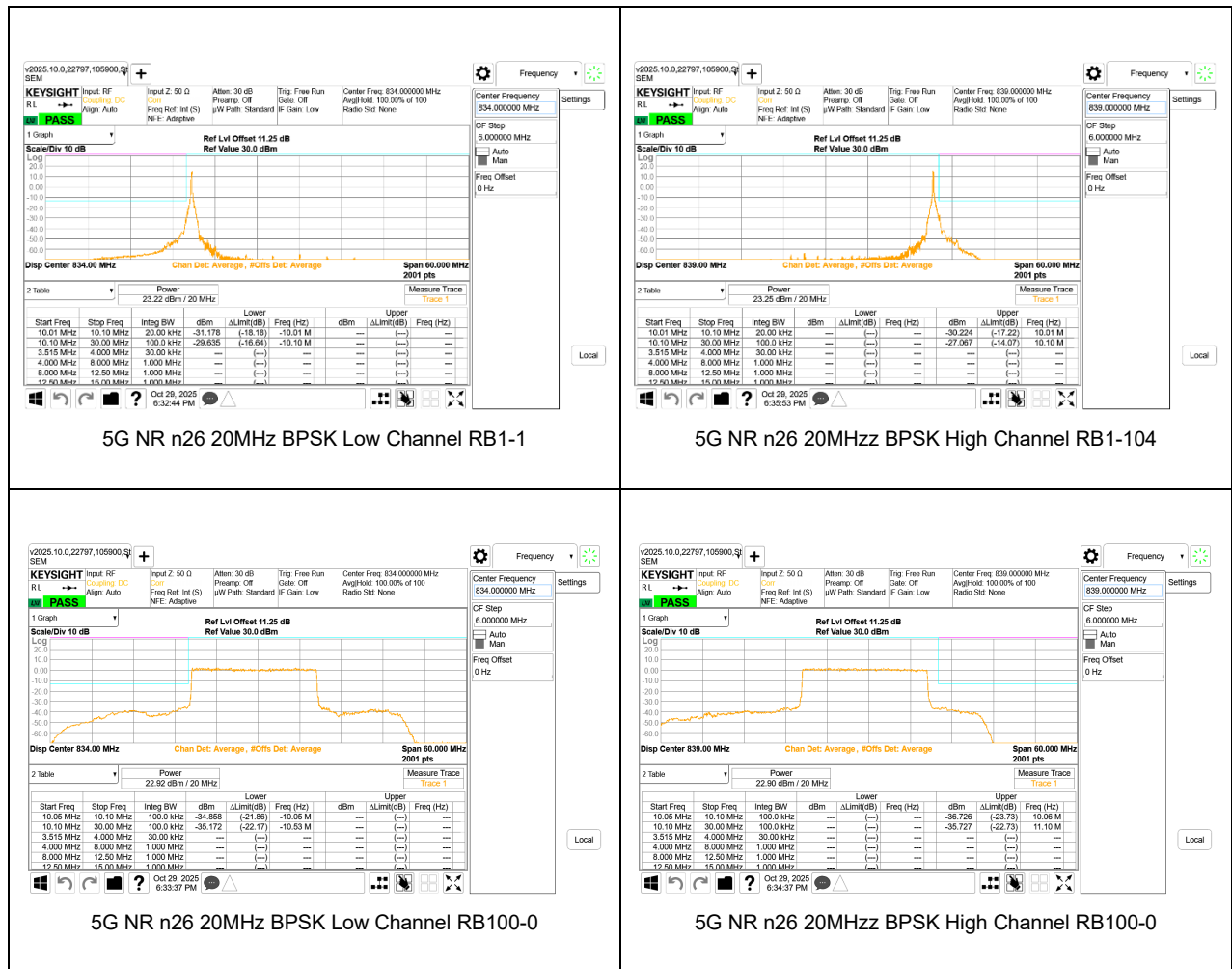






8.3. OUT OF BAND EMISSIONS

LIMITS

FCC: §22.917

The minimum permissible attenuation level of any spurious emissions is $43 + 10 \log (P)$ dB where transmitting power (P) in Watts.

FCC: §90.691

The minimum permissible attenuation level of any spurious emissions is $43 + 10 \log (P)$ dB where transmitting power (P) in Watts.

RSS132§5.5

The minimum permissible attenuation level of any spurious emissions is $43 + 10 \log (P)$ dB where transmitting power (P) in Watts.

TEST PROCEDURE

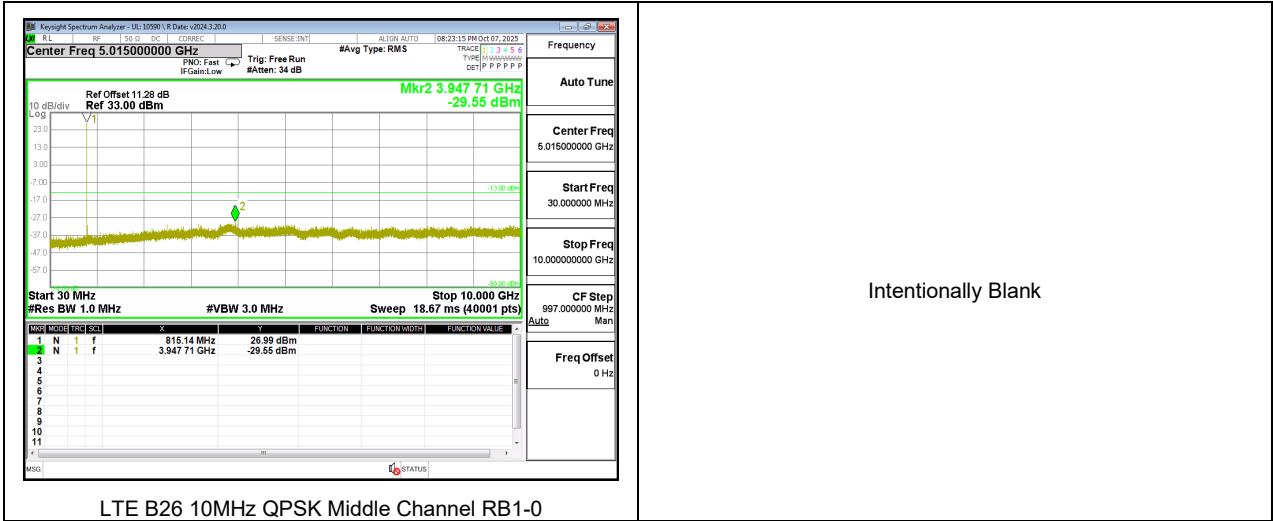
The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

