## B.2: Peak-to-Average Ratio

### Test Result

### Channel Bandwidth: 1.4 MHz

| Channel Bandwidth: 1.4 MHz | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Channel | RB Configuration | | Peak-to-Average Ratio | Limit | Verdict |
| | | Size | Offset | (dB) | (dB) | |
| QPSK | LCH | 1 | 0 | 3.29 | <13 | PASS |
| | | 1 | 3 | 3.32 | <13 | PASS |
| | | 1 | 5 | 3.39 | <13 | PASS |
| | | 3 | 0 | 3.71 | <13 | PASS |
| | | 3 | 2 | 3.74 | <13 | PASS |
| | | 3 | 3 | 3.79 | <13 | PASS |
| | | 6 | 0 | 4.94 | <13 | PASS |
| | MCH | 1 | 0 | 3.63 | <13 | PASS |
| | | 1 | 3 | 3.64 | <13 | PASS |
| | | 1 | 5 | 3.58 | <13 | PASS |
| | | 3 | 0 | 4.14 | <13 | PASS |
| | | 3 | 2 | 4.06 | <13 | PASS |
| | | 3 | 3 | 4.08 | <13 | PASS |
| | | 6 | 0 | 5.16 | <13 | PASS |
| | HCH | 1 | 0 | 4.11 | <13 | PASS |
| | | 1 | 3 | 3.99 | <13 | PASS |
| | | 1 | 5 | 3.95 | <13 | PASS |
| | | 3 | 0 | 4.52 | <13 | PASS |
| | | 3 | 2 | 4.45 | <13 | PASS |
| | | 3 | 3 | 4.44 | <13 | PASS |
| | | 6 | 0 | 5.37 | <13 | PASS |
| 16QAM | LCH | 1 | 0 | 4.33 | <13 | PASS |
| | | 1 | 3 | 4.31 | <13 | PASS |
| | | 1 | 5 | 4.46 | <13 | PASS |
| | | 3 | 0 | 4.61 | <13 | PASS |
| | | 3 | 2 | 4.67 | <13 | PASS |
| | | 3 | 3 | 4.74 | <13 | PASS |
| | | 6 | 0 | 5.81 | <13 | PASS |
| | MCH | 1 | 0 | 4.71 | <13 | PASS |
| | | 1 | 3 | 4.68 | <13 | PASS |
| | | 1 | 5 | 4.65 | <13 | PASS |
| | | 3 | 0 | 5.1 | <13 | PASS |
| | | 3 | 2 | 5 | <13 | PASS |
| | | 3 | 3 | 5.05 | <13 | PASS |
| | | 6 | 0 | 6.04 | <13 | PASS |

| | | | | | | |
|---|---|---|---|---|---|---|
| | HCH | 1 | 0 | 4.97 | <13 | PASS |
| | | 1 | 3 | 4.8 | <13 | PASS |
| | | 1 | 5 | 4.78 | <13 | PASS |
| | | 3 | 0 | 5.24 | <13 | PASS |
| | | 3 | 2 | 5.17 | <13 | PASS |
| | | 3 | 3 | 5.24 | <13 | PASS |
| | | 6 | 0 | 6.24 | <13 | PASS |

## Channel Bandwidth: 3 MHz

| Modulation | Channel | RB Configuration | | Peak-to-Average Ratio | Limit | Verdict |
|---|---|---|---|---|---|---|
| | | Size | Offset | [dB] | [dB] | |
| QPSK | LCH | 1 | 0 | 3.31 | <13 | PASS |
| | | 1 | 7 | 3.62 | <13 | PASS |
| | | 1 | 14 | 3.76 | <13 | PASS |
| | | 8 | 0 | 4.72 | <13 | PASS |
| | | 8 | 4 | 4.82 | <13 | PASS |
| | | 8 | 7 | 4.92 | <13 | PASS |
| | | 15 | 0 | 5.13 | <13 | PASS |
| | MCH | 1 | 0 | 3.91 | <13 | PASS |
| | | 1 | 7 | 3.73 | <13 | PASS |
| | | 1 | 14 | 3.6 | <13 | PASS |
| | | 8 | 0 | 5.07 | <13 | PASS |
| | | 8 | 4 | 5.01 | <13 | PASS |
| | | 8 | 7 | 4.96 | <13 | PASS |
| | | 15 | 0 | 5.24 | <13 | PASS |
| | HCH | 1 | 0 | 3.98 | <13 | PASS |
| | | 1 | 7 | 3.99 | <13 | PASS |
| | | 1 | 14 | 3.91 | <13 | PASS |
| | | 8 | 0 | 5.41 | <13 | PASS |
| | | 8 | 4 | 5.32 | <13 | PASS |
| | | 8 | 7 | 5.31 | <13 | PASS |
| | | 15 | 0 | 5.6 | <13 | PASS |
| 16QAM | LCH | 1 | 0 | 4.23 | <13 | PASS |
| | | 1 | 7 | 4.37 | <13 | PASS |
| | | 1 | 14 | 4.55 | <13 | PASS |
| | | 8 | 0 | 5.47 | <13 | PASS |
| | | 8 | 4 | 5.56 | <13 | PASS |
| | | 8 | 7 | 5.68 | <13 | PASS |
| | | 15 | 0 | 5.98 | <13 | PASS |
| | MCH | 1 | 0 | 4.65 | <13 | PASS |
| | | 1 | 7 | 4.66 | <13 | PASS |
| | | 1 | 14 | 4.52 | <13 | PASS |
| | | 8 | 0 | 5.74 | <13 | PASS |
| | | 8 | 4 | 5.73 | <13 | PASS |
| | | 8 | 7 | 5.67 | <13 | PASS |
| | | 15 | 0 | 6.15 | <13 | PASS |
| | HCH | 1 | 0 | 4.96 | <13 | PASS |
| | | 1 | 7 | 4.9 | <13 | PASS |
| | | 1 | 14 | 4.81 | <13 | PASS |

| | | 8 | 0 | 6.13 | <13 | PASS |
|---|---|---|---|---|---|---|
| | | 8 | 4 | 6.13 | <13 | PASS |
| | | 8 | 7 | 6.05 | <13 | PASS |
| | | 15 | 0 | 6.37 | <13 | PASS |

## Channel Bandwidth: 5 MHz

| Channel Bandwidth: 5 MHz | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Channel | RB Configuration | | Peak-to-Average Ratio | Limit | Verdict |
| | | Size | Offset | [dB] | [dB] | |
| QPSK | LCH | 1 | 0 | 3.14 | <13 | PASS |
| | | 1 | 12 | 3.67 | <13 | PASS |
| | | 1 | 24 | 3.82 | <13 | PASS |
| | | 12 | 0 | 4.75 | <13 | PASS |
| | | 12 | 6 | 4.84 | <13 | PASS |
| | | 12 | 13 | 5.09 | <13 | PASS |
| | | 25 | 0 | 5.26 | <13 | PASS |
| | MCH | 1 | 0 | 3.55 | <13 | PASS |
| | | 1 | 12 | 3.63 | <13 | PASS |
| | | 1 | 24 | 3.33 | <13 | PASS |
| | | 12 | 0 | 5.01 | <13 | PASS |
| | | 12 | 6 | 4.89 | <13 | PASS |
| | | 12 | 13 | 4.91 | <13 | PASS |
| | | 25 | 0 | 5.22 | <13 | PASS |
| | HCH | 1 | 0 | 4 | <13 | PASS |
| | | 1 | 12 | 4.16 | <13 | PASS |
| | | 1 | 24 | 3.98 | <13 | PASS |
| | | 12 | 0 | 5.35 | <13 | PASS |
| | | 12 | 6 | 5.32 | <13 | PASS |
| | | 12 | 13 | 5.34 | <13 | PASS |
| | | 25 | 0 | 5.53 | <13 | PASS |
| 16QAM | LCH | 1 | 0 | 4.19 | <13 | PASS |
| | | 1 | 12 | 4.62 | <13 | PASS |
| | | 1 | 24 | 4.77 | <13 | PASS |
| | | 12 | 0 | 5.59 | <13 | PASS |
| | | 12 | 6 | 5.69 | <13 | PASS |
| | | 12 | 13 | 5.94 | <13 | PASS |
| | | 25 | 0 | 6.04 | <13 | PASS |
| | MCH | 1 | 0 | 4.67 | <13 | PASS |
| | | 1 | 12 | 4.57 | <13 | PASS |
| | | 1 | 24 | 4.31 | <13 | PASS |
| | | 12 | 0 | 5.82 | <13 | PASS |
| | | 12 | 6 | 5.76 | <13 | PASS |
| | | 12 | 13 | 5.71 | <13 | PASS |
| | | 25 | 0 | 6.05 | <13 | PASS |
| | HCH | 1 | 0 | 4.69 | <13 | PASS |
| | | 1 | 12 | 4.82 | <13 | PASS |
| | | 1 | 24 | 4.66 | <13 | PASS |

| | | 12 | 0 | 6.26 | <13 | PASS |
|---|---|---|---|---|---|---|
| | | 12 | 6 | 6.26 | <13 | PASS |
| | | 12 | 13 | 6.28 | <13 | PASS |
| | | 25 | 0 | 6.35 | <13 | PASS |

## Channel Bandwidth: 10 MHz

| Modulation | Channel | RB Configuration | | Peak-to-Average Ratio | Limit | Verdict |
|---|---|---|---|---|---|---|
| | | Size | Offset | [dB] | [dB] | |
| QPSK | LCH | 1 | 0 | 3.29 | <13 | PASS |
| | | 1 | 24 | 3.95 | <13 | PASS |
| | | 1 | 49 | 4.12 | <13 | PASS |
| | | 25 | 0 | 4.99 | <13 | PASS |
| | | 25 | 12 | 5.27 | <13 | PASS |
| | | 25 | 25 | 5.38 | <13 | PASS |
| | | 50 | 0 | 5.41 | <13 | PASS |
| | MCH | 1 | 0 | 3.84 | <13 | PASS |
| | | 1 | 24 | 3.64 | <13 | PASS |
| | | 1 | 49 | 3.36 | <13 | PASS |
| | | 25 | 0 | 5.09 | <13 | PASS |
| | | 25 | 12 | 4.96 | <13 | PASS |
| | | 25 | 25 | 4.98 | <13 | PASS |
| | | 50 | 0 | 5.22 | <13 | PASS |
| | HCH | 1 | 0 | 3.4 | <13 | PASS |
| | | 1 | 24 | 3.78 | <13 | PASS |
| | | 1 | 49 | 3.76 | <13 | PASS |
| | | 25 | 0 | 5.11 | <13 | PASS |
| | | 25 | 12 | 5.3 | <13 | PASS |
| | | 25 | 25 | 5.36 | <13 | PASS |
| | | 50 | 0 | 5.48 | <13 | PASS |
| 16QAM | LCH | 1 | 0 | 4.16 | <13 | PASS |
| | | 1 | 24 | 4.72 | <13 | PASS |
| | | 1 | 49 | 4.92 | <13 | PASS |
| | | 25 | 0 | 5.87 | <13 | PASS |
| | | 25 | 12 | 6.1 | <13 | PASS |
| | | 25 | 25 | 6.23 | <13 | PASS |
| | | 50 | 0 | 6.15 | <13 | PASS |
| | MCH | 1 | 0 | 4.61 | <13 | PASS |
| | | 1 | 24 | 4.58 | <13 | PASS |
| | | 1 | 49 | 4.36 | <13 | PASS |
| | | 25 | 0 | 5.97 | <13 | PASS |
| | | 25 | 12 | 5.81 | <13 | PASS |
| | | 25 | 25 | 5.79 | <13 | PASS |
| | | 50 | 0 | 5.99 | <13 | PASS |
| | HCH | 1 | 0 | 4.43 | <13 | PASS |
| | | 1 | 24 | 4.85 | <13 | PASS |
| | | 1 | 49 | 4.86 | <13 | PASS |

| | | 25 | 0 | 5.94 | <13 | PASS |
|---|---|---|---|---|---|---|
| | | 25 | 12 | 6.08 | <13 | PASS |
| | | 25 | 25 | 6.21 | <13 | PASS |
| | | 50 | 0 | 6.23 | <13 | PASS |

## Channel Bandwidth: 15 MHz

| Modulation | Channel | RB Configuration | | Peak-to-Average Ratio | Limit | Verdict |
|---|---|---|---|---|---|---|
| | | Size | Offset | [dB] | [dB] | |
| QPSK | LCH | 1 | 0 | 8.88 | <13 | PASS |
| | | 1 | 37 | 3.93 | <13 | PASS |
| | | 1 | 74 | 8.82 | <13 | PASS |
| | | 37 | 0 | 4.74 | <13 | PASS |
| | | 37 | 18 | 5.38 | <13 | PASS |
| | | 37 | 38 | 4.83 | <13 | PASS |
| | | 75 | 0 | 4.99 | <13 | PASS |
| | MCH | 1 | 0 | 8.52 | <13 | PASS |
| | | 1 | 37 | 3.63 | <13 | PASS |
| | | 1 | 74 | 8.92 | <13 | PASS |
| | | 37 | 0 | 4.72 | <13 | PASS |
| | | 37 | 18 | 5.05 | <13 | PASS |
| | | 37 | 38 | 4.72 | <13 | PASS |
| | | 75 | 0 | 4.96 | <13 | PASS |
| | HCH | 1 | 0 | 8.75 | <13 | PASS |
| | | 1 | 37 | 3.63 | <13 | PASS |
| | | 1 | 74 | 8.36 | <13 | PASS |
| | | 37 | 0 | 4.57 | <13 | PASS |
| | | 37 | 18 | 5.15 | <13 | PASS |
| | | 37 | 38 | 4.93 | <13 | PASS |
| | | 75 | 0 | 5.05 | <13 | PASS |
| 16QAM | LCH | 1 | 0 | 9.19 | <13 | PASS |
| | | 1 | 37 | 4.75 | <13 | PASS |
| | | 1 | 74 | 9.43 | <13 | PASS |
| | | 37 | 0 | 6.09 | <13 | PASS |
| | | 37 | 18 | 6.2 | <13 | PASS |
| | | 37 | 38 | 6.17 | <13 | PASS |
| | | 75 | 0 | 6.33 | <13 | PASS |
| | MCH | 1 | 0 | 9.17 | <13 | PASS |
| | | 1 | 37 | 4.6 | <13 | PASS |
| | | 1 | 74 | 9.65 | <13 | PASS |
| | | 37 | 0 | 6 | <13 | PASS |
| | | 37 | 18 | 5.9 | <13 | PASS |
| | | 37 | 38 | 5.99 | <13 | PASS |
| | | 75 | 0 | 6.25 | <13 | PASS |
| | HCH | 1 | 0 | 8.9 | <13 | PASS |
| | | 1 | 37 | 4.6 | <13 | PASS |
| | | 1 | 74 | 9.48 | <13 | PASS |

| | | 37 | 0 | 5.93 | <13 | PASS |
| --- | --- | --- | --- | --- | --- | --- |
| | | 37 | 18 | 6.01 | <13 | PASS |
| | | 37 | 38 | 6.14 | <13 | PASS |
| | | 75 | 0 | 6.28 | <13 | PASS |

## Channel Bandwidth: 20 MHz

| Modulation | Channel | RB Configuration | | Peak-to-Average Ratio | Limit | Verdict |
|---|---|---|---|---|---|---|
| | | Size | Offset | [dB] | [dB] | |
| QPSK | LCH | 1 | 0 | 8.43 | <13 | PASS |
| | | 1 | 49 | 4.06 | <13 | PASS |
| | | 1 | 99 | 8.21 | <13 | PASS |
| | | 50 | 0 | 5.66 | <13 | PASS |
| | | 50 | 25 | 5.41 | <13 | PASS |
| | | 50 | 50 | 5.82 | <13 | PASS |
| | | 100 | 0 | 5.65 | <13 | PASS |
| | MCH | 1 | 0 | 8.71 | <13 | PASS |
| | | 1 | 49 | 3.6 | <13 | PASS |
| | | 1 | 99 | 9.09 | <13 | PASS |
| | | 50 | 0 | 5.61 | <13 | PASS |
| | | 50 | 25 | 5.23 | <13 | PASS |
| | | 50 | 50 | 5.79 | <13 | PASS |
| | | 100 | 0 | 5.69 | <13 | PASS |
| | HCH | 1 | 0 | 8.87 | <13 | PASS |
| | | 1 | 49 | 3.45 | <13 | PASS |
| | | 1 | 99 | 8.91 | <13 | PASS |
| | | 50 | 0 | 5.46 | <13 | PASS |
| | | 50 | 25 | 5.22 | <13 | PASS |
| | | 50 | 50 | 5.8 | <13 | PASS |
| | | 100 | 0 | 5.8 | <13 | PASS |
| 16QAM | LCH | 1 | 0 | 7.42 | <13 | PASS |
| | | 1 | 49 | 4.78 | <13 | PASS |
| | | 1 | 99 | 8.29 | <13 | PASS |
| | | 50 | 0 | 6.78 | <13 | PASS |
| | | 50 | 25 | 6.26 | <13 | PASS |
| | | 50 | 50 | 6.78 | <13 | PASS |
| | | 100 | 0 | 6.87 | <13 | PASS |
| | MCH | 1 | 0 | 8.97 | <13 | PASS |
| | | 1 | 49 | 4.41 | <13 | PASS |
| | | 1 | 99 | 8.92 | <13 | PASS |
| | | 50 | 0 | 6.7 | <13 | PASS |
| | | 50 | 25 | 5.98 | <13 | PASS |
| | | 50 | 50 | 6.77 | <13 | PASS |
| | | 100 | 0 | 6.87 | <13 | PASS |
| | HCH | 1 | 0 | 8.88 | <13 | PASS |
| | | 1 | 49 | 4.29 | <13 | PASS |
| | | 1 | 99 | 8.76 | <13 | PASS |

|  |  | 50 | 0 | 6.58 | <13 | PASS |
|---|---|---|---|---|---|---|
|  |  | 50 | 25 | 5.94 | <13 | PASS |
|  |  | 50 | 50 | 6.75 | <13 | PASS |
|  |  | 100 | 0 | 6.74 | <13 | PASS |

