8.8 Occupied Bandwidth

Multiple transmit

Mode	Bands	Channel	Frequency [MHz]	Test Result [MHz]	
				ANT 1	ANT 2
802.11n HT20	U-NII 1	36	5180	18.025	17.786
		40	5200	17.870	17.771
		48	5240	17.892	17.773
	U-NII 2A	52	5260	17.874	17.795
		60	5300	17.784	17.775
		64	5320	17.953	17.827
	U-NII 2C	100	5500	17.915	17.811
		116	5580	18.034	17.910
		140	5700	17.925	17.779
	U-NII 3	149	5745	17.861	17.811
		157	5785	17.941	17.878
		165	5825	17.992	17.885
802.11n HT40	U-NII 1	38	5190	36.224	36.023
		46	5230	36.280	36.162
	U-NII 2A	54	5270	36.186	36.109
		62	5310	36.040	36.177
	U-NII 2C	102	5510	36.096	36.012
		110	5550	36.202	36.201
		134	5670	36.296	36.232
	U-NII 3	151	5755	36.103	36.167
		159	5795	36.236	36.264
802.11ac VHT80	U-NII 1	42	5210	75.320	75.117
	U-NII 2A	58	5290	75.361	75.257
	U-NII 2C	106	5530	75.254	75.233
	U-NII 3	155	5775	75.335	75.377
802.11ac (VHT20)	Cross Band	144	5720	17.997	17.830
802.11ac (VHT40)	Cross Band	142	5710	36.177	36.252
802.11ac VHT80	Cross Band	138	5690	75.414	75.594

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 1 & Ch.48

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 1 & Ch.52

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 1 & Ch.60

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 1 & Ch.64

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 1 & Ch.100

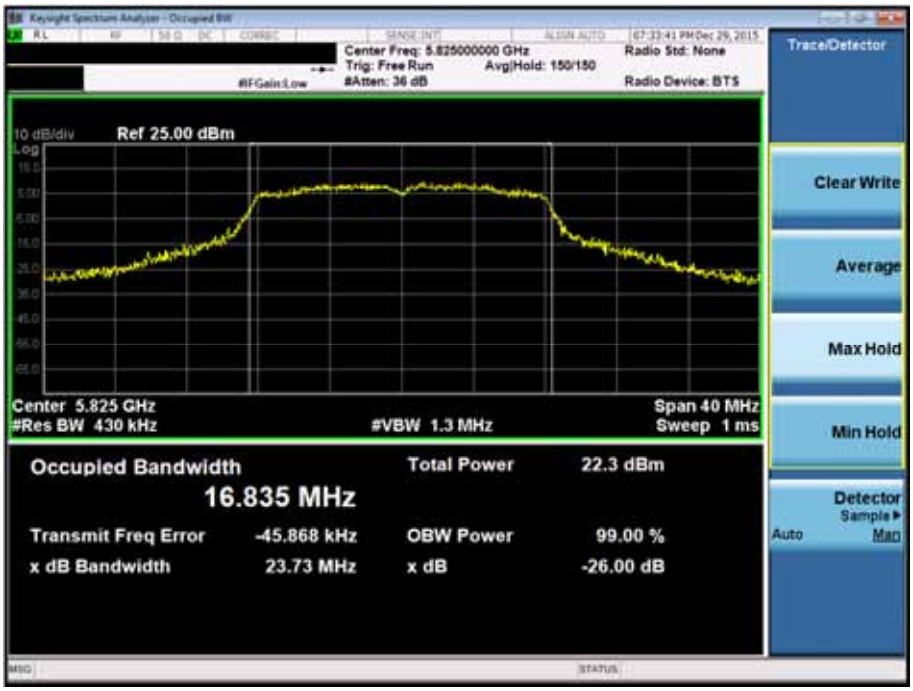
Occupied Bandwidth 99% Test Mode: 802.11a & ANT 1 & Ch.116

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 1 & Ch.140

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 1 & Ch.149

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 1 & Ch.157

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 1 & Ch.165



Occupied Bandwidth 99% Test Mode: 802.11n(HT20) & ANT 1 & Ch.36

Occupied Bandwidth 99% Test Mode: 802.11n(HT20) & ANT 1 & Ch.40

Occupied Bandwidth 99% Test Mode: 802.11n(HT20) & ANT 1 & Ch.48

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.52

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.60

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.64

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.100

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.116

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.140

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.149

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.157

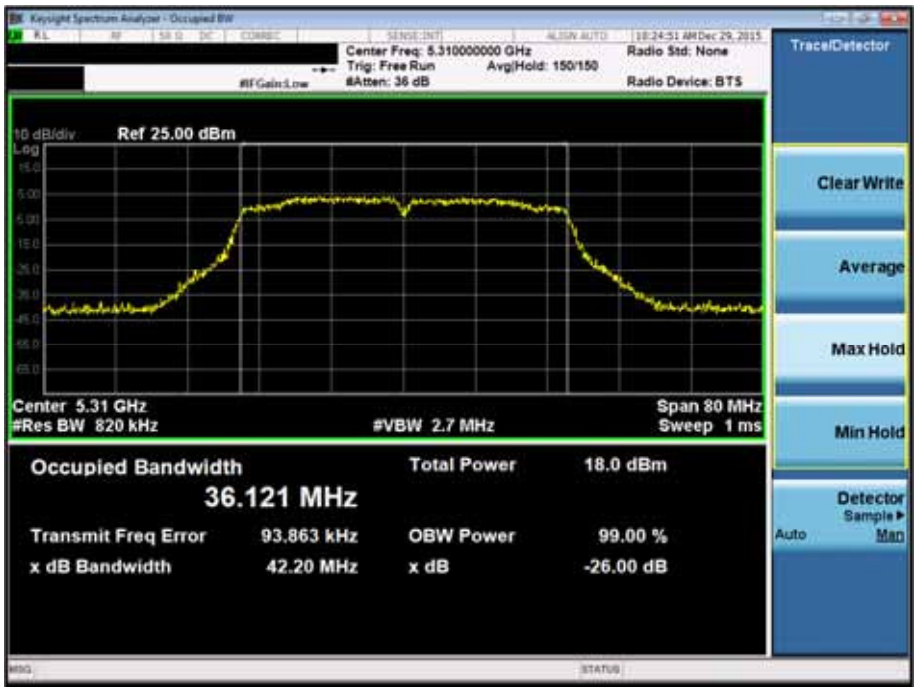
Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.165

