

Test plot

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

channel 151

Keysight Spectrum Analyzer - Occupied BW RL RF 50 Ω AC	SI	ENSE:PULSE	ALIGN AUTO	11:34:04 AM Dec 20, 2018	
pan 100.00 MHz	Cente Trig:	r Freq: 5.755000000 GHz Free Run AvaiHa	ld:>10/10	Radio Std: None	Span
	#IFGain:Low #Atter	n: 30 dB		Radio Device: BTS	Spa
					100.00 M
0 dB/div Ref 20.00 dBm					
0.0					
.00	www.anderson	m man had a south	<u> </u>		
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0.0 atom a series of the serie				"With the property of the state	
0.0					
0.0					
0.0					
enter 5.755 GHz				Span 100 MHz	
Res BW 510 kHz	#	VBW 2 MHz		Sweep 1 ms	Last Sp
Occupied Bandwidth		Total Power	21.	0 dBm	
25	952 M⊔ ⊿				
55	.992 WHZ				
Transmit Freq Error	119.49 kHz	OBW Power	9	9.00 %	
x dB Bandwidth	38.65 MHz	x dB	-26	.00 dB	

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

channel 159

RL RF 50.0 AC enter Freq 5.79500000	GHz Center Trig: F #EGain:1 ow #Atten	NSE:PULSE Freq: 5.795000000 GHz ree Run Avg Hol : 30 dB	ALIGN AUTO 11:3 Radii Id:>10/10 Radii	4:18 AMDec 20, 2018 o Std: None o Device: BTS	Frequency
D dB/div Ref 20.00 dB	m				
0.0	and the second s	ary all the second			Center Free 5.795000000 GH:
0.0 0.0 0.0 0.0 0.0 0.0	,/		handlandrasta	the contact of the second	
0.0					
enter 5.795 GHz Res BW 510 kHz	#	VBW 2 MHz	s	pan 100 MHz Sweep 1 ms	CF Ste 10.000000 MH
Occupied Bandwid	th 5.965 MHz	Total Power	21.3 dBr	n	Auto Mar Freq Offse
Transmit Freq Error x dB Bandwidth	84.345 kHz 38.83 MHz	OBW Power x dB	99.00 % -26.00 d	6 3	0 H



6. MINIMUM 6 DB BANDWIDTH

6.1 APPLIED PROCEDURES / LIMIT

According to FCC §15.407(e)

(e) Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

6.2 TEST PROCEDURE

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) \geq 3 × RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 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.



6.6 TEST RESULTS

EUT :	LTE SMARTPHONE	Model Name. :	PSM01E		
Temperature :	25 ℃	Relative Humidity :	60%		
Pressure :	1012 hPa Test Voltage : DC 3.8V				
Test Mode :	TX (5G) Mode Frequency Band 3 (5725-5850MHz)				

Mode	Channel	Frequency (MHz)	-6dB bandwidth (MHz)	Limit (KHz)	Result
	149	5745	16.39	≧500	Pass
802.11a	157	5785	16.38	≧500	Pass
	165	5825	16.40	≧500	Pass
	149	5745	17.61	≧500	Pass
802.11 n20	157	5785	17.61	≧500	Pass
	165	5825	17.62	≧500	Pass
902 11 p 10	151	5755	36.38	≧500	Pass
602.11 H40	159	5795	36.35	≧500	Pass
	149	5745	17.65	≧500	Pass
802.11 ac20	157	5785	17.67	≧500	Pass
	165	5825	17.51	≧500	Pass
902 11 06 10	149	5745	36.30	≧500	Pass
002.11 ac40	157	5785	36.34	≧500	Pass



