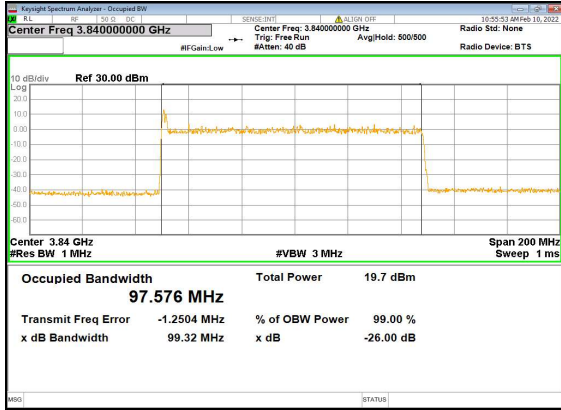
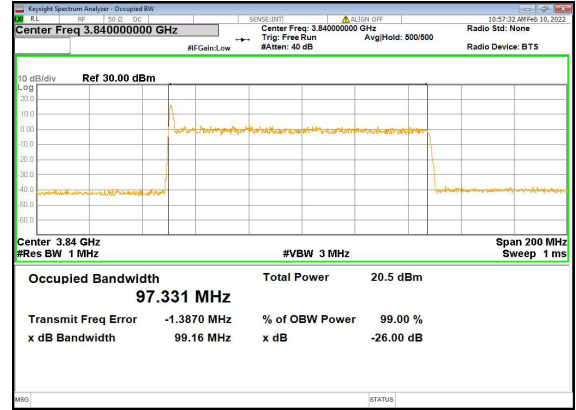




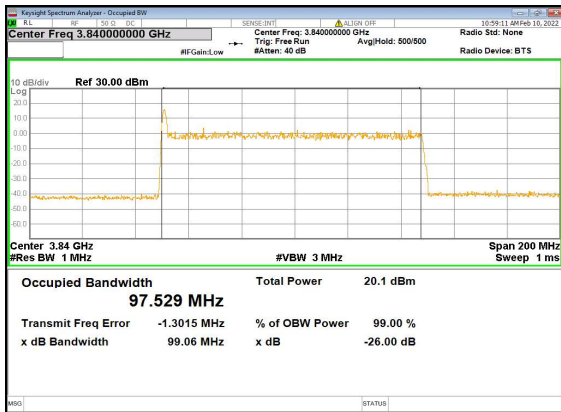
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Full\_Mid\_CH



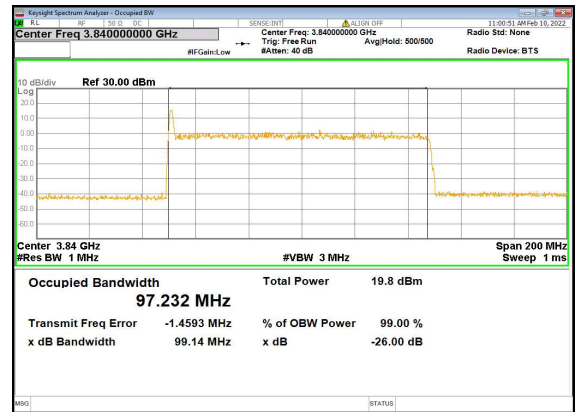
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Full\_Mid\_CH



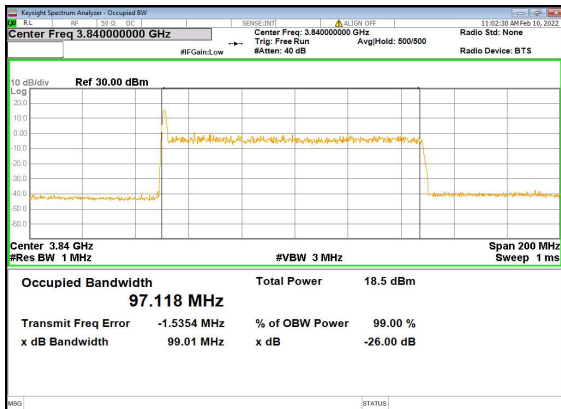
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Mid\_CH



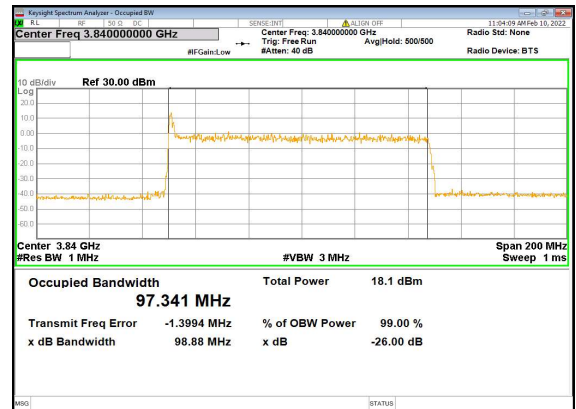
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Full\_Mid\_CH