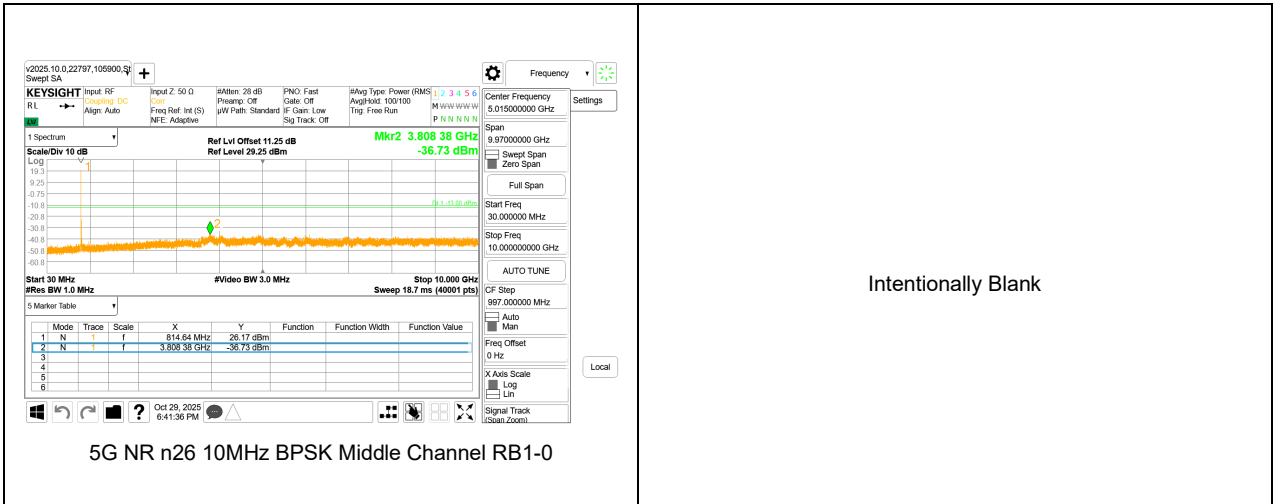
- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.
(NOTE: Worst case set RBW/VBW to 1MHz/3MHz)

RESULTS

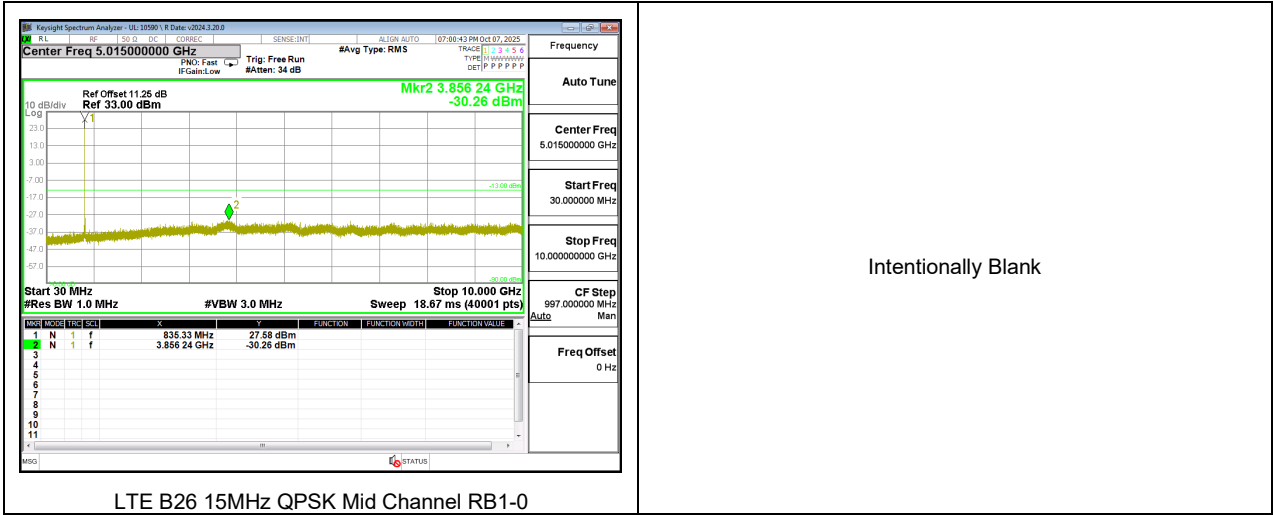
8.3.1. LTE BAND 26 (FCC PART 90S)