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ACCREDITED

Certificate #4298.01

(802.11 n20) 6dB Bandwidth plot on channel 149 11:24:32 AM Dec 20 Radio Std: None a 5.74500 0000 GH Center Freq: 5.745000000 GHz Radio Device: BTS Ref 20.00 dBm Center Fre nter 5.745 GHz es BW 100 kHz Span 50 MHz Sweep 6.2 ms CFS #VBW 300 kHz 5.0 uto Occupied Band ^{idth} 17.576 MHz Total Power 19.9 dBm Freq Offs nsmit Freq Error 15.945 kHz OBW Power 99.00 % Tra 17.61 MHz x dB Bandwidth x dB -6.00 dB

(802.11a) 6dB Bandwidth plot on channel 157



(802.11a) 6dB Bandwidth plot on channel 165



(802.11 n20) 6dB Bandwidth plot on channel 165



Test plot



(802.11 n20) 6dB Bandwidth plot on channel 157





Test plot

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Certificate #4298.01

(802.11 n40) 6dB Bandwidth plot on channel 151

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ALIGH AUTO 111:28:31 AMDec 20,20 0000 GHz Radio Std: None Avg|Hold:>10/10 SENSE PULSE Center Freq: 5.75500 Trig: Free Run ter Freg 5.755000000 GHz Ref 20.00 dBm Center Free enter 5.755 GH Span 100 MHz Sweep 12.4 ms CF Step 10.000000 MHz 2 Man #VBW 300 kHz 10.7 dBr Occupied Ba Total P ndwidth 35.958 MHz Freq Offse 0 H -54.113 kHz mit Freq Error OBW Po 99.00 % 36.38 MHz x dB -6.00 dB

(802.11 n40) 6dB Bandwidth plot on channel 159



(802.11 ac20) 6dB Bandwidth plot on channel 149



(802.11 ac20) 6dB Bandwidth plot on channel 157



(802.11 ac20) 6dB Bandwidth plot on channel 165



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Test plot

(802.11 ac40) 6dB Bandwidth plot on channel 151

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Keysight Spectrum Analyzer - Occupied BM RL RF 50 Ω AC Snap 100 00 MHz		SENS	E:PULSE	0000 GHz		ALIGN AUTO	11:27:12 A	MDec 20, 2018	Trac	e/Detector
	#IFGain:Lo	Trig: Fre #Atten: 2	e Run 0 dB	Avg Ho	ld:	>10/10	Radio Dev	ice: BTS		
10 dB/div Ref 20.00 dBn	1									
10.0 0.00										Clear Writ
10.0		nin hinter of the line of	yelder geerfally	United the	l					
30.0	/				ł					Averag
40.0	ment					helders Hyrele	-	Witness of a	_	
60.0										Max Hol
							0	400 8411		
Res BW 100 kHz		#V	3W 300 k	Hz			Sweep	100 MHz 12.4 ms		Min Hol
Occupied Bandwidt	h		Total P	ower		19.0	dBm			
35	.925	MHz								Detecto
Transmit Freq Error	-53.4	70 kHz	OBW Po	ower		99	.00 %		Auto	Ma
x dB Bandwidth	36.3	0 MHz	x dB			-6.	00 dB			
sg						STATUS	5			

(802.11 ac40) 6dB Bandwidth plot on channel 159

secologias (mising pass)	Apren (1997) 446-55-461 yrs		Center Free 5.795000000 GH
And a second second second	APACINE TO ALL PLANE TO		
		ndenyinyinininininin Anyolu	Merikan
#VBW	300 kHz	Span 100 Sweep 12	MHz CF Step 4 ms 10.000000 MH
то MHz	tal Power	19.5 dBm	Freq Offse
43 kHz OE	BW Power	99.00 %	он
	IB	-6.00 dB	
	34 MHz x o	34 MHz x dB	34 MHz x dB -6.00 dB



7. MAXIMUM CONDUCTED OUTPUT POWER

7.1 PPLIED PROCEDURES / LIMIT

According to FCC §15.407

The maximum conduced output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	250mW
5250~5350	250 mW or 11 dBm + 10 log B (Note)
5470~5725	250 mW or 11 dBm + 10 log B (Note)
5725~5850	1W

Note: the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.

7.2 TEST PROCEDURE

• Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.

