

(802.11n40) PSD plot on channel 151



(802.11ac20) PSD plot on channel 149



(802.11n40) PSD plot on channel 159



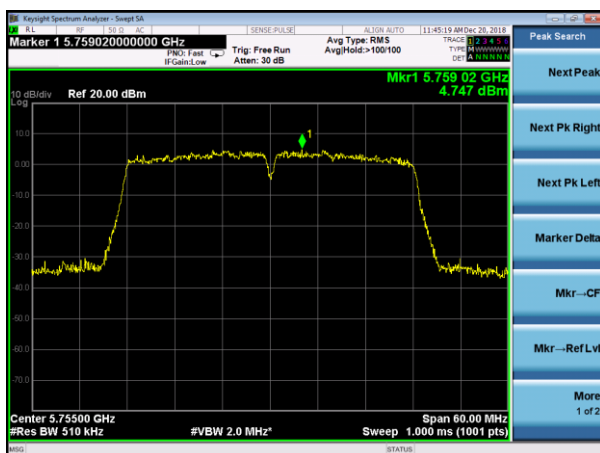
(802.11ac20) PSD plot on channel 157



(802.11ac20) PSD plot on channel 165



(802.11ac40) PSD plot on channel 151



(802.11ac40) PSD plot on channel 159



5. 26DB & 99% EMISSION BANDWIDTH

5.1 APPLIED PROCEDURES / LIMIT

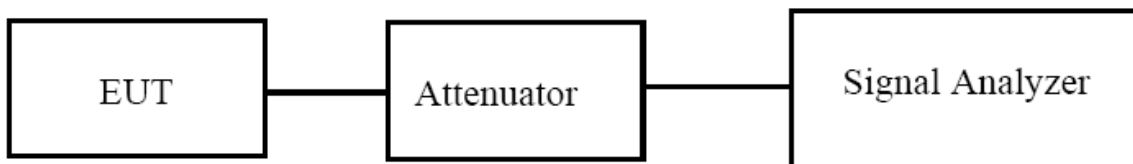
The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

5.2 TEST PROCEDURE

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW $\geq 3 \cdot$ RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.



5.3 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

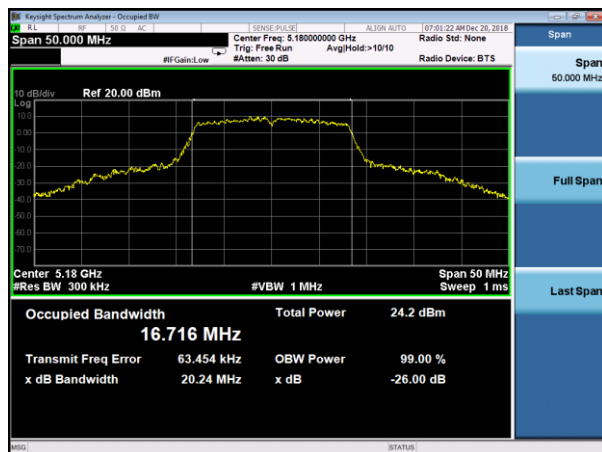
5.4 TEST RESULTS

EUT :	LTE SMARTPHONE	Model Name. :	PSM01E
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1012 hPa	Test Voltage :	DC 3.8V
Test Mode :	TX Frequency Band 1 (5150-5250MHz)		

Mode	Channel	Frequency (MHz)	99% bandwidth(MHz)	26dB bandwidth (MHz)	Result
802.11a	CH36	5180	16.716	20.24	Pass
	CH40	5200	16.735	20.20	Pass
	CH48	5240	16.634	20.05	Pass
802.11 n20	CH36	5180	17.671	20.29	Pass
	CH40	5200	17.723	20.24	Pass
	CH48	5240	17.682	19.89	Pass
802.11 n40	CH 38	5190	35.951	39.70	Pass
	CH 46	5230	36.027	40.67	Pass
802.11 ac20	CH36	5180	17.605	19.70	Pass
	CH40	5200	17.566	19.55	Pass
	CH48	5240	17.614	19.61	Pass
802.11 ac40	CH 38	5190	35.920	38.97	Pass
	CH 46	5230	35.953	39.00	Pass

Test plot

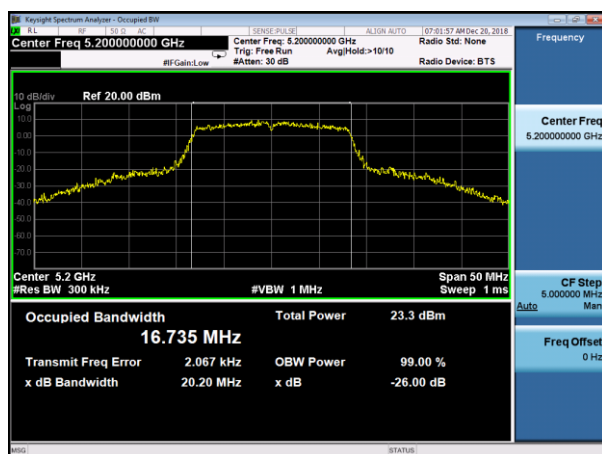
(802.11a) -26dB&99%Bandwidth plot on
channel 36



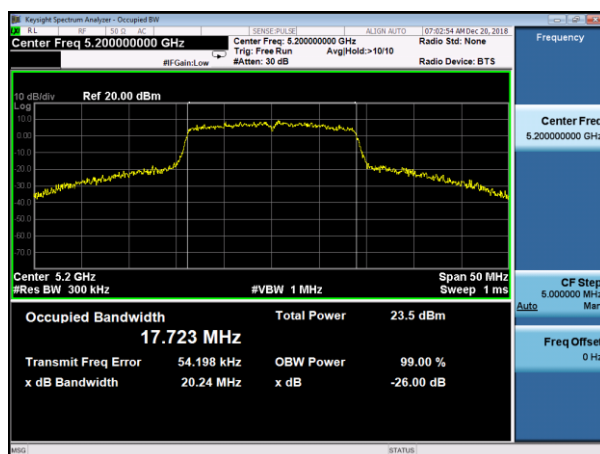
(802.11 n20) -26dB&99%Bandwidth plot on
channel 36



