000000
		-10	836,500,000	-0.31	0.0	0.000000
		0	836,499,995	-5.18	0.0	-0.000001
		+10	836,500,000	0.07	0.0	0.000000
		+20	836,500,000	0.49	0.0	0.000000
		+30	836,500,001	1.06	0.0	0.000000
		+40	836,499,995	-4.72	0.0	-0.000001
		+50	836,499,999	-0.53	0.0	0.000000
115%	4.44	+22.0(Ref)	836,499,999	-1.13	0.0	0.000000
End point	3.50	+22.0(Ref)	836,500,001	0.76	0.0	0.000000



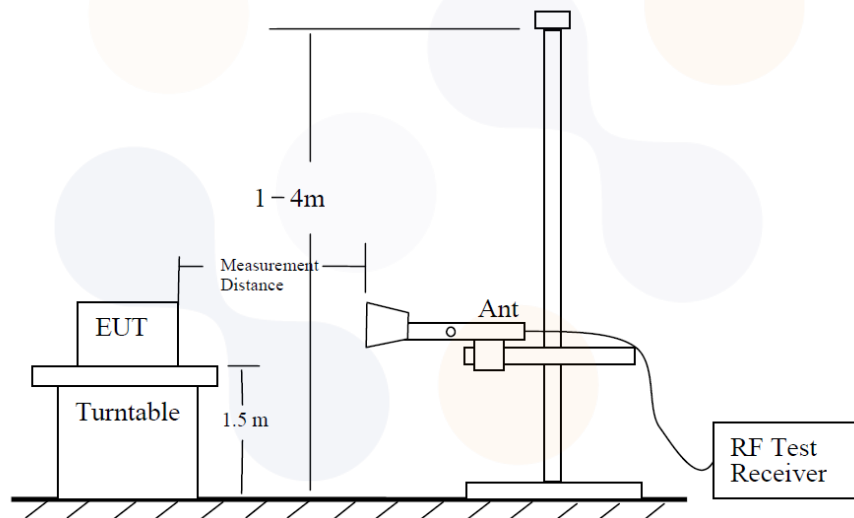
7.7. Radiated Power (ERP)

Test setup

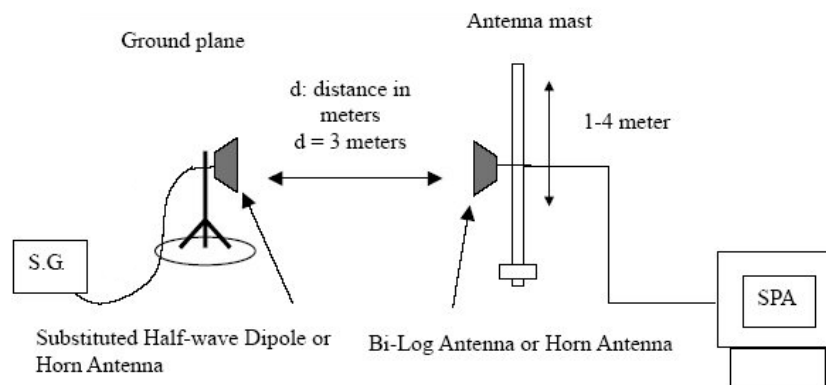
The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 GHz emissions.



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 emissions, whichever is lower.



The diagram below shows the test setup for substituted method.



Limit

According to §22.913(a)(5),

The ERP of transmitters in the cellular radiotelephone service must not exceed the limits in this section. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

Test procedure

412172 D01 v01r01

971168 D01 v03r01 - Section 5.2 and 5.8

ANSI 63.26-2015 – Section 5.2

ANSI/TIA-603-E-2016 - Section 2.2.17

Test settings

- 1) RBW = 1 % to 5 % of the OBW.
- 2) VBW $\geq 3 \times$ RBW.
- 3) SPAN = 2 $\times$ to 3 $\times$ the OBW.
- 4) Number of measurement points in sweep $\geq 2 \times$ span / SSRBW.
- 5) Sweep time:
 - a) Auto couple, or
 - b) $\geq [10 \times (\text{number of points in sweep}) \times (\text{transmission period})]$ for single sweep (automation-compatible) measurement. Transmission period is the on and off time of the transmitter.
- 6) Detector = RMS
- 7) If the EUT can be configured to transmit continuously, then set the trigger to free run.
- 8) If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration. Time gating can also be used under similar constraints (i.e., configured such that measurement data is collected only during active full-power transmissions).
- 9) Trace mode = trace averaging (RMS) over 100 sweeps.
- 10) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's B or channel power measurement function, with the B/channel limits set equal to the OBW B edges. If the instrument does not have a B or channel power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
- 11) Allow trace to fully stabilize.

