

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15521.90	46.68	54.00	-7.32	23.74	18.54	38.13	33.73	200	224	Average	HORIZONTAL
2	15564.20	59.50	74.00	-14.50	36.65	18.57	38.05	33.77	200	224	Peak	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15520.90	59.62	74.00	-14.38	36.68	18.54	38.13	33.73	200	81	Peak	VERTICAL
2	15534.30	46.56	54.00	-7.44	23.62	18.54	38.13	33.73	200	81	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15577.10	58.80	74.00	-15.20	35.95	18.57	38.05	33.77	200	269	Peak	HORIZONTAL
2	15617.10	46.28	54.00	-7.72	23.52	18.60	37.98	33.82	200	269	Average	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15592.30	59.63	74.00	-14.37	36.78	18.57	38.05	33.77	200	83	Peak	VERTICAL
2	15593.10	46.53	54.00	-7.47	23.68	18.57	38.05	33.77	200	83	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit Line	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	15695.10	45.89	54.00	-8.11	23.26	18.66	37.84	33.87	200	266	Average	HORIZONTAL
2	15698.10	58.96	74.00	-15.04	36.33	18.66	37.84	33.87	200	266	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	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	15697.40	46.03	54.00	-7.97	23.40	18.66	37.84	33.87	200	72	Average	VERTICAL
2	15733.30	59.52	74.00	-14.48	36.94	18.66	37.84	33.92	200	72	Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11465.40	42.49	54.00	-11.51	21.92	14.79	39.15	33.37	200	277	Average	HORIZONTAL
2	11467.60	55.07	74.00	-18.93	34.50	14.79	39.15	33.37	200	277	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11465.70	42.57	54.00	-11.43	22.00	14.79	39.15	33.37	200	88	Average
2	11495.00	54.81	74.00	-19.19	34.16	14.82	39.20	33.37	200	88	Peak

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	cm	deg	
1	11582.40	55.28	74.00	-18.72	34.58	14.89	39.20	33.39	200	282 Peak	HORIZONTAL
2	11585.90	42.73	54.00	-11.27	22.01	14.92	39.20	33.40	200	282 Average	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	cm	deg	
1	11562.30	42.52	54.00	-11.48	21.82	14.89	39.20	33.39	200	77 Average	VERTICAL
2	11578.10	55.50	74.00	-18.50	34.80	14.89	39.20	33.39	200	77 Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit Line	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	11629.40	42.40	54.00	-11.60	21.66	14.95	39.20	33.41	200	223	Average	HORIZONTAL
2	11643.00	55.75	74.00	-18.25	35.01	14.95	39.20	33.41	200	223	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	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	11628.50	42.78	54.00	-11.22	22.04	14.95	39.20	33.41	200	79	Average	VERTICAL
2	11636.30	55.18	74.00	-18.82	34.44	14.95	39.20	33.41	200	79	Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15572.40	46.21	54.00	-7.79	23.36	18.57	38.05	33.77	200	288	Average	HORIZONTAL
2	15584.20	58.87	74.00	-15.13	36.02	18.57	38.05	33.77	200	288	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15552.60	58.87	74.00	-15.13	35.93	18.54	38.13	33.73	200	86	Peak	VERTICAL
2	15554.10	46.49	54.00	-7.51	23.55	18.54	38.13	33.73	200	86	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna 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	15674.60	58.92	74.00	-15.08	36.25	18.63	37.91	33.87	200	231	Peak	HORIZONTAL
2	15680.40	46.30	54.00	-7.70	23.63	18.63	37.91	33.87	200	231	Average	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna 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	15674.50	46.41	54.00	-7.59	23.74	18.63	37.91	33.87	200	81	Average	VERTICAL
2	15701.80	58.46	74.00	-15.54	35.83	18.66	37.84	33.87	200	81	Peak	VERTICAL



Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11509.10	43.73	54.00	-10.27	23.09	14.82	39.20	33.38	200	296	Average
2	11531.90	55.63	74.00	-18.37	34.96	14.85	39.20	33.38	200	296	Peak

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11504.70	43.76	54.00	-10.24	23.11	14.82	39.20	33.37	200	93	Average
2	11512.70	56.11	74.00	-17.89	35.47	14.82	39.20	33.38	200	93	Peak

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11569.20	43.68	54.00	-10.32	22.98	14.89	39.20	33.39	200	209	Average	HORIZONTAL
2	11587.50	56.59	74.00	-17.41	35.87	14.92	39.20	33.40	200	209	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11577.60	43.79	54.00	-10.21	23.09	14.89	39.20	33.39	200	85	Average	VERTICAL
2	11585.50	56.60	74.00	-17.40	35.88	14.92	39.20	33.40	200	85	Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15624.60	46.08	54.00	-7.92	23.32	18.60	37.98	33.82	200	274	Average	HORIZONTAL
2	15632.20	58.52	74.00	-15.48	35.76	18.60	37.98	33.82	200	274	Peak	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15615.70	58.67	74.00	-15.33	35.91	18.60	37.98	33.82	200	69	Peak	VERTICAL
2	15624.40	46.17	54.00	-7.83	23.41	18.60	37.98	33.82	200	69	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11564.30	42.61	54.00	-11.39	21.91	14.89	39.20	33.39	200	258	Average	HORIZONTAL
2	11564.30	54.94	74.00	-19.06	34.24	14.89	39.20	33.39	200	258	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11538.60	42.63	54.00	-11.37	21.96	14.85	39.20	33.38	200	95	Average
2	11556.00	54.83	74.00	-19.17	34.13	14.89	39.20	33.39	200	95	Peak

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11a CH 36 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15536.70	58.19	74.00	-15.81	43.44	11.23	38.16	34.64	256	200	Peak	HORIZONTAL
2	15538.66	45.19	54.00	-8.81	30.44	11.23	38.16	34.64	256	200	Average	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15535.72	58.01	74.00	-15.99	43.26	11.23	38.16	34.64	23	200	Peak	VERTICAL
2	15540.48	45.06	54.00	-8.94	30.31	11.23	38.16	34.64	23	200	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11a CH 40 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15600.06	58.68	74.00	-15.32	43.89	11.24	38.23	34.68	269	200	Peak
2	15601.84	45.44	54.00	-8.56	30.58	11.25	38.29	34.68	269	200	Average

#### Vertical

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15598.08	58.65	74.00	-15.35	43.86	11.24	38.23	34.68	75	200	Peak
2	15602.26	45.50	54.00	-8.50	30.64	11.25	38.29	34.68	75	200	Average

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11a CH 48 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15719.62	45.47	54.00	-8.53	30.59	11.27	38.42	34.81	291	200	Average	HORIZONTAL
2	15720.16	58.03	74.00	-15.97	43.15	11.27	38.42	34.81	291	200	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15723.84	45.41	54.00	-8.59	30.53	11.27	38.42	34.81	68	200	Average	VERTICAL
2	15724.42	58.01	74.00	-15.99	43.13	11.27	38.42	34.81	68	200	Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11a CH 149 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11494.18	41.81	54.00	-12.19	28.31	9.62	38.50	34.62	207	200	Average	HORIZONTAL
2	11494.28	54.55	74.00	-19.45	41.05	9.62	38.50	34.62	207	200	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11492.42	41.62	54.00	-12.38	28.12	9.62	38.50	34.62	68	200	Average	VERTICAL
2	11493.16	54.39	74.00	-19.61	40.89	9.62	38.50	34.62	68	200	Peak	VERTICAL



Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11a CH 157 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11565.14	54.52	74.00	-19.48	41.03	9.61	38.53	34.65	257	200	Peak	HORIZONTAL
2	11567.74	41.76	54.00	-12.24	28.27	9.61	38.53	34.65	257	200	Average	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11565.58	54.62	74.00	-19.38	41.13	9.61	38.53	34.65	64	200	Peak	VERTICAL
2	11568.12	41.83	54.00	-12.17	28.34	9.61	38.53	34.65	64	200	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11a CH 165 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11646.50	41.94	54.00	-12.06	28.47	9.60	38.55	34.68	266	200 Average	HORIZONTAL
2	11647.38	54.39	74.00	-19.61	40.92	9.60	38.55	34.68	266	200 Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11652.00	54.89	74.00	-19.11	41.40	9.60	38.57	34.68	86	200 Peak	VERTICAL
2	11652.66	41.76	54.00	-12.24	28.27	9.60	38.57	34.68	86	200 Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15539.34	58.04	74.00	-15.96	43.29	11.23	38.16	34.64	256	200	Peak	HORIZONTAL
2	15542.04	44.97	54.00	-9.03	30.22	11.23	38.16	34.64	256	200	Average	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15536.92	44.97	54.00	-9.03	30.22	11.23	38.16	34.64	57	200	Average	VERTICAL
2	15541.64	58.05	74.00	-15.95	43.30	11.23	38.16	34.64	57	200	Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15597.44	58.38	74.00	-15.62	43.59	11.24	38.23	34.68	233	200	Peak
2	15604.58	45.69	54.00	-8.31	30.83	11.25	38.29	34.68	233	200	Average

