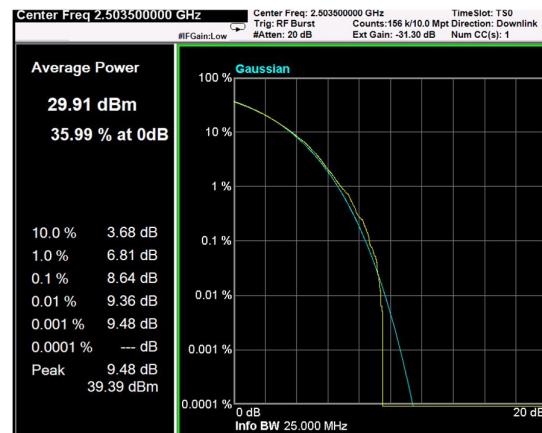
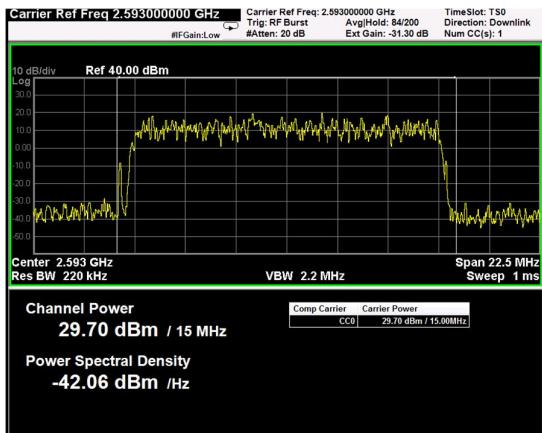


Channel: BOTTOM, Modulation: QPSK,
BW=15MHz, Channel Power



Channel: BOTTOM, Modulation: QPSK,
BW=15MHz, CCDF



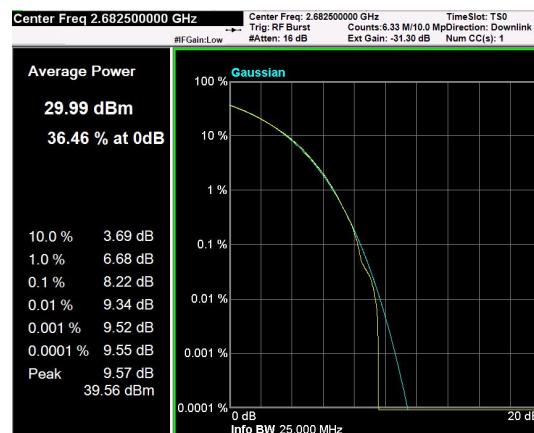
Channel: MIDDLE, Modulation: QPSK,
BW=15MHz, Channel Power



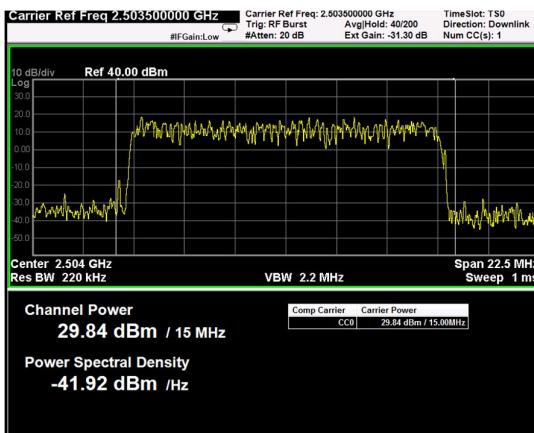
Channel: MIDDLE, Modulation: QPSK,
BW=15MHz, CCDF



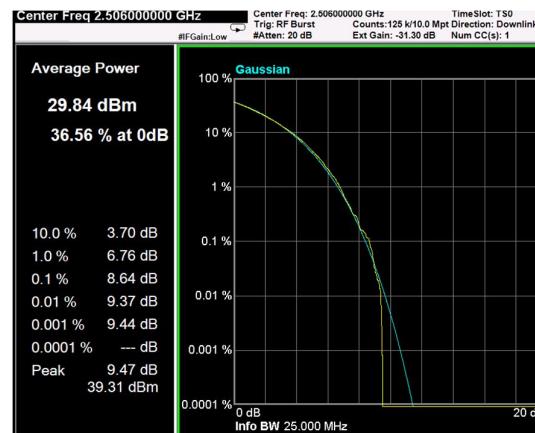
Channel: TOP, Modulation: QPSK,
BW=15MHz, Channel Power



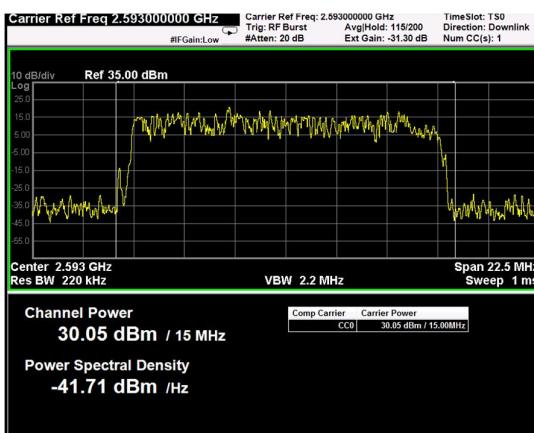
Channel: TOP, Modulation: QPSK,
BW=15MHz, CCDF



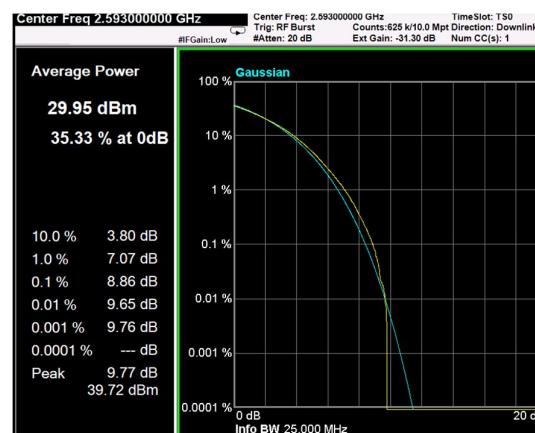
Channel: BOTTOM, Modulation: 16QAM, BW=15MHz, Channel Power