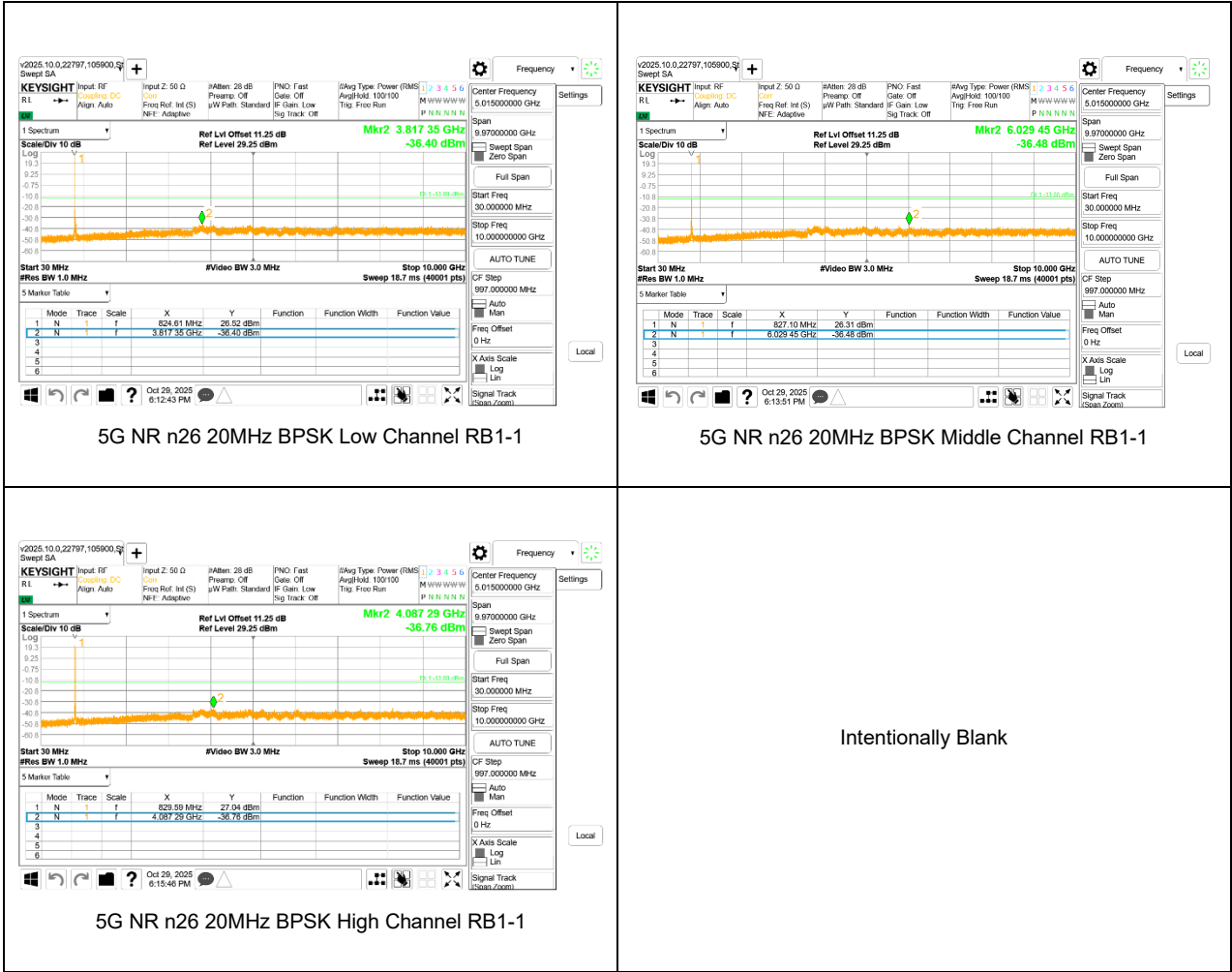
8.3.2. 5G NR n26 (FCC PART 90S)



8.3.3. LTE BAND 5&26 (FCC PART 22)



8.3.4. 5G NR n5&n26 (FCC PART 22)



8.4. FREQUENCY LIMITS

FCC: §22.355

The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

FCC: §90.213

The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

ISED: RSS132§5.3

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within each of the sub-bands when tested at the temperature and supply voltage variations specified in RSS-Gen.

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = -30°C to $+50^{\circ}\text{C}$
- Voltage = (85% - 100%)

Normal, 3.89VDC

End Voltage, 3.69VDC.

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until $+50^{\circ}\text{C}$ is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

RESULTS

See the following pages.

8.4.1. LTE BAND 5&26 (QPSK 10MHz BANDWIDTH, FCC PART 22)

Test Engineer ID:	33499	Test Date:	2025-10-14
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Band		Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		814	849		2.5	Within Authorized Frequency Block (Hz)
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	
Normal (20°C)	Normal	814.4075	848.3800			
Extreme (50°C)		814.4075	848.3800	3.37	0.004	Yes
Extreme (40°C)		814.4075	848.3800	4.87	0.006	Yes
Extreme (30°C)		814.4075	848.3800	4.23	0.005	Yes
Extreme (10°C)		814.4075	848.3800	4.32	0.005	Yes
Extreme (0°C)		814.4075	848.3800	2.77	0.003	Yes
Extreme (-10°C)		814.4075	848.3800	4.13	0.005	Yes
Extreme (-20°C)		814.4075	848.3800	4.09	0.005	Yes
Extreme (-30°C)		814.4075	848.3800	4.85	0.006	Yes
20°C	End Point Voltage	814.4075	848.3800	2.5	0.003	Yes

8.4.2. 5G NR n5&n26 (BPSK 20MHz BANDWIDTH, FCC PART 22)

Test Engineer ID:	33499	Test Date:	2025-10-07
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Band		Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		814	849		2.5	Within Authorized Frequency Block (Hz)
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	
Normal (20°C)	Normal					
Extreme (50°C)		0.0000	0.0000	-6.4	-0.008	Yes
Extreme (40°C)		0.0000	0.0000	-3.9	-0.005	Yes
Extreme (30°C)		0.0000	0.0000	-2.8	-0.003	Yes
Extreme (10°C)		0.0000	0.0000	-6.9	-0.008	Yes
Extreme (0°C)		0.0000	0.0000	-5	-0.006	Yes
Extreme (-10°C)		0.0000	0.0000	-3.5	-0.004	Yes
Extreme (-20°C)		0.0000	0.0000	-7.8	-0.009	Yes
Extreme (-30°C)		0.0000	0.0000	-7.2	-0.009	Yes
20°C	End Point Voltage	0.0000	0.0000	3.2	0.004	Yes

8.5. PEAK-TO-AVERAGE POWER RATIO

LIMIT

FCC: §22.913 (d)

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

ISED: RSS132§5.4

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

Test Procedure

The EUT was connected to a Wideband Power Sensor to measure Peak and Average Output power.

RESULT

Config 0 to measure as the worst case; full resource block (FRB) for each bandwidth was used to measure as the worst case. The results from all CCDF measurements are passed with 13dB peak-to-average power ratio criteria.