Notes:

1. On a test site, the EUT shall be placed at 80 cm 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 turntable is rotated through 360°, and the receiving antenna scans in order to determine the Level of the maximized emission.
4. 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.
5. The maximum signal level detected by the measuring receiver shall be noted.
6. The EUT was replaced by half-wave dipole (1 GHz below) or horn antenna (1 GHz above) connected to a signal generator.
 The power is calculated by the following formula;

$$Pd(\text{dBm}) = Pg(\text{dBm}) - \text{Cable loss (dB)} + \text{Antenna gain (dB)}$$
 Note. Pd is the dipole equivalent power and Pg is the generator output power into the substitution antenna.
7. The test antenna shall be raised and lowered through the specified range of height to ensure that The maximum signal is received.
8. The input signal to the substitution antenna shall be adjusted to the level that produces a level Detected by the measuring corrected for the change of input attenuator setting of the measuring Receiver.
9. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for Any change of input attenuator setting of the measuring receiver.
10. The measurement shall be repeated with the test antenna and the substitution antenna Orientated for horizontal polarization.

Test results

Test mode: WCDMA 850

Mode	Channel	Pol.	Antenna Gain	C.L	Substitute Level	ERP	
		[V/H]	[dBd]	[dB]	[dB m]	[dB m]	[W]
RMC	Low	H	4.25	7.06	13.49	10.68	0.012
	Middle	H	4.12	7.10	13.39	10.41	0.011
	High	H	4.18	7.14	13.61	10.65	0.012

Note:

1. $E.R.P(dBm) = \text{Substitute Level}(dBm) + \text{Antenna gain}(dBd) - C.L(\text{Cable loss})(dB)$



Test mode: LTE B5

Bandwidth [MHz]	Modulation	Channel	Pol.	Antenna Gain	C.L	Substitute Level	ERP	
			[V/H]	[dBd]	[dB]	[dBm]	[dBm]	[W]
1.4	QPSK	Low	H	4.25	7.06	14.69	11.88	0.015
		Middle	H	4.12	7.10	14.10	11.13	0.013
		High	H	4.22	7.15	13.83	10.89	0.012
	16QAM	Low	H	4.25	7.06	13.70	10.89	0.012
		Middle	H	4.12	7.10	13.29	10.31	0.011
		High	H	4.22	7.15	12.84	9.90	0.010
3	QPSK	Low	H	4.25	7.06	14.42	11.61	0.014
		Middle	H	4.12	7.10	14.08	11.10	0.013
		High	H	4.20	7.15	13.80	10.86	0.012
	16QAM	Low	H	4.25	7.06	13.58	10.77	0.012
		Middle	H	4.12	7.10	13.37	10.39	0.011
		High	H	4.20	7.15	12.82	9.87	0.010
5	QPSK	Low	H	4.25	7.06	13.58	10.76	0.012
		Middle	H	4.12	7.10	13.97	10.99	0.013
		High	H	4.18	7.14	13.68	10.72	0.012
	16QAM	Low	H	4.25	7.06	12.69	9.87	0.010
		Middle	H	4.12	7.10	13.12	10.14	0.010
		High	H	4.18	7.14	12.72	9.76	0.009
10	QPSK	Low	H	4.25	7.07	13.48	10.67	0.012
		Middle	H	4.12	7.10	14.04	11.07	0.013
		High	H	4.13	7.13	14.00	11.00	0.013
	16QAM	Low	H	4.25	7.07	12.57	9.75	0.009
		Middle	H	4.12	7.10	13.27	10.29	0.011
		High	H	4.13	7.13	13.06	10.06	0.010

Note:

1. $E.R.P(dBm) = \text{Substitute Level}(dBm) + \text{Antenna gain}(dBd) - C.L(\text{Cable loss})(dB)$

