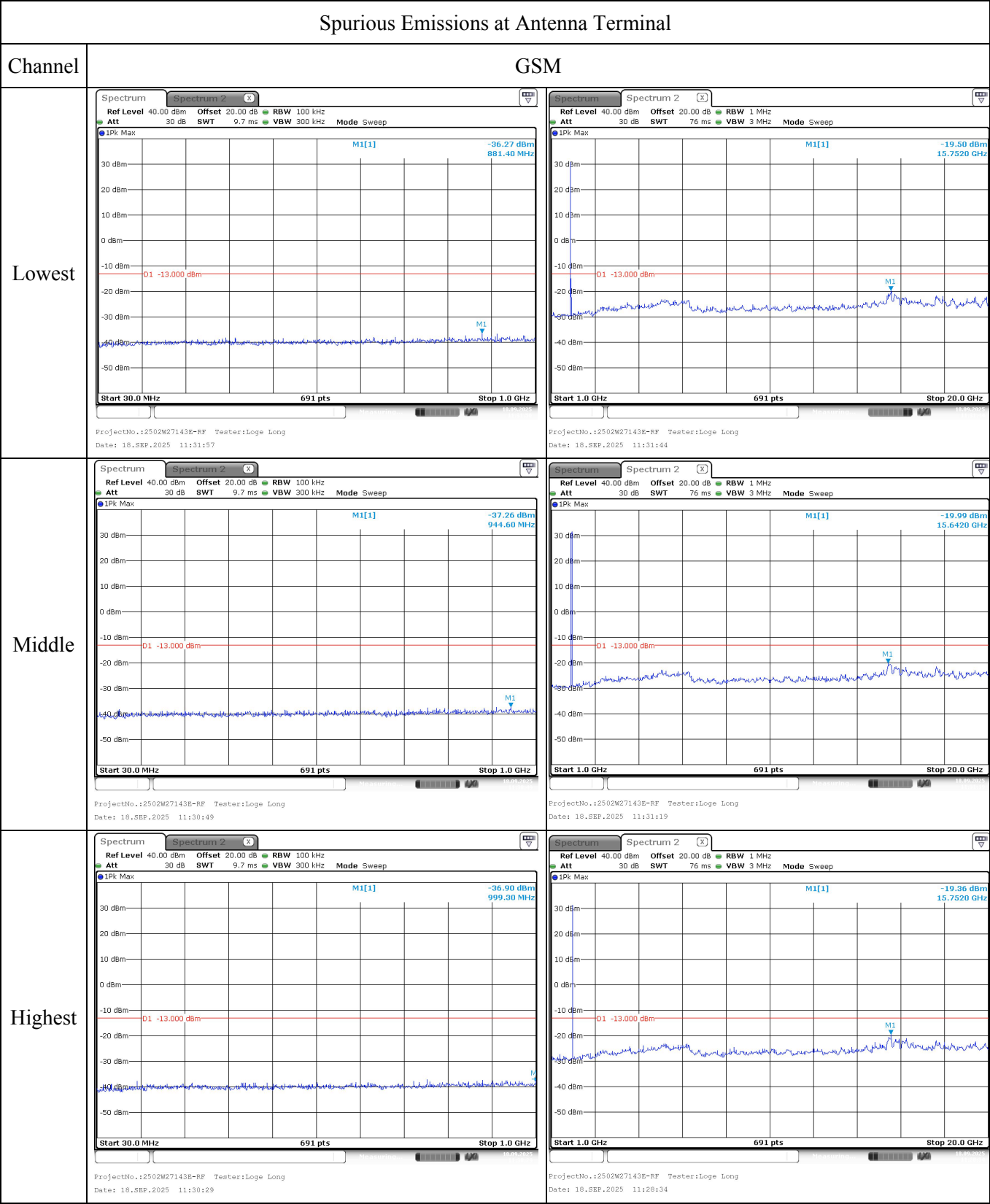


PCS 1900:



Note: The maximum path attenuation of 30MHz-20GHz was added into the offset.

4.5 Transmitter unwanted emissions-Out of band emission:

4.5.1 Applicable Standard

FCC §22.917

(a) Out of band emissions. 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.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a reference bandwidth as follows:

(1) In the spectrum below 1 GHz, instrumentation should employ a reference bandwidth of 100 kHz or greater. 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) In the spectrum above 1 GHz, instrumentation should employ a reference bandwidth of 1 MHz

FCC §24.238

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

(a) Out of band emissions. 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.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, 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 the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz 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.

(c) Alternative out of band emission limit. Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) Interference caused by out of band emissions. If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

FCC §27.53

(a) For operations in the 2305-2320 MHz band and the 2345-2360 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power P (with averaging performed only during periods of transmission) within the licensed band(s) of operation, in watts, by the following amounts:

(4) For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

(i) By a factor of not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz, $67 + 10 \log (P)$ dB on all frequencies between 2288 and 2292 MHz, and 70 + $10 \log (P)$ dB below 2288 MHz;

(iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log (P)$ dB above 2365 MHz.

(c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

(h) AWS emission limits

(1) **General protection levels.** Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

(m)(4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ 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 $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 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.

FCC §90.691

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

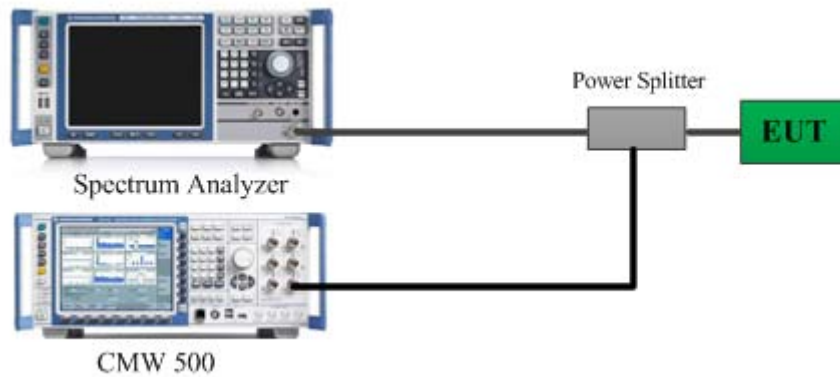
(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

FCC §90.543

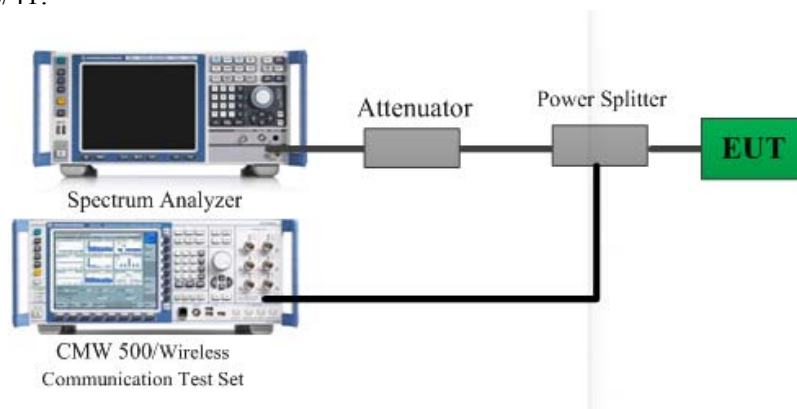
(c) Out-of-band emission limit. On any frequency outside of the frequency ranges covered by the ACP tables in this section, the power of any emission must be reduced below the mean output power (P) by at least $43 + 10 \log(P)$ dB measured in a 100 kHz bandwidth for frequencies less than 1 GHz, and in a 1 MHz bandwidth for frequencies greater than 1 GHz.

4.5.2 Test Setup Block

For LTE B7/38/41:



Except for LTE B7/38/41:



Note: The Insertion loss of the RF cable and Power Splitter was offset into the Reading of Spectrum Analyzer.