8.5.1. LTE BAND 26 (FCC PART 90S)

Test Engineer ID:	33499	Test Date:	2025-10-20
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Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
LTE Band 26 (FCC Part 90S)	1.4MHz	819.0	6	0	QPSK	27.17	21.92	5.25
					16QAM	27.32	21.05	6.27
	3MHz		15	0	QPSK	26.70	22.03	4.67
					16QAM	26.64	21.10	5.54
	5MHz		25	0	QPSK	26.64	22.01	4.63
					16QAM	26.74	21.06	5.68
	10MHz		50	0	QPSK	26.68	22.00	4.68
					16QAM	26.83	21.03	5.80
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

8.5.2. 5G NR n26 (FCC PART 90S)

Test Engineer ID:	33499	Test Date:	2025-10-20
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Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
5G NR n26 (FCC Part 90S)	5MHz	819.0	25	0	BPSK	27.00	22.87	4.13
					16QAM	26.92	21.21	5.71
	10MHz	50	0	BPSK	26.69	22.82	3.87	
					16QAM	26.85	21.24	5.61
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

8.5.3. LTE BAND 5&26 (FCC PART 22)

Test Engineer ID:	33499	Test Date:	2025-10-08
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Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
LTE Band 26 (FCC Part 22)	1.4MHz	836.5	6	0	QPSK	27.73	22.46	5.27
					16QAM	27.80	21.63	6.17
	3MHz		15	0	QPSK	27.19	22.56	4.63
					16QAM	27.09	21.54	5.55
	5MHz		25	0	QPSK	27.24	22.54	4.70
					16QAM	27.36	21.54	5.82
	10MHz		50	0	QPSK	27.14	22.42	4.72
					16QAM	27.49	21.59	5.90
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

8.5.4. 5G NR n5&n26 (FCC PART 22)

Test Engineer ID:	33499	Test Date:	2025-10-21
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Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
5G NR n26 (FCC Part 22)	5MHz	836.5	25	0	BPSK	26.64	22.31	4.33
	10MHz		50	0	16QAM	26.87	21.32	5.55
					BPSK	26.49	22.63	3.86
	15MHz		75	0	16QAM	26.62	20.93	5.69
					BPSK	26.83	22.65	4.19
	20MHz		100	0	16QAM	26.84	21.06	5.78
					BPSK	26.19	21.92	4.28
	16QAM		26.65	20.72	5.93			
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9. RADIATED TEST RESULTS

Radiated measurement using the Field Strength Method

Using the test configuration shown in Figure 6 below, the radiated emissions is measured directly from the EUT and convert the measured field strength or received power to ERP or EIRP, as required, for comparison to the applicable limits. As stated in 5.5.1 of ANSI C63.26-2015, the field strength measurement method using a test site validated to the requirements of ANSI C63.4 is an alternative to the substitution measurement.

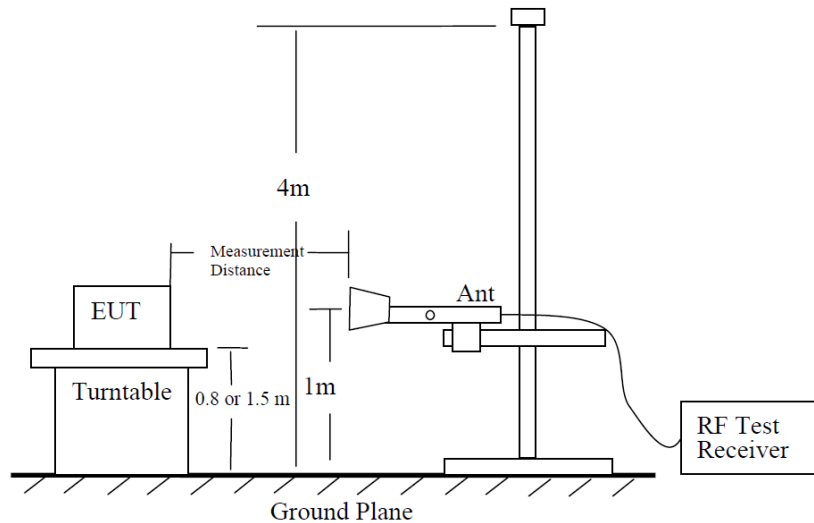


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

Radiated Power Measurement Calculation According to ANSI C63.26-2015

- a) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$.
- b) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$.
- c) $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8$; where D is the measurement distance (in the far field region) in m.
- d) $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.

So, from d)

The measuring distance is usually at 3m, then $20 \cdot \log(3) = 9.5424$

Then, $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 9.5424 - 104.8 = E \text{ (dB}\mu\text{V/m)} - 95.2576$

Note: Confidence check of each chamber is performed daily to see if any degradation from expected/normal reading reference data. Ambient check of each chamber is performed monthly.

9.1. EFFECTIVE RADIATED POWER ERP/EIRP

RULE PART(S)

FCC: §2.1046, §90.635 (b), §22.913

LIMITS

22.913 (a)(5) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

§90.635 (b) - The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw). Power is given in terms of effective radiated power (ERP).

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13dB.

TEST PROCEDURE

ANSI / TIA / EIA 603-E (2016), Clause 2.2.17; PSA setting reference to 971168 D01

For average power measurements:

- a) Set span to at least 1.5 times the OBW;
- b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz;
- c) Set VBW $\geq 3 \times$ RBW;
- d) Set number of points in sweep $\geq 2 \times$ span / RBW;
- e) Sweep time = auto-couple;
- f) Detector = RMS (power averaging);
- g) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- h) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function.

