



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2
Test Date	Jul. 26, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15630.63	45.34	54.00	-8.66	28.58	12.58	37.98	33.80	167	166	Average	HORIZONTAL
2	15632.43	58.50	74.00	-15.50	41.74	12.58	37.98	33.80	167	166	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15629.48	45.13	54.00	-8.87	28.37	12.58	37.98	33.80	165	149	Average	VERTICAL
2	15629.48	57.67	74.00	-16.33	40.91	12.58	37.98	33.80	165	149	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2
Test Date	Jul. 26, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15869.01	58.77	74.00	-15.23	42.64	12.57	37.59	34.03	167	174	Peak	HORIZONTAL
2	15871.08	44.90	54.00	-9.10	28.77	12.57	37.59	34.03	167	174	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15871.19	45.02	54.00	-8.98	28.89	12.57	37.59	34.03	165	189	Average	VERTICAL
2	15871.77	58.02	74.00	-15.98	41.89	12.57	37.59	34.03	165	189	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2
Test Date	Jul. 26, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11058.13	43.42	54.00	-10.58	27.76	10.57	38.47	33.38	182	213	Average	HORIZONTAL
2	11061.00	56.82	74.00	-17.18	41.15	10.58	38.47	33.38	182	213	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11060.41	56.57	74.00	-17.43	40.90	10.58	38.47	33.38	180	103	Peak	VERTICAL
2	11061.47	43.37	54.00	-10.63	27.70	10.58	38.47	33.38	180	103	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2
Test Date	Jul. 26, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11219.84	57.55	74.00	-16.45	41.68	10.63	38.62	33.38	176	196	Peak	HORIZONTAL
2	11222.18	43.26	54.00	-10.74	27.39	10.63	38.62	33.38	176	196	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11220.42	56.34	74.00	-17.66	40.47	10.63	38.62	33.38	180	172	Peak	VERTICAL
2	11220.61	43.40	54.00	-10.60	27.53	10.63	38.62	33.38	180	172	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2
Test Date	Jul. 26, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11549.93	57.15	74.00	-16.85	40.85	10.75	38.93	33.38	195	218	Peak	HORIZONTAL
2	11551.74	43.97	54.00	-10.03	27.67	10.75	38.93	33.38	195	218	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11547.76	44.06	54.00	-9.94	27.77	10.75	38.92	33.38	165	177	Average	VERTICAL
2	11551.12	57.06	74.00	-16.94	40.76	10.75	38.93	33.38	165	177	Peak	VERTICAL

**Straddle Channel**

<b>Temperature</b>	23°C	<b>Humidity</b>	61%
<b>Test Engineer</b>	Paul Chen	<b>Configurations</b>	IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1 + Chain 2
<b>Test Date</b>	Jul. 26, 2015		
<b>Test Mode</b>	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11439.97	51.29	54.00	-2.71	35.14	10.69	38.83	33.37	198	246	Average	HORIZONTAL
2	11440.00	65.39	74.00	-8.61	49.24	10.69	38.83	33.37	198	246	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11439.74	50.88	54.00	-3.12	34.73	10.69	38.83	33.37	196	173	Average	VERTICAL
2	11442.21	64.07	74.00	-9.93	47.92	10.69	38.83	33.37	196	173	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1 + Chain 2
Test Date	Jul. 26, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11419.80	60.36	74.00	-13.64	44.22	10.69	38.82	33.37	154	160	Peak	HORIZONTAL
2	11419.81	48.52	54.00	-5.48	32.38	10.69	38.82	33.37	154	160	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11419.82	48.57	54.00	-5.43	32.43	10.69	38.82	33.37	122	174	Average	VERTICAL
2	11422.06	62.59	74.00	-11.41	46.45	10.69	38.82	33.37	122	174	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 138 / Chain 1 + Chain 2
Test Date	Jul. 26, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	/m			dB	dBuV	dB	dB/m	dB	cm	
1	11380.03	56.61	74.00	-17.39	40.52	10.68	38.78	33.37	123	189	Peak	HORIZONTAL
2	11382.50	44.14	54.00	-9.86	28.05	10.68	38.78	33.37	123	189	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	/m			dB	dBuV	dB	dB/m	dB	cm	
1	11377.84	43.86	54.00	-10.14	27.78	10.68	38.77	33.37	165	199	Average	VERTICAL
2	11381.55	57.58	74.00	-16.42	41.49	10.68	38.78	33.37	165	199	Peak	VERTICAL

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15540.29	58.60	74.00	-15.40	41.58	12.58	38.14	33.70	152	330	Peak	HORIZONTAL
2	15549.94	45.29	54.00	-8.71	28.32	12.58	38.12	33.73	152	330	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15535.71	46.47	54.00	-7.53	29.45	12.58	38.14	33.70	148	327	Average	VERTICAL
2	15542.56	59.09	74.00	-14.91	42.07	12.58	38.14	33.70	148	327	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor		A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg				
1	15596.70	59.20	74.00	-14.80	42.34	12.58	38.03	33.75	151	8	Peak	HORIZONTAL			
2	15599.04	47.03	54.00	-6.97	30.20	12.58	38.03	33.78	151	8	Average	HORIZONTAL			

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor		A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg				
1	15595.45	45.46	54.00	-8.54	28.60	12.58	38.03	33.75	153	311	Average	VERTICAL			
2	15604.62	57.73	74.00	-16.27	40.90	12.58	38.03	33.78	153	311	Peak	VERTICAL			



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15718.88	45.37	54.00	-8.63	28.84	12.57	37.84	33.88	151	274	Average	HORIZONTAL
2	15721.06	58.15	74.00	-15.85	41.62	12.57	37.84	33.88	151	274	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15724.17	59.08	74.00	-14.92	42.55	12.57	37.84	33.88	150	285	Peak	VERTICAL
2	15727.50	45.31	54.00	-8.69	28.80	12.57	37.84	33.90	150	285	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15778.33	47.22	54.00	-6.78	30.84	12.57	37.76	33.95	150	250	Average	HORIZONTAL	
2	15780.54	60.67	74.00	-13.33	44.29	12.57	37.76	33.95	150	250	Peak	HORIZONTAL	

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15775.22	45.95	54.00	-8.05	29.55	12.57	37.76	33.93	152	263	Average	VERTICAL	
2	15776.63	58.54	74.00	-15.46	42.14	12.57	37.76	33.93	152	263	Peak	VERTICAL	



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10600.26	55.12	74.00	-18.88	40.19	10.16	38.40	33.63	157	169	Peak	HORIZONTAL
2	10609.29	42.53	54.00	-11.47	27.56	10.19	38.40	33.62	157	169	Average	HORIZONTAL
3	15895.64	57.93	74.00	-16.07	41.84	12.57	37.57	34.05	158	157	Peak	HORIZONTAL
4	15900.32	44.19	54.00	-9.81	28.10	12.57	37.57	34.05	158	157	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10607.05	43.02	54.00	-10.98	28.05	10.19	38.40	33.62	157	180	Average	VERTICAL
2	10607.12	54.86	74.00	-19.14	39.89	10.19	38.40	33.62	157	180	Peak	VERTICAL
3	15904.58	59.37	74.00	-14.63	43.31	12.57	37.54	34.05	159	190	Peak	VERTICAL
4	15905.87	45.74	54.00	-8.26	29.72	12.56	37.54	34.08	159	190	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10642.98	56.15	74.00	-17.85	41.14	10.21	38.40	33.60	155	126	Peak	HORIZONTAL
2	10646.54	42.95	54.00	-11.05	27.94	10.21	38.40	33.60	155	126	Average	HORIZONTAL
3	15954.52	57.79	74.00	-16.21	41.87	12.56	37.46	34.10	151	114	Peak	HORIZONTAL
4	15957.12	44.80	54.00	-9.20	28.91	12.56	37.46	34.13	151	114	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10637.95	55.81	74.00	-18.19	40.80	10.21	38.40	33.60	156	144	Peak	VERTICAL
2	10645.45	43.11	54.00	-10.89	28.10	10.21	38.40	33.60	156	144	Average	VERTICAL
3	15954.46	58.61	74.00	-15.39	42.69	12.56	37.46	34.10	153	100	Peak	VERTICAL
4	15960.71	44.85	54.00	-9.15	28.96	12.56	37.46	34.13	153	100	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10997.72	57.01	74.00	-16.99	41.44	10.55	38.40	33.38	154	71 Peak	HORIZONTAL
2	10999.62	43.59	54.00	-10.41	28.02	10.55	38.40	33.38	154	71 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11006.31	43.49	54.00	-10.51	27.90	10.55	38.42	33.38	154	89 Average	VERTICAL
2	11009.55	55.94	74.00	-18.06	40.34	10.56	38.42	33.38	154	89 Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11159.87	59.48	74.00	-14.52	43.69	10.60	38.57	33.38	151	14	Peak	HORIZONTAL
2	11161.92	46.31	54.00	-7.69	30.51	10.61	38.57	33.38	151	14	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11159.58	56.73	74.00	-17.27	40.94	10.60	38.57	33.38	151	82	Peak	VERTICAL
2	11160.96	44.57	54.00	-9.43	28.78	10.60	38.57	33.38	151	82	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11391.57	57.25	74.00	-16.75	41.15	10.69	38.78	33.37	150	81	Peak	HORIZONTAL
2	11393.33	44.39	54.00	-9.61	28.29	10.69	38.78	33.37	150	81	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11396.25	58.60	74.00	-15.40	42.48	10.69	38.80	33.37	151	60	Peak	VERTICAL
2	11398.56	45.34	54.00	-8.66	29.22	10.69	38.80	33.37	151	60	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11484.36	56.89	74.00	-17.11	40.67	10.71	38.88	33.37	153	156	Peak	HORIZONTAL
2	11485.35	44.42	54.00	-9.58	28.20	10.71	38.88	33.37	153	156	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11486.03	44.29	54.00	-9.71	28.07	10.71	38.88	33.37	153	133	Average	VERTICAL
2	11489.04	57.15	74.00	-16.85	40.93	10.71	38.88	33.37	153	133	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11572.02	51.80	54.00	-2.20	35.49	10.76	38.94	33.39	161	295	Average	HORIZONTAL
2	11575.64	65.45	74.00	-8.55	49.14	10.76	38.94	33.39	161	295	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11570.10	46.62	54.00	-7.38	30.31	10.76	38.94	33.39	156	359	Average	VERTICAL
2	11576.57	60.11	74.00	-13.89	43.80	10.76	38.94	33.39	156	359	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11644.94	56.82	74.00	-17.18	40.45	10.79	38.98	33.40	152	199	Peak	HORIZONTAL
2	11660.00	44.21	54.00	-9.79	27.82	10.81	38.99	33.41	152	199	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11642.34	44.17	54.00	-9.83	27.80	10.79	38.98	33.40	147	176	Average	VERTICAL
2	11657.88	56.86	74.00	-17.14	40.47	10.81	38.99	33.41	147	176	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15567.60	58.46	74.00	-15.54	41.52	12.58	38.09	33.73	154	323	Peak	HORIZONTAL
2	15574.68	45.53	54.00	-8.47	28.61	12.58	38.09	33.75	154	323	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15575.77	45.48	54.00	-8.52	28.56	12.58	38.09	33.75	152	338	Average	VERTICAL
2	15576.25	58.11	74.00	-15.89	41.19	12.58	38.09	33.75	152	338	Peak	VERTICAL



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	15684.68	45.80	54.00	-8.20	29.17	12.58	37.90	33.85	152	175	Average	HORIZONTAL
2	15685.74	58.23	74.00	-15.77	41.60	12.58	37.90	33.85	152	175	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	15690.77	45.86	54.00	-8.14	29.23	12.58	37.90	33.85	154	4	Average	VERTICAL
2	15692.44	58.90	74.00	-15.10	42.27	12.58	37.90	33.85	154	4	Peak	VERTICAL



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15803.62	57.66	74.00	-16.34	41.37	12.57	37.70	33.98	155	222	Peak	HORIZONTAL
2	15805.03	44.91	54.00	-9.09	28.62	12.57	37.70	33.98	155	222	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15800.64	57.89	74.00	-16.11	41.57	12.57	37.70	33.95	153	193	Peak	VERTICAL
2	15805.71	45.37	54.00	-8.63	29.08	12.57	37.70	33.98	153	193	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10618.08	56.16	74.00	-17.84	41.19	10.19	38.40	33.62	151	314	Peak	HORIZONTAL
2	10624.49	43.10	54.00	-10.90	28.13	10.19	38.40	33.62	151	314	Average	HORIZONTAL
3	15925.03	58.10	74.00	-15.90	42.11	12.56	37.51	34.08	153	295	Peak	HORIZONTAL
4	15926.35	45.01	54.00	-8.99	29.02	12.56	37.51	34.08	153	295	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10626.44	55.79	74.00	-18.21	40.78	10.21	38.40	33.60	153	256	Peak	VERTICAL
2	10627.44	43.31	54.00	-10.69	28.30	10.21	38.40	33.60	153	256	Average	VERTICAL
3	15926.12	58.43	74.00	-15.57	42.44	12.56	37.51	34.08	151	274	Peak	VERTICAL
4	15936.79	45.09	54.00	-8.91	29.15	12.56	37.48	34.10	151	274	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11012.12	56.35	74.00	-17.65	40.75	10.56	38.42	33.38	152	271	Peak		HORIZONTAL	
2	11013.43	43.38	54.00	-10.62	27.78	10.56	38.42	33.38	152	271	Average		HORIZONTAL	

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11014.71	43.55	54.00	-10.45	27.95	10.56	38.42	33.38	151	252	Average		VERTICAL	
2	11014.81	56.12	74.00	-17.88	40.52	10.56	38.42	33.38	151	252	Peak		VERTICAL	



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11095.35	56.15	74.00	-17.85	40.45	10.58	38.50	33.38	154	315	Peak	HORIZONTAL
2	11103.14	43.43	54.00	-10.57	27.73	10.58	38.50	33.38	154	315	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11092.98	56.67	74.00	-17.33	40.97	10.58	38.50	33.38	152	334	Peak	VERTICAL
2	11105.26	43.59	54.00	-10.41	27.89	10.58	38.50	33.38	152	334	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11336.57	56.85	74.00	-17.15	40.83	10.66	38.73	33.37	151	276 Peak	HORIZONTAL
2	11342.40	43.89	54.00	-10.11	27.86	10.67	38.73	33.37	151	276 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11331.70	56.76	74.00	-17.24	40.74	10.66	38.73	33.37	153	293 Peak	VERTICAL
2	11338.11	44.26	54.00	-9.74	28.24	10.66	38.73	33.37	153	293 Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11486.04	44.07	54.00	-9.93	27.85	10.71	38.88	33.37	151	208	Average	HORIZONTAL
2	11507.84	57.07	74.00	-16.93	40.82	10.72	38.90	33.37	151	208	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11493.01	57.19	74.00	-16.81	40.97	10.71	38.88	33.37	152	225	Peak	VERTICAL
2	11501.43	44.43	54.00	-9.57	28.18	10.72	38.90	33.37	152	225	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11585.77	44.25	54.00	-9.75	27.93	10.76	38.95	33.39	152	238	Average	HORIZONTAL
2	11589.68	57.29	74.00	-16.71	40.97	10.76	38.95	33.39	152	238	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11580.22	44.11	54.00	-9.89	27.80	10.76	38.94	33.39	152	215	Average	VERTICAL
2	11581.22	56.99	74.00	-17.01	40.68	10.76	38.94	33.39	152	215	Peak	VERTICAL



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	15632.02	58.56	74.00	-15.44	41.80	12.58	37.98	33.80	152	277	Peak	HORIZONTAL
2	15635.22	45.54	54.00	-8.46	28.78	12.58	37.98	33.80	152	277	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	15626.54	45.63	54.00	-8.37	28.84	12.58	38.01	33.80	154	253	Average	VERTICAL
2	15630.67	59.14	74.00	-14.86	42.38	12.58	37.98	33.80	154	253	Peak	VERTICAL



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB			
1	15869.65	58.47	74.00	-15.53	42.34	12.57	37.59	34.03	153	277 Peak	HORIZONTAL
2	15878.56	45.23	54.00	-8.77	29.10	12.57	37.59	34.03	153	277 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB			
1	15865.64	57.84	74.00	-16.16	41.68	12.57	37.62	34.03	154	257 Peak	VERTICAL
2	15877.56	45.38	54.00	-8.62	29.25	12.57	37.59	34.03	154	257 Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11059.81	56.48	74.00	-17.52	40.81	10.58	38.47	33.38	150	319 Peak	HORIZONTAL
2	11067.50	43.24	54.00	-10.76	27.57	10.58	38.47	33.38	150	319 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11056.15	56.45	74.00	-17.55	40.79	10.57	38.47	33.38	151	298 Peak	VERTICAL
2	11058.94	43.44	54.00	-10.56	27.78	10.57	38.47	33.38	151	298 Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11211.06	43.12	54.00	-10.88	27.26	10.62	38.62	33.38	153	315	Average	HORIZONTAL	
2	11225.54	57.30	74.00	-16.70	41.42	10.63	38.63	33.38	153	315	Peak	HORIZONTAL	