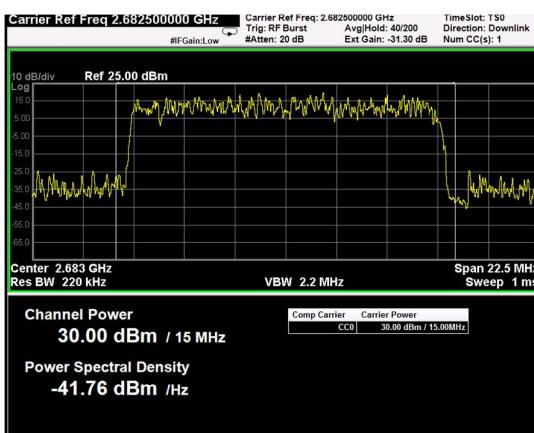
Channel: BOTTOM, Modulation: 16QAM, BW=15MHz, CCDF



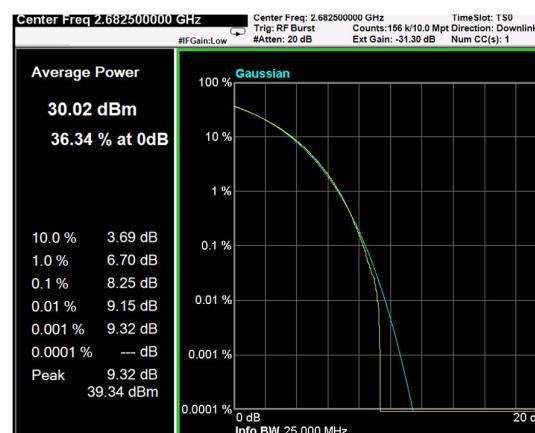
Channel: MIDDLE, Modulation: 16QAM, BW=15MHz, Channel Power



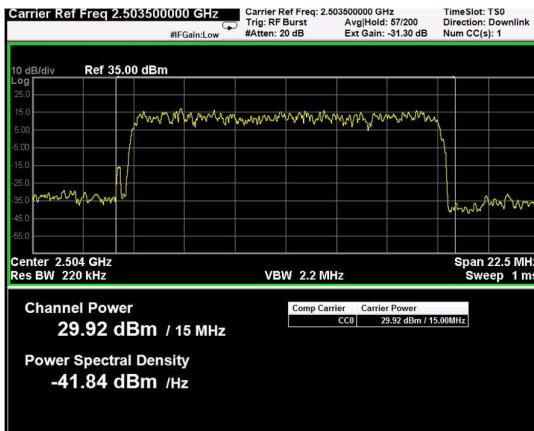
Channel: MIDDLE, Modulation: 16QAM, BW=15MHz, CCDF



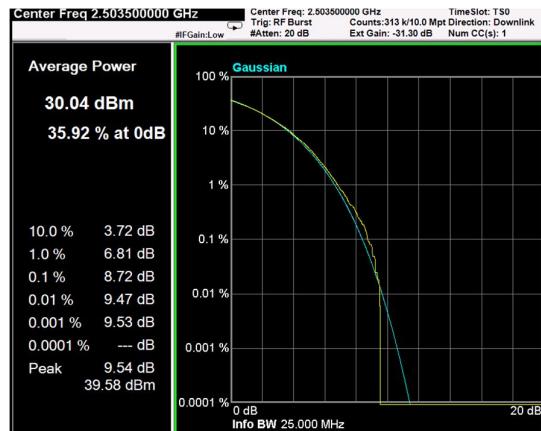
Channel: TOP, Modulation: 16QAM, BW=15MHz, Channel Power



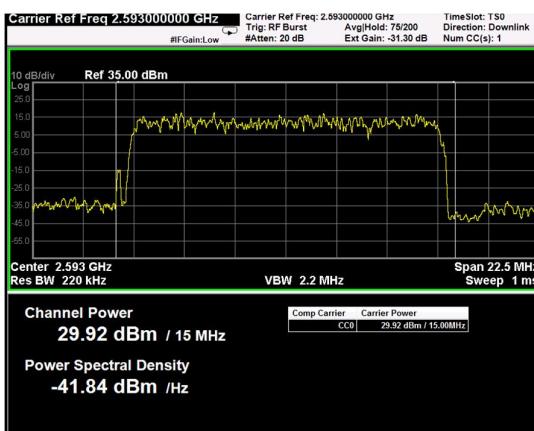
Channel: TOP, Modulation: 16QAM, BW=15MHz, CCDF



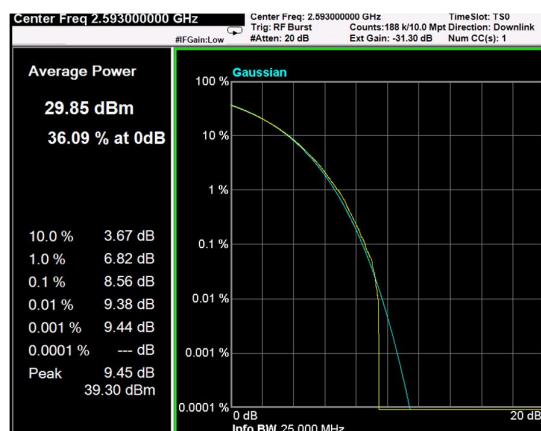
Channel: BOTTOM, Modulation: 64QAM,
BW=15MHz, Channel Power