# Test Graphs

## Channel Bandwidth: 1.4 MHz

| (Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0 |
| --- |

Agilent Spectrum Analyzer - Power Stat CCDF
LXI  R L    RF    50 Ω    AC        SENSE:INT        ALIGN AUTO    09:44:46 AM Mar 05, 2018
Center Freq 1.710700000 GHz        Center Freq: 1.710700000 GHz        Radio Std: None        Frequency
#IFGain:Low    #Atten: 36 dB        Trig: Free Run        Counts:500 k/500 kpt

Average Power
**14.09 dBm**
**54.85 % at 0dB**

100 %  Gaussian
10 %
1 %

| 10.0 % | 2.28 dB |
| 1.0 % | 2.92 dB |
| 0.1 % | 3.29 dB |
| 0.01 % | 3.50 dB |
| 0.001 % | 3.68 dB |
| 0.0001 % | --- dB |
| Peak | 3.74 dB |
| | 17.83 dBm |

0 dB
Info BW 1.5000 MHz        20 dB

Center Freq 1.710700000 GHz
CF Step 6.000000 MHz  Auto  Man
Freq Offset 0 Hz

MSG        STATUS

| (Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3 |
| --- |

Agilent Spectrum Analyzer - Power Stat CCDF
LXI  R L    RF    50 Ω    AC        SENSE:INT        ALIGN AUTO    09:44:51 AM Mar 05, 2018
Center Freq 1.710700000 GHz        Center Freq: 1.710700000 GHz        Radio Std: None        Frequency
#IFGain:Low    #Atten: 36 dB        Trig: Free Run        Counts:500 k/500 kpt

Average Power
**14.11 dBm**
**54.48 % at 0dB**

100 %  Gaussian
10 %
1 %

| 10.0 % | 2.31 dB |
| 1.0 % | 2.99 dB |
| 0.1 % | 3.32 dB |
| 0.01 % | 3.51 dB |
| 0.001 % | 3.69 dB |
| 0.0001 % | --- dB |
| Peak | 3.72 dB |
| | 17.83 dBm |

0 dB
Info BW 1.5000 MHz        20 dB

Center Freq 1.710700000 GHz
CF Step 6.000000 MHz  Auto  Man
Freq Offset 0 Hz

MSG        STATUS

| (Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5 |
| --- |

Agilent Spectrum Analyzer - Power Stat CCDF
LXI  R L    RF    50 Ω    AC        SENSE:INT        ALIGN AUTO    09:44:56 AM Mar 05, 2018
Center Freq 1.710700000 GHz        Center Freq: 1.710700000 GHz        Radio Std: None        Frequency
#IFGain:Low    #Atten: 36 dB        Trig: Free Run        Counts:500 k/500 kpt

Average Power
**14.13 dBm**
**54.04 % at 0dB**

100 %  Gaussian
10 %
1 %

| 10.0 % | 2.37 dB |
| 1.0 % | 3.06 dB |
| 0.1 % | 3.39 dB |
| 0.01 % | 3.62 dB |
| 0.001 % | 3.71 dB |
| 0.0001 % | --- dB |
| Peak | 3.73 dB |
| | 17.86 dBm |

0 dB
Info BW 1.5000 MHz        20 dB

Center Freq 1.710700000 GHz
CF Step 6.000000 MHz  Auto  Man
Freq Offset 0 Hz

MSG        STATUS

| (Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#0 |
| --- |

**Average Power**

**14.14 dBm**

**52.11 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.28 dB |
| 1.0 % | 3.39 dB |
| 0.1 % | 3.71 dB |
| 0.01 % | 3.89 dB |
| 0.001 % | 4.03 dB |
| 0.0001 % | --- dB |
| Peak | 4.09 dB |
| | 18.23 dBm |

(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#2



**Average Power**

**14.13 dBm**

**51.79 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.31 dB |
| 1.0 % | 3.43 dB |
| 0.1 % | 3.74 dB |
| 0.01 % | 3.95 dB |
| 0.001 % | 4.06 dB |
| 0.0001 % | --- dB |
| Peak | 4.11 dB |
| | 18.24 dBm |

(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#3



**Average Power**

**14.13 dBm**

**51.83 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.30 dB |
| 1.0 % | 3.46 dB |
| 0.1 % | 3.79 dB |
| 0.01 % | 3.97 dB |
| 0.001 % | 4.06 dB |
| 0.0001 % | --- dB |
| Peak | 4.08 dB |
| | 18.21 dBm |

(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_6RB#0

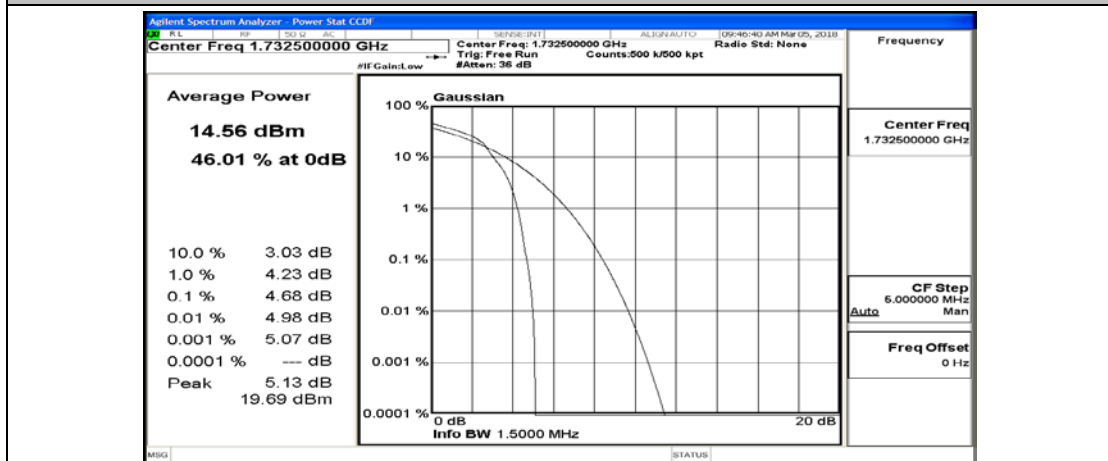| (Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#0 |
| --- |



| (Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3 |
| --- |



| (Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#5 |
| --- |

**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.732500000 GHz

Average Power

**15.50 dBm**

**53.61 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.40 dB |
| 1.0 % | 3.24 dB |
| 0.1 % | 3.58 dB |
| 0.01 % | 3.74 dB |
| 0.001 % | 3.83 dB |
| 0.0001 % | --- dB |
| Peak | 3.84 dB |
| | 19.34 dBm |

(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_3RB#0



**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.732500000 GHz

Average Power

**15.58 dBm**

**50.41 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.39 dB |
| 1.0 % | 3.71 dB |
| 0.1 % | 4.14 dB |
| 0.01 % | 4.33 dB |
| 0.001 % | 4.44 dB |
| 0.0001 % | --- dB |
| Peak | 4.51 dB |
| | 20.09 dBm |

(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_3RB#2



**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.732500000 GHz

Average Power

**15.55 dBm**

**50.51 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.39 dB |
| 1.0 % | 3.68 dB |
| 0.1 % | 4.06 dB |
| 0.01 % | 4.27 dB |
| 0.001 % | 4.39 dB |
| 0.0001 % | --- dB |
| Peak | 4.42 dB |
| | 19.97 dBm |

(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_3RB#3

(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_6RB#0
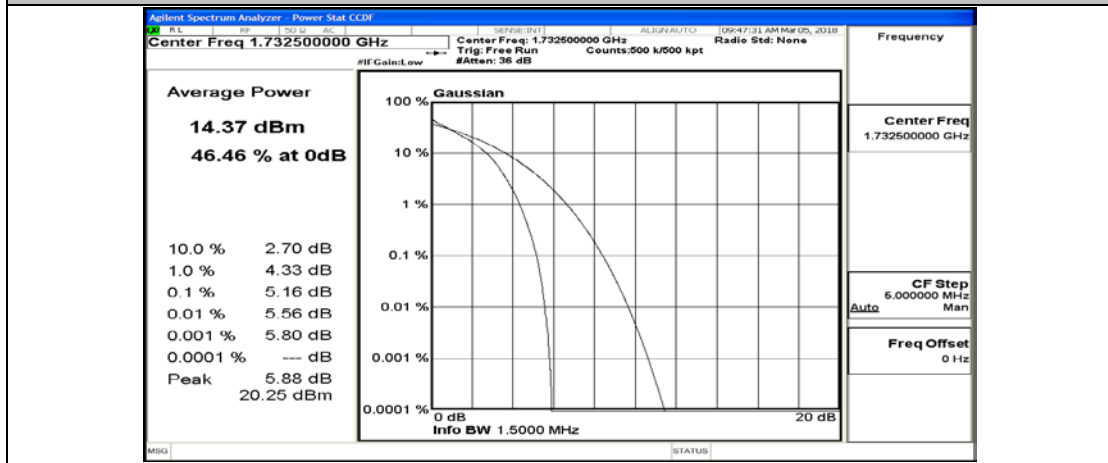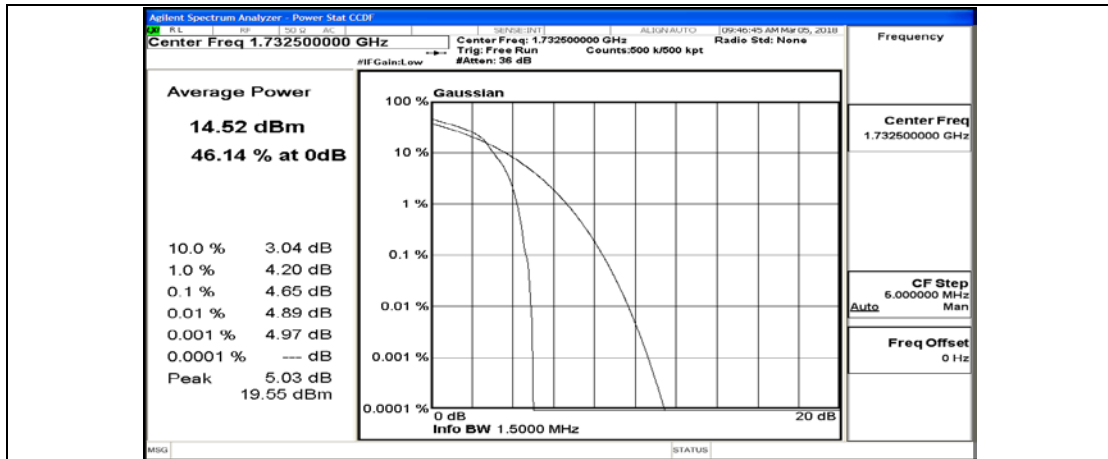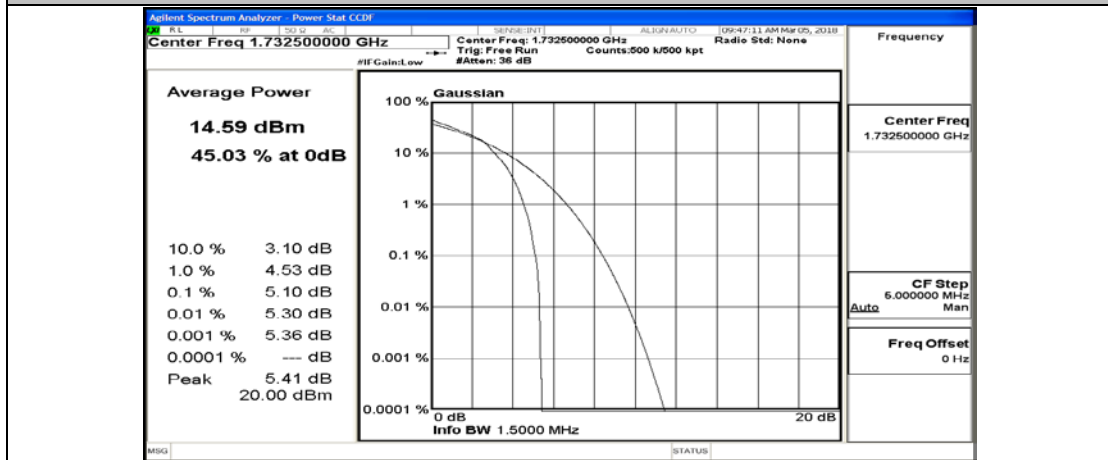


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0
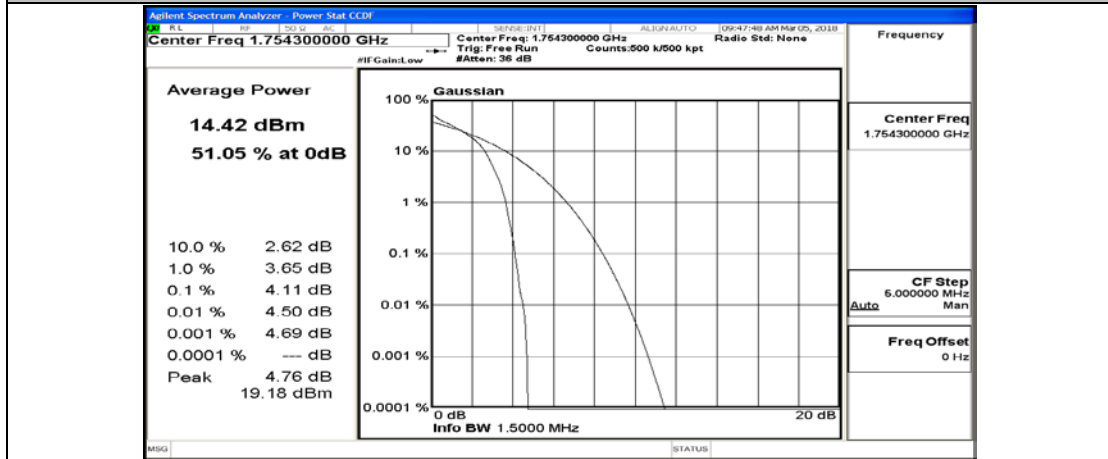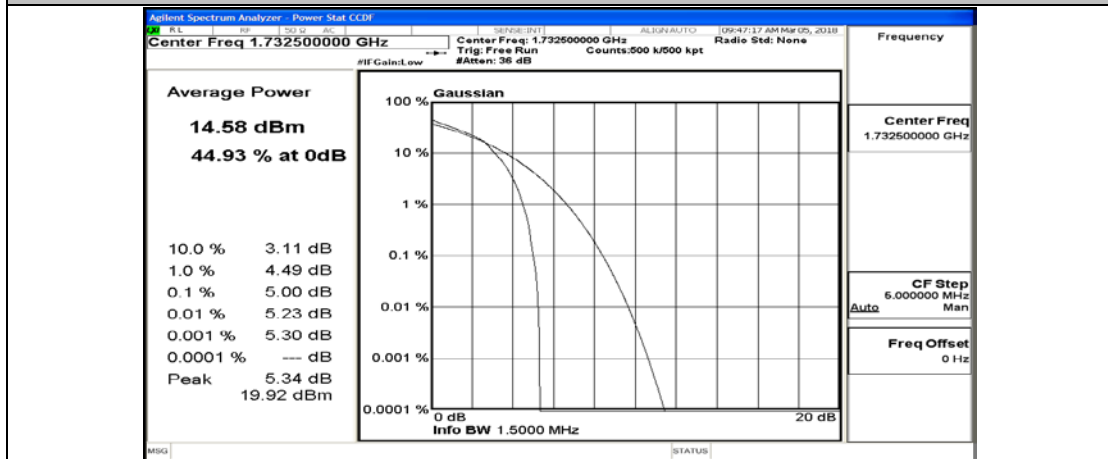