4.5.3 Test Procedure

According to ANSI C63.26-2015 Section 5.7.3:

Typically, a measurement (resolution) bandwidth smaller than the reference bandwidth is allowed for measurements within a specified frequency range at the edge of the authorized frequency block/band (e.g., within the first Y MHz outside of the authorized frequency band/block, where the value of Y is specified in the relevant rule part). Some FCC out-of-band emission rules permit the use of a narrower RBW (typically limited to a minimum RBW of 1 % of the OBW) for measuring the out-of-band emissions without a requirement to integrate the result over the full reference bandwidth. Beyond the specified frequency range in which this relaxation of the uniform reference bandwidth is permitted, it typically is also acceptable to use a narrower RBW (again limited to a minimum of 1 % of OBW) to increase accuracy, but the measurement result must subsequently be integrated over the full reference bandwidth.

4.5.4 Test Results**For 2G:**

Serial Number:	38S5-2	Test Date:	2025/9/18
Test Site:	RF	Test Mode:	Transmitting
Tester:	Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	26.8	Relative Humidity: (%)	68	ATM Pressure: (kPa)	100.5
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Test Equipment List and Details:

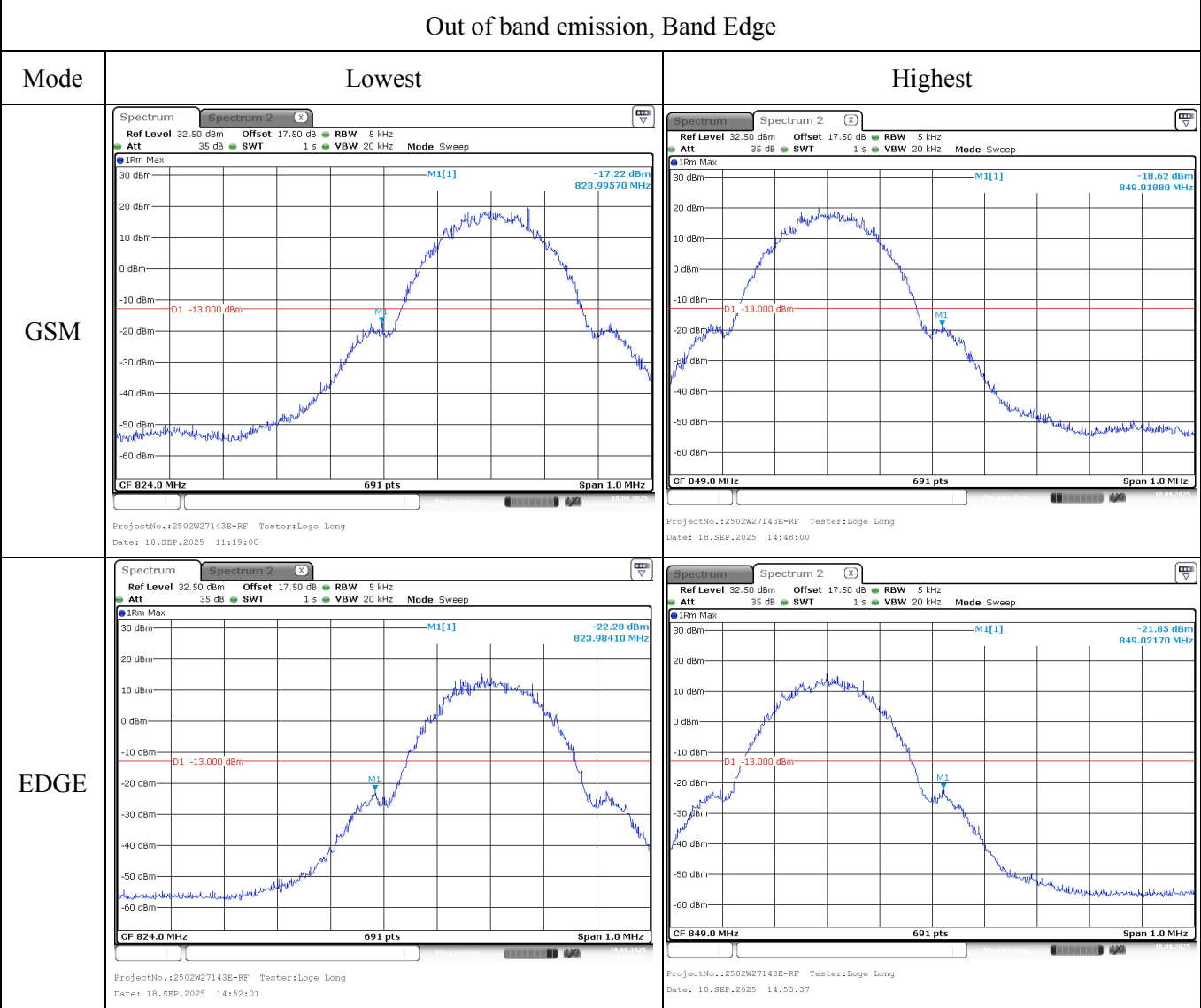
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101947	2025/7/28	2026/7/27
Micro-Coax	Coaxial Cable	UFB205A	323308-024	2025/6/1	2026/5/31
Eastsheep	Coaxial Attenuator	5W-N-JK-6G-10dB	F-08-EM502	2025/6/6	2026/6/5
HUBER+SUHNER	Coaxial Attenuator	6610_SMA-50-1	0064	2025/6/6	2026/6/5
Mini-Circuits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2025/2/25	2026/2/24
Agilent	Wireless Communication Test Set	E5515C	MY50266471	2025/7/28	2026/7/27

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

For 3G/4G:

Please refer to the attachment Appendix A, B.

Test Plots:
GSM850:



PCS 1900:

Out of band emission, Band Edge		
Channel	Lowest	Highest
GSM	Spectrum Spectrum 2 Ref Level 32.50 dBm Offset 17.50 dB RBW 5 kHz Att 35 dB SWT 1 s VBW 20 kHz Mode Sweep IRm Max 30 dBm -19.92 dBm 1.85000000 GHz M1 -13.000 dBm CF 1.85 GHz 691 pts Span 1.0 MHz ProjectNo.:2502W27143E-RF Tester:Loge Long Date: 18.SEP.2025 11:24:02	Spectrum Spectrum 2 Ref Level 32.50 dBm Offset 17.50 dB RBW 5 kHz Att 35 dB SWT 1 s VBW 20 kHz Mode Sweep IRm Max 30 dBm -21.72 dBm 1.91002030 GHz M1 -13.000 dBm CF 1.91 GHz 691 pts Span 1.0 MHz ProjectNo.:2502W27143E-RF Tester:Loge Long Date: 18.SEP.2025 14:46:12
EDGE	Spectrum Spectrum 2 Ref Level 32.50 dBm Offset 17.50 dB RBW 5 kHz Att 35 dB SWT 1 s VBW 20 kHz Mode Sweep IRm Max 30 dBm -25.36 dBm 1.84998120 GHz M1 -13.000 dBm CF 1.85 GHz 691 pts Span 1.0 MHz ProjectNo.:2502W27143E-RF Tester:Loge Long Date: 18.SEP.2025 14:38:40	Spectrum Spectrum 2 Ref Level 32.50 dBm Offset 17.50 dB RBW 5 kHz Att 35 dB SWT 1 s VBW 20 kHz Mode Sweep IRm Max 30 dBm -24.63 dBm 1.91001300 GHz M1 -13.000 dBm CF 1.91 GHz 691 pts Span 1.0 MHz ProjectNo.:2502W27143E-RF Tester:Loge Long Date: 18.SEP.2025 14:41:00

4.6 Transmitter unwanted emissions-Radiated Spurious emissions:

4.6.1 Applicable Standard

FCC §22.917

(a) Out of band emissions. 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.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a reference bandwidth as follows:

(1) In the spectrum below 1 GHz, instrumentation should employ a reference bandwidth of 100 kHz or greater. 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) In the spectrum above 1 GHz, instrumentation should employ a reference bandwidth of 1 MHz

FCC §24.238

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

(a) Out of band emissions. 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.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, 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 the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz 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.