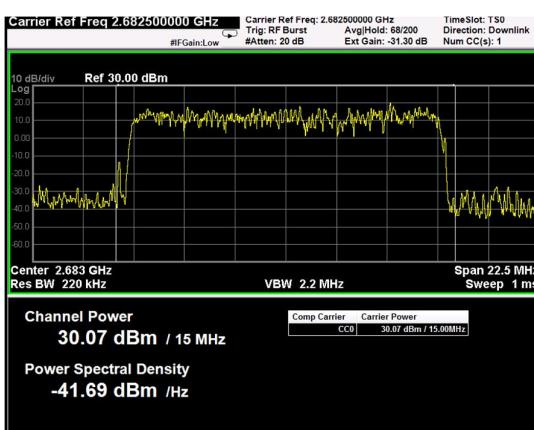
Channel: BOTTOM, Modulation: 64QAM,
BW=15MHz, CCDF



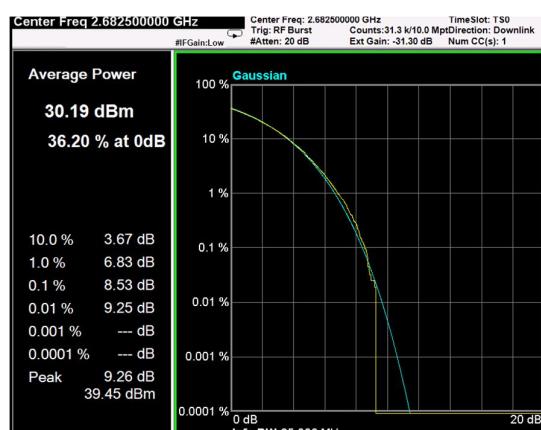
Channel: MIDDLE, Modulation: 64QAM,
BW=15MHz, Channel Power



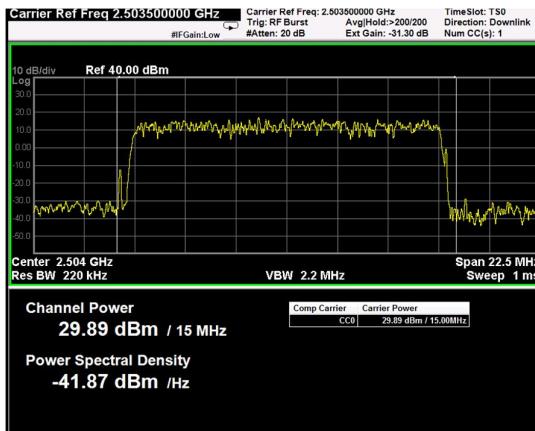
Channel: MIDDLE, Modulation: 64QAM,
BW=15MHz, CCDF



Channel: TOP, Modulation: 64QAM,
BW=15MHz, Channel Power



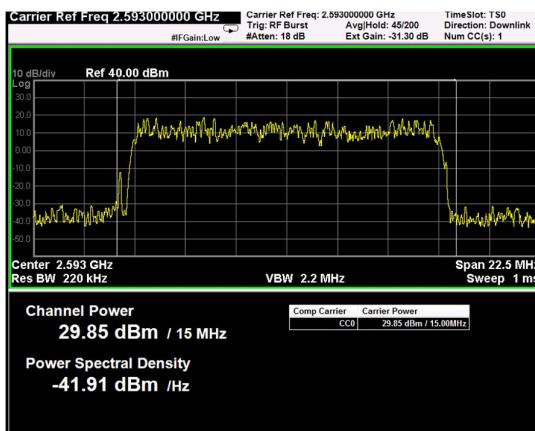
Channel: TOP, Modulation: 64QAM,
BW=15MHz, CCDF



Channel: BOTTOM, Modulation: 256QAM,
BW=15MHz, Channel Power



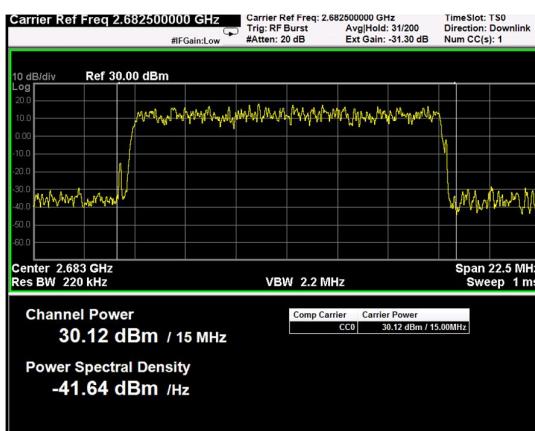
Channel: BOTTOM, Modulation: 256QAM,
BW=15MHz, CCDF



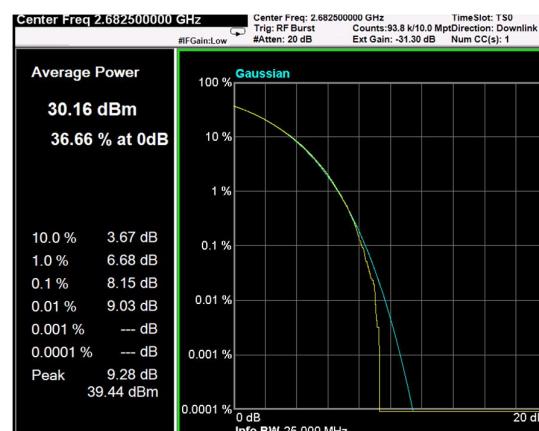
Channel: MIDDLE, Modulation: 256QAM,
BW=15MHz, Channel Power



Channel: MIDDLE, Modulation: 256QAM,
BW=15MHz, CCDF



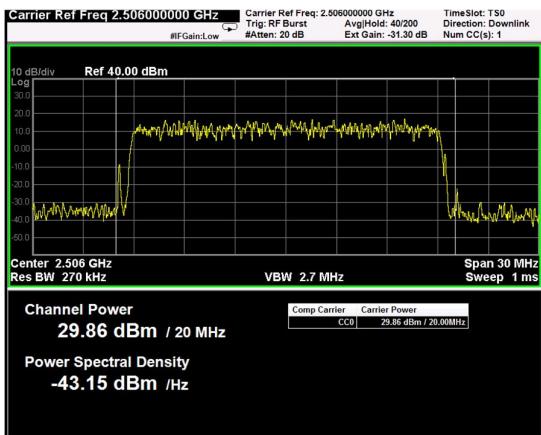
Channel: TOP, Modulation: 256QAM,
BW=15MHz, Channel Power