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3
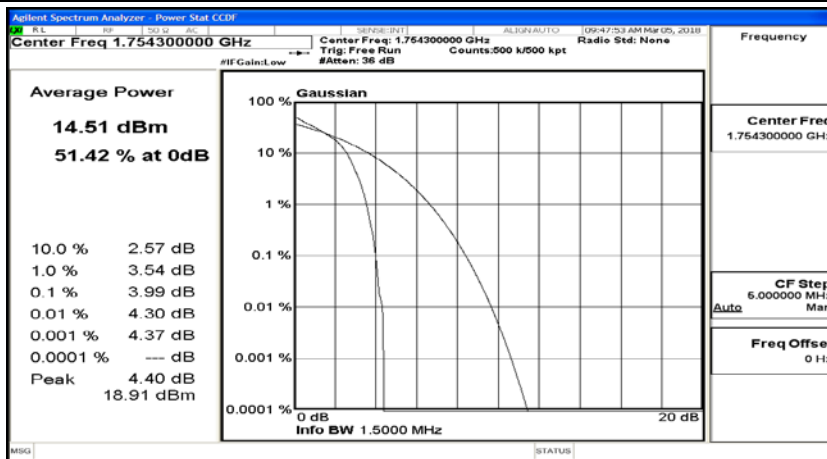
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#5
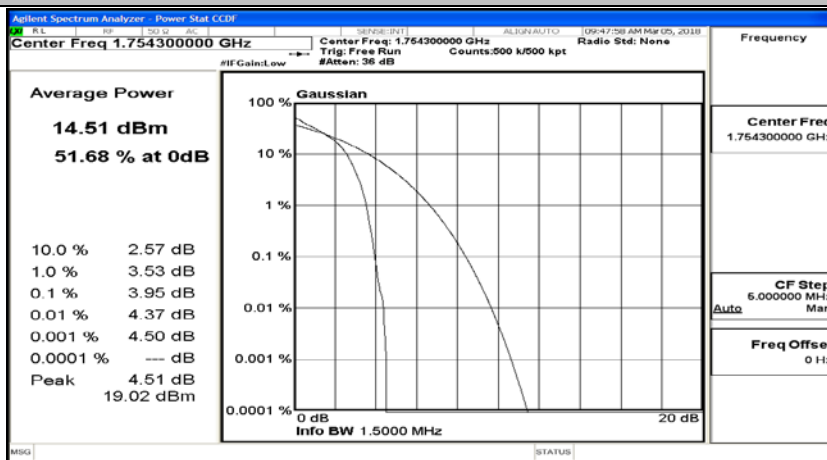


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_3RB#0
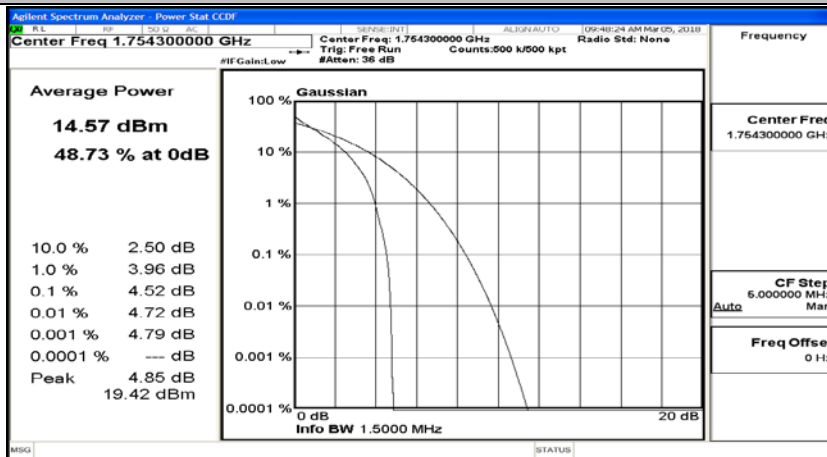


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_3RB#2
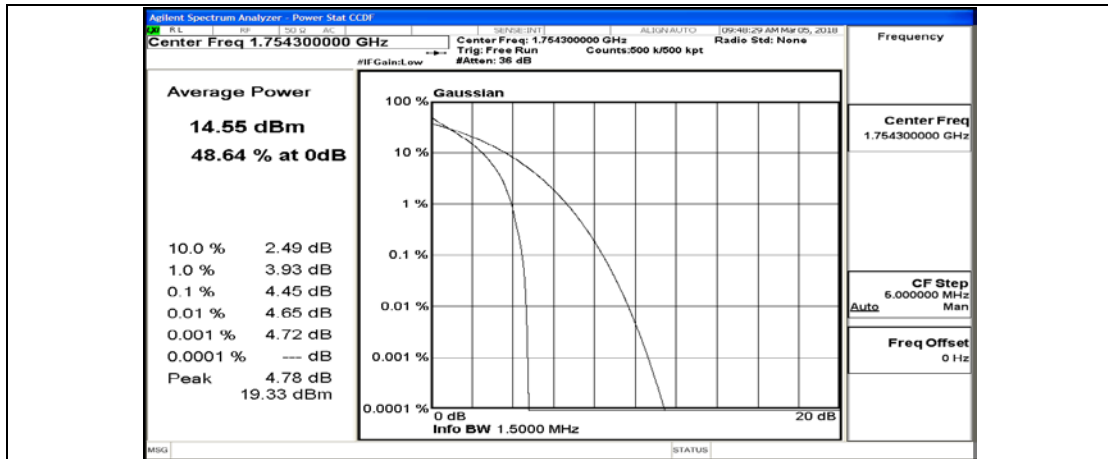
| (Channel Bandwidth: 1.4 MHz)_HCH_QPSK_3RB#3 |
| --- |



| (Channel Bandwidth: 1.4 MHz)_HCH_QPSK_6RB#0 |
| --- |



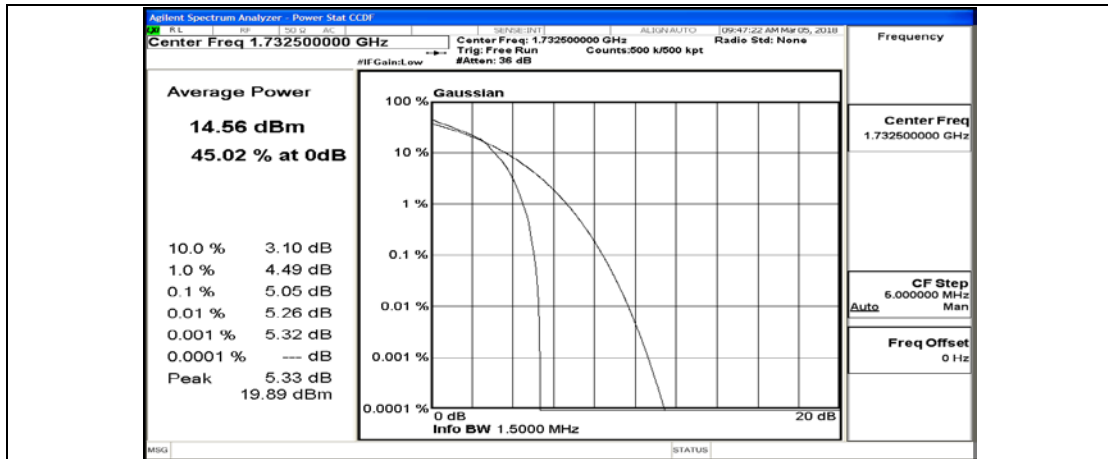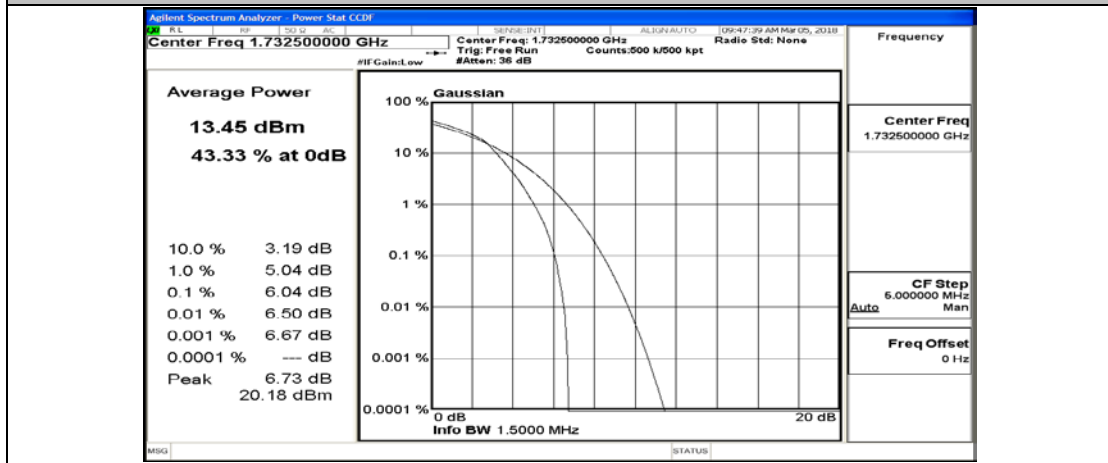| (Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#0 |
| --- |
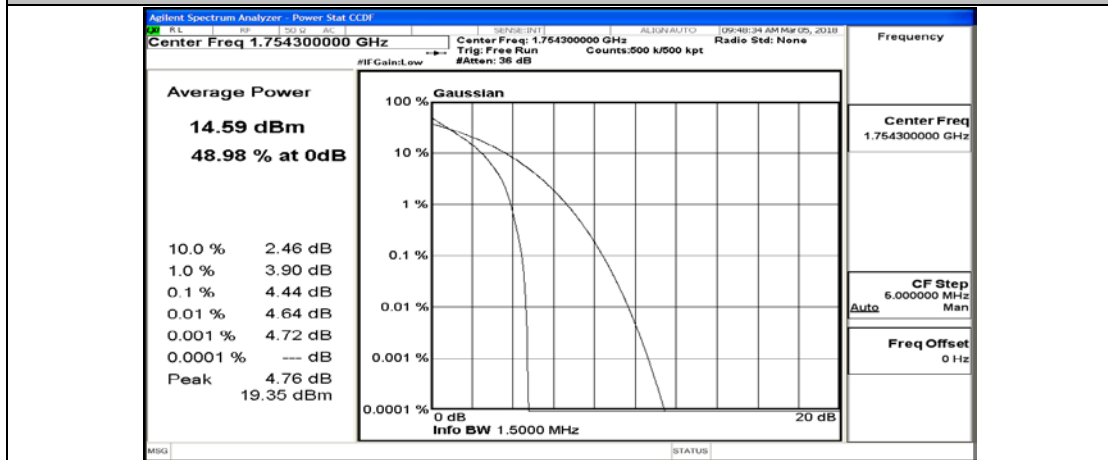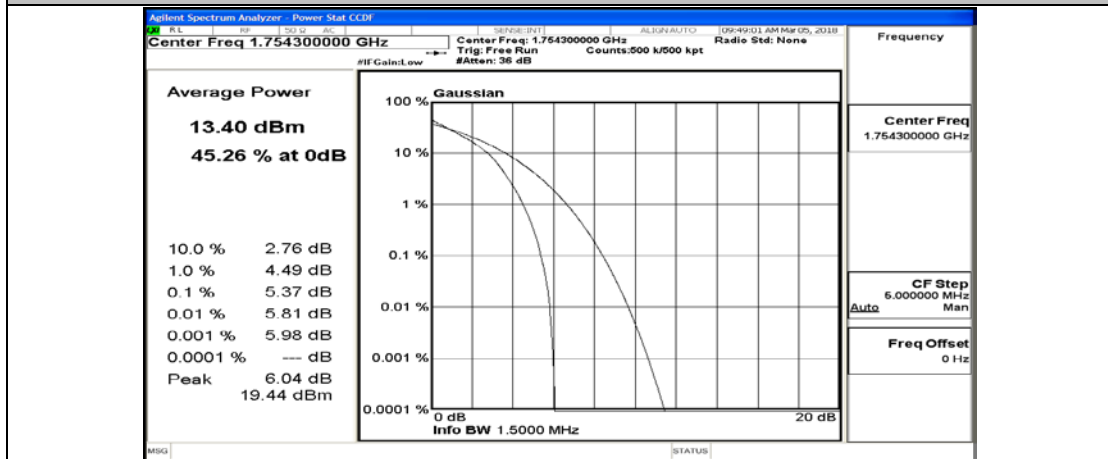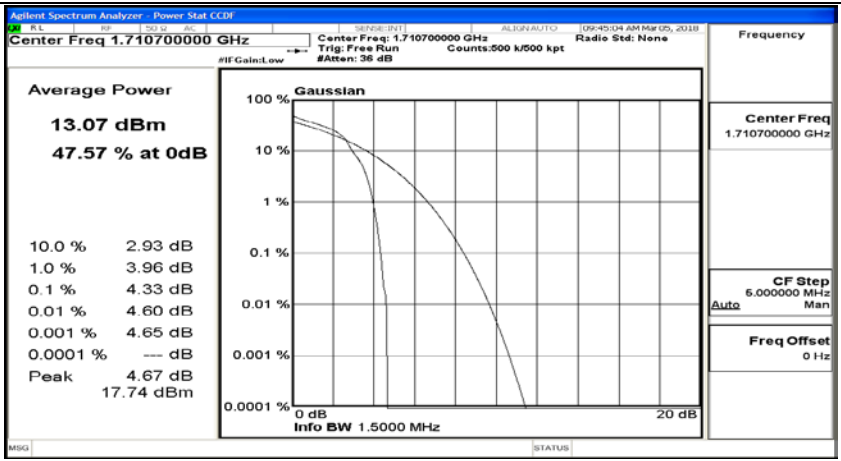
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#3
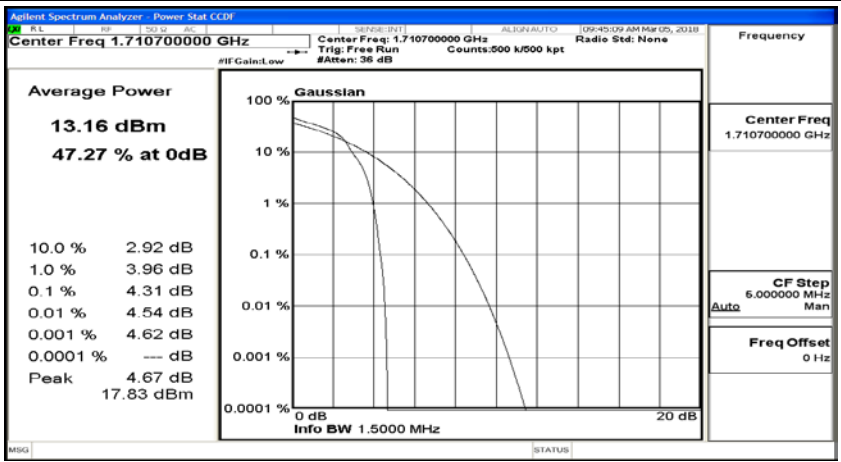


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5



(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#0

Agilent Spectrum Analyzer - Power Stat CCDF

Center Freq 1.710700000 GHz

Average Power

13.14 dBm

46.85 % at 0dB

| | |
|---|---|
| 10.0 % | 2.98 dB |
| 1.0 % | 4.16 dB |
| 0.1 % | 4.61 dB |
| 0.01 % | 4.85 dB |
| 0.001 % | 4.92 dB |
| 0.0001 % | --- dB |
| Peak | 4.96 dB |
| | 18.10 dBm |

Info BW 1.5000 MHz

(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#2



Agilent Spectrum Analyzer - Power Stat CCDF

Center Freq 1.710700000 GHz

Average Power

13.12 dBm

46.41 % at 0dB

| | |
|---|---|
| 10.0 % | 3.00 dB |
| 1.0 % | 4.21 dB |
| 0.1 % | 4.67 dB |
| 0.01 % | 4.93 dB |
| 0.001 % | 5.02 dB |
| 0.0001 % | --- dB |
| Peak | 5.11 dB |
| | 18.23 dBm |