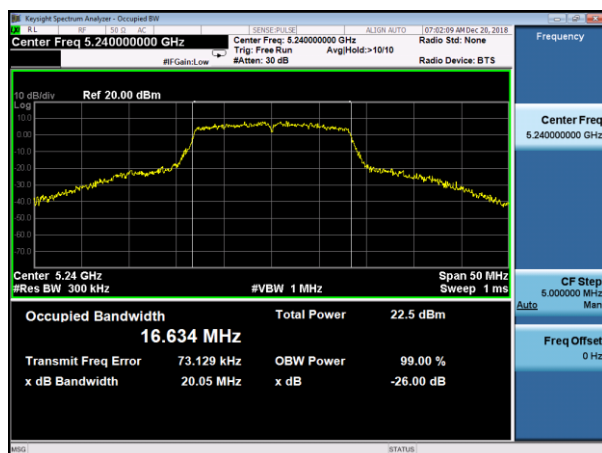
(802.11a) -26dB&99%Bandwidth plot on
channel 40



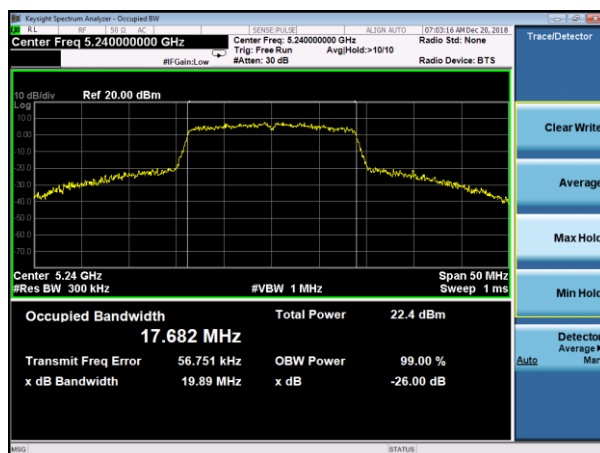
(802.11 n20) -26dB&99%Bandwidth plot on
channel 40



(802.11a) -26dB&99%Bandwidth plot on
channel 48

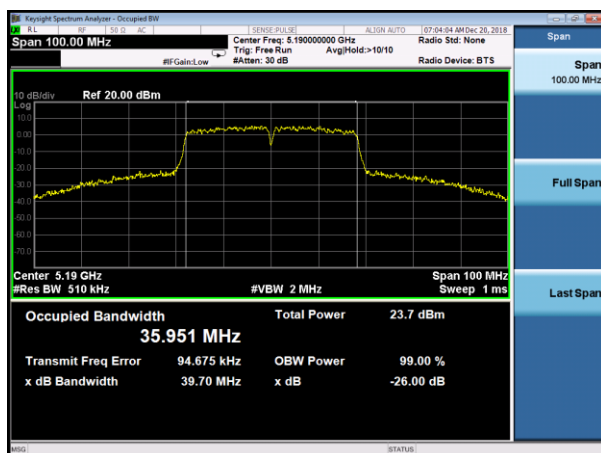


(802.11 n20) -26dB&99%Bandwidth plot on
channel 48



Test plot

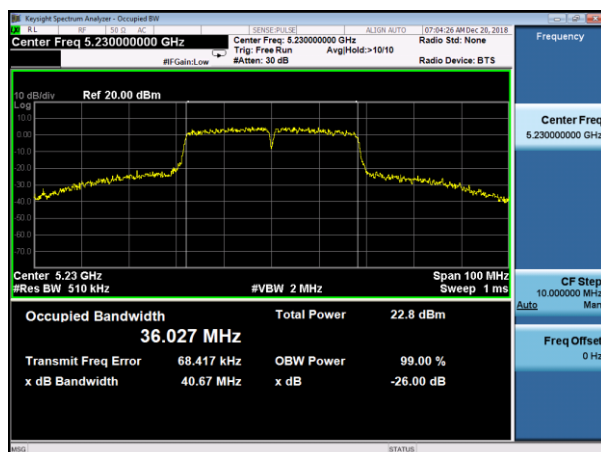
(802.11 n40) -26dB&99%Bandwidth plot on
channel 38



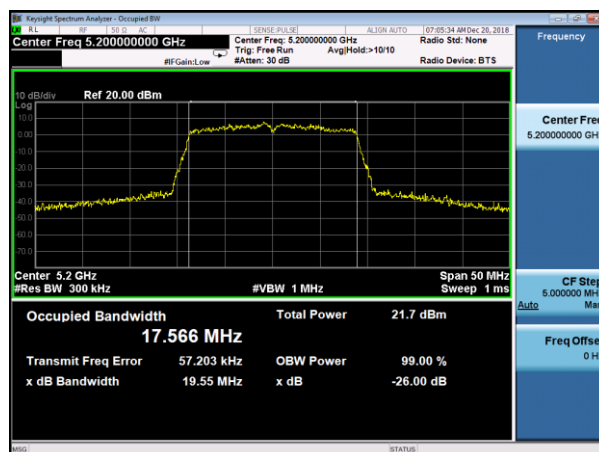
(802.11 AC20) -26dB&99%Bandwidth plot on
channel 36