1. Device Configuration

If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).

a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)

Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).



a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:

• The EUT transmits continuously (or with a duty cycle ≥ 98 percent).

• Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.

(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.

(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.

b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set RBW = 1 MHz.

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(iii) Set VBW ≥ 3 MHz.

(iv) Number of points in sweep \geq 2 Span / RBW. (This ensures that bin-to-bin spacing is \leq RBW/2, so that narrowband signals are not lost between frequency bins.)

(v) Sweep time = auto.

(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.

(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle \geq 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".

(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum



7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 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.



7.6 TEST RESULTS

EUT :	LTE SMARTPHONE	Model Name. :	PSM01E	
Temperature :	25 ℃	Relative Humidity :	60%	
Pressure :	1012 hPa	Test Voltage :	DC 3.8V	
Test Mode :	TX (5G) Mode Frequency Band 1 (5150-5250MHz)			

Test Channel	Frequency	Maximum output power. Antenna port (AV)	LIMIT	Result				
	(MHz)	(dBm)	dBm					
	TX 802.11a Mode							
CH36	5180	15.30	23.98	Pass				
CH40	5200	15.00	23.98	Pass				
CH48	5240	14.90	23.98	Pass				
	TX 802.11 n20M Mode							
CH36	5180	15.80	23.98	Pass				
CH40	5200	15.00	23.98	Pass				
CH48	5240	15.00	23.98	Pass				
		TX 802.11 n40M Mode						
CH38	5190	12.80	23.98	Pass				
CH46	5230	12.60	23.98	Pass				
		TX 802.11 ac20M Mode	;					
CH36	5180	13.50	23.98	Pass				
CH40	5200	13.40	23.98	Pass				
CH48	5240	12.90	23.98	Pass				
		TX 802.11 ac40M Mode)					
CH38	5190	13.30	23.98	Pass				
CH46	5230	13.30	23.98	Pass				



EUT :	LTE SMARTPHONE	Model Name. :	PSM01E		
Temperature :	25 ℃	Relative Humidity :	60%		
Pressure :	1012 hPa	Test Voltage :	DC 3.8V		
Test Mode :	st Mode : TX (5G) Mode Frequency Band 2A (5250-5350MHz)				

Test Channel	Frequency	Maximum output power. Antenna port (AV)	LIMIT	Result				
	(MHz)	(dBm)	dBm					
	TX 802.11a Mode							
CH52	5260	12.70	23.93	Pass				
CH56	5280	13.10	23.91	Pass				
CH64	5320	13.30	23.96	Pass				
	TX 802.11 n20M Mode							
CH52	5260	12.90	23.98	Pass				
CH56	5280	13.00	23.97	Pass				
CH64	5320	13.10	23.93	Pass				
		TX 802.11 n40M Mode	1					
CH54	5270	13.40	23.98	Pass				
CH62	5310	13.20	23.98	Pass				
		TX 802.11 ac20M Mode	9					
CH52	5260	11.80	23.90	Pass				
CH56	5280	11.60	23.92	Pass				
CH64	5320	11.90	23.95	Pass				
		TX 802.11 ac40M Mode	9					
CH54	5270	11.90	23.98	Pass				
CH62	5310	11.70	23.98	Pass				



FUT:	I TE SMARTPHONE	Model Name :	PSM01E		
Tomporatura :					
	25 L		60%		
Pressure :	1012 hPa	Test Voltage :	DC 3.8V		
Test Mode :	st Mode : TX (5G) Mode Frequency Band 2C (5470-5725MHz)				