n77(100M)\_DFT-s-OFDM\_256QAM\_Outer\_  
Full\_Mid\_CH

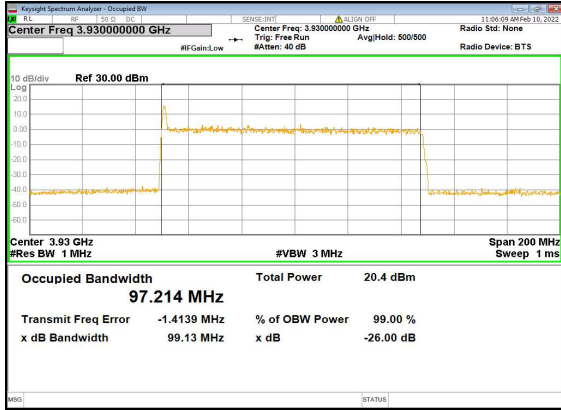


n77(100M)\_CP-OFDM\_QPSK\_Outer\_Full\_Mid\_  
\_CH

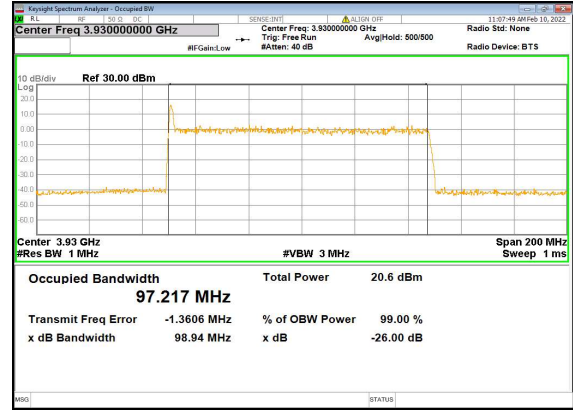




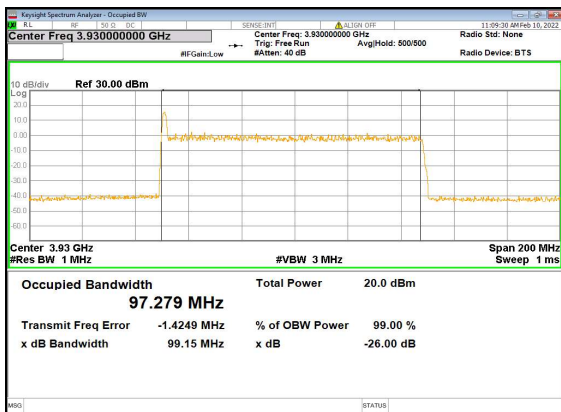
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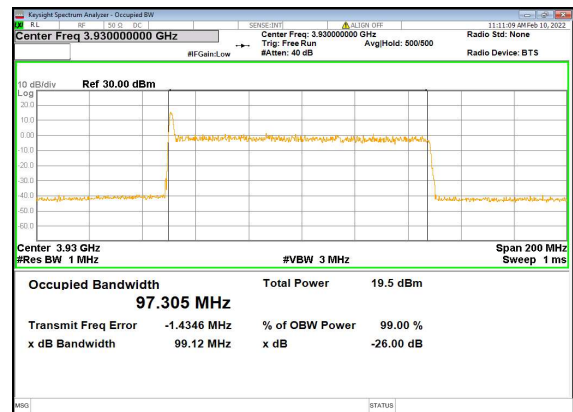
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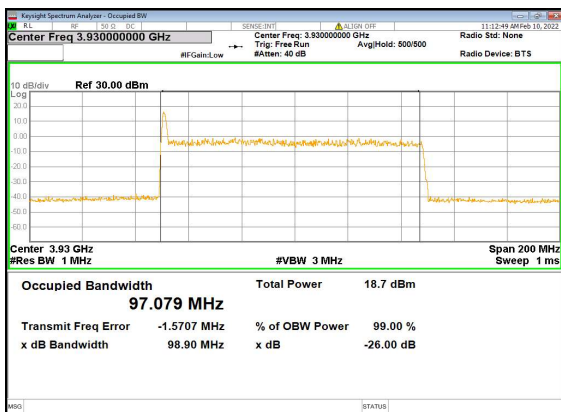
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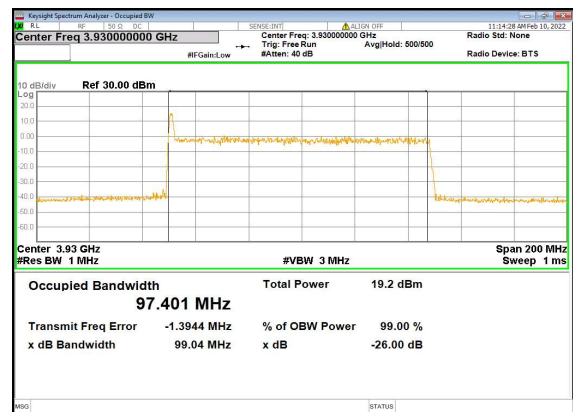
n77(100M)\_DFT-s-OFDM\_64QAM\_Outer\_Full\_High\_CH



n77(100M)\_DFT-s-OFDM\_256QAM\_Outer\_Full\_High\_CH



n77(100M)\_CP-OFDM\_QPSK\_Outer\_Full\_High\_CH



## 2.3. Frequency Stability

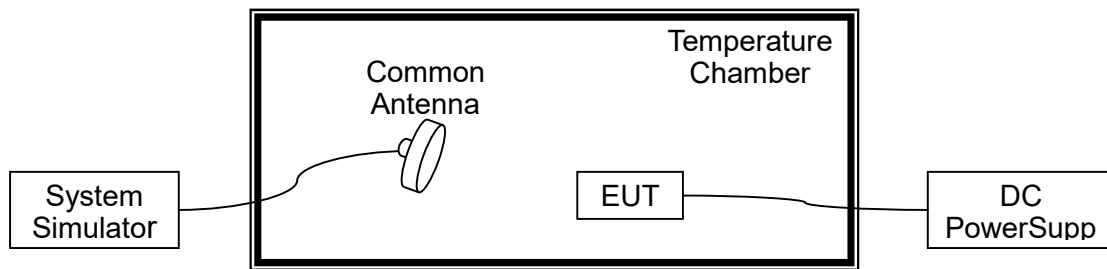
### 2.3.1. Requirement

According to FCC section 2.1055, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

- (a) The temperature is varied from  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  at intervals of not more than  $10^{\circ}\text{C}$ .
- (b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. 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.

Note: The operating temperature of EUT is from  $0^{\circ}\text{C}$  to  $40^{\circ}\text{C}$ , which are specified by the applicant.

### 2.3.2. Test Description



The EUT which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power. A call is established between the EUT and the SS via a Common Antenna.

### 2.3.3. Test procedure

KDB 971168 D01v03 Section 9.0 and ANSI/TIA-603-E-2016.