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15595.30	58.30	74.00	-15.70	43.51	11.24	38.23	34.68	24	200	Peak	VERTICAL
2	15598.88	45.47	54.00	-8.53	30.68	11.24	38.23	34.68	24	200	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15717.74	45.64	54.00	-8.36	30.76	11.27	38.42	34.81	263	200 Average	HORIZONTAL
2	15721.06	58.28	74.00	-15.72	43.40	11.27	38.42	34.81	263	200 Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15716.92	45.56	54.00	-8.44	30.68	11.27	38.42	34.81	37	200 Average	VERTICAL
2	15722.58	58.99	74.00	-15.01	44.11	11.27	38.42	34.81	37	200 Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11486.72	41.81	54.00	-12.19	28.31	9.62	38.50	34.62	299	200 Average	HORIZONTAL
2	11488.56	54.49	74.00	-19.51	40.99	9.62	38.50	34.62	299	200 Peak	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11492.02	54.35	74.00	-19.65	40.85	9.62	38.50	34.62	82	200 Peak	VERTICAL
2	11494.60	41.84	54.00	-12.16	28.34	9.62	38.50	34.62	82	200 Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	deg	cm		
1	11565.02	42.01	54.00	-11.99	28.52	9.61	38.53	209	200	Average	HORIZONTAL
2	11569.34	54.99	74.00	-19.01	41.50	9.61	38.53	209	200	Peak	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	deg	cm		
1	11567.52	54.51	74.00	-19.49	41.02	9.61	38.53	45	200	Peak	VERTICAL
2	11567.60	41.86	54.00	-12.14	28.37	9.61	38.53	45	200	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11646.90	41.85	54.00	-12.15	28.38	9.60	38.55	34.68	296	200 Average	HORIZONTAL
2	11648.40	54.46	74.00	-19.54	40.99	9.60	38.55	34.68	296	200 Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11645.58	54.67	74.00	-19.33	41.20	9.60	38.55	34.68	53	200 Peak	VERTICAL
2	11646.48	41.83	54.00	-12.17	28.36	9.60	38.55	34.68	53	200 Average	VERTICAL



Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 14, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	cm	deg	
1	15567.84	45.69	54.00	-8.31	28.90	12.30	38.26	33.77	200	99 Average	HORIZONTAL
2	15574.68	58.71	74.00	-15.29	41.92	12.30	38.26	33.77	200	99 Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	cm	deg	
1	15574.00	45.79	54.00	-8.21	29.00	12.30	38.26	33.77	200	299 Average	VERTICAL
2	15578.72	58.58	74.00	-15.42	41.79	12.30	38.26	33.77	200	299 Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15686.28	58.38	74.00	-15.62	43.54	11.26	38.35	34.77	229	200 Peak	HORIZONTAL
2	15686.50	45.76	54.00	-8.24	30.92	11.26	38.35	34.77	229	200 Average	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15691.76	45.90	54.00	-8.10	30.98	11.27	38.42	34.77	53	200 Average	VERTICAL
2	15692.34	59.13	74.00	-14.87	44.21	11.27	38.42	34.77	53	200 Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11511.38	41.83	54.00	-12.17	28.34	9.62	38.50	34.63	232	200 Average	HORIZONTAL
2	11512.94	54.74	74.00	-19.26	41.25	9.62	38.50	34.63	232	200 Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11508.12	55.73	74.00	-18.27	42.23	9.62	38.50	34.62	22	200 Peak	VERTICAL
2	11511.94	41.75	54.00	-12.25	28.26	9.62	38.50	34.63	22	200 Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11587.44	41.75	54.00	-12.25	28.27	9.60	38.54	34.66	272	200 Average	HORIZONTAL
2	11593.98	55.46	74.00	-18.54	41.98	9.60	38.54	34.66	272	200 Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11587.86	54.96	74.00	-19.04	41.48	9.60	38.54	34.66	66	200 Peak	VERTICAL
2	11592.96	41.65	54.00	-12.35	28.17	9.60	38.54	34.66	66	200 Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15633.34	45.71	54.00	-8.29	30.90	11.25	38.29	34.73	271	200 Average	HORIZONTAL
2	15634.14	58.88	74.00	-15.12	44.07	11.25	38.29	34.73	271	200 Peak	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15626.90	45.75	54.00	-8.25	30.94	11.25	38.29	34.73	26	200 Average	VERTICAL
2	15632.02	58.37	74.00	-15.63	43.56	11.25	38.29	34.73	26	200 Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11550.34	55.14	74.00	-18.86	41.65	9.61	38.53	34.65	248	200 Peak	HORIZONTAL
2	11553.22	41.79	54.00	-12.21	28.30	9.61	38.53	34.65	248	200 Average	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11545.98	41.89	54.00	-12.11	28.40	9.61	38.51	34.63	71	200 Average	VERTICAL
2	11552.26	54.81	74.00	-19.19	41.32	9.61	38.53	34.65	71	200 Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	cm	deg	
1	15536.36	48.47	54.00	-5.53	25.53	18.54	38.13	33.73	105	26	Average
2	15537.18	61.07	74.00	-12.93	38.13	18.54	38.13	33.73	105	26	Peak

#### Vertical

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	cm	deg	
1	15536.74	63.20	74.00	-10.80	40.26	18.54	38.13	33.73	170	285	Peak
2	15537.58	49.27	54.00	-4.73	26.33	18.54	38.13	33.73	170	285	Average

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15599.14	48.33	54.00	-5.67	25.48	18.57	38.05	33.77	109	257	Average	HORIZONTAL
2	15603.76	61.20	74.00	-12.80	38.39	18.60	37.98	33.77	109	257	Peak	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	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	15595.36	60.55	74.00	-13.45	37.70	18.57	38.05	33.77	118	291	Peak	VERTICAL
2	15604.66	48.18	54.00	-5.82	25.37	18.60	37.98	33.77	118	291	Average	VERTICAL



Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15719.50	62.73	74.00	-11.27	40.15	18.66	37.84	33.92	125	181	Peak	HORIZONTAL
2	15721.80	48.64	54.00	-5.36	26.06	18.66	37.84	33.92	125	181	Average	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15721.92	61.67	74.00	-12.33	39.09	18.66	37.84	33.92	120	239	Peak	VERTICAL
2	15724.08	48.75	54.00	-5.25	26.17	18.66	37.84	33.92	120	239	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit Line	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	11485.66	44.81	54.00	-9.19	24.16	14.82	39.20	33.37	124	70	Average	HORIZONTAL
2	11492.36	57.81	74.00	-16.19	37.16	14.82	39.20	33.37	124	70	Peak	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	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	11485.62	43.58	54.00	-10.42	22.93	14.82	39.20	33.37	132	265	Average	VERTICAL
2	11493.14	55.94	74.00	-18.06	35.29	14.82	39.20	33.37	132	265	Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit Line	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	11571.74	44.90	54.00	-9.10	24.20	14.89	39.20	33.39	144	95	Average	HORIZONTAL
2	11574.22	57.76	74.00	-16.24	37.06	14.89	39.20	33.39	144	95	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	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	11569.70	44.70	54.00	-9.30	24.00	14.89	39.20	33.39	140	176	Average	VERTICAL
2	11574.54	58.15	74.00	-15.85	37.45	14.89	39.20	33.39	140	176	Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11646.18	44.61	54.00	-9.39	23.87	14.95	39.20	33.41	135	185	Average
2	11650.38	57.31	74.00	-16.69	36.57	14.95	39.20	33.41	135	185	Peak

