

15 MHz + 5 MHz / 2 Carriers (30 W + 10 W)

Test Data at Downlink Port 0

Mod.	Channel	Frequency (MHz)	Measured Bandwidth (MHz)
QPSK	Low	1940.00	19.230
	Middle	1962.50	19.247
	High	1985.00	19.263
16QAM	Low	1940.00	19.208
	Middle	1962.50	19.225
	High	1985.00	19.206
64QAM	Low	1940.00	19.224
	Middle	1962.50	19.227
	High	1985.00	19.195
256QAM	Low	1940.00	19.142
	Middle	1962.50	19.205
	High	1985.00	19.199

Test Data at Downlink Port 1

Mod.	Channel	Frequency (MHz)	Measured Bandwidth (MHz)
QPSK	Low	1940.00	19.216
	Middle	1962.50	19.270
	High	1985.00	19.217
16QAM	Low	1940.00	19.250
	Middle	1962.50	19.233
	High	1985.00	19.224
64QAM	Low	1940.00	19.217
	Middle	1962.50	19.187
	High	1985.00	19.247
256QAM	Low	1940.00	19.182
	Middle	1962.50	19.233
	High	1985.00	19.238

Test Data at Downlink Port 2

Mod.	Channel	Frequency (MHz)	Measured Bandwidth (MHz)
QPSK	Low	1940.00	19.177
	Middle	1962.50	19.217
	High	1985.00	19.246
16QAM	Low	1940.00	19.178
	Middle	1962.50	19.251
	High	1985.00	19.238
64QAM	Low	1940.00	19.200
	Middle	1962.50	19.215
	High	1985.00	19.252
256QAM	Low	1940.00	19.211
	Middle	1962.50	19.229
	High	1985.00	19.239

Test Data at Downlink Port 3

Mod.	Channel	Frequency (MHz)	Measured Bandwidth (MHz)
QPSK	Low	1940.00	19.256
	Middle	1962.50	19.197
	High	1985.00	19.168
16QAM	Low	1940.00	19.219
	Middle	1962.50	19.195
	High	1985.00	19.191
64QAM	Low	1940.00	19.223
	Middle	1962.50	19.236
	High	1985.00	19.186
256QAM	Low	1940.00	19.166
	Middle	1962.50	19.248
	High	1985.00	19.169

10 MHz + 5 MHz / 2 Carriers (20 W + 10 W)

Test Data at Downlink Port 0

Mod.	Channel	Frequency (MHz)	Measured Bandwidth (MHz)
QPSK	Low	1937.50	14.392
	Middle	1962.50	14.399
	High	1987.50	14.445
16QAM	Low	1937.50	14.332
	Middle	1962.50	14.390
	High	1987.50	14.438
64QAM	Low	1937.50	14.392
	Middle	1962.50	14.387
	High	1987.50	14.423
256QAM	Low	1937.50	14.413
	Middle	1962.50	14.400
	High	1987.50	14.422

Test Data at Downlink Port 1

Mod.	Channel	Frequency (MHz)	Measured Bandwidth (MHz)
QPSK	Low	1937.50	14.369
	Middle	1962.50	14.452
	High	1987.50	14.380
16QAM	Low	1937.50	14.350
	Middle	1962.50	14.372
	High	1987.50	14.333
64QAM	Low	1937.50	14.378
	Middle	1962.50	14.425
	High	1987.50	14.394
256QAM	Low	1937.50	14.368
	Middle	1962.50	14.416
	High	1987.50	14.447

Test Data at Downlink Port 2

Mod.	Channel	Frequency (MHz)	Measured Bandwidth (MHz)
QPSK	Low	1937.50	14.403
	Middle	1962.50	14.319
	High	1987.50	14.404
16QAM	Low	1937.50	14.385
	Middle	1962.50	14.380
	High	1987.50	14.381
64QAM	Low	1937.50	14.356
	Middle	1962.50	14.424
	High	1987.50	14.445
256QAM	Low	1937.50	14.430
	Middle	1962.50	14.391
	High	1987.50	14.428

Test Data at Downlink Port 3

Mod.	Channel	Frequency (MHz)	Measured Bandwidth (MHz)
QPSK	Low	1937.50	14.407
	Middle	1962.50	14.358
	High	1987.50	14.447
16QAM	Low	1937.50	14.407
	Middle	1962.50	14.343
	High	1987.50	14.379
64QAM	Low	1937.50	14.362
	Middle	1962.50	14.406
	High	1987.50	14.412
256QAM	Low	1937.50	14.369
	Middle	1962.50	14.383
	High	1987.50	14.431

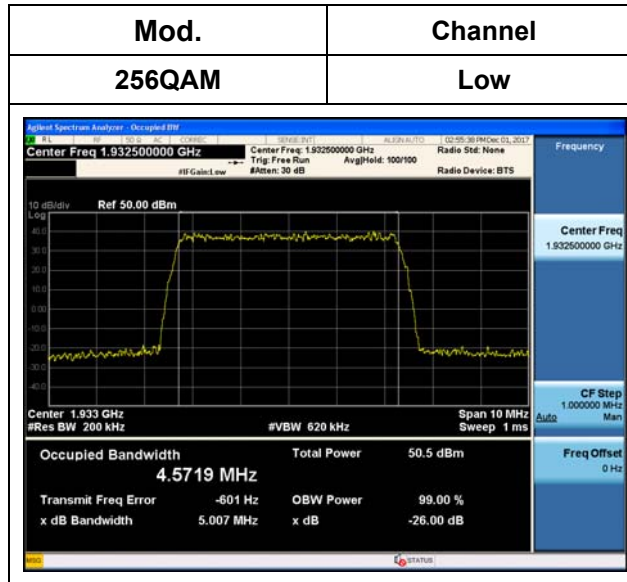
Note:

This test report only contains the worst case plot data for each port and modulation.