### 2.3.4. Test Result

The nominal, highest and lowest extreme voltages are separately 7.78VDC, 8.96VDC and 6.3VDC, which are specified by the applicant; the normal temperature here used is  $20^{\circ}\text{C}$ .



| NR n41, QPSK, Channel 518598, SCS 30kHz, Frequency 2593MHz |             |           |                |                 |        |
|--|-------------|-----------|----------------|-----------------|--------|
| Limit =±2.5ppm   |             |           |                |                 |        |
| Voltage (%)  | Power (VDC) | Temp (°C) | Fre. Dev. (Hz) | Deviation (ppm) | Result |
| Normal   | 7.78        | +20(Ref)  | 18             | 0.007           | PASS   |
| Normal   |             | 0         | -22            | -0.008          |        |
| Normal   |             | +10       | 23             | 0.009           |        |
| Normal   |             | +20       | 14             | 0.005           |        |
| Normal   |             | +30       | 40             | 0.015           |        |
| Normal   |             | +40       | -13            | -0.005          |        |
| High   | 8.96        | +20       | -24            | -0.009          |        |
| BATT.ENDPOINT  | 6.30        | +20       | 26             | 0.010           |        |

| NR n77, QPSK, Channel 656000, SCS 30kHz, Frequency 3840MHz |             |           |                |                 |        |
|--|-------------|-----------|----------------|-----------------|--------|
| Limit =±2.5ppm   |             |           |                |                 |        |
| Voltage (%)  | Power (VDC) | Temp (°C) | Fre. Dev. (Hz) | Deviation (ppm) | Result |
| Normal   | 7.78        | +20(Ref)  | 31             | 0.008           | PASS   |
| Normal   |             | 0         | 17             | 0.004           |        |
| Normal   |             | +10       | 26             | 0.007           |        |
| Normal   |             | +20       | 31             | 0.008           |        |
| Normal   |             | +30       | -28            | -0.007          |        |
| Normal   |             | +40       | 34             | 0.009           |        |
| High   | 8.96        | +20       | 38             | 0.010           |        |
| BATT.ENDPOINT  | 6.30        | +20       | 27             | 0.007           |        |

## 2.4. Peak to Average Ratio

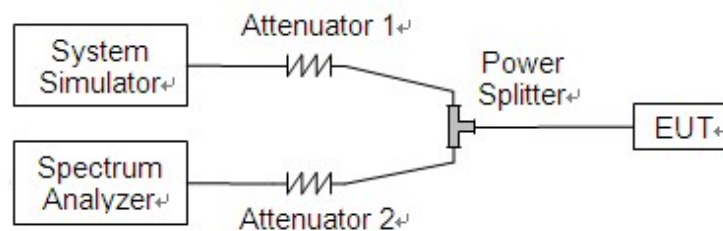
### 2.4.1. Requirement

According to FCC section 24.232(d), the peak to average ratio (PAR) of the transmission may not exceed 13dB.

According to FCC section 27.50(j)(4) for n77, In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

### 2.4.2. Test Description

Test Set:



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

### 2.4.3. Test procedure

KDB 971168 D01v03 Section 5.7 and ANSI/TIA-603-E-2016.

### 2.4.4. Test Result

Record the maximum PAPR level associated with a probability of 0.1%.



| n77     |               |            |                           |            |         |
|---------|---------------|------------|---------------------------|------------|---------|
| BW(MHz) | Channel Level | Modulation | Peak to Average Radio(dB) | Limit (dB) | Verdict |
| 20      | Low           | BPSK       | 10.73                     | <=13       | PASS    |
| 20      | Low           | QPSK       | 11.95                     | <=13       | PASS    |
| 20      | Mid           | BPSK       | 10.61                     | <=13       | PASS    |
| 20      | Mid           | QPSK       | 12.19                     | <=13       | PASS    |
| 20      | High          | BPSK       | 10.43                     | <=13       | PASS    |
| 20      | High          | QPSK       | 11.64                     | <=13       | PASS    |
| 30      | Low           | BPSK       | 9.68                      | <=13       | PASS    |
| 30      | Low           | QPSK       | 11.93                     | <=13       | PASS    |
| 30      | Mid           | BPSK       | 10.70                     | <=13       | PASS    |
| 30      | Mid           | QPSK       | 11.91                     | <=13       | PASS    |
| 30      | High          | BPSK       | 10.90                     | <=13       | PASS    |
| 30      | High          | QPSK       | 12.12                     | <=13       | PASS    |
| 40      | Low           | BPSK       | 10.21                     | <=13       | PASS    |
| 40      | Low           | QPSK       | 11.59                     | <=13       | PASS    |
| 40      | Mid           | BPSK       | 10.56                     | <=13       | PASS    |
| 40      | Mid           | QPSK       | 11.00                     | <=13       | PASS    |
| 40      | High          | BPSK       | 9.45                      | <=13       | PASS    |
| 40      | High          | QPSK       | 10.86                     | <=13       | PASS    |
| 60      | Low           | BPSK       | 10.26                     | <=13       | PASS    |
| 60      | Low           | QPSK       | 12.04                     | <=13       | PASS    |
| 60      | Mid           | BPSK       | 9.76                      | <=13       | PASS    |
| 60      | Mid           | QPSK       | 11.49                     | <=13       | PASS    |
| 60      | High          | BPSK       | 9.85                      | <=13       | PASS    |
| 60      | High          | QPSK       | 10.61                     | <=13       | PASS    |
| 80      | Low           | BPSK       | 9.51                      | <=13       | PASS    |
| 80      | Low           | QPSK       | 10.82                     | <=13       | PASS    |
| 80      | Mid           | BPSK       | 10.67                     | <=13       | PASS    |
| 80      | Mid           | QPSK       | 11.22                     | <=13       | PASS    |
| 80      | High          | BPSK       | 10.24                     | <=13       | PASS    |
| 80      | High          | QPSK       | 11.09                     | <=13       | PASS    |
| 100     | Low           | BPSK       | 10.68                     | <=13       | PASS    |
| 100     | Low           | QPSK       | 12.13                     | <=13       | PASS    |
| 100     | Mid           | BPSK       | 10.51                     | <=13       | PASS    |
| 100     | Mid           | QPSK       | 10.66                     | <=13       | PASS    |