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11211.15	56.37	74.00	-17.63	40.51	10.62	38.62	33.38	152	339	Peak	VERTICAL	
2	11226.73	43.37	54.00	-10.63	27.49	10.63	38.63	33.38	152	339	Average	VERTICAL	



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11569.87	56.78	74.00	-17.22	40.47	10.76	38.94	33.39	154	298	Peak	HORIZONTAL
2	11574.84	44.25	54.00	-9.75	27.94	10.76	38.94	33.39	154	298	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11533.49	57.08	74.00	-16.92	40.81	10.73	38.92	33.38	153	314	Peak	VERTICAL
2	11549.52	44.32	54.00	-9.68	28.02	10.75	38.93	33.38	153	314	Average	VERTICAL



## Straddle Channel

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

## Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11439.42	52.78	54.00	-1.22	36.63	10.69	38.83	33.37	152	290	Average	HORIZONTAL
2	11443.59	67.80	74.00	-6.20	51.64	10.70	38.83	33.37	152	290	Peak	HORIZONTAL

## Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11437.21	50.07	54.00	-3.93	33.92	10.69	38.83	33.37	153	225	Average	VERTICAL
2	11437.37	63.53	74.00	-10.47	47.38	10.69	38.83	33.37	153	225	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11426.49	48.88	54.00	-5.12	32.74	10.69	38.82	33.37	152	198	Average	HORIZONTAL
2	11429.29	61.13	74.00	-12.87	44.99	10.69	38.82	33.37	152	198	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11430.18	51.74	54.00	-2.26	35.59	10.69	38.83	33.37	157	296	Average	VERTICAL
2	11434.58	64.35	74.00	-9.65	48.20	10.69	38.83	33.37	157	296	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 138 / Chain 1
Test Date	Jul. 30, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 1TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11394.90	48.49	54.00	-5.51	32.39	10.69	38.78	33.37	152	292	Average	HORIZONTAL
2	11396.75	61.08	74.00	-12.92	44.96	10.69	38.80	33.37	152	292	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11393.46	45.15	54.00	-8.85	29.05	10.69	38.78	33.37	150	32	Average	VERTICAL
2	11398.67	57.97	74.00	-16.03	41.85	10.69	38.80	33.37	150	32	Peak	VERTICAL

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15534.68	59.44	74.00	-14.56	42.42	12.58	38.14	33.70	149	1	Peak	HORIZONTAL
2	15540.45	47.17	54.00	-6.83	30.15	12.58	38.14	33.70	149	1	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15530.54	60.48	74.00	-13.52	43.46	12.58	38.14	33.70	153	1	Peak	VERTICAL
2	15540.99	47.34	54.00	-6.66	30.32	12.58	38.14	33.70	153	1	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15602.98	47.29	54.00	-6.71	30.46	12.58	38.03	33.78	157	140	Average	HORIZONTAL
2	15604.84	59.78	74.00	-14.22	42.95	12.58	38.03	33.78	157	140	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15596.70	47.63	54.00	-6.37	30.77	12.58	38.03	33.75	165	61	Average	VERTICAL
2	15598.43	60.89	74.00	-13.11	44.03	12.58	38.03	33.75	165	61	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15710.71	59.42	74.00	-14.58	42.86	12.57	37.87	33.88	152	209	Peak	HORIZONTAL
2	15718.01	47.21	54.00	-6.79	30.68	12.57	37.84	33.88	152	209	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15714.65	47.32	54.00	-6.68	30.79	12.57	37.84	33.88	157	247	Average	VERTICAL
2	15716.51	59.36	74.00	-14.64	42.83	12.57	37.84	33.88	157	247	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15777.63	50.70	54.00	-3.30	34.32	12.57	37.76	33.95	158	191	Average	HORIZONTAL
2	15777.76	64.11	74.00	-9.89	47.73	12.57	37.76	33.95	158	191	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15774.87	61.69	74.00	-12.31	45.29	12.57	37.76	33.93	148	155	Peak	VERTICAL
2	15779.46	48.91	54.00	-5.09	32.53	12.57	37.76	33.95	148	155	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm	deg	
1	10599.26	46.49	54.00	-7.51	31.56	10.16	38.40	33.63	161	347	Average	HORIZONTAL
2	10599.84	58.98	74.00	-15.02	44.05	10.16	38.40	33.63	161	347	Peak	HORIZONTAL
3	15899.74	48.60	54.00	-5.40	32.51	12.57	37.57	34.05	129	314	Average	HORIZONTAL
4	15899.97	62.40	74.00	-11.60	46.31	12.57	37.57	34.05	129	314	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm	deg	
1	10599.33	59.46	74.00	-14.54	44.53	10.16	38.40	33.63	150	231	Peak	VERTICAL
2	10599.39	46.78	54.00	-7.22	31.85	10.16	38.40	33.63	150	231	Average	VERTICAL
3	15892.47	59.54	74.00	-14.46	43.45	12.57	37.57	34.05	153	178	Peak	VERTICAL
4	15900.00	47.00	54.00	-7.00	30.91	12.57	37.57	34.05	153	178	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10637.08	45.04	54.00	-8.96	30.03	10.21	38.40	33.60	156	199	Average	HORIZONTAL
2	10648.56	57.22	74.00	-16.78	42.21	10.21	38.40	33.60	156	199	Peak	HORIZONTAL
3	15958.62	58.51	74.00	-15.49	42.62	12.56	37.46	34.13	163	94	Peak	HORIZONTAL
4	15962.60	46.43	54.00	-7.57	30.54	12.56	37.46	34.13	163	94	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10634.94	57.38	74.00	-16.62	42.37	10.21	38.40	33.60	147	109	Peak	VERTICAL
2	10636.83	45.09	54.00	-8.91	30.08	10.21	38.40	33.60	147	109	Average	VERTICAL
3	15960.48	59.11	74.00	-14.89	43.22	12.56	37.46	34.13	171	202	Peak	VERTICAL
4	15961.70	46.24	54.00	-7.76	30.35	12.56	37.46	34.13	171	202	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11007.15	45.30	54.00	-8.70	29.71	10.55	38.42	33.38	142	90	Average	HORIZONTAL
2	11008.56	57.62	74.00	-16.38	42.03	10.55	38.42	33.38	142	90	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10991.76	57.25	74.00	-16.75	41.68	10.55	38.40	33.38	165	198	Peak	VERTICAL
2	11009.74	45.27	54.00	-8.73	29.67	10.56	38.42	33.38	165	198	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preampl	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB	dB/m	cm	
1	11159.33	58.81	74.00	-15.19	43.02	10.60	38.57	33.38	157	306	Peak	HORIZONTAL
2	11159.49	47.13	54.00	-6.87	31.34	10.60	38.57	33.38	157	306	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preampl	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB	dB/m	cm	
1	11159.52	58.86	74.00	-15.14	43.07	10.60	38.57	33.38	160	307	Peak	VERTICAL
2	11161.86	46.14	54.00	-7.86	30.34	10.61	38.57	33.38	160	307	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11391.54	57.61	74.00	-16.39	41.51	10.69	38.78	33.37	154	267	Peak	HORIZONTAL
2	11391.63	44.76	54.00	-9.24	28.66	10.69	38.78	33.37	154	267	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11398.01	57.65	74.00	-16.35	41.53	10.69	38.80	33.37	170	213	Peak	VERTICAL
2	11402.28	44.35	54.00	-9.65	28.23	10.69	38.80	33.37	170	213	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11489.68	45.35	54.00	-8.65	29.13	10.71	38.88	33.37	167	128	Average	HORIZONTAL
2	11492.53	60.18	74.00	-13.82	43.96	10.71	38.88	33.37	167	128	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11486.79	58.82	74.00	-15.18	42.60	10.71	38.88	33.37	165	144	Peak	VERTICAL
2	11489.39	45.06	54.00	-8.94	28.84	10.71	38.88	33.37	165	144	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11572.18	65.58	74.00	-8.42	49.27	10.76	38.94	33.39	167	298	Peak	HORIZONTAL
2	11572.21	52.21	54.00	-1.79	35.90	10.76	38.94	33.39	167	298	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11569.71	48.09	54.00	-5.91	31.78	10.75	38.94	33.38	171	207	Average	VERTICAL
2	11574.78	61.37	74.00	-12.63	45.06	10.76	38.94	33.39	171	207	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	dB	cm	deg		
1	11653.81	44.23	54.00	-9.77	27.84	10.81	38.99	33.41	157	284	Average	HORIZONTAL
2	11658.62	57.08	74.00	-16.92	40.69	10.81	38.99	33.41	157	284	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	dB	cm	deg		
1	11644.68	44.21	54.00	-9.79	27.84	10.79	38.98	33.40	157	307	Average	VERTICAL
2	11655.26	57.21	74.00	-16.79	40.82	10.81	38.99	33.41	157	307	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15574.74	59.37	74.00	-14.63	42.45	12.58	38.09	33.75	159	238	Peak	HORIZONTAL
2	15578.46	45.50	54.00	-8.50	28.61	12.58	38.06	33.75	159	238	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15571.99	58.46	74.00	-15.54	41.52	12.58	38.09	33.73	157	262	Peak	VERTICAL
2	15572.63	45.36	54.00	-8.64	28.42	12.58	38.09	33.73	157	262	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15685.26	60.42	74.00	-13.58	43.79	12.58	37.90	33.85	151	191	Peak	HORIZONTAL
2	15698.14	47.12	54.00	-6.88	30.52	12.58	37.87	33.85	151	191	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15683.75	58.80	74.00	-15.20	42.17	12.58	37.90	33.85	153	214	Peak	VERTICAL
2	15698.01	45.75	54.00	-8.25	29.15	12.58	37.87	33.85	153	214	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15807.31	61.19	74.00	-12.81	44.90	12.57	37.70	33.98	160	324	Peak	HORIZONTAL
2	15809.68	47.86	54.00	-6.14	31.57	12.57	37.70	33.98	160	324	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15802.12	45.18	54.00	-8.82	28.86	12.57	37.70	33.95	158	306	Average	VERTICAL
2	15816.63	58.21	74.00	-15.79	41.94	12.57	37.68	33.98	158	306	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBm			Loss	Factor	Factor	cm	deg		
1	10612.02	43.06	54.00	-10.94	28.09	10.19	38.40	33.62	158	275	Average	HORIZONTAL
2	10620.54	55.54	74.00	-18.46	40.57	10.19	38.40	33.62	158	275	Peak	HORIZONTAL
3	15929.68	45.09	54.00	-8.91	29.10	12.56	37.51	34.08	152	279	Average	HORIZONTAL
4	15934.52	59.06	74.00	-14.94	43.12	12.56	37.48	34.10	152	279	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBm			Loss	Factor	Factor	cm	deg		
1	10610.16	55.93	74.00	-18.07	40.96	10.19	38.40	33.62	151	282	Peak	VERTICAL
2	10618.75	42.78	54.00	-11.22	27.81	10.19	38.40	33.62	151	282	Average	VERTICAL
3	15933.43	57.99	74.00	-16.01	42.02	12.56	37.51	34.10	154	258	Peak	VERTICAL
4	15933.49	45.09	54.00	-8.91	29.12	12.56	37.51	34.10	154	258	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11023.69	43.35	54.00	-10.65	27.74	10.56	38.43	33.38	149	304	Average	HORIZONTAL
2	11027.47	56.74	74.00	-17.26	41.13	10.56	38.43	33.38	149	304	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11021.86	43.29	54.00	-10.71	27.68	10.56	38.43	33.38	187	288	Average	VERTICAL
2	11028.65	56.53	74.00	-17.47	40.92	10.56	38.43	33.38	187	288	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB	dB/m	
1	11094.07	55.91	74.00	-18.09	40.21	10.58	38.50	33.38	154	284	Peak	HORIZONTAL
2	11097.08	43.22	54.00	-10.78	27.52	10.58	38.50	33.38	154	284	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB	dB/m	
1	11101.63	43.08	54.00	-10.92	27.38	10.58	38.50	33.38	152	306	Average	VERTICAL
2	11106.70	56.36	74.00	-17.64	40.64	10.58	38.52	33.38	152	306	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm			
1	11344.62	44.89	54.00	-9.11	28.84	10.67	38.75	33.37	155	323	Average	HORIZONTAL
2	11344.65	57.46	74.00	-16.54	41.41	10.67	38.75	33.37	155	323	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm			
1	11346.70	57.69	74.00	-16.31	41.64	10.67	38.75	33.37	152	303	Peak	VERTICAL
2	11347.69	43.68	54.00	-10.32	27.63	10.67	38.75	33.37	152	303	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11500.93	44.19	54.00	-9.81	27.94	10.72	38.90	33.37	158	309	Average	HORIZONTAL
2	11511.99	56.59	74.00	-17.41	40.34	10.72	38.90	33.37	158	309	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11502.15	43.90	54.00	-10.10	27.65	10.72	38.90	33.37	156	329	Average	VERTICAL
2	11511.57	57.40	74.00	-16.60	41.15	10.72	38.90	33.37	156	329	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11589.81	45.78	54.00	-8.22	29.46	10.76	38.95	33.39	154	316	Average	HORIZONTAL
2	11594.74	59.00	74.00	-15.00	42.68	10.76	38.95	33.39	154	316	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11582.34	57.01	74.00	-16.99	40.70	10.76	38.94	33.39	153	295	Peak	VERTICAL
2	11587.63	43.75	54.00	-10.25	27.43	10.76	38.95	33.39	153	295	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15627.63	59.10	74.00	-14.90	42.31	12.58	38.01	33.80	151	322	Peak	HORIZONTAL
2	15635.51	45.54	54.00	-8.46	28.78	12.58	37.98	33.80	151	322	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15623.94	58.58	74.00	-15.42	41.77	12.58	38.01	33.78	151	301	Peak	VERTICAL
2	15634.46	45.39	54.00	-8.61	28.63	12.58	37.98	33.80	151	301	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15866.57	58.11	74.00	-15.89	41.98	12.57	37.59	34.03	154	279	Peak	HORIZONTAL
2	15870.54	45.08	54.00	-8.92	28.95	12.57	37.59	34.03	154	279	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15863.85	45.11	54.00	-8.89	28.95	12.57	37.62	34.03	160	259	Average	VERTICAL
2	15864.90	58.06	74.00	-15.94	41.90	12.57	37.62	34.03	160	259	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11057.31	43.30	54.00	-10.70	27.64	10.57	38.47	33.38	155	236	Average	HORIZONTAL
2	11065.10	56.12	74.00	-17.88	40.45	10.58	38.47	33.38	155	236	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11053.40	42.91	54.00	-11.09	27.27	10.57	38.45	33.38	153	211	Average	VERTICAL
2	11069.74	56.45	74.00	-17.55	40.78	10.58	38.47	33.38	153	211	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11224.52	55.59	74.00	-18.41	39.72	10.63	38.62	33.38	154	194	Peak	HORIZONTAL
2	11227.47	43.22	54.00	-10.78	27.34	10.63	38.63	33.38	154	194	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11219.10	43.02	54.00	-10.98	27.15	10.63	38.62	33.38	154	222	Average	VERTICAL
2	11222.40	55.96	74.00	-18.04	40.09	10.63	38.62	33.38	154	222	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11554.23	43.94	54.00	-10.06	27.64	10.75	38.93	33.38	150	131	Average	HORIZONTAL
2	11554.52	56.94	74.00	-17.06	40.64	10.75	38.93	33.38	150	131	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11546.83	56.56	74.00	-17.44	40.27	10.75	38.92	33.38	160	151	Peak	VERTICAL
2	11553.40	43.66	54.00	-10.34	27.36	10.75	38.93	33.38	160	151	Average	VERTICAL



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**Straddle Channel**

<b>Temperature</b>	23°C	<b>Humidity</b>	61%
<b>Test Engineer</b>	Paul Chen	<b>Configurations</b>	IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1 + Chain 2
<b>Test Date</b>	Aug. 04, 2015		
<b>Test Mode</b>	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
1	11437.31	67.10	74.00	-6.90	50.95	10.69	38.83	33.37	162	128	Peak	HORIZONTAL
2	11439.58	52.99	54.00	-1.01	36.84	10.69	38.83	33.37	162	128	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
1	11437.28	65.71	74.00	-8.29	49.56	10.69	38.83	33.37	163	260	Peak	VERTICAL
2	11439.46	51.98	54.00	-2.02	35.83	10.69	38.83	33.37	163	260	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11427.15	50.85	54.00	-3.15	34.71	10.69	38.82	33.37		175	259	Average
2	11427.15	64.05	74.00	-9.95	47.91	10.69	38.82	33.37		175	259	Peak

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11427.28	46.58	54.00	-7.42	30.44	10.69	38.82	33.37		160	285	Average
2	11430.00	59.28	74.00	-14.72	43.13	10.69	38.83	33.37		160	285	Peak