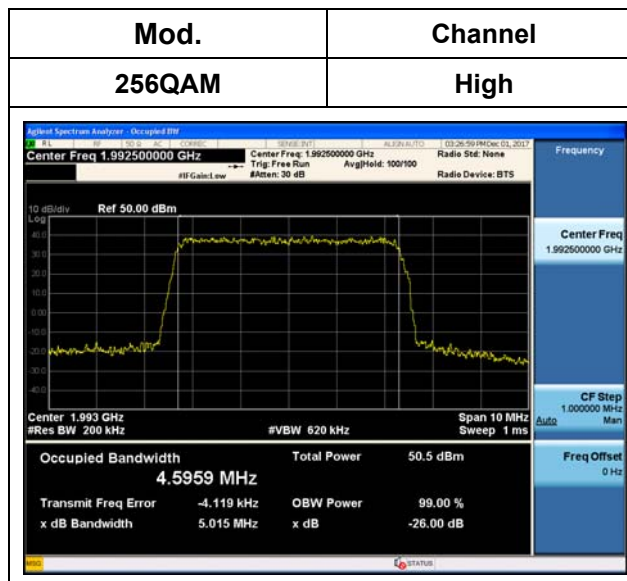
OCCUPIED BANDWIDTH

5 MHz / 1 Carrier (20 W)

Plot Data for Output Port 0



Plot Data for Output Port 1



Plot Data for Output Port 2

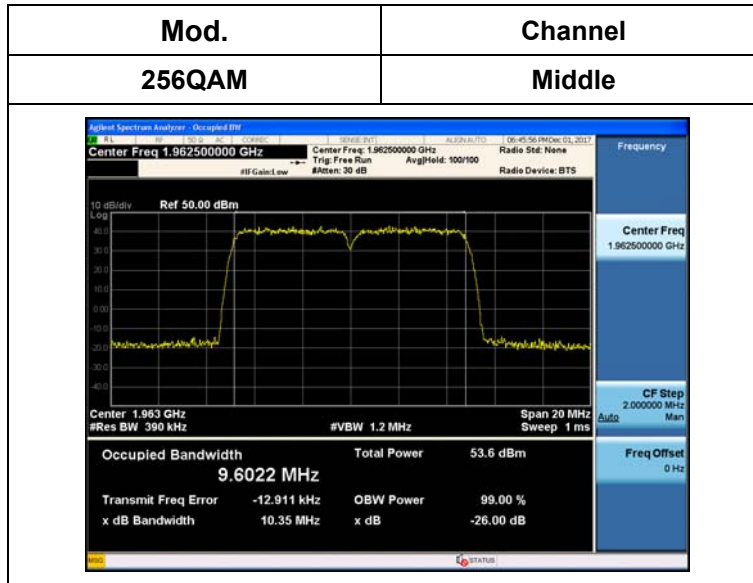
Mod.	Channel	Mod.	Channel
QPSK	Middle	16QAM	Low
<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 1.962500000 GHz</p> <p>Center Freq 1.962500000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Device: BTS</p> <p>Frequency</p> <p>Ref 50.00 dBm</p> <p>Center Freq 1.962500000 GHz</p> <p>CF Step 1.000000 MHz</p> <p>Center 1.963 GHz</p> <p>#Res BW 200 kHz</p> <p>#VBW 620 kHz</p> <p>Span 10 MHz</p> <p>Sweep 1 ms</p> <p>Occupied Bandwidth 4.5815 MHz</p> <p>Total Power 51.6 dBm</p> <p>Transmit Freq Error -11.574 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 4.937 MHz</p> <p>x dB -26.00 dB</p> <p>Freq Offset 0 Hz</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 1.932500000 GHz</p> <p>Center Freq 1.932500000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Device: BTS</p> <p>Frequency</p> <p>Ref 50.00 dBm</p> <p>Center Freq 1.932500000 GHz</p> <p>CF Step 1.000000 MHz</p> <p>Center 1.933 GHz</p> <p>#Res BW 200 kHz</p> <p>#VBW 620 kHz</p> <p>Span 10 MHz</p> <p>Sweep 1 ms</p> <p>Occupied Bandwidth 4.5756 MHz</p> <p>Total Power 51.1 dBm</p> <p>Transmit Freq Error 3.999 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 4.970 MHz</p> <p>x dB -26.00 dB</p> <p>Freq Offset 0 Hz</p>		
64QAM	Low	256QAM	Middle
<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 1.932500000 GHz</p> <p>Center Freq 1.932500000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Device: BTS</p> <p>Frequency</p> <p>Ref 50.00 dBm</p> <p>Center Freq 1.932500000 GHz</p> <p>CF Step 1.000000 MHz</p> <p>Center 1.933 GHz</p> <p>#Res BW 200 kHz</p> <p>#VBW 620 kHz</p> <p>Span 10 MHz</p> <p>Sweep 1 ms</p> <p>Occupied Bandwidth 4.5616 MHz</p> <p>Total Power 50.1 dBm</p> <p>Transmit Freq Error 11.028 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 4.986 MHz</p> <p>x dB -26.00 dB</p> <p>Freq Offset 0 Hz</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 1.962500000 GHz</p> <p>Center Freq 1.962500000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Device: BTS</p> <p>Frequency</p> <p>Ref 50.00 dBm</p> <p>Center Freq 1.962500000 GHz</p> <p>CF Step 1.000000 MHz</p> <p>Center 1.963 GHz</p> <p>#Res BW 200 kHz</p> <p>#VBW 620 kHz</p> <p>Span 10 MHz</p> <p>Sweep 1 ms</p> <p>Occupied Bandwidth 4.5738 MHz</p> <p>Total Power 50.5 dBm</p> <p>Transmit Freq Error -1.804 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 4.999 MHz</p> <p>x dB -26.00 dB</p> <p>Freq Offset 0 Hz</p>		