Test mode: LTE B26

Bandwidth [MHz]	Modulation	Channel	Pol.	Antenna Gain	C.L	Substitute Level	ERP	
			[V/H]	[dBd]	[dB]	[dBm]	[dBm]	[W]
1.4	QPSK	Low	H	4.25	7.06	14.11	11.30	0.013
		Middle	H	4.12	7.10	13.76	10.79	0.012
		High	H	4.22	7.15	13.69	10.75	0.012
	16QAM	Low	H	4.25	7.06	12.97	10.16	0.010
		Middle	H	4.12	7.10	12.67	9.69	0.009
		High	H	4.22	7.15	12.63	9.69	0.009
3	QPSK	Low	H	4.25	7.06	14.01	11.20	0.013
		Middle	H	4.12	7.10	13.68	10.70	0.012
		High	H	4.20	7.15	13.71	10.76	0.012
	16QAM	Low	H	4.25	7.06	13.22	10.40	0.011
		Middle	H	4.12	7.10	12.78	9.80	0.010
		High	H	4.20	7.15	12.91	9.96	0.010
5	QPSK	Low	H	4.25	7.06	12.88	10.06	0.010
		Middle	H	4.12	7.10	13.75	10.78	0.012
		High	H	4.18	7.14	13.50	10.53	0.011
	16QAM	Low	H	4.25	7.06	12.07	9.25	0.008
		Middle	H	4.12	7.10	12.81	9.83	0.010
		High	H	4.18	7.14	12.86	9.90	0.010
10	QPSK	Low	H	4.25	7.07	13.07	10.25	0.011
		Middle	H	4.12	7.10	13.64	10.67	0.012
		High	H	4.13	7.13	13.61	10.61	0.012
	16QAM	Low	H	4.25	7.07	12.16	9.35	0.009
		Middle	H	4.12	7.10	12.66	9.68	0.009
		High	H	4.13	7.13	12.76	9.76	0.009
15	QPSK	Low	H	4.22	7.08	13.13	10.27	0.011
		Middle	H	4.12	7.10	13.40	10.43	0.011
		High	H	4.08	7.12	13.52	10.48	0.011
	16QAM	Low	H	4.22	7.08	12.39	9.54	0.009
		Middle	H	4.12	7.10	12.49	9.51	0.009
		High	H	4.08	7.12	12.89	9.86	0.010

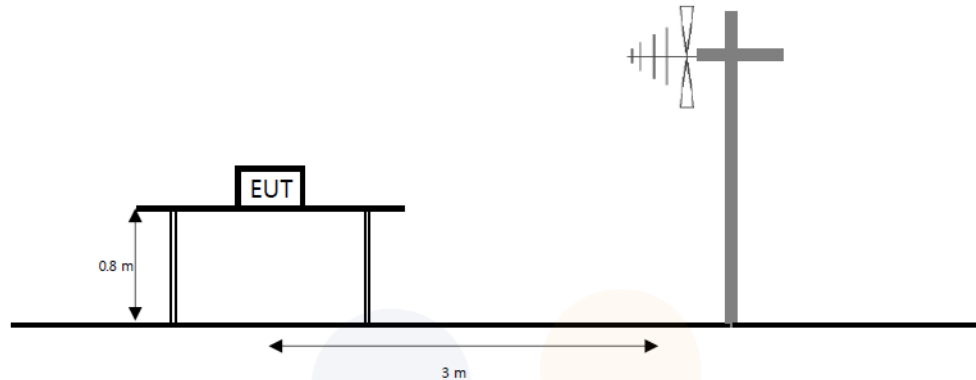
Note:

1. $E.R.P(dBm) = \text{Substitute Level}(dBm) + \text{Antenna gain}(dBd) - C.L(\text{Cable loss})(dB)$