Info BW 1.5000 MHz

(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#3



Agilent Spectrum Analyzer - Power Stat CCDF

Center Freq 1.710700000 GHz

Average Power

13.11 dBm

46.33 % at 0dB

| | |
|---|---|
| 10.0 % | 3.00 dB |
| 1.0 % | 4.25 dB |
| 0.1 % | 4.74 dB |
| 0.01 % | 4.96 dB |
| 0.001 % | 5.04 dB |
| 0.0001 % | --- dB |
| Peak | 5.10 dB |
| | 18.21 dBm |

Info BW 1.5000 MHz

(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_6RB#0

| (Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#0 |
|---|



| (Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#3 |
|---|



| (Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#5 |
|---|
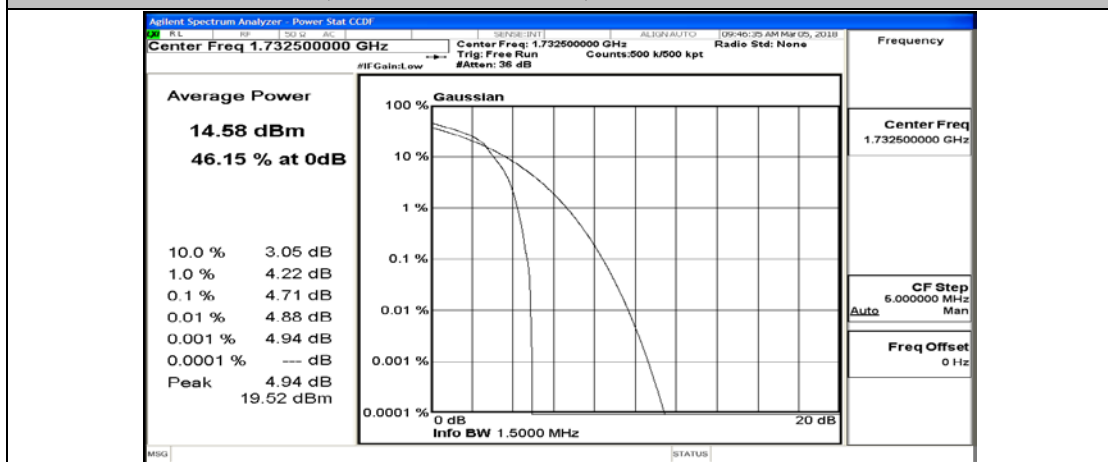
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_3RB#0



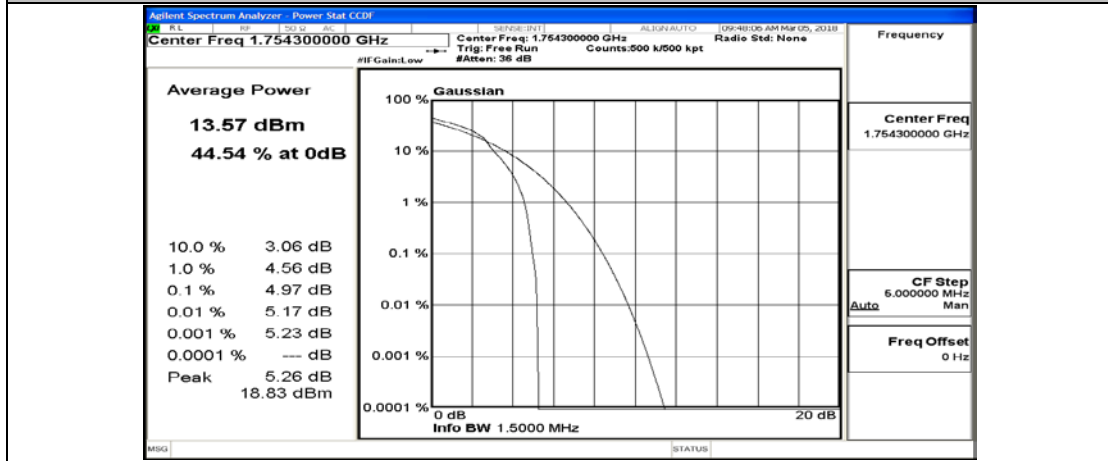(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_3RB#2
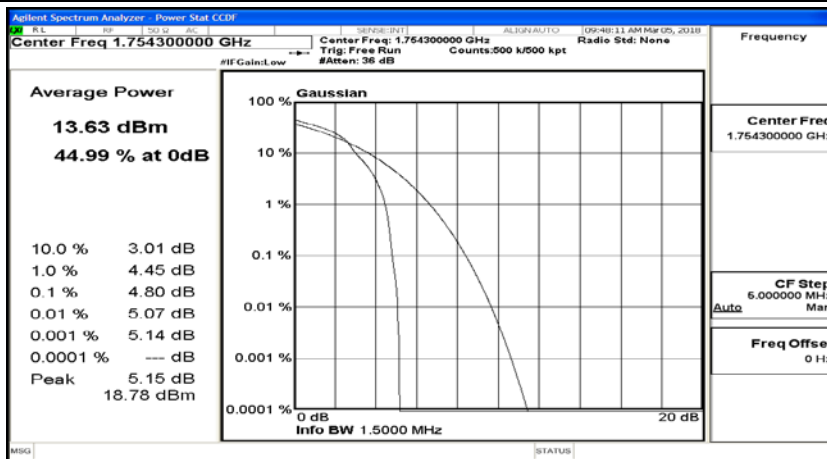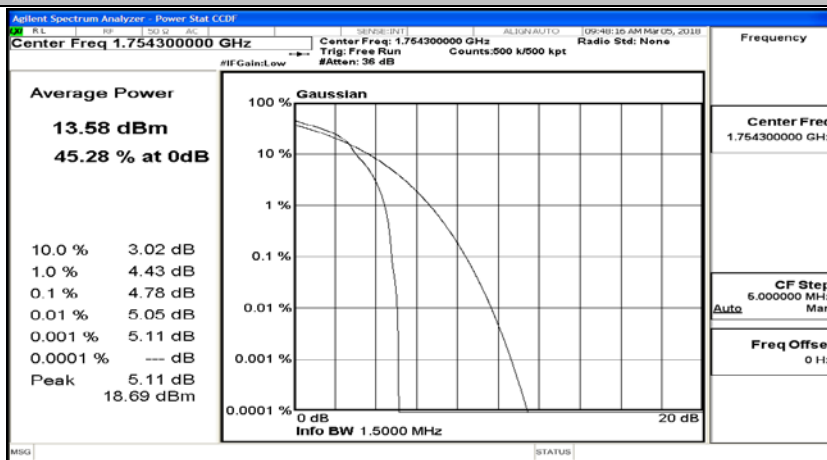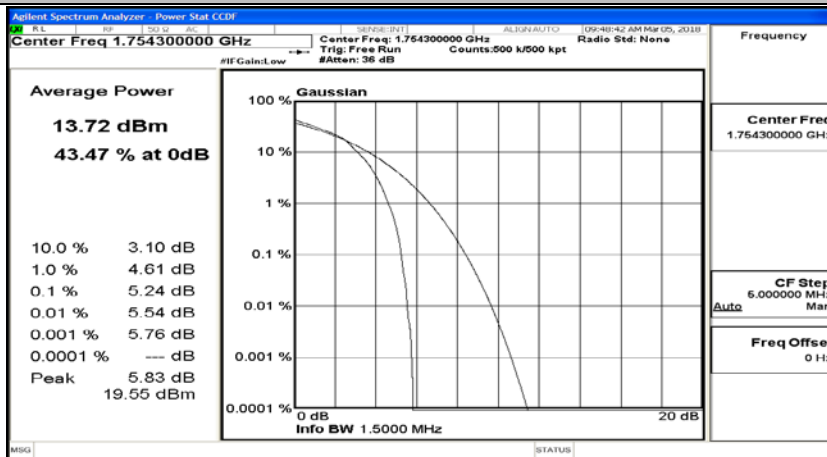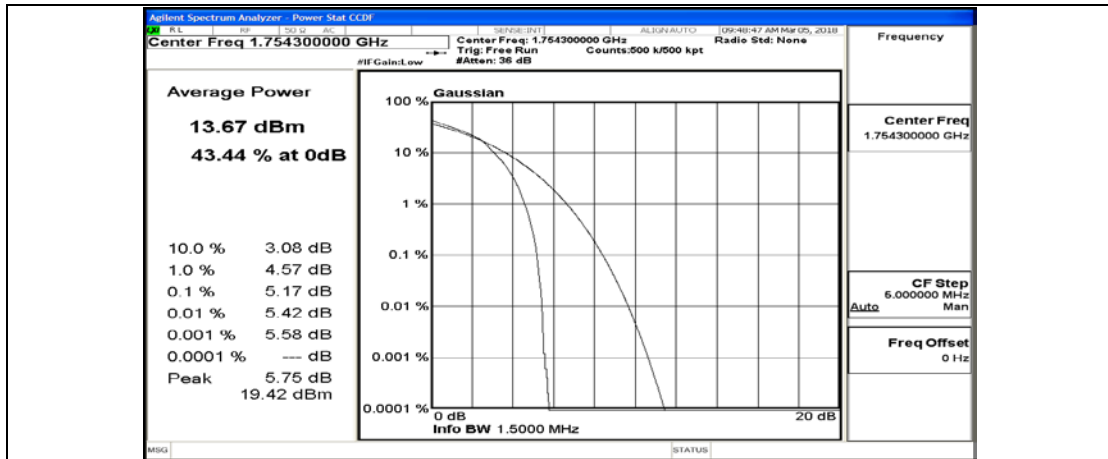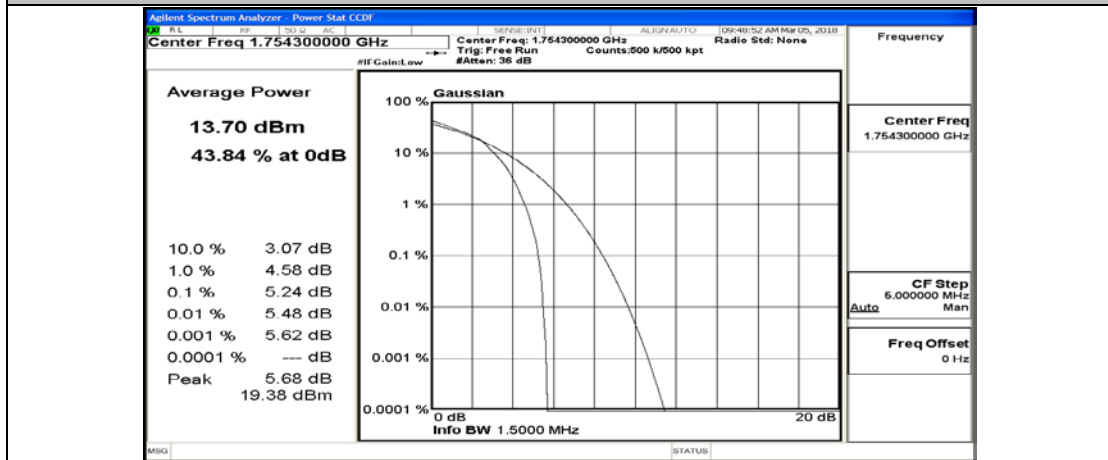


(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_3RB#3

(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_6RB#0



(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0
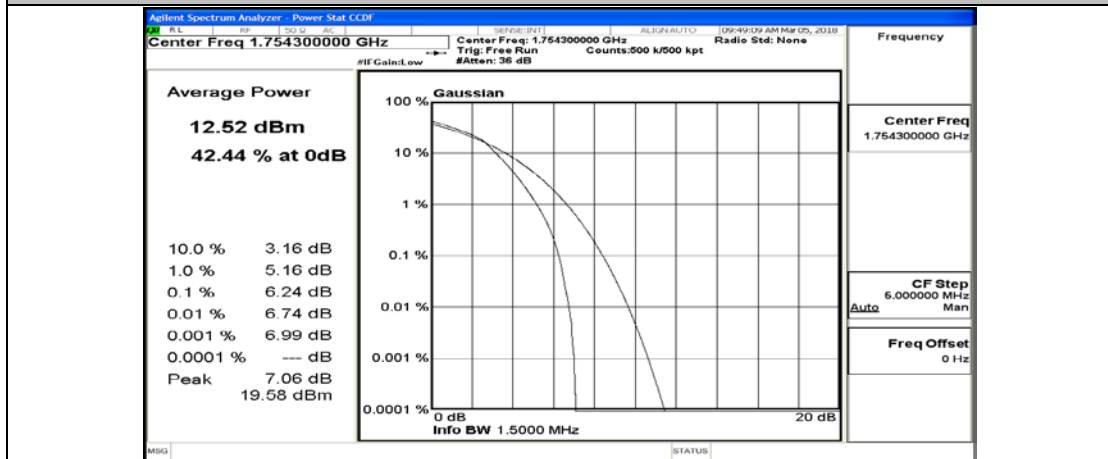


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3

(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#5



(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#0
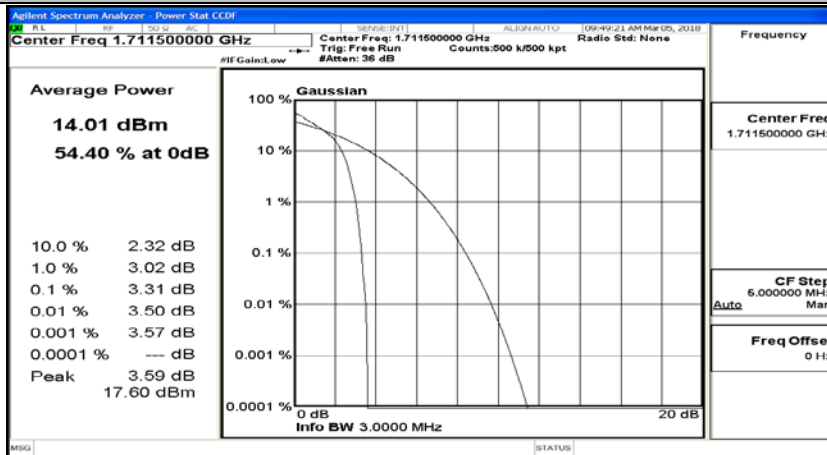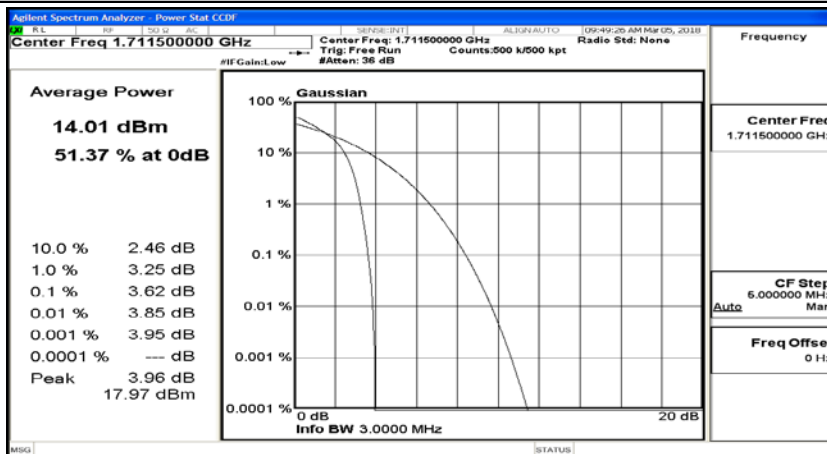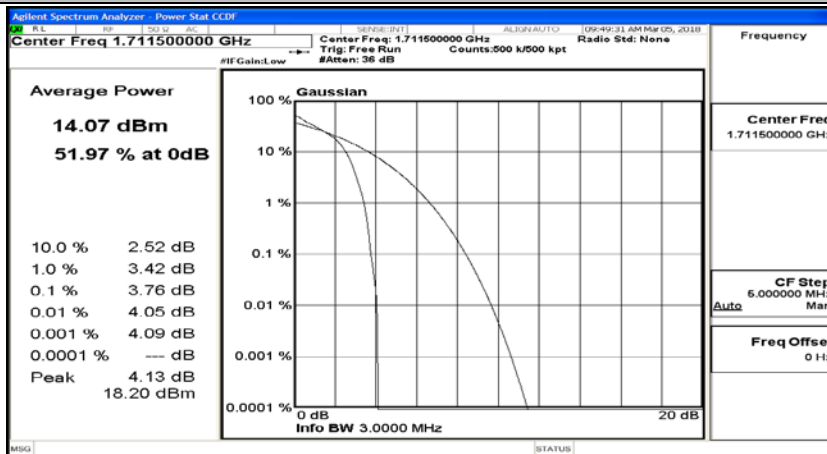


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#2

**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.754300000 GHz

Center Freq: 1.754300000 GHz
Trig: Free Run
#Atten: 36 dB
Counts:500 k/500 kpt
Radio Std: None
09:48:47 AM Mar 05, 2018