Plot Data for Output Port 3

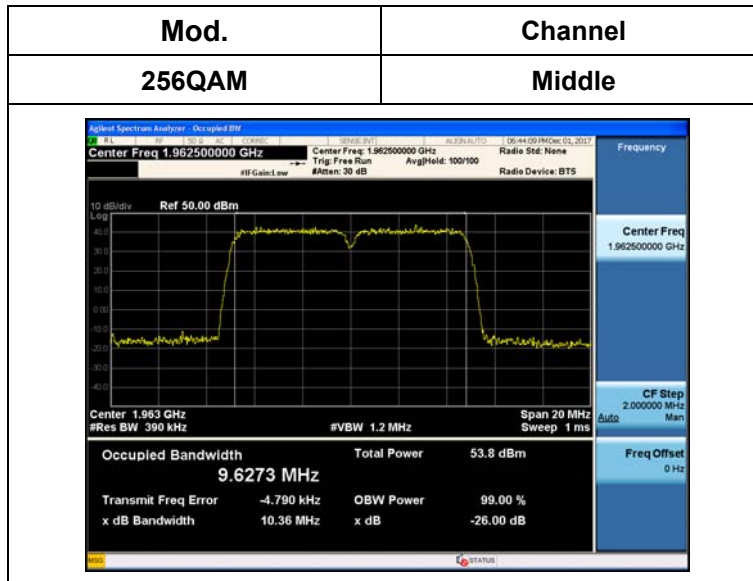
Mod.	Channel	Mod.	Channel
QPSK	Middle	16QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Center Freq: 1.962500000 GHz Trig: Free Run AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.962500000 GHz CF Step 1.000000 MHz Center 1.963 GHz #Res BW 200 kHz #VBW 620 kHz Span 10 MHz Sweep 1 ms Occupied Bandwidth 4.5822 MHz Total Power 51.8 dBm Transmit Freq Error -1.470 kHz OBW Power 99.00 % x dB Bandwidth 4.965 MHz x dB -26.00 dB</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Center Freq: 1.962500000 GHz Trig: Free Run AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.962500000 GHz CF Step 1.000000 MHz Center 1.963 GHz #Res BW 200 kHz #VBW 620 kHz Span 10 MHz Sweep 1 ms Occupied Bandwidth 4.5599 MHz Total Power 51.5 dBm Transmit Freq Error -2.640 kHz OBW Power 99.00 % x dB Bandwidth 4.941 MHz x dB -26.00 dB</p>		
Mod.	Channel	Mod.	Channel
64QAM	Low	256QAM	Low
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.932500000 GHz Center Freq: 1.932500000 GHz Trig: Free Run AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.932500000 GHz CF Step 1.000000 MHz Center 1.933 GHz #Res BW 200 kHz #VBW 620 kHz Span 10 MHz Sweep 1 ms Occupied Bandwidth 4.5619 MHz Total Power 50.5 dBm Transmit Freq Error 3.947 kHz OBW Power 99.00 % x dB Bandwidth 4.964 MHz x dB -26.00 dB</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.932500000 GHz Center Freq: 1.932500000 GHz Trig: Free Run AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.932500000 GHz CF Step 1.000000 MHz Center 1.933 GHz #Res BW 200 kHz #VBW 620 kHz Span 10 MHz Sweep 1 ms Occupied Bandwidth 4.5810 MHz Total Power 50.6 dBm Transmit Freq Error 6.375 kHz OBW Power 99.00 % x dB Bandwidth 4.988 MHz x dB -26.00 dB</p>		