TEST RESULTS

9.1.1. LTE BAND 26 (FCC PART 90S)

High Frequency Substitution Measurement UL Morrisville Chamber 4									
Company:		Samsung Electronic Co., Ltd.							
Project #:		15980274							
Date:		09/10/25							
Test Engineer:		112113/11993							
Configuration:		EUT Only							
Mode:		TX, LTE26(90s), 821.5 MHz, 15MHz, QPSK							

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
821.50	16.72	H	7.72	-0.95		8.05	38.45	-30.40	RB1-74
821.50	27.70	V	7.72	-0.95		19.03	38.45	-19.42	RB1-74

Rev. 10.17.25

High Frequency Substitution Measurement UL Morrisville Chamber 4									
Company:		Samsung Electronic Co., Ltd.							
Project #:		15980274							
Date:		09/10/25							
Test Engineer:		112113/11993							
Configuration:		EUT Only							
Mode:		TX, LTE26(90s), 821.5 MHz, 15MHz, 16QAM							

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
821.50	14.56	H	7.72	-0.95		5.89	38.45	-32.56	RB1-74
821.50	27.20	V	7.72	-0.95		18.53	38.45	-19.92	RB1-74

Rev. 10.17.25

CONFIG 0

High Frequency Substitution Measurement
UL Morrisville Chamber 4

Company: Samsung Electronic Co., Ltd.
Project #: 15980274
Date: 09/12/25
Test Engineer: 33271/11993
Configuration: EUT Only
Mode: TX, LTE26(90s), 821.5 MHz, 15MHz, QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
821.50	25.48	H	7.72	-0.95		16.81	38.45	-21.64	RB1-74
821.50	10.36	V	7.72	-0.95		1.69	38.45	-36.76	RB1-74

Rev. 10.17.25

High Frequency Substitution Measurement
UL Morrisville Chamber 4

Company: Samsung Electronic Co., Ltd.
Project #: 15980274
Date: 09/12/25
Test Engineer: 33271/11993
Configuration: EUT Only
Mode: TX, LTE26(90s), 821.5 MHz, 15MHz, 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
821.50	23.84	H	7.72	-0.95		15.17	38.45	-23.28	RB1-36

Rev. 10.17.25

CONFIG 1

9.1.2. 5G NR n26 (FCC PART 90S)

High Frequency Substitution Measurement UL Morrisville Chamber 4

Company: Samsung Electronic Co., Ltd.
Project #: 15980274
Date: 10/07/25
Test Engineer: 84740/11993
Configuration: EUT Only
Mode: TX, 5G N26(90S), 824MHz, 20MHz, BPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.00	15.74	H	7.72	-0.95		7.07	38.45	-31.38	
824.00	26.21	V	7.72	-0.95		17.54	38.45	-20.91	

Rev. 10.17.25

High Frequency Substitution Measurement UL Morrisville Chamber 4

Company: Samsung Electronic Co., Ltd.
Project #: 15980274
Date: 10/07/25
Test Engineer: 84740/11993
Configuration: EUT Only
Mode: TX, 5G N26(90S), 824MHz, 20MHz, 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.00	25.02	V	7.72	-0.95		16.35	38.45	-22.10	

Rev. 10.17.25

High Frequency Substitution Measurement UL Morrisville Chamber 4 Company: Project #: Date: Test Engineer: Configuration: Mode: Samsung Electronic Co., Ltd. 15980274 10/07/25 84740/11993 EUT Only TX, 5G N26(90S), 824MHz, 15MHz, BPSK									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.00	27.32	V	7.72	-0.95		18.65	38.45	-19.80	WC Overall
Rev. 10.17.25									
CONFIG 0									

High Frequency Substitution Measurement
UL Morrisville Chamber 4

Company: Samsung Electronic Co., Ltd.
Project #: 15980274
Date: 10/07/25
Test Engineer: 112113/11993
Configuration: EUT Only
Mode: TX, 5G N26(90s), 824MHz, 20MHz, BPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.00	25.28	H	7.72	-0.95		16.61	38.45	-21.84	RB1-53
824.00	11.15	V	7.72	-0.95		2.48	38.45	-35.97	RB1-53

Rev. 10.17.25

High Frequency Substitution Measurement
UL Morrisville Chamber 4

Company: Samsung Electronic Co., Ltd.
Project #: 15980274
Date: 10/07/25
Test Engineer: 112113/11993
Configuration: EUT Only
Mode: TX, 5G N26(90s), 824MHz, 20MHz, 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.00	22.99	H	7.72	-0.95		14.32	38.45	-24.13	RB1-1

Rev. 10.17.25

CONFIG 1

9.1.3. LTE BAND 5&26 (FCC PART 22)

High Frequency Substitution Measurement UL Morrisville Chamber 4									
Company: Samsung Electronic Co., Ltd. Project #: 15980274 Date: 09/10/25 Test Engineer: 112113/11993 Configuration: EUT Only Mode: TX, LTE26(22H), 836.5 MHz, 15MHz, QPSK									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
836.50	19.31	H	7.67	-0.95		10.69	38.45	-27.76	RB1-74
836.50	25.25	V	7.67	-0.95		16.63	38.45	-21.82	RB1-74
Rev. 10.17.25									

High Frequency Substitution Measurement UL Morrisville Chamber 4									
Company: Samsung Electronic Co., Ltd. Project #: 15980274 Date: 09/10/25 Test Engineer: 112113/11993 Configuration: EUT Only Mode: TX, LTE26(22H), 836.5 MHz, 15MHz, 16QAM									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
836.50	10.88	H	7.67	-0.95		2.26	38.45	-36.19	RB1-0
836.50	26.60	V	7.67	-0.95		17.98	38.45	-20.47	RB1-0
Rev. 10.17.25									

High Frequency Substitution Measurement UL Morrisville Chamber 4 Company: Project #: Date: Test Engineer: Configuration: Mode: Samsung Electronic Co., Ltd. 15980274 09/10/25 112113/11993 EUT Only TX, LTE26(22H), 836.5 MHz, 5MHz, 16QAM									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
836.50	27.96	V	7.67	-0.95		19.34	38.45	-19.11	RB1-0 (WC Overall)
Rev. 10.17.25									
CONFIG 0									

High Frequency Substitution Measurement
UL Morrisville Chamber 4

Company: Samsung Electronic Co., Ltd.
Project #: 15980274
Date: 09/12/25
Test Engineer: 33271/11993
Configuration: EUT Only
Mode: TX, LTE26(22H), 836.5 MHz, 15MHz, QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
836.50	25.70	H	7.67	-0.95		17.08	38.45	-21.37	RB1-0
836.50	13.18	V	7.67	-0.95		4.56	38.45	-33.89	RB1-0