Average Power

**13.67 dBm**

**43.44 % at 0dB**

| | |
|---|---|
| 10.0 % | 3.08 dB |
| 1.0 % | 4.57 dB |
| 0.1 % | 5.17 dB |
| 0.01 % | 5.42 dB |
| 0.001 % | 5.58 dB |
| 0.0001 % | --- dB |
| Peak | 5.75 dB |
| | 19.42 dBm |

Info BW 1.5000 MHz

(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#3



**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.754300000 GHz

Center Freq: 1.754300000 GHz
Trig: Free Run
#Atten: 36 dB
Counts:500 k/500 kpt
Radio Std: None
09:48:52 AM Mar 05, 2018

Average Power

**13.70 dBm**

**43.84 % at 0dB**

| | |
|---|---|
| 10.0 % | 3.07 dB |
| 1.0 % | 4.58 dB |
| 0.1 % | 5.24 dB |
| 0.01 % | 5.48 dB |
| 0.001 % | 5.62 dB |
| 0.0001 % | --- dB |
| Peak | 5.68 dB |
| | 19.38 dBm |

Info BW 1.5000 MHz

(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_6RB#0



**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.754300000 GHz

Center Freq: 1.754300000 GHz
Trig: Free Run
#Atten: 36 dB
Counts:500 k/500 kpt
Radio Std: None
09:49:09 AM Mar 05, 2018

Average Power

**12.52 dBm**

**42.44 % at 0dB**

| | |
|---|---|
| 10.0 % | 3.16 dB |
| 1.0 % | 5.16 dB |
| 0.1 % | 6.24 dB |
| 0.01 % | 6.74 dB |
| 0.001 % | 6.99 dB |
| 0.0001 % | --- dB |
| Peak | 7.06 dB |
| | 19.58 dBm |

Info BW 1.5000 MHz

## Channel Bandwidth: 3 MHz

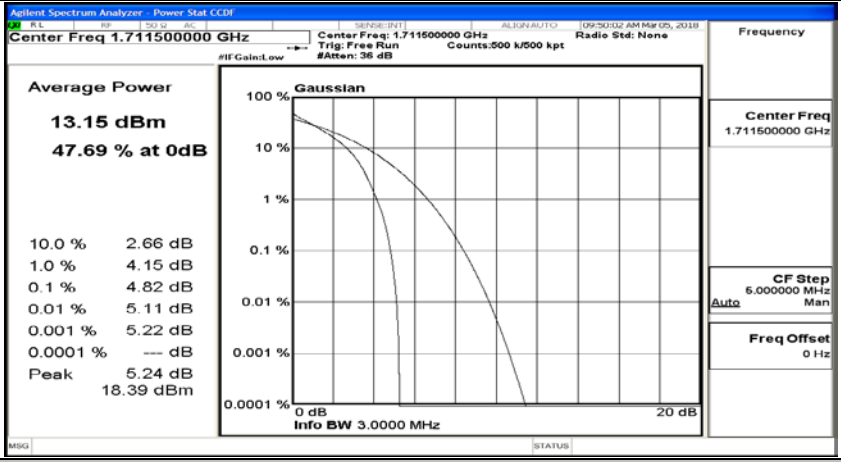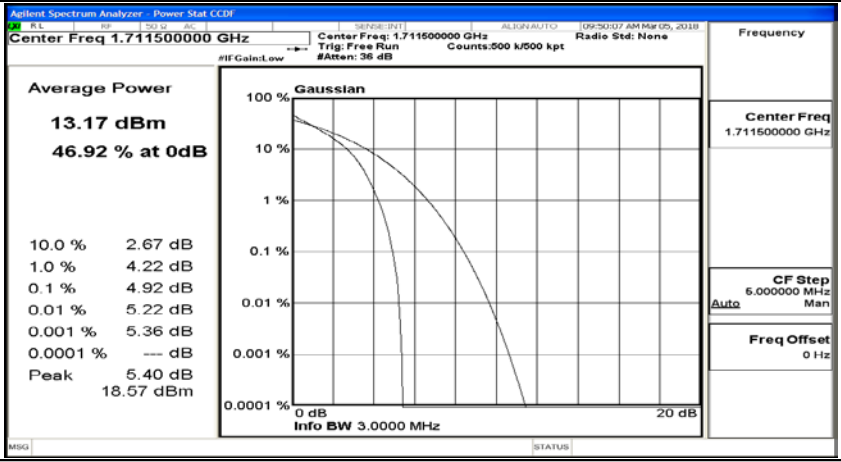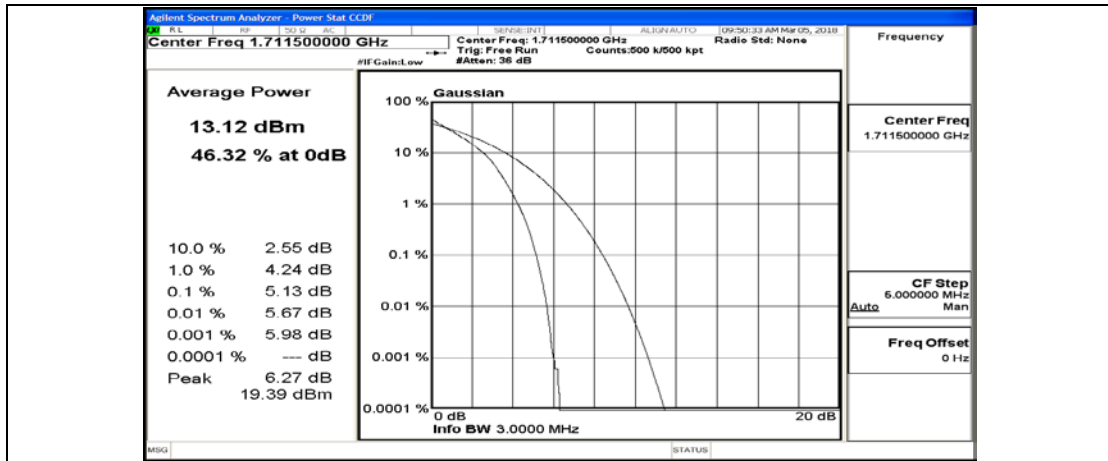| (Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0 |
|---|



| (Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#7 |
|---|



| (Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#14 |
|---|



| (Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#0 |
|---|

**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.711500000 GHz
Center Freq: 1.711500000 GHz
Trig: Free Run     Counts:500 k/500 kpt
#Atten: 36 dB
SENSE:INT     ALIGN AUTO     09:49:57 AM Mar 05, 2018     Radio Std: None
#IF Gain:Low

Average Power

**13.17 dBm**

**48.00 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.63 dB |
| 1.0 % | 4.06 dB |
| 0.1 % | 4.72 dB |
| 0.01 % | 5.00 dB |
| 0.001 % | 5.15 dB |
| 0.0001 % | --- dB |
| Peak | 5.16 dB |
| | 18.33 dBm |

Info BW 3.0000 MHz

(Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#4



**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.711500000 GHz
Center Freq: 1.711500000 GHz
Trig: Free Run     Counts:500 k/500 kpt
#Atten: 36 dB
SENSE:INT     ALIGN AUTO     09:50:02 AM Mar 05, 2018     Radio Std: None
#IF Gain:Low

Average Power

**13.15 dBm**

**47.69 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.66 dB |
| 1.0 % | 4.15 dB |
| 0.1 % | 4.82 dB |
| 0.01 % | 5.11 dB |
| 0.001 % | 5.22 dB |
| 0.0001 % | --- dB |
| Peak | 5.24 dB |
| | 18.39 dBm |

Info BW 3.0000 MHz

(Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#7



**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.711500000 GHz
Center Freq: 1.711500000 GHz
Trig: Free Run     Counts:500 k/500 kpt
#Atten: 36 dB
SENSE:INT     ALIGN AUTO     09:50:07 AM Mar 05, 2018     Radio Std: None
#IF Gain:Low

Average Power

**13.17 dBm**

**46.92 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.67 dB |
| 1.0 % | 4.22 dB |
| 0.1 % | 4.92 dB |
| 0.01 % | 5.22 dB |
| 0.001 % | 5.36 dB |
| 0.0001 % | --- dB |
| Peak | 5.40 dB |
| | 18.57 dBm |

Info BW 3.0000 MHz

(Channel Bandwidth: 3 MHz)_LCH_QPSK_15RB#0

| (Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#0 |
|---|



| (Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#7 |
|---|



| (Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#14 |
|---|

(Channel Bandwidth: 3 MHz)_MCH_QPSK_8RB#0
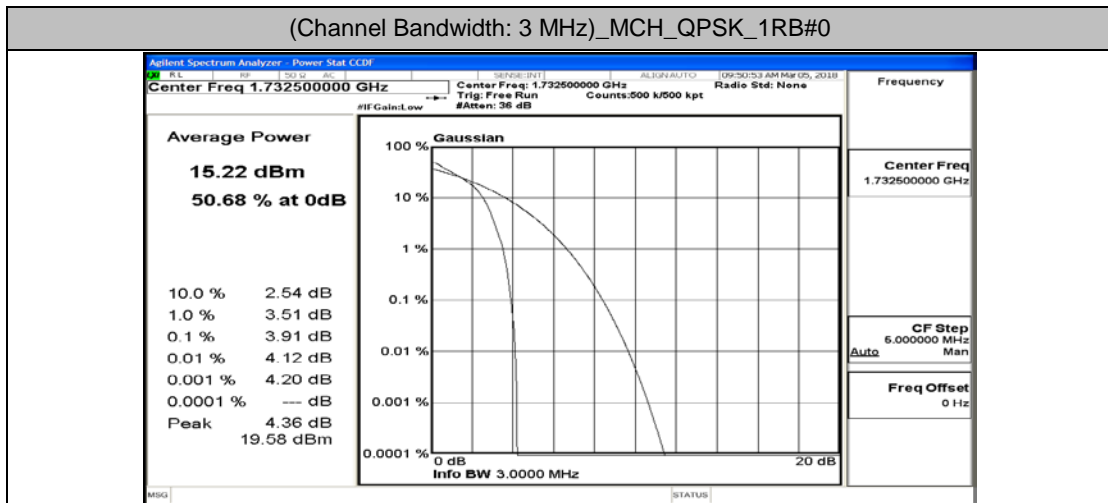