(802.11 n40) -26dB&99%Bandwidth plot on
channel 46



(802.11 AC20) -26dB&99%Bandwidth plot on
channel 40

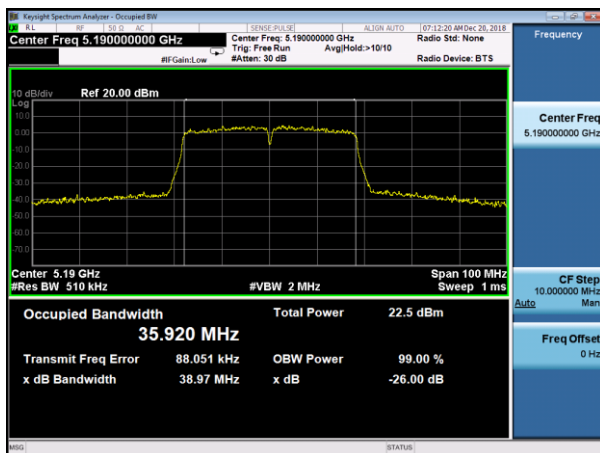


(802.11 AC20) -26dB&99%Bandwidth plot on
channel 48

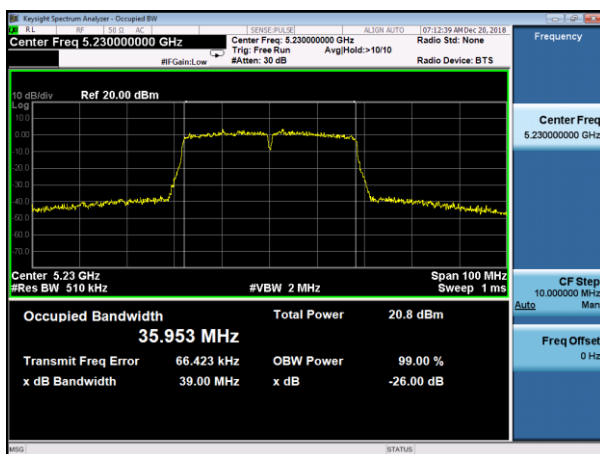


Test plot

(802.11 AC40) -26dB&99%Bandwidth plot on
channel 38



(802.11 AC40) -26dB&99%Bandwidth plot on
channel 46

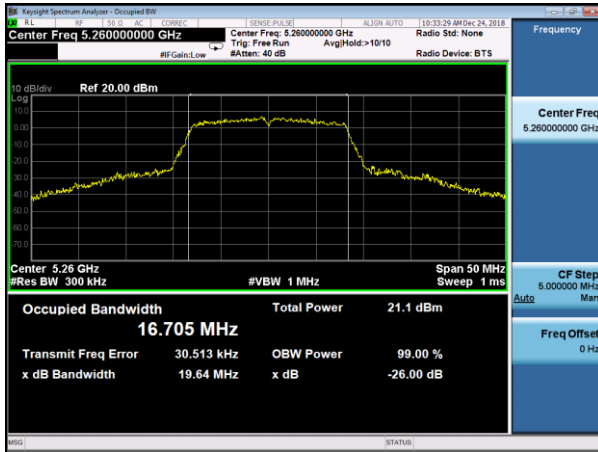


EUT :	LTE SMARTPHONE	Model Name. :	PSM01E
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1012 hPa	Test Voltage :	DC 3.8V
Test Mode :	TX Frequency Band 2A (5250-5350MHz)		

Mode	Channel	Frequency (MHz)	99% bandwidth(MHz)	26dB bandwidth (MHz)	Result
802.11a	CH52	5260	16.705	19.64	Pass
	CH56	5280	16.594	19.54	Pass
	CH64	5320	16.766	19.76	Pass
802.11 n20	CH52	5260	17.671	19.86	Pass
	CH56	5280	17.670	19.81	Pass
	CH64	5320	17.641	19.64	Pass
802.11 n40	CH 54	5270	35.902	39.60	Pass
	CH 62	5310	35.880	39.11	Pass
802.11 ac20	CH52	5260	17.616	19.50	Pass
	CH56	5280	17.645	19.59	Pass
	CH64	5320	17.594	19.71	Pass
802.11 ac40	CH 54	5270	35.946	38.99	Pass
	CH 62	5310	35.953	38.86	Pass

Test plot

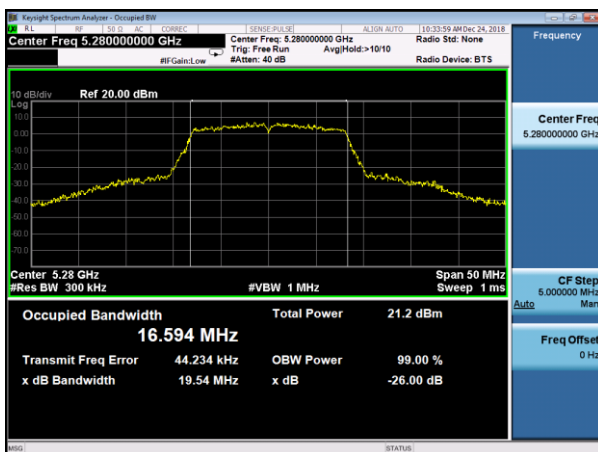
(802.11a) -26dB&99%Bandwidth plot on
channel 52



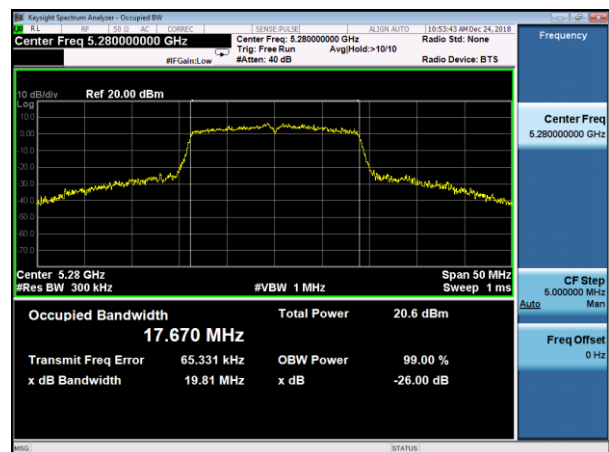
(802.11 n20) -26dB&99%Bandwidth plot on
channel 52