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.38

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.46

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.54

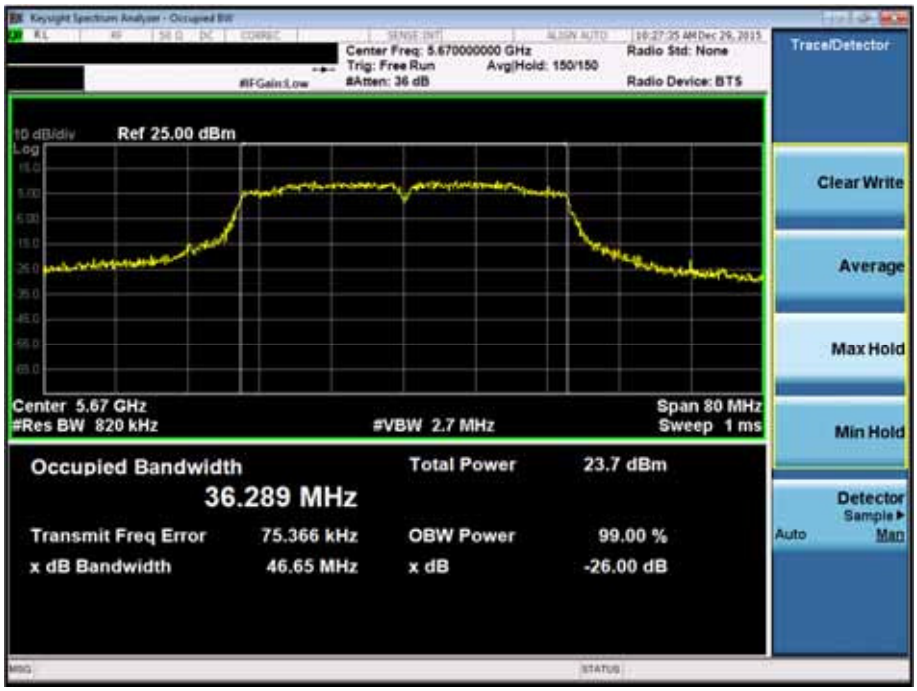
Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.62



Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.102

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.110

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.134



Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.151

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.159

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 1 & Ch.42

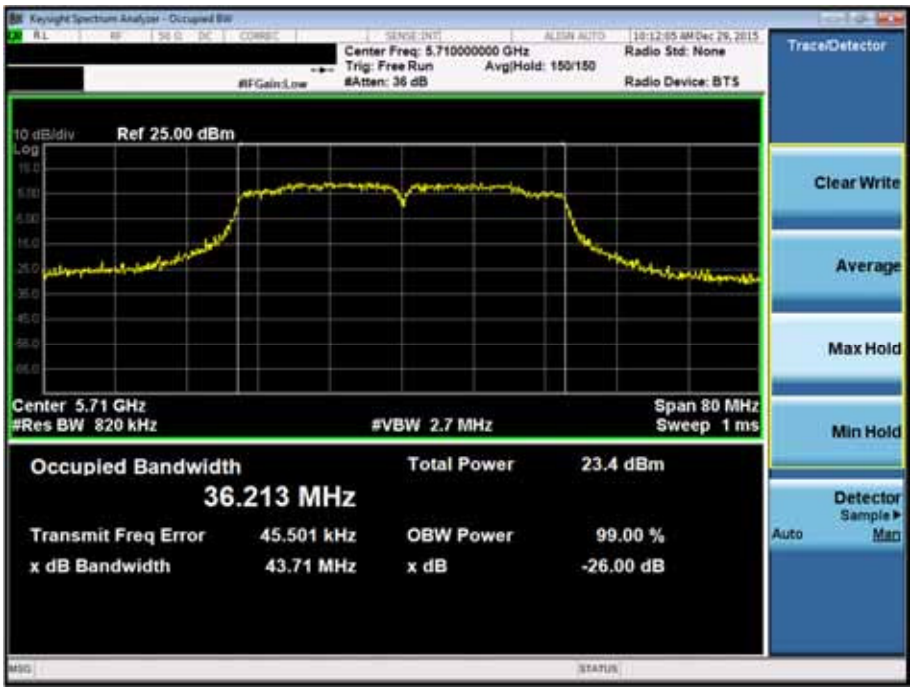
Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 1 & Ch.58

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 1 & Ch.106

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 1 & Ch.155

Occupied Bandwidth 99% Test Mode: 802.11ac VHT20 & ANT 1 & Ch.144

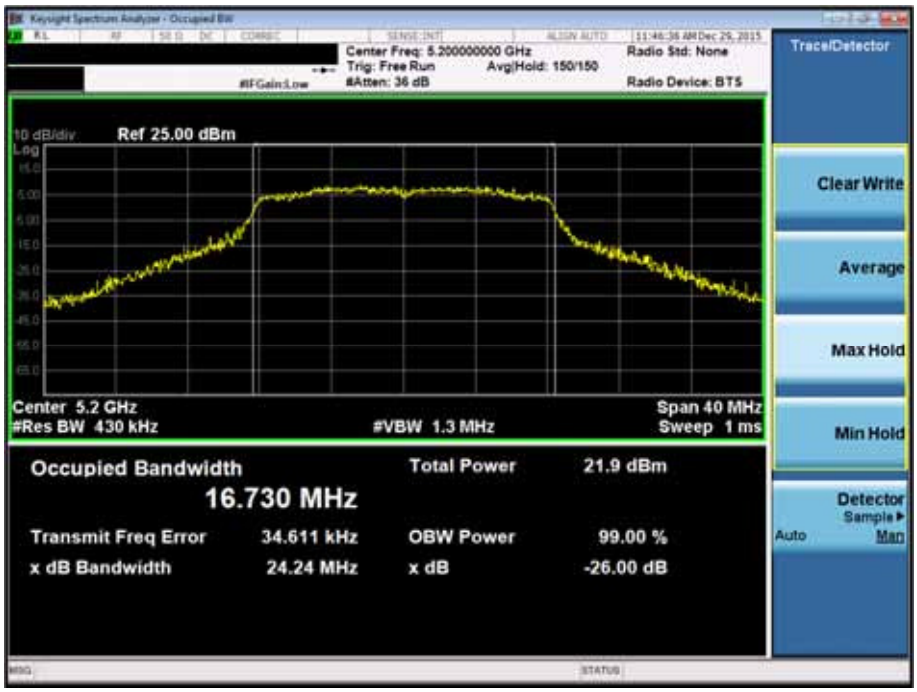
Occupied Bandwidth 99% Test Mode: 802.11ac VHT40 & ANT 1 & Ch.142