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 138 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11389.17	60.42	74.00	-13.58	44.33	10.68	38.78	33.37	151	124	Peak	HORIZONTAL
2	11389.49	47.67	54.00	-6.33	31.58	10.68	38.78	33.37	151	124	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11388.53	58.00	74.00	-16.00	41.91	10.68	38.78	33.37	150	159	Peak	VERTICAL
2	11388.81	44.73	54.00	-9.27	28.64	10.68	38.78	33.37	150	159	Average	VERTICAL

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



## &lt;For Beamforming Mode&gt;

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	/m			dB	dBuV	dB	dB/m	dB	cm	
1	15530.22	60.02	74.00	-13.98	43.00	12.58	38.14	33.70	123	150	Peak	HORIZONTAL
2	15547.67	46.83	54.00	-7.17	29.83	12.58	38.12	33.70	123	150	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	/m			dB	dBuV	dB	dB/m	dB	cm	
1	15544.66	59.80	74.00	-14.20	42.80	12.58	38.12	33.70	131	230	Peak	VERTICAL
2	15546.08	46.96	54.00	-7.04	29.96	12.58	38.12	33.70	131	230	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	15599.97	48.38	54.00	-5.62	31.55	12.58	38.03	33.78	148	217	Average	HORIZONTAL
2	15605.73	61.75	74.00	-12.25	44.92	12.58	38.03	33.78	148	217	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	15590.97	46.90	54.00	-7.10	30.01	12.58	38.06	33.75	163	312	Average	VERTICAL
2	15594.04	59.76	74.00	-14.24	42.87	12.58	38.06	33.75	163	312	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15710.71	59.79	74.00	-14.21	43.23	12.57	37.87	33.88	137	162	Peak	HORIZONTAL
2	15724.60	47.52	54.00	-6.48	30.99	12.57	37.84	33.88	137	162	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15720.29	59.44	74.00	-14.56	42.91	12.57	37.84	33.88	155	258	Peak	VERTICAL
2	15720.75	46.42	54.00	-7.58	29.89	12.57	37.84	33.88	155	258	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15781.25	60.25	74.00	-13.75	43.87	12.57	37.76	33.95	168	243	Peak	HORIZONTAL
2	15783.21	48.04	54.00	-5.96	31.69	12.57	37.73	33.95	168	243	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15779.80	46.89	54.00	-7.11	30.51	12.57	37.76	33.95	158	135	Average	VERTICAL
2	15785.82	60.00	74.00	-14.00	43.65	12.57	37.73	33.95	158	135	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10593.46	43.42	54.00	-10.58	28.49	10.16	38.40	33.63	146	237	Average	HORIZONTAL
2	10599.48	56.75	74.00	-17.25	41.82	10.16	38.40	33.63	146	237	Peak	HORIZONTAL
3	15893.49	60.51	74.00	-13.49	44.42	12.57	37.57	34.05	162	183	Peak	HORIZONTAL
4	15894.47	47.01	54.00	-6.99	30.92	12.57	37.57	34.05	162	183	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10590.16	43.44	54.00	-10.56	28.51	10.16	38.40	33.63	169	192	Average	VERTICAL
2	10598.75	57.07	74.00	-16.93	42.14	10.16	38.40	33.63	169	192	Peak	VERTICAL
3	15893.08	47.03	54.00	-6.97	30.94	12.57	37.57	34.05	151	259	Average	VERTICAL
4	15900.12	60.04	74.00	-13.96	43.95	12.57	37.57	34.05	151	259	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10634.79	56.33	74.00	-17.67	41.32	10.21	38.40	33.60	168	274	Peak	HORIZONTAL
2	10648.80	43.58	54.00	-10.42	28.57	10.21	38.40	33.60	168	274	Average	HORIZONTAL
3	15958.41	59.31	74.00	-14.69	43.42	12.56	37.46	34.13	186	320	Peak	HORIZONTAL
4	15965.21	46.40	54.00	-7.60	30.51	12.56	37.46	34.13	186	320	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10633.03	56.29	74.00	-17.71	41.28	10.21	38.40	33.60	150	298	Peak	VERTICAL
2	10640.26	43.55	54.00	-10.45	28.54	10.21	38.40	33.60	150	298	Average	VERTICAL
3	15959.48	46.34	54.00	-7.66	30.45	12.56	37.46	34.13	169	249	Average	VERTICAL
4	15963.39	59.45	74.00	-14.55	43.56	12.56	37.46	34.13	169	249	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10998.00	56.32	74.00	-17.68	40.75	10.55	38.40	33.38	158	332	Peak	HORIZONTAL
2	11001.36	43.75	54.00	-10.25	28.18	10.55	38.40	33.38	158	332	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10997.57	56.90	74.00	-17.10	41.33	10.55	38.40	33.38	176	237	Peak	VERTICAL
2	11008.68	43.69	54.00	-10.31	28.10	10.55	38.42	33.38	176	237	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11163.39	56.73	74.00	-17.27	40.93	10.61	38.57	33.38	171	277	Peak	HORIZONTAL
2	11165.07	44.14	54.00	-9.86	28.34	10.61	38.57	33.38	171	277	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11154.50	57.53	74.00	-16.47	41.76	10.60	38.55	33.38	152	199	Peak	VERTICAL
2	11155.51	44.12	54.00	-9.88	28.35	10.60	38.55	33.38	152	199	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11399.48	44.62	54.00	-9.38	28.50	10.69	38.80	33.37	153	75	Average	HORIZONTAL
2	11408.25	57.27	74.00	-16.73	41.15	10.69	38.80	33.37	153	75	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11394.33	44.57	54.00	-9.43	28.47	10.69	38.78	33.37	168	161	Average	VERTICAL
2	11398.96	57.85	74.00	-16.15	41.73	10.69	38.80	33.37	168	161	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11485.28	56.52	74.00	-17.48	40.30	10.71	38.88	33.37	138	220	Peak	HORIZONTAL
2	11487.97	43.82	54.00	-10.18	27.60	10.71	38.88	33.37	138	220	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11482.79	56.26	74.00	-17.74	40.04	10.71	38.88	33.37	162	86	Peak	VERTICAL
2	11495.67	43.92	54.00	-10.08	27.69	10.72	38.88	33.37	162	86	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11566.61	58.35	74.00	-15.65	42.04	10.75	38.94	33.38	161	166	Peak	HORIZONTAL
2	11572.89	46.61	54.00	-7.39	30.30	10.76	38.94	33.39	161	166	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11565.77	57.61	74.00	-16.39	41.30	10.75	38.94	33.38	160	34	Peak	VERTICAL
2	11567.97	44.58	54.00	-9.42	28.27	10.75	38.94	33.38	160	34	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	11656.51	58.20	74.00	-15.80	41.81	10.81	38.99	33.41	148	146	Peak	HORIZONTAL
2	11658.65	44.53	54.00	-9.47	28.14	10.81	38.99	33.41	148	146	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	11643.23	58.02	74.00	-15.98	41.65	10.79	38.98	33.40	146	93	Peak	VERTICAL
2	11649.36	44.54	54.00	-9.46	28.16	10.81	38.98	33.41	146	93	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15573.59	59.65	74.00	-14.35	42.73	12.58	38.09	33.75	147	183	Peak	HORIZONTAL
2	15574.05	46.84	54.00	-7.16	29.92	12.58	38.09	33.75	147	183	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15561.84	46.91	54.00	-7.09	29.97	12.58	38.09	33.73	158	292	Average	VERTICAL
2	15564.50	59.85	74.00	-14.15	42.91	12.58	38.09	33.73	158	292	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15684.38	46.60	54.00	-7.40	29.97	12.58	37.90	33.85	140	110	Average	HORIZONTAL
2	15691.65	60.00	74.00	-14.00	43.37	12.58	37.90	33.85	140	110	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15682.30	46.59	54.00	-7.41	29.96	12.58	37.90	33.85	139	221	Average	VERTICAL
2	15690.32	59.50	74.00	-14.50	42.87	12.58	37.90	33.85	139	221	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15814.69	46.77	54.00	-7.23	30.48	12.57	37.70	33.98	157	150	Average	HORIZONTAL
2	15816.22	59.47	74.00	-14.53	43.20	12.57	37.68	33.98	157	150	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15801.92	59.72	74.00	-14.28	43.40	12.57	37.70	33.95	146	272	Peak	VERTICAL
2	15809.83	46.74	54.00	-7.26	30.45	12.57	37.70	33.98	146	272	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm	deg	
1	10614.64	43.48	54.00	-10.52	28.51	10.19	38.40	33.62	157	216	Average	HORIZONTAL
2	10616.61	57.10	74.00	-16.90	42.13	10.19	38.40	33.62	157	216	Peak	HORIZONTAL
3	15922.71	46.61	54.00	-7.39	30.62	12.56	37.51	34.08	143	185	Average	HORIZONTAL
4	15923.55	60.94	74.00	-13.06	44.95	12.56	37.51	34.08	143	185	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm	deg	
1	10619.88	43.49	54.00	-10.51	28.52	10.19	38.40	33.62	130	226	Average	VERTICAL
2	10620.03	57.31	74.00	-16.69	42.34	10.19	38.40	33.62	130	226	Peak	VERTICAL
3	15922.21	59.64	74.00	-14.36	43.65	12.56	37.51	34.08	147	268	Peak	VERTICAL
4	15925.08	46.60	54.00	-7.40	30.61	12.56	37.51	34.08	147	268	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11012.01	43.64	54.00	-10.36	28.04	10.56	38.42	33.38	143	135	Average	HORIZONTAL
2	11013.46	56.46	74.00	-17.54	40.86	10.56	38.42	33.38	143	135	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11013.60	43.76	54.00	-10.24	28.16	10.56	38.42	33.38	143	109	Average	VERTICAL
2	11028.05	56.69	74.00	-17.31	41.08	10.56	38.43	33.38	143	109	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11092.30	57.07	74.00	-16.93	41.37	10.58	38.50	33.38	146	198	Peak	HORIZONTAL
2	11101.50	44.02	54.00	-9.98	28.32	10.58	38.50	33.38	146	198	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11103.94	44.01	54.00	-9.99	28.31	10.58	38.50	33.38	155	73	Average	VERTICAL
2	11103.94	53.96	74.00	-20.04	38.26	10.58	38.50	33.38	155	73	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11336.76	57.21	74.00	-16.79	41.19	10.66	38.73	33.37	160	162	Peak	HORIZONTAL
2	11346.40	44.33	54.00	-9.67	28.28	10.67	38.75	33.37	160	162	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11330.59	44.29	54.00	-9.71	28.27	10.66	38.73	33.37	150	289	Average	VERTICAL
2	11341.65	56.84	74.00	-17.16	40.81	10.67	38.73	33.37	150	289	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11503.52	57.40	74.00	-16.60	41.15	10.72	38.90	33.37	140	303	Peak	HORIZONTAL
2	11509.42	44.13	54.00	-9.87	27.88	10.72	38.90	33.37	140	303	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11512.63	44.25	54.00	-9.75	28.00	10.72	38.90	33.37	155	192	Average	VERTICAL
2	11518.02	57.31	74.00	-16.69	41.05	10.72	38.91	33.37	155	192	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm			
1	11580.94	44.37	54.00	-9.63	28.06	10.76	38.94	33.39	161	311	Average	HORIZONTAL
2	11599.38	57.30	74.00	-16.70	40.97	10.78	38.95	33.40	161	311	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm			
1	11580.30	44.27	54.00	-9.73	27.96	10.76	38.94	33.39	169	233	Average	VERTICAL
2	11592.52	57.14	74.00	-16.86	40.82	10.76	38.95	33.39	169	233	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15630.14	59.61	74.00	-14.39	42.85	12.58	37.98	33.80	121	196	Peak	HORIZONTAL
2	15637.70	46.54	54.00	-7.46	29.78	12.58	37.98	33.80	121	196	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15637.35	46.58	54.00	-7.42	29.82	12.58	37.98	33.80	119	311	Average	VERTICAL
2	15638.80	60.19	74.00	-13.81	43.43	12.58	37.98	33.80	119	311	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15861.14	60.33	74.00	-13.67	44.17	12.57	37.62	34.03	132	252	Peak	HORIZONTAL
2	15877.44	47.03	54.00	-6.97	30.90	12.57	37.59	34.03	132	252	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15864.73	47.21	54.00	-6.79	31.05	12.57	37.62	34.03	144	348	Average	VERTICAL
2	15872.87	59.69	74.00	-14.31	43.56	12.57	37.59	34.03	144	348	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11050.39	57.06	74.00	-16.94	41.42	10.57	38.45	33.38	115	141	Peak	HORIZONTAL
2	11061.45	44.93	54.00	-9.07	29.26	10.58	38.47	33.38	115	141	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11059.80	56.63	74.00	-17.37	40.96	10.58	38.47	33.38	113	284	Peak	VERTICAL
2	11063.04	43.93	54.00	-10.07	28.26	10.58	38.47	33.38	113	284	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11211.49	44.03	54.00	-9.97	28.17	10.62	38.62	33.38	130	212	Average	HORIZONTAL
2	11222.14	57.04	74.00	-16.96	41.17	10.63	38.62	33.38	130	212	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11213.81	57.20	74.00	-16.80	41.33	10.63	38.62	33.38	132	306	Peak	VERTICAL
2	11228.31	44.13	54.00	-9.87	28.25	10.63	38.63	33.38	132	306	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11550.90	44.43	54.00	-9.57	28.13	10.75	38.93	33.38	117	116	Average	HORIZONTAL
2	11551.94	57.22	74.00	-16.78	40.92	10.75	38.93	33.38	117	116	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11556.25	57.73	74.00	-16.27	41.43	10.75	38.93	33.38	134	46	Peak	VERTICAL
2	11557.47	45.06	54.00	-8.94	28.76	10.75	38.93	33.38	134	46	Average	VERTICAL



## Straddle Channel

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

## Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	dB	cm	deg		
1	11439.02	51.52	54.00	-2.48	35.37	10.69	38.83	33.37	158	319	Average	HORIZONTAL
2	11440.38	63.17	74.00	-10.83	47.02	10.69	38.83	33.37	158	319	Peak	HORIZONTAL

## Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	dB	cm	deg		
1	11432.53	51.07	54.00	-2.93	34.92	10.69	38.83	33.37	174	144	Average	VERTICAL
2	11436.50	64.29	74.00	-9.71	48.14	10.69	38.83	33.37	174	144	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm			
1	11410.13	47.35	54.00	-6.65	31.23	10.69	38.80	33.37	128	270	Average	HORIZONTAL
2	11418.55	59.06	74.00	-14.94	42.92	10.69	38.82	33.37	128	270	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm			
1	11414.88	47.32	54.00	-6.68	31.18	10.69	38.82	33.37	114	69	Average	VERTICAL
2	11419.65	59.13	74.00	-14.87	42.99	10.69	38.82	33.37	114	69	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 138 / Chain 1 + Chain 2
Test Date	Jul. 18, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11371.95	57.54	74.00	-16.46	41.46	10.68	38.77	33.37	147	182	Peak	HORIZONTAL
2	11377.05	44.68	54.00	-9.32	28.60	10.68	38.77	33.37	147	182	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11372.85	44.56	54.00	-9.44	28.48	10.68	38.77	33.37	158	250	Average	VERTICAL
2	11389.46	58.09	74.00	-15.91	42.00	10.68	38.78	33.37	158	250	Peak	VERTICAL

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15535.99	47.29	54.00	-6.71	30.27	12.58	38.14	33.70	137	239	Average	HORIZONTAL
2	15543.49	59.46	74.00	-14.54	42.44	12.58	38.14	33.70	137	239	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15533.01	59.58	74.00	-14.42	42.56	12.58	38.14	33.70	156	23	Peak	VERTICAL
2	15547.28	47.24	54.00	-6.76	30.24	12.58	38.12	33.70	156	23	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15605.51	48.08	54.00	-5.92	31.25	12.58	38.03	33.78	177	52	Average	HORIZONTAL
2	15607.50	61.15	74.00	-12.85	44.32	12.58	38.03	33.78	177	52	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15592.18	59.89	74.00	-14.11	43.00	12.58	38.06	33.75	156	134	Peak	VERTICAL
2	15602.95	47.18	54.00	-6.82	30.35	12.58	38.03	33.78	156	134	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15711.54	46.97	54.00	-7.03	30.41	12.57	37.87	33.88	197	173	Average	HORIZONTAL
2	15713.49	59.46	74.00	-14.54	42.90	12.57	37.87	33.88	197	173	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15712.18	59.16	74.00	-14.84	42.60	12.57	37.87	33.88	139	248	Peak	VERTICAL
2	15715.38	47.10	54.00	-6.90	30.57	12.57	37.84	33.88	139	248	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15779.57	47.02	54.00	-6.98	30.64	12.57	37.76	33.95	173	63	Average	HORIZONTAL
2	15783.99	59.83	74.00	-14.17	43.48	12.57	37.73	33.95	173	63	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15777.84	59.59	74.00	-14.41	43.21	12.57	37.76	33.95	149	296	Peak	VERTICAL
2	15781.83	46.99	54.00	-7.01	30.64	12.57	37.73	33.95	149	296	Average	VERTICAL



SPORTON LAB.

Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10595.10	44.74	54.00	-9.26	29.81	10.16	38.40	33.63	148	264	Average	HORIZONTAL
2	10602.04	58.10	74.00	-15.90	43.13	10.19	38.40	33.62	148	264	Peak	HORIZONTAL
3	15903.30	46.66	54.00	-7.34	30.60	12.57	37.54	34.05	175	87	Average	HORIZONTAL
4	15904.86	60.03	74.00	-13.97	44.01	12.56	37.54	34.08	175	87	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10597.37	57.46	74.00	-16.54	42.53	10.16	38.40	33.63	171	87	Peak	VERTICAL
2	10600.45	44.87	54.00	-9.13	29.94	10.16	38.40	33.63	171	87	Average	VERTICAL
3	15896.73	58.51	74.00	-15.49	42.42	12.57	37.57	34.05	154	271	Peak	VERTICAL
4	15896.76	46.60	54.00	-7.40	30.51	12.57	37.57	34.05	154	271	Average	VERTICAL



SPORTON LAB.

Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10635.26	57.02	74.00	-16.98	42.01	10.21	38.40	33.60	156	37	Peak	HORIZONTAL
2	10640.00	44.90	54.00	-9.10	29.89	10.21	38.40	33.60	156	37	Average	HORIZONTAL
3	15957.92	46.48	54.00	-7.52	30.59	12.56	37.46	34.13	138	155	Average	HORIZONTAL
4	15963.14	58.95	74.00	-15.05	43.06	12.56	37.46	34.13	138	155	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10641.38	44.77	54.00	-9.23	29.76	10.21	38.40	33.60	124	180	Average	VERTICAL
2	10643.51	56.81	74.00	-17.19	41.80	10.21	38.40	33.60	124	180	Peak	VERTICAL
3	15955.21	46.46	54.00	-7.54	30.54	12.56	37.46	34.10	152	249	Average	VERTICAL
4	15962.95	59.44	74.00	-14.56	43.55	12.56	37.46	34.13	152	249	Peak	VERTICAL



SPORTON LAB.

Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10996.46	55.82	74.00	-18.18	40.25	10.55	38.40	33.38	161	263	Peak	HORIZONTAL
2	11003.29	45.01	54.00	-8.99	29.44	10.55	38.40	33.38	161	263	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10995.11	57.68	74.00	-16.32	42.11	10.55	38.40	33.38	144	337	Peak	VERTICAL
2	11004.86	45.35	54.00	-8.65	29.76	10.55	38.42	33.38	144	337	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11162.61	45.95	54.00	-8.05	30.15	10.61	38.57	33.38	168	24	Average	HORIZONTAL
2	11164.57	57.83	74.00	-16.17	42.03	10.61	38.57	33.38	168	24	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11156.39	58.03	74.00	-15.97	42.26	10.60	38.55	33.38	156	109	Peak	VERTICAL
2	11157.44	45.50	54.00	-8.50	29.73	10.60	38.55	33.38	156	109	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11402.44	58.24	74.00	-15.76	42.12	10.69	38.80	33.37	158	227	Peak		HORIZONTAL	
2	11402.92	45.91	54.00	-8.09	29.79	10.69	38.80	33.37	158	227	Average		HORIZONTAL	

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11399.52	45.92	54.00	-8.08	29.80	10.69	38.80	33.37	160	295	Average		VERTICAL	
2	11404.10	58.22	74.00	-15.78	42.10	10.69	38.80	33.37	160	295	Peak		VERTICAL	



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11483.08	57.53	74.00	-16.47	41.31	10.71	38.88	33.37	153	195	Peak	HORIZONTAL
2	11492.44	45.86	54.00	-8.14	29.64	10.71	38.88	33.37	153	195	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11482.37	45.87	54.00	-8.13	29.65	10.71	38.88	33.37	150	62	Average	VERTICAL
2	11494.97	57.95	74.00	-16.05	41.72	10.72	38.88	33.37	150	62	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11570.32	46.38	54.00	-7.62	30.07	10.76	38.94	33.39	140	310	Average	HORIZONTAL
2	11574.20	58.42	74.00	-15.58	42.11	10.76	38.94	33.39	140	310	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11576.06	57.88	74.00	-16.12	41.57	10.76	38.94	33.39	164	233	Peak	VERTICAL
2	11578.65	45.80	54.00	-8.20	29.49	10.76	38.94	33.39	164	233	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11654.84	46.04	54.00	-7.96	29.65	10.81	38.99	33.41	153	166	Average	HORIZONTAL
2	11655.93	57.97	74.00	-16.03	41.58	10.81	38.99	33.41	153	166	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11644.42	45.97	54.00	-8.03	29.60	10.79	38.98	33.40	148	92	Average	VERTICAL
2	11655.38	58.37	74.00	-15.63	41.98	10.81	38.99	33.41	148	92	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15562.05	59.77	74.00	-14.23	42.83	12.58	38.09	33.73	156	311	Peak	HORIZONTAL
2	15570.58	47.43	54.00	-6.57	30.49	12.58	38.09	33.73	156	311	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15557.95	59.62	74.00	-14.38	42.65	12.58	38.12	33.73	160	226	Peak	VERTICAL
2	15560.06	47.27	54.00	-6.73	30.30	12.58	38.12	33.73	160	226	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15684.81	59.44	74.00	-14.56	42.81	12.58	37.90	33.85	168	250	Peak	HORIZONTAL
2	15688.08	47.21	54.00	-6.79	30.58	12.58	37.90	33.85	168	250	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15682.63	59.58	74.00	-14.42	42.95	12.58	37.90	33.85	162	203	Peak	VERTICAL
2	15701.28	47.23	54.00	-6.77	30.67	12.57	37.87	33.88	162	203	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15792.37	46.83	54.00	-7.17	30.48	12.57	37.73	33.95	139	188	Average	HORIZONTAL
2	15818.59	58.97	74.00	-15.03	42.70	12.57	37.68	33.98	139	188	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15790.64	46.93	54.00	-7.07	30.58	12.57	37.73	33.95	149	244	Average	VERTICAL
2	15818.72	58.88	74.00	-15.12	42.61	12.57	37.68	33.98	149	244	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10607.69	45.01	54.00	-8.99	30.04	10.19	38.40	33.62	155	183	Average	HORIZONTAL
2	10637.63	57.67	74.00	-16.33	42.66	10.21	38.40	33.60	155	183	Peak	HORIZONTAL
3	15943.97	58.66	74.00	-15.34	42.72	12.56	37.48	34.10	152	160	Peak	HORIZONTAL
4	15945.00	46.58	54.00	-7.42	30.64	12.56	37.48	34.10	152	160	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10601.15	57.45	74.00	-16.55	42.48	10.19	38.40	33.62	153	328	Peak	VERTICAL
2	10610.45	45.00	54.00	-9.00	30.03	10.19	38.40	33.62	153	328	Average	VERTICAL
3	15923.59	46.70	54.00	-7.30	30.71	12.56	37.51	34.08	155	217	Average	VERTICAL
4	15928.33	59.25	74.00	-14.75	43.26	12.56	37.51	34.08	155	217	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11026.09	57.21	74.00	-16.79	41.60	10.56	38.43	33.38	149	101	Peak		HORIZONTAL	
2	11034.87	45.41	54.00	-8.59	29.79	10.57	38.43	33.38	149	101	Average		HORIZONTAL	

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11008.53	45.38	54.00	-8.62	29.79	10.55	38.42	33.38	151	83	Average		VERTICAL	
2	11038.27	57.22	74.00	-16.78	41.60	10.57	38.43	33.38	151	83	Peak		VERTICAL	



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11106.28	45.49	54.00	-8.51	29.79	10.58	38.50	33.38	174	229	Average	HORIZONTAL
2	11113.08	57.69	74.00	-16.31	41.96	10.59	38.52	33.38	174	229	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11087.24	45.41	54.00	-8.59	29.73	10.58	38.48	33.38	158	148	Average	VERTICAL
2	11095.00	57.27	74.00	-16.73	41.57	10.58	38.50	33.38	158	148	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11339.42	57.64	74.00	-16.36	41.62	10.66	38.73	33.37	164	42	Peak	HORIZONTAL
2	11347.18	45.88	54.00	-8.12	29.83	10.67	38.75	33.37	164	42	Average	HORIZONTAL

**Vertical•**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11338.01	57.28	74.00	-16.72	41.26	10.66	38.73	33.37	154	103	Peak	VERTICAL
2	11347.31	45.76	54.00	-8.24	29.71	10.67	38.75	33.37	154	103	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11505.71	57.71	74.00	-16.29	41.46	10.72	38.90	33.37	157	243	Peak	HORIZONTAL
2	11512.76	45.95	54.00	-8.05	29.70	10.72	38.90	33.37	157	243	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11518.78	57.67	74.00	-16.33	41.41	10.73	38.91	33.38	150	290	Peak	VERTICAL
2	11525.26	45.94	54.00	-8.06	29.68	10.73	38.91	33.38	150	290	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11580.64	57.85	74.00	-16.15	41.54	10.76	38.94	33.39	166	71	Peak	HORIZONTAL
2	11602.05	46.03	54.00	-7.97	29.69	10.78	38.96	33.40	166	71	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11577.69	58.09	74.00	-15.91	41.78	10.76	38.94	33.39	152	203	Peak	VERTICAL
2	11603.46	46.02	54.00	-7.98	29.68	10.78	38.96	33.40	152	203	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15615.00	58.96	74.00	-15.04	42.15	12.58	38.01	33.78	189	271	Peak	HORIZONTAL
2	15661.67	47.22	54.00	-6.78	30.52	12.58	37.95	33.83	189	271	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15649.36	58.85	74.00	-15.15	42.12	12.58	37.95	33.80	178	198	Peak	VERTICAL
2	15662.31	47.27	54.00	-6.73	30.57	12.58	37.95	33.83	178	198	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15865.38	46.80	54.00	-7.20	30.64	12.57	37.62	34.03	150	235	Average	HORIZONTAL
2	15871.41	58.22	74.00	-15.78	42.09	12.57	37.59	34.03	150	235	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15874.62	58.46	74.00	-15.54	42.33	12.57	37.59	34.03	155	162	Peak	VERTICAL
2	15890.77	46.77	54.00	-7.23	30.68	12.57	37.57	34.05	155	162	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11048.08	57.99	74.00	-16.01	42.35	10.57	38.45	33.38	148	331	Peak		HORIZONTAL	
2	11063.08	45.58	54.00	-8.42	29.91	10.58	38.47	33.38	148	331	Average		HORIZONTAL	

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11033.21	45.42	54.00	-8.58	29.81	10.56	38.43	33.38	188	259	Average		VERTICAL	
2	11062.69	57.82	74.00	-16.18	42.15	10.58	38.47	33.38	188	259	Peak		VERTICAL	



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11187.69	57.33	74.00	-16.67	41.51	10.62	38.58	33.38	160	233	Peak	HORIZONTAL
2	11251.28	45.69	54.00	-8.31	29.78	10.64	38.65	33.38	160	233	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11193.85	57.36	74.00	-16.64	41.52	10.62	38.60	33.38	169	109	Peak	VERTICAL
2	11259.49	45.72	54.00	-8.28	29.81	10.64	38.65	33.38	169	109	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11532.05	56.82	74.00	-17.18	40.55	10.73	38.92	33.38	173	244	Peak	HORIZONTAL
2	11533.59	45.80	54.00	-8.20	29.53	10.73	38.92	33.38	173	244	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11532.82	57.80	74.00	-16.20	41.53	10.73	38.92	33.38	148	198	Peak	VERTICAL
2	11533.97	46.02	54.00	-7.98	29.75	10.73	38.92	33.38	148	198	Average	VERTICAL

**Straddle Channel**

<b>Temperature</b>	23°C	<b>Humidity</b>	61%
<b>Test Engineer</b>	Paul Chen	<b>Configurations</b>	IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1 + Chain 2
<b>Test Date</b>	Jul. 29, 2015		
<b>Test Mode</b>	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11440.74	52.63	54.00	-1.37	36.48	10.69	38.83	33.37	149	304	Average	HORIZONTAL
2	11441.67	67.22	74.00	-6.78	51.07	10.69	38.83	33.37	149	304	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11434.78	64.60	74.00	-9.40	48.45	10.69	38.83	33.37	178	202	Peak	VERTICAL
2	11440.48	50.66	54.00	-3.34	34.51	10.69	38.83	33.37	178	202	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11419.87	63.39	74.00	-10.61	47.25	10.69	38.82	33.37	149	302	Peak	HORIZONTAL
2	11430.19	48.05	54.00	-5.95	31.90	10.69	38.83	33.37	149	302	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11412.12	46.90	54.00	-7.10	30.78	10.69	38.80	33.37	165	208	Average	VERTICAL
2	11419.81	63.62	74.00	-10.38	47.48	10.69	38.82	33.37	165	208	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 138 / Chain 1 + Chain 2
Test Date	Jul. 29, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
1	11391.79	46.25	54.00	-7.75	30.15	10.69	38.78	33.37	164	106	Average	HORIZONTAL
2	11396.03	58.24	74.00	-15.76	42.12	10.69	38.80	33.37	164	106	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
1	11350.38	57.90	74.00	-16.10	41.85	10.67	38.75	33.37	142	337	Peak	VERTICAL
2	11415.90	46.10	54.00	-7.90	29.96	10.69	38.82	33.37	142	337	Average	VERTICAL

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15533.00	59.18	74.00	-14.82	42.16	12.58	38.14	33.70	155	24	Peak	HORIZONTAL
2	15538.96	46.04	54.00	-7.96	29.02	12.58	38.14	33.70	155	24	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15536.08	46.14	54.00	-7.86	29.12	12.58	38.14	33.70	152	81	Average	VERTICAL
2	15545.72	58.65	74.00	-15.35	41.65	12.58	38.12	33.70	152	81	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15602.96	47.25	54.00	-6.75	30.42	12.58	38.03	33.78	151	44	Average	HORIZONTAL
2	15608.04	60.01	74.00	-13.99	43.18	12.58	38.03	33.78	151	44	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15600.24	60.13	74.00	-13.87	43.30	12.58	38.03	33.78	143	231	Peak	VERTICAL
2	15600.72	46.94	54.00	-7.06	30.11	12.58	38.03	33.78	143	231	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15714.84	61.36	74.00	-12.64	44.83	12.57	37.84	33.88	145	290	Peak	HORIZONTAL
2	15716.32	48.65	54.00	-5.35	32.12	12.57	37.84	33.88	145	290	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15724.32	61.27	74.00	-12.73	44.74	12.57	37.84	33.88	153	213	Peak	VERTICAL
2	15725.00	47.91	54.00	-6.09	31.38	12.57	37.84	33.88	153	213	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15779.44	49.63	54.00	-4.37	33.25	12.57	37.76	33.95	147	126	Average	HORIZONTAL
2	15786.64	62.52	74.00	-11.48	46.17	12.57	37.73	33.95	147	126	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15773.20	51.28	54.00	-2.72	34.88	12.57	37.76	33.93	168	213	Average	VERTICAL
2	15776.40	65.18	74.00	-8.82	48.78	12.57	37.76	33.93	168	213	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10600.12	64.66	74.00	-9.34	49.73	10.16	38.40	33.63	149	49	Peak	HORIZONTAL
2	10600.64	51.39	54.00	-2.61	36.46	10.16	38.40	33.63	149	49	Average	HORIZONTAL
3	15896.84	48.87	54.00	-5.13	32.78	12.57	37.57	34.05	141	288	Average	HORIZONTAL
4	15905.32	61.21	74.00	-12.79	45.19	12.56	37.54	34.08	141	288	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10596.56	48.61	54.00	-5.39	33.68	10.16	38.40	33.63	150	237	Average	VERTICAL
2	10597.44	62.08	74.00	-11.92	47.15	10.16	38.40	33.63	150	237	Peak	VERTICAL
3	15896.12	61.39	74.00	-12.61	45.30	12.57	37.57	34.05	159	52	Peak	VERTICAL
4	15902.20	48.21	54.00	-5.79	32.15	12.57	37.54	34.05	159	52	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10630.80	41.39	54.00	-12.61	26.38	10.21	38.40	33.60	148	259	Average	HORIZONTAL
2	10642.92	54.41	74.00	-19.59	39.40	10.21	38.40	33.60	148	259	Peak	HORIZONTAL
3	15953.16	46.88	54.00	-7.12	30.96	12.56	37.46	34.10	151	312	Average	HORIZONTAL
4	15959.40	59.83	74.00	-14.17	43.94	12.56	37.46	34.13	151	312	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10638.36	42.55	54.00	-11.45	27.54	10.21	38.40	33.60	163	317	Average	VERTICAL
2	10644.52	54.14	74.00	-19.86	39.13	10.21	38.40	33.60	163	317	Peak	VERTICAL
3	15952.32	60.42	74.00	-13.58	44.50	12.56	37.46	34.10	158	255	Peak	VERTICAL
4	15961.24	46.62	54.00	-7.38	30.73	12.56	37.46	34.13	158	255	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11002.48	56.03	74.00	-17.97	40.46	10.55	38.40	33.38	163	212	Peak	HORIZONTAL
2	11008.68	42.49	54.00	-11.51	26.90	10.55	38.42	33.38	163	212	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10990.96	54.94	74.00	-19.06	39.37	10.55	38.40	33.38	138	153	Peak	VERTICAL
2	11009.60	42.58	54.00	-11.42	26.98	10.56	38.42	33.38	138	153	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11160.96	46.74	54.00	-7.26	30.95	10.60	38.57	33.38	158	258	Average	HORIZONTAL
2	11169.64	59.89	74.00	-14.11	44.09	10.61	38.57	33.38	158	258	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11160.60	46.11	54.00	-7.89	30.32	10.60	38.57	33.38	174	87	Average	VERTICAL
2	11161.68	58.84	74.00	-15.16	43.05	10.60	38.57	33.38	174	87	Peak	VERTICAL