(802.11a) -26dB&99%Bandwidth plot on
channel 56



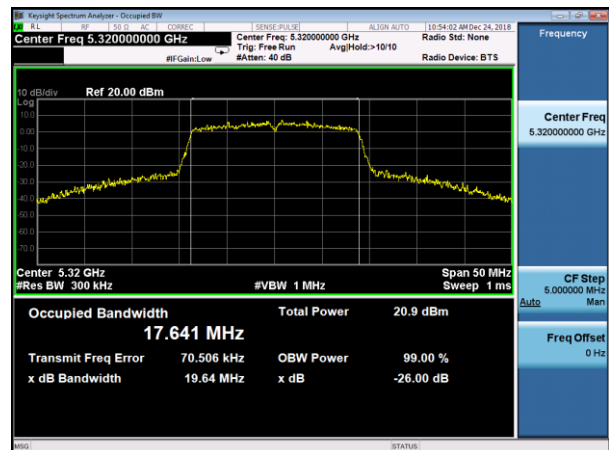
(802.11 n20) -26dB&99%Bandwidth plot on
channel 56



(802.11a) -26dB&99%Bandwidth plot on
channel 62

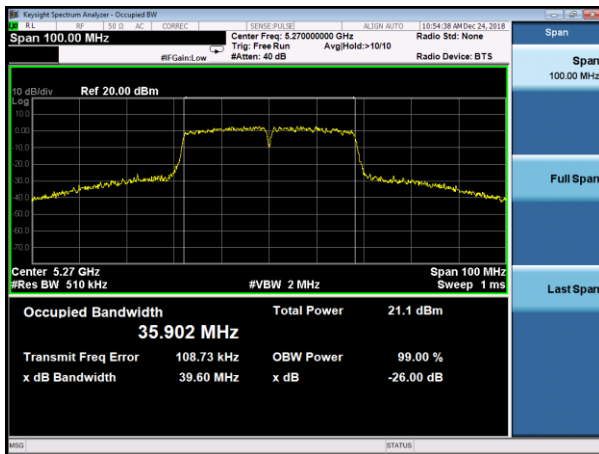


(802.11 n20) -26dB&99%Bandwidth plot on
channel 62

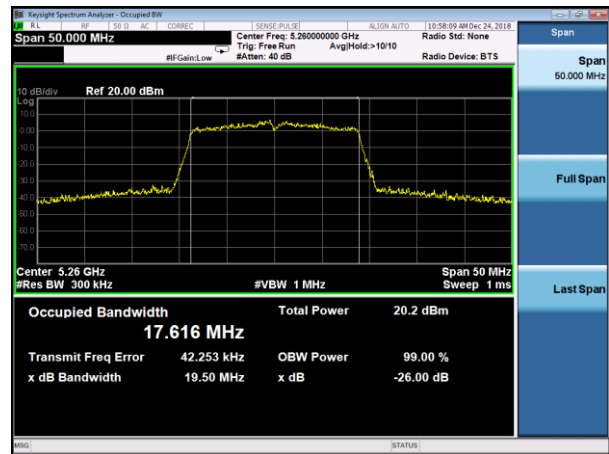


Test plot

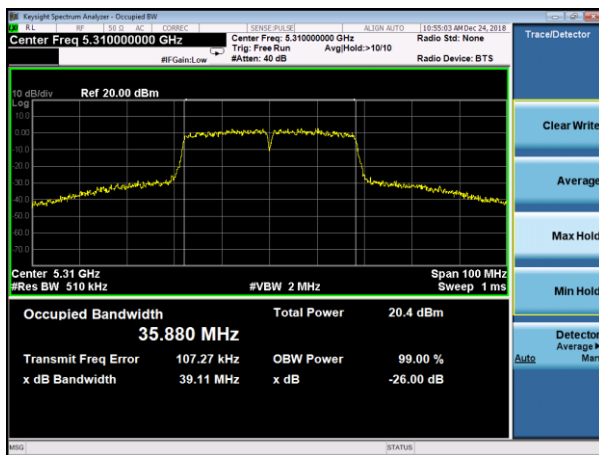
(802.11 n40) -26dB&99%Bandwidth plot on
channel 54



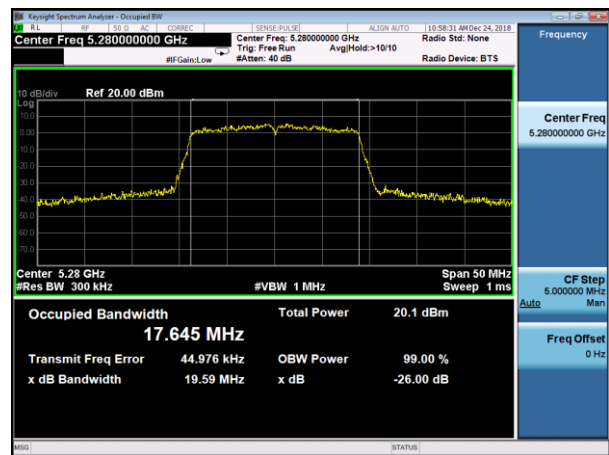
(802.11 ac20) -26dB&99%Bandwidth plot on
channel 52



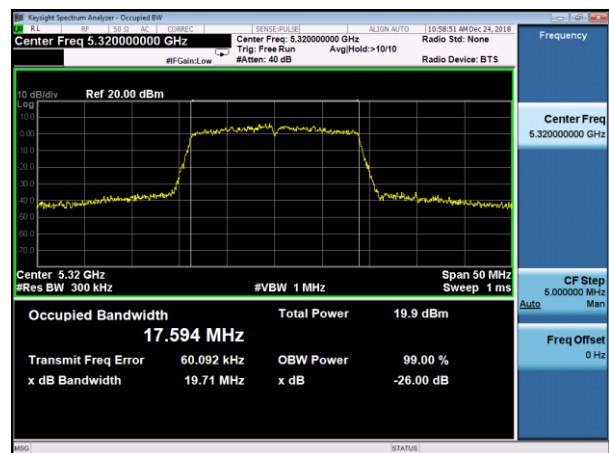
(802.11 n40) -26dB&99%Bandwidth plot on
channel 62