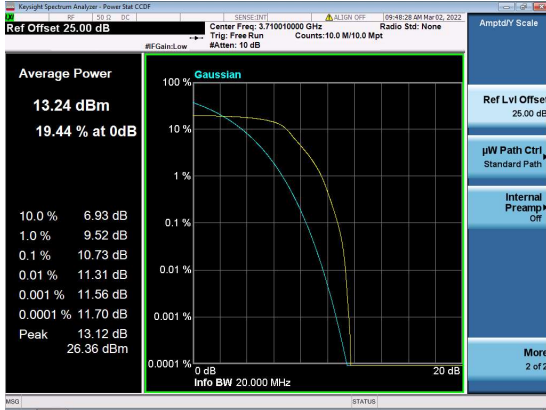


REPORT No.: SZ21120450W11

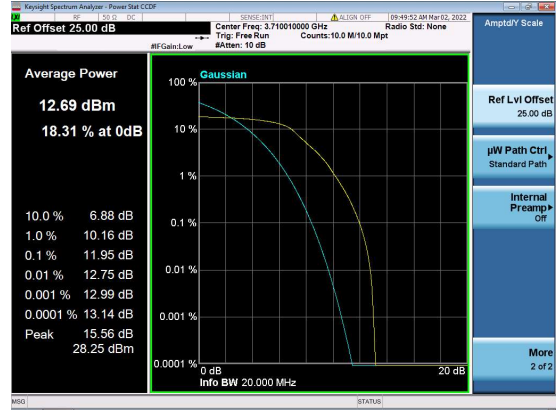
|     |      |      |       |      |      |
|-----|------|------|-------|------|------|
| 100 | High | BPSK | 10.14 | <=13 | PASS |
| 100 | High | QPSK | 11.27 | <=13 | PASS |



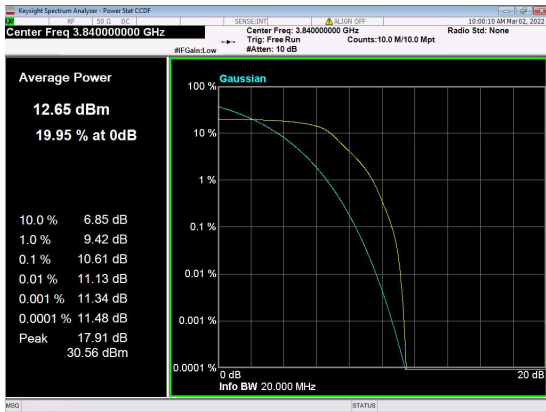
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Full\_Low\_CH



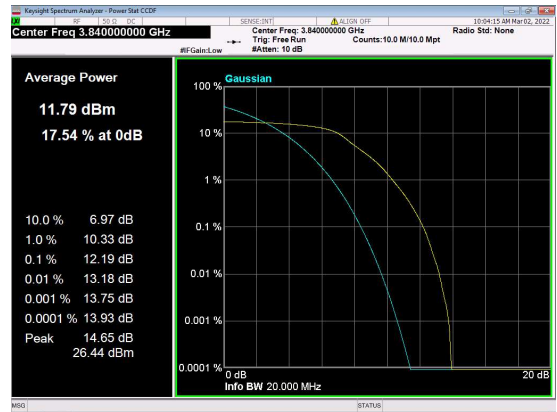
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Low\_CH



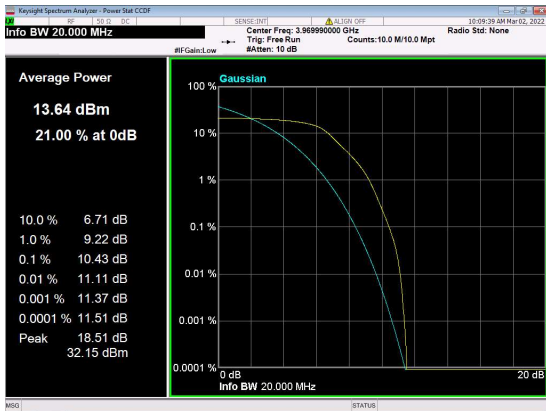
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Full\_Mid\_CH



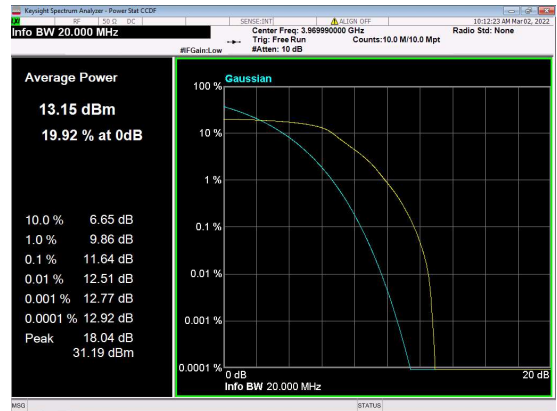
n77(20M)\_DFT-s-OFDM\_QPSK\_Outer\_Full\_  
Mid\_CH



n77(20M)\_DFT-s-OFDM\_PI\_2-BPSK\_Outer\_  
Full\_High\_CH



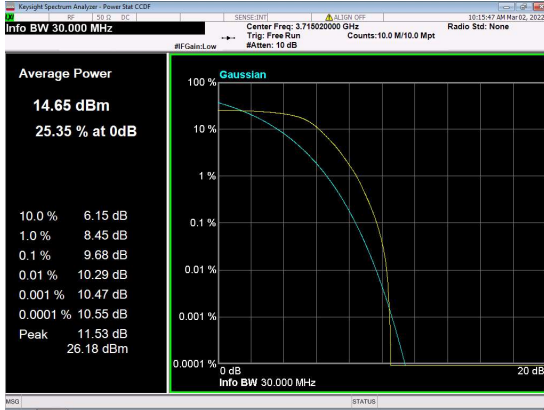
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High\_CH