Occupied Bandwidth 99% Test Mode: 802.11ac VHT80 & ANT 1 & Ch.138

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.36

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.40



Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.48

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.52

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.60

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.64

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.100

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.116

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.140

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.149

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.157

Occupied Bandwidth 99% Test Mode: 802.11a & ANT 2 & Ch.165

Occupied Bandwidth 99% Test Mode: 802.11n(HT20) & ANT 2 & Ch.36

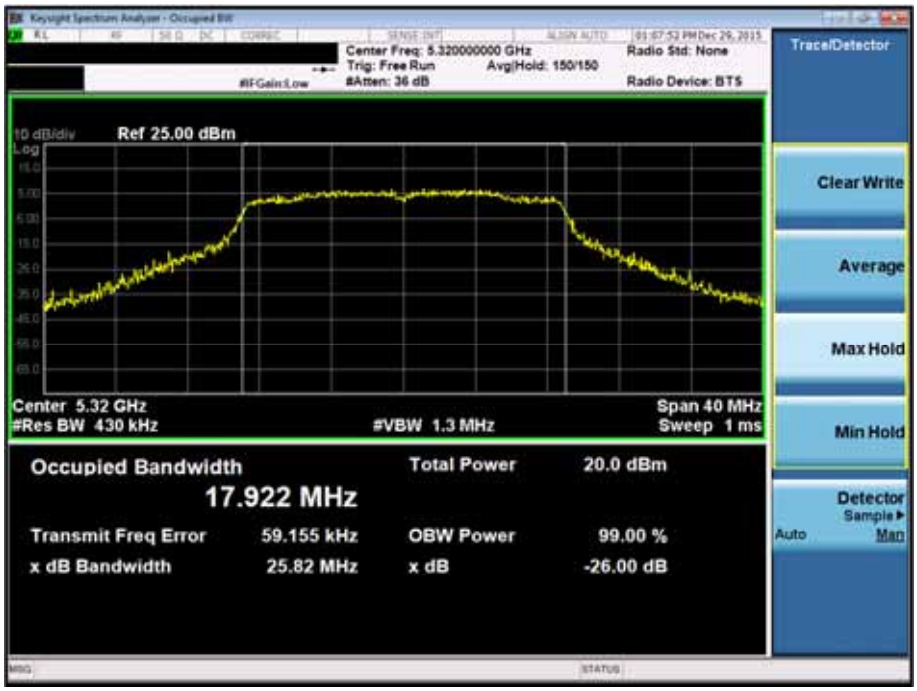
Occupied Bandwidth 99% Test Mode: 802.11n(HT20) & ANT 2 & Ch.40

Occupied Bandwidth 99% Test Mode: 802.11n(HT20) & ANT 2 & Ch.48

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.52

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.60

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.64



Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.100

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.116

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.140

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.149

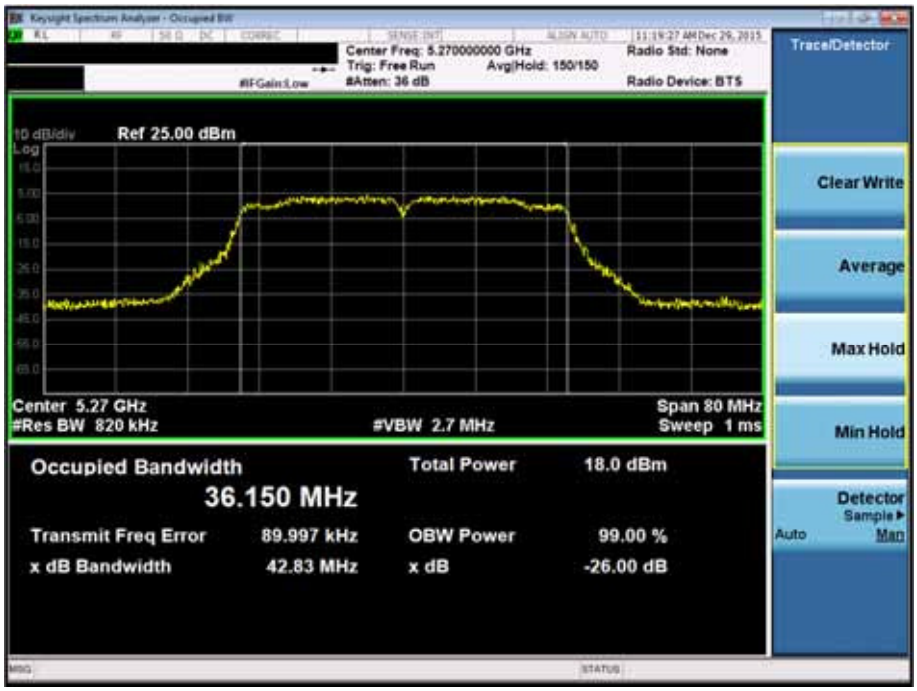
Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.157