(c) Alternative out of band emission limit. Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) Interference caused by out of band emissions. If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

FCC §27.53

(a) For operations in the 2305-2320 MHz band and the 2345-2360 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power P (with

averaging performed only during periods of transmission) within the licensed band(s) of operation, in watts, by the following amounts:

(4) For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

(i) By a factor of not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz, $67 + 10 \log (P)$ dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;

(iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log (P)$ dB above 2365 MHz.

(c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision

is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

(h) AWS emission limits

(1) **General protection levels.** Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

(m)(4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ 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 $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 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.

FCC §90.691

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

FCC §90.543

(c) Out-of-band emission limit. On any frequency outside of the frequency ranges covered by the ACP tables in this section, the power of any emission must be reduced below the mean output power (P) by at least $43 + 10 \log(P)$ dB measured in a 100 kHz bandwidth for frequencies less than 1 GHz, and in a 1 MHz bandwidth for frequencies greater than 1 GHz.

4.6.2 Test setup

According to ANSI C63.26-2015 Section 5.5.3:

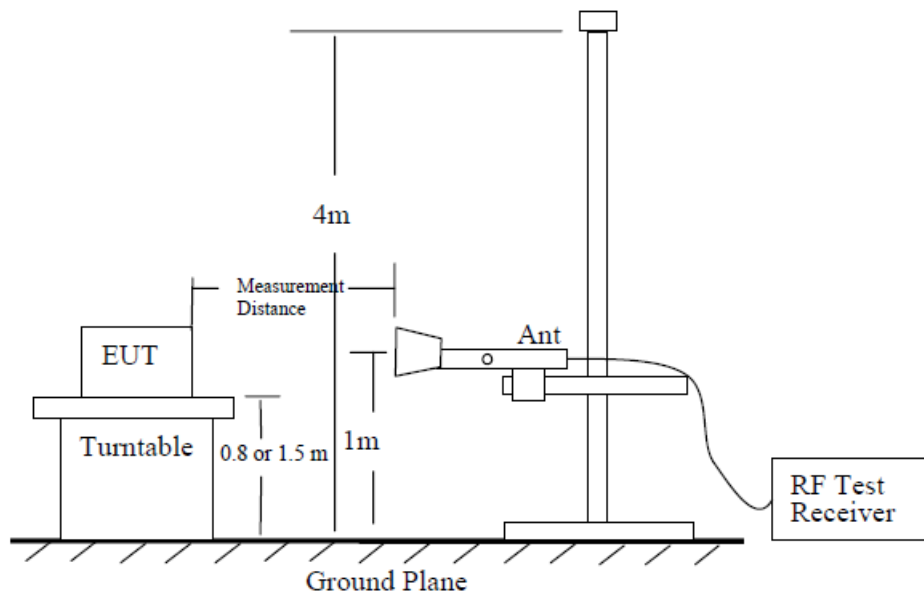


Figure 6 —Test site-up for radiated ERP and/or EIRP measurements

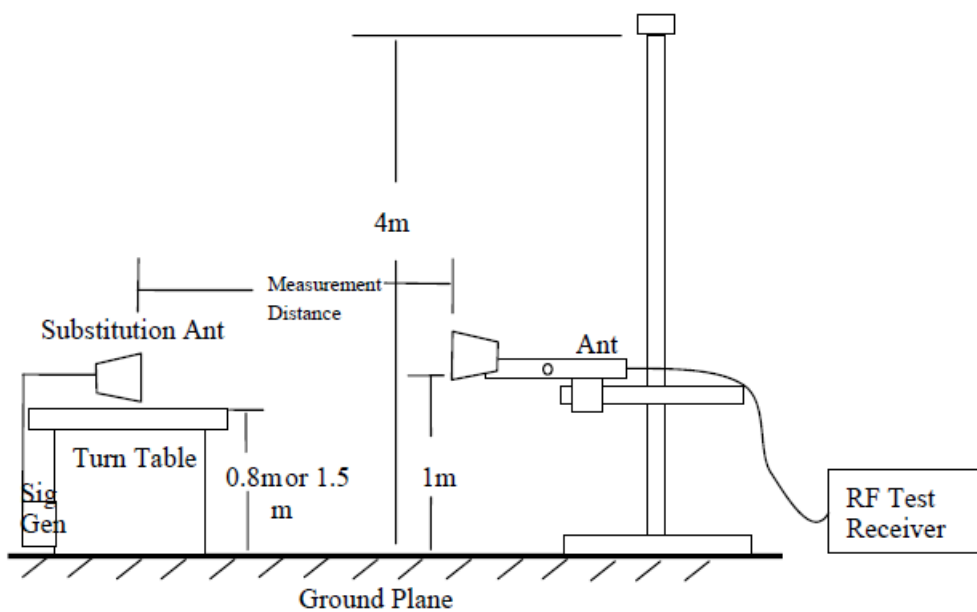


Figure 7 —Substitution method set-up for radiated emission

4.6.3 Test Procedure

According to ANSI C63.26-2015 Section 5.5.3:

- a) Place the EUT in the center of the turntable. The EUT shall be configured to transmit into the standard non-radiating load (for measuring radiated spurious emissions), connected with cables of minimal length unless specified otherwise. If the EUT uses an adjustable antenna, the antenna shall be positioned to the length that produces the worst case emission at the fundamental operating frequency.
- b) Each emission under consideration shall be evaluated:
 - 1) Raise and lower the measurement antenna in accordance 5.5.2, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.
 - 2) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.
 - 3) Return the turntable to the azimuth where the highest emission amplitude level was observed.
 - 4) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.
 - 5) Record the measured emission amplitude level and frequency using the appropriate RBW.
- c) Repeat step b) for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.
- d) Set-up the substitution measurement with the reference point of the substitution antenna located as near as possible to where the center of the EUT radiating element was located during the initial EUT measurement.
- e) Maintain the previous measurement instrument settings and test set-up, with the exception that the EUT is removed and replaced by the substitution antenna.
- f) Connect a signal generator to the substitution antenna; locate the signal generator so as to minimize any potential influences on the measurement results. Set the signal generator to the frequency where emissions are detected, and set an output power level such that the radiated signal can be detected by the measurement instrument, with sufficient dynamic range relative to the noise floor.
- g) For each emission that was detected and measured in the initial test [i.e., in step b) and step c)]:
 - 1) Vary the measurement antenna height between 1 m to 4 m to maximize the received (measured) signal amplitude.
 - 2) Adjust the signal generator output power level until the amplitude detected by the measurement instrument equals the amplitude level of the emission previously measured directly in step b) and step c).
 - 3) Record the output power level of the signal generator when equivalence is achieved in step 2).
- h) Repeat step e) through step g) with the measurement antenna oriented in the opposite polarization.
- i) Calculate the emission power in dBm referenced to a half-wave dipole using the following equation:

$$P_e = P_s(\text{dBm}) - \text{cable loss (dB)} + \text{antenna gain (dBd)}$$
 where

P_e = equivalent emission power in dBm
 P_s = source (signal generator) power in dBm

NOTE—dBd refers to the measured antenna gain in decibels relative to a half-wave dipole.
- j) Correct the antenna gain of the substitution antenna if necessary to reference the emission power to a half-wave dipole. When using measurement antennas with the gain specified in dBi, the equivalent dipole-referenced gain can be determined from: $\text{gain (dBd)} = \text{gain (dBi)} - 2.15 \text{ dB}$. If necessary, the antenna gain can be calculated from calibrated antenna factor information
- k) Provide the complete measurement results as a part of the test report.