(Channel Bandwidth: 3 MHz)_MCH_QPSK_8RB#4



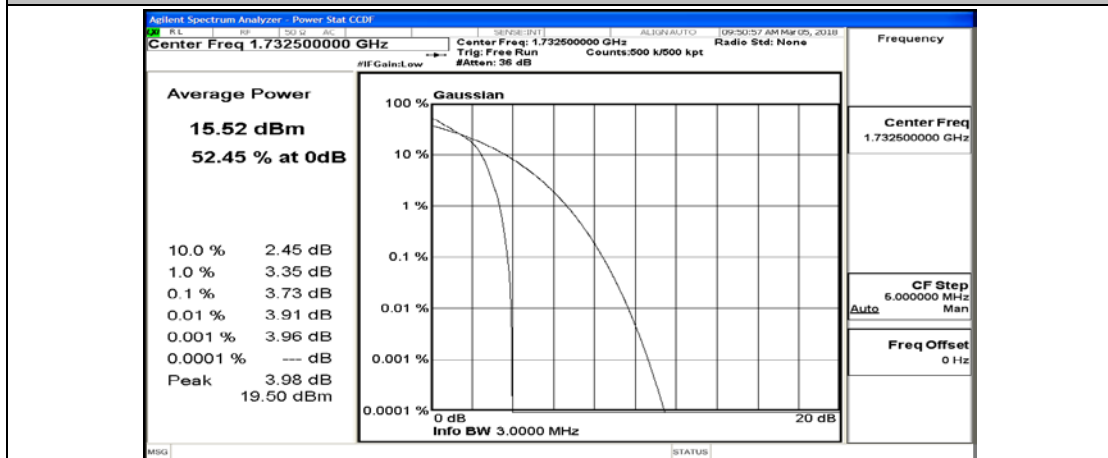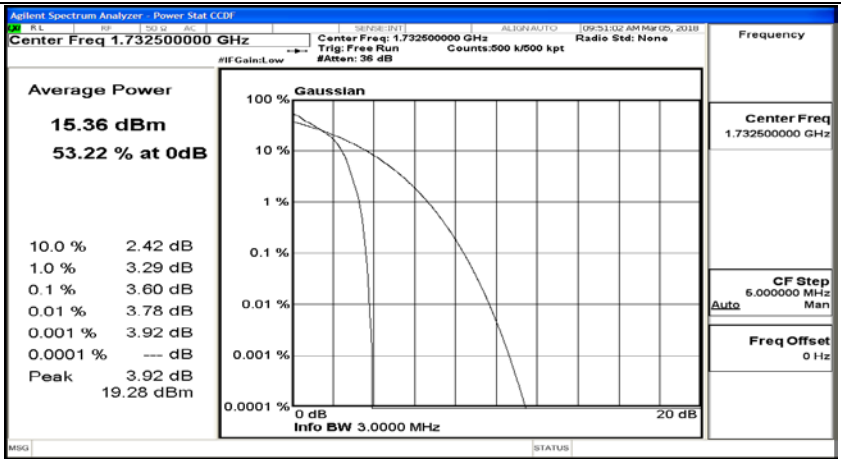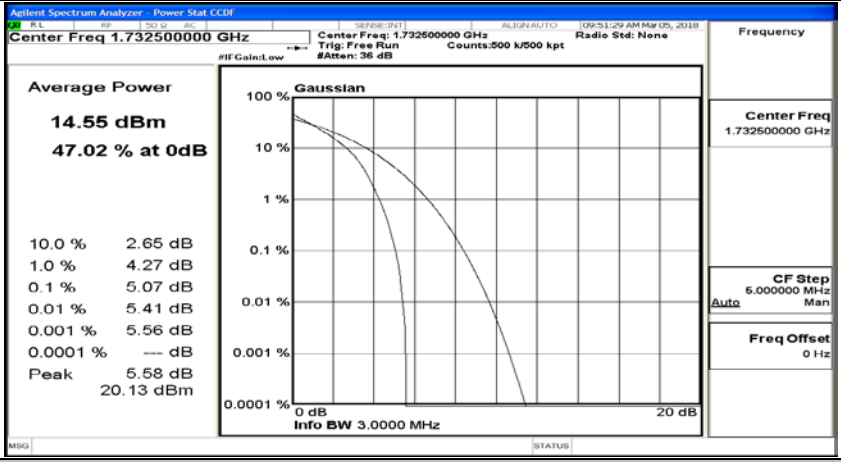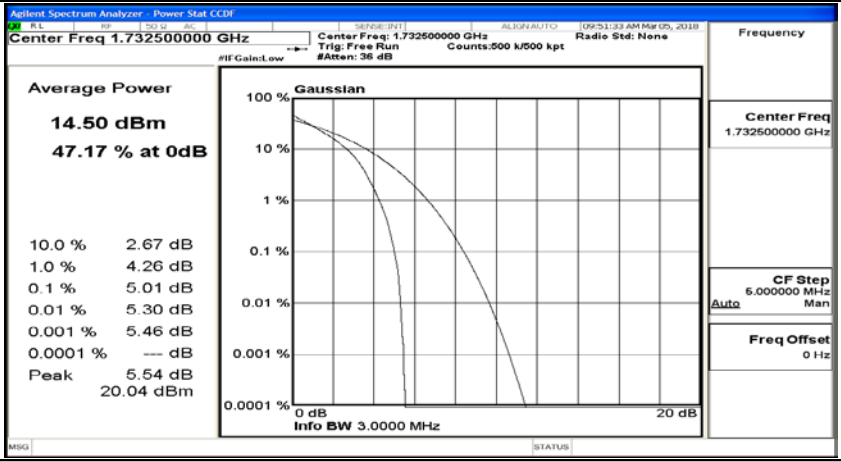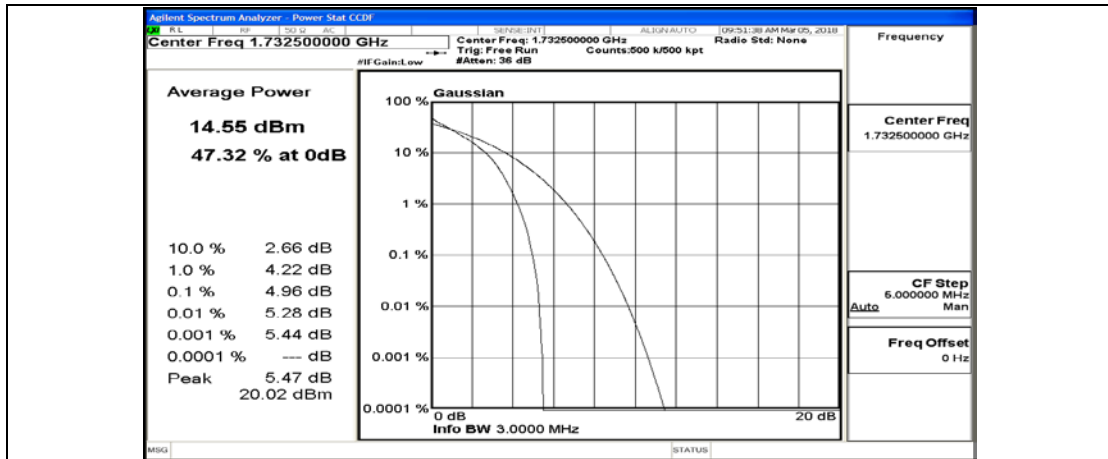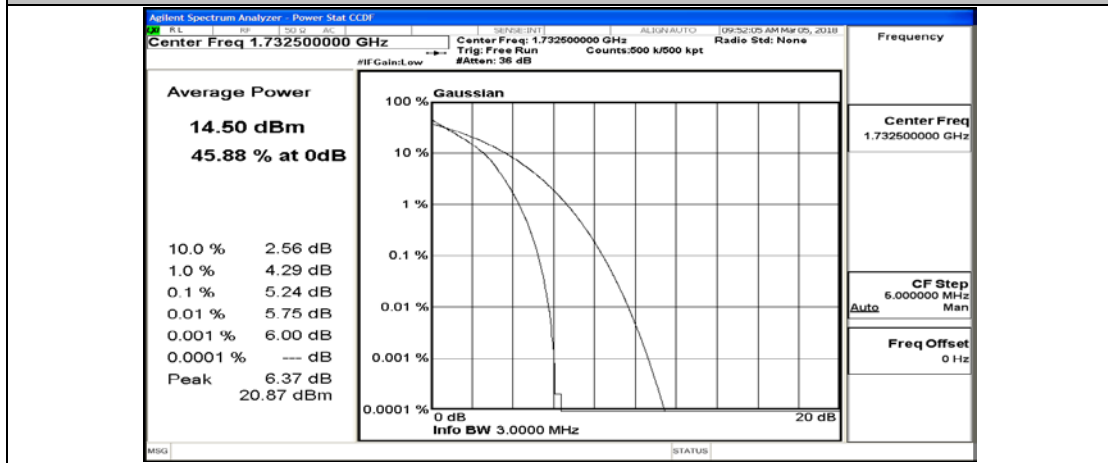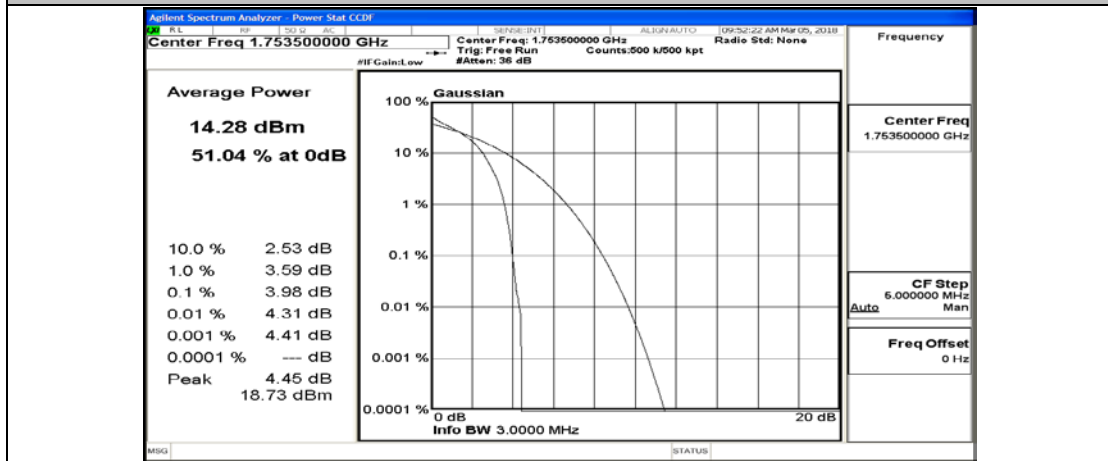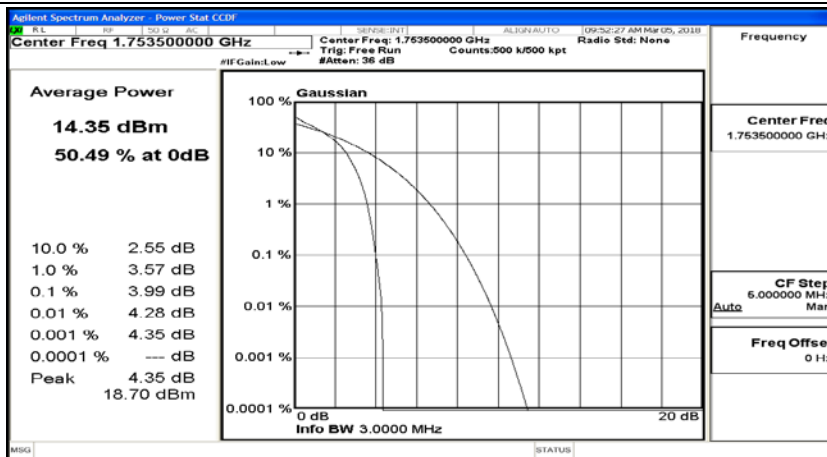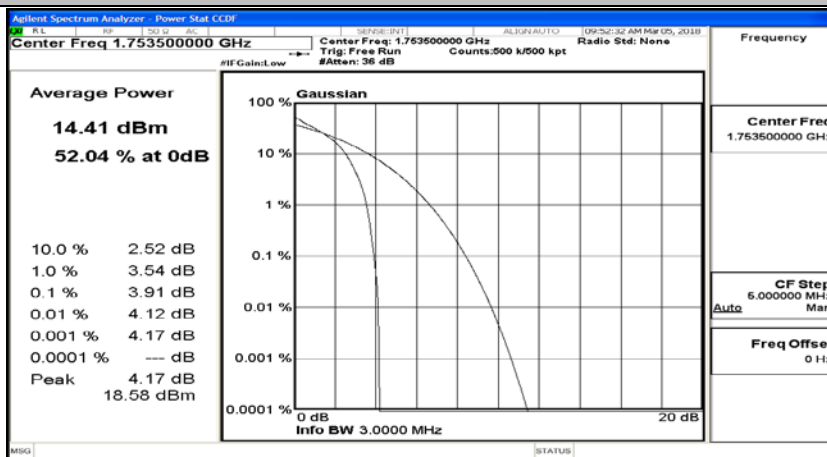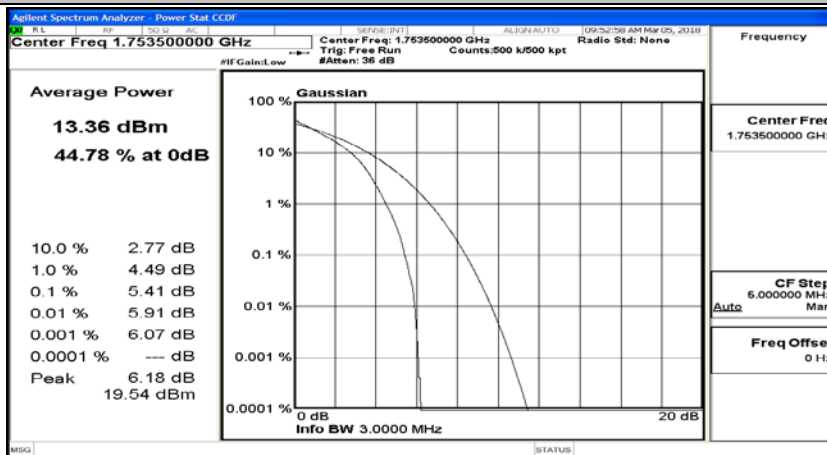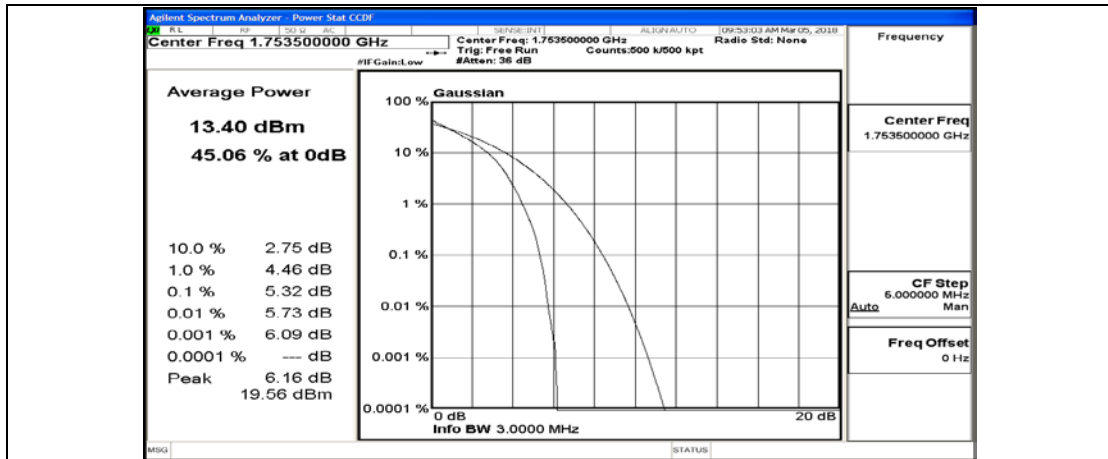(Channel Bandwidth: 3 MHz)_MCH_QPSK_8RB#7

(Channel Bandwidth: 3 MHz)_MCH_QPSK_15RB#0



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#7

**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.753500000 GHz
#IF Gain:Low

SENSE:INT   ALIGN AUTO   09:52:27 AM Mar 05, 2018
Center Freq: 1.753500000 GHz   Radio Std: None
Trig: Free Run   Counts:500 k/500 kpt
#Atten: 36 dB

Frequency

Center Freq
1.753500000 GHz

CF Step
5.000000 MHz
Auto          Man

Freq Offset
0 Hz

Average Power

**14.35 dBm**

**50.49 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.55 dB |
| 1.0 % | 3.57 dB |
| 0.1 % | 3.99 dB |
| 0.01 % | 4.28 dB |
| 0.001 % | 4.35 dB |
| 0.0001 % | --- dB |
| Peak | 4.35 dB |
| | 18.70 dBm |

Gaussian — Info BW 3.0000 MHz — 0 dB ... 20 dB

MSG   STATUS

(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#14

---

**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.753500000 GHz
#IF Gain:Low

SENSE:INT   ALIGN AUTO   09:52:32 AM Mar 05, 2018
Center Freq: 1.753500000 GHz   Radio Std: None
Trig: Free Run   Counts:500 k/500 kpt
#Atten: 36 dB

Frequency

Center Freq
1.753500000 GHz

CF Step
5.000000 MHz
Auto          Man

Freq Offset
0 Hz

Average Power

**14.41 dBm**

**52.04 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.52 dB |
| 1.0 % | 3.54 dB |
| 0.1 % | 3.91 dB |
| 0.01 % | 4.12 dB |
| 0.001 % | 4.17 dB |
| 0.0001 % | --- dB |
| Peak | 4.17 dB |
| | 18.58 dBm |

Gaussian — Info BW 3.0000 MHz — 0 dB ... 20 dB

MSG   STATUS

(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#0

---

**Agilent Spectrum Analyzer - Power Stat CCDF**

Center Freq 1.753500000 GHz
#IF Gain:Low

SENSE:INT   ALIGN AUTO   09:52:58 AM Mar 05, 2018
Center Freq: 1.753500000 GHz   Radio Std: None
Trig: Free Run   Counts:500 k/500 kpt
#Atten: 36 dB

Frequency

Center Freq
1.753500000 GHz

CF Step
5.000000 MHz
Auto          Man

Freq Offset
0 Hz

Average Power

**13.36 dBm**

**44.78 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.77 dB |
| 1.0 % | 4.49 dB |
| 0.1 % | 5.41 dB |
| 0.01 % | 5.91 dB |
| 0.001 % | 6.07 dB |
| 0.0001 % | --- dB |
| Peak | 6.18 dB |
| | 19.54 dBm |

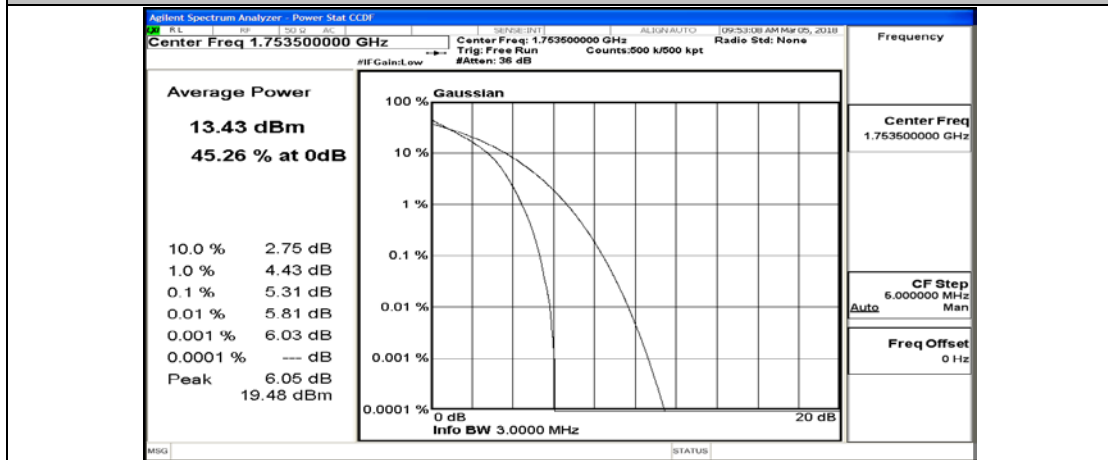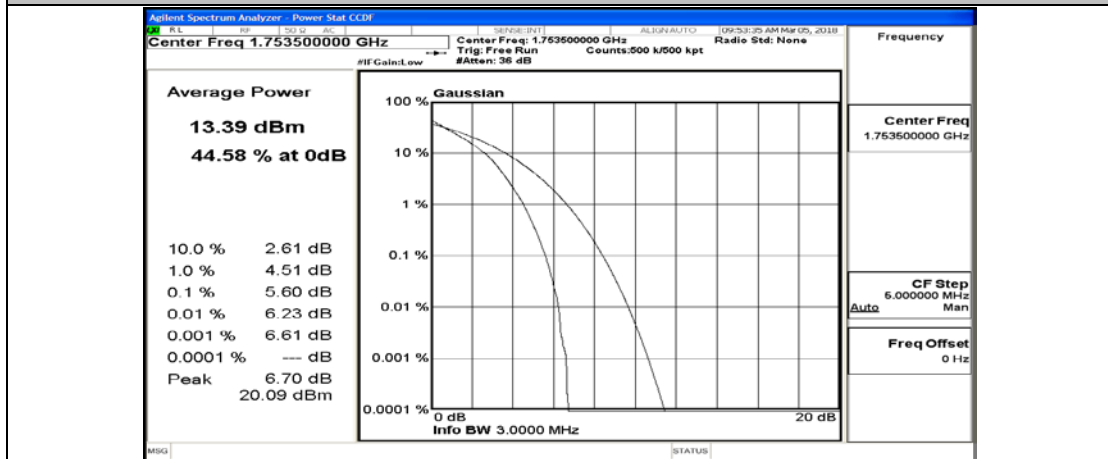Gaussian — Info BW 3.0000 MHz — 0 dB ... 20 dB