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.165

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.38

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.46

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.54

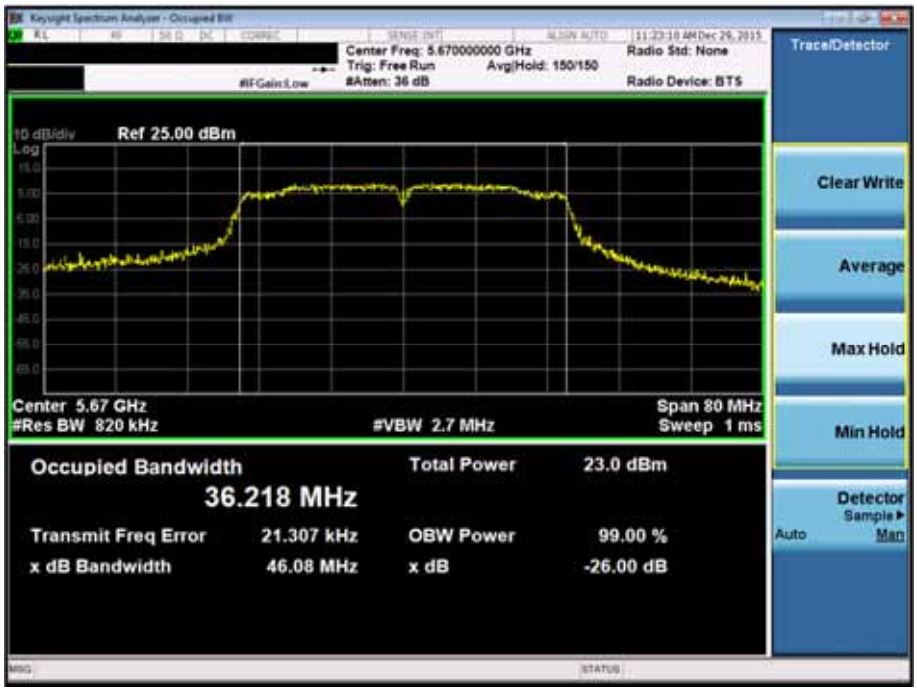


Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.62

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.102

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.110

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.134



Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.151

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.159

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 2 & Ch.42

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 2 & Ch.58

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 2 & Ch.106

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 2 & Ch.155

Occupied Bandwidth 99% Test Mode: 802.11ac VHT20 & ANT 2 & Ch.144

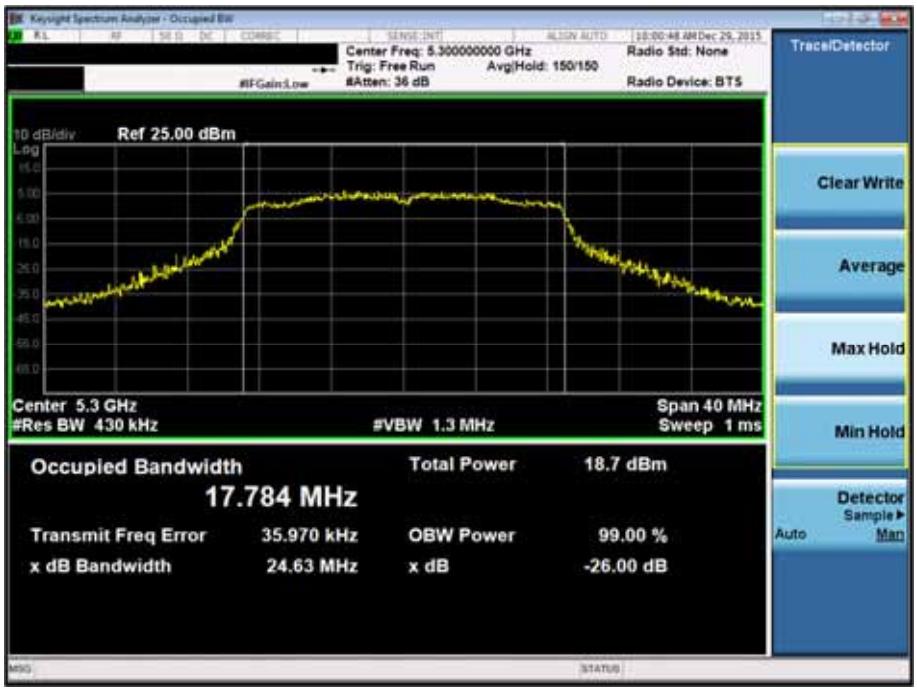
Occupied Bandwidth 99% Test Mode: 802.11ac VHT40 & ANT 2 & Ch.142

Occupied Bandwidth 99% Test Mode: 802.11ac VHT80 & ANT 2 & Ch.138

Occupied Bandwidth 99% Test Mode: 802.11n(HT20) & ANT 1 & Ch.48

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.52

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.60



Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.64

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.100

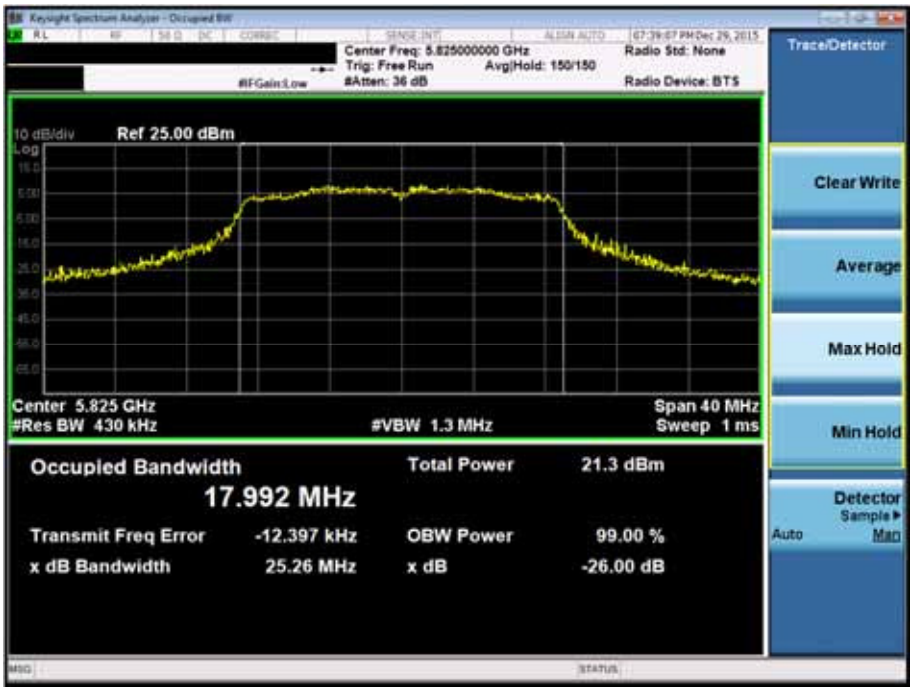
Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.116