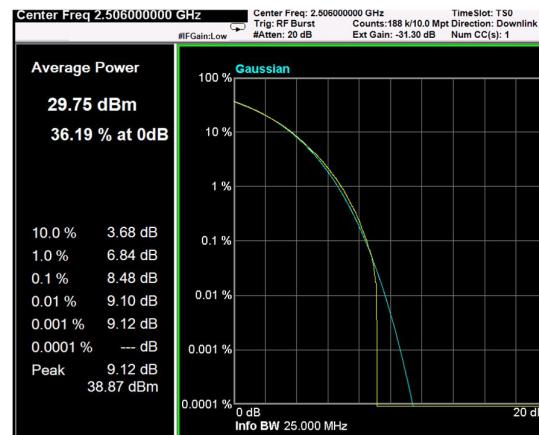
Channel: TOP, Modulation: 256QAM,
BW=15MHz, CCDF



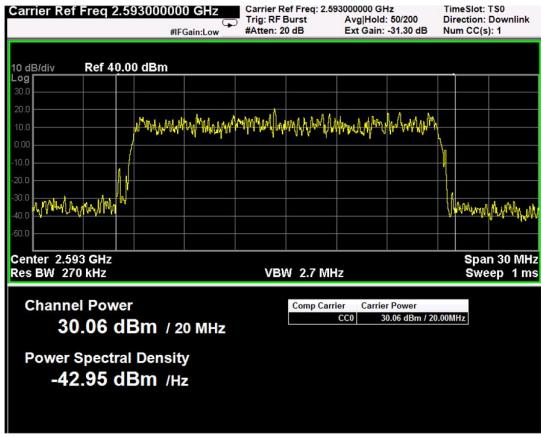
Test data					
Direction	Modulation	Frequency (MHz)	RF output Power (dBm)	RF output channel Power (W)	PAR (dB)
Down-link	LTE 20MHz (QPSK)	2506	29.9	0.968	9.1
Down-link	LTE 20MHz (QPSK)	2593	30.1	1.014	9.1
Down-link	LTE 20MHz (QPSK)	2680	30.1	1.016	9.1
Down-link	LTE 20MHz (16QAM)	2506	29.8	0.955	9.1
Down-link	LTE 20MHz (16QAM)	2593	30.1	1.019	9.0
Down-link	LTE 20MHz (16QAM)	2680	30.1	1.026	9.1
Down-link	LTE 20MHz (64QAM)	2506	29.8	0.962	9.1
Down-link	LTE 20MHz (64QAM)	2593	30.1	1.016	9.1
Down-link	LTE 20MHz (64QAM)	2680	30.2	1.035	9.0
Down-link	LTE 20MHz (256QAM)	2506	30.0	0.991	9.1
Down-link	LTE 20MHz (256QAM)	2593	30.1	1.023	9.1
Down-link	LTE 20MHz (256QAM)	2680	30.1	1.026	9.0



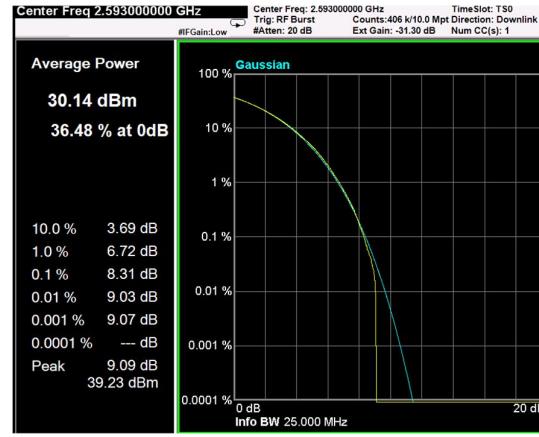
Channel: BOTTOM, Modulation: QPSK,
BW=20MHz, Channel Power



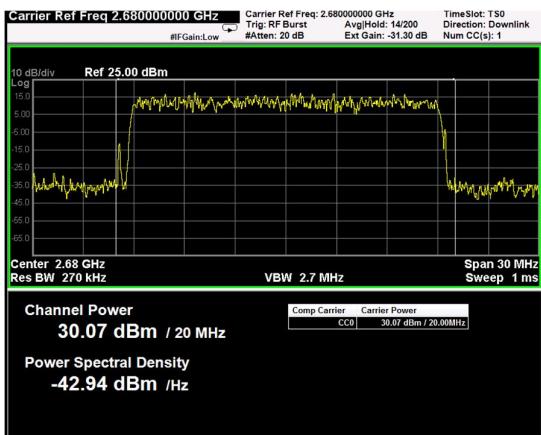
Channel: BOTTOM, Modulation: QPSK,
BW=20MHz, CCDF



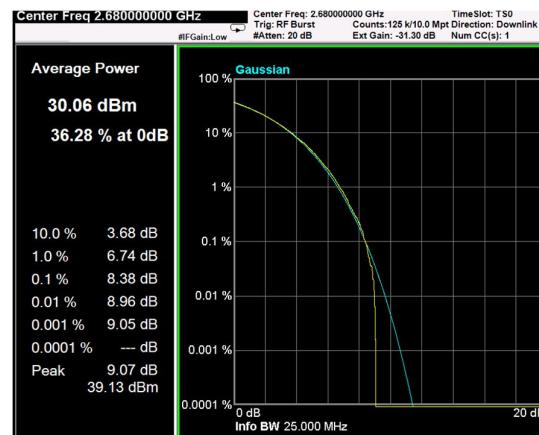
Channel: MIDDLE, Modulation: QPSK,
BW=20MHz, Channel Power