4.6.4 Test Results

Serial Number:	38S5-1	Test Date:	Below 1GHz: 2025/8/29 Above 1GHz: 2025/9/4
Test Site:	Chamber 10m, Chamber B	Test Mode:	Transmitting
Tester:	Zoo Zou, Alan Xie	Test Result:	Pass

Environmental Conditions:					
Temperature: (°C)	25.6~26.9	Relative Humidity: (%)	43~45	ATM Pressure: (kPa)	100.1~100.4

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
30MHz~1000MHz					
Sunol Sciences	Hybrid Antenna	JB3	A060611-1	2025/6/23	2028/6/22
Narda	Coaxial Attenuator	779-6dB	04269	2025/6/23	2028/6/22
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2025/7/1	2026/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	2025/7/1	2026/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2025/7/1	2026/6/30
Sonoma	Amplifier	310N	185914	2025/8/25	2026/8/24
R&S	EMI Test Receiver	ESR3	102453	2025/6/25	2026/6/24
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
Micro-Coax	Coaxial Cable	UFA210B	99G1448	2024/9/5	2025/9/4
Agilent	Signal Generator	E8247C	MY43321350	2025/7/28	2026/7/27
R&S	Wideband Radio Communication Tester	CMW500	149216	2025/7/28	2026/7/27
E-Microwave	Band Rejection Filter	OBF-ZP-703-748-SMAF	OE01902425	2025/6/6	2026/6/5
E-Microwave	Band Rejection Filter	BSF-ZP-777-787-SMAF	OE01902430	2025/6/6	2026/6/5
Sinoscite	Band Rejection Filter	BSF824-862MS	1438001	2025/6/6	2026/6/5

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Above 1GHz					
ETS-Lindgren	Horn Antenna	3115	000 527 35	2023/9/7	2026/9/6
AH	Horn Antenna	SAS-571	1177	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-03 1304	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-01 1302	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-02 1302	2023/2/22	2026/2/21
Xinhang Macrowave	Coaxial Cable	XH750A-N/J-SMA/J-10M	20231117004 #0001	2024/11/17	2025/11/16
Xinhang Macrowave	Coaxial Cable	XH360A-2.92/J-2.92/J-6M-A	20231208001 #0001	2024/12/9	2025/12/8
Micro-Coax	Coaxial Cable	UFA210B	99G1448	2024/9/5	2025/9/4
Agilent	Signal Generator	E8247C	MY43321350	2025/7/28	2026/7/27
AH	Preamplifier	PAM-0118P	469	2025/4/11	2026/4/10
AH	Preamplifier	PAM-1840VH	191	2024/9/6	2025/9/5
R&S	Spectrum Analyzer	FSV40	101944	2025/8/8	2026/8/7
Decentest	Multiplex Switch Test Control Set & Filter Switch Unit	DT7220SCU & DT7220FCU	DC79902 & DC79905	2025/8/25	2026/8/24

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data:

After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

Cellular Band (30MHz-10GHz)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 850 Frequency:824.2MHz								
82.60	H	47.71	-60.65	0.00	0.18	-60.83	-13.00	47.83
74.20	V	47.84	-58.07	-2.90	0.18	-61.15	-13.00	48.15
1648.40	H	51.93	-64.23	9.44	0.44	-55.23	-13.00	42.23
1648.40	V	52.39	-64.77	9.44	0.44	-55.77	-13.00	42.77
2472.60	H	72.94	-41.79	9.24	0.62	-33.17	-13.00	20.17
2472.60	V	67.57	-47.21	9.24	0.62	-38.59	-13.00	25.59
3296.80	H	48.45	-63.34	10.44	0.72	-53.62	-13.00	40.62
3296.80	V	49.34	-63.02	10.44	0.72	-53.30	-13.00	40.30
GSM 850 Frequency:836.6MHz								
82.12	H	47.86	-60.32	0.00	0.18	-60.50	-13.00	47.50
74.35	V	47.92	-57.97	-2.83	0.18	-60.98	-13.00	47.98
1673.20	H	50.58	-65.50	9.48	0.45	-56.47	-13.00	43.47
1673.20	V	50.65	-66.27	9.48	0.45	-57.24	-13.00	44.24
2509.80	H	71.48	-43.05	9.22	0.62	-34.45	-13.00	21.45
2509.80	V	68.04	-46.80	9.22	0.62	-38.20	-13.00	25.20
3346.40	H	48.86	-63.35	10.48	0.72	-53.59	-13.00	40.59
3346.40	V	49.53	-62.99	10.48	0.72	-53.23	-13.00	40.23
GSM 850 Frequency:848.8MHz								
82.78	H	47.97	-60.45	0.00	0.18	-60.63	-13.00	47.63
74.91	V	48.02	-57.78	-2.55	0.18	-60.51	-13.00	47.51
1697.60	H	49.20	-66.80	9.52	0.46	-57.74	-13.00	44.74
1697.60	V	49.89	-66.79	9.52	0.46	-57.73	-13.00	44.73
2546.40	H	73.49	-41.13	9.29	0.63	-32.47	-13.00	19.47
2546.40	V	69.65	-45.29	9.29	0.63	-36.63	-13.00	23.63
3395.20	H	48.59	-64.06	10.52	0.72	-54.26	-13.00	41.26
3395.20	V	49.69	-63.00	10.52	0.72	-53.20	-13.00	40.20

PCS Band (30MHz-20GHz)

CS Band (Center Frequency)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
PCS 1900 Frequency:1850.2MHz								
82.54	H	48.95	-59.38	0.00	0.18	-59.56	-13.00	46.56
74.27	V	48.56	-57.34	-2.87	0.18	-60.39	-13.00	47.39
3700.40	H	51.84	-60.75	10.72	0.74	-50.77	-13.00	37.77
3700.40	V	49.77	-63.15	10.72	0.74	-53.17	-13.00	40.17
5550.60	H	56.37	-54.95	11.69	1.05	-44.31	-13.00	31.31
5550.60	V	59.94	-50.93	11.69	1.05	-40.29	-13.00	27.29
PCS 1900 Frequency:1880MHz								
82.38	H	49.04	-59.24	0.00	0.18	-59.42	-13.00	46.42
74.49	V	48.73	-57.14	-2.76	0.18	-60.08	-13.00	47.08
3760.00	H	51.07	-61.39	10.76	0.75	-51.38	-13.00	38.38
3760.00	V	49.08	-63.52	10.76	0.75	-53.51	-13.00	40.51
5640.00	H	52.67	-58.75	11.67	1.05	-48.13	-13.00	35.13
5640.00	V	58.37	-52.54	11.67	1.05	-41.92	-13.00	28.92
PCS 1900 Frequency:1909.8MHz								
82.77	H	49.17	-59.25	0.00	0.18	-59.43	-13.00	46.43
74.63	V	48.99	-56.86	-2.69	0.18	-59.73	-13.00	46.73
3819.60	H	50.58	-61.58	10.79	0.76	-51.55	-13.00	38.55
3819.60	V	49.07	-63.03	10.79	0.76	-53.00	-13.00	40.00
5729.40	H	50.30	-61.69	11.65	1.05	-51.09	-13.00	38.09
5729.40	V	54.27	-57.09	11.65	1.05	-46.49	-13.00	33.49