Rev. 10.17.25

High Frequency Substitution Measurement
UL Morrisville Chamber 4

Company: Samsung Electronic Co., Ltd.
Project #: 15980274
Date: 09/12/25
Test Engineer: 33271/11993
Configuration: EUT Only
Mode: TX, LTE26(22H), 836.5 MHz, 15MHz, 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
836.50	24.07	H	7.67	-0.95		15.45	38.45	-23.00	RB1-0

Rev. 10.17.25

CONFIG 1

9.1.4. 5G NR n5&n26 (FCC PART 22)

High Frequency Substitution Measurement UL Morrisville Chamber 4									
Company:		Samsung Electronic Co., Ltd.							
Project #:		15980274							
Date:		10/07/25							
Test Engineer:		84740/11993							
Configuration:		EUT Only							
Mode:		TX, 5G N26(22H), 836.5MHz, 20MHz, BPSK							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
836.50	17.91	H	7.67	-0.95		9.29	38.45	-29.16	RB1-104
836.50	27.56	V	7.67	-0.95		18.94	38.45	-19.51	RB1-104
Rev. 10.17.25									

High Frequency Substitution Measurement UL Morrisville Chamber 4									
Company:		Samsung Electronic Co., Ltd.							
Project #:		15980274							
Date:		10/07/25							
Test Engineer:		84740/11993							
Configuration:		EUT Only							
Mode:		TX, 5G N26(22H), 836.5MHz, 20MHz, 16QAM							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
836.50	26.53	V	7.67	-0.95		17.91	38.45	-20.54	RB1-104
Rev. 10.17.25									

High Frequency Substitution Measurement UL Morrisville Chamber 4 Company: Samsung Electronic Co., Ltd. Project #: 15980274 Date: 10/07/25 Test Engineer: 84740/11993 Configuration: EUT Only Mode: TX, 5G N26(22H), 836.5MHz, 5MHz, BPSK									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
836.50	27.64	V	7.67	-0.95		19.02	38.45	-19.43	WC Overall
Rev. 10.17.25									
CONFIG 0									

High Frequency Substitution Measurement
UL Morrisville Chamber 4

Company: Samsung Electronic Co., Ltd.
Project #: 15980274
Date: 10/07/25
Test Engineer: 112113/11993
Configuration: EUT Only
Mode: TX, 5G N26(22H), 836.5MHz, 20MHz, BPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
836.50	26.04	H	7.67	-0.95		17.42	38.45	-21.03	
836.50	13.40	V	7.67	-0.95		4.78	38.45	-33.67	

Rev. 10.17.25

High Frequency Substitution Measurement
UL Morrisville Chamber 4

Company: Samsung Electronic Co., Ltd.
Project #: 15980274
Date: 10/07/25
Test Engineer: 112113/11993
Configuration: EUT Only
Mode: TX, 5G N26(22H), 836.5MHz, 20MHz, 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
836.50	24.16	H	7.67	-0.95		15.54	38.45	-22.91	RB1-104

Rev. 10.17.25

CONFIG 1

9.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMITS

FCC: §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.

FCC: §90.691

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.