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11400.96	44.17	54.00	-9.83	28.05	10.69	38.80	33.37	149	199	Average	HORIZONTAL
2	11402.52	56.36	74.00	-17.64	40.24	10.69	38.80	33.37	149	199	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11396.80	44.09	54.00	-9.91	27.97	10.69	38.80	33.37	154	242	Average	VERTICAL
2	11407.28	56.36	74.00	-17.64	40.24	10.69	38.80	33.37	154	242	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11488.80	45.54	54.00	-8.46	29.32	10.71	38.88	33.37	151	320	Average	HORIZONTAL
2	11488.80	58.21	74.00	-15.79	41.99	10.71	38.88	33.37	151	320	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11489.00	56.48	74.00	-17.52	40.26	10.71	38.88	33.37	148	265	Peak	VERTICAL
2	11490.20	44.40	54.00	-9.60	28.18	10.71	38.88	33.37	148	265	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2
Test Date	Aug. 11, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11569.80	51.23	54.00	-2.77	34.92	10.76	38.94	33.39	172	48	Average	HORIZONTAL
2	11572.80	63.54	74.00	-10.46	47.23	10.76	38.94	33.39	172	48	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11574.10	60.78	74.00	-13.22	44.47	10.76	38.94	33.39	152	172	Peak	VERTICAL
2	11575.70	48.42	54.00	-5.58	32.11	10.76	38.94	33.39	152	172	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2
Test Date	Aug. 11, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11629.10	56.77	74.00	-17.23	40.41	10.79	38.97	33.40	155	163	Peak	HORIZONTAL
2	11642.70	44.34	54.00	-9.66	27.97	10.79	38.98	33.40	155	163	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11648.70	56.83	74.00	-17.17	40.45	10.81	38.98	33.41	142	187	Peak	VERTICAL
2	11650.50	44.71	54.00	-9.29	28.33	10.81	38.98	33.41	142	187	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15573.00	58.60	74.00	-15.40	41.66	12.58	38.09	33.73	157	218	Peak	HORIZONTAL
2	15587.10	46.32	54.00	-7.68	29.43	12.58	38.06	33.75	157	218	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15551.40	58.71	74.00	-15.29	41.74	12.58	38.12	33.73	152	244	Peak	VERTICAL
2	15589.80	46.21	54.00	-7.79	29.32	12.58	38.06	33.75	152	244	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15693.00	59.63	74.00	-14.37	43.00	12.58	37.90	33.85	175	190	Peak	HORIZONTAL
2	15707.70	47.96	54.00	-6.04	31.40	12.57	37.87	33.88	175	190	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15702.00	58.96	74.00	-15.04	42.40	12.57	37.87	33.88	149	128	Peak	VERTICAL
2	15704.50	46.96	54.00	-7.04	30.40	12.57	37.87	33.88	149	128	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15820.20	60.49	74.00	-13.51	44.22	12.57	37.68	33.98	147	314	Peak	HORIZONTAL
2	15827.50	47.80	54.00	-6.20	31.53	12.57	37.68	33.98	147	314	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15818.50	47.74	54.00	-6.26	31.47	12.57	37.68	33.98	151	149	Average	VERTICAL
2	15828.80	60.72	74.00	-13.28	44.47	12.57	37.68	34.00	151	149	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10607.30	41.97	54.00	-12.03	27.00	10.19	38.40	33.62	150	219	Average	HORIZONTAL
2	10623.00	54.75	74.00	-19.25	39.78	10.19	38.40	33.62	150	219	Peak	HORIZONTAL
3	15905.50	59.65	74.00	-14.35	43.63	12.56	37.54	34.08	152	268	Peak	HORIZONTAL
4	15925.00	47.14	54.00	-6.86	31.15	12.56	37.51	34.08	152	268	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10597.30	41.83	54.00	-12.17	26.90	10.16	38.40	33.63	159	249	Average	VERTICAL
2	10600.40	54.07	74.00	-19.93	39.14	10.16	38.40	33.63	159	249	Peak	VERTICAL
3	15905.50	46.98	54.00	-7.02	30.96	12.56	37.54	34.08	154	217	Average	VERTICAL
4	15927.60	59.86	74.00	-14.14	43.87	12.56	37.51	34.08	154	217	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11037.80	55.12	74.00	-18.88	39.50	10.57	38.43	33.38	159	322	Peak	HORIZONTAL
2	11042.40	42.93	54.00	-11.07	27.29	10.57	38.45	33.38	159	322	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11042.10	55.71	74.00	-18.29	40.07	10.57	38.45	33.38	155	291	Peak	VERTICAL
2	11043.20	42.86	54.00	-11.14	27.22	10.57	38.45	33.38	155	291	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11099.60	44.90	54.00	-9.10	29.20	10.58	38.50	33.38	166	219	Average	HORIZONTAL
2	11106.20	56.12	74.00	-17.88	40.42	10.58	38.50	33.38	166	219	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11086.00	43.39	54.00	-10.61	27.71	10.58	38.48	33.38	168	239	Average	VERTICAL
2	11119.70	56.02	74.00	-17.98	40.29	10.59	38.52	33.38	168	239	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11352.70	44.13	54.00	-9.87	28.08	10.67	38.75	33.37	158	259	Average	HORIZONTAL
2	11354.90	55.83	74.00	-18.17	39.78	10.67	38.75	33.37	158	259	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11324.10	55.51	74.00	-18.49	39.50	10.66	38.72	33.37	148	211	Peak	VERTICAL
2	11345.00	43.13	54.00	-10.87	27.08	10.67	38.75	33.37	148	211	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11520.10	56.60	74.00	-17.40	40.34	10.73	38.91	33.38	174	83	Peak	HORIZONTAL
2	11529.10	43.67	54.00	-10.33	27.41	10.73	38.91	33.38	174	83	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11522.60	55.67	74.00	-18.33	39.41	10.73	38.91	33.38	147	137	Peak	VERTICAL
2	11527.30	43.60	54.00	-10.40	27.34	10.73	38.91	33.38	147	137	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11569.40	44.29	54.00	-9.71	27.98	10.75	38.94	33.38	154	239	Average	HORIZONTAL
2	11604.40	57.03	74.00	-16.97	40.69	10.78	38.96	33.40	154	239	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11590.60	44.50	54.00	-9.50	28.18	10.76	38.95	33.39	160	318	Average	VERTICAL
2	11599.10	56.23	74.00	-17.77	39.90	10.78	38.95	33.40	160	318	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15649.70	58.85	74.00	-15.15	42.12	12.58	37.95	33.80	156	213	Peak	HORIZONTAL
2	15653.20	46.33	54.00	-7.67	29.63	12.58	37.95	33.83	156	213	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15620.00	59.35	74.00	-14.65	42.54	12.58	38.01	33.78	148	117	Peak	VERTICAL
2	15651.40	46.30	54.00	-7.70	29.60	12.58	37.95	33.83	148	117	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15867.70	59.78	74.00	-14.22	43.65	12.57	37.59	34.03	151	180	Peak	HORIZONTAL	
2	15889.00	47.43	54.00	-6.57	31.34	12.57	37.57	34.05	151	180	Average	HORIZONTAL	

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15890.00	47.29	54.00	-6.71	31.20	12.57	37.57	34.05	157	239	Average	VERTICAL	
2	15890.50	60.30	74.00	-13.70	44.21	12.57	37.57	34.05	157	239	Peak	VERTICAL	



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11047.50	55.48	74.00	-18.52	39.84	10.57	38.45	33.38	157	171	Peak	HORIZONTAL	
2	11079.70	43.06	54.00	-10.94	27.38	10.58	38.48	33.38	157	171	Average	HORIZONTAL	

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11051.10	43.23	54.00	-10.77	27.59	10.57	38.45	33.38	147	235	Average	VERTICAL	
2	11066.90	55.70	74.00	-18.30	40.03	10.58	38.47	33.38	147	235	Peak	VERTICAL	



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11214.50	55.04	74.00	-18.96	39.17	10.63	38.62	33.38	140	243	Peak	HORIZONTAL
2	11240.50	43.32	54.00	-10.68	27.43	10.64	38.63	33.38	140	243	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11239.60	43.06	54.00	-10.94	27.17	10.64	38.63	33.38	168	155	Average	VERTICAL
2	11240.10	55.48	74.00	-18.52	39.59	10.64	38.63	33.38	168	155	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11554.10	56.68	74.00	-17.32	40.38	10.75	38.93	33.38	168	185	Peak	HORIZONTAL
2	11566.50	43.82	54.00	-10.18	27.51	10.75	38.94	33.38	168	185	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11549.70	43.78	54.00	-10.22	27.48	10.75	38.93	33.38	153	265	Average	VERTICAL
2	11573.70	57.35	74.00	-16.65	41.04	10.76	38.94	33.39	153	265	Peak	VERTICAL



## Straddle Channel

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

## Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11438.80	66.05	74.00	-7.95	49.90	10.69	38.83	33.37	188	45	Peak	HORIZONTAL
2	11439.30	51.83	54.00	-2.17	35.68	10.69	38.83	33.37	188	45	Average	HORIZONTAL

## Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11437.10	52.73	54.00	-1.27	36.58	10.69	38.83	33.37	136	190	Average	VERTICAL
2	11439.00	67.67	74.00	-6.33	51.52	10.69	38.83	33.37	136	190	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11420.00	63.05	74.00	-10.95	46.91	10.69	38.82	33.37	151	30	Peak	HORIZONTAL
2	11423.30	48.71	54.00	-5.29	32.57	10.69	38.82	33.37	151	30	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11423.50	50.43	54.00	-3.57	34.29	10.69	38.82	33.37	157	203	Average	VERTICAL
2	11425.20	65.60	74.00	-8.40	49.46	10.69	38.82	33.37	157	203	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 138 / Chain 1 + Chain 2
Test Date	Aug. 07, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11393.90	45.02	54.00	-8.98	28.92	10.69	38.78	33.37	232	126	Average	HORIZONTAL
2	11394.60	57.64	74.00	-16.36	41.54	10.69	38.78	33.37	232	126	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11396.80	59.78	74.00	-14.22	43.66	10.69	38.80	33.37	212	46	Peak	VERTICAL
2	11397.70	46.40	54.00	-7.60	30.28	10.69	38.80	33.37	212	46	Average	VERTICAL

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



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## &lt;For STBC Mode&gt;

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB/m	dB	cm		
1	15539.43	46.20	54.00	-7.80	29.18	12.58	38.14	33.70	152	318	Average	HORIZONTAL
2	15539.62	59.70	74.00	-14.30	42.68	12.58	38.14	33.70	152	318	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB/m	dB	cm		
1	15539.37	45.62	54.00	-8.38	28.60	12.58	38.14	33.70	152	339	Average	VERTICAL
2	15540.88	58.23	74.00	-15.77	41.21	12.58	38.14	33.70	152	339	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	Loss Factor	Factor	cm		
MHz	dBuV/m	dBuV/m	dB	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15599.01	46.08	54.00	-7.92	29.25	12.58	38.03	33.78	153	321	Average	HORIZONTAL
2	15600.31	58.94	74.00	-15.06	42.11	12.58	38.03	33.78	153	321	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	Loss Factor	Factor	cm		
MHz	dBuV/m	dBuV/m	dB	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15599.95	45.81	54.00	-8.19	28.98	12.58	38.03	33.78	152	335	Average	VERTICAL
2	15600.53	59.10	74.00	-14.90	42.27	12.58	38.03	33.78	152	335	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15719.23	45.89	54.00	-8.11	29.36	12.57	37.84	33.88	152	310	Average	HORIZONTAL
2	15720.71	59.71	74.00	-14.29	43.18	12.57	37.84	33.88	152	310	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15719.01	45.92	54.00	-8.08	29.39	12.57	37.84	33.88	153	321	Average	VERTICAL
2	15720.13	59.60	74.00	-14.40	43.07	12.57	37.84	33.88	153	321	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15779.18	59.03	74.00	-14.97	42.65	12.57	37.76	33.95	151	307	Peak	HORIZONTAL
2	15779.83	46.61	54.00	-7.39	30.23	12.57	37.76	33.95	151	307	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15780.17	58.47	74.00	-15.53	42.09	12.57	37.76	33.95	153	323	Peak	VERTICAL
2	15780.68	45.57	54.00	-8.43	29.19	12.57	37.76	33.95	153	323	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB									
1	10600.88	43.52	54.00	-10.48	28.55	10.19	38.40	33.62	146	288	Average	HORIZONTAL
2	10600.92	57.39	74.00	-16.61	42.42	10.19	38.40	33.62	146	288	Peak	HORIZONTAL
3	15900.50	58.45	74.00	-15.55	42.36	12.57	37.57	34.05	148	308	Peak	HORIZONTAL
4	15900.91	45.29	54.00	-8.71	29.23	12.57	37.54	34.05	148	308	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB									
1	10599.13	42.89	54.00	-11.11	27.96	10.16	38.40	33.63	155	335	Average	VERTICAL
2	10600.40	57.33	74.00	-16.67	42.40	10.16	38.40	33.63	155	335	Peak	VERTICAL
3	15899.99	45.34	54.00	-8.66	29.25	12.57	37.57	34.05	104	308	Average	VERTICAL
4	15900.69	58.25	74.00	-15.75	42.19	12.57	37.54	34.05	104	308	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm	deg	
1	10639.84	42.94	54.00	-11.06	27.93	10.21	38.40	33.60	152	287	Average	HORIZONTAL
2	10640.04	56.63	74.00	-17.37	41.62	10.21	38.40	33.60	152	287	Peak	HORIZONTAL
3	15959.59	44.78	54.00	-9.22	28.89	12.56	37.46	34.13	151	306	Average	HORIZONTAL
4	15960.23	57.80	74.00	-16.20	41.91	12.56	37.46	34.13	151	306	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm	deg	
1	10639.77	56.18	74.00	-17.82	41.17	10.21	38.40	33.60	151	317	Peak	VERTICAL
2	10640.99	42.91	54.00	-11.09	27.90	10.21	38.40	33.60	151	317	Average	VERTICAL
3	15959.07	58.03	74.00	-15.97	42.14	12.56	37.46	34.13	153	292	Peak	VERTICAL
4	15960.32	44.84	54.00	-9.16	28.95	12.56	37.46	34.13	153	292	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	10999.05	43.36	54.00	-10.64	27.79	10.55	38.40	33.38	148	287	Average	HORIZONTAL
2	11000.85	56.27	74.00	-17.73	40.70	10.55	38.40	33.38	148	287	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11000.27	43.16	54.00	-10.84	27.59	10.55	38.40	33.38	149	307	Average	VERTICAL
2	11000.59	56.39	74.00	-17.61	40.82	10.55	38.40	33.38	149	307	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11160.27	56.96	74.00	-17.04	41.17	10.60	38.57	33.38	148	291	Peak	HORIZONTAL
2	11160.34	43.46	54.00	-10.54	27.67	10.60	38.57	33.38	148	291	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11159.48	43.64	54.00	-10.36	27.85	10.60	38.57	33.38	149	303	Average	VERTICAL
2	11160.02	57.17	74.00	-16.83	41.38	10.60	38.57	33.38	149	303	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11399.71	57.16	74.00	-16.84	41.04	10.69	38.80	33.37	151	288	Peak	HORIZONTAL
2	11400.54	43.98	54.00	-10.02	27.86	10.69	38.80	33.37	151	288	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11399.06	57.30	74.00	-16.70	41.18	10.69	38.80	33.37	149	301	Peak	VERTICAL
2	11399.20	44.06	54.00	-9.94	27.94	10.69	38.80	33.37	149	301	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dB	dB	dB	dB/m	dB	cm	deg		
1	11489.63	43.77	54.00	-10.23	27.55	10.71	38.88	33.37	148	313	Average	HORIZONTAL
2	11489.74	57.09	74.00	-16.91	40.87	10.71	38.88	33.37	148	313	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dB	dB	dB	dB/m	dB	cm	deg		
1	11489.42	57.56	74.00	-16.44	41.34	10.71	38.88	33.37	148	298	Peak	VERTICAL
2	11490.23	43.79	54.00	-10.21	27.57	10.71	38.88	33.37	148	298	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11569.22	43.70	54.00	-10.30	27.39	10.75	38.94	33.38	149	311	Average	HORIZONTAL
2	11569.55	57.73	74.00	-16.27	41.42	10.75	38.94	33.38	149	311	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11569.29	57.46	74.00	-16.54	41.15	10.75	38.94	33.38	149	299	Peak	VERTICAL
2	11570.77	44.46	54.00	-9.54	28.15	10.76	38.94	33.39	149	299	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11649.03	57.67	74.00	-16.33	41.29	10.81	38.98	33.41	150	320	Peak	HORIZONTAL
2	11650.45	43.52	54.00	-10.48	27.14	10.81	38.98	33.41	150	320	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11650.41	57.23	74.00	-16.77	40.85	10.81	38.98	33.41	149	301	Peak	VERTICAL
2	11650.92	43.63	54.00	-10.37	27.24	10.81	38.99	33.41	149	301	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15569.97	45.14	54.00	-8.86	28.20	12.58	38.09	33.73	151	278	Average	HORIZONTAL
2	15570.08	59.90	74.00	-14.10	42.96	12.58	38.09	33.73	151	278	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15569.77	45.25	54.00	-8.75	28.31	12.58	38.09	33.73	149	299	Average	VERTICAL
2	15570.71	58.45	74.00	-15.55	41.51	12.58	38.09	33.73	149	299	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15702.42	45.82	54.00	-8.18	29.26	12.57	37.87	33.88	126	106	Average	HORIZONTAL
2	15705.79	58.88	74.00	-15.12	42.32	12.57	37.87	33.88	126	106	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15667.96	59.31	74.00	-14.69	42.64	12.58	37.92	33.83	142	223	Peak	VERTICAL
2	15688.16	46.07	54.00	-7.93	29.44	12.58	37.90	33.85	142	223	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15785.24	45.66	54.00	-8.34	29.31	12.57	37.73	33.95	131	205	Average	HORIZONTAL
2	15806.96	58.07	74.00	-15.93	41.78	12.57	37.70	33.98	131	205	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15786.36	45.58	54.00	-8.42	29.23	12.57	37.73	33.95	115	287	Average	VERTICAL
2	15792.37	59.27	74.00	-14.73	42.92	12.57	37.73	33.95	115	287	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10614.55	43.24	54.00	-10.76	28.27	10.19	38.40	33.62	129	315	Average	HORIZONTAL
2	10637.63	55.90	74.00	-18.10	40.89	10.21	38.40	33.60	129	315	Peak	HORIZONTAL
3	15937.85	57.81	74.00	-16.19	41.87	12.56	37.48	34.10	109	256	Peak	HORIZONTAL
4	15949.79	45.41	54.00	-8.59	29.47	12.56	37.48	34.10	109	256	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10606.94	43.00	54.00	-11.00	28.03	10.19	38.40	33.62	152	246	Average	VERTICAL
2	10613.03	55.77	74.00	-18.23	40.80	10.19	38.40	33.62	152	246	Peak	VERTICAL
3	15928.16	45.42	54.00	-8.58	29.43	12.56	37.51	34.08	120	315	Average	VERTICAL
4	15928.40	58.91	74.00	-15.09	42.92	12.56	37.51	34.08	120	315	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11011.19	56.48	74.00	-17.52	40.88	10.56	38.42	33.38	158	77	Peak	HORIZONTAL
2	11032.58	43.43	54.00	-10.57	27.82	10.56	38.43	33.38	158	77	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11008.78	55.89	74.00	-18.11	40.29	10.56	38.42	33.38	177	168	Peak	VERTICAL
2	11019.92	43.44	54.00	-10.56	27.84	10.56	38.42	33.38	177	168	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11104.97	43.48	54.00	-10.52	27.78	10.58	38.50	33.38	150	130	Average	HORIZONTAL
2	11123.08	56.08	74.00	-17.92	40.35	10.59	38.52	33.38	150	130	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11085.18	56.07	74.00	-17.93	40.39	10.58	38.48	33.38	127	227	Peak	VERTICAL
2	11104.81	43.29	54.00	-10.71	27.59	10.58	38.50	33.38	127	227	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11347.93	56.88	74.00	-17.12	40.83	10.67	38.75	33.37	128	127	Peak		HORIZONTAL	
2	11358.11	43.81	54.00	-10.19	27.76	10.67	38.75	33.37	128	127	Average		HORIZONTAL	