Test Channel	Frequency	Maximum output power. Antenna port (AV)	LIMIT	Result			
		(dBm)	ID				
	(MHZ)	Antenna A	aBm				
		TX 802.11a Mode					
CH 100	5500	12.40	23.90	Pass			
CH 120	5600	12.50	23.98	Pass			
CH 140	5700	12.60	23.92	Pass			
	TX 802.11 n20M Mode						
CH 100	5500	12.20	23.98	Pass			
CH 120	5600	12.40	23.98	Pass			
CH 140	5700	12.40	23.98	Pass			
		TX 802.11 n40M Mode					
CH 102	5510	12.30	23.98	Pass			
CH 118	5590	12.20	23.98	Pass			
CH 134	5670	12.80	23.98				
		TX 802.11 ac20M Mode					
CH 100	5500	11.10	23.95	Pass			
CH 120	5600	11.00	23.94	Pass			
CH 140	5700	11.20	23.95	Pass			
		TX 802.11 ac40M Mode					
CH 102	5510	11.20	23.98	Pass			
CH 118	5590	11.30	23.98	Pass			
CH 134	5670	11.60	23.98				



EUT :	LTE SMARTPHONE	Model Name. :	PSM01E	
Temperature :	25 ℃	Relative Humidity :	60%	
Pressure :	1012 hPa	Test Voltage :	DC 3.8V	
Test Mode : TX (5G) Mode Frequency Band 3 (5725-5850MHz)				

Test Channel	Frequency	Maximum output power. Antenna port (AV)	LIMIT	Result				
	(MHz)	(dBm)	dBm					
		TX 802.11a Mode						
CH149	5745	13.20	30.00	Pass				
CH157	5785	13.10	30.00	Pass				
CH165	5825	13.20	30.00	Pass				
	TX 802.11 n20M Mode							
CH149	5745	13.10	30.00	Pass				
CH157	5785	12.90	30.00	Pass				
CH165	5825	12.30	30.00	Pass				
		TX 802.11 n40M Mode						
CH151	5755	13.20	30.00	Pass				
CH159	5795	12.90	30.00	Pass				
		TX 802.11 ac20M Mode	9					
CH149	5745	11.80	30.00	Pass				
CH157	5785	11.60	30.00	Pass				
CH165	5825	11.60	30.00	Pass				
	TX 802.11 ac40M Mode							
CH151	5755	12.20	30.00	Pass				
CH159	5795	11.80	30.00	Pass				

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8. OUT OF BAND EMISSIONS

8.1 APPLICABLE STANDARD

According to FCC §15.407(b)

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

 For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

8.2 TEST PROCEDURE

- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- 3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
- 4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- 5. Repeat above procedures until all measured frequencies were complete.

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP





8.5 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.



8.6 TEST RESULTS

EUT :	LTE SMARTPHONE	Model Name. :	PSM01E
Temperature :	25 ℃	Relative Humidity :	56%
Pressure :	1012 hPa	Test Voltage :	DC 3.8V

TX (5G) Mode Frequency Band 1/2A (5150-5350MHz)

5.15~5.35 GHz

(802.11a) Band Edge, Left Side





(802.11a) Band Edge, Right Side











5.15~5.35 GHz

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Max Ho

Min Ho

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View Blan Trace O

(802.11n40) Band Edge, Left Side

Trig: Free Ru

#VBW 3.0 MHz*

Avg Type: RMS Avg Hold

> Span 180.0 M Sweep 1.000 ms (1001 p

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Ref Level 20.00 d

ter 5.15000 G

Ref 20.00 dBm

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(802.11n40) Band Edge, Right Side

(802.11ac20) Band Edge, Right Side



Keysight Spectrum Analyzer - Swept SA					- 4 💽
arker 1 5.35000000000	0 GHz	SENSE:PULSE	Avg Type: RMS Avg Hold:>100/100	07:32:06 AM Dec 25, 2018 TRACE 2 3 4 5 6 TYPE WWWWWW	Trace/Detector
Def 20.00 dBm	IFGain:Low	Atten: 30 dB	Mkr	1 5.350 00 GHz	Select Trace
	lander				Clear Writ
10 10 10 10	Lun wa	Marray 1		-27.00 dBr.	Trace Averag
					Max Hol
enter 5.35000 GHz les BW 1.0 MHz	#VBW	3.0 MHz*	Sweep 1	Span 120.0 MHz .000 ms (1001 pts) FUNCTION VALUE	Min Ho
N 1 1 5.	350 00 GHz	-41.317 dBm			View Blank Trace On
					Moi 1 of
			STATU	>	