WCDMA Band 2(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 2 Frequency:1852.4 MHz								
82.59	H	48.86	-59.49	0.00	0.18	-59.67	-13.00	46.67
74.14	V	48.75	-57.17	-2.93	0.18	-60.28	-13.00	47.28
3704.80	H	49.03	-63.55	10.72	0.74	-53.57	-13.00	40.57
3704.80	V	48.25	-64.64	10.72	0.74	-54.66	-13.00	41.66
5557.20	H	48.65	-62.64	11.69	1.05	-52.00	-13.00	39.00
5557.20	V	49.01	-61.83	11.69	1.05	-51.19	-13.00	38.19
WCDMA Band 2 Frequency:1880MHz								
82.75	H	48.89	-59.52	0.00	0.18	-59.70	-13.00	46.70
74.86	V	48.82	-56.99	-2.57	0.18	-59.74	-13.00	46.74
3760.00	H	48.07	-64.39	10.76	0.75	-54.38	-13.00	41.38
3760.00	V	48.81	-63.79	10.76	0.75	-53.78	-13.00	40.78
5640.00	H	48.27	-63.15	11.67	1.05	-52.53	-13.00	39.53
5640.00	V	48.72	-62.19	11.67	1.05	-51.57	-13.00	38.57
WCDMA Band 2 Frequency:1907.6MHz								
82.23	H	49.06	-59.16	0.00	0.18	-59.34	-13.00	46.34
74.94	V	48.97	-56.83	-2.53	0.18	-59.54	-13.00	46.54
3815.20	H	48.36	-63.85	10.79	0.76	-53.82	-13.00	40.82
3815.20	V	48.93	-63.23	10.79	0.76	-53.20	-13.00	40.20
5722.80	H	48.12	-63.86	11.66	1.05	-53.25	-13.00	40.25
5722.80	V	48.54	-62.82	11.66	1.05	-52.21	-13.00	39.21

WCDMA Band 4(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 4 Frequency:1712.4 MHz								
82.84	H	48.54	-59.90	0.00	0.18	-60.08	-13.00	47.08
74.33	V	48.36	-57.53	-2.84	0.18	-60.55	-13.00	47.55
3424.80	H	48.00	-64.90	10.54	0.72	-55.08	-13.00	42.08
3424.80	V	48.27	-64.63	10.54	0.72	-54.81	-13.00	41.81
5137.20	H	48.75	-62.29	10.76	0.96	-52.49	-13.00	39.49
5137.20	V	48.84	-61.60	10.76	0.96	-51.80	-13.00	38.80
WCDMA Band 4 Frequency:1732.6MHz								
82.65	H	48.77	-59.60	0.00	0.18	-59.78	-13.00	46.78
74.12	V	48.51	-57.41	-2.94	0.18	-60.53	-13.00	47.53
3465.20	H	48.41	-64.83	10.57	0.72	-54.98	-13.00	41.98
3465.20	V	48.06	-65.14	10.57	0.72	-55.29	-13.00	42.29
5197.80	H	48.59	-63.00	10.91	0.97	-53.06	-13.00	40.06
5197.80	V	48.14	-62.67	10.91	0.97	-52.73	-13.00	39.73
WCDMA Band 4 Frequency:1752.6MHz								
82.09	H	48.87	-59.30	0.00	0.18	-59.48	-13.00	46.48
74.54	V	48.65	-57.21	-2.73	0.18	-60.12	-13.00	47.12
3505.20	H	48.58	-64.93	10.60	0.72	-55.05	-13.00	42.05
3505.20	V	48.13	-65.30	10.60	0.72	-55.42	-13.00	42.42
5257.80	H	48.26	-63.00	11.07	0.99	-52.92	-13.00	39.92
5257.80	V	48.42	-62.15	11.07	0.99	-52.07	-13.00	39.07

WCDMA Band 5(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 5 Frequency:826.4 MHz								
82.21	H	47.77	-60.44	0.00	0.18	-60.62	-13.00	47.62
74.79	V	47.82	-58.00	-2.61	0.18	-60.79	-13.00	47.79
1652.80	H	48.66	-67.49	9.44	0.44	-58.49	-13.00	45.49
1652.80	V	48.97	-68.15	9.44	0.44	-59.15	-13.00	46.15
2479.20	H	48.64	-66.04	9.23	0.62	-57.43	-13.00	44.43
2479.20	V	49.01	-65.78	9.23	0.62	-57.17	-13.00	44.17
3305.60	H	48.38	-63.46	10.44	0.72	-53.74	-13.00	40.74
3305.60	V	48.84	-63.54	10.44	0.72	-53.82	-13.00	40.82
WCDMA Band 5 Frequency:836.6MHz								
82.32	H	47.91	-60.34	0.00	0.18	-60.52	-13.00	47.52
74.74	V	47.93	-57.90	-2.63	0.18	-60.71	-13.00	47.71
1673.20	H	48.78	-67.30	9.48	0.45	-58.27	-13.00	45.27
1673.20	V	48.54	-68.38	9.48	0.45	-59.35	-13.00	46.35
2509.80	H	48.47	-66.06	9.22	0.62	-57.46	-13.00	44.46
2509.80	V	48.75	-66.09	9.22	0.62	-57.49	-13.00	44.49
3346.40	H	48.16	-64.05	10.48	0.72	-54.29	-13.00	41.29
3346.40	V	48.69	-63.83	10.48	0.72	-54.07	-13.00	41.07
WCDMA Band 5 Frequency:846.6MHz								
82.16	H	48.05	-60.15	0.00	0.18	-60.33	-13.00	47.33
74.31	V	48.11	-57.78	-2.85	0.18	-60.81	-13.00	47.81
1693.20	H	48.82	-67.19	9.51	0.46	-58.14	-13.00	45.14
1693.20	V	48.39	-68.34	9.51	0.46	-59.29	-13.00	46.29
2539.80	H	48.26	-66.34	9.28	0.63	-57.69	-13.00	44.69
2539.80	V	48.83	-66.09	9.28	0.63	-57.44	-13.00	44.44
3386.40	H	48.23	-64.34	10.51	0.72	-54.55	-13.00	41.55
3386.40	V	48.45	-64.21	10.51	0.72	-54.42	-13.00	41.42

LTE Bands:

(The Worst modulation and bandwidth was below)

LTE Band 2(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK,Frequency:1850.7 MHz								
82.93	H	49.05	-59.43	0.00	0.18	-59.61	-13.00	46.61
74.25	V	48.92	-56.98	-2.88	0.18	-60.04	-13.00	47.04
3701.40	H	50.93	-61.66	10.72	0.74	-51.68	-13.00	38.68
3701.40	V	50.11	-62.80	10.72	0.74	-52.82	-13.00	39.82
5552.10	H	56.42	-54.89	11.69	1.05	-44.25	-13.00	31.25
5552.10	V	50.96	-59.90	11.69	1.05	-49.26	-13.00	36.26
1RB, 1.4MHz, QPSK,Frequency:1880 MHz								
82.11	H	49.13	-59.05	0.00	0.18	-59.23	-13.00	46.23
74.28	V	49.01	-56.89	-2.86	0.18	-59.93	-13.00	46.93
3760.00	H	50.42	-62.04	10.76	0.75	-52.03	-13.00	39.03
3760.00	V	51.52	-61.08	10.76	0.75	-51.07	-13.00	38.07
5640.00	H	55.32	-56.10	11.67	1.05	-45.48	-13.00	32.48
5640.00	V	57.17	-53.74	11.67	1.05	-43.12	-13.00	30.12
1RB, 1.4MHz, QPSK,Frequency:1909.3 MHz								
82.36	H	49.20	-59.07	0.00	0.18	-59.25	-13.00	46.25
74.47	V	49.08	-56.79	-2.77	0.18	-59.74	-13.00	46.74
3818.60	H	51.65	-60.52	10.79	0.76	-50.49	-13.00	37.49
3818.60	V	50.11	-62.00	10.79	0.76	-51.97	-13.00	38.97
5727.90	H	53.53	-58.46	11.65	1.05	-47.86	-13.00	34.86
5727.90	V	51.75	-59.61	11.65	1.05	-49.01	-13.00	36.01

LTE Band 4(30MHz-20GHz):