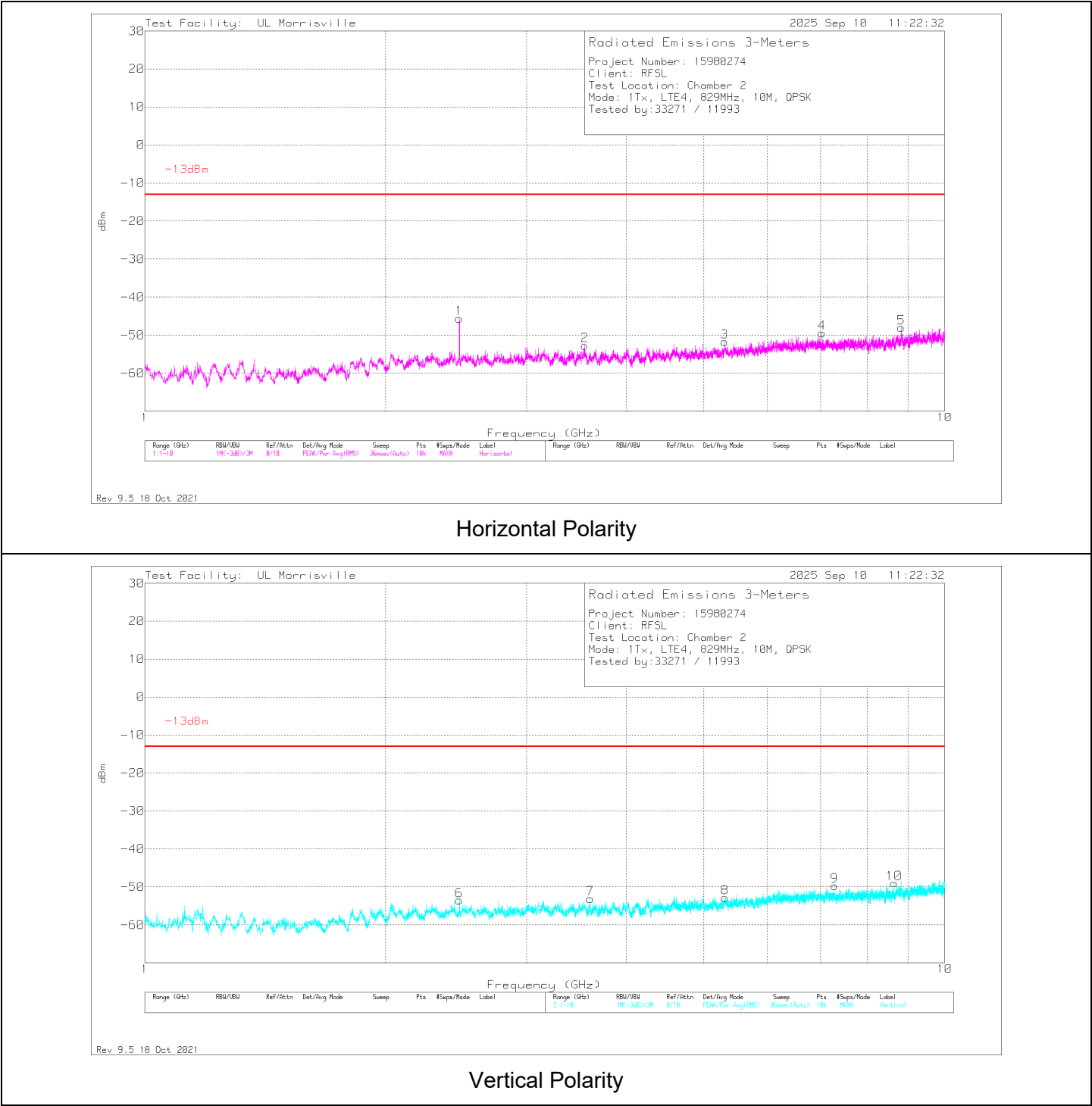
RSS132§5.5

Equipment shall meet the unwanted emission limits specified below:

- (i) In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated below the transmitter output power P (dBW) by at least $43 + 10 \log(p)$ dB.
- (ii) After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated below the transmitter output power P (dBW) by at least $43 + 10 \log(p)$ dB. If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

p is the output power specified in watts.

Example Plot



Trace Markers

Frequency (MHz)	Meter Reading (dBuV)	Det	88761 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)	Polarity
Low Channel, 829MHz									
3.548800	-52.11	Pk	33.1	11.8	-46.00	-52.71	-13	-39.71	H
3.604600	-52.29	Pk	32.9	11.8	-46.00	-53.09	-13	-40.09	V
5.307400	-53.39	Pk	34.3	11.8	-44.70	-51.79	-13	-38.79	H
5.315500	-54.69	Pk	34.3	11.8	-44.50	-52.89	-13	-39.89	V
7.030900	-54.14	Pk	35.6	11.8	-43.10	-49.44	-13	-36.44	H
7.285600	-54.57	Pk	35.6	11.8	-43.00	-49.77	-13	-36.77	V

TEST PROCEDURE

KDB 971168 D01 /D02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz

RESULTS

9.2.1. LTE BAND 26 (FCC PART 90S & 22)

LTE BAND 26 (QPSK 15.0MHZ BANDWIDTH, ANT E (CONFIG 0))

Date:	2025-09-10, 11-26-25
Test Engineer:	112113, 11993
Configuration:	EUT Only
Mode:	LTE B26 15MHz QPSK
Chamber #:	Chamber 2

Frequency (MHz)	Meter Reading (dBuV)	Det	88761 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)	Polarity
Low Channel, 821.5MHz									
3.283300	-53.15	Pk	32.9	11.8	-45.00	-52.85	-13	-39.85	H
3.276100	-52.03	Pk	32.9	11.8	-46.10	-52.93	-13	-39.93	V
4.249900	-52.80	Pk	33.3	11.8	-46.30	-53.30	-13	-40.30	H
4.267000	-51.80	Pk	33.4	11.8	-46.00	-52.10	-13	-39.10	V
7.453000	-55.53	Pk	35.6	11.8	-42.80	-50.63	-13	-37.63	H
7.217200	-53.75	Pk	35.5	11.8	-43.00	-49.15	-13	-36.15	V
Mid Channel, 831.5MHz									
2.6506	-50.43	Pk	32.9	11.8	-47.4	-52.73	-13	-39.73	H
3.5623	-52.65	Pk	32.9	11.8	-46	-53.55	-13	-40.55	V
5.8564	-55.48	Pk	35	11.8	-43.9	-52.28	-13	-39.28	H
6.4243	-54.06	Pk	35.8	11.8	-43.6	-49.66	-13	-36.66	V
9.8533	-57.61	Pk	37.1	11.8	-40.1	-48.21	-13	-35.21	H
9.8614	-57.87	Pk	37.1	11.8	-40.4	-48.77	-13	-35.77	V
High Channel, 839MHz									
2.496700	-47.28	Pk	32.3	11.8	-48.30	-51.08	-13	-38.08	H
2.496700	-46.56	Pk	32.3	11.8	-48.30	-50.36	-13	-37.36	V
4.132900	-50.35	Pk	33.3	11.8	-46.70	-51.45	-13	-38.45	H
4.132900	-52.36	Pk	33.3	11.8	-46.70	-53.46	-13	-40.46	V
9.627400	-54.72	Pk	36.8	11.8	-42.30	-48.12	-13	-35.12	H
9.560800	-54.07	Pk	36.7	11.8	-41.40	-46.57	-13	-33.57	V

LTE BAND 26 (QPSK 15.0MHZ BANDWIDTH, ANT A (CONFIG 1))

Date:	2025-09-12
Test Engineer:	33271, 11993
Configuration:	EUT Only
Mode:	LTE B26 15MHz QPSK
Chamber #:	Chamber 2