(802.11 ac20) -26dB&99%Bandwidth plot on
channel 56



(802.11 ac20) -26dB&99%Bandwidth plot on
channel 64

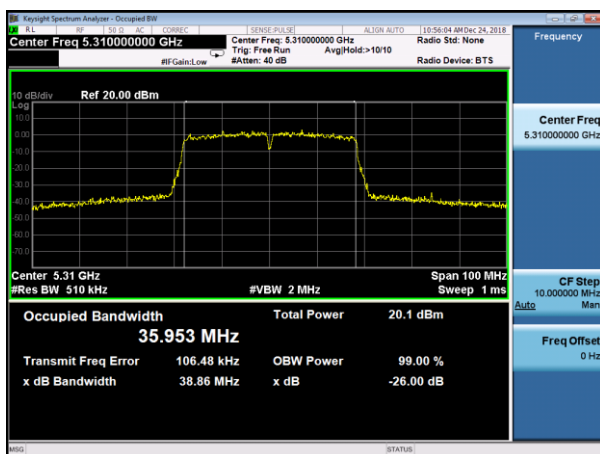


Test plot

(802.11 ac40) -26dB&99%Bandwidth plot on
channel 54



(802.11 ac40) -26dB&99%Bandwidth plot on
channel 62

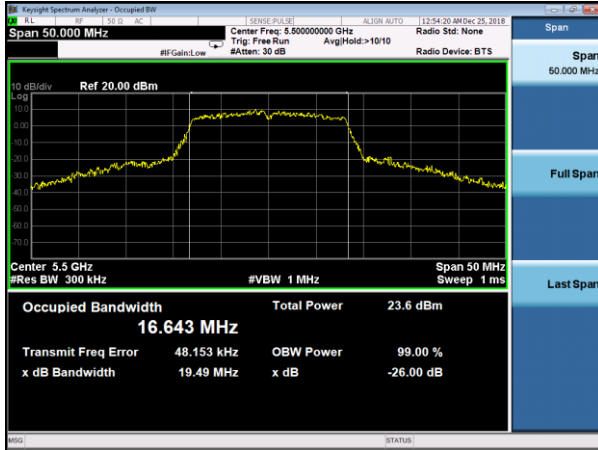


EUT :	LTE SMARTPHONE	Model Name. :	PSM01E
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1012 hPa	Test Voltage :	DC 3.8V
Test Mode :	TX Frequency Band 2C(5470-5725MHz)		

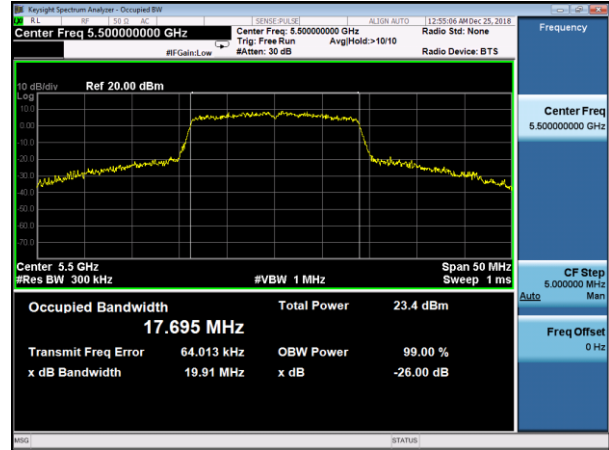
Mode	Channel	Frequency (MHz)	99% bandwidth(MHz)	26dB bandwidth (MHz)	Result
802.11a	CH100	5500	16.643	19.49	Pass
	CH120	5600	16.812	22.42	Pass
	CH140	5700	16.670	19.59	Pass
802.11 n20	CH100	5500	17.695	19.91	Pass
	CH120	5600	17.685	20.11	Pass
	CH140	5700	17.694	20.78	Pass
802.11 n40	CH102	5510	35.975	39.57	Pass
	CH118	5590	35.953	39.53	Pass
	CH134	5670	35.940	39.70	Pass
802.11 ac20	CH100	5500	17.652	19.74	Pass
	CH120	5600	17.616	19.68	Pass
	CH140	5700	17.616	19.74	Pass
802.11 ac40	CH102	5510	36.002	38.91	Pass
	CH118	5590	35.924	38.75	Pass
	CH134	5670	35.910	38.98	Pass

Test plot

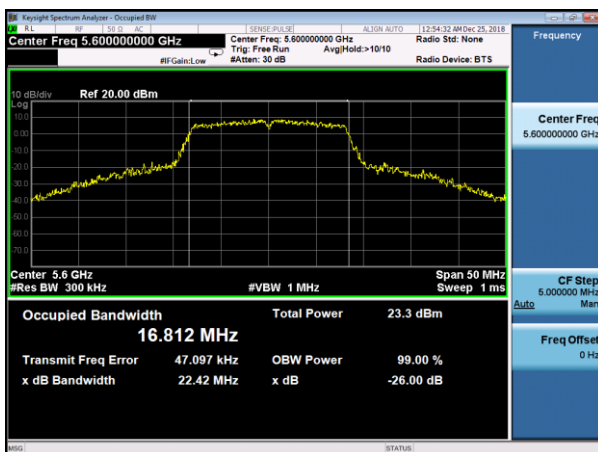
(802.11a) -26dB&99%Bandwidth plot on
channel 100



