Transmitter Maximum Conducted Output Power (5.25-5.35 GHz & 5.47-5.725 GHz bands) (continued)

Results: 802.11n / 20 MHz / 16QAM / MCS4 / 5.47-5.725 GHz band / Port 1



Bottom Channel



Top Channel



Transmitter Maximum Conducted Output Power (5.25-5.35 GHz & 5.47-5.725 GHz bands) (continued)

Results: 802.11n / 20 MHz / 16QAM / MCS4 / 5.47-5.725 GHz band / Port 2





Bottom Channel



Top Channel



<u>Transmitter Maximum Conducted Output Power (5.25-5.35 GHz & 5.47-5.725 GHz bands)</u> (continued)

Results: 802.11n / 40 MHz / BPSK / MCS0 / 5.47-5.725 GHz band

		Port 1			Port 2			
Channel	Frequency (MHz)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	
Bottom	5510	13.2	0.2	13.4	12.9	0.2	13.1	
Middle	5550	13.2	0.2	13.4	12.7	0.2	12.9	
Тор	5670	13.2	0.2	13.4	12.7	0.2	12.9	

Channel	Frequency (MHz)	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5510	13.4	13.1	16.3	24.0	7.7	Complied
Middle	5550	13.4	12.9	16.2	24.0	7.8	Complied
Тор	5670	13.4	12.9	16.2	24.0	7.8	Complied

Transmitter Maximum Conducted Output Power (5.25-5.35 GHz & 5.47-5.725 GHz bands) (continued)

Results: 802.11n / 40 MHz / BPSK / MCS0 / 5.47-5.725 GHz band / Port 1



Bottom Channel



Top Channel



Transmitter Maximum Conducted Output Power (5.25-5.35 GHz & 5.47-5.725 GHz bands) (continued)

Results: 802.11n / 40 MHz / BPSK / MCS0 / 5.47-5.725 GHz band / Port 2



Bottom Channel



Top Channel



<u>Transmitter Maximum Conducted Output Power (5.25-5.35 GHz & 5.47-5.725 GHz bands)</u> (continued)

Results: 802.11ac / 80 MHz / 64QAM / MCS6x1 / 5.47-5.725 GHz band

		Port 1			Port 2			
Channel	Frequency (MHz)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	
Bottom	5530	11.7	2.5	14.2	11.3	2.5	13.8	
Тор	5610	11.6	2.5	14.1	11.0	2.5	13.5	

Channel	Frequency (MHz)	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5530	14.2	13.8	17.0	24.0	7.0	Complied
Тор	5610	14.1	13.5	16.8	24.0	7.2	Complied

<u>Transmitter Maximum Conducted Output Power (5.25-5.35 GHz & 5.47-5.725 GHz bands)</u> (continued)

Spectrum Spectrun RefLevel 30.00 dBm Offset 30.30 dB RBW 1 MHz Att 15 dB SWT 1 ms VBW 3 MHz Mode Sweep SGL Count 300/300 1 ms VBW 3 MHz Mode Sweep -5.27 di 5.505040 G -5.32 dB 5.577870 GF M1[1] M1[1] 0 dBm 20 dBr dB dBi dBm 10 dB 20 dBn ab og 30 dBn 30 dB LO dBr 50 dBr mah 02 60 dBn F 5.53 GHz Span 150.0 MHz CF 5.61 GHz Span 150.0 MHz 691 pts 691 pts nannel Power hannel Power Bandwidth 99.34 MHz Power 11.68 dBm Tx Total 11.68 dBm Bandwidth 99.34 MHz Power 11.57 dBm Tx Total 11.57 dBm 430 4364 066287JD09 066287JD09 te: 11.MAY.2016 12:43:58 te: 11.MAY.2016 12:49:14