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.140

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.149

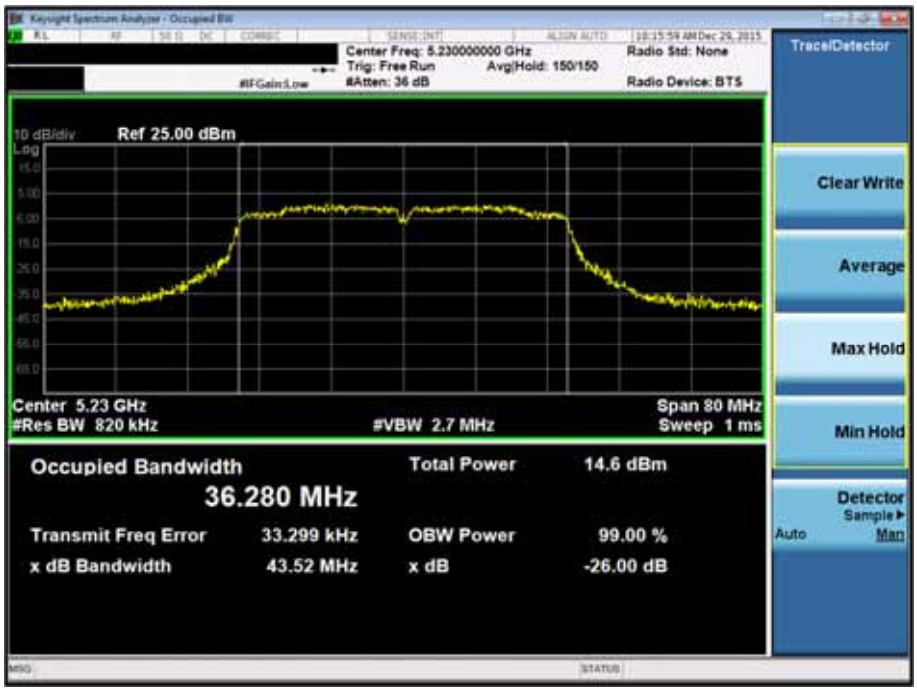
Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.157

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 1 & Ch.165

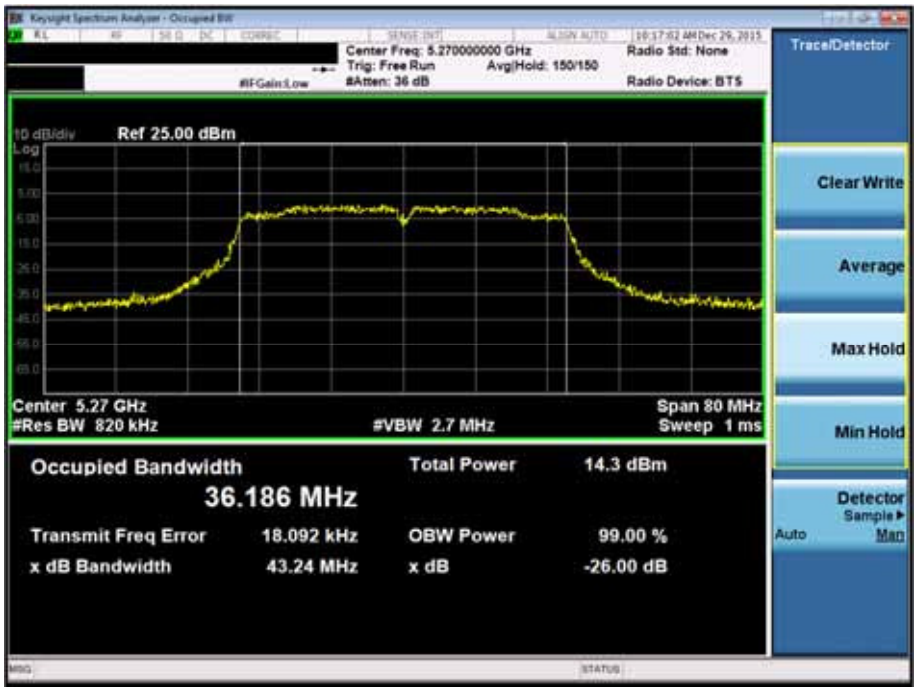


Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.38

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.46



Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.54

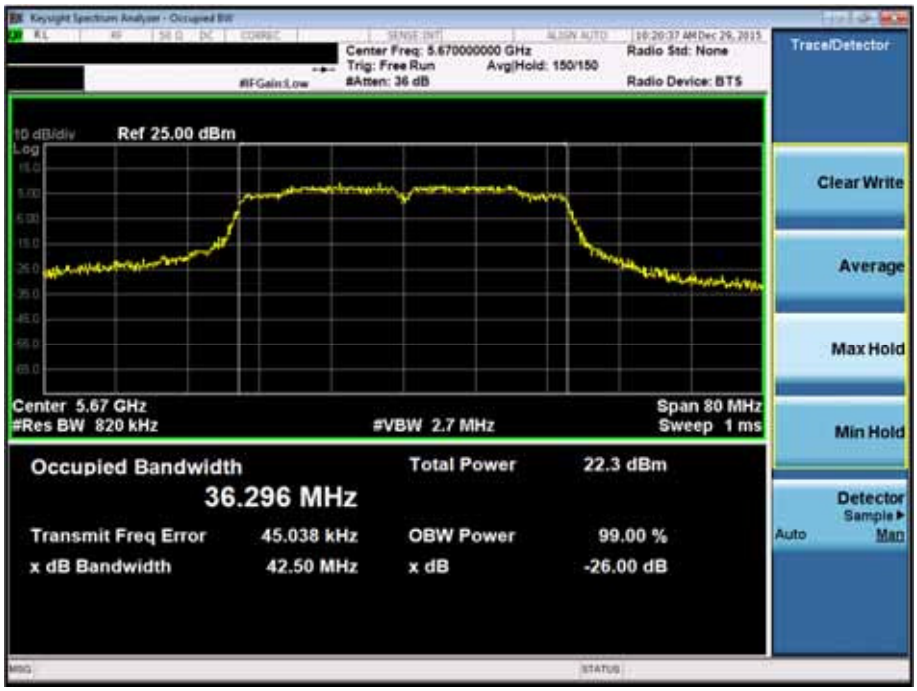


Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.62

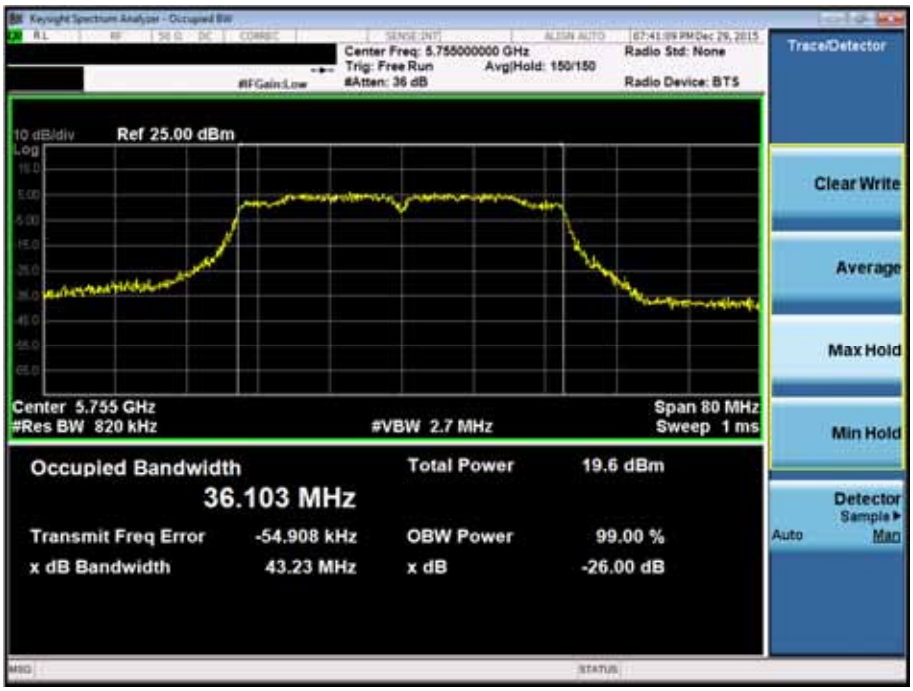
Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.102