MSG   STATUS

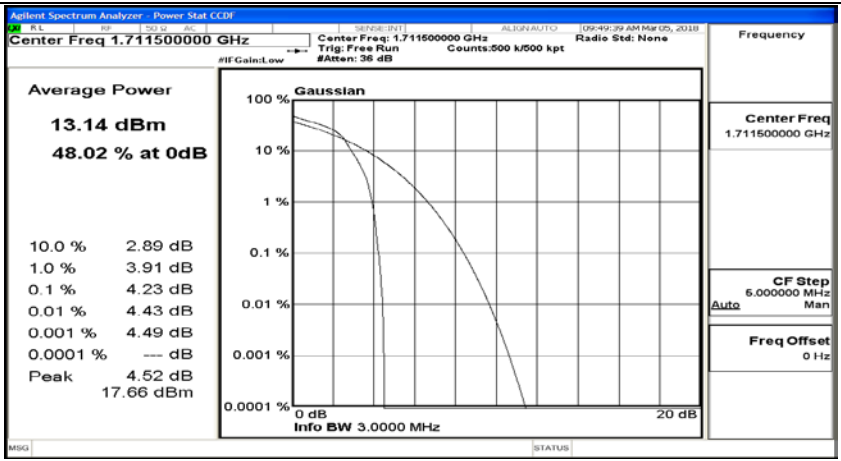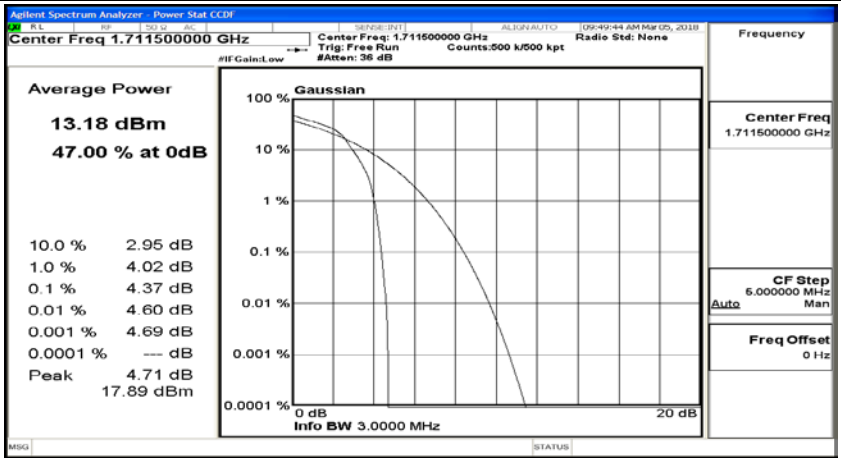(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#4

(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#7
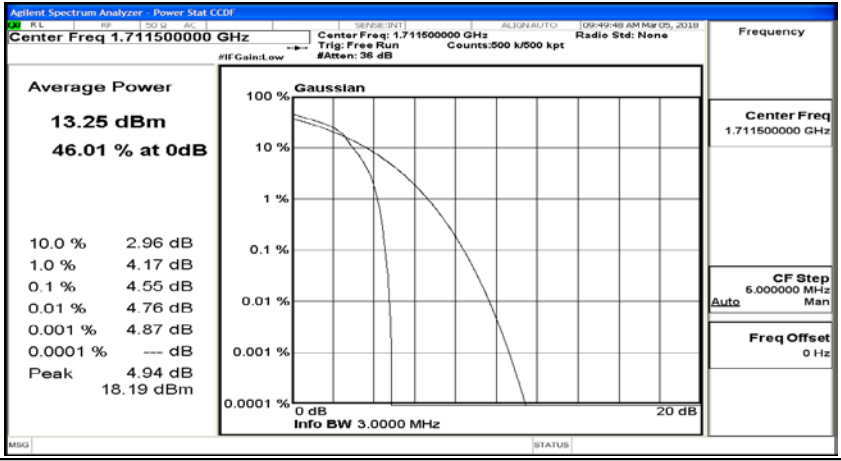


(Channel Bandwidth: 3 MHz)_HCH_QPSK_15RB#0



(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#0

Agilent Spectrum Analyzer - Power Stat CCDF

Center Freq 1.711500000 GHz

Center Freq: 1.711500000 GHz
Trig: Free Run
#Atten: 36 dB
Counts:500 k/500 kpt
Radio Std: None

#IF Gain:Low

**Average Power**

**13.14 dBm**

**48.02 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.89 dB |
| 1.0 % | 3.91 dB |
| 0.1 % | 4.23 dB |
| 0.01 % | 4.43 dB |
| 0.001 % | 4.49 dB |
| 0.0001 % | --- dB |
| Peak | 4.52 dB |
| | 17.66 dBm |

Gaussian

Info BW 3.0000 MHz

**(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#7**



Agilent Spectrum Analyzer - Power Stat CCDF

Center Freq 1.711500000 GHz

Center Freq: 1.711500000 GHz
Trig: Free Run
#Atten: 36 dB
Counts:500 k/500 kpt
Radio Std: None

#IF Gain:Low

**Average Power**

**13.18 dBm**

**47.00 % at 0dB**

| | |
|---|---|
| 10.0 % | 2.95 dB |
| 1.0 % | 4.02 dB |
| 0.1 % | 4.37 dB |
| 0.01 % | 4.60 dB |
| 0.001 % | 4.69 dB |
| 0.0001 % | --- dB |
| Peak | 4.71 dB |
| | 17.89 dBm |

Gaussian

Info BW 3.0000 MHz

**(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#14**



Agilent Spectrum Analyzer - Power Stat CCDF

Center Freq 1.711500000 GHz

Center Freq: 1.711500000 GHz
Trig: Free Run
#Atten: 36 dB
Counts:500 k/500 kpt
Radio Std: None

#IF Gain:Low

**Average Power**

**13.25 dBm**

**46.01 % at 0dB**

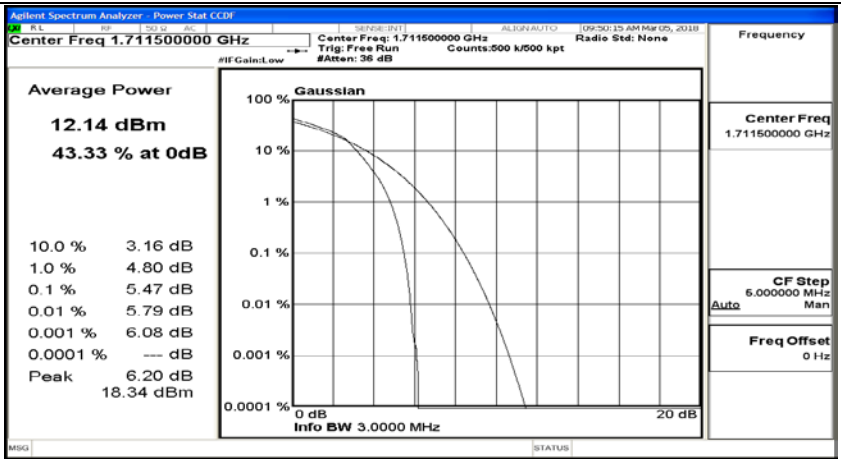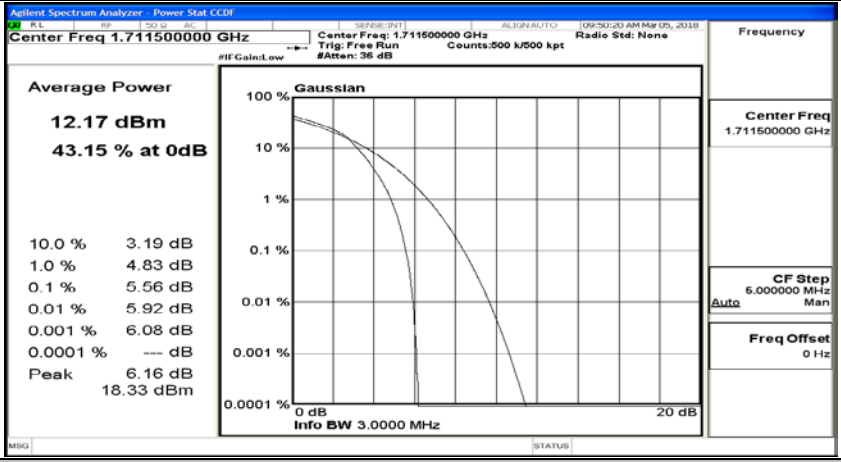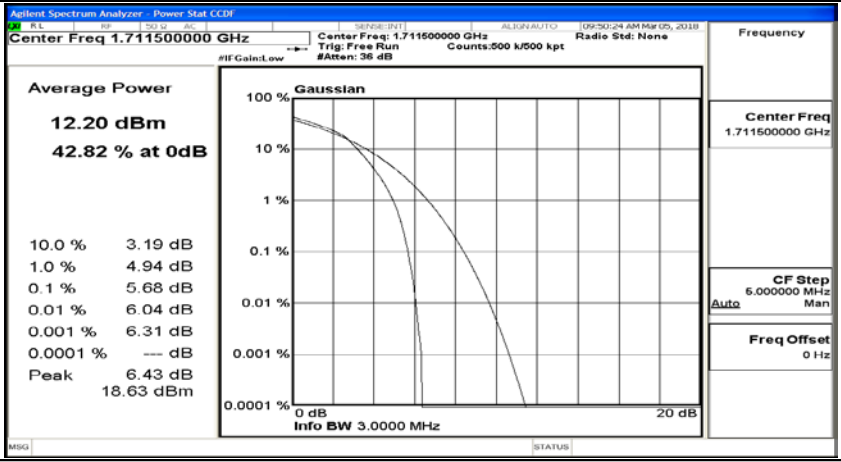| | |
|---|---|
| 10.0 % | 2.96 dB |
| 1.0 % | 4.17 dB |
| 0.1 % | 4.55 dB |
| 0.01 % | 4.76 dB |
| 0.001 % | 4.87 dB |
| 0.0001 % | --- dB |
| Peak | 4.94 dB |
| | 18.19 dBm |

Gaussian

Info BW 3.0000 MHz

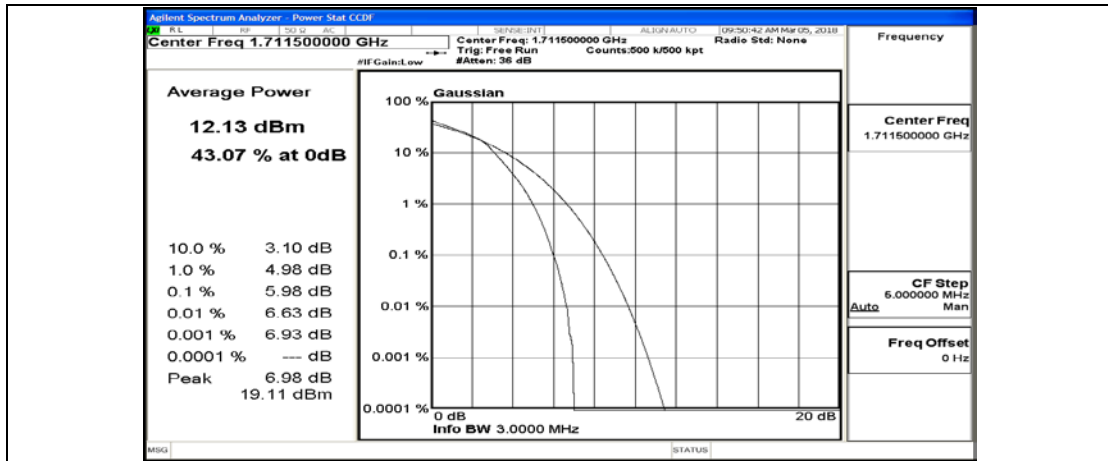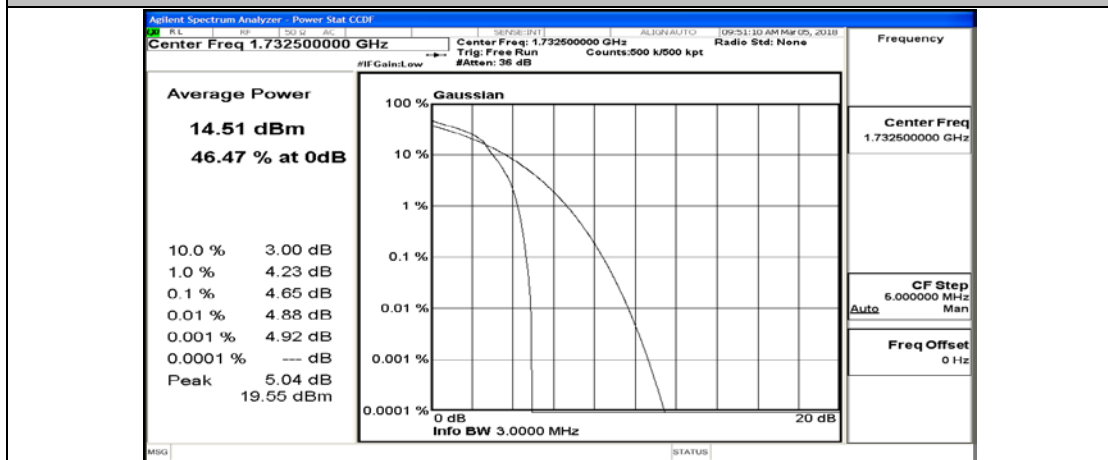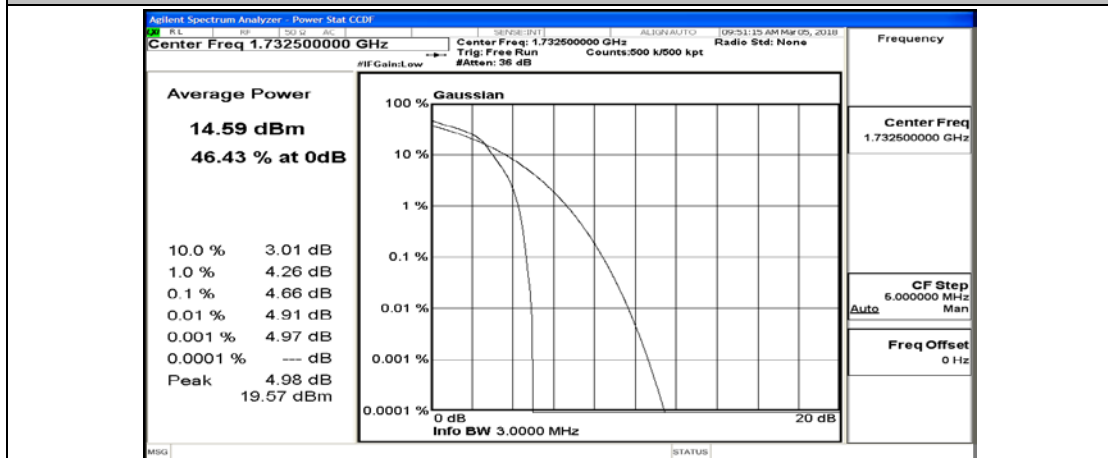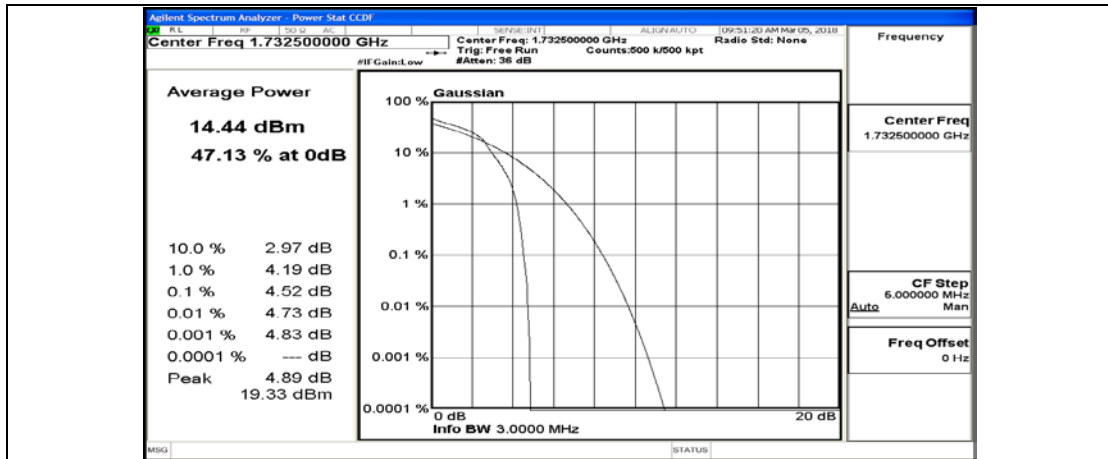**(Channel Bandwidth: 3 MHz)_LCH_16QAM_8RB#0**