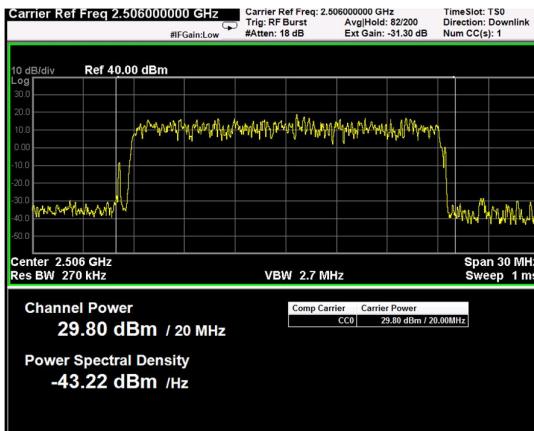
Channel: MIDDLE, Modulation: QPSK,
BW=20MHz, CCDF



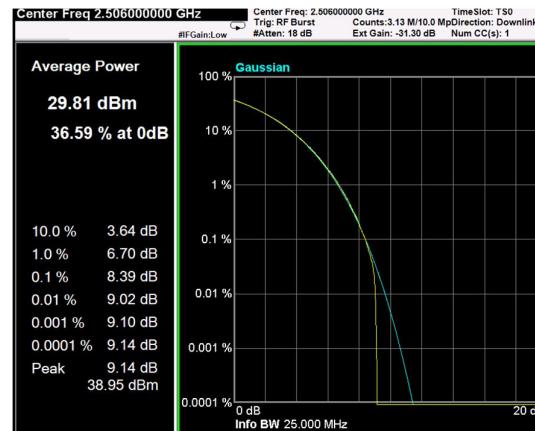
Channel: TOP, Modulation: QPSK,
BW=20MHz, Channel Power



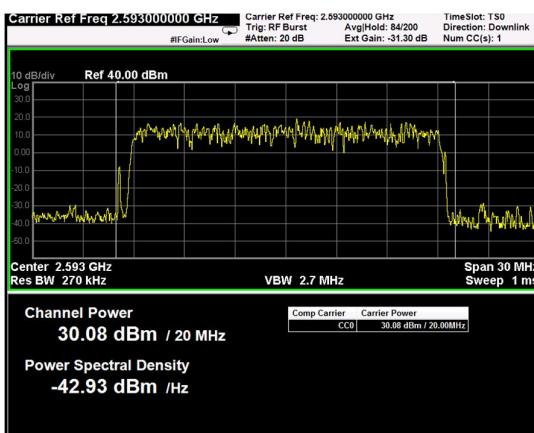
Channel: TOP, Modulation: QPSK,
BW=20MHz, CCDF



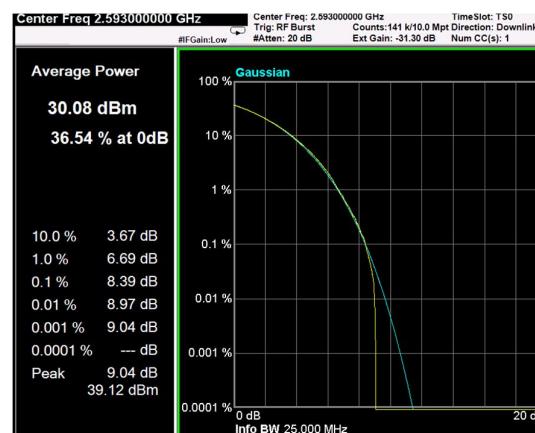
Channel: BOTTOM, Modulation: 16QAM, BW=20MHz, Channel Power



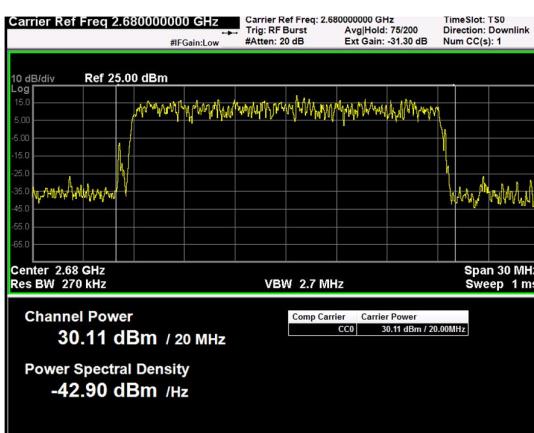
Channel: BOTTOM, Modulation: 16QAM, BW=20MHz, CCDF



Channel: MIDDLE, Modulation: 16QAM, BW=20MHz, Channel Power



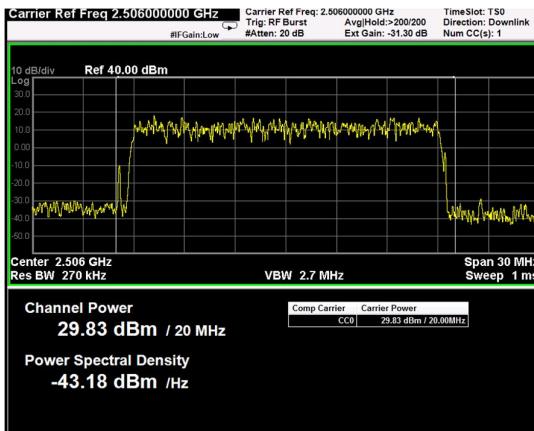
Channel: MIDDLE, Modulation: 16QAM, BW=20MHz, CCDF



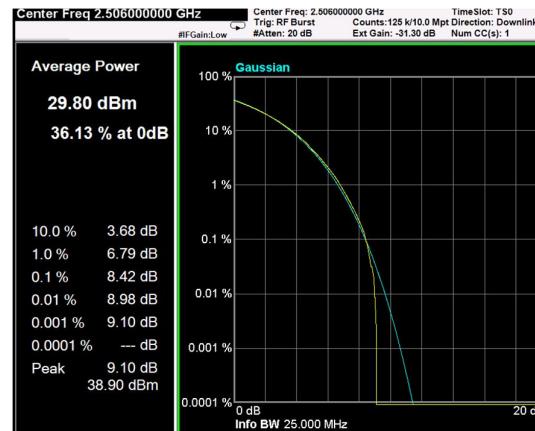
Channel: TOP, Modulation: 16QAM, BW=20MHz, Channel Power