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.110

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.134



Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.151

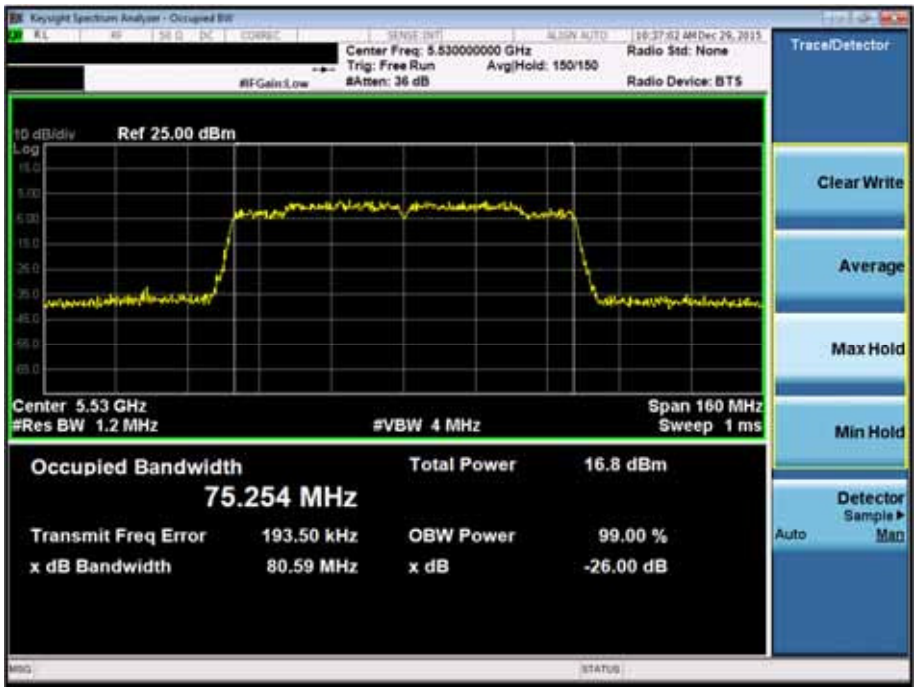


Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 1 & Ch.159

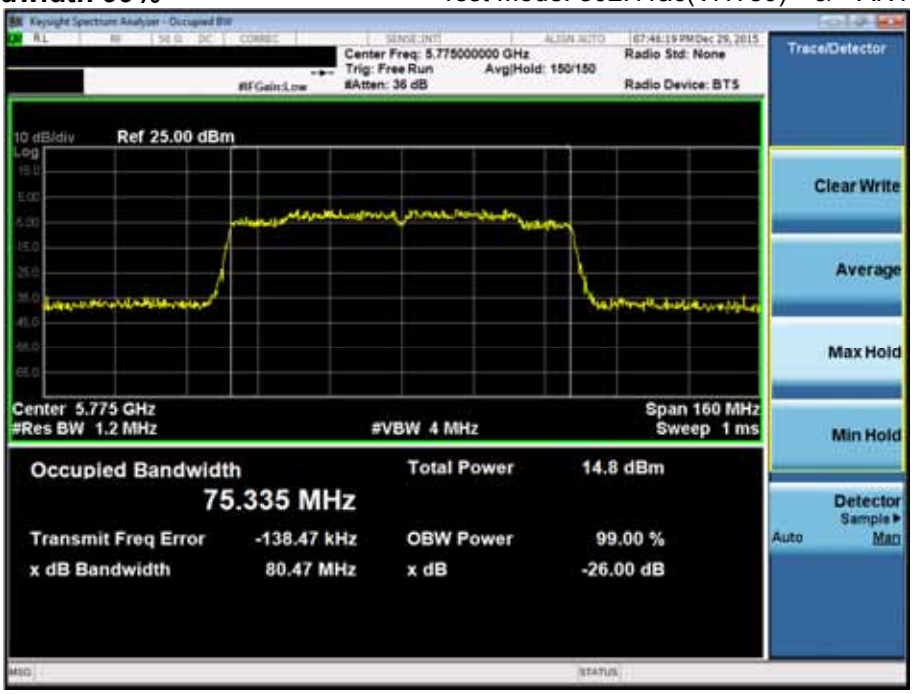
Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 1 & Ch.42