EYE Band (500MHz to 3GHz)			Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK, Frequency:1710.7 MHz								
82.55	H	48.85	-59.49	0.00	0.18	-59.67	-13.00	46.67
74.65	V	48.76	-57.08	-2.68	0.18	-59.94	-13.00	46.94
3421.40	H	53.53	-59.34	10.54	0.72	-49.52	-13.00	36.52
3421.40	V	48.55	-64.32	10.54	0.72	-54.50	-13.00	41.50
5132.10	H	53.28	-57.72	10.74	0.95	-47.93	-13.00	34.93
5132.10	V	56.10	-54.31	10.74	0.95	-44.52	-13.00	31.52
1RB, 1.4MHz, QPSK, Frequency:1732.5 MHz								
82.34	H	48.93	-59.33	0.00	0.18	-59.51	-13.00	46.51
74.18	V	48.88	-57.03	-2.91	0.18	-60.12	-13.00	47.12
3465.00	H	51.62	-61.62	10.57	0.72	-51.77	-13.00	38.77
3465.00	V	48.34	-64.86	10.57	0.72	-55.01	-13.00	42.01
5197.50	H	54.32	-57.27	10.91	0.97	-47.33	-13.00	34.33
5197.50	V	54.49	-56.31	10.91	0.97	-46.37	-13.00	33.37
1RB, 1.4MHz, QPSK, Frequency:1754.3MHz								
82.29	H	49.02	-59.22	0.00	0.18	-59.40	-13.00	46.40
74.41	V	49.03	-56.85	-2.80	0.18	-59.83	-13.00	46.83
3508.60	H	52.62	-60.88	10.61	0.72	-50.99	-13.00	37.99
3508.60	V	47.88	-65.53	10.61	0.72	-55.64	-13.00	42.64
5262.90	H	53.55	-57.68	11.08	0.99	-47.59	-13.00	34.59
5262.90	V	52.53	-58.02	11.08	0.99	-47.93	-13.00	34.93

LTE Band 5(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK, Frequency: 824.7 MHz								
82.25	H	48.18	-60.05	0.00	0.18	-60.23	-13.00	47.23
74.96	V	47.98	-57.82	-2.52	0.18	-60.52	-13.00	47.52
1649.40	H	48.53	-67.63	9.44	0.44	-58.63	-13.00	45.63
1649.40	V	48.20	-68.95	9.44	0.44	-59.95	-13.00	46.95
2474.10	H	57.50	-57.22	9.24	0.62	-48.60	-13.00	35.60
2474.10	V	58.95	-55.84	9.24	0.62	-47.22	-13.00	34.22
3298.80	H	48.32	-63.47	10.44	0.72	-53.75	-13.00	40.75
3298.80	V	48.49	-63.87	10.44	0.72	-54.15	-13.00	41.15
1RB, 1.4MHz, QPSK, Frequency: 836.5 MHz								
82.71	H	48.23	-60.17	0.00	0.18	-60.35	-13.00	47.35
74.58	V	48.04	-57.81	-2.71	0.18	-60.70	-13.00	47.70
1673.00	H	48.15	-67.93	9.48	0.45	-58.90	-13.00	45.90
1673.00	V	48.28	-68.64	9.48	0.45	-59.61	-13.00	46.61
2509.50	H	52.98	-61.55	9.22	0.62	-52.95	-13.00	39.95
2509.50	V	60.11	-54.73	9.22	0.62	-46.13	-13.00	33.13
3346.00	H	48.90	-63.30	10.48	0.72	-53.54	-13.00	40.54
3346.00	V	48.69	-63.83	10.48	0.72	-54.07	-13.00	41.07
1RB, 1.4MHz, QPSK, Frequency: 848.3 MHz								
83.05	H	48.35	-60.17	0.00	0.18	-60.35	-13.00	47.35
74.76	V	48.15	-57.68	-2.62	0.18	-60.48	-13.00	47.48
1696.60	H	48.37	-67.63	9.51	0.46	-58.58	-13.00	45.58
1696.60	V	48.57	-68.12	9.51	0.46	-59.07	-13.00	46.07
2544.90	H	51.48	-63.13	9.29	0.63	-54.47	-13.00	41.47
2544.90	V	62.15	-52.78	9.29	0.63	-44.12	-13.00	31.12
3393.20	H	48.73	-63.90	10.51	0.72	-54.11	-13.00	41.11
3393.20	V	48.41	-64.28	10.51	0.72	-54.49	-13.00	41.49

LTE Band 7(30MHz-26GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 5MHz, QPSK, Frequency: 2502.5 MHz								
82.39	H	50.14	-58.14	0.00	0.18	-58.32	-25.00	33.32
74.16	V	49.69	-56.23	-2.92	0.18	-59.33	-25.00	34.33
5005.00	H	48.43	-62.67	10.41	0.92	-53.18	-25.00	28.18
5005.00	V	48.60	-62.01	10.41	0.92	-52.52	-25.00	27.52
7507.50	H	48.75	-59.28	10.81	1.20	-49.67	-25.00	24.67
7507.50	V	48.44	-60.34	10.81	1.20	-50.73	-25.00	25.73
1RB, 5MHz, QPSK, Frequency: 2535 MHz								
82.51	H	50.23	-58.09	0.00	0.18	-58.27	-25.00	33.27
75.01	V	49.78	-56.01	-2.50	0.18	-58.69	-25.00	33.69
5070.00	H	48.66	-62.17	10.58	0.94	-52.53	-25.00	27.53
5070.00	V	48.31	-62.03	10.58	0.94	-52.39	-25.00	27.39
7605.00	H	48.82	-58.95	10.88	1.21	-49.28	-25.00	24.28
7605.00	V	48.29	-60.21	10.88	1.21	-50.54	-25.00	25.54
1RB, 5MHz, QPSK, Frequency: 2567.5 MHz								
82.28	H	50.36	-57.88	0.00	0.18	-58.06	-25.00	33.06
74.69	V	49.84	-56.00	-2.66	0.18	-58.84	-25.00	33.84
5135.00	H	48.83	-62.20	10.75	0.96	-52.41	-25.00	27.41
5135.00	V	48.23	-62.19	10.75	0.96	-52.40	-25.00	27.40
7702.50	H	48.89	-58.61	10.96	1.23	-48.88	-25.00	23.88
7702.50	V	48.17	-60.04	10.96	1.23	-50.31	-25.00	25.31

LTE Band 12(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK, Frequency: 699.7 MHz								
82.14	H	47.35	-60.84	0.00	0.18	-61.02	-13.00	48.02
74.57	V	47.14	-58.72	-2.72	0.18	-61.62	-13.00	48.62
1399.40	H	48.52	-67.39	8.62	0.38	-59.15	-13.00	46.15
1399.40	V	48.63	-67.07	8.62	0.38	-58.83	-13.00	45.83
2099.10	H	53.65	-60.50	9.84	0.57	-51.23	-13.00	38.23
2099.10	V	48.53	-65.59	9.84	0.57	-56.32	-13.00	43.32
2798.80	H	48.49	-66.39	9.80	0.69	-57.28	-13.00	44.28
2798.80	V	48.33	-66.31	9.80	0.69	-57.20	-13.00	44.20
1RB, 1.4MHz, QPSK, Frequency: 707.5 MHz								
82.44	H	47.44	-60.86	0.00	0.18	-61.04	-13.00	48.04
75.31	V	47.23	-58.51	-2.35	0.18	-61.04	-13.00	48.04
1415.00	H	48.63	-67.37	8.71	0.38	-59.04	-13.00	46.04
1415.00	V	48.80	-66.98	8.71	0.38	-58.65	-13.00	45.65
2122.50	H	55.91	-58.44	9.80	0.57	-49.21	-13.00	36.21
2122.50	V	48.74	-65.52	9.80	0.57	-56.29	-13.00	43.29
2830.00	H	48.69	-66.03	9.86	0.69	-56.86	-13.00	43.86
2830.00	V	48.17	-66.44	9.86	0.69	-57.27	-13.00	44.27
1RB, 1.4MHz, QPSK, Frequency: 715.3 MHz								
82.86	H	47.51	-60.94	0.00	0.18	-61.12	-13.00	48.12
75.16	V	47.38	-58.39	-2.42	0.18	-60.99	-13.00	47.99
1430.60	H	48.76	-67.33	8.80	0.38	-58.91	-13.00	45.91
1430.60	V	48.39	-67.46	8.80	0.38	-59.04	-13.00	46.04
2145.90	H	56.38	-58.17	9.77	0.58	-48.98	-13.00	35.98
2145.90	V	48.59	-65.82	9.77	0.58	-56.63	-13.00	43.63
2861.20	H	48.34	-66.20	9.92	0.70	-56.98	-13.00	43.98
2861.20	V	48.47	-66.12	9.92	0.70	-56.90	-13.00	43.90