(802.11 n20) -26dB&99%Bandwidth plot on
channel 100



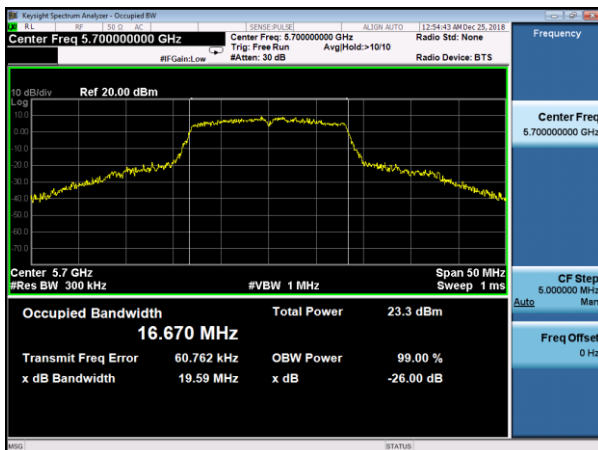
(802.11a) -26dB&99%Bandwidth plot on
channel 120



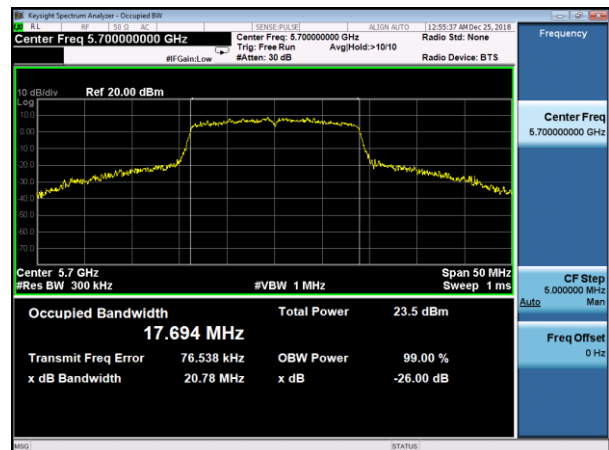
(802.11 n20) -26dB&99%Bandwidth plot on
channel 120



(802.11a) -26dB&99%Bandwidth plot on
channel 140

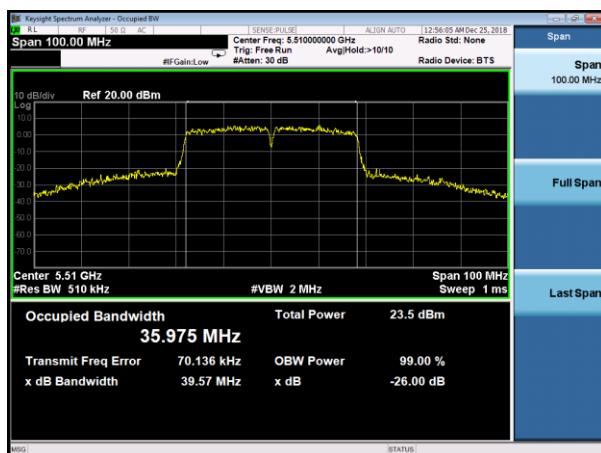


(802.11 n20) -26dB&99%Bandwidth plot on
channel 140

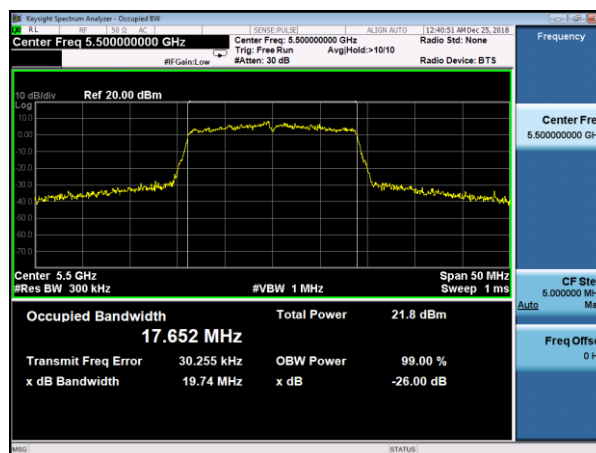


Test plot

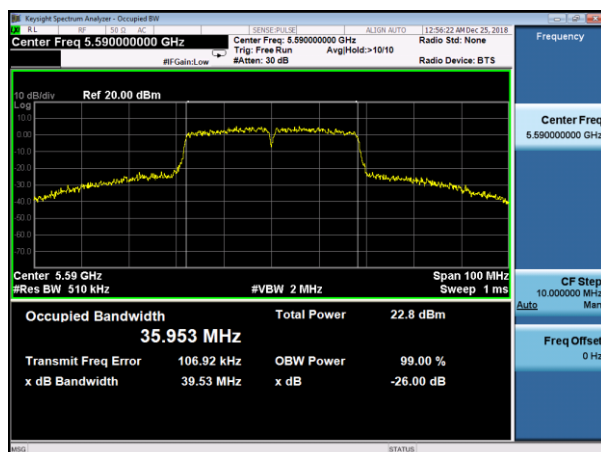
(802.11 n40) -26dB&99%Bandwidth plot on
channel 102



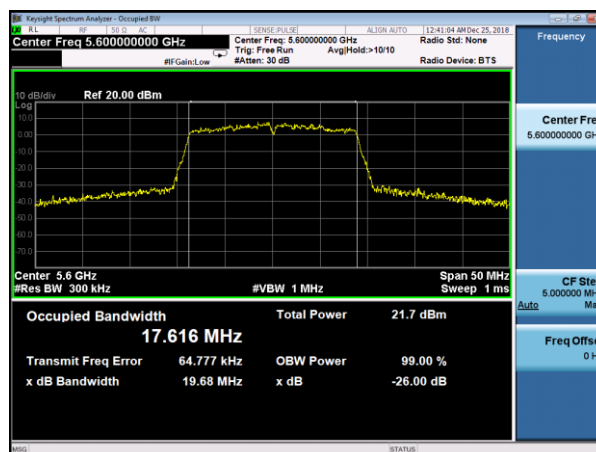
(802.11 ac20) -26dB&99%Bandwidth plot on
channel 100