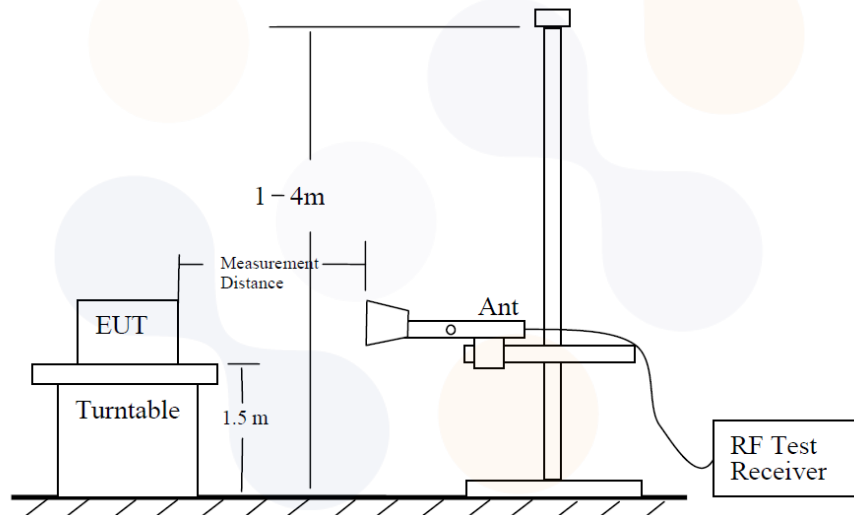
7.8. Radiated Spurious Emissions

Test setup

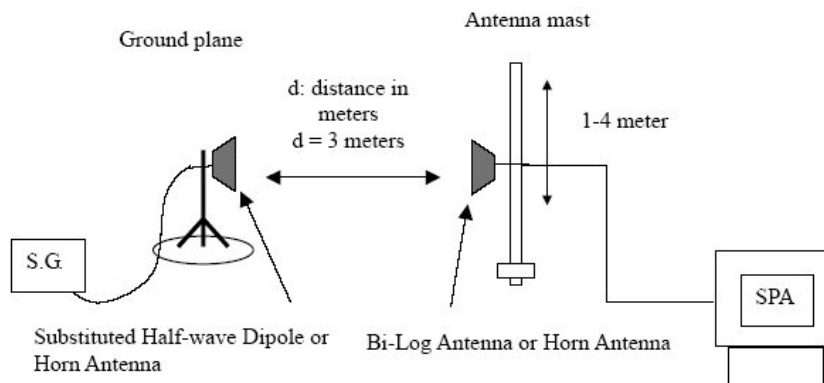
The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 GHz emissions.



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 emissions, whichever is lower.



The diagram below shows the test setup for substituted method.



Limit

According to §22.917(a),

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

Test procedure

971168 D01 v03r01 - Section 6.2

ANSI 63.26-2015 – Section 5.5

ANSI/TIA-603-E-2016 - Section 2.2.12

Test settings

- 1) RBW = 100 kHz for below 1 GHz and 1 MHz for above 1 GHz.
- 2) VBW $\geq 3 \times$ RBW.
- 3) Detector = RMS
- 4) Trace mode = Max hold
- 5) Sweep time = Auto couple
- 6) Number of sweep points $\geq 2 \times \text{span} / \text{RBW}$
- 7) Allow trace to fully stabilize.

Notes:

1. On a test site, the EUT shall be placed at 80 cm 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 turntable is rotated through 360°, and the receiving antenna scans in order to determine the Level of the maximized emission.
4. 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.
5. The maximum signal level detected by the measuring receiver shall be noted.
6. The EUT was replaced by half-wave dipole (1 GHz below) or horn antenna (1 GHz above) connected to a signal generator.
7. The test antenna shall be raised and lowered through the specified range of height to ensure that The maximum signal is received.
8. The input signal to the substitution antenna shall be adjusted to the level that produces a level Detected by the measuring corrected for the change of input attenuator setting of the measuring Receiver.
9. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for Any change of input attenuator setting of the measuring receiver.
10. The measurement shall be repeated with the test antenna and the substitution antenna Orientated for horizontal polarization.

Test results (Above 1 000 MHz)

Test mode : WCDMA 850

Frequency(MHz) : 826.4

Channel : 4132

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
RMC	1 651.20	H	5.90	9.75	-57.15	-61.00	-13.00	48.00
	2 478.40	V	5.86	11.57	-49.89	-55.60	-13.00	42.60
	3 303.20	V	7.71	13.48	-49.23	-55.00	-13.00	42.00
	4 131.60	H	9.16	14.73	-45.53	-51.10	-13.00	38.10

Test mode : WCDMA 850

Frequency(MHz) : 836.6

Channel : 4183

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
RMC	1 670.80	H	5.82	9.84	-57.28	-61.30	-13.00	48.30
	2 513.60	V	5.91	11.67	-50.54	-56.30	-13.00	43.30
	3 348.80	V	7.80	13.55	-48.15	-53.90	-13.00	40.90
	4 182.40	V	9.26	14.70	-46.96	-52.40	-13.00	39.40

Test mode : WCDMA 850

Frequency(MHz) : 846.6

Channel : 4233

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
RMC	1 694.40	H	5.72	9.95	-55.67	-59.90	-13.00	46.90
	2 538.40	V	5.94	11.75	-50.09	-55.90	-13.00	42.90
	3 384.40	V	7.87	13.61	-48.86	-54.60	-13.00	41.60
	4 230.40	V	9.30	14.85	-48.25	-53.80	-13.00	40.80

Note:

1. E.I.R.P(dBm) = Substitute Level(dBm) + Antenna gain(dBi) - C.L(Cable loss) (dB)

Test mode : LTE B5

Frequency(MHz) : 824.7

Channel : 20407

Bandwidth(MHz) : 1.4

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 651.20	H	5.90	9.75	-63.65	-67.50	-13.00	54.50
	2 474.40	V	5.85	11.55	-54.90	-60.60	-13.00	47.60
	3 298.40	H	7.70	13.47	-52.73	-58.50	-13.00	45.50
	4 123.60	V	9.15	14.74	-49.71	-55.30	-13.00	42.30