LTE Band 13(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 5MHz, QPSK, Frequency: 779.5 MHz								
82.30	H	47.65	-60.60	0.00	0.18	-60.78	-13.00	47.78
75.52	V	47.58	-58.13	-2.24	0.18	-60.55	-13.00	47.55
1559.00	H	48.22	-68.16	9.29	0.41	-59.28	-40.00	19.28
1559.00	V	48.16	-68.87	9.29	0.41	-59.99	-40.00	19.99
2338.50	H	54.27	-61.05	9.46	0.60	-52.19	-13.00	39.19
2338.50	V	48.49	-66.74	9.46	0.60	-57.88	-13.00	44.88
3118.00	H	48.58	-63.43	10.29	0.73	-53.87	-13.00	40.87
3118.00	V	48.75	-63.85	10.29	0.73	-54.29	-13.00	41.29
1RB, 5MHz, QPSK, Frequency: 784.5 MHz								
82.45	H	47.75	-60.55	0.00	0.18	-60.73	-13.00	47.73
74.97	V	47.64	-58.15	-2.52	0.18	-60.85	-13.00	47.85
1569.00	H	48.36	-68.00	9.31	0.41	-59.10	-40.00	19.10
1569.00	V	48.55	-68.63	9.31	0.41	-59.73	-40.00	19.73
2353.50	H	55.63	-59.69	9.43	0.60	-50.86	-13.00	37.86
2353.50	V	48.87	-66.22	9.43	0.60	-57.39	-13.00	44.39
3138.00	H	48.74	-63.21	10.31	0.73	-53.63	-13.00	40.63
3138.00	V	48.93	-63.61	10.31	0.73	-54.03	-13.00	41.03

LTE Band 17(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 5MHz, QPSK, Frequency: 706.5 MHz								
81.39	H	47.32	-60.60	0.00	0.18	-60.78	-13.00	47.78
74.11	V	47.10	-58.83	-2.95	0.18	-61.96	-13.00	48.96
1413.00	H	48.52	-67.47	8.70	0.38	-59.15	-13.00	46.15
1413.00	V	48.34	-67.43	8.70	0.38	-59.11	-13.00	46.11
2119.50	H	53.29	-61.03	9.81	0.57	-51.79	-13.00	38.79
2119.50	V	48.24	-66.00	9.81	0.57	-56.76	-13.00	43.76
2826.00	H	48.16	-66.58	9.85	0.69	-57.42	-13.00	44.42
2826.00	V	48.82	-65.79	9.85	0.69	-56.63	-13.00	43.63
1RB, 5MHz, QPSK, Frequency: 710 MHz								
82.79	H	47.34	-61.09	0.00	0.18	-61.27	-13.00	48.27
74.36	V	47.15	-58.74	-2.82	0.18	-61.74	-13.00	48.74
1420.00	H	48.48	-67.55	8.74	0.38	-59.19	-13.00	46.19
1420.00	V	48.40	-67.40	8.74	0.38	-59.04	-13.00	46.04
2130.00	H	52.75	-61.66	9.79	0.58	-52.45	-13.00	39.45
2130.00	V	48.09	-66.22	9.79	0.58	-57.01	-13.00	44.01
2840.00	H	48.03	-66.63	9.88	0.69	-57.44	-13.00	44.44
2840.00	V	48.79	-65.82	9.88	0.69	-56.63	-13.00	43.63
1RB, 5MHz, QPSK, Frequency: 713.5 MHz								
82.91	H	47.41	-61.06	0.00	0.18	-61.24	-13.00	48.24
74.52	V	47.22	-58.64	-2.74	0.18	-61.56	-13.00	48.56
1427.00	H	48.33	-67.74	8.78	0.38	-59.34	-13.00	46.34
1427.00	V	48.26	-67.57	8.78	0.38	-59.17	-13.00	46.17
2140.50	H	51.27	-63.24	9.78	0.58	-54.04	-13.00	41.04
2140.50	V	48.43	-65.95	9.78	0.58	-56.75	-13.00	43.75
2854.00	H	48.28	-66.30	9.91	0.70	-57.09	-13.00	44.09
2854.00	V	48.65	-65.95	9.91	0.70	-56.74	-13.00	43.74

**LTE Band 26(30MHz-10GHz):
814-824MHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK, Frequency: 814.7 MHz								
82.24	H	47.68	-60.55	0.00	0.18	-60.73	-13.00	47.73
74.13	V	47.59	-58.33	-2.94	0.18	-61.45	-13.00	48.45
1629.40	H	48.46	-67.76	9.41	0.43	-58.78	-13.00	45.78
1629.40	V	48.73	-68.61	9.41	0.43	-59.63	-13.00	46.63
2444.10	H	62.93	-52.03	9.29	0.61	-43.35	-13.00	30.35
2444.10	V	59.57	-55.18	9.29	0.61	-46.50	-13.00	33.50
3258.80	H	48.49	-63.29	10.41	0.72	-53.60	-13.00	40.60
3258.80	V	48.19	-64.17	10.41	0.72	-54.48	-13.00	41.48
1RB, 1.4MHz, QPSK, Frequency: 823.3 MHz								
83.65	H	47.74	-61.00	0.00	0.18	-61.18	-13.00	48.18
75.12	V	47.63	-58.14	-2.44	0.18	-60.76	-13.00	47.76
1646.60	H	48.12	-68.05	9.43	0.44	-59.06	-13.00	46.06
1646.60	V	48.62	-68.56	9.43	0.44	-59.57	-13.00	46.57
2469.90	H	62.62	-52.13	9.25	0.62	-43.50	-13.00	30.50
2469.90	V	62.10	-52.68	9.25	0.62	-44.05	-13.00	31.05
3293.20	H	48.36	-63.43	10.43	0.72	-53.72	-13.00	40.72
3293.20	V	48.27	-64.09	10.43	0.72	-54.38	-13.00	41.38