(Channel Bandwidth: 3 MHz)_LCH_16QAM_8RB#4



(Channel Bandwidth: 3 MHz)_LCH_16QAM_8RB#7



(Channel Bandwidth: 3 MHz)_LCH_16QAM_15RB#0

| (Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#0 |
|---|



| (Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#7 |
|---|



| (Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#14 |
|---|

(Channel Bandwidth: 3 MHz)_MCH_16QAM_8RB#0



(Channel Bandwidth: 3 MHz)_MCH_16QAM_8RB#4



(Channel Bandwidth: 3 MHz)_MCH_16QAM_8RB#7

(Channel Bandwidth: 3 MHz)_MCH_16QAM_15RB#0



(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0
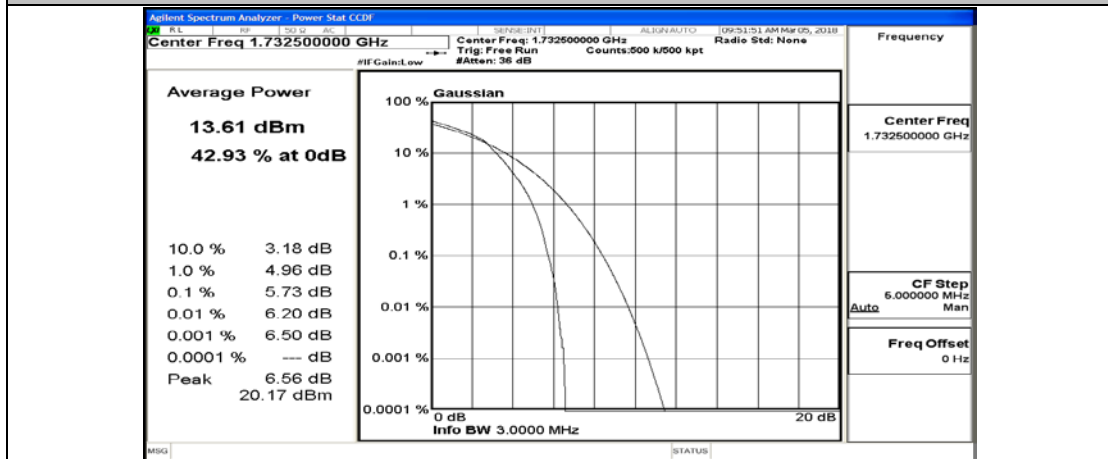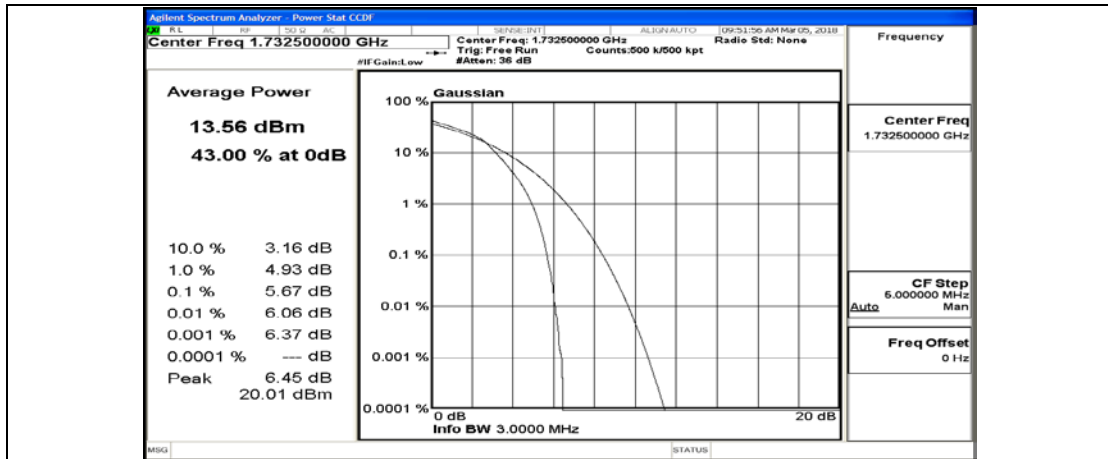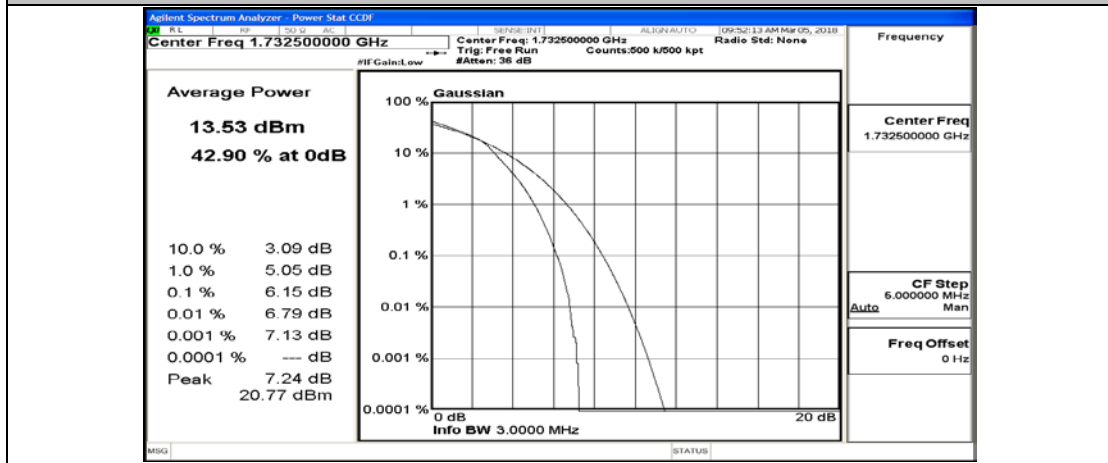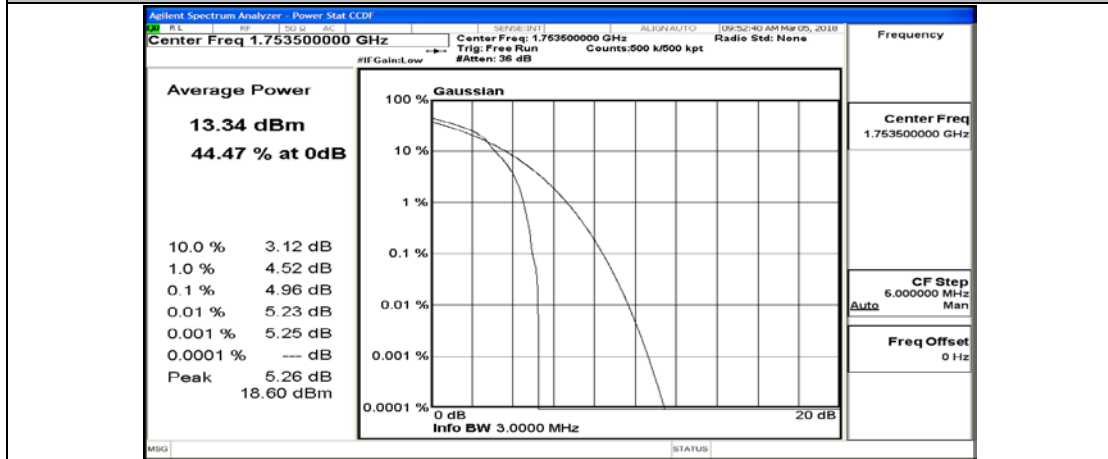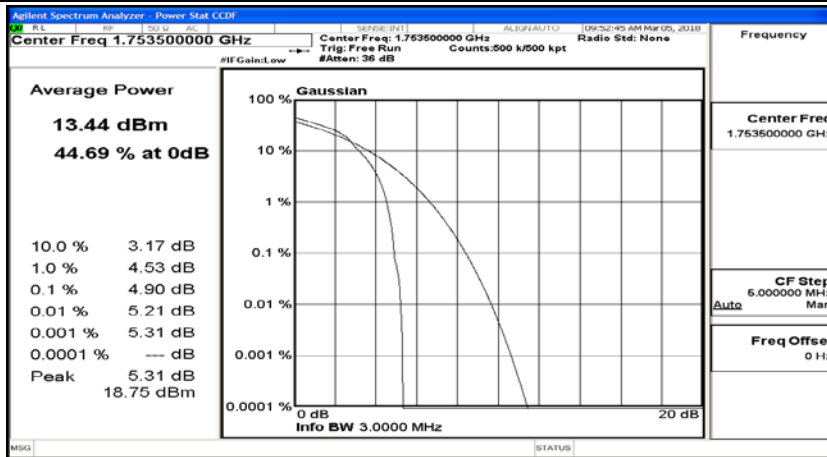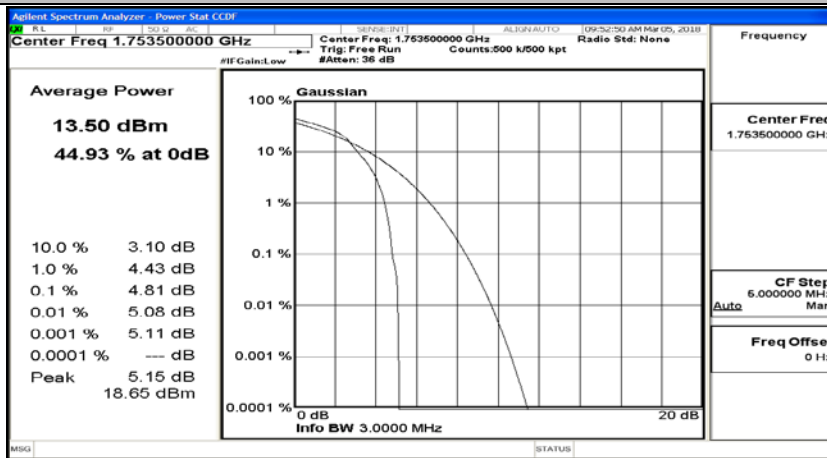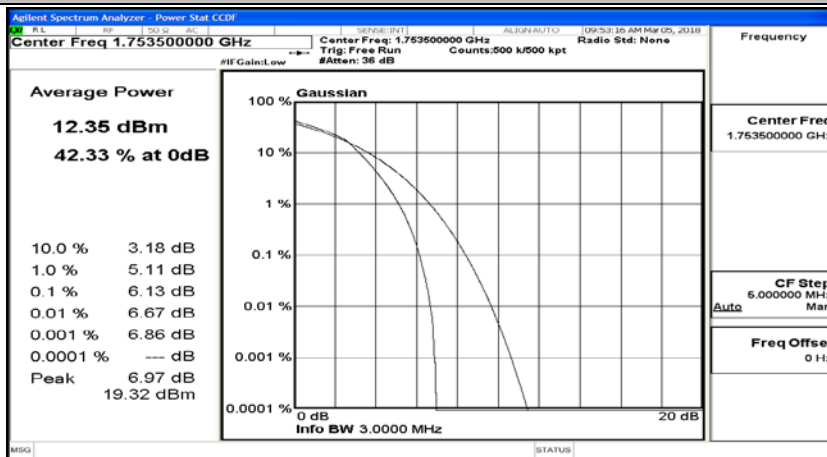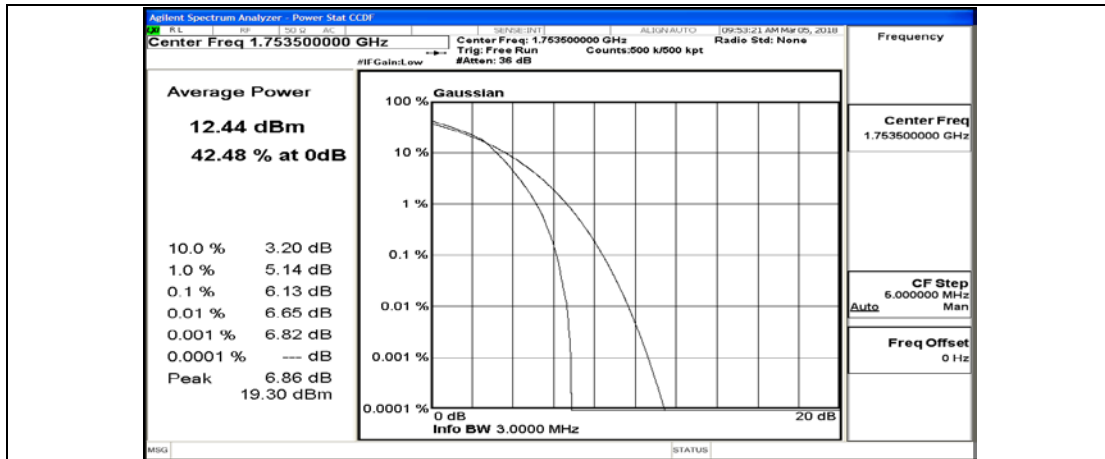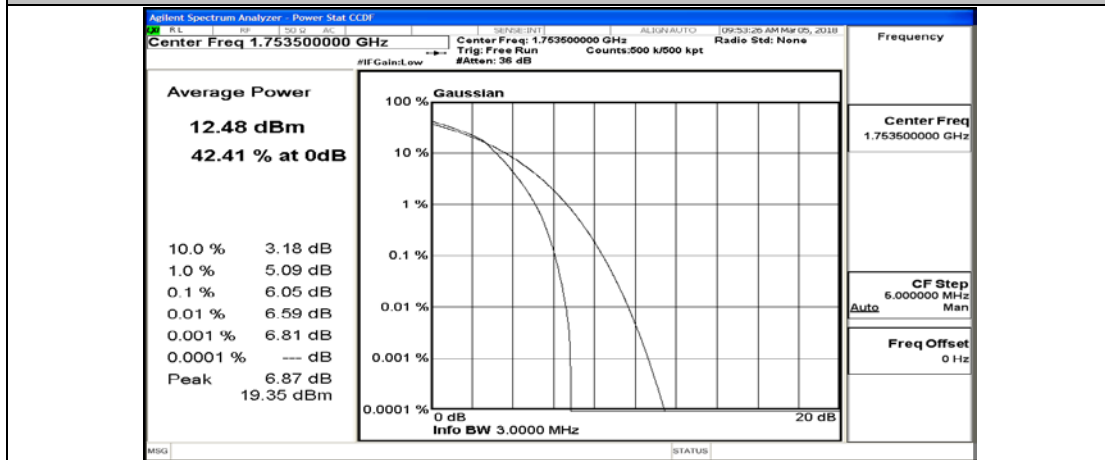


(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7

**(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#14**



**(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#0**



**(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#4**

| **Agilent Spectrum Analyzer - Power Stat CCDF** | | |
| LXI R L RF 50 Ω AC | SENSE:INT ALIGN AUTO 09:53:21 AM Mar 05, 2018 | |
| Center Freq 1.753500000 GHz | Center Freq: 1.753500000 GHz Radio Std: None Trig: Free Run Counts:500 k/500 kpt #Atten: 36 dB | Frequency |
| #IFGain:Low | | |

Average Power

**12.44 dBm**

**42.48 % at 0dB**

| 10.0 % | 3.20 dB |
| 1.0 % | 5.14 dB |
| 0.1 % | 6.13 dB |
| 0.01 % | 6.65 dB |
| 0.001 % | 6.82 dB |
| 0.0001 % | --- dB |
| Peak | 6.86 dB |
| | 19.30 dBm |

Gaussian

Info BW 3.0000 MHz

Center Freq 1.753500000 GHz

CF Step 5.000000 MHz
Auto    Man

Freq Offset 0 Hz

(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#7



Agilent Spectrum Analyzer - Power Stat CCDF
LXI R L RF 50 Ω AC    SENSE:INT    ALIGN AUTO    09:53:26 AM Mar 05, 2018
Center Freq 1.753500000 GHz    Center Freq: 1.753500000 GHz    Radio Std: None
Trig: Free Run    Counts:500 k/500 kpt
#IFGain:Low    #Atten: 36 dB    Frequency

Average Power

**12.48 dBm**

**42.41 % at 0dB**

| 10.0 % | 3.18 dB |
| 1.0 % | 5.09 dB |
| 0.1 % | 6.05 dB |
| 0.01 % | 6.59 dB |
| 0.001 % | 6.81 dB |
| 0.0001 % | --- dB |
| Peak | 6.87 dB |
| | 19.35 dBm |

Gaussian

Info BW 3.0000 MHz

Center Freq 1.753500000 GHz

CF Step 5.000000 MHz
Auto    Man

Freq Offset 0 Hz

(Channel Bandwidth: 3 MHz)_HCH_16QAM_15RB#0



Agilent Spectrum Analyzer - Power Stat CCDF
LXI R L RF 50 Ω AC    SENSE:INT    ALIGN AUTO    09:53:43 AM Mar 05, 2018
Center Freq 1.753500000 GHz    Center Freq: 1.753500000 GHz    Radio Std: None
Trig: Free Run    Counts:500 k/500 kpt
#IFGain:Low    #Atten: 36 dB    Frequency

Average Power

**12.53 dBm**

**41.98 % at 0dB**

| 10.0 % | 3.11 dB |
| 1.0 % | 5.20 dB |
| 0.1 % | 6.37 dB |
| 0.01 % | 7.08 dB |
| 0.001 % | 7.52 dB |
| 0.0001 % | --- dB |
| Peak | 7.82 dB |
| | 20.35 dBm |

Gaussian

Info BW 3.0000 MHz

Center Freq 1.753500000 GHz

CF Step 5.000000 MHz
Auto    Man

Freq Offset 0 Hz