Test mode : LTE B5

Frequency(MHz) : 836.5

Channel : 20525

Bandwidth(MHz) : 1.4

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 670.80	H	5.82	9.84	-64.28	-68.30	-13.00	55.30
	2 510.40	H	5.91	11.66	-55.25	-61.00	-13.00	48.00
	3 344.80	V	7.79	13.55	-54.24	-60.00	-13.00	47.00
	4 178.40	V	9.26	14.70	-49.76	-55.20	-13.00	42.20

Test mode : LTE B5

Frequency(MHz) : 848.3

Channel : 20643

Bandwidth(MHz) : 1.4

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 698.80	H	5.70	9.97	-64.43	-68.70	-13.00	55.70
	2 547.20	V	5.95	11.77	-56.18	-62.00	-13.00	49.00
	3 395.60	H	7.89	13.63	-53.36	-59.10	-13.00	46.10
	4 244.80	V	9.30	14.92	-51.48	-57.10	-13.00	44.10

Note:

1. $E.I.R.P(dBm) = \text{Substitute Level}(dBm) + \text{Antenna gain}(dBi) - C.L(\text{Cable loss})(dB)$

Test mode : LTE B26

Frequency(MHz) : 824.7

Channel : 26797

Bandwidth(MHz) : 1.4

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 650.40	H	5.90	9.75	-64.75	-68.60	-13.00	55.60
	2 474.80	V	5.85	11.55	-55.90	-61.60	-13.00	48.60
	3 302.00	V	7.70	13.47	-52.43	-58.20	-13.00	45.20
	4 129.20	H	9.16	14.73	-49.83	-55.40	-13.00	42.40

Test mode : LTE B26

Frequency(MHz) : 836.5

Channel : 26915

Bandwidth(MHz) : 1.4

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 674.00	H	5.80	9.86	-64.84	-68.90	-13.00	55.90
	2 510.00	V	5.91	11.66	-55.45	-61.20	-13.00	48.20
	3 348.40	V	7.80	13.55	-53.25	-59.00	-13.00	46.00
	4 186.00	H	9.27	14.70	-51.57	-57.00	-13.00	44.00

Test mode : LTE B26

Frequency(MHz) : 848.3

Channel : 27033

Bandwidth(MHz) : 1.4

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 697.60	V	5.71	9.97	-64.14	-68.40	-13.00	55.40
	2 549.20	V	5.95	11.78	-55.27	-61.10	-13.00	48.10
	3 397.20	V	7.89	13.64	-54.45	-60.20	-13.00	47.20
	4 245.20	H	9.30	14.93	-51.97	-57.60	-13.00	44.60

Note:

1. $E.I.R.P(dBm) = \text{Substitute Level}(dBm) + \text{Antenna gain}(dBi) - C.L(\text{Cable loss})(dB)$

8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSV30	100810	27.02.19
PXA Spectrum Analyzer	KEYSIGHT	N9040B	US56050101	26.09.29
Signal Generator	R&S	SMB100A	176206	27.01.15
Vector Signal Generator	R&S	SMBV100A	257566	26.07.01
Wideband Radio Communication Tester	R&S	CMW500	141780	27.01.15
Wideband Radio Communication Tester	R&S	CMW500	106840	27.01.15
DC Power Supply	AGILENT	E3632A	MY40006352	27.04.23*
Power Divider	Aeroflex/ Weinschel, Inc	1580-1	NX380	27.04.28*
Temp & Humid Chamber	ESPEC CORP.	LHU-113	1012003753	27.04.23*
Bi-log Antenna	Teseq GmbH	CBL 6112D	62027	26.10.17
Bi-log Antenna	ETS-LINDGREN	3143B	00228420	27.07.03
Horn Antenna	ETS-LINDGREN	3117	00251528	27.01.23
Horn Antenna	ETS-LINDGREN	3117	00246058	27.01.23
High pass Filter	Wainwright Instruments GmbH	WHKX1.0/15G-10SS	14	27.01.16
Amplifier	SONOMA INSTRUMENT	310N	421822	26.09.29
Amplifier	C&K Technologies, Inc.	BZR-00504000- 551028-252525	27736	27.04.27*

*This equipment was calibrated during the test period, and was used before calibration.

End of test report