824-849MHz:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK, Frequency: 824.7 MHz								
82.26	H	47.85	-60.38	0.00	0.18	-60.56	-13.00	47.56
74.44	V	47.78	-58.10	-2.78	0.18	-61.06	-13.00	48.06
1649.40	H	48.47	-67.69	9.44	0.44	-58.69	-13.00	45.69
1649.40	V	48.62	-68.53	9.44	0.44	-59.53	-13.00	46.53
2474.10	H	61.74	-52.98	9.24	0.62	-44.36	-13.00	31.36
2474.10	V	59.86	-54.93	9.24	0.62	-46.31	-13.00	33.31
3298.80	H	48.16	-63.63	10.44	0.72	-53.91	-13.00	40.91
3298.80	V	48.38	-63.98	10.44	0.72	-54.26	-13.00	41.26
1RB, 1.4MHz, QPSK, Frequency: 831.5 MHz								
82.53	H	47.89	-60.44	0.00	0.18	-60.62	-13.00	47.62
74.92	V	47.81	-57.99	-2.54	0.18	-60.71	-13.00	47.71
1663.00	H	48.67	-67.44	9.46	0.45	-58.43	-13.00	45.43
1663.00	V	48.53	-68.49	9.46	0.45	-59.48	-13.00	46.48
2494.50	H	61.83	-52.72	9.21	0.62	-44.13	-13.00	31.13
2494.50	V	62.58	-52.23	9.21	0.62	-43.64	-13.00	30.64
3326.00	H	48.29	-63.73	10.46	0.72	-53.99	-13.00	40.99
3326.00	V	48.37	-64.08	10.46	0.72	-54.34	-13.00	41.34
1RB, 1.4MHz, QPSK, Frequency: 848.3 MHz								
82.31	H	47.96	-60.29	0.00	0.18	-60.47	-13.00	47.47
74.85	V	47.99	-57.82	-2.58	0.18	-60.58	-13.00	47.58
1696.60	H	48.27	-67.73	9.51	0.46	-58.68	-13.00	45.68
1696.60	V	48.64	-68.05	9.51	0.46	-59.00	-13.00	46.00
2544.90	H	61.56	-53.05	9.29	0.63	-44.39	-13.00	31.39
2544.90	V	61.32	-53.61	9.29	0.63	-44.95	-13.00	31.95
3393.20	H	48.36	-64.27	10.51	0.72	-54.48	-13.00	41.48
3393.20	V	48.43	-64.26	10.51	0.72	-54.47	-13.00	41.47

LTE Band 38(30MHz-26.5GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 5MHz,QPSK, Frequency: 2572.5 MHz								
81.34	H	50.25	-57.65	0.00	0.18	-57.83	-25.00	32.83
74.07	V	49.87	-56.06	-2.97	0.18	-59.21	-25.00	34.21
5145.00	H	48.63	-62.49	10.78	0.96	-52.67	-25.00	27.67
5145.00	V	48.24	-62.24	10.78	0.96	-52.42	-25.00	27.42
7717.50	H	48.72	-58.74	10.97	1.23	-49.00	-25.00	24.00
7717.50	V	48.43	-59.74	10.97	1.23	-50.00	-25.00	25.00
1RB, 5MHz,QPSK, Frequency:2595 MHz								
82.17	H	50.33	-57.87	0.00	0.18	-58.05	-25.00	33.05
74.64	V	49.97	-55.87	-2.68	0.18	-58.73	-25.00	33.73
5190.00	H	48.78	-62.74	10.89	0.97	-52.82	-25.00	27.82
5190.00	V	48.00	-62.76	10.89	0.97	-52.84	-25.00	27.84
7785.00	H	48.57	-58.71	11.03	1.24	-48.92	-25.00	23.92
7785.00	V	48.68	-59.29	11.03	1.24	-49.50	-25.00	24.50
1RB, 5MHz,QPSK, Frequency: 2617.5 MHz								
82.02	H	50.49	-57.66	0.00	0.18	-57.84	-25.00	32.84
74.95	V	50.12	-55.68	-2.53	0.18	-58.39	-25.00	33.39
5235.00	H	48.83	-62.57	11.01	0.98	-52.54	-25.00	27.54
5235.00	V	48.45	-62.22	11.01	0.98	-52.19	-25.00	27.19
7852.50	H	48.86	-58.24	11.08	1.25	-48.41	-25.00	23.41
7852.50	V	48.74	-59.04	11.08	1.25	-49.21	-25.00	24.21

LTE Band 41(30MHz-27GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 5MHz,QPSK, Frequency: 2498.5 MHz								
82.15	H	50.17	-58.02	0.00	0.18	-58.20	-25.00	33.20
74.50	V	49.72	-56.15	-2.75	0.18	-59.08	-25.00	34.08
4997.00	H	48.73	-62.39	10.40	0.92	-52.91	-25.00	27.91
4997.00	V	48.96	-61.67	10.40	0.92	-52.19	-25.00	27.19
7495.50	H	48.54	-59.52	10.80	1.20	-49.92	-25.00	24.92
7495.50	V	48.36	-60.44	10.80	1.20	-50.84	-25.00	25.84
1RB, 5MHz,QPSK, Frequency:2593 MHz								
83.38	H	50.35	-58.29	0.00	0.18	-58.47	-25.00	33.47
74.78	V	49.86	-55.96	-2.61	0.18	-58.75	-25.00	33.75
5186.00	H	48.49	-62.99	10.88	0.97	-53.08	-25.00	28.08
5186.00	V	49.23	-61.50	10.88	0.97	-51.59	-25.00	26.59
7779.00	H	48.87	-58.43	11.02	1.24	-48.65	-25.00	23.65
7779.00	V	48.26	-59.73	11.02	1.24	-49.95	-25.00	24.95
1RB, 5MHz,QPSK, Frequency: 2687.5 MHz								
82.19	H	50.51	-57.70	0.00	0.18	-57.88	-25.00	32.88
74.51	V	49.95	-55.91	-2.75	0.18	-58.84	-25.00	33.84
5375.00	H	48.23	-62.93	11.38	1.02	-52.57	-25.00	27.57
5375.00	V	49.52	-61.22	11.38	1.02	-50.86	-25.00	25.86
8062.50	H	48.96	-57.56	11.20	1.28	-47.64	-25.00	22.64
8062.50	V	48.47	-58.70	11.20	1.28	-48.78	-25.00	23.78

LTE Band 66(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz,QPSK, Frequency: 1710.7 MHz								
82.08	H	49.28	-58.89	0.00	0.18	-59.07	-13.00	46.07
74.93	V	48.83	-56.97	-2.54	0.18	-59.69	-13.00	46.69
3421.40	H	51.26	-61.61	10.54	0.72	-51.79	-13.00	38.79
3421.40	V	49.36	-63.51	10.54	0.72	-53.69	-13.00	40.69
5132.10	H	56.27	-54.73	10.74	0.95	-44.94	-13.00	31.94
5132.10	V	54.82	-55.59	10.74	0.95	-45.80	-13.00	32.80
1RB, 1.4MHz,QPSK, Frequency:1745MHz								
81.74	H	49.35	-58.69	0.00	0.18	-58.87	-13.00	45.87
74.38	V	48.96	-56.92	-2.81	0.18	-59.91	-13.00	46.91
3490.00	H	50.87	-62.58	10.59	0.72	-52.71	-13.00	39.71
3490.00	V	48.65	-64.74	10.59	0.72	-54.87	-13.00	41.87
5235.00	H	55.34	-56.06	11.01	0.98	-46.03	-13.00	33.03
5235.00	V	54.48	-56.19	11.01	0.98	-46.16	-13.00	33.16
1RB, 1.4MHz,QPSK, Frequency: 1779.3 MHz								
82.66	H	49.44	-58.94	0.00	0.18	-59.12	-13.00	46.12
74.99	V	49.07	-56.72	-2.51	0.18	-59.41	-13.00	46.41
3558.60	H	50.63	-62.72	10.64	0.73	-52.81	-13.00	39.81
3558.60	V	48.39	-64.75	10.64	0.73	-54.84	-13.00	41.84
5337.90	H	55.25	-55.83	11.28	1.01	-45.56	-13.00	32.56
5337.90	V	54.13	-56.44	11.28	1.01	-46.17	-13.00	33.17

Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = Substituted Level - Cable loss + Antenna Gain
- 3) Margin = Limit-Absolute Level

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2502W27143E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2502W27143E-RF-INP EUT INTERNAL PHOTOGRAPHS.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2502W27143E-RF-00E-TSP TEST SETUP PHOTOGRAPHS.

******* END OF REPORT *******