5 MHz + 5 MHz / 2 Carriers (20 W + 20 W)

Plot Data for Output Port 0



Plot Data for Output Port 1



Plot Data for Output Port 2

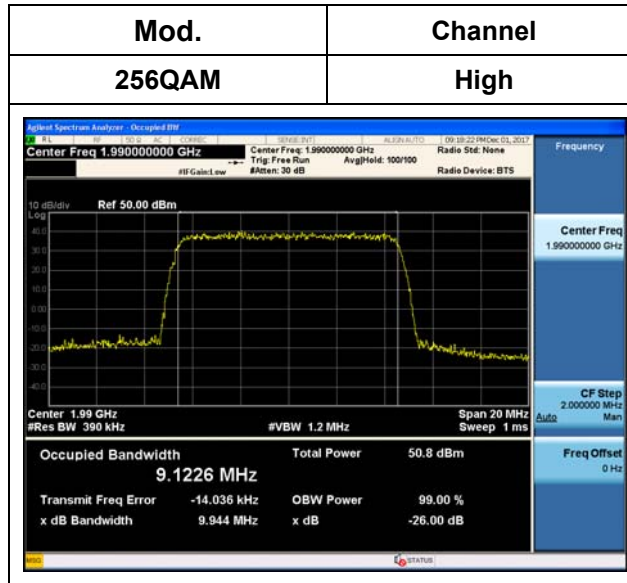
Mod.	Channel	Mod.	Channel
QPSK	Middle	16QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Ref 50.00 dBm Occupied Bandwidth 9.6215 MHz Total Power 54.4 dBm Transmit Freq Error -8.822 kHz OBW Power 99.00 % x dB Bandwidth 10.37 MHz x dB -26.00 dB</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.990000000 GHz Ref 50.00 dBm Occupied Bandwidth 9.5670 MHz Total Power 54.3 dBm Transmit Freq Error -4.762 kHz OBW Power 99.00 % x dB Bandwidth 10.36 MHz x dB -26.00 dB</p>		
64QAM	High	256QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.990000000 GHz Ref 50.00 dBm Occupied Bandwidth 9.6090 MHz Total Power 53.7 dBm Transmit Freq Error -26.211 kHz OBW Power 99.00 % x dB Bandwidth 10.33 MHz x dB -26.00 dB</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.990000000 GHz Ref 50.00 dBm Occupied Bandwidth 9.6051 MHz Total Power 53.5 dBm Transmit Freq Error -1.475 kHz OBW Power 99.00 % x dB Bandwidth 10.40 MHz x dB -26.00 dB</p>		

Plot Data for Output Port 3

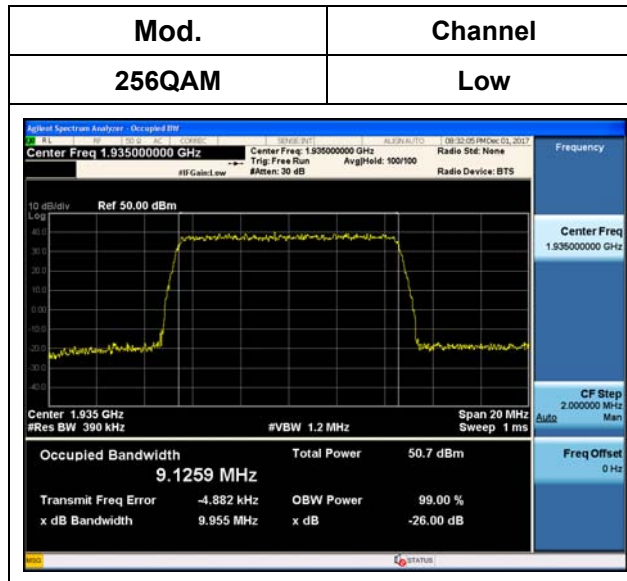
Mod.	Channel	Mod.	Channel
QPSK	Middle	16QAM	Middle
64QAM	High	256QAM	Low