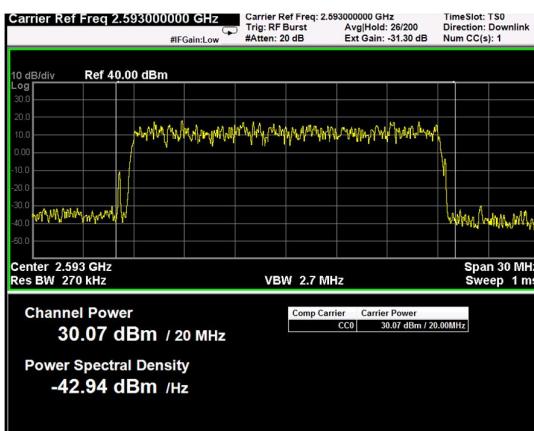
Channel: TOP, Modulation: 16QAM, BW=20MHz, CCDF



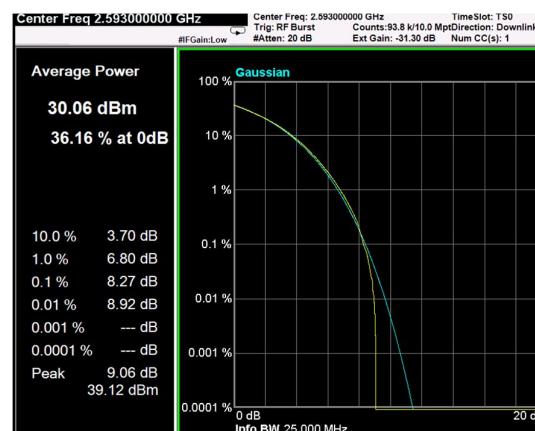
Channel: BOTTOM, Modulation: 64QAM, BW=20MHz, Channel Power



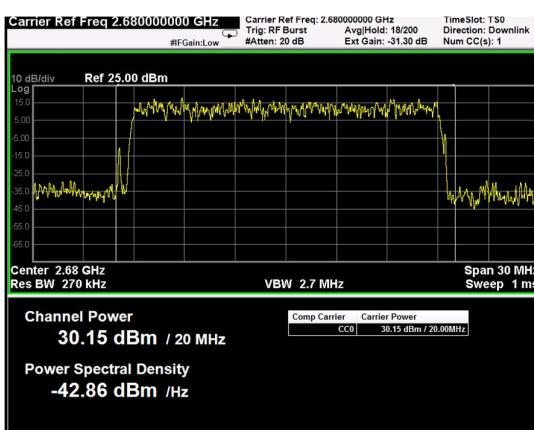
Channel: BOTTOM, Modulation: 64QAM, BW=20MHz, CCDF



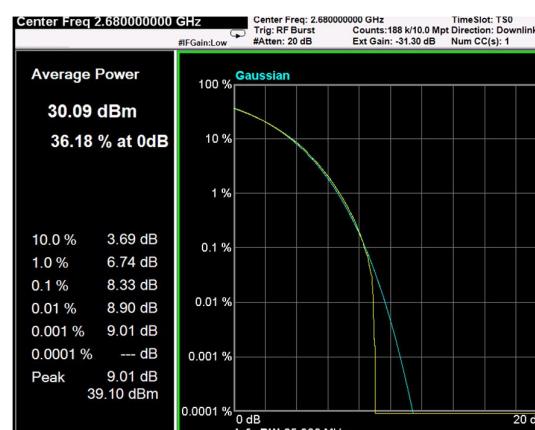
Channel: MIDDLE, Modulation: 64QAM, BW=20MHz, Channel Power



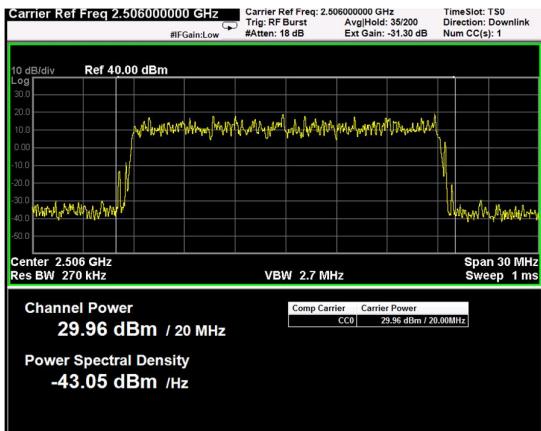
Channel: MIDDLE, Modulation: 64QAM, BW=20MHz, CCDF



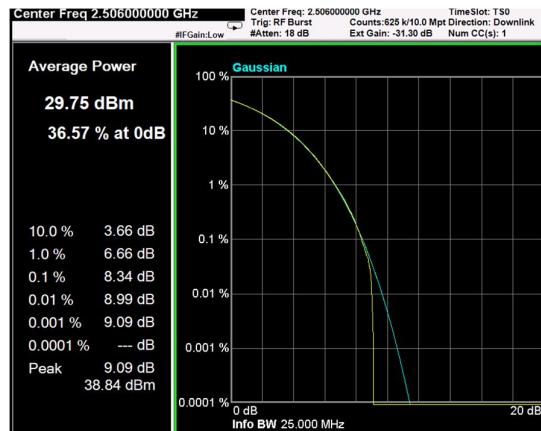
Channel: TOP, Modulation: 64QAM, BW=20MHz, Channel Power



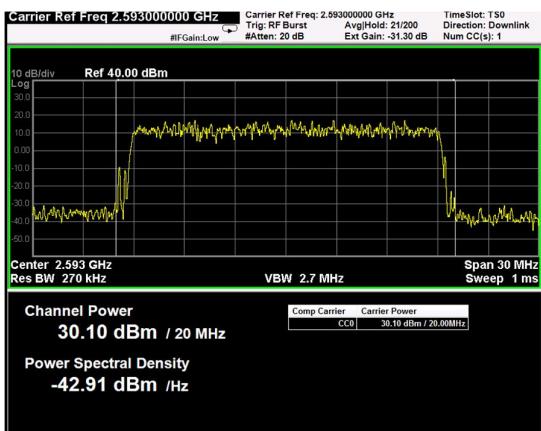
Channel: TOP, Modulation: 64QAM, BW=20MHz, CCDF