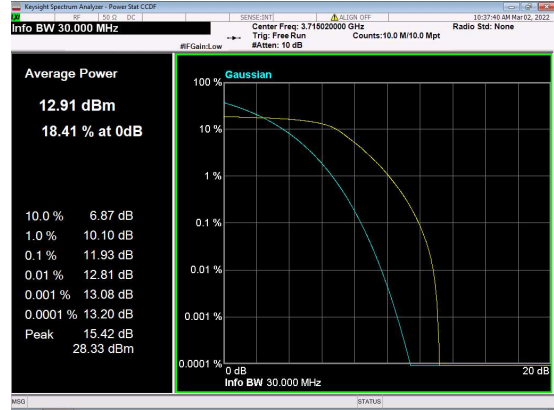




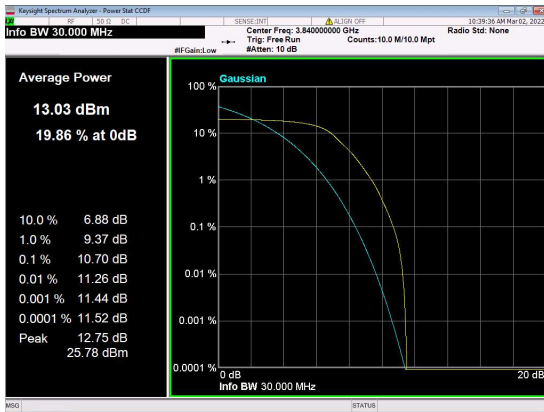
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Full\_Low\_CH



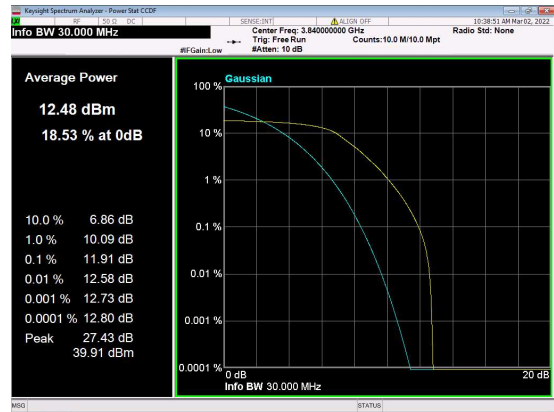
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Low\_CH



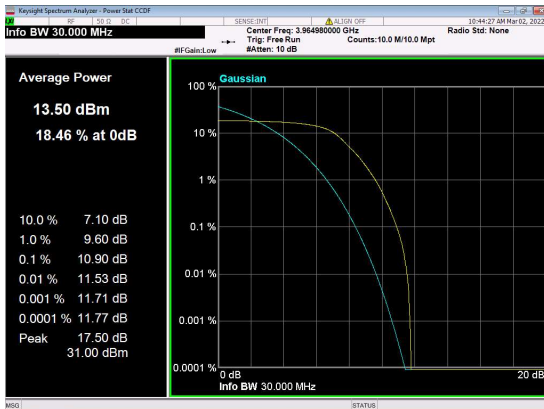
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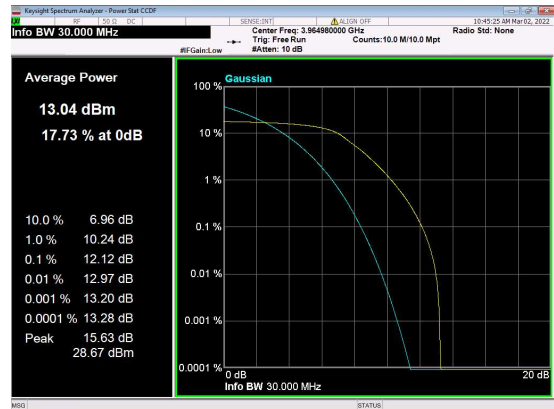
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Mid\_CH



n77(30M)\_DFT-s-OFDM\_PI\_2-BPSK\_Outer\_  
Full\_High\_CH

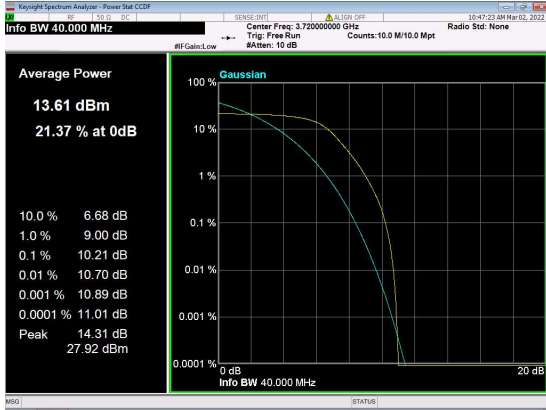


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High\_CH

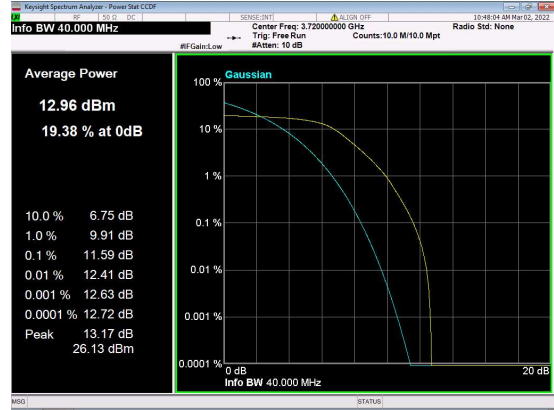




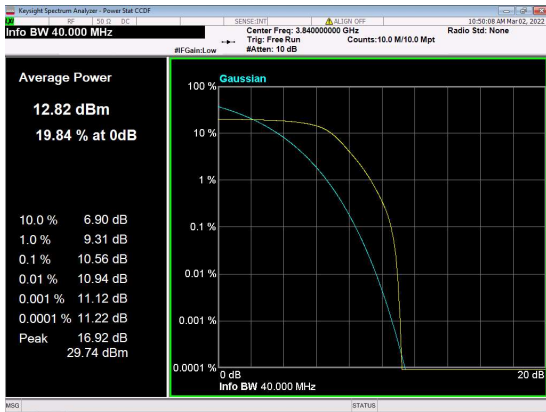
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Full\_Low\_CH