10 MHz / 1 Carrier (20 W)

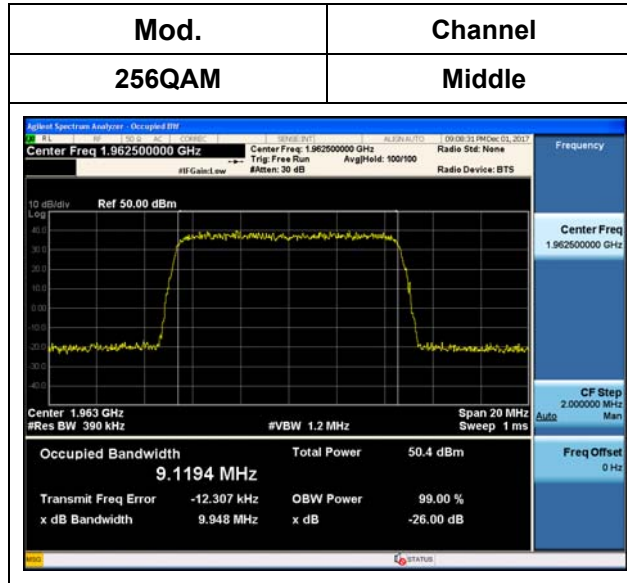
Plot Data for Output Port 0



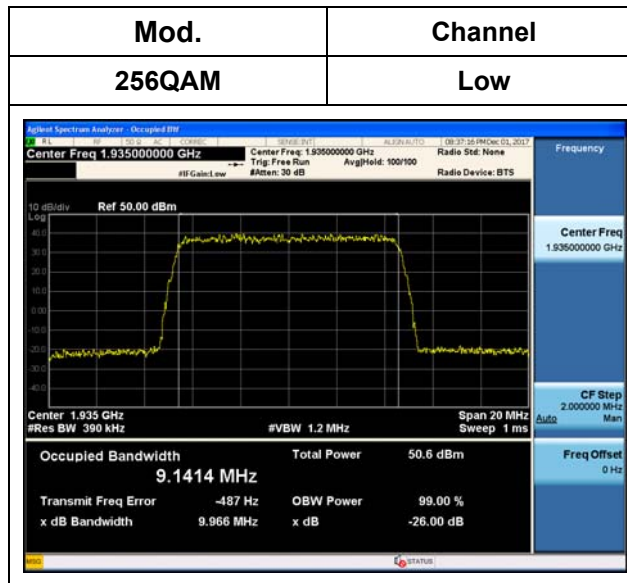
Plot Data for Output Port 1



Plot Data for Output Port 2

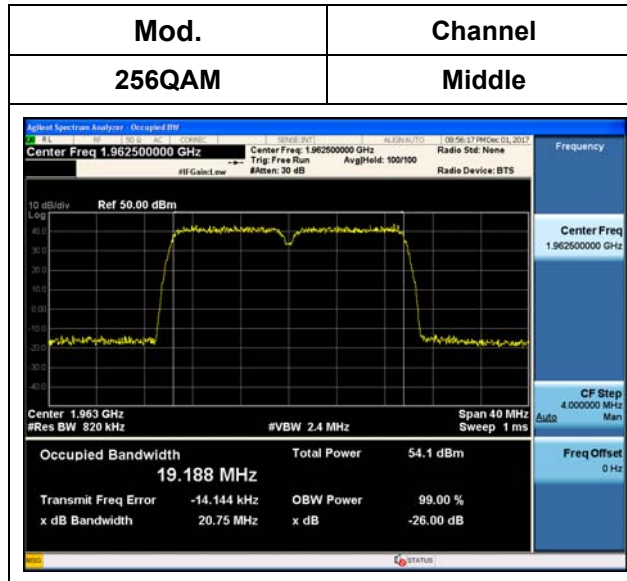


Plot Data for Output Port 3

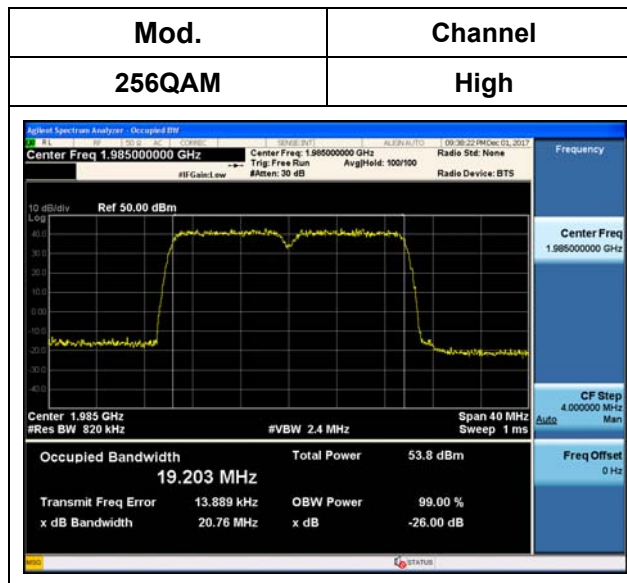


10 MHz + 10 MHz / 2 Carriers (20 W + 20 W)

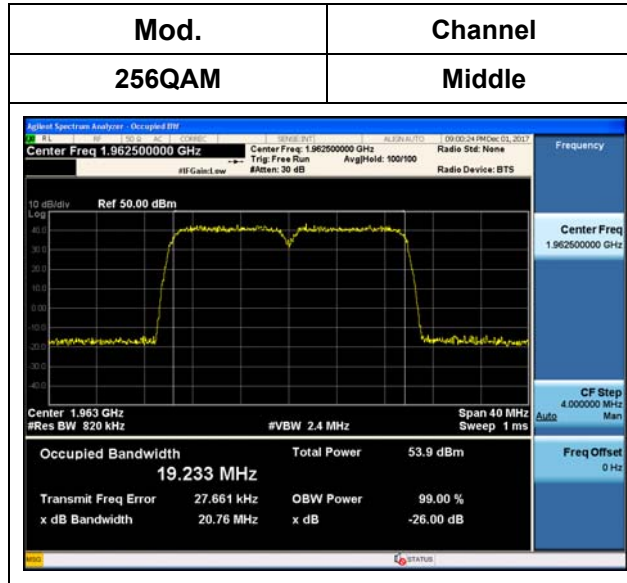
Plot Data for Output Port 0



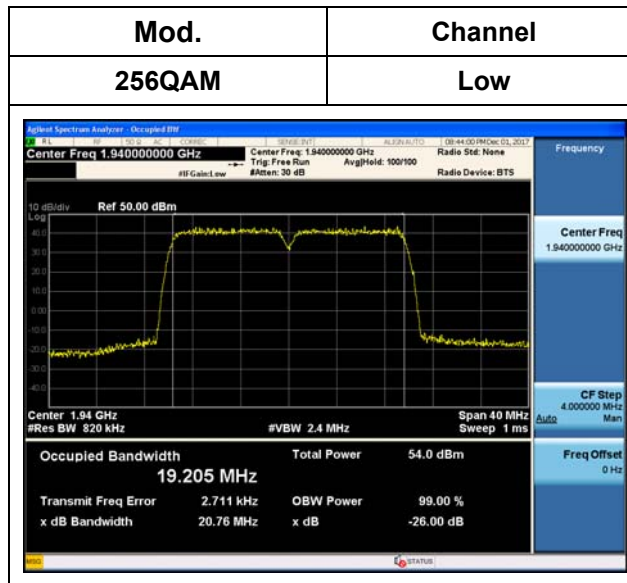
Plot Data for Output Port 1



Plot Data for Output Port 2



Plot Data for Output Port 3



15 MHz / 1 Carrier (30 W)

Plot Data for Output Port 0

Mod.	Channel	Mod.	Channel
QPSK	Low	16QAM	Low
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.937500000 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 13.722 MHz Total Power 53.0 dBm Transmit Freq Error 37.355 kHz x dB Bandwidth 14.91 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.937500000 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 13.712 MHz Total Power 52.9 dBm Transmit Freq Error 28.962 kHz x dB Bandwidth 14.98 MHz</p>		
64QAM	High	256QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 13.679 MHz Total Power 52.4 dBm Transmit Freq Error 24.310 kHz x dB Bandwidth 14.90 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 13.693 MHz Total Power 52.2 dBm Transmit Freq Error -24.995 kHz x dB Bandwidth 14.81 MHz</p>		