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11647.42	57.19	74.00	-16.81	36.45	14.95	39.20	33.41	119	119	Peak	VERTICAL
2	11652.08	44.50	54.00	-9.50	23.73	14.98	39.20	33.41	119	119	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	15567.64	62.10	74.00	-11.90	39.25	18.57	38.05	33.77	138	229 Peak	HORIZONTAL
2	15573.56	48.18	54.00	-5.82	25.33	18.57	38.05	33.77	138	229 Average	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	15570.26	63.03	74.00	-10.97	40.18	18.57	38.05	33.77	126	319 Peak	VERTICAL
2	15574.40	49.21	54.00	-4.79	26.36	18.57	38.05	33.77	126	319 Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit Line	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	15685.26	48.93	54.00	-5.07	26.26	18.63	37.91	33.87	136	280	Average	HORIZONTAL
2	15685.54	62.02	74.00	-11.98	39.35	18.63	37.91	33.87	136	280	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	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	15687.40	61.48	74.00	-12.52	38.81	18.63	37.91	33.87	133	233	Peak	VERTICAL
2	15689.14	49.02	54.00	-4.98	26.35	18.63	37.91	33.87	133	233	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit Line	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	11507.42	44.61	54.00	-9.39	23.96	14.82	39.20	33.37	128	224	Average	HORIZONTAL
2	11513.38	57.58	74.00	-16.42	36.94	14.82	39.20	33.38	128	224	Peak	HORIZONTAL

#### Vertical

	Freq	Level	Limit Line	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	11505.12	44.60	54.00	-9.40	23.95	14.82	39.20	33.37	131	275	Average	VERTICAL
2	11509.86	57.01	74.00	-16.99	36.37	14.82	39.20	33.38	131	275	Peak	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11586.52	44.67	54.00	-9.33	23.95	14.92	39.20	33.40	134	157	Average	HORIZONTAL
2	11589.62	57.79	74.00	-16.21	37.07	14.92	39.20	33.40	134	157	Peak	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11585.44	58.72	74.00	-15.28	38.00	14.92	39.20	33.40	138	221	Peak	VERTICAL
2	11593.54	44.78	54.00	-9.22	24.06	14.92	39.20	33.40	138	221	Average	VERTICAL



Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	15625.96	61.70	74.00	-12.30	38.94	18.60	37.98	33.82	135	271	Peak
2	15637.52	49.02	54.00	-4.98	26.26	18.60	37.98	33.82	135	271	Average

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15625.16	61.44	74.00	-12.56	38.68	18.60	37.98	33.82	133	237	Peak	VERTICAL
2	15625.52	48.98	54.00	-5.02	26.22	18.60	37.98	33.82	133	237	Average	VERTICAL

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

#### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11551.08	57.24	74.00	-16.76	36.54	14.89	39.20	33.39	132	275	Peak	HORIZONTAL
2	11553.12	44.81	54.00	-9.19	24.11	14.89	39.20	33.39	132	275	Average	HORIZONTAL

#### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11550.00	56.65	74.00	-17.35	35.99	14.85	39.20	33.39	128	178	Peak	VERTICAL
2	11553.20	44.75	54.00	-9.25	24.05	14.89	39.20	33.39	128	178	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.

## 4.7. Band Edge Emissions Measurement

### 4.7.1. Limit

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

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 (micorvolts/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

Note:  $-17$  and  $-27$  dBm/MHz limits are lower than the current 15.407 (b) (4) (i) requirement.

### 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)	1 MHz / 3MHz for Peak, 1 MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	1 MHz / 3MHz for Peak

### 4.7.3. Test Procedures

1. The test procedure is the same as section 4.6.3.
2. The measurement distance for 1 to 18GHz is 3m, and above 18GHz is 1m.

### 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 function:

The EUT was programmed to be in continuously transmitting mode.

For beamforming function:

The EUT was programmed to be in beamforming transmitting mode.

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11a CH 36, 40, 48 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Mar. 31, 2016	Test Mode	Mode 1
Test Function	Non-beamforming function		

##### Channel 36

	Freq	Level	Limit Line	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	5145.60	66.38	74.00	-7.62	55.26	10.43	33.74	33.05	161	171	Peak	VERTICAL
2	5147.60	52.73	54.00	-1.27	41.61	10.43	33.74	33.05	161	171	Average	VERTICAL
3	5176.80	120.10			108.90	10.46	33.79	33.05	161	171	Peak	VERTICAL
4	5177.20	108.96			97.76	10.46	33.79	33.05	161	171	Average	VERTICAL

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

##### Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5147.80	68.83	74.00	-5.17	57.71	10.43	33.74	33.05	171	183	Peak	VERTICAL
2	5149.00	52.41	54.00	-1.59	41.29	10.43	33.74	33.05	171	183	Average	VERTICAL
3	5197.00	112.29			101.04	10.48	33.82	33.05	171	183	Average	VERTICAL
4	5197.00	122.61			111.36	10.48	33.82	33.05	171	183	Peak	VERTICAL

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

##### Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5140.40	59.38	74.00	-14.62	48.29	10.42	33.72	33.05	184	195	Peak	VERTICAL
2	5141.00	48.08	54.00	-5.92	36.99	10.42	33.72	33.05	184	195	Average	VERTICAL
3	5236.40	113.79			102.48	10.47	33.89	33.05	184	195	Average	VERTICAL
4	5236.40	124.07			112.76	10.47	33.89	33.05	184	195	Peak	VERTICAL
5	5355.80	47.22	54.00	-6.78	35.77	10.43	34.08	33.06	184	195	Average	VERTICAL
6	5384.60	59.74	74.00	-14.26	48.27	10.42	34.11	33.06	184	195	Peak	VERTICAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11a CH 149, 157, 165 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Mar. 31, 2016	Test Mode	Mode 1
Test Function	Non-beamforming function		

#### Channel 149

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5715.00	64.55	68.20	-3.65	52.47	10.78	34.43	33.13	199	198	Peak	VERTICAL
2	5724.00	77.10	78.20	-1.10	65.02	10.77	34.44	33.13	199	198	Peak	VERTICAL
3	5745.60	119.09			107.02	10.76	34.45	33.14	199	198	Peak	VERTICAL
4	5746.20	108.83			96.76	10.76	34.45	33.14	199	198	Average	VERTICAL

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

#### Channel 157

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5709.40	66.67	68.20	-1.53	54.59	10.78	34.43	33.13	179	197	Peak	VERTICAL
2	5719.60	70.23	78.20	-7.97	58.15	10.78	34.43	33.13	179	197	Peak	VERTICAL
3	5788.00	113.02			100.96	10.74	34.47	33.15	179	197	Average	VERTICAL
4	5788.00	123.86			111.80	10.74	34.47	33.15	179	197	Peak	VERTICAL
5	5853.40	67.35	78.20	-10.85	55.11	10.90	34.51	33.17	179	197	Peak	VERTICAL
6	5861.80	62.71	68.20	-5.49	50.41	10.96	34.52	33.18	179	197	Peak	VERTICAL

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

#### Channel 165

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5826.80	119.83			107.65	10.85	34.50	33.17	183	188	Peak	VERTICAL
2	5827.40	109.74			97.56	10.85	34.50	33.17	183	188	Average	VERTICAL
3	5852.00	74.41	78.20	-3.79	62.17	10.90	34.51	33.17	183	188	Peak	VERTICAL
4	5860.00	67.14	68.20	-1.06	54.84	10.96	34.52	33.18	183	188	Peak	VERTICAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36, 40, 48 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 06, 2016	Test Mode	Mode 1
Test Function	Non-beamforming function		

### Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5148.20	66.71	74.00	-7.29	55.59	10.43	33.74	33.05	198	36 Peak	VERTICAL
2	5150.00	52.49	54.00	-1.51	41.37	10.43	33.74	33.05	198	36 Average	VERTICAL
3	5184.80	118.50			107.30	10.46	33.79	33.05	198	36 Peak	VERTICAL
4	5185.40	107.52			96.32	10.46	33.79	33.05	198	36 Average	VERTICAL

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

### Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5150.00	52.44	54.00	-1.56	41.32	10.43	33.74	33.05	259	180 Average	VERTICAL
2	5150.00	65.42	74.00	-8.58	54.30	10.43	33.74	33.05	259	180 Peak	VERTICAL
3	5202.40	122.66			111.39	10.48	33.84	33.05	259	180 Peak	VERTICAL
4	5203.00	113.21			101.94	10.48	33.84	33.05	259	180 Average	VERTICAL