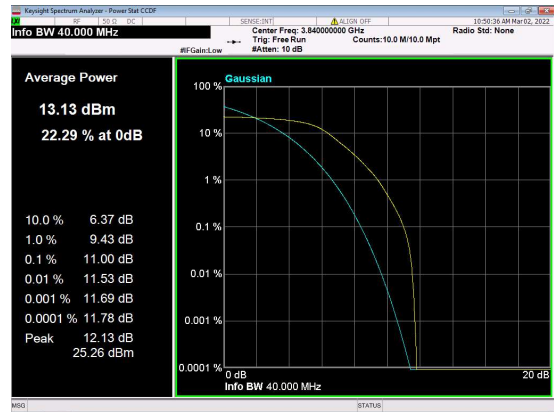
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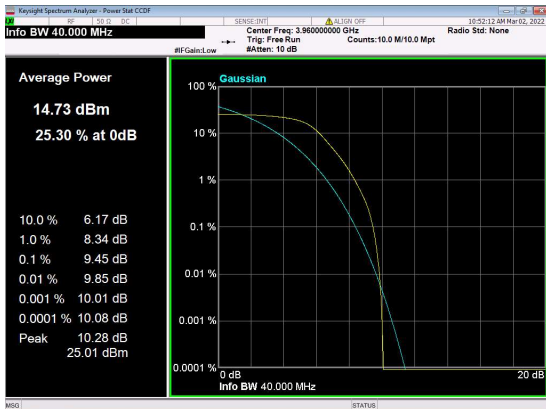
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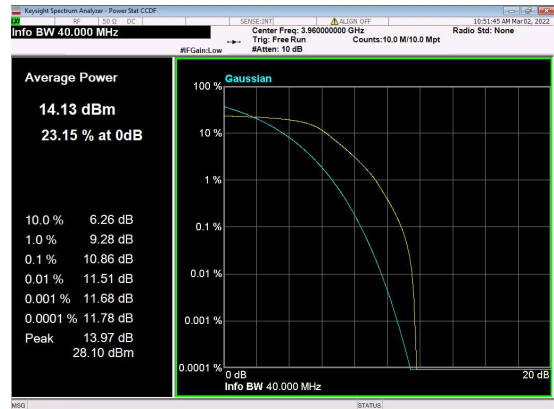
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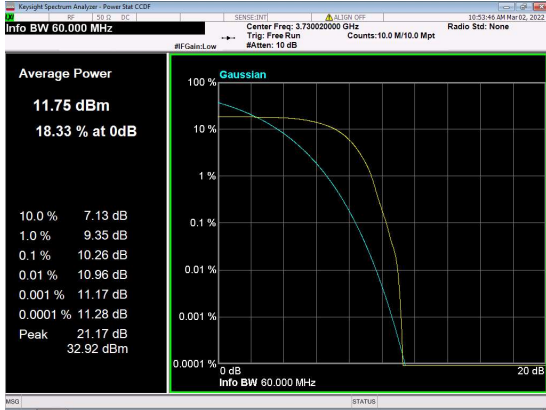


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High\_CH

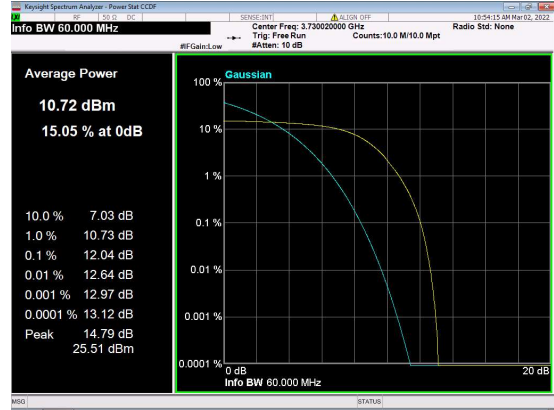




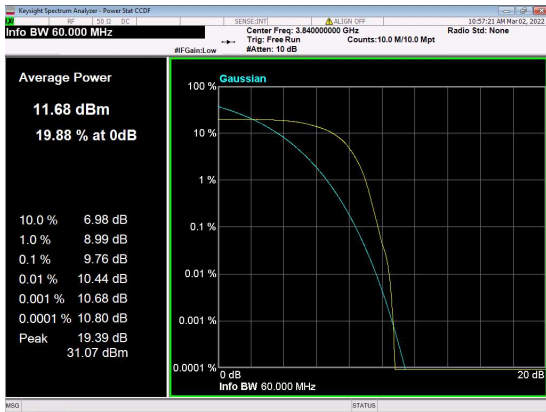
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Full\_Low\_CH



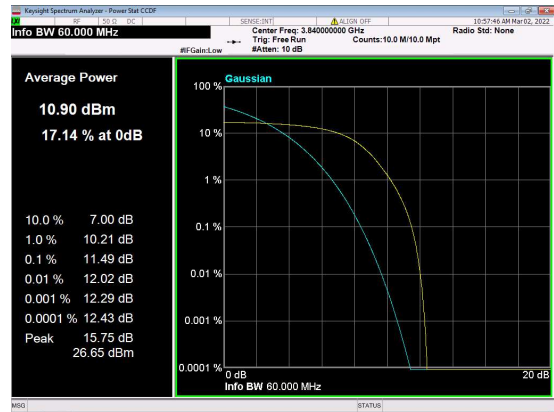
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Low\_CH