Frequency (MHz)	Meter Reading (dBuV)	Det	88761 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)	Polarity
Low Channel, 821.5MHz									
3.097000	-53.34	Pk	33.3	11.8	-45.70	-53.54	-13	-40.54	H
3.099700	-54.45	Pk	33.3	11.8	-45.40	-54.35	-13	-41.35	V
4.015000	-52.00	Pk	33.4	11.8	-46.30	-52.70	-13	-39.70	H
4.038400	-53.00	Pk	33.4	11.8	-46.80	-54.50	-13	-41.50	V
6.471100	-54.73	Pk	35.5	11.8	-43.60	-50.73	-13	-37.73	H
6.489100	-55.72	Pk	35.5	11.8	-43.10	-51.22	-13	-38.22	V
Mid Channel, 831.5MHz									
3.142000	-52.04	Pk	33.2	11.8	-46.10	-52.64	-13	-39.64	H
2.474200	-48.80	Pk	32.2	11.8	-48.20	-52.70	-13	-39.70	V
6.556600	-54.95	Pk	35.5	11.8	-43.40	-50.65	-13	-37.65	H
6.499000	-54.26	Pk	35.5	11.8	-44.00	-50.66	-13	-37.66	V
8.833600	-56.93	Pk	36.0	11.8	-40.30	-49.03	-13	-36.03	H
8.830000	-58.25	Pk	36.0	11.8	-39.40	-49.45	-13	-36.45	V
High Channel, 839MHz									
2.437300	-50.19	Pk	32.1	11.8	-48.10	-53.99	-13	-40.99	H
2.437300	-51.70	Pk	32.1	11.8	-48.10	-55.50	-13	-42.50	V
4.336300	-51.75	Pk	33.4	11.8	-46.00	-52.25	-13	-39.25	H
4.240900	-53.43	Pk	33.3	11.8	-46.20	-53.93	-13	-40.93	V
7.215400	-54.60	Pk	35.5	11.8	-43.00	-50.00	-13	-37.00	H
7.208200	-53.79	Pk	35.5	11.8	-43.00	-49.19	-13	-36.19	V

9.2.2. 5G NR n26 (FCC PART 90S & 22)

5G NR n26 (BPSK 20.0MHZ BANDWIDTH, ANT E (CONFIG 0))

Date:	2025-10-07
Test Engineer:	84740, 11993
Configuration:	EUT Only
Mode:	FR1 N26 20MHz BPSK
Chamber #:	Chamber 4

Frequency (MHz)	Meter Reading (dBuV)	Det	206211 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)	Polarity
Low Channel, 824MHz									
2.029600	-61.60	Pk	31.7	11.8	-37.00	-54.80	-13	-41.80	H
2.042200	-61.63	Pk	31.7	11.8	-36.70	-54.43	-13	-41.43	V
5.302900	-64.69	Pk	34.4	11.8	-32.00	-50.29	-13	-37.29	H
5.310100	-64.65	Pk	34.4	11.8	-31.50	-49.75	-13	-36.75	V
9.594100	-65.29	Pk	36.6	11.8	-25.10	-41.59	-13	-28.59	H
9.545500	-66.82	Pk	36.7	11.8	-24.60	-42.42	-13	-29.42	V
Mid Channel, 831.5MHz									
1.917100	-61.97	Pk	30.6	11.8	-36.20	-55.47	-13	-42.47	H
1.909900	-61.72	Pk	30.6	11.8	-36.30	-55.32	-13	-42.32	V
4.587400	-63.53	Pk	34.1	11.8	-32.40	-49.93	-13	-36.93	H
4.700800	-64.38	Pk	34.1	11.8	-32.30	-50.58	-13	-37.58	V
9.550000	-65.75	Pk	36.7	11.8	-24.70	-41.45	-13	-28.45	H
8.920900	-65.98	Pk	36.0	11.8	-25.40	-43.08	-13	-30.08	V
High Channel, 839MHz									
2.302300	-62.18	Pk	31.9	11.8	-36.00	-54.18	-13	-41.18	H
2.248300	-61.91	Pk	31.7	11.8	-36.20	-54.21	-13	-41.21	V
5.306500	-64.31	Pk	34.4	11.8	-31.80	-49.71	-13	-36.71	H
5.325400	-64.47	Pk	34.4	11.8	-32.10	-50.27	-13	-37.27	V
9.575200	-66.71	Pk	36.6	11.8	-25.30	-43.11	-13	-30.11	H
9.151300	-66.26	Pk	36.2	11.8	-24.90	-42.56	-13	-29.56	V

5G NR n26 (BPSK 20.0MHZ BANDWIDTH, ANT A(CONFIG 1))

Date:	2025-10-07
Test Engineer:	112113, 11993
Configuration:	EUT Only
Mode:	FR1 N26 20MHz BPSK
Chamber #:	Chamber 4

Frequency (MHz)	Meter Reading (dBuV)	Det	206211 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)	Polarity
Low Channel, 824MHz									
1.729000	-62.59	Pk	29.1	11.8	-36.60	-57.79	-13	-44.79	H
1.719100	-62.00	Pk	29.1	11.8	-36.90	-57.50	-13	-44.50	V
3.176200	-63.02	Pk	32.8	11.8	-35.80	-53.52	-13	-40.52	H
3.172600	-63.31	Pk	32.9	11.8	-35.90	-53.81	-13	-40.81	V
5.401000	-65.58	Pk	34.4	11.8	-32.00	-51.18	-13	-38.18	H
5.426200	-65.90	Pk	34.4	11.8	-32.20	-51.60	-13	-38.60	V
Mid Channel, 831.5MHz									
1.637200	-62.68	Pk	28.9	11.8	-36.90	-58.38	-13	-45.38	H
1.621000	-59.12	Pk	28.7	11.8	-37.50	-55.62	-13	-42.62	V
2.998000	-62.24	Pk	32.7	11.8	-36.40	-53.74	-13	-40.74	H
3.030400	-63.13	Pk	32.9	11.8	-36.40	-54.23	-13	-41.23	V
4.086100	-64.16	Pk	33.3	11.8	-33.80	-52.36	-13	-39.36	H
4.087000	-65.57	Pk	33.3	11.8	-33.80	-53.77	-13	-40.77	V
High Channel, 839MHz									
1.860400	-62.97	Pk	30.6	11.8	-36.70	-56.87	-13	-43.87	H
1.859500	-63.16	Pk	30.6	11.8	-36.80	-57.16	-13	-44.16	V
3.227500	-63.43	Pk	32.8	11.8	-35.90	-54.33	-13	-41.33	H
3.227500	-63.00	Pk	32.8	11.8	-35.90	-53.90	-13	-40.90	V
5.662000	-65.70	Pk	34.4	11.8	-31.70	-50.80	-13	-37.80	H
5.638600	-66.30	Pk	34.4	11.8	-31.60	-51.40	-13	-38.40	V

10. SETUP PHOTOS

Refer to R15980274-EP1 for setup photos.

END OF REPORT