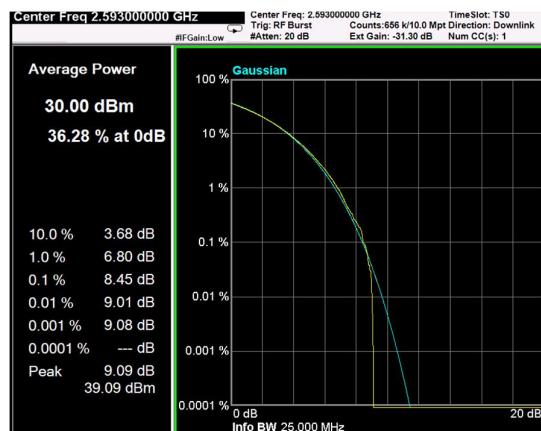
Channel: BOTTOM, Modulation: 256QAM, BW=20MHz, Channel Power



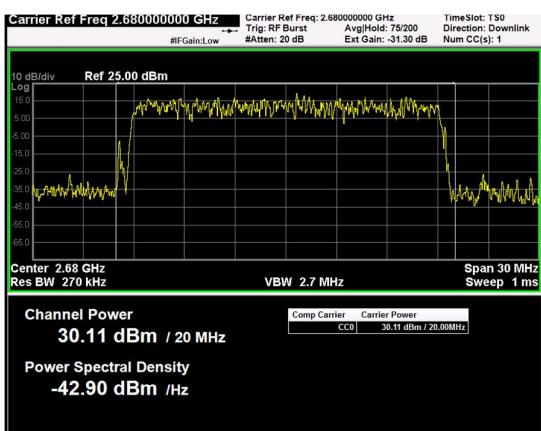
Channel: BOTTOM, Modulation: 256QAM, BW=20MHz, CCDF



Channel: MIDDLE, Modulation: 256QAM, BW=20MHz, Channel Power



Channel: MIDDLE, Modulation: 256QAM, BW=20MHz, CCDF



Channel: TOP, Modulation: 256QAM, BW=20MHz, Channel Power



Channel: TOP, Modulation: 256QAM, BW=20MHz, CCDF

PAR measure is performed by the “CCDF” function installed on Spectrum analyzer that provides average power (the same measured with “Channel power” function), peak power and PAR.



Clause 27.53(m) Spurious emissions at RF antenna connector

(m) For BRS and EBS stations, the power of any emissions outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) measured in watts in accordance with the standards below. If a licensee has multiple contiguous channels, out-of-band emissions shall be measured from the upper and lower edges of the contiguous channels.

(2) For digital base stations, the attenuation shall be not less than $43 + 10 \log (P)$ dB, unless a documented interference complaint is received from an adjacent channel licensee with an overlapping Geographic Service Area. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS No. 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. Provided that a documented interference complaint cannot be mutually resolved between the parties prior to the applicable deadline, then the following additional attenuation requirements shall apply:

(6) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz 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; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent 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 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). 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. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

Test date: 10/21/2019 to 12/13/2019

Test results: Pass

Special notes

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Clause 27.53 (m) Spurious emissions at RF antenna connector, continued

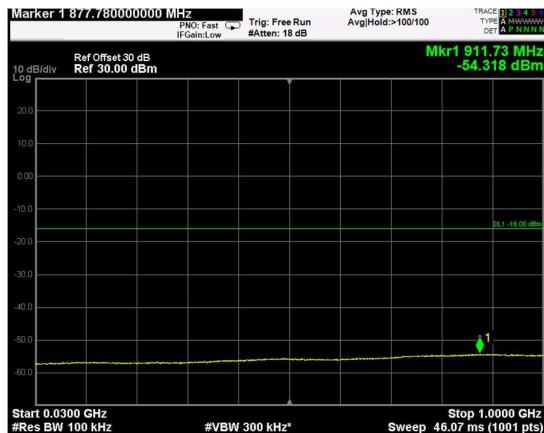
Test data

See Plots below

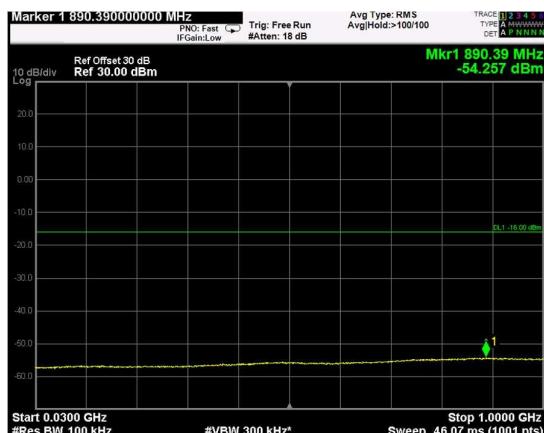
Spurious emissions measurement results:

Frequency (MHz)	Spurious emission (dBm)	Limit (dBm)	Margin (dB)
Low channel			
First channel	Negligible	-13	
Mid channel			
2593 MHz	Negligible	-13	
High channel			
Last channel	Negligible	-13	

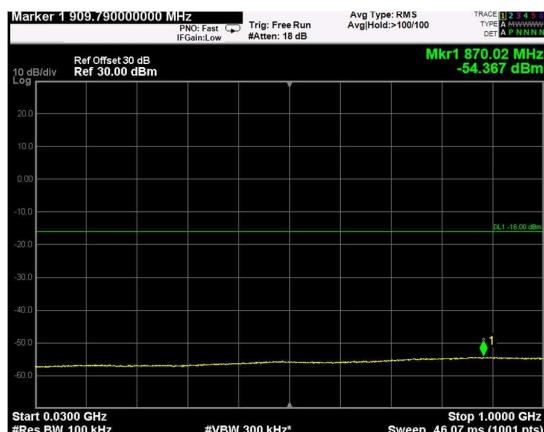
Test data, continued: spurious emissions at antenna terminal
RF PORT 1