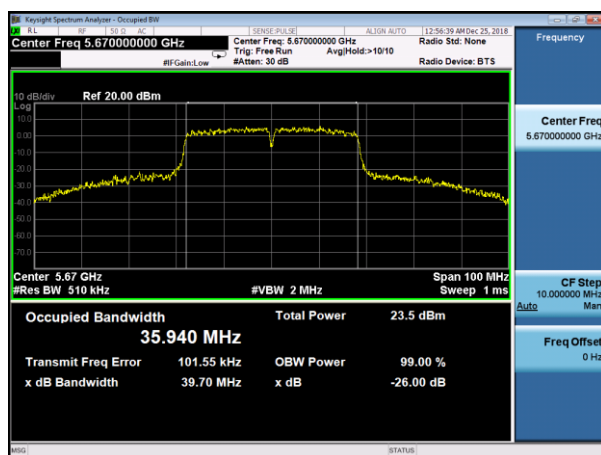
(802.11 n40) -26dB&99%Bandwidth plot on
channel 118



(802.11 ac20) -26dB&99%Bandwidth plot on
channel 120



(802.11 n40) -26dB&99%Bandwidth plot on
channel 134

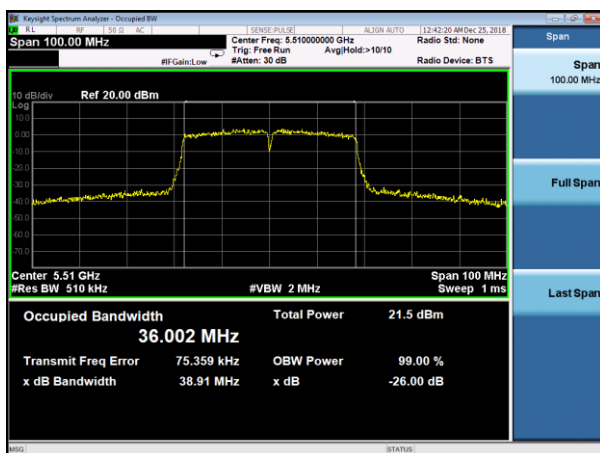


(802.11 ac20) -26dB&99%Bandwidth plot on
channel 140

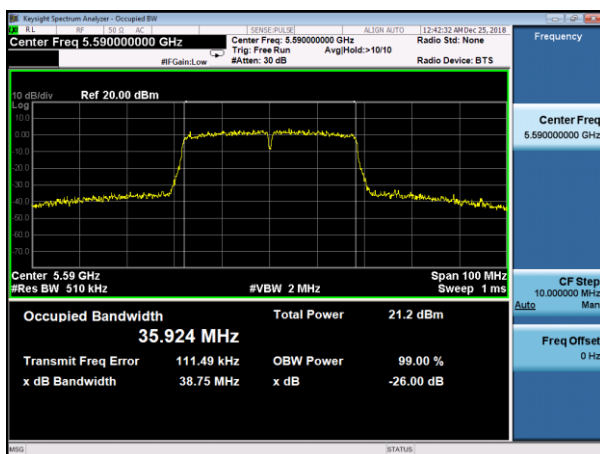


Test plot

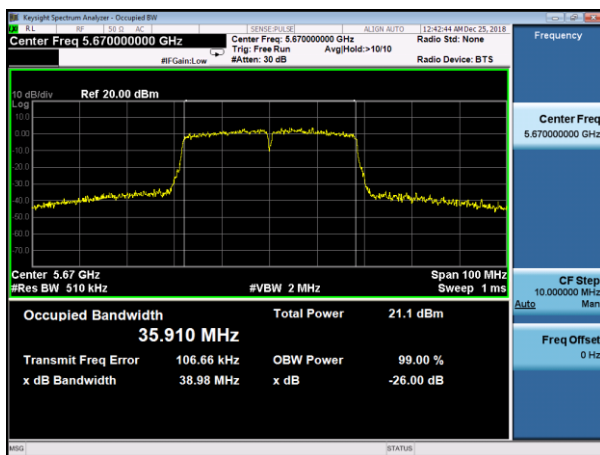
(802.11 ac40) -26dB&99%Bandwidth plot on
channel 102



(802.11 ac40) -26dB&99%Bandwidth plot on
channel 118



(802.11 ac40) -26dB&99%Bandwidth plot on
channel 134

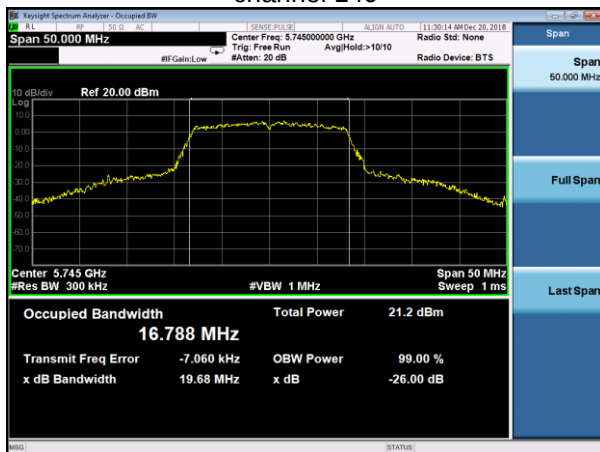


EUT :	LTE SMARTPHONE	Model Name. :	PSM01E
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1012 hPa	Test Voltage :	DC 3.8V
Test Mode :	TX Frequency Band 3(5725-5850MHz)		

Mode	Channel	Frequency (MHz)	99% bandwidth(MHz)	26dB bandwidth (MHz)	Result
802.11a	CH149	5745	16.788	19.68	Pass
	CH157	5785	16.773	19.84	Pass
	CH165	5825	16.709	19.60	Pass
802.11 n20	CH149	5745	17.653	19.96	Pass
	CH157	5785	17.685	19.76	Pass
	CH165	5825	17.693	19.95	Pass
802.11 n40	CH151	5755	36.0704	40.37	Pass
	CH159	5795	36.0886	40.27	Pass
802.11 ac20	CH149	5745	17.610	19.59	Pass
	CH157	5785	17.595	19.55	Pass
	CH165	5825	17.597	19.79	Pass
802.11 ac40	CH151	5755	35.952	38.65	Pass
	CH159	5795	35.965	38.83	Pass