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11327.02	43.85	54.00	-10.15	27.84	10.66	38.72	33.37	140	179	Average		VERTICAL	
2	11330.54	56.98	74.00	-17.02	40.96	10.66	38.73	33.37	140	179	Peak		VERTICAL	



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11501.11	57.43	74.00	-16.57	41.18	10.72	38.90	33.37	137	203	Peak		HORIZONTAL	
2	11508.24	44.24	54.00	-9.76	27.99	10.72	38.90	33.37	137	203	Average		HORIZONTAL	

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11501.03	44.25	54.00	-9.75	28.00	10.72	38.90	33.37	148	101	Average		VERTICAL	
2	11505.51	57.02	74.00	-16.98	40.77	10.72	38.90	33.37	148	101	Peak		VERTICAL	



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11565.16	57.24	74.00	-16.76	40.94	10.75	38.93	33.38	147	298	Peak	HORIZONTAL
2	11599.62	44.18	54.00	-9.82	27.84	10.78	38.96	33.40	147	298	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11581.51	57.38	74.00	-16.62	41.07	10.76	38.94	33.39	125	353	Peak	VERTICAL
2	11606.43	44.11	54.00	-9.89	27.77	10.78	38.96	33.40	125	353	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15629.63	45.42	54.00	-8.58	28.66	12.58	37.98	33.80		172	149 Average	HORIZONTAL
2	15630.86	59.04	74.00	-14.96	42.28	12.58	37.98	33.80		172	149 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	15633.40	59.02	74.00	-14.98	42.26	12.58	37.98	33.80		113	272 Peak	VERTICAL
2	15636.92	45.69	54.00	-8.31	28.93	12.58	37.98	33.80		113	272 Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15869.95	58.46	74.00	-15.54	42.33	12.57	37.59	34.03	164	244	Peak	HORIZONTAL
2	15870.46	45.33	54.00	-8.67	29.20	12.57	37.59	34.03	164	244	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15870.07	45.10	54.00	-8.90	28.97	12.57	37.59	34.03	168	179	Average	VERTICAL
2	15870.48	58.03	74.00	-15.97	41.90	12.57	37.59	34.03	168	179	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11060.24	55.77	74.00	-18.23	40.10	10.58	38.47	33.38	175	176	Peak	HORIZONTAL
2	11061.32	43.16	54.00	-10.84	27.49	10.58	38.47	33.38	175	176	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11060.11	43.32	54.00	-10.68	27.65	10.58	38.47	33.38	161	55	Average	VERTICAL
2	11061.24	56.66	74.00	-17.34	40.99	10.58	38.47	33.38	161	55	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11222.01	43.04	54.00	-10.96	27.17	10.63	38.62	33.38	157	232	Average	HORIZONTAL
2	11222.04	43.16	74.00	-30.84	27.29	10.63	38.62	33.38	157	232	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11220.72	43.13	54.00	-10.87	27.26	10.63	38.62	33.38	169	193	Average	VERTICAL
2	11221.46	57.30	74.00	-16.70	41.43	10.63	38.62	33.38	169	193	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11548.08	43.84	54.00	-10.16	27.55	10.75	38.92	33.38	173	148	Average	HORIZONTAL
2	11550.28	56.45	74.00	-17.55	40.15	10.75	38.93	33.38	173	148	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB	dB/m	dB		
1	11550.67	43.68	54.00	-10.32	27.38	10.75	38.93	33.38	152	253	Average	VERTICAL
2	11552.17	57.57	74.00	-16.43	41.27	10.75	38.93	33.38	152	253	Peak	VERTICAL



## Straddle Channel

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

## Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB/m	dB	cm		
1	11439.76	47.61	54.00	-6.39	31.46	10.69	38.83	33.37	147	283	Average	HORIZONTAL
2	11439.79	60.92	74.00	-13.08	44.77	10.69	38.83	33.37	147	283	Peak	HORIZONTAL

## Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB/m	dB	cm		
1	11439.80	46.45	54.00	-7.55	30.30	10.69	38.83	33.37	152	298	Average	VERTICAL
2	11440.63	59.56	74.00	-14.44	43.41	10.69	38.83	33.37	152	298	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB/m	dB	cm		
1	11433.54	44.82	54.00	-9.18	28.67	10.69	38.83	33.37	146	164	Average	HORIZONTAL
2	11441.07	57.08	74.00	-16.92	40.93	10.69	38.83	33.37	146	164	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dBuV	dB	dB/m	dB	cm		
1	11397.24	57.32	74.00	-16.68	41.20	10.69	38.80	33.37	122	50	Peak	VERTICAL
2	11429.70	45.33	54.00	-8.67	29.18	10.69	38.83	33.37	122	50	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 138 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11381.45	43.61	54.00	-10.39	27.52	10.68	38.78	33.37	164	86	Average	HORIZONTAL
2	11382.40	57.09	74.00	-16.91	41.00	10.68	38.78	33.37	164	86	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11378.59	43.77	54.00	-10.23	27.68	10.68	38.78	33.37	161	114	Average	VERTICAL
2	11381.75	56.59	74.00	-17.41	40.50	10.68	38.78	33.37	161	114	Peak	VERTICAL

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	15536.51	57.63	74.00	-16.37	40.61	12.58	38.14	33.70	170	151 Peak	HORIZONTAL
2	15540.37	44.53	54.00	-9.47	27.51	12.58	38.14	33.70	170	151 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	15538.43	57.93	74.00	-16.07	40.91	12.58	38.14	33.70	162	269 Peak	VERTICAL
2	15541.44	44.51	54.00	-9.49	27.49	12.58	38.14	33.70	162	269 Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm			
1	15603.04	46.12	54.00	-7.88	29.29	12.58	38.03	33.78	171	41	Average	HORIZONTAL
2	15604.09	58.11	74.00	-15.89	41.28	12.58	38.03	33.78	171	41	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm			
1	15598.64	46.11	54.00	-7.89	29.25	12.58	38.03	33.75	211	167	Average	VERTICAL
2	15612.74	57.77	74.00	-16.23	40.96	12.58	38.01	33.78	211	167	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	15708.14	44.64	54.00	-9.36	28.08	12.57	37.87	33.88	152	262	Average	HORIZONTAL
2	15733.86	57.10	74.00	-16.90	40.62	12.57	37.81	33.90	152	262	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	15696.92	45.02	54.00	-8.98	28.42	12.58	37.87	33.85	170	214	Average	VERTICAL
2	15725.13	57.53	74.00	-16.47	41.00	12.57	37.84	33.88	170	214	Peak	VERTICAL



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15775.03	66.07	74.00	-7.93	49.67	12.57	37.76	33.93	171	192	Peak	HORIZONTAL
2	15779.04	52.01	54.00	-1.99	35.63	12.57	37.76	33.95	171	192	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15779.84	49.48	54.00	-4.52	33.10	12.57	37.76	33.95	146	195	Average	VERTICAL
2	15779.92	61.33	74.00	-12.67	44.95	12.57	37.76	33.95	146	195	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15897.08	44.08	54.00	-9.92	27.99	12.57	37.57	34.05	171	191	Average	HORIZONTAL
2	15901.91	56.87	74.00	-17.13	40.81	12.57	37.54	34.05	171	191	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15895.74	44.18	54.00	-9.82	28.09	12.57	37.57	34.05	176	231	Average	VERTICAL
2	15902.15	57.36	74.00	-16.64	41.30	12.57	37.54	34.05	176	231	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	15957.34	43.71	54.00	-10.29	27.82	12.56	37.46	34.13	175	131	Average	HORIZONTAL
2	15962.58	57.05	74.00	-16.95	41.16	12.56	37.46	34.13	175	131	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	15958.54	43.91	54.00	-10.09	28.02	12.56	37.46	34.13	177	167	Average	VERTICAL
2	15962.74	56.87	74.00	-17.13	40.98	12.56	37.46	34.13	177	167	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg		
1	10995.53	42.45	54.00	-11.55	26.88	10.55	38.40	33.38	195	264	Average	HORIZONTAL
2	11000.11	55.73	74.00	-18.27	40.16	10.55	38.40	33.38	195	264	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg		
1	10995.34	42.36	54.00	-11.64	26.79	10.55	38.40	33.38	191	224	Average	VERTICAL
2	11001.94	55.88	74.00	-18.12	40.31	10.55	38.40	33.38	191	224	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11159.44	45.60	54.00	-8.40	29.81	10.60	38.57	33.38	199	188	Average	HORIZONTAL
2	11161.76	57.16	74.00	-16.84	41.36	10.61	38.57	33.38	199	188	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11153.11	55.48	74.00	-18.52	39.71	10.60	38.55	33.38	203	98	Peak	VERTICAL
2	11160.48	43.27	54.00	-10.73	27.48	10.60	38.57	33.38	203	98	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11397.48	43.05	54.00	-10.95	26.93	10.69	38.80	33.37	168	220	Average	HORIZONTAL
2	11402.04	57.33	74.00	-16.67	41.21	10.69	38.80	33.37	168	220	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11398.70	43.02	54.00	-10.98	26.90	10.69	38.80	33.37	172	160	Average	VERTICAL
2	11403.62	56.26	74.00	-17.74	40.14	10.69	38.80	33.37	172	160	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1	11487.16	56.30	74.00	-17.70	40.08	10.71	38.88	33.37	162	130 Peak	HORIZONTAL
2	11493.72	42.63	54.00	-11.37	26.40	10.72	38.88	33.37	162	130 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1	11485.14	42.92	54.00	-11.08	26.70	10.71	38.88	33.37	172	104 Average	VERTICAL
2	11490.61	55.73	74.00	-18.27	39.51	10.71	38.88	33.37	172	104 Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11570.64	47.93	54.00	-6.07	31.62	10.76	38.94	33.39	209	189	Average	HORIZONTAL
2	11571.52	60.74	74.00	-13.26	44.43	10.76	38.94	33.39	209	189	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11570.72	46.39	54.00	-7.61	30.08	10.76	38.94	33.39	213	176	Average	VERTICAL
2	11572.24	57.72	74.00	-16.28	41.41	10.76	38.94	33.39	213	176	Peak	VERTICAL



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11648.29	57.36	74.00	-16.64	40.98	10.81	38.98	33.41	185	173 Peak	HORIZONTAL
2	11650.14	42.97	54.00	-11.03	26.59	10.81	38.98	33.41	185	173 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11648.03	43.04	54.00	-10.96	26.66	10.81	38.98	33.41	178	218 Average	VERTICAL
2	11649.34	55.99	74.00	-18.01	39.61	10.81	38.98	33.41	178	218 Peak	VERTICAL



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15569.51	57.87	74.00	-16.13	40.93	12.58	38.09	33.73	133	295	Peak	HORIZONTAL
2	15572.35	44.36	54.00	-9.64	27.42	12.58	38.09	33.73	133	295	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15569.19	44.31	54.00	-9.69	27.37	12.58	38.09	33.73	192	148	Average	VERTICAL
2	15570.38	57.43	74.00	-16.57	40.49	12.58	38.09	33.73	192	148	Peak	VERTICAL



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15689.10	57.76	74.00	-16.24	41.13	12.58	37.90	33.85	157	225	Peak	HORIZONTAL
2	15691.19	44.50	54.00	-9.50	27.87	12.58	37.90	33.85	157	225	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15687.92	44.38	54.00	-9.62	27.75	12.58	37.90	33.85	134	195	Average	VERTICAL
2	15691.42	58.03	74.00	-15.97	41.40	12.58	37.90	33.85	134	195	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15811.21	56.67	74.00	-17.33	40.38	12.57	37.70	33.98	150	94	Peak	HORIZONTAL
2	15811.58	43.95	54.00	-10.05	27.66	12.57	37.70	33.98	150	94	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15810.90	57.24	74.00	-16.76	40.95	12.57	37.70	33.98	137	156	Peak	VERTICAL
2	15811.42	43.68	54.00	-10.32	27.39	12.57	37.70	33.98	137	156	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15928.29	56.68	74.00	-17.32	40.69	12.56	37.51	34.08	167	77	Peak	HORIZONTAL
2	15928.73	43.48	54.00	-10.52	27.49	12.56	37.51	34.08	167	77	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15929.17	43.68	54.00	-10.32	27.69	12.56	37.51	34.08	170	227	Average	VERTICAL
2	15931.86	57.23	74.00	-16.77	41.26	12.56	37.51	34.10	170	227	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	11016.12	54.93	74.00	-19.07	39.33	10.56	38.42	33.38	140	180	Peak	HORIZONTAL
2	11017.98	42.41	54.00	-11.59	26.81	10.56	38.42	33.38	140	180	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	11023.65	55.38	74.00	-18.62	39.77	10.56	38.43	33.38	154	203	Peak	VERTICAL
2	11024.18	42.46	54.00	-11.54	26.85	10.56	38.43	33.38	154	203	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11098.72	55.68	74.00	-18.32	39.98	10.58	38.50	33.38	172	200 Peak	HORIZONTAL
2	11102.32	42.74	54.00	-11.26	27.04	10.58	38.50	33.38	172	200 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11096.47	56.33	74.00	-17.67	40.63	10.58	38.50	33.38	195	240 Peak	VERTICAL
2	11104.28	42.55	54.00	-11.45	26.85	10.58	38.50	33.38	195	240 Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11328.62	55.54	74.00	-18.46	39.52	10.66	38.73	33.37	176	189	Peak	HORIZONTAL
2	11344.25	43.44	54.00	-10.56	27.41	10.67	38.73	33.37	176	189	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11337.68	42.96	54.00	-11.04	26.94	10.66	38.73	33.37	240	304	Average	VERTICAL
2	11343.96	56.32	74.00	-17.68	40.29	10.67	38.73	33.37	240	304	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11505.91	42.96	54.00	-11.04	26.71	10.72	38.90	33.37	158	219	Average	HORIZONTAL		
2	11511.68	56.34	74.00	-17.66	40.09	10.72	38.90	33.37	158	219	Peak	HORIZONTAL		