Plot Data for Output Port 1

Mod.	Channel	Mod.	Channel
QPSK	Low	16QAM	Middle
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.937500000 GHz Occupied Bandwidth 13.700 MHz Total Power 52.8 dBm</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Occupied Bandwidth 13.770 MHz Total Power 52.9 dBm</p>		
64QAM	Middle	256QAM	Low
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Occupied Bandwidth 13.687 MHz Total Power 52.3 dBm</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.937500000 GHz Occupied Bandwidth 13.656 MHz Total Power 52.1 dBm</p>		

Plot Data for Output Port 2

Mod.	Channel	Mod.	Channel
QPSK	Middle	16QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Center Freq: 1.962500000 GHz Trig: Free Run AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.962500000 GHz CF Step 3.000000 MHz Center 1.963 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 13.741 MHz Total Power 53.2 dBm Transmit Freq Error 12.223 kHz OBW Power 99.00 % x dB Bandwidth 14.77 MHz x dB -26.00 dB Freq Offset 0 Hz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz Center Freq: 1.987500000 GHz Trig: Free Run AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.987500000 GHz CF Step 3.000000 MHz Center 1.988 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 13.765 MHz Total Power 53.0 dBm Transmit Freq Error -4.455 kHz OBW Power 99.00 % x dB Bandwidth 14.89 MHz x dB -26.00 dB Freq Offset 0 Hz</p>		
64QAM	Middle	256QAM	Low
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Center Freq: 1.962500000 GHz Trig: Free Run AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.962500000 GHz CF Step 3.000000 MHz Center 1.963 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 13.698 MHz Total Power 52.5 dBm Transmit Freq Error -6.636 kHz OBW Power 99.00 % x dB Bandwidth 14.92 MHz x dB -26.00 dB Freq Offset 0 Hz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.937500000 GHz Center Freq: 1.937500000 GHz Trig: Free Run AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.937500000 GHz CF Step 3.000000 MHz Center 1.938 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 13.693 MHz Total Power 52.4 dBm Transmit Freq Error -31.584 kHz OBW Power 99.00 % x dB Bandwidth 14.97 MHz x dB -26.00 dB Freq Offset 0 Hz</p>		

Plot Data for Output Port 3

Mod.	Channel	Mod.	Channel
QPSK	Middle	16QAM	Middle
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Ref 50.00 dBm Occupied Bandwidth 13.780 MHz Total Power 53.2 dBm</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Ref 50.00 dBm Occupied Bandwidth 13.719 MHz Total Power 53.1 dBm</p>		
64QAM	Low	256QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.937500000 GHz Ref 50.00 dBm Occupied Bandwidth 13.686 MHz Total Power 52.4 dBm</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz Ref 50.00 dBm Occupied Bandwidth 13.681 MHz Total Power 52.4 dBm</p>		

15 MHz + 5 MHz / 2 Carriers (30 W + 10 W)

Plot Data for Output Port 0

Mod.	Channel	Mod.	Channel
QPSK	High	16QAM	Middle
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.98500000 GHz #Res BW 820 kHz #VBW 2.4 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.263 MHz Total Power 54.5 dBm Transmit Freq Error 230.95 kHz x dB Bandwidth 20.81 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.96250000 GHz #Res BW 820 kHz #VBW 2.4 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.225 MHz Total Power 54.5 dBm Transmit Freq Error 237.56 kHz x dB Bandwidth 20.70 MHz</p>		
64QAM	Middle	256QAM	Middle
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.96250000 GHz #Res BW 820 kHz #VBW 2.4 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.227 MHz Total Power 54.0 dBm Transmit Freq Error 259.86 kHz x dB Bandwidth 20.75 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.96250000 GHz #Res BW 820 kHz #VBW 2.4 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.205 MHz Total Power 54.0 dBm Transmit Freq Error 284.66 kHz x dB Bandwidth 20.76 MHz</p>		

Plot Data for Output Port 1

Mod.	Channel	Mod.	Channel
QPSK	Middle	16QAM	Low
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Occupied Bandwidth 19.270 MHz Total Power 54.4 dBm</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.940000000 GHz Occupied Bandwidth 19.250 MHz Total Power 54.3 dBm</p>		
64QAM	High	256QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.985000000 GHz Occupied Bandwidth 19.247 MHz Total Power 53.9 dBm</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.985000000 GHz Occupied Bandwidth 19.238 MHz Total Power 53.8 dBm</p>		