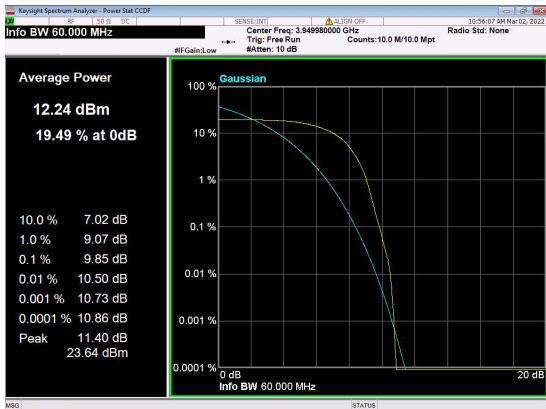
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Full\_Mid\_CH



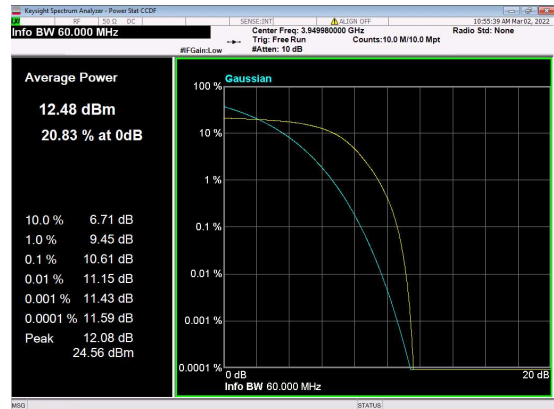
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Mid\_CH



n77(60M)\_DFT-s-OFDM\_PI\_2-BPSK\_Outer\_  
Full\_High\_CH

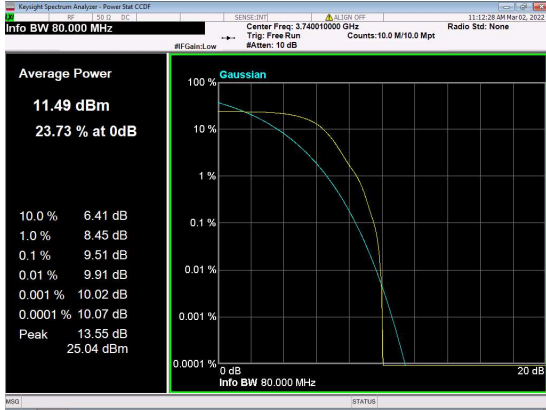


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High\_CH

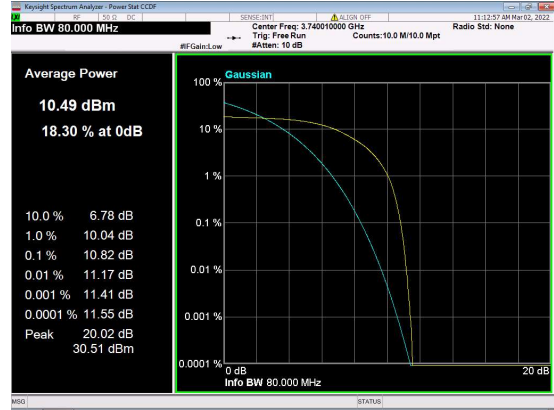




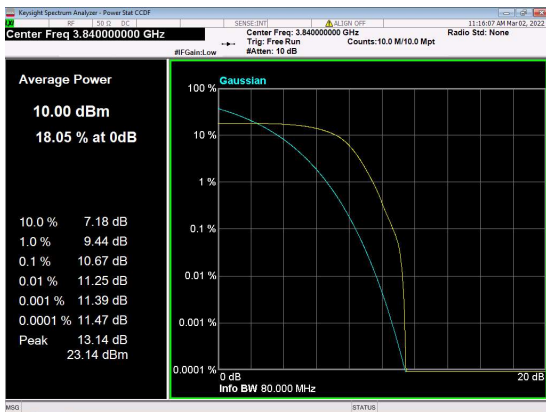
n77(80M)\_DFT-s-OFDM\_PI\_2-BPSK\_Outer\_Full\_Low\_CH



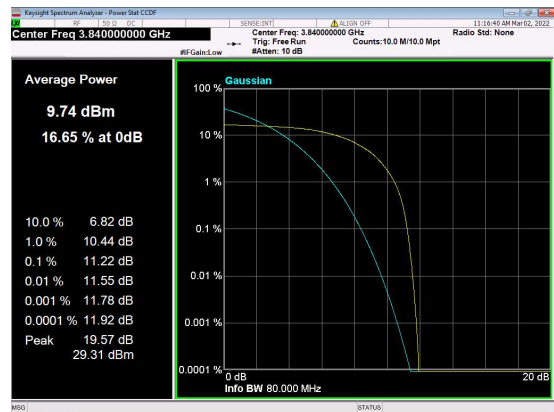
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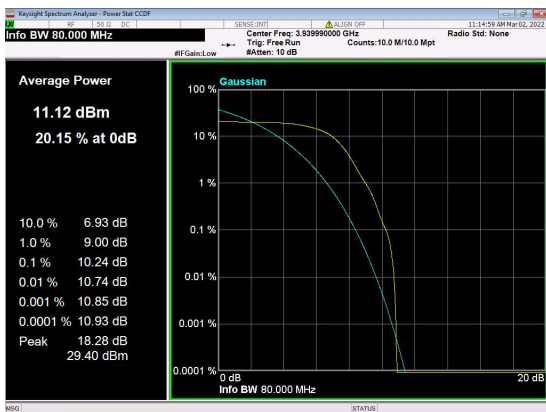
n77(80M)\_DFT-s-OFDM\_PI\_2-BPSK\_Outer\_Full\_Mid\_CH