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable Loss		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB					
1	11509.73	42.84	54.00	-11.16	26.59	10.72	38.90	33.37	162	127	Average	VERTICAL		
2	11514.04	56.20	74.00	-17.80	39.95	10.72	38.90	33.37	162	127	Peak	VERTICAL		



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	11590.67	43.18	54.00	-10.82	26.86	10.76	38.95	33.39	150	195	Average	HORIZONTAL
2	11592.87	55.99	74.00	-18.01	39.67	10.76	38.95	33.39	150	195	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	11591.14	43.09	54.00	-10.91	26.77	10.76	38.95	33.39	170	154	Average	VERTICAL
2	11593.70	57.32	74.00	-16.68	41.00	10.76	38.95	33.39	170	154	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1	15629.18	58.21	74.00	-15.79	41.45	12.58	37.98	33.80	148	254	Peak HORIZONTAL
2	15631.71	45.26	54.00	-8.74	28.50	12.58	37.98	33.80	148	254	Average HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1	15630.96	56.99	74.00	-17.01	40.23	12.58	37.98	33.80	175	220	Peak VERTICAL
2	15632.82	44.66	54.00	-9.34	27.90	12.58	37.98	33.80	175	220	Average VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15867.53	56.83	74.00	-17.17	40.70	12.57	37.59	34.03	164	70	Peak	HORIZONTAL
2	15874.29	44.68	54.00	-9.32	28.55	12.57	37.59	34.03	164	70	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15867.71	51.76	74.00	-22.24	35.63	12.57	37.59	34.03	158	152	Peak	VERTICAL
2	15873.09	44.44	54.00	-9.56	28.31	12.57	37.59	34.03	158	152	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11058.96	42.49	54.00	-11.51	26.83	10.57	38.47	33.38	165	199	Average	HORIZONTAL
2	11064.09	55.63	74.00	-18.37	39.96	10.58	38.47	33.38	165	199	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11057.80	42.53	54.00	-11.47	26.87	10.57	38.47	33.38	152	225	Average	VERTICAL
2	11058.24	55.58	74.00	-18.42	39.92	10.57	38.47	33.38	152	225	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	11223.86	56.95	74.00	-17.05	41.08	10.63	38.62	33.38	147	149	Peak	HORIZONTAL
2	11224.68	42.68	54.00	-11.32	26.81	10.63	38.62	33.38	147	149	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	11219.12	56.21	74.00	-17.79	40.34	10.63	38.62	33.38	149	173	Peak	VERTICAL
2	11224.70	42.60	54.00	-11.40	26.73	10.63	38.62	33.38	149	173	Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	11547.50	43.15	54.00	-10.85	26.86	10.75	38.92	33.38	144	298	Average	HORIZONTAL
2	11553.60	54.25	74.00	-19.75	37.95	10.75	38.93	33.38	144	298	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	11549.31	42.95	54.00	-11.05	26.65	10.75	38.93	33.38	100	247	Average	VERTICAL
2	11552.50	53.58	74.00	-20.42	37.28	10.75	38.93	33.38	100	247	Peak	VERTICAL



## Straddle Channel

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

## Horizontal

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11437.20	61.69	74.00	-12.31	45.54	10.69	38.83	33.37	185	180 Peak	HORIZONTAL
2	11440.40	49.74	54.00	-4.26	33.59	10.69	38.83	33.37	185	180 Average	HORIZONTAL

## Vertical

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11438.96	62.54	74.00	-11.46	46.39	10.69	38.83	33.37	196	149 Peak	VERTICAL
2	11441.04	49.34	54.00	-4.66	33.19	10.69	38.83	33.37	196	149 Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	dB	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1	11418.88	60.83	74.00	-13.17	44.69	10.69	38.82	33.37	154	201 Peak	HORIZONTAL
2	11420.40	47.34	54.00	-6.66	31.20	10.69	38.82	33.37	154	201 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	dB	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1	11414.39	61.09	74.00	-12.91	44.95	10.69	38.82	33.37	131	191 Peak	VERTICAL
2	11425.53	48.11	54.00	-5.89	31.97	10.69	38.82	33.37	131	191 Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 138 / Chain 1 + Chain 2
Test Date	Jul. 25, 2015		
Test Mode	Mode 2 (Ant. 7 Polarized Panel / 10.7dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11383.93	55.46	74.00	-18.54	39.37	10.68	38.78	33.37	120	318 Peak	HORIZONTAL
2	11388.65	43.38	54.00	-10.62	27.29	10.68	38.78	33.37	120	318 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11376.96	43.50	54.00	-10.50	27.42	10.68	38.77	33.37	145	203 Average	VERTICAL
2	11377.20	56.66	74.00	-17.34	40.58	10.68	38.77	33.37	145	203 Peak	VERTICAL

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15539.12	58.64	74.00	-15.36	41.62	12.58	38.14	33.70	150	227 Peak	HORIZONTAL
2	15541.34	45.44	54.00	-8.56	28.42	12.58	38.14	33.70	150	227 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15541.34	59.14	74.00	-14.86	42.12	12.58	38.14	33.70	150	237 Peak	VERTICAL
2	15541.54	45.73	54.00	-8.27	28.71	12.58	38.14	33.70	150	237 Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15600.96	62.61	74.00	-11.39	45.78	12.58	38.03	33.78	150	41	Peak	HORIZONTAL
2	15601.65	46.32	54.00	-7.68	29.49	12.58	38.03	33.78	150	41	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15601.20	48.35	54.00	-5.65	31.52	12.58	38.03	33.78	182	183	Average	VERTICAL
2	15605.40	61.06	74.00	-12.94	44.23	12.58	38.03	33.78	182	183	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	15718.42	46.80	54.00	-7.20	30.27	12.57	37.84	33.88	157	238	Average	HORIZONTAL
2	15722.46	60.47	74.00	-13.53	43.94	12.57	37.84	33.88	157	238	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	15717.90	47.57	54.00	-6.43	31.04	12.57	37.84	33.88	162	156	Average	VERTICAL
2	15718.45	60.60	74.00	-13.40	44.07	12.57	37.84	33.88	162	156	Peak	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB/m	dB	
1	15778.19	63.61	74.00	-10.39	47.23	12.57	37.76	33.95	172	0	Peak	HORIZONTAL
2	15779.37	50.02	54.00	-3.98	33.64	12.57	37.76	33.95	172	0	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB/m	dB	
1	15778.51	50.87	54.00	-3.13	34.49	12.57	37.76	33.95	162	195	Average	VERTICAL
2	15779.73	64.57	74.00	-9.43	48.19	12.57	37.76	33.95	162	195	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	15900.17	49.15	54.00	-4.85	33.06	12.57	37.57	34.05	141	293	Average	HORIZONTAL
2	15900.18	62.32	74.00	-11.68	46.23	12.57	37.57	34.05	141	293	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	15899.53	49.07	54.00	-4.93	32.98	12.57	37.57	34.05	160	113	Average	VERTICAL
2	15899.75	62.35	74.00	-11.65	46.26	12.57	37.57	34.05	160	113	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15957.60	59.55	74.00	-14.45	43.66	12.56	37.46	34.13	152	332	Peak	HORIZONTAL
2	15961.47	46.77	54.00	-7.23	30.88	12.56	37.46	34.13	152	332	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15958.85	59.26	74.00	-14.74	43.37	12.56	37.46	34.13	152	299	Peak	VERTICAL
2	15959.99	46.41	54.00	-7.59	30.52	12.56	37.46	34.13	152	299	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10998.48	55.00	74.00	-19.00	39.43	10.55	38.40	33.38	138	33 Peak	HORIZONTAL
2	11000.03	42.07	54.00	-11.93	26.50	10.55	38.40	33.38	138	33 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10998.71	55.36	74.00	-18.64	39.79	10.55	38.40	33.38	138	43 Peak	VERTICAL
2	10999.73	42.32	54.00	-11.68	26.75	10.55	38.40	33.38	138	43 Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11157.90	44.90	54.00	-9.10	29.11	10.60	38.57	33.38	138	177	Average	HORIZONTAL
2	11159.91	59.23	74.00	-14.77	43.44	10.60	38.57	33.38	138	177	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11159.16	44.22	54.00	-9.78	28.43	10.60	38.57	33.38	155	167	Average	VERTICAL
2	11159.92	57.44	74.00	-16.56	41.65	10.60	38.57	33.38	155	167	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11398.05	43.68	54.00	-10.32	27.56	10.69	38.80	33.37	155	234	Average	HORIZONTAL
2	11401.51	57.32	74.00	-16.68	41.20	10.69	38.80	33.37	155	234	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11398.33	44.67	54.00	-9.33	28.55	10.69	38.80	33.37	155	210	Average	VERTICAL
2	11400.52	57.36	74.00	-16.64	41.24	10.69	38.80	33.37	155	210	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm			
1	11490.00	45.61	54.00	-8.39	29.39	10.71	38.88	33.37	140	302	Average	HORIZONTAL
2	11490.00	57.30	74.00	-16.70	41.08	10.71	38.88	33.37	140	302	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm			
1	11490.42	45.00	54.00	-9.00	28.78	10.71	38.88	33.37	150	195	Average	VERTICAL
2	11492.49	58.10	74.00	-15.90	41.88	10.71	38.88	33.37	150	195	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB	dB/m	
1	11570.29	64.30	74.00	-9.70	47.99	10.76	38.94	33.39	146	300	Peak	HORIZONTAL
2	11570.34	50.88	54.00	-3.12	34.57	10.76	38.94	33.39	146	300	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB	dB/m	
1	11570.48	47.54	54.00	-6.46	31.23	10.76	38.94	33.39	144	193	Average	VERTICAL
2	11572.26	60.66	74.00	-13.34	44.35	10.76	38.94	33.39	144	193	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11647.55	56.58	74.00	-17.42	40.20	10.81	38.98	33.41	153	279 Peak	HORIZONTAL
2	11647.57	43.84	54.00	-10.16	27.46	10.81	38.98	33.41	153	279 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11648.47	56.82	74.00	-17.18	40.44	10.81	38.98	33.41	153	293 Peak	VERTICAL
2	11648.98	44.09	54.00	-9.91	27.71	10.81	38.98	33.41	153	293 Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15570.11	58.33	74.00	-15.67	41.39	12.58	38.09	33.73	153	244	Peak	HORIZONTAL
2	15572.40	45.75	54.00	-8.25	28.81	12.58	38.09	33.73	153	244	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15567.80	59.61	74.00	-14.39	42.67	12.58	38.09	33.73	153	219	Peak	VERTICAL
2	15571.04	45.42	54.00	-8.58	28.48	12.58	38.09	33.73	153	219	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15687.50	46.58	54.00	-7.42	29.95	12.58	37.90	33.85	153	39	Average	HORIZONTAL
2	15690.35	59.90	74.00	-14.10	43.27	12.58	37.90	33.85	153	39	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15688.46	59.99	74.00	-14.01	43.36	12.58	37.90	33.85	153	22	Peak	VERTICAL
2	15689.82	46.70	54.00	-7.30	30.07	12.58	37.90	33.85	153	22	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15810.13	60.59	74.00	-13.41	44.30	12.57	37.70	33.98	153	323	Peak	HORIZONTAL
2	15811.75	47.84	54.00	-6.16	31.55	12.57	37.70	33.98	153	323	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15808.23	47.65	54.00	-6.35	31.36	12.57	37.70	33.98	153	35	Average	VERTICAL
2	15811.76	60.38	74.00	-13.62	44.09	12.57	37.70	33.98	153	35	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	15931.40	46.75	54.00	-7.25	30.78	12.56	37.51	34.10	153	327	Average	HORIZONTAL
2	15931.71	60.03	74.00	-13.97	44.06	12.56	37.51	34.10	153	327	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	15928.59	46.78	54.00	-7.22	30.79	12.56	37.51	34.08	153	81	Average	VERTICAL
2	15929.85	60.13	74.00	-13.87	44.14	12.56	37.51	34.08	153	81	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11019.21	42.44	54.00	-11.56	26.84	10.56	38.42	33.38	153	338	Average	HORIZONTAL
2	11022.33	54.58	74.00	-19.42	38.97	10.56	38.43	33.38	153	338	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11018.78	55.52	74.00	-18.48	39.92	10.56	38.42	33.38	153	322	Peak	VERTICAL
2	11019.44	42.41	54.00	-11.59	26.81	10.56	38.42	33.38	153	322	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	11099.78	42.75	54.00	-11.25	27.05	10.58	38.50	33.38	153	124	Average	HORIZONTAL
2	11102.48	55.66	74.00	-18.34	39.96	10.58	38.50	33.38	153	124	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	11099.40	55.82	74.00	-18.18	40.12	10.58	38.50	33.38	153	132	Peak	VERTICAL
2	11100.91	42.86	54.00	-11.14	27.16	10.58	38.50	33.38	153	132	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11340.69	56.41	74.00	-17.59	40.38	10.67	38.73	33.37	153	82 Peak	HORIZONTAL
2	11340.72	42.73	54.00	-11.27	26.70	10.67	38.73	33.37	153	82 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11340.68	43.02	54.00	-10.98	26.99	10.67	38.73	33.37	150	125 Average	VERTICAL
2	11340.71	56.09	74.00	-17.91	40.06	10.67	38.73	33.37	150	125 Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11509.59	42.58	54.00	-11.42	26.33	10.72	38.90	33.37	155	151	Average	HORIZONTAL
2	11511.24	55.89	74.00	-18.11	39.64	10.72	38.90	33.37	155	151	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11509.87	42.61	54.00	-11.39	26.36	10.72	38.90	33.37	136	244	Average	VERTICAL
2	11512.27	55.85	74.00	-18.15	39.60	10.72	38.90	33.37	136	244	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11588.99	56.47	74.00	-17.53	40.15	10.76	38.95	33.39	148	119 Peak	HORIZONTAL
2	11591.60	43.30	54.00	-10.70	26.98	10.76	38.95	33.39	148	119 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	11591.33	56.95	74.00	-17.05	40.63	10.76	38.95	33.39	151	52 Peak	VERTICAL
2	11592.12	43.63	54.00	-10.37	27.31	10.76	38.95	33.39	151	52 Average	VERTICAL



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Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	15628.19	60.26	74.00	-13.74	43.47	12.58	38.01	33.80	148	230 Peak	HORIZONTAL
2	15632.32	47.11	54.00	-6.89	30.35	12.58	37.98	33.80	148	230 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	15630.95	46.96	54.00	-7.04	30.20	12.58	37.98	33.80	185	135 Average	VERTICAL
2	15632.23	60.34	74.00	-13.66	43.58	12.58	37.98	33.80	185	135 Peak	VERTICAL



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Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15867.96	58.91	74.00	-15.09	42.78	12.57	37.59	34.03	185	207	Peak	HORIZONTAL
2	15868.44	46.24	54.00	-7.76	30.11	12.57	37.59	34.03	185	207	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	15872.10	46.26	54.00	-7.74	30.13	12.57	37.59	34.03	185	159	Average	VERTICAL
2	15872.30	59.21	74.00	-14.79	43.08	12.57	37.59	34.03	185	159	Peak	VERTICAL



SPORTON LAB.