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

### Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5135.60	60.45	74.00	-13.55	49.36	10.42	33.72	33.05	300	188 Peak	VERTICAL
2	5150.00	47.52	54.00	-6.48	36.40	10.43	33.74	33.05	300	188 Average	VERTICAL
3	5232.20	112.27			100.96	10.47	33.89	33.05	300	188 Average	VERTICAL
4	5232.20	122.46			111.15	10.47	33.89	33.05	300	188 Peak	VERTICAL
5	5350.00	46.47	54.00	-7.53	35.04	10.43	34.06	33.06	300	188 Average	VERTICAL
6	5355.80	59.24	74.00	-14.76	47.79	10.43	34.08	33.06	300	188 Peak	VERTICAL

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



Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149, 157, 165 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 06, 2016	Test Mode	Mode 1
Test Function	Non-beamforming function		

#### Channel 149

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5715.00	66.56	68.20	-1.64	54.48	10.78	34.43	33.13	199	25	Peak	VERTICAL
2	5725.00	74.36	78.20	-3.84	62.28	10.77	34.44	33.13	199	25	Peak	VERTICAL
3	5746.20	108.23			96.16	10.76	34.45	33.14	199	25	Average	VERTICAL
4	5746.80	119.65			107.58	10.76	34.45	33.14	199	25	Peak	VERTICAL

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

#### Channel 157

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5708.80	66.92	68.20	-1.28	54.84	10.78	34.43	33.13	201	12	Peak	VERTICAL
2	5724.40	71.65	78.20	-6.55	59.57	10.77	34.44	33.13	201	12	Peak	VERTICAL
3	5786.20	112.21			100.15	10.74	34.47	33.15	201	12	Average	VERTICAL
4	5786.80	123.65			111.59	10.74	34.47	33.15	201	12	Peak	VERTICAL
5	5851.00	65.78	78.20	-12.42	53.54	10.90	34.51	33.17	201	12	Peak	VERTICAL
6	5866.60	63.15	68.20	-5.05	50.85	10.96	34.52	33.18	201	12	Peak	VERTICAL

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

#### Channel 165

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5826.20	120.30			108.12	10.85	34.50	33.17	194	360	Peak	VERTICAL
2	5826.80	109.04			96.86	10.85	34.50	33.17	194	360	Average	VERTICAL
3	5850.00	76.83	78.20	-1.37	64.59	10.90	34.51	33.17	194	360	Peak	VERTICAL
4	5860.00	64.01	68.20	-4.19	51.71	10.96	34.52	33.18	194	360	Peak	VERTICAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38, 46 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 06, 2016	Test Mode	Mode 1
Test Function	Non-beamforming function		

### Channel 38

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5134.00	52.79	54.00	-1.21	41.70	10.42	33.72	33.05	208	37 Average	VERTICAL
2	5135.00	64.50	74.00	-9.50	53.41	10.42	33.72	33.05	208	37 Peak	VERTICAL
3	5194.00	104.32			93.07	10.48	33.82	33.05	208	37 Average	VERTICAL
4	5195.00	114.51			103.26	10.48	33.82	33.05	208	37 Peak	VERTICAL

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

### Channel 46

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5149.00	63.88	74.00	-10.12	52.76	10.43	33.74	33.05	203	298 Peak	VERTICAL
2	5150.00	52.50	54.00	-1.50	41.38	10.43	33.74	33.05	203	298 Average	VERTICAL
3	5222.00	117.63			106.35	10.47	33.86	33.05	203	298 Peak	VERTICAL
4	5223.00	106.99			95.71	10.47	33.86	33.05	203	298 Average	VERTICAL
5	5365.00	59.78	74.00	-14.22	48.33	10.43	34.08	33.06	203	298 Peak	VERTICAL
6	5426.00	47.91	54.00	-6.09	36.30	10.49	34.18	33.06	203	298 Average	VERTICAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151, 159 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 06, 2016	Test Mode	Mode 1
Test Function	Non-beamforming function		

#### Channel 151

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5706.00	67.15	68.20	-1.05	55.07	10.78	34.43	33.13	203	355 Peak	VERTICAL
2	5725.00	73.30	78.20	-4.90	61.22	10.77	34.44	33.13	203	355 Peak	VERTICAL
3	5746.00	104.32			92.25	10.76	34.45	33.14	203	355 Average	VERTICAL
4	5746.00	114.97			102.90	10.76	34.45	33.14	203	355 Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5755 MHz.

#### Channel 159

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5715.00	65.30	68.20	-2.90	53.22	10.78	34.43	33.13	195	311 Peak	VERTICAL
2	5725.00	63.87	78.20	-14.33	51.79	10.77	34.44	33.13	195	311 Peak	VERTICAL
3	5796.00	105.91			93.85	10.73	34.48	33.15	195	311 Average	VERTICAL
4	5796.00	116.43			104.37	10.73	34.48	33.15	195	311 Peak	VERTICAL
5	5850.00	71.75	78.20	-6.45	59.51	10.90	34.51	33.17	195	311 Peak	VERTICAL
6	5860.00	66.40	68.20	-1.80	54.10	10.96	34.52	33.18	195	311 Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5795 MHz.

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42, 155 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 06, 2016	Test Mode	Mode 1
Test Function	Non-beamforming function		

### Channel 42

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5137.00	63.24	74.00	-10.76	52.15	10.42	33.72	33.05	267	37	Peak	VERTICAL
2	5143.00	52.15	54.00	-1.85	41.03	10.43	33.74	33.05	267	37	Average	VERTICAL
3	5197.00	105.03			93.78	10.48	33.82	33.05	267	37	Peak	VERTICAL
4	5198.00	95.64			84.39	10.48	33.82	33.05	267	37	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5210 MHz.

### Channel 155

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5695.00	67.12	68.20	-1.08	55.03	10.80	34.42	33.13	195	359	Peak	VERTICAL
2	5724.00	66.85	78.20	-11.35	54.77	10.77	34.44	33.13	195	359	Peak	VERTICAL
3	5776.00	97.33			85.27	10.74	34.47	33.15	195	359	Average	VERTICAL
4	5777.00	107.37			95.31	10.74	34.47	33.15	195	359	Peak	VERTICAL
5	5858.00	67.33	78.20	-10.87	55.02	10.96	34.52	33.17	195	359	Peak	VERTICAL
6	5868.00	65.76	68.20	-2.44	53.46	10.96	34.52	33.18	195	359	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5775 MHz.

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36, 40, 48 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

### Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5149.40	65.52	74.00	-8.48	54.40	10.43	33.74	33.05	202	84 Peak	VERTICAL
2	5150.00	52.72	54.00	-1.28	41.60	10.43	33.74	33.05	202	84 Average	VERTICAL
3	5186.60	117.79			106.54	10.48	33.82	33.05	202	84 Peak	VERTICAL
4	5187.80	105.48			94.23	10.48	33.82	33.05	202	84 Average	VERTICAL

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

### Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5108.20	59.77	74.00	-14.23	48.77	10.38	33.67	33.05	203	84 Peak	VERTICAL
2	5150.00	47.43	54.00	-6.57	36.31	10.43	33.74	33.05	203	84 Average	VERTICAL
3	5201.80	107.25			95.98	10.48	33.84	33.05	203	84 Average	VERTICAL
4	5202.40	119.59			108.32	10.48	33.84	33.05	203	84 Peak	VERTICAL

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

### Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5138.00	60.21	74.00	-13.79	49.12	10.42	33.72	33.05	200	87 Peak	VERTICAL
2	5150.00	46.95	54.00	-7.05	35.83	10.43	33.74	33.05	200	87 Average	VERTICAL
3	5235.20	121.65			110.34	10.47	33.89	33.05	200	87 Peak	VERTICAL
4	5235.80	109.25			97.94	10.47	33.89	33.05	200	87 Average	VERTICAL
5	5350.00	46.25	54.00	-7.75	34.82	10.43	34.06	33.06	200	87 Average	VERTICAL
6	5351.20	57.87	74.00	-16.13	46.44	10.43	34.06	33.06	200	87 Peak	VERTICAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149, 157, 165 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Channel 149