(802.11ac20) Band Edge, Left Side



5.15~5.35 GHz

(802.11ac40) Band Edge, Left Side

Keysight Spectrum Analyzer - Swept SA						
ef Level 20.00 dBm		SENSE:PULSE	Avg Type:	RMS	09:10:53 AM Dec 20, 2018 TRACE 2 3 4 5 6	Trace/Detector
	PNO: Fast G	Atten: 30 dB	Avg Hold:	>100/100	DET A NNNNN	Select Trace
Bef 20.00 dBm				Mkr1	5.150 00 GHz -37.057 dBm	1
00			manner	Janwood	\	Clear Writ
10						
.0						
1.0		1	1.00		-27.00 dBm	Trace Averag
1.0	marth of the and	and a standard and the stand			the state of the state of the	
0 Wangerland and a horizontal and the						
0						Max Ho
.0						
enter 5.15000 GHz					Span 180.0 MHz	
Kes BW 1.0 MHz	#VBW	3.0 MHZ*	s	weep 1.0	00 ms (1001 pts)	Min Hol
N 1 1 5.	150 00 GHz	-37.057 dBm	FUNCTION FUNC	CTION WIDTH	FUNCTION VALUE	
3						View Blank
5						Trace On
7						
8						Mor
						1 of

(802.11ac40) Band Edge, Right Side

RL RF	- Swept SA 50 Q AC MHZ PNO: Fas IFGain:Lor	SENSE:PULSE Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: RMS Avg Hold:>100/100	07:33:18 AMDec 25, 2018 TRACE 1 2 3 4 5 6 TYPE M DET A NNNNN	Trace/Detector
0 dB/div Ref 20.0	00 dBm		Mkr	1 5.350 00 GHz -38.049 dBm	1
0 00 10.0 10.0	for the second second	η			Clear Writ
20.0 20.0 40.0 44/10/00/00/00/00/00/00/00/00/00/00/00/00/		with the stands	and the second	-27.00 dBn	Trace Averag
50.0 60.0 70.0				⁴ ν ⁴ 8- ⁴ 84 ³ 97,7 4 [*] 48 ³ −17,1 ⁴ 17,0 ² 84 ³	Max Hol
Center 5.35000 GH Res BW 1.0 MHz	z #\	/BW 3.0 MHz*	Sweep 1	Span 180.0 MHz .000 ms (1001 pts) FUNCTION VALUE	Min Hol
2 3 4 5 6	5.350 00 GHZ	-36.049 dBm			View Blank Trace On
7 8 9 10 11					Mo 1 of
sa			STATU	•	



TX (5G) Mode Frequency Band 2C (5470-5725MHz)

5.47~5.725 GHz

(802.11a) Band Edge, Left Side

(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side











5.47~5.725 GHz

(802.11n40) Band Edge, Left Side

(802.11ac20) Band Edge, Left Side



(802.11n40) Band Edge, Right Side





(802.11ac20) Band Edge, Right Side





TX (5G) Mode Frequency Band 2C (5470-5725MHz)

5.47~5.725 GHz

(802.11ac40) Band Edge, Left Side



(802.11n40) Band Edge, Right Side





TX (5G) Mode Frequency Band 3 (5.725~5.850 GHz)

5.725~5.850 GHz

(802.11a) Band Edge, Left Side

(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side



Image: Sector Ander: Sector Ander: Sector Ander Secto

(802.11n20) Band Edge, Right Side





5.725~5.850 GHz

(802.11n40) Band Edge, Left Side

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(802.11n40) Band Edge, Right Side