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 1 & Ch.58

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 1 & Ch.106



Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 1 & Ch.155



Occupied Bandwidth 99% Test Mode: 802.11ac VHT20 & ANT 1 & Ch.144

Occupied Bandwidth 99% Test Mode: 802.11ac VHT40 & ANT 1 & Ch.142

Occupied Bandwidth 99% Test Mode: 802.11ac VHT80 & ANT 1 & Ch.138

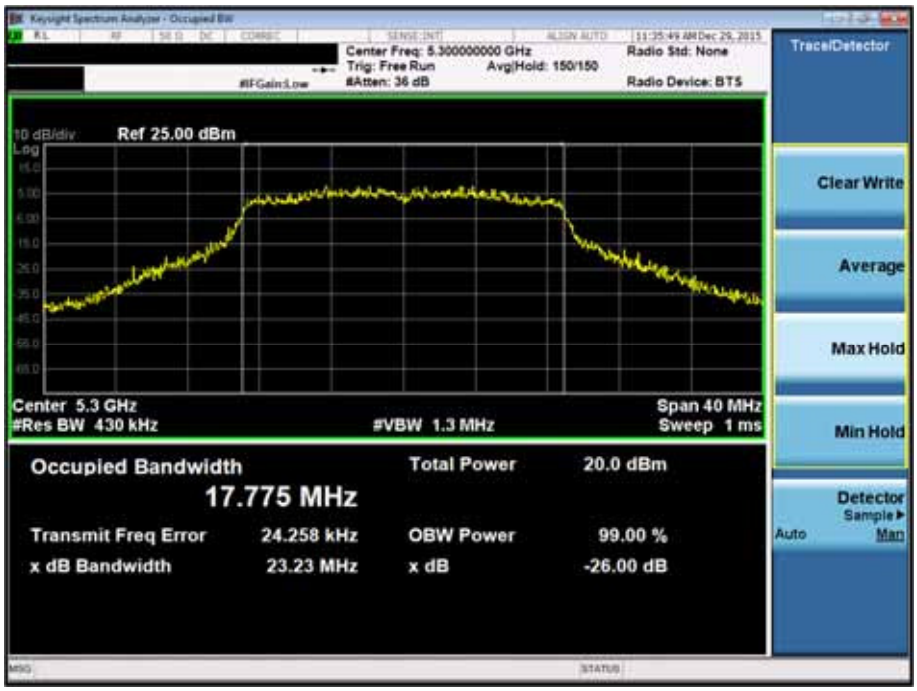
Occupied Bandwidth 99% Test Mode: 802.11n(HT20) & ANT 2 & Ch.36

Occupied Bandwidth 99% Test Mode: 802.11n(HT20) & ANT 2 & Ch.40

Occupied Bandwidth 99% Test Mode: 802.11n(HT20) & ANT 2 & Ch.48

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.52

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.60



Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.64

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.100

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.116

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.140

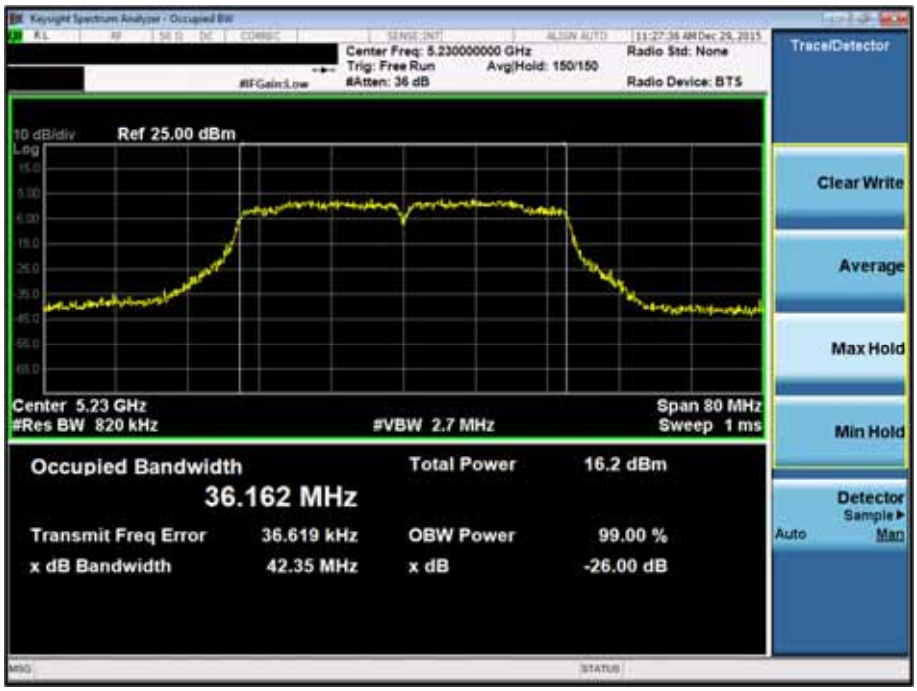
Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.149

Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.157

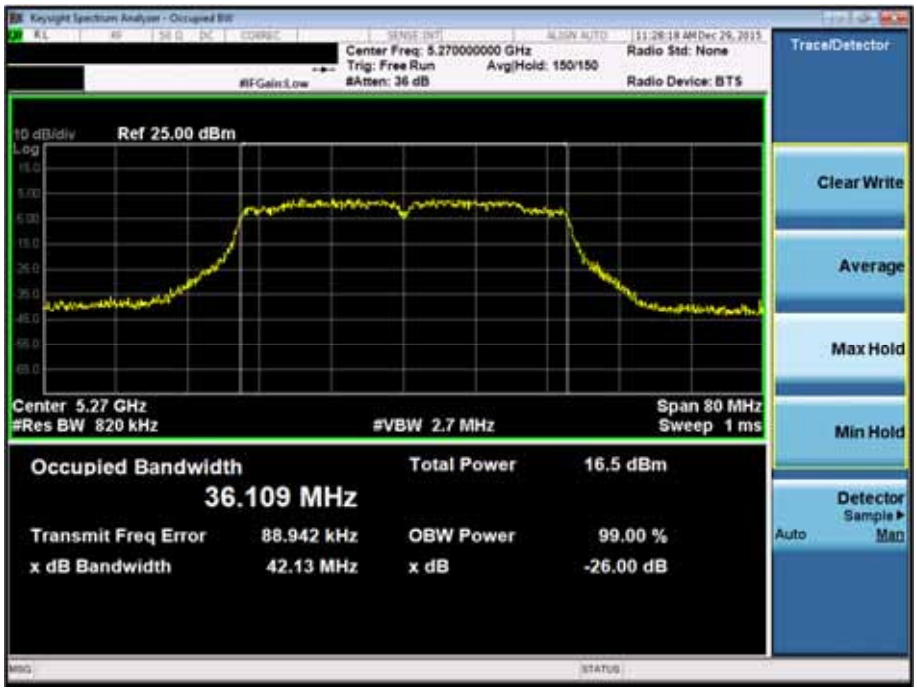
Occupied Bandwidth 99% Test Mode: 802.11n HT20 & ANT 2 & Ch.165