Plot Data for Output Port 2

Mod.	Channel	Mod.	Channel
QPSK	High	16QAM	Middle
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.985000000 GHz Center Freq: 1.985000000 GHz Trig: Free Run #Atten: 30 dB AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.985000000 GHz CF Step 4.000000 MHz Center 1.985 GHz #Res BW 820 kHz #VBW 2.4 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.246 MHz Total Power 54.5 dBm Transmit Freq Error 245.31 kHz OBW Power 99.00 % x dB Bandwidth 20.74 MHz x dB -26.00 dB Freq Offset 0 Hz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Center Freq: 1.962500000 GHz Trig: Free Run #Atten: 30 dB AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.962500000 GHz CF Step 4.000000 MHz Center 1.963 GHz #Res BW 820 kHz #VBW 2.4 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.251 MHz Total Power 54.5 dBm Transmit Freq Error 242.78 kHz OBW Power 99.00 % x dB Bandwidth 20.73 MHz x dB -26.00 dB Freq Offset 0 Hz</p>		
Mod.	Channel	Mod.	Channel
64QAM	High	256QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.985000000 GHz Center Freq: 1.985000000 GHz Trig: Free Run #Atten: 30 dB AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.985000000 GHz CF Step 4.000000 MHz Center 1.985 GHz #Res BW 820 kHz #VBW 2.4 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.252 MHz Total Power 53.9 dBm Transmit Freq Error 268.92 kHz OBW Power 99.00 % x dB Bandwidth 20.81 MHz x dB -26.00 dB Freq Offset 0 Hz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.985000000 GHz Center Freq: 1.985000000 GHz Trig: Free Run #Atten: 30 dB AvgHeld: 100/100 Radio Device: BTS Frequency Ref 50.00 dBm Center Freq 1.985000000 GHz CF Step 4.000000 MHz Center 1.985 GHz #Res BW 820 kHz #VBW 2.4 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.239 MHz Total Power 54.0 dBm Transmit Freq Error 280.48 kHz OBW Power 99.00 % x dB Bandwidth 20.75 MHz x dB -26.00 dB Freq Offset 0 Hz</p>		

Plot Data for Output Port 3

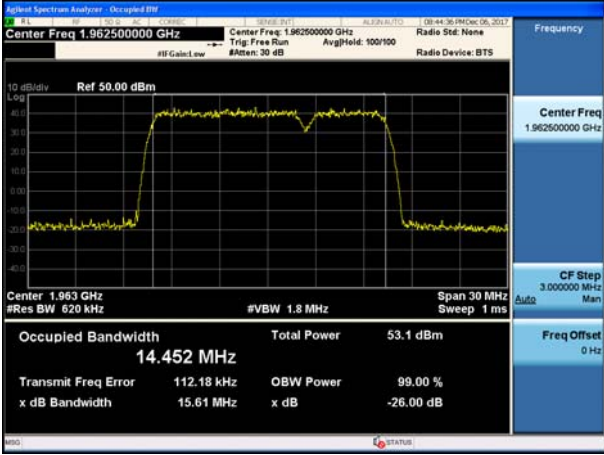
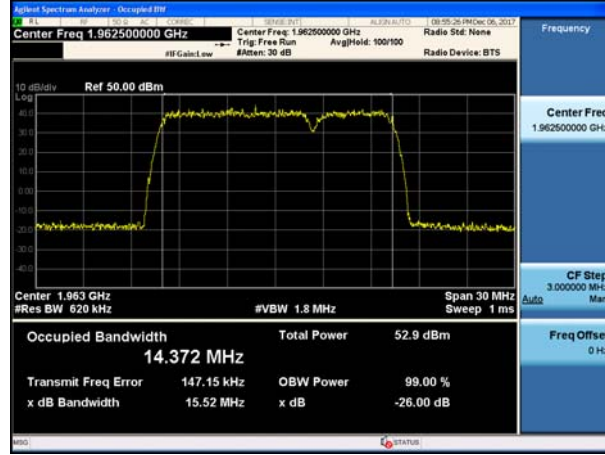
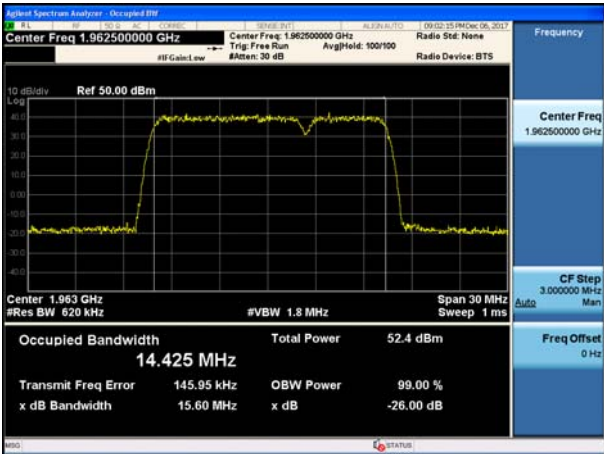
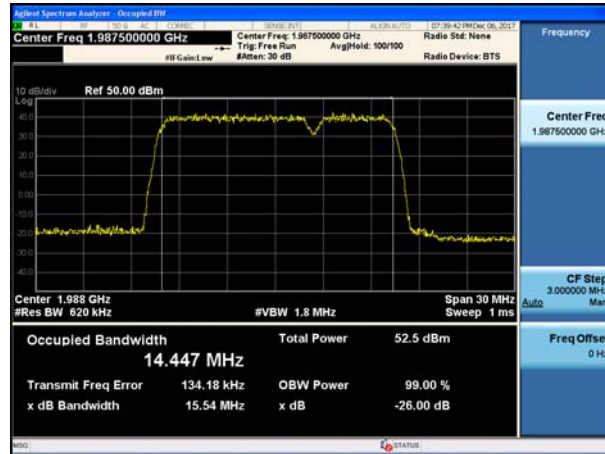
Mod.	Channel	Mod.	Channel
QPSK	Low	16QAM	Low
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.94000000 GHz Occupied Bandwidth 19.256 MHz Total Power 54.6 dBm Transmit Freq Error 266.05 kHz x dB Bandwidth 20.73 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.94000000 GHz Occupied Bandwidth 19.219 MHz Total Power 54.5 dBm Transmit Freq Error 241.41 kHz x dB Bandwidth 20.70 MHz</p>		
Mod.	Channel	Mod.	Channel
64QAM	Middle	256QAM	Middle
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.96250000 GHz Occupied Bandwidth 19.236 MHz Total Power 54.1 dBm Transmit Freq Error 288.23 kHz x dB Bandwidth 20.87 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.96250000 GHz Occupied Bandwidth 19.248 MHz Total Power 54.0 dBm Transmit Freq Error 262.44 kHz x dB Bandwidth 20.71 MHz</p>		