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5712.60	61.16	68.20	-7.04	49.08	10.78	34.43	33.13	188	185 Peak	VERTICAL
2	5725.00	77.01	78.20	-1.19	64.93	10.77	34.44	33.13	188	185 Peak	VERTICAL
3	5739.60	104.40			92.33	10.76	34.45	33.14	188	185 Average	VERTICAL
4	5742.60	116.06			103.99	10.76	34.45	33.14	188	185 Peak	VERTICAL

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

#### Channel 157

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5715.00	60.29	68.20	-7.91	48.21	10.78	34.43	33.13	198	310 Peak	VERTICAL
2	5725.00	58.92	78.20	-19.28	46.84	10.77	34.44	33.13	198	310 Peak	VERTICAL
3	5786.80	107.71			95.65	10.74	34.47	33.15	198	310 Average	VERTICAL
4	5788.60	119.51			107.45	10.74	34.47	33.15	198	310 Peak	VERTICAL
5	5850.00	59.20	78.20	-19.00	46.96	10.90	34.51	33.17	198	310 Peak	VERTICAL
6	5860.00	58.93	68.20	-9.27	46.63	10.96	34.52	33.18	198	310 Peak	VERTICAL

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

#### Channel 165

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5826.80	106.57			94.39	10.85	34.50	33.17	197	39 Average	VERTICAL
2	5827.40	118.13			105.95	10.85	34.50	33.17	197	39 Peak	VERTICAL
3	5850.00	76.68	78.20	-1.52	64.44	10.90	34.51	33.17	197	39 Peak	VERTICAL
4	5861.00	65.86	68.20	-2.34	53.56	10.96	34.52	33.18	197	39 Peak	VERTICAL

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



Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38, 46 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Channel 38

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5150.00	52.98	54.00	-1.02	41.86	10.43	33.74	33.05	192	309 Average	VERTICAL
2	5150.00	63.93	74.00	-10.07	52.81	10.43	33.74	33.05	192	309 Peak	VERTICAL
3	5198.00	100.51			89.26	10.48	33.82	33.05	192	309 Average	VERTICAL
4	5202.00	112.35			101.08	10.48	33.84	33.05	192	309 Peak	VERTICAL

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

#### Channel 46

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5143.00	61.31	74.00	-12.69	50.19	10.43	33.74	33.05	201	85 Peak	VERTICAL
2	5145.00	50.18	54.00	-3.82	39.06	10.43	33.74	33.05	201	85 Average	VERTICAL
3	5235.00	117.00			105.69	10.47	33.89	33.05	201	85 Peak	VERTICAL
4	5236.00	105.91			94.60	10.47	33.89	33.05	201	85 Average	VERTICAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151, 159 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Channel 151

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	cm	deg		
1	5714.00	66.45	68.20	-1.75	54.37	10.78	34.43	33.13	206	217	Peak	VERTICAL
2	5723.00	74.75	78.20	-3.45	62.67	10.77	34.44	33.13	206	217	Peak	VERTICAL
3	5759.00	112.04			99.97	10.75	34.46	33.14	206	217	Peak	VERTICAL
4	5762.00	99.69			87.62	10.75	34.46	33.14	206	217	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5755 MHz.

#### Channel 159

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	cm	deg		
1	5785.00	117.00			104.94	10.74	34.47	33.15	199	306	Peak	VERTICAL
2	5787.00	104.37			92.31	10.74	34.47	33.15	199	306	Average	VERTICAL
3	5850.00	72.50	78.20	-5.70	60.26	10.90	34.51	33.17	199	306	Peak	VERTICAL
4	5860.00	67.00	68.20	-1.20	54.70	10.96	34.52	33.18	199	306	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5795 MHz.



Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42, 155 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 08, 2016	Test Mode	Mode 1
Test Function	Beamforming function		

#### Channel 42

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5144.00	67.23	74.00	-6.77	56.11	10.43	33.74	33.05	183	87	Peak	VERTICAL
2	5149.00	52.98	54.00	-1.02	41.86	10.43	33.74	33.05	183	87	Average	VERTICAL
3	5209.00	107.65			96.38	10.48	33.84	33.05	183	87	Peak	VERTICAL
4	5218.00	96.08			84.80	10.47	33.86	33.05	183	87	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5210 MHz.

#### Channel 155

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5711.00	64.96	68.20	-3.24	52.88	10.78	34.43	33.13	212	326	Peak	VERTICAL
2	5723.00	69.37	78.20	-8.83	57.29	10.77	34.44	33.13	212	326	Peak	VERTICAL
3	5809.00	96.65			84.53	10.79	34.49	33.16	212	326	Average	VERTICAL
4	5809.00	109.67			97.55	10.79	34.49	33.16	212	326	Peak	VERTICAL
5	5852.00	70.48	78.20	-7.72	58.24	10.90	34.51	33.17	212	326	Peak	VERTICAL
6	5860.00	67.07	68.20	-1.13	54.77	10.96	34.52	33.18	212	326	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5775 MHz.

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11a CH 36, 40, 48 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 07, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5143.20	52.84	54.00	-1.16	46.10	7.90	33.31	34.47	313	253	Average	HORIZONTAL
2	5143.60	65.98	74.00	-8.02	59.24	7.90	33.31	34.47	313	253	Peak	HORIZONTAL
3	5182.00	123.82			116.99	7.95	33.35	34.47	313	253	Peak	HORIZONTAL
4	5182.40	113.55			106.72	7.95	33.35	34.47	313	253	Average	HORIZONTAL

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

#### Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5138.00	66.10	74.00	-7.90	59.40	7.88	33.29	34.47	312	193	Peak	HORIZONTAL
2	5150.00	52.83	54.00	-1.17	46.09	7.90	33.31	34.47	312	193	Average	HORIZONTAL
3	5199.20	126.21			119.32	7.98	33.38	34.47	312	193	Peak	HORIZONTAL
4	5199.20	114.09			107.20	7.98	33.38	34.47	312	193	Average	HORIZONTAL

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

#### Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5117.00	62.79	74.00	-11.21	56.14	7.85	33.27	34.47	309	200	Peak	HORIZONTAL
2	5150.00	49.28	54.00	-4.72	42.54	7.90	33.31	34.47	309	200	Average	HORIZONTAL
3	5240.60	115.64			108.72	7.95	33.44	34.47	309	200	Average	HORIZONTAL
4	5241.20	126.37			119.45	7.95	33.44	34.47	309	200	Peak	HORIZONTAL
5	5350.00	48.63	54.00	-5.37	41.62	7.89	33.59	34.47	309	200	Average	HORIZONTAL
6	5362.40	62.73	74.00	-11.27	55.71	7.88	33.61	34.47	309	200	Peak	HORIZONTAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11a CH 149, 157, 165 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 07, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Channel 149

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5707.20	62.76	68.20	-5.44	54.94	7.88	34.45	34.51	304	240 Peak	HORIZONTAL
2	5725.00	76.54	78.20	-1.66	68.68	7.87	34.50	34.51	304	240 Peak	HORIZONTAL
3	5747.40	110.79			102.90	7.86	34.55	34.52	304	240 Peak	HORIZONTAL
4	5748.00	121.69			113.80	7.86	34.55	34.52	304	240 Peak	HORIZONTAL

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

#### Channel 157

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5708.20	66.51	68.20	-1.69	58.69	7.88	34.45	34.51	307	236 Peak	HORIZONTAL
2	5725.00	69.64	78.20	-8.56	61.78	7.87	34.50	34.51	307	236 Peak	HORIZONTAL
3	5788.00	126.10			118.14	7.84	34.65	34.53	307	236 Peak	HORIZONTAL
4	5788.00	115.40			107.44	7.84	34.65	34.53	307	236 Average	HORIZONTAL
5	5850.00	62.39	78.20	-15.81	54.28	7.80	34.85	34.54	307	236 Peak	HORIZONTAL
6	5867.80	62.63	68.20	-5.57	54.48	7.79	34.90	34.54	307	236 Peak	HORIZONTAL

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

#### Channel 165

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5828.00	123.67			115.60	7.81	34.80	34.54	309	235 Peak	HORIZONTAL
2	5828.00	112.76			104.69	7.81	34.80	34.54	309	235 Average	HORIZONTAL
3	5851.40	76.50	78.20	-1.70	68.39	7.80	34.85	34.54	309	235 Peak	HORIZONTAL
4	5863.40	64.74	68.20	-3.46	56.59	7.79	34.90	34.54	309	235 Peak	HORIZONTAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36, 40, 48 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 07, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