Test plot

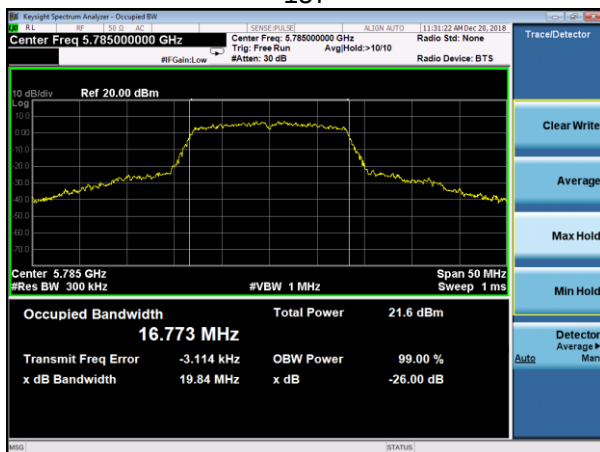
(802.11a) -26dB&99%Bandwidth plot on
channel 149



(802.11 n20) -26dB&99%Bandwidth plot on
channel 149



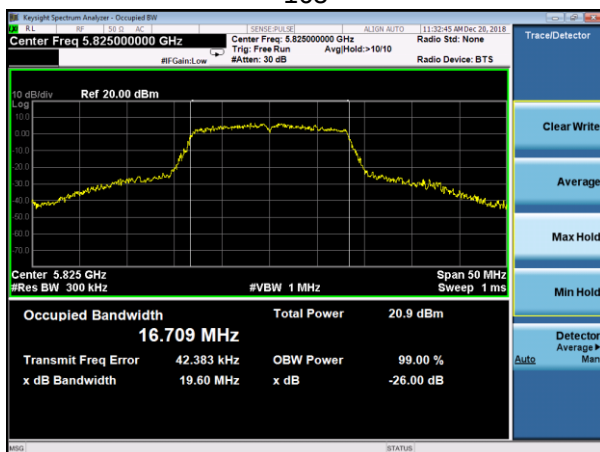
(802.11a) -26dB&99%Bandwidth plot on channel
157



(802.11 n20) -26dB&99%Bandwidth plot on
channel 157



(802.11a) -26dB&99%Bandwidth plot on channel
165

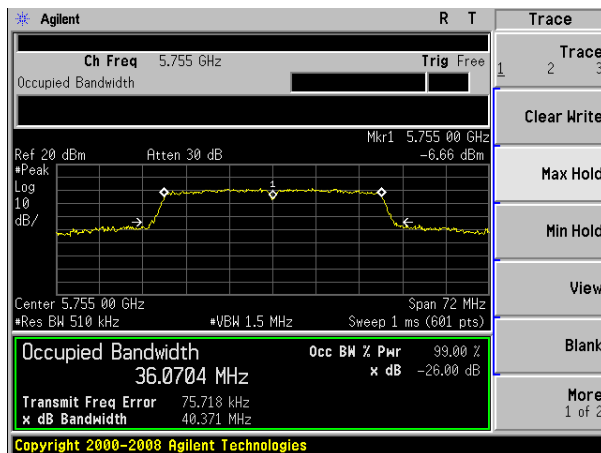


(802.11 n20) -26dB&99%Bandwidth plot on
channel 165



Test plot

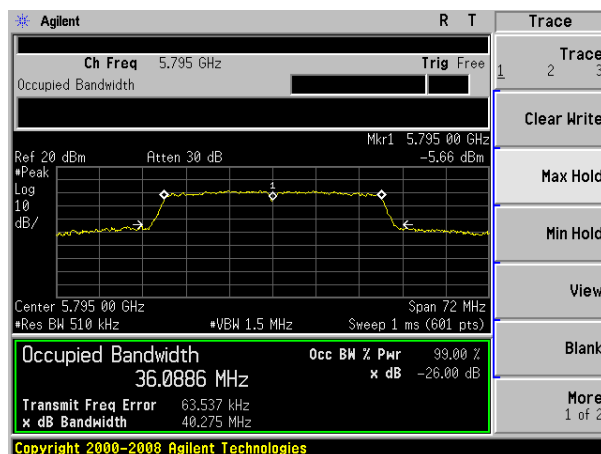
(802.11 n40) -26dB&99%Bandwidth plot on
channel 151



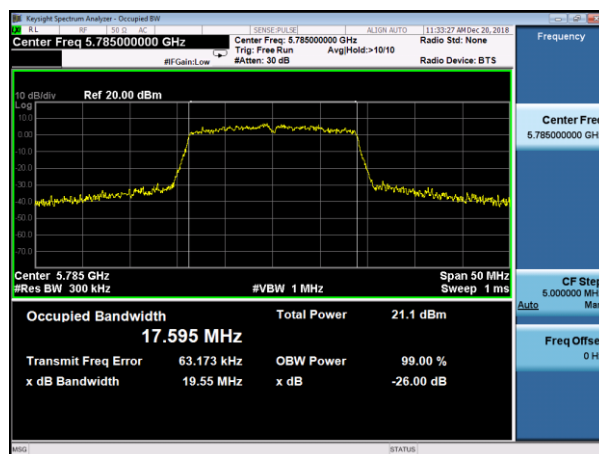
(802.11 ac20) -26dB&99%Bandwidth plot on
channel 149



(802.11 n40) -26dB&99%Bandwidth plot on
channel 159



(802.11 ac20) -26dB&99%Bandwidth plot on
channel 157



(802.11 ac20) -26dB&99%Bandwidth plot on
channel 165