(802.11ac20) Band Edge, Right Side





5.725~5.850 GHz

(802.11ac40) Band Edge, Left Side



(802.11ac40) Band Edge, Right Side

Keysight Spectrum Analyzer - Swept SA RL RF 50 Q AC Center Freq 5.850000000 PASS	SENSE:PULSE PNO: Fast IFGain:Low Atten: 40 dB	ALIGN AUTO 12:14:14 PM Dec 20 Avg Type: RMS TRACE 12 Avg[Hold:>100/100 Type Det A	2018 Trace/Detector
10 dB/div Ref 30.00 dBm		Mkr1 5.850 0 G -37.695 dl	Hz 1 Bm
Trace 1 Pass	and and a second s		Clear Writ
20.0	1		Trace Averag
-0.0 50.0 60.0		alegy metrik statete terset konstruktion på terse proken separation og att som separation som separation som s	Max Hol
Center 5.8500 GHz Res BW 1.0 MHz	#VBW 3.0 MHz ^A	Span 200.0 fl Sweep 1.000 ms (1001 ICTION FUNCTION WIDTH FUNCTION VALUE	AHz pts) Min Hol
N 1 7 5.	-37.695 dBm		View Blank Trace On
7 8 9 10 11			Mo 1 of
5G		STATUS	

9.SPURIOUS RF CONDUCTED EMISSIONS

9.1CONFORMANCE LIMIT

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- 1. Below -20dB of the highest emission level in operating band.
- 2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

9.2MEASURING INSTRUMENTS

The Measuring equipment is listed in the section 6.3 of this test report.

9.3TEST SETUP

Please refer to Section 6.1 of this test report.

9.4TEST PROCEDURE

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBW= 300KHz to measure the peak field strength, and mwasure frequeny range from 9KHz to 26.5GHz.

9.5TEST RESULTS

Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.





TX (5G) Mode Frequency Band 1 (5150-5250MHz)

Test Plot



802.11n20 on channel 36



802.11a on channel 36

802.11n20 on channel 36







Test Plot



802.11n40 on channel 38

802.11ac20 on channel 36



802.11ac20 on channel 36







Test Plot



802.11ac40 on channel 38

Keysight Spectrum Analyzer - Swept SA				
Ac RL RF 50 Q AC	0 GHz	PULSE ALIGN AUTO Avg Type: Log-Pwr	10:58:51 AM Dec 20, 2018 TRACE 1 2 3 4 5 G	Peak Search
0 dB/div Ref 20.00 dBm	PNO: Fast Trig: Free IFGain:Low Atten: 30	Run Avg Hold: 39/100 dB	1kr1 25.639 GHz -30.309 dBm	NextPeak
10.0				Next Pk Righ
10.0				Next Pk Let
30.0			-22 g 1 m	Marker Delt
no nhanna	man man	Manderand	hand have the	Mkr→C
60.0				Mkr→RefLv
Start 6.00 GHz	#1014 0 0 MIL		Stop 26.50 GHz	Mor 1 of
Res BW 1.0 MHz	#VBW 3.0 MHz	Sweep	91.27 ms (1001 pts)	





Clear

Trace Ave

Max H

NextP

Next Pk Rid



Test Plot



802.11n40 on channel 54

802.11ac20 on channel 52



802.11ac20 on channel 52







Test Plot



802.11ac40 on channel 54

Keysight Spectrum Analyzer - Swept SA			
RL RF 50 Q AC	0 GHz	ALIGN AUTO 10:58:51 AM Dec 20 Avg Type: Log-Pwr TRACE	2018 Peak Search
10 dB/div Ref 20.00 dBm	PNO: Fast Trig: Free Run IFGain:Low Atten: 30 dB	Avg Hold: 39/100 Det No Det No Mkr1 25.639 (-30.309 d	HZ NextPea Bm
10.0			Next Pk Rigi
10.0			Next Pk Le
30.0		27	Marker Del
an when when the state of the s	when when the	when the when the w	Mkr→C
60.0			Mkr→RefL
Start 6.00 GHz	40/DW 2.0 MU-	Stop 26.50	Mor GHz
NGS DW NO MINZ	#15W 5.0 WH2	Gweep S1.27 His (1001	Prev