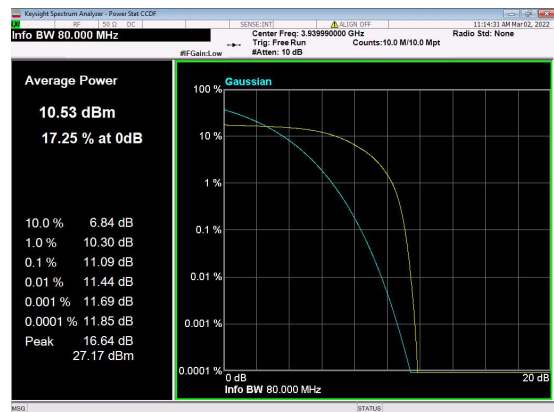
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n77(80M)\_DFT-s-OFDM\_PI\_2-BPSK\_Outer\_Full\_High\_CH

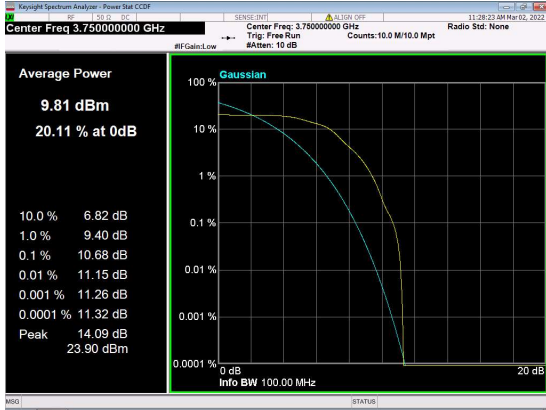


n77(80M)\_DFT-s-OFDM\_QPSK\_Outer\_Full\_High\_CH





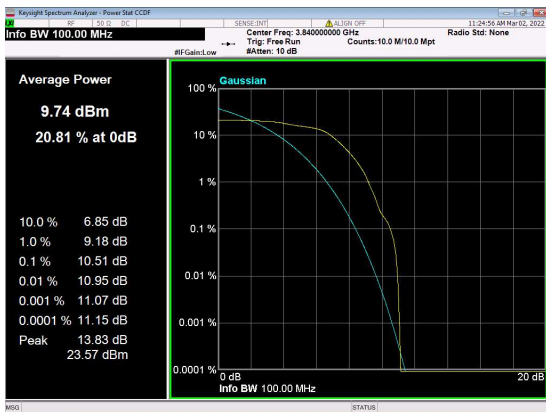
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Full\_Low\_CH



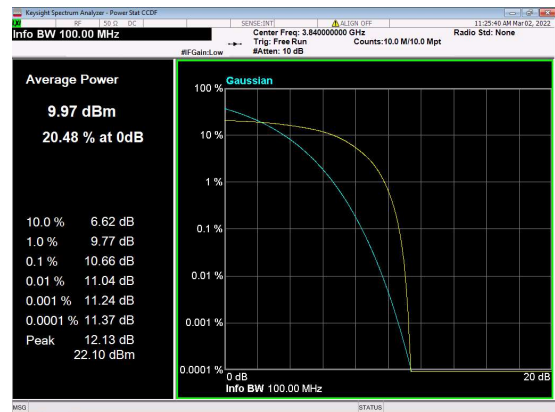
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Full\_Low\_CH



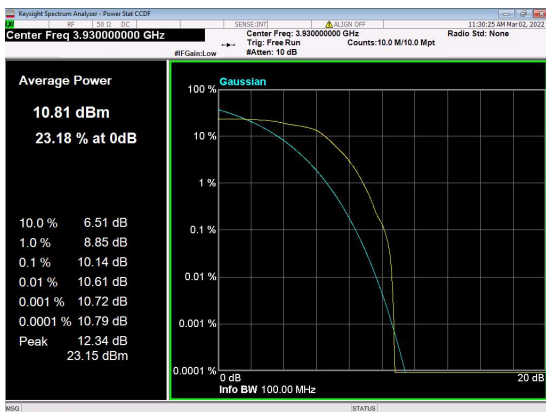
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Full\_Mid\_CH



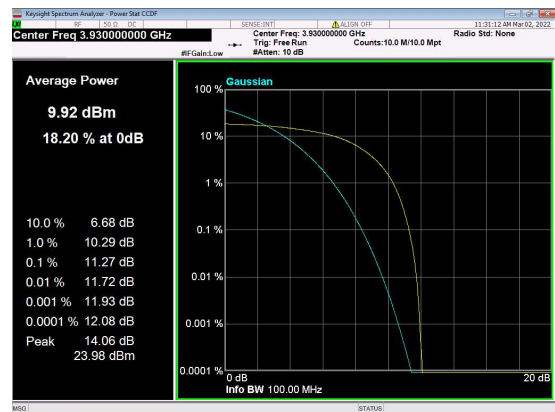
n77(100M)\_DFT-s-OFDM\_QPSK\_Outer\_  
Full\_Mid\_CH



n77(100M)\_DFT-s-OFDM\_PI\_2-BPSK\_Outer\_Full  
\_High\_CH



n77(100M)\_DFT-s-OFDM\_QPSK\_Outer\_  
Full\_High\_CH



## 2.5. Conducted Spurious Emissions

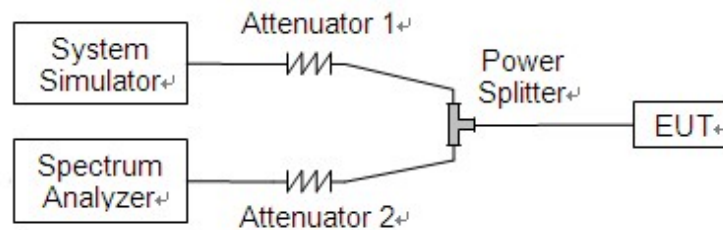
### 2.5.1. Requirement

According to FCC section 2.1051, 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. This calculated to be -13dBm.

According to FCC section 27.53(m)(4) for n41, 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  $55 + 10 \log(P)$  dB. This calculated to be -25dBm.

According to FCC section 27.53(l)(2) for n77, For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

### 2.5.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.



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### 2.5.3. Test procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.

### 2.5.4. Test Result