Results: 802.11ac / 80 MHz / 64QAM / MCS6x1 / 5.47-5.725 GHz band / Port 1

Bottom Channel

Top Channel

Results: 802.11ac / 80 MHz / 64QAM / MCS6x1 / 5.47-5.725 GHz band / Port 2



Bottom Channel



Top Channel

Transmitter Maximum Conducted Output Power (Channels that straddle the U-NII-2C and U-NII-3 bands at 5725 MHz)

Test Summary:

Test Engineer:	Georgios Vrezas	Test Date:	11 May 2016	
Test Sample IMEI:	357232070003098			

FCC Reference:	Part 15.407(a)(2)
Test Method Used:	KDB 789033 D02 Section II.E.2.d)

Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	28

Note(s):

- 1. For channels that straddle the U-NII-2C and U-NII-3 bands at 5725 MHz, the maximum conducted power limit is more stringent on U-NII-2C, compliance is shown against the limits of U-NII-2C. By default the EUT also complies on U-NII-3.
- 2. The FCC Part 15.407(a)(2) limit is the lesser of 250 mW (24.0 dBm) or 11 dBm + 10 log₁₀ B, where B is the previously measured 26 dB emission bandwidth in MHz. The 26 dB EBW is greater than 20 MHz:

For B > 20 MHz \rightarrow $\rightarrow \log_{10} B > \log_{10} 20 \rightarrow$ $\rightarrow 10 \log_{10} B > 10 \log_{10} 20 \rightarrow$ $\rightarrow 11 + 10 \log_{10} B > 11 + 10 \log_{10} 20 \rightarrow$ $\rightarrow 11 + 10 \log_{10} B > 24.0 dBm$

Therefore for measured emission bandwidths greater than 20 MHz, the lesser of the two limits is the fixed limit of 250 mW (24.0 dBm). This was applied to the results.

3. The EUT's directional antenna gain is < 6 dBi.

Transmitter Maximum Conducted Output Power (Channels that straddle the U-NII-2C and U-NII-3 bands at 5725 MHz) (continued)

Results: 802.11a / 20 MHz / 16QAM / 36 Mbps

		Port 1			Port 2		
Channel	Frequency (MHz)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)
Single	5720	14.7	0.6	15.3	13.9	0.6	14.5

Channel	Frequency (MHz)	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5720	15.3	14.5	17.9	24.0	6.1	Complied



Single Channel / Port 1



Single Channel / Port 2

Transmitter Maximum Conducted Output Power (Channels that straddle the U-NII-2C and U-NII-3 bands at 5725 MHz) (continued)

Results: 802.11n / 20 MHz / 16QAM / MCS4

		Port 1			Port 2		
Channel	Frequency (MHz)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)
Single	5720	13.1	0.6	13.7	12.2	0.6	12.8

Channel	Frequency (MHz)	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5720	13.7	12.8	16.3	24.0	7.7	Complied



Single Channel / Port 1



Single Channel / Port 2

<u>Transmitter Maximum Conducted Output Power (Channels that straddle the U-NII-2C and U-NII-3 bands at 5725 MHz) (continued)</u>

Results: 802.11n / 40 MHz / BPSK / MCS0

		Port 1			Port 2		
Channel	Frequency (MHz)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)
Single	5710	13.0	0.2	13.2	12.3	0.2	12.5

Channel	Frequency (MHz)	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5710	13.2	12.5	15.9	24.0	8.1	Complied



Single Channel / Port 1



Single Channel / Port 2

Transmitter Maximum Conducted Output Power (Channels that straddle the U-NII-2C and U-NII-3 bands at 5725 MHz) (continued)

Results: 802.11ac / 80 MHz / 64QAM / MCS6x1

		Port 1			Port 2		
Channel	Frequency (MHz)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)
Single	5690	11.5	2.5	14.0	10.9	2.5	13.4

Channel	Frequency (MHz)	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5690	14.0	13.4	16.7	24.0	7.3	Complied



Single Channel / Port 1



Single Channel / Port 2

ISSUE DATE: 31 AUGUST 2016

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band)