Report No.: FR441804-22AB

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11058.90	42.50	54.00	-11.50	26.84	10.57	38.47	33.38	175	207	Average	HORIZONTAL
2	11059.34	54.83	74.00	-19.17	39.17	10.57	38.47	33.38	175	207	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg
1	11059.37	42.35	54.00	-11.65	26.69	10.57	38.47	33.38	175	192	Average	VERTICAL
2	11060.62	55.83	74.00	-18.17	40.16	10.58	38.47	33.38	175	192	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11218.86	42.43	54.00	-11.57	26.56	10.63	38.62	33.38	175	77	Average	HORIZONTAL
2	11221.17	55.13	74.00	-18.87	39.26	10.63	38.62	33.38	175	77	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11218.07	42.38	54.00	-11.62	26.51	10.63	38.62	33.38	175	57	Average	VERTICAL
2	11221.63	55.58	74.00	-18.42	39.71	10.63	38.62	33.38	175	57	Peak	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11550.51	42.82	54.00	-11.18	26.52	10.75	38.93	33.38	171	166	Average	HORIZONTAL
2	11551.94	56.01	74.00	-17.99	39.71	10.75	38.93	33.38	171	166	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	11548.11	55.47	74.00	-18.53	39.18	10.75	38.92	33.38	171	284	Peak	VERTICAL
2	11550.62	42.84	54.00	-11.16	26.54	10.75	38.93	33.38	171	284	Average	VERTICAL



## Straddle Channel

Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

## Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB	dB/m	
1	11437.59	65.79	74.00	-8.21	49.64	10.69	38.83	33.37	150	293	Peak	HORIZONTAL
2	11439.08	52.22	54.00	-1.78	36.07	10.69	38.83	33.37	150	293	Average	HORIZONTAL

## Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB	dB/m	
1	11438.38	65.44	74.00	-8.56	49.29	10.69	38.83	33.37	150	195	Peak	VERTICAL
2	11439.68	51.86	54.00	-2.14	35.71	10.69	38.83	33.37	150	195	Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11420.57	63.05	74.00	-10.95	46.91	10.69	38.82	33.37	212	300 Peak	HORIZONTAL
2	11422.36	49.13	54.00	-4.87	32.99	10.69	38.82	33.37	212	300 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11420.04	63.66	74.00	-10.34	47.52	10.69	38.82	33.37	148	208 Peak	VERTICAL
2	11422.19	48.94	54.00	-5.06	32.80	10.69	38.82	33.37	148	208 Average	VERTICAL



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 138 / Chain 1 + Chain 2
Test Date	Aug. 05, 2015		
Test Mode	Mode 3 (Ant. 9 Patch antenna / 5.4dBi / 2TX)		

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	11380.45	44.91	54.00	-9.09	28.82	10.68	38.78	33.37	143	298	Average	HORIZONTAL
2	11380.53	58.14	74.00	-15.86	42.05	10.68	38.78	33.37	143	298	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	11379.63	44.75	54.00	-9.25	28.66	10.68	38.78	33.37	171	100	Average	VERTICAL
2	11381.35	56.66	74.00	-17.34	40.57	10.68	38.78	33.37	171	100	Peak	VERTICAL

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

## 4.7. Band Edge Emissions Measurement

### 4.7.1. Limit

For transmitters operating in the 5.15-5.35 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.

For transmitters operating in the 5.470-5.725 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.

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.

In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

### 4.7.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for Peak

### 4.7.3. Test Procedures

- The test procedure is the same as section 4.6.3.

### 4.7.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.6.4.

#### 4.7.5. Test Deviation

There is no deviation with the original standard.

#### 4.7.6. EUT Operation during Test

For Non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

The EUT was programmed to be in beamforming transmitting mode.

For STBC mode:

The EUT was programmed to be in continuously transmitting mode.

#### 4.7.7. Test Result of Band Edge and Fundamental Emissions

<For Non-Beamforming Mode>

<b>Temperature</b>	23°C	<b>Humidity</b>	61%
<b>Test Engineer</b>	Paul Chen	<b>Configurations</b>	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36, 40, 48 / Chain 2
<b>Test Date</b>	Jul. 15, 2015		
<b>Test Mode</b>	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 1TX)		

##### Channel 36

Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dB	dB			deg	cm		
1	5149.87	69.75	74.00	-4.25	66.69	4.26	33.27	34.47	344	152	Peak	VERTICAL	
2	5150.00	52.88	54.00	-1.12	49.82	4.26	33.27	34.47	344	152	Average	VERTICAL	
3	5182.56	112.04			108.91	4.27	33.33	34.47	344	152	Peak	VERTICAL	
4	5187.37	101.68			98.55	4.27	33.33	34.47	344	152	Average	VERTICAL	

Item 3, 4 are the fundamental frequency at 5180 MHz.

##### Channel 40

Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dB	dB			deg	cm		
1	5148.72	68.33	74.00	-5.67	65.27	4.26	33.27	34.47	45	165	Peak	VERTICAL	
2	5149.68	52.89	54.00	-1.11	49.83	4.26	33.27	34.47	45	165	Average	VERTICAL	
3	5201.28	107.39			104.22	4.28	33.36	34.47	45	165	Average	VERTICAL	
4	5202.24	116.87			113.70	4.28	33.36	34.47	45	165	Peak	VERTICAL	

Item 3, 4 are the fundamental frequency at 5200 MHz.

##### Channel 48

Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dB	dB			deg	cm		
1	5118.85	59.80	74.00	-14.20	56.82	4.24	33.21	34.47	44	161	Peak	VERTICAL	
2	5121.73	47.99	54.00	-6.01	45.01	4.24	33.21	34.47	44	161	Average	VERTICAL	
3	5238.08	106.79			103.54	4.30	33.42	34.47	44	161	Average	VERTICAL	
4	5241.92	116.46			113.18	4.30	33.45	34.47	44	161	Peak	VERTICAL	
5	5361.64	61.95	74.00	-12.05	58.40	4.36	33.66	34.47	44	161	Peak	VERTICAL	
6	5361.64	50.12	54.00	-3.88	46.57	4.36	33.66	34.47	44	161	Average	VERTICAL	

Item 3, 4 are the fundamental frequency at 5240 MHz.



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52, 60, 64 / Chain 2
Test Date	Jul. 15, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 1TX)		

### Channel 52

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	5258.08	119.02			115.74	4.30	33.45	34.47	46	168	Peak	VERTICAL
2	5250.04	107.96			104.64	4.31	33.48	34.47	46	168	Average	VERTICAL
3	5377.79	65.99	74.00	-8.01	62.40	4.37	33.69	34.47	46	168	Peak	VERTICAL
4	5378.75	52.51	54.00	-1.49	48.92	4.37	33.69	34.47	46	168	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5260 MHz.

### Channel 60

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	5301.28	106.44			103.04	4.33	33.54	34.47	43	164	Average	VERTICAL
2	5302.89	117.80			114.40	4.33	33.54	34.47	43	164	Peak	VERTICAL
3	5350.00	52.99	54.00	-1.01	49.48	4.35	33.63	34.47	43	164	Average	VERTICAL
4	5357.37	68.45	74.00	-5.55	64.94	4.35	33.63	34.47	43	164	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

### Channel 64

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	5321.28	113.45			110.02	4.33	33.57	34.47	47	162	Peak	VERTICAL
2	5321.28	102.94			99.51	4.33	33.57	34.47	47	162	Average	VERTICAL
3	5350.00	52.92	54.00	-1.08	49.41	4.35	33.63	34.47	47	162	Average	VERTICAL
4	5352.37	68.29	74.00	-5.71	64.78	4.35	33.63	34.47	47	162	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

<b>Temperature</b>	23°C	<b>Humidity</b>	61%
<b>Test Engineer</b>	Paul Chen	<b>Configurations</b>	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100, 116, 140 / Chain 2
<b>Test Date</b>	Jul. 15, 2015		
<b>Test Mode</b>	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 1TX)		

### Channel 100

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dB	dB/m	deg	cm			
1	5455.93	67.21	74.00	-6.79	63.47	4.40	33.81	34.47	46	147	Peak	VERTICAL
2	5460.00	48.17	54.00	-5.83	44.43	4.40	33.81	34.47	46	147	Average	VERTICAL
3	5469.87	72.01	74.00	-1.99	68.23	4.41	33.84	34.47	46	147	Peak	VERTICAL
4	5469.87	52.72	54.00	-1.28	48.94	4.41	33.84	34.47	46	147	Average	VERTICAL
5	5498.56	103.79			99.94	4.42	33.90	34.47	46	147	Average	VERTICAL
6	5501.60	115.04			111.20	4.42	33.90	34.48	46	147	Peak	VERTICAL

Item 5, 6 are the fundamental frequency at 5500 MHz.

### Channel 116

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dB	dB/m	deg	cm			
1	5458.21	52.74	54.00	-1.26	49.00	4.40	33.81	34.47	43	169	Average	VERTICAL
2	5458.85	63.74	74.00	-10.26	60.00	4.40	33.81	34.47	43	169	Peak	VERTICAL
3	5468.08	62.12	74.00	-11.88	58.34	4.41	33.84	34.47	43	169	Peak	VERTICAL
4	5468.08	51.68	54.00	-2.32	47.90	4.41	33.84	34.47	43	169	Average	VERTICAL
5	5579.36	118.00			113.94	4.44	34.11	34.49	43	169	Peak	VERTICAL
6	5581.28	107.02			102.96	4.44	34.11	34.49	43	169	Average	VERTICAL
7	5733.85	47.81	54.00	-6.19	43.26	4.50	34.57	34.52	43	169	Average	VERTICAL
8	5742.18	60.47	74.00	-13.53	55.87	4.50	34.62	34.52	43	169	Peak	VERTICAL

Item 5, 6 are the fundamental frequency at 5580 MHz.

### Channel 140

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dB	dB/m	deg	cm			
1	5694.07	112.18			107.73	4.49	34.47	34.51	44	154	Peak	VERTICAL
2	5698.72	100.34			95.89	4.49	34.47	34.51	44	154	Average	VERTICAL
3	5725.00	49.76	54.00	-4.24	45.20	4.50	34.57	34.51	44	154	Average	VERTICAL
4	5725.16	72.95	74.00	-1.05	68.39	4.50	34.57	34.51	44	154	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5700 MHz.



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149, 157, 165 / Chain 2
Test Date	Jul. 15, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 1TX)		

### Channel 149

Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m				
1	5711.19	67.02	68.20	-1.18	62.52	4.49	34.52	34.51	308	147 Peak	VERTICAL
2	5724.49	74.68	78.20	-3.52	70.12	4.50	34.57	34.51	308	147 Peak	VERTICAL
3	5743.88	102.01			97.41	4.50	34.62	34.52	308	147 Average	VERTICAL
4	5746.60	112.41			107.81	4.50	34.62	34.52	308	147 Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5745 MHz.

### Channel 157

Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m				
1	5705.51	67.19	68.20	-1.01	62.69	4.49	34.52	34.51	307	180 Peak	VERTICAL
2	5722.50	72.20	78.20	-6.00	67.64	4.50	34.57	34.51	307	180 Peak	VERTICAL
3	5785.96	118.16			113.39	4.52	34.78	34.53	307	180 Peak	VERTICAL
4	5786.60	108.20			103.43	4.52	34.78	34.53	307	180 Average	VERTICAL
5	5852.31	71.99	78.20	-6.21	67.06	4.54	34.93	34.54	307	180 Peak	VERTICAL
6	5867.69	66.93	68.20	-1.27	61.93	4.55	34.99	34.54	307	180 Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5785 MHz.

### Channel 165

Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m				
1	5822.92	113.15			108.27	4.53	34.88	34.53	307	171 Peak	VERTICAL
2	5823.40	103.15			98.27	4.53	34.88	34.53	307	171 Average	VERTICAL
3	5851.28	76.97	78.20	-1.23	72.04	4.54	34.93	34.54	307	171 Peak	VERTICAL
4	5863.78	67.18	68.20	-1.02	62.18	4.55	34.99	34.54	307	171 Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5825 MHz.



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38, 46 / Chain 2
Test Date	Jul. 15, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 1TX)		

**Channel 38**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	5148.97	72.07	74.00	-1.93	69.01	4.26	33.27	34.47	346	145	Peak	VERTICAL
2	5149.30	52.58	54.00	-1.42	49.52	4.26	33.27	34.47	346	145	Average	VERTICAL
3	5194.81	98.26			95.09	4.28	33.36	34.47	346	145	Average	VERTICAL
4	5195.13	108.74			105.57	4.28	33.36	34.47	346	145	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5190 MHz.

**Channel 46**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	5146.35	62.79	74.00	-11.21	59.73	4.26	33.27	34.47	45	163	Peak	VERTICAL
2	5148.75	50.31	54.00	-3.69	47.25	4.26	33.27	34.47	45	163	Average	VERTICAL
3	5235.29	103.39			100.14	4.30	33.42	34.47	45	163	Average	VERTICAL
4	5237.69	113.25			110.00	4.30	33.42	34.47	45	163	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5230 MHz.



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54, 62 / Chain 2
Test Date	Jul. 15, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 1TX)		

#### Channel 54

Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	5264.71	102.93			99.61	4.31	33.48	34.47	347	150	Average
2	5265.19	113.72			110.40	4.31	33.48	34.47	347	150	Peak
3	5351.73	52.93	54.00	-1.07	49.42	4.35	33.63	34.47	347	150	Average
4	5366.64	66.04	74.00	-7.96	62.49	4.36	33.66	34.47	347	150	Peak

Item 1, 2 are the fundamental frequency at 5270 MHz.

#### Channel 62

Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	5304.87	108.32			104.92	4.33	33.54	34.47	46	158	Peak
2	5305.51	98.94			95.54	4.33	33.54	34.47	46	158	Average
3	5351.67	52.86	54.00	-1.14	49.35	4.35	33.63	34.47	46	158	Average
4	5352.95	71.45	74.00	-2.55	67.94	4.35	33.63	34.47	46	158	Peak

Item 1, 2 are the fundamental frequency at 5310 MHz.



Temperature	23°C	Humidity	61%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102, 110, 134 / Chain 2
Test Date	Jul. 15, 2015		
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 1TX)		

### Channel 102

Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	deg	cm		
1	5459.68	67.92	74.00	-6.08	64.18	4.40	33.81	34.47	43	167 Peak	VERTICAL
2	5459.68	49.45	54.00	-4.55	45.71	4.40	33.81	34.47	43	167 Average	VERTICAL
3	5469.62	72.15	74.00	-1.85	68.37	4.41	33.84	34.47	43	167 Peak	VERTICAL
4	5469.62	52.71	54.00	-1.29	48.93	4.41	33.84	34.47	43	167 Average	VERTICAL
5	5503.91	109.94			106.10	4.42	33.90	34.48	43	167 Peak	VERTICAL
6	5504.87	99.34			95.50	4.42	33.90	34.48	43	167 Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5510 MHz.

### Channel 110

Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	deg	cm		
1	5443.75	51.61	54.00	-2.39	47.91	4.39	33.78	34.47	43	167 Average	VERTICAL
2	5454.33	65.93	74.00	-8.07	62.19	4.40	33.81	34.47	43	167 Peak	VERTICAL
3	5469.71	67.43	74.00	-6.57	63.65	4.41	33.84	34.47	43	167 Peak	VERTICAL
4	5470.00	52.77	54.00	-1.23	48.99	4.41	33.84	34.47	43	167 Average	VERTICAL
5	5545.67	113.08			109.13	4.43	34.00	34.48	43	167 Peak	VERTICAL
6	5546.15	102.41			98.46	4.43	34.00	34.48	43	167 Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5550 MHz.

### Channel 134

Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	deg	cm		
1	5665.83	100.58			96.25	4.47	34.37	34.51	47	151 Average	VERTICAL
2	5673.21	110.84			106.45	4.48	34.42	34.51	47	151 Peak	VERTICAL
3	5725.00	70.72	74.00	-3.28	66.16	4.50	34.57	34.51	47	151 Peak	VERTICAL
4	5726.73	52.67	54.00	-1.33	48.11	4.50	34.57	34.51	47	151 Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

<b>Temperature</b>	23°C	<b>Humidity</b>	61%
<b>Test Engineer</b>	Paul Chen	<b>Configurations</b>	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151, 159 / Chain 2
<b>Test Date</b>	Jul. 15, 2015		
<b>Test Mode</b>	Mode 1 (Ant. 6 Dipole antenna / 6.4dBi / 1TX)		

### Channel 151

Freq MHz	Level dBuV/m	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/I Pos deg	A/A Pos cm	Remark	Pol/Phase
		dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg		
1 5707.24	67.05	68.20	-1.15	62.55	4.49	34.52	34.51	307	167	Peak	VERTICAL
2 5724.23	74.65	78.20	-3.55	70.09	4.50	34.57	34.51	307	167	Peak	VERTICAL
3 5758.85	109.08			104.42	4.51	34.68	34.53	307	167	Peak	VERTICAL
4 5759.17	98.12			93.46	4.51	34.68	34.53	307	167	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5755 MHz.

### Channel 159

Freq MHz	Level dBuV/m	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/I Pos deg	A/A Pos cm	Remark	Pol/Phase
		dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg		
1 5708.14	60.27	68.20	-7.93	55.77	4.49	34.52	34.51	310	163	Peak	VERTICAL
2 5723.85	64.28	78.20	-13.92	59.72	4.50	34.57	34.51	310	163	Peak	VERTICAL
3 5799.81	109.15			104.38	4.52	34.78	34.53	310	163	Peak	VERTICAL
4 5807.18	98.65			93.82	4.53	34.83	34.53	310	163	Average	VERTICAL
5 5850.32	69.13	78.20	-9.07	64.20	4.54	34.93	34.54	310	163	Peak	VERTICAL
6 5860.71	66.90	68.20	-1.30	61.90	4.55	34.99	34.54	310	163	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5795 MHz.