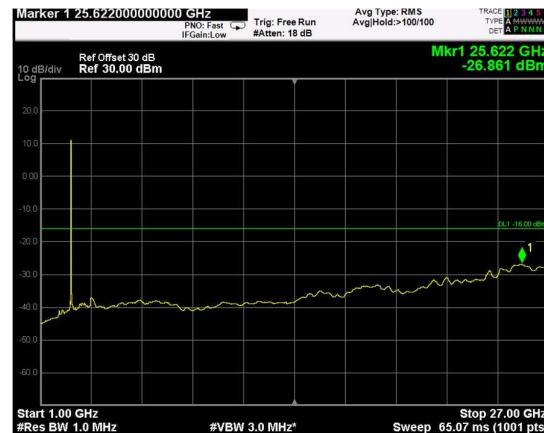
Channel: BOTTOM, Modulation: QPSK,
 BW=5MHz, Range: Lower



Channel: MIDDLE, Modulation: QPSK,
 BW=5MHz, Range: Lower



Channel: TOP, Modulation: QPSK,
 BW=5MHz, Range: Lower



Channel: BOTTOM, Modulation: QPSK,
 BW=5MHz, Range: Upper



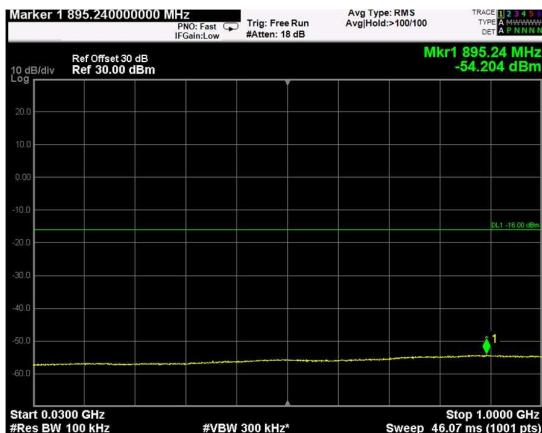
Channel: MIDDLE, Modulation: QPSK,
 BW=5MHz, Range: Upper



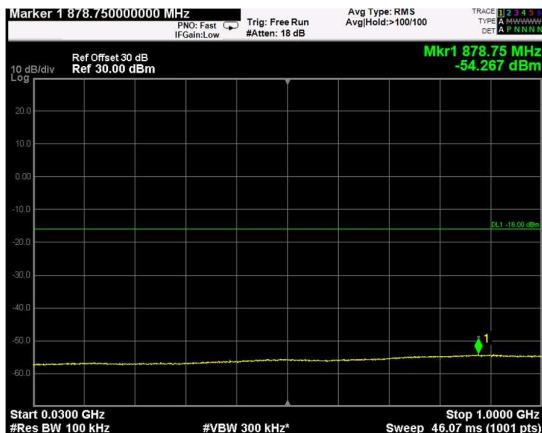
Channel: TOP, Modulation: QPSK,
 BW=5MHz, Range: Upper



Channel: BOTTOM, Modulation: 16QAM,
BW=5MHz, Range: Lower



Channel: MIDDLE, Modulation: 16QAM,
BW=5MHz, Range: Lower



Channel: TOP, Modulation: 16QAM,
BW=5MHz, Range: Lower



Channel: BOTTOM, Modulation: 16QAM,
BW=5MHz, Range: Upper



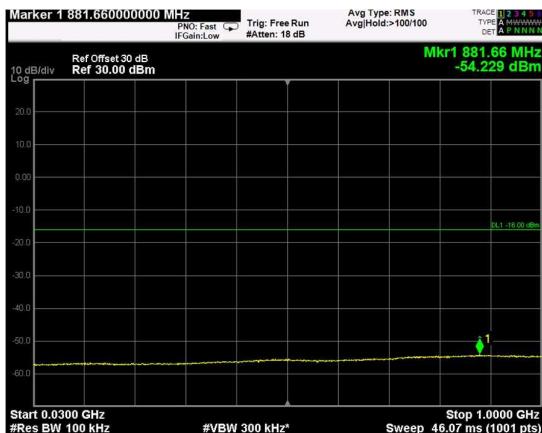
Channel: MIDDLE, Modulation: 16QAM,
BW=5MHz, Range: Upper



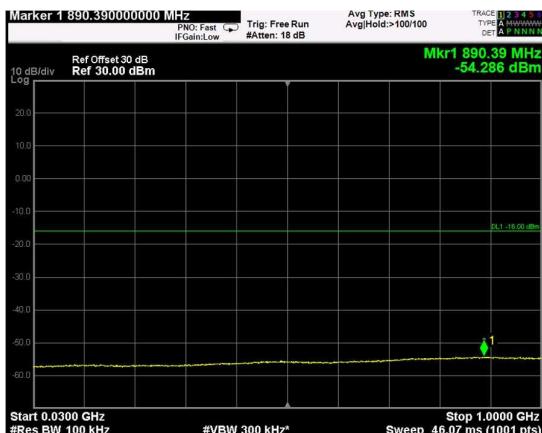
Channel: TOP, Modulation: 16QAM,
BW=5MHz, Range: Upper



Channel: BOTTOM, Modulation: 64QAM,
BW=5MHz, Range: Lower



Channel: MIDDLE, Modulation: 64QAM,
BW=5MHz, Range: Lower



Channel: TOP, Modulation: 64QAM,
BW=5MHz, Range: Lower



Channel: BOTTOM, Modulation: 64QAM,
BW=5MHz, Range: Upper



Channel: MIDDLE, Modulation: 64QAM,
BW=5MHz, Range: Upper



Channel: TOP, Modulation: 64QAM,
BW=5MHz, Range: Upper