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.38

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.46



Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.54



Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.62

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.102

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.110

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.134

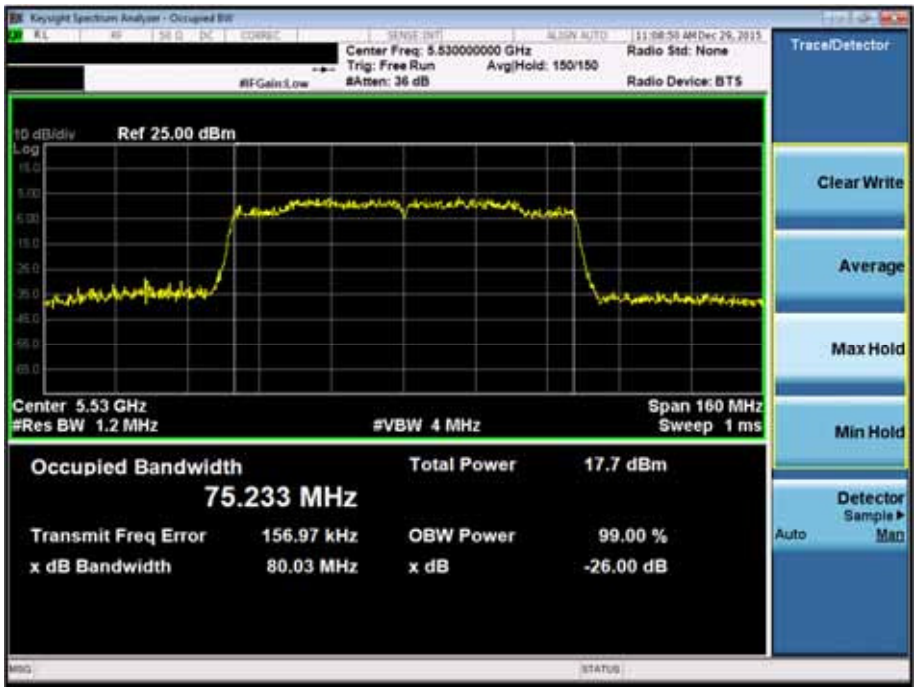
Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.151

Occupied Bandwidth 99% Test Mode: 802.11n HT40 & ANT 2 & Ch.159

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 2 & Ch.42

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 2 & Ch.58

Occupied Bandwidth 99% Test Mode: 802.11ac(VHT80) & ANT 2 & Ch.106



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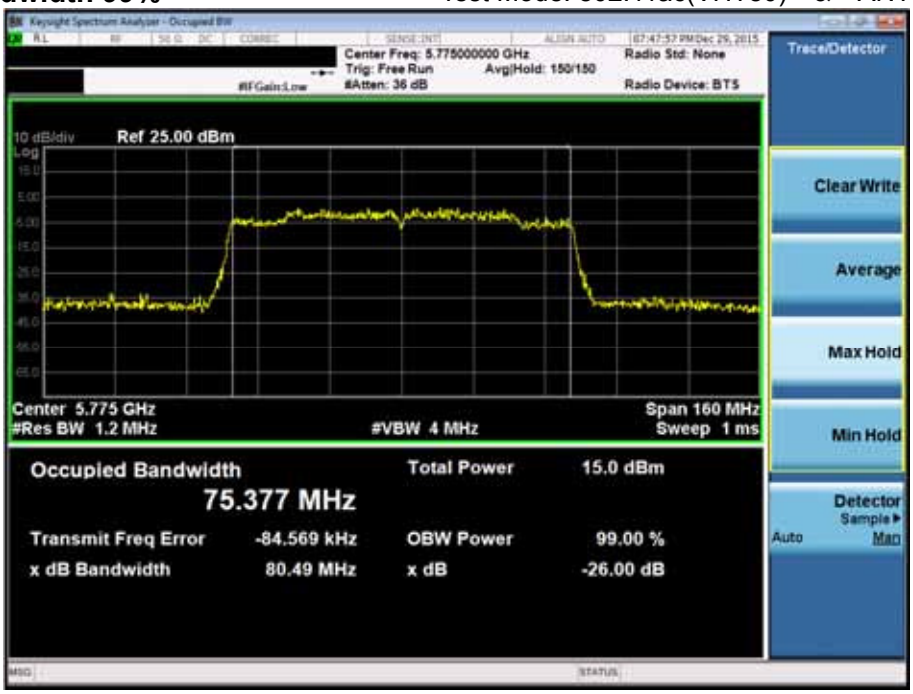

Occupied Bandwidth 99% Test Mode: 802.11ac VHT20 & ANT 2 & Ch.144

Occupied Bandwidth 99% Test Mode: 802.11ac VHT40 & ANT 2 & Ch.142

Occupied Bandwidth 99% Test Mode: 802.11ac VHT80 & ANT 2 & Ch.138

9. LIST OF TEST EQUIPMENT

Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
Spectrum Analyzer	Agilent Technologies	N9030A	15/10/19	16/10/19	MY53310140
Spectrum Analyzer	Agilent Technologies	N9020A	15/08/18	16/08/18	MY50200867
Dynamic Measurement DC Source	Agilent Technologies	66332A	15/01/22	16/01/22	US37471368
Power Meter & Wide Bandwidth Sensor	Anritsu	ML2496A / MA2411B	15/06/25	16/06/25	1338004 / 1306053
Temp & Humi Test Chamber	SJ Science	SJ-TH-S50	15/10/19	16/10/19	SJ-TH-S50-130930
Thermohygrometer	BODYCOM	BJ5478	15/02/26	16/02/26	1209
Signal Generator	Rohde Schwarz	SMF100A	15/06/29	16/06/29	102341
Vector Signal Generator	Rohde Schwarz	SMBV100A	15/01/06	16/01/06	255571
Digital Multimeter	Agilent Technologies	34401A	15/01/06	16/01/06	MY41037027
Loop Antenna	Schwarzbeck	FMZB1513	14/04/29	16/04/29	1513-128
TRILOG Broadband Test-Antenna	Schwarzbeck	VULB 9160	14/04/30	16/04/30	3358
Double-Ridged Guide Antenna	ETS-Lindgren	3117	14/05/12	16/05/12	140394
Horn Antenna	A.H.Systems Inc.	SAS-574	15/04/30	17/04/30	154
Highpass Filter	Wainwright Instruments	WHKX12-2580-3000-18000-80SS	15/09/23	16/09/23	3
PreAmplifier	TSJ	MLA-010K01-B01-27	15/04/09	16/04/09	1844539
PreAmplifier	Agilent	8449B	15/02/26	16/02/26	3008A00370
EMI Test Receiver	Rohde Schwarz	DSR7	15/10/19	16/10/19	101109
EMI Test Receiver	Rohde Schwarz	ESCI	15/02/25	16/02/25	100364
Single-Phase Master	NF	4420	15/09/09	16/09/09	3.04935E+12
Artificial Mains Network	Narda S.T.S. / PMM	PMM L2-16B	15/06/26	16/06/26	000WX20305

APPENDIX I

Conducted Test set up Diagram

- **Conducted Measurement**

APPENDIX II

Duty Cycle Information