### Channel 36

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5144.00	64.37	74.00	-9.63	57.63	7.90	33.31	34.47	307	286 Peak	HORIZONTAL
2	5144.00	52.23	54.00	-1.77	45.49	7.90	33.31	34.47	307	286 Average	HORIZONTAL
3	5182.40	122.96			116.13	7.95	33.35	34.47	307	286 Peak	HORIZONTAL
4	5183.00	112.01			105.18	7.95	33.35	34.47	307	286 Average	HORIZONTAL

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

### Channel 40

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5142.40	66.77	74.00	-7.23	60.03	7.90	33.31	34.47	309	284 Peak	HORIZONTAL
2	5144.80	52.41	54.00	-1.59	45.67	7.90	33.31	34.47	309	284 Average	HORIZONTAL
3	5202.40	125.70			118.80	7.97	33.40	34.47	309	284 Peak	HORIZONTAL
4	5203.00	115.41			108.51	7.97	33.40	34.47	309	284 Average	HORIZONTAL

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

### Channel 48

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5147.00	62.21	74.00	-11.79	55.47	7.90	33.31	34.47	310	198 Peak	HORIZONTAL
2	5150.00	50.03	54.00	-3.97	43.29	7.90	33.31	34.47	310	198 Average	HORIZONTAL
3	5240.60	114.04			107.12	7.95	33.44	34.47	310	198 Average	HORIZONTAL
4	5241.20	123.94			117.02	7.95	33.44	34.47	310	198 Peak	HORIZONTAL
5	5350.00	49.62	54.00	-4.38	42.61	7.89	33.59	34.47	310	198 Average	HORIZONTAL
6	5381.00	62.69	74.00	-11.31	55.66	7.87	33.63	34.47	310	198 Peak	HORIZONTAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149, 157, 165 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 07, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Channel 149

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5707.80	66.37	68.20	-1.83	58.55	7.88	34.45	34.51	307	244 Peak	HORIZONTAL
2	5725.00	75.61	78.20	-2.59	67.75	7.87	34.50	34.51	307	244 Peak	HORIZONTAL
3	5747.40	121.10			113.21	7.86	34.55	34.52	307	244 Peak	HORIZONTAL
4	5748.00	110.09			102.20	7.86	34.55	34.52	307	244 Average	HORIZONTAL

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

#### Channel 157

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5715.00	66.47	68.20	-1.73	58.65	7.88	34.45	34.51	309	244 Peak	HORIZONTAL
2	5716.20	69.50	78.20	-8.70	61.68	7.88	34.45	34.51	309	244 Peak	HORIZONTAL
3	5787.40	125.41			117.45	7.84	34.65	34.53	309	244 Peak	HORIZONTAL
4	5788.00	114.27			106.31	7.84	34.65	34.53	309	244 Average	HORIZONTAL
5	5851.00	68.83	78.20	-9.37	60.72	7.80	34.85	34.54	309	244 Peak	HORIZONTAL
6	5860.60	63.77	68.20	-4.43	55.62	7.79	34.90	34.54	309	244 Peak	HORIZONTAL

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

#### Channel 165

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5827.40	122.90			114.83	7.81	34.80	34.54	304	250 Peak	HORIZONTAL
2	5828.00	111.48			103.41	7.81	34.80	34.54	304	250 Average	HORIZONTAL
3	5850.00	76.61	78.20	-1.59	68.50	7.80	34.85	34.54	304	250 Peak	HORIZONTAL
4	5862.80	64.25	68.20	-3.95	56.10	7.79	34.90	34.54	304	250 Peak	HORIZONTAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38, 46 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 14, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

### Channel 38

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	cm	deg	
1	5150.00	52.37	54.00	-1.63	46.01	7.96	31.45	33.05	293	320 Average	HORIZONTAL
2	5150.00	62.96	74.00	-11.04	56.60	7.96	31.45	33.05	293	320 Peak	HORIZONTAL
3	5194.00	113.44			107.00	7.99	31.50	33.05	293	320 Peak	HORIZONTAL
4	5195.00	104.06			97.62	7.99	31.50	33.05	293	320 Average	HORIZONTAL

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

### Channel 46

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	deg	cm	
1	5135.00	63.99	74.00	-10.01	57.29	7.88	33.29	34.47	305	283 Peak	HORIZONTAL
2	5150.00	52.84	54.00	-1.16	46.10	7.90	33.31	34.47	305	283 Average	HORIZONTAL
3	5234.00	120.32			113.40	7.95	33.44	34.47	305	283 Peak	HORIZONTAL
4	5234.00	110.38			103.46	7.95	33.44	34.47	305	283 Average	HORIZONTAL

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



Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151, 159 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 07, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Channel 151

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5711.00	66.98	68.20	-1.22	59.16	7.88	34.45	34.51	311	229 Peak	HORIZONTAL
2	5725.00	76.25	78.20	-1.95	68.39	7.87	34.50	34.51	311	229 Peak	HORIZONTAL
3	5758.00	107.06			99.13	7.85	34.60	34.52	311	229 Average	HORIZONTAL
4	5759.00	117.11			109.18	7.85	34.60	34.52	311	229 Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5755 MHz.

#### Channel 159

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5715.00	63.69	68.20	-4.51	55.87	7.88	34.45	34.51	307	238 Peak	HORIZONTAL
2	5717.00	68.75	78.20	-9.45	60.93	7.88	34.45	34.51	307	238 Peak	HORIZONTAL
3	5798.00	118.69			110.69	7.83	34.70	34.53	307	238 Peak	HORIZONTAL
4	5798.00	108.70			100.70	7.83	34.70	34.53	307	238 Average	HORIZONTAL
5	5859.00	68.97	78.20	-9.23	60.82	7.79	34.90	34.54	307	238 Peak	HORIZONTAL
6	5860.00	66.58	68.20	-1.62	58.43	7.79	34.90	34.54	307	238 Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5795 MHz.

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42, 155 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 07, 2016 / Apr. 08, 2016	Test Mode	Mode 2
Test Function	Non-beamforming function		

#### Channel 42

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	deg	cm		
1	5131.00	64.59	74.00	-9.41	57.89	7.88	33.29	314	234	Peak	HORIZONTAL
2	5150.00	52.74	54.00	-1.26	46.00	7.90	33.31	314	234	Average	HORIZONTAL
3	5191.00	97.44			90.55	7.98	33.38	314	234	Average	HORIZONTAL
4	5192.00	107.71			100.82	7.98	33.38	314	234	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5210 MHz.

#### Channel 155

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	deg	cm		
1	5696.00	66.79	68.20	-1.41	59.01	7.89	34.40	307	201	Peak	HORIZONTAL
2	5725.00	70.69	78.20	-7.51	62.83	7.87	34.50	307	201	Peak	HORIZONTAL
3	5756.00	98.36			90.43	7.85	34.60	307	201	Average	HORIZONTAL
4	5757.00	108.62			100.69	7.85	34.60	307	201	Peak	HORIZONTAL
5	5850.00	64.96	78.20	-13.24	56.85	7.80	34.85	307	201	Peak	HORIZONTAL
6	5860.00	66.38	68.20	-1.82	58.23	7.79	34.90	307	201	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5775 MHz.



Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36, 40, 48 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

#### Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5143.60	60.69	74.00	-13.31	49.57	10.43	33.74	33.05	275	73	Peak	HORIZONTAL
2	5144.40	48.05	54.00	-5.95	36.93	10.43	33.74	33.05	275	73	Average	HORIZONTAL
3	5178.20	107.76			96.56	10.46	33.79	33.05	275	73	Average	HORIZONTAL
4	5185.00	118.11			106.91	10.46	33.79	33.05	275	73	Peak	HORIZONTAL

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

#### Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5148.80	59.68	74.00	-14.32	48.56	10.43	33.74	33.05	275	67	Peak	HORIZONTAL
2	5150.00	47.25	54.00	-6.75	36.13	10.43	33.74	33.05	275	67	Average	HORIZONTAL
3	5197.60	119.94			108.69	10.48	33.82	33.05	275	67	Peak	HORIZONTAL
4	5203.20	108.96			97.69	10.48	33.84	33.05	275	67	Average	HORIZONTAL

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

#### Channel 48

	Freq	Level	Limit Line	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	5137.40	60.45	74.00	-13.55	49.36	10.42	33.72	33.05	278	332	Peak	HORIZONTAL
2	5150.00	46.85	54.00	-7.15	35.73	10.43	33.74	33.05	278	332	Average	HORIZONTAL
3	5232.20	115.94			104.63	10.47	33.89	33.05	278	332	Peak	HORIZONTAL
4	5243.00	106.86			95.56	10.47	33.89	33.06	278	332	Average	HORIZONTAL
5	5350.00	46.43	54.00	-7.57	35.00	10.43	34.06	33.06	278	332	Average	HORIZONTAL
6	5350.00	57.33	74.00	-16.67	45.90	10.43	34.06	33.06	278	332	Peak	HORIZONTAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149, 157, 165 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

#### Channel 149

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5699.00	62.68	68.20	-5.52	50.59	10.80	34.42	33.13	226	70	Peak	HORIZONTAL
2	5723.00	71.23	78.20	-6.97	59.15	10.77	34.44	33.13	226	70	Peak	HORIZONTAL
3	5745.80	120.82			108.75	10.76	34.45	33.14	226	70	Peak	HORIZONTAL
4	5746.00	109.26			97.19	10.76	34.45	33.14	226	70	Average	HORIZONTAL

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

#### Channel 157

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5715.00	58.27	68.20	-9.93	46.19	10.78	34.43	33.13	271	47	Peak	VERTICAL
2	5725.00	59.28	78.20	-18.92	47.20	10.77	34.44	33.13	271	47	Peak	VERTICAL
3	5788.20	104.28			92.22	10.74	34.47	33.15	271	47	Average	VERTICAL
4	5788.60	116.02			103.96	10.74	34.47	33.15	271	47	Peak	VERTICAL
5	5850.00	59.13	78.20	-19.07	46.89	10.90	34.51	33.17	271	47	Peak	VERTICAL
6	5877.80	61.82	68.20	-6.38	49.45	11.02	34.53	33.18	271	47	Peak	VERTICAL

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

#### Channel 165

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5830.00	109.37			97.19	10.85	34.50	33.17	275	311	Average	HORIZONTAL
2	5830.00	120.06			107.88	10.85	34.50	33.17	275	311	Peak	HORIZONTAL
3	5850.20	68.85	78.20	-9.35	56.61	10.90	34.51	33.17	275	311	Peak	HORIZONTAL
4	5861.20	62.15	68.20	-6.05	49.85	10.96	34.52	33.18	275	311	Peak	HORIZONTAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38, 46 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

#### Channel 38

	Freq	Level	Limit Line	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	5149.20	52.98	54.00	-1.02	41.86	10.43	33.74	33.05	274	299	Average	HORIZONTAL
2	5150.00	65.45	74.00	-8.55	54.33	10.43	33.74	33.05	274	299	Peak	HORIZONTAL
3	5183.40	116.22			105.02	10.46	33.79	33.05	274	299	Peak	HORIZONTAL
4	5200.20	107.66			96.41	10.48	33.82	33.05	274	299	Average	HORIZONTAL

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

#### Channel 46

	Freq	Level	Limit Line	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	5119.60	48.00	54.00	-6.00	36.96	10.40	33.69	33.05	277	325	Average	HORIZONTAL
2	5144.20	59.53	74.00	-14.47	48.41	10.43	33.74	33.05	277	325	Peak	HORIZONTAL
3	5225.20	117.41			106.13	10.47	33.86	33.05	277	325	Peak	HORIZONTAL
4	5233.00	105.98			94.67	10.47	33.89	33.05	277	325	Average	HORIZONTAL
5	5350.00	46.71	54.00	-7.29	35.28	10.43	34.06	33.06	277	325	Average	HORIZONTAL
6	5350.00	56.98	74.00	-17.02	45.55	10.43	34.06	33.06	277	325	Peak	HORIZONTAL

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

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151, 159 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

#### Channel 151

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5707.60	67.09	68.20	-1.11	55.01	10.78	34.43	33.13	220	302	Peak	HORIZONTAL
2	5721.40	76.63	78.20	-1.57	64.55	10.78	34.43	33.13	220	302	Peak	HORIZONTAL
3	5765.20	106.24			94.18	10.75	34.46	33.15	220	302	Average	HORIZONTAL
4	5768.80	117.42			105.36	10.75	34.46	33.15	220	302	Peak	HORIZONTAL
5	5850.00	60.92	78.20	-17.28	48.68	10.90	34.51	33.17	220	302	Peak	HORIZONTAL
6	5860.60	61.98	68.20	-6.22	49.68	10.96	34.52	33.18	220	302	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5755 MHz.

#### Channel 159

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5715.00	60.38	68.20	-7.82	48.30	10.78	34.43	33.13	247	309	Peak	HORIZONTAL
2	5725.00	60.95	78.20	-17.25	48.87	10.77	34.44	33.13	247	309	Peak	HORIZONTAL
3	5783.00	104.85			92.79	10.74	34.47	33.15	247	309	Average	HORIZONTAL
4	5789.00	119.76			107.70	10.73	34.48	33.15	247	309	Peak	HORIZONTAL
5	5850.00	67.06	78.20	-11.14	54.82	10.90	34.51	33.17	247	309	Peak	HORIZONTAL
6	5871.20	64.70	68.20	-3.50	52.40	10.96	34.52	33.18	247	309	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5795 MHz.

Temperature	25°C	Humidity	62%
Test Engineer	Andy Tsai, Peter Wu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42, 155 / Chain 1 + Chain 2 + Chain 3+ Chain 4
Test Date	Apr. 09, 2016	Test Mode	Mode 2
Test Function	Beamforming function		

#### Channel 42

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5134.00	52.66	54.00	-1.34	41.57	10.42	33.72	33.05	279	310	Average	HORIZONTAL
2	5142.00	63.53	74.00	-10.47	52.41	10.43	33.74	33.05	279	310	Peak	HORIZONTAL
3	5213.00	99.04			87.77	10.48	33.84	33.05	279	310	Average	HORIZONTAL
4	5213.00	108.28			97.01	10.48	33.84	33.05	279	310	Peak	HORIZONTAL
5	5350.00	57.76	74.00	-16.24	46.33	10.43	34.06	33.06	279	310	Peak	HORIZONTAL
6	5432.00	47.75	54.00	-6.25	36.14	10.49	34.18	33.06	279	310	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5210 MHz.

#### Channel 155

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5706.00	67.10	68.20	-1.10	55.02	10.78	34.43	33.13	278	311	Peak	HORIZONTAL
2	5725.00	75.08	78.20	-3.12	63.00	10.77	34.44	33.13	278	311	Peak	HORIZONTAL
3	5740.00	97.65			85.58	10.76	34.45	33.14	278	311	Average	HORIZONTAL
4	5750.00	110.50			98.43	10.76	34.45	33.14	278	311	Peak	HORIZONTAL
5	5851.00	66.51	78.20	-11.69	54.27	10.90	34.51	33.17	278	311	Peak	HORIZONTAL
6	5861.00	67.16	68.20	-1.04	54.86	10.96	34.52	33.18	278	311	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5775 MHz.

Note:

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

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

## 4.8. Frequency Stability Measurement

### 4.8.1. Limit

In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

The transmitter center frequency tolerance shall be  $\pm 20$  ppm maximum for the 5 GHz band (IEEE 802.11n specification).

### 4.8.2. Measuring Instruments and Setting

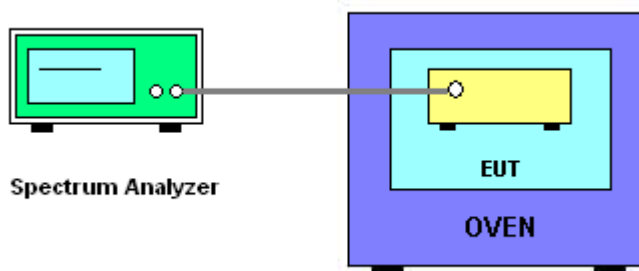
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Sweep Time	Auto

### 4.8.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5.  $f_c$  is declaring of channel frequency. Then the frequency error formula is  $(f_c - f)/f_c \times 10^6$  ppm and the limit is less than  $\pm 20$  ppm (IEEE 802.11n specification).
6. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
7. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
8. Extreme temperature is  $-30^\circ\text{C} \sim 50^\circ\text{C}$ .