Test Summary:

Test Engineer:	Georgios Vrezas	Test Date:	07 May 2016			
Test Sample IMEI:	357232070003098	·				
FCC Reference:	Part 15.407(a)(3)					
Test Method Used:	KDB 789033 D02 Section II.E.2.d)					
Environmental Conditions:U-	NII					
Temperature (°C):	24					
Relative Humidity (%):	33					

Note(s):

- 1. The FCC Part 15.407(a)(3) limit shall not exceed 1 W (30.0 dBm).
- 2. The EUT has a directional antenna gain of <6 dBi.

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

Results: 802.11a / 20 MHz / 16QAM / 36 Mbps

		Port 1			Port 2			
Channel	Frequency (MHz)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	
Bottom	5745	14.7	0.6	15.3	13.8	0.6	14.4	
Middle	5785	14.7	0.6	15.3	13.8	0.6	14.4	
Тор	5825	14.5	0.6	15.1	13.6	0.6	14.2	

Channel	Frequency (MHz)	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	15.3	14.4	17.9	30.0	12.1	Complied
Middle	5785	15.3	14.4	17.9	30.0	12.1	Complied
Тор	5825	15.1	14.2	17.7	30.0	12.3	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

Results: 802.11a / 20 MHz / 16QAM / 36 Mbps / Port 1



Bottom Channel



Top Channel



Middle Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

Results: 802.11a / 20 MHz / 16QAM / 36 Mbps / Port 2



Bottom Channel



Top Channel



Middle Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

		Port 1			Port 2			
Channel	Frequency (MHz)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	
Bottom	5745	13.6	0.6	14.2	12.6	0.6	13.2	
Middle	5785	13.4	0.6	14.0	12.4	0.6	13.0	
Тор	5825	13.3	0.6	13.9	12.3	0.6	12.9	

Channel	Frequency (MHz)	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	14.2	13.2	16.7	30.0	13.3	Complied
Middle	5785	14.0	13.0	16.5	30.0	13.5	Complied
Тор	5825	13.9	12.9	16.4	30.0	13.6	Complied

<u>Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)</u> <u>Results: 802.11n / 20 MHz / 16QAM / MCS4 / Port 1</u>



Bottom Channel



Top Channel



ISSUE DATE: 31 AUGUST 2016

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

Results: 802.11n / 20 MHz / 16QAM / MCS4 / Port 2



Bottom Channel



Top Channel



Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

	Frequency (MHz) Pe	Port 1			Port 2		
Channel		Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)
Bottom	5755	13.4	0.2	13.6	12.5	0.2	12.7
Тор	5795	13.3	0.2	13.5	12.4	0.2	12.6

Channel	Frequency (MHz)	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	13.6	12.7	16.2	30.0	13.8	Complied
Тор	5795	13.5	12.6	16.1	30.0	13.9	Complied

Results: 802.11n / 40 MHz / BPSK / MCS0

M1[1]

-0.85 dB

5.792470 GH

Span 70.0 MHz

Tx Total 13.31 dBm

1,00

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

Results: 802.11n / 40 MHz / BPSK / MCS0 / Port 1



Bottom Channel

Top Channel

691 pts

Power 13.31 dBm

Results: 802.11n / 40 MHz / BPSK / 13.5 Mbps / MCS0 / Port 2



Bottom Channel



Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

Results: 802.11ac / 80 MHz / 64QAM / MCS6x1

Port 1 Port 2 Corrected Corrected Frequency Duty Cycle Correction Conducted **Duty Cycle** Conducted Channel Conducted Conducted (MHz) Peak Power Correction **Peak Power** Peak Power Peak Power (dBm) (dB) (dBm) (dB) (dBm) (dBm) 5775 11.5 2.5 14.0 2.5 13.1 Single 10.6

Channel	Frequency (MHz)	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	14.0	13.1	16.6	30.0	13.4	Complied