### 4.8.4. Test Setup Layout



#### 4.8.5. Test Deviation

There is no deviation with the original standard.

#### 4.8.6. EUT Operation during Test

The EUT was programmed to be in continuously un-modulation transmitting mode.

#### 4.8.7. Test Result of Frequency Stability

Temperature	24°C	Humidity	60%
Test Engineer	Eddie Weng / Clemens Fang	Test Date	Apr. 22, 2016~Apr. 23, 2016

Mode: 20 MHz / Chain 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9752	5199.9741	5199.9726	5199.9706
110.00	5199.9740	5199.9727	5199.9711	5199.9692
93.50	5199.9726	5199.9717	5199.9703	5199.9685
Max. Deviation (MHz)	0.0275	0.0284	0.0298	0.0316
Max. Deviation (ppm)	5.28	5.45	5.72	6.07
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5199.9812	5199.9796	5199.9781	5199.9757
-20	5199.9794	5199.9781	5199.9764	5199.9743
-10	5199.9779	5199.9767	5199.9751	5199.9732
0	5199.9765	5199.9751	5199.9732	5199.9710
10	5199.9752	5199.9739	5199.9724	5199.9706
20	5199.9740	5199.9727	5199.9711	5199.9692
30	5199.9726	5199.9715	5199.9701	5199.9685
40	5199.9711	5199.9698	5199.9682	5199.9663
50	5199.9694	5199.9682	5199.9667	5199.9644
Max. Deviation (MHz)	0.0307	0.0319	0.0334	0.0357
Max. Deviation (ppm)	5.89	6.13	6.41	6.86
Result	Complies			



### Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9656	5784.9645	5784.9630	5784.9610
110.00	5784.9644	5784.9631	5784.9615	5784.9596
93.50	5784.9630	5784.9621	5784.9607	5784.9589
Max. Deviation (MHz)	0.0370	0.0379	0.0393	0.0411
Max. Deviation (ppm)	6.40	6.55	6.79	7.10
Result	Complies			

### Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5784.9716	5784.9700	5784.9685	5784.9661
-20	5784.9698	5784.9685	5784.9668	5784.9647
-10	5784.9683	5784.9671	5784.9655	5784.9636
0	5784.9669	5784.9655	5784.9636	5784.9614
10	5784.9656	5784.9643	5784.9628	5784.9610
20	5784.9644	5784.9631	5784.9615	5784.9596
30	5784.9630	5784.9619	5784.9605	5784.9589
40	5784.9615	5784.9602	5784.9586	5784.9567
50	5784.9598	5784.9586	5784.9571	5784.9548
Max. Deviation (MHz)	0.0402	0.0414	0.0429	0.0452
Max. Deviation (ppm)	6.95	7.16	7.42	7.81
Result	Complies			



Mode: 40 MHz / Chain 1

#### Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5189.9712	5189.9701	5189.9686	5189.9666
110.00	5189.9700	5189.9687	5189.9671	5189.9652
93.50	5189.9686	5189.9677	5189.9663	5189.9645
Max. Deviation (MHz)	0.0314	0.0323	0.0337	0.0355
Max. Deviation (ppm)	6.04	6.22	6.49	6.83
Result	Complies			

#### Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5189.9772	5189.9756	5189.9741	5189.9717
-20	5189.9754	5189.9741	5189.9724	5189.9703
-10	5189.9739	5189.9727	5189.9711	5189.9692
0	5189.9725	5189.9711	5189.9692	5189.9670
10	5189.9712	5189.9699	5189.9684	5189.9666
20	5189.9700	5189.9687	5189.9671	5189.9652
30	5189.9686	5189.9675	5189.9661	5189.9645
40	5189.9671	5189.9658	5189.9642	5189.9623
50	5189.9654	5189.9642	5189.9627	5189.9604
Max. Deviation (MHz)	0.0346	0.0358	0.0373	0.0396
Max. Deviation (ppm)	6.66	6.89	7.18	7.62
Result	Complies			

### Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9660	5754.9649	5754.9634	5754.9614
110.00	5754.9648	5754.9635	5754.9619	5754.9600
93.50	5754.9634	5754.9625	5754.9611	5754.9593
Max. Deviation (MHz)	0.0366	0.0375	0.0389	0.0407
Max. Deviation (ppm)	6.35	6.51	6.75	7.07
Result	Complies			

### Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5754.9720	5754.9704	5754.9689	5754.9665
-20	5754.9702	5754.9689	5754.9672	5754.9651
-10	5754.9687	5754.9675	5754.9659	5754.9640
0	5754.9673	5754.9659	5754.9640	5754.9618
10	5754.9660	5754.9647	5754.9632	5754.9614
20	5754.9648	5754.9635	5754.9619	5754.9600
30	5754.9634	5754.9623	5754.9609	5754.9593
40	5754.9619	5754.9606	5754.9590	5754.9571
50	5754.9602	5754.9590	5754.9575	5754.9552
Max. Deviation (MHz)	0.0398	0.0410	0.0425	0.0448
Max. Deviation (ppm)	6.91	7.12	7.38	7.78
Result	Complies			

Mode: 80 MHz / Chain 1

#### Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5209.9699	5209.9688	5209.9673	5209.9653
110.00	5209.9687	5209.9674	5209.9658	5209.9639
93.50	5209.9673	5209.9664	5209.9650	5209.9632
Max. Deviation (MHz)	0.0327	0.0336	0.0350	0.0368
Max. Deviation (ppm)	6.27	6.44	6.71	7.06
Result	Complies			

#### Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5209.9759	5209.9743	5209.9728	5209.9704
-20	5209.9741	5209.9728	5209.9711	5209.9690
-10	5209.9726	5209.9714	5209.9698	5209.9679
0	5209.9712	5209.9698	5209.9679	5209.9657
10	5209.9699	5209.9686	5209.9671	5209.9653
20	5209.9687	5209.9674	5209.9658	5209.9639
30	5209.9673	5209.9662	5209.9648	5209.9632
40	5209.9658	5209.9645	5209.9629	5209.9610
50	5209.9641	5209.9629	5209.9614	5209.9591
Max. Deviation (MHz)	0.0359	0.0371	0.0386	0.0409
Max. Deviation (ppm)	6.88	7.11	7.40	7.84
Result	Complies			

### Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9652	5774.9641	5774.9626	5774.9606
110.00	5774.9640	5774.9627	5774.9611	5774.9592
93.50	5774.9626	5774.9617	5774.9603	5774.9585
Max. Deviation (MHz)	0.0374	0.0383	0.0397	0.0415
Max. Deviation (ppm)	6.48	6.64	6.88	7.19
Result	Complies			

### Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5774.9712	5774.9696	5774.9681	5774.9657
-20	5774.9694	5774.9681	5774.9664	5774.9643
-10	5774.9679	5774.9667	5774.9651	5774.9632
0	5774.9665	5774.9651	5774.9632	5774.9610
10	5774.9652	5774.9639	5774.9624	5774.9606
20	5774.9640	5774.9627	5774.9611	5774.9592
30	5774.9626	5774.9615	5774.9601	5774.9585
40	5774.9611	5774.9598	5774.9582	5774.9563
50	5774.9594	5774.9582	5774.9567	5774.9544
Max. Deviation (MHz)	0.0406	0.0418	0.0433	0.0456
Max. Deviation (ppm)	7.04	7.24	7.50	7.90
Result	Complies			

## **4.9. Antenna Requirements**

### **4.9.1. Limit**

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

### **4.9.2. Antenna Connector Construction**

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

## 5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 27, 2016	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 08, 2015	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 23, 2015	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 25, 2015	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	37880	20MHz ~ 2GHz	Sep. 03, 2015	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 22, 2015	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Nov. 13, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	Apr. 22, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz ~ 1 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 09, 2015	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz ~ 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz ~ 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz ~ 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz ~ 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz ~ 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 02, 2015	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

“\*” Calibration Interval of instruments listed above is two years.

N.C.R. means Non-Calibration required.

## 6. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%