10 MHz + 5 MHz / 2 Carriers (20 W + 10 W)

Plot Data for Output Port 0

Mod.	Channel	Mod.	Channel
QPSK	High	16QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 14.445 MHz Total Power 53.6 dBm Transmit Freq Error 81.411 kHz x dB Bandwidth 15.55 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 14.438 MHz Total Power 53.1 dBm Transmit Freq Error 108.35 kHz x dB Bandwidth 15.55 MHz</p>		
64QAM	High	256QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 14.423 MHz Total Power 52.6 dBm Transmit Freq Error 130.20 kHz x dB Bandwidth 15.57 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz #Res BW 620 kHz #VBW 1.8 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 14.422 MHz Total Power 52.6 dBm Transmit Freq Error 104.79 kHz x dB Bandwidth 15.62 MHz</p>		

Plot Data for Output Port 1

Mod.	Channel	Mod.	Channel
QPSK	Middle	16QAM	Middle
 <p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Occupied Bandwidth 14.452 MHz Total Power 53.1 dBm Transmit Freq Error 112.18 kHz</p>		 <p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Occupied Bandwidth 14.372 MHz Total Power 52.9 dBm Transmit Freq Error 147.15 kHz</p>	
64QAM	Middle	256QAM	High
 <p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.962500000 GHz Occupied Bandwidth 14.425 MHz Total Power 52.4 dBm Transmit Freq Error 145.95 kHz</p>		 <p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz Occupied Bandwidth 14.447 MHz Total Power 52.5 dBm Transmit Freq Error 134.18 kHz</p>	

Plot Data for Output Port 2

Mod.	Channel	Mod.	Channel
QPSK	High	16QAM	Low
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz Ref 50.00 dBm Occupied Bandwidth 14.404 MHz Total Power 53.6 dBm Transmit Freq Error 113.02 kHz x dB Bandwidth 15.59 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.937500000 GHz Ref 50.00 dBm Occupied Bandwidth 14.385 MHz Total Power 53.1 dBm Transmit Freq Error 131.13 kHz x dB Bandwidth 15.68 MHz</p>		
64QAM	High	256QAM	Low
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz Ref 50.00 dBm Occupied Bandwidth 14.445 MHz Total Power 52.6 dBm Transmit Freq Error 122.22 kHz x dB Bandwidth 15.55 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.937500000 GHz Ref 50.00 dBm Occupied Bandwidth 14.430 MHz Total Power 52.7 dBm Transmit Freq Error 113.10 kHz x dB Bandwidth 15.59 MHz</p>		

Plot Data for Output Port 3

Mod.	Channel	Mod.	Channel
QPSK	High	16QAM	Low
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz Ref 50.00 dBm Occupied Bandwidth 14.447 MHz Total Power 53.5 dBm Transmit Freq Error 102.96 kHz x dB Bandwidth 15.60 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.937500000 GHz Ref 50.00 dBm Occupied Bandwidth 14.407 MHz Total Power 53.1 dBm Transmit Freq Error 108.00 kHz x dB Bandwidth 15.56 MHz</p>		
64QAM	High	256QAM	High
<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz Ref 50.00 dBm Occupied Bandwidth 14.412 MHz Total Power 52.8 dBm Transmit Freq Error 118.02 kHz x dB Bandwidth 15.53 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 1.987500000 GHz Ref 50.00 dBm Occupied Bandwidth 14.431 MHz Total Power 52.8 dBm Transmit Freq Error 111.97 kHz x dB Bandwidth 15.61 MHz</p>		

7. SPURIOUS EMISSION AT ANTENNA TERMINAL

Test Requirements:

§ 2.1051 Measurements required: Spurious emissions at antenna terminals:

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in § 2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

§ 24.238 Emission limitations for Broadband PCS equipment.

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(c) Alternative out of band emission limit. Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) Interference caused by out of band emissions. If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than

Test Procedures:

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.

The resolution bandwidth of the spectrum analyzer was set at 100 KHz (Under 1 GHz), 1MHz (Above 1 GHz). Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

Notes:

1) In 9 KHz-150 KHz and 150 KHz-30 MHz bands, RBW was reduced to 1% and 10% of the reference bandwidth for measuring unwanted emission level (typically, 100KHz if the authorized frequency band is below 1GHz) and power was integrated. (1% = +20 dB, 10% = +10 dB)

2) Due to 4x4 MIMO operation, limit is -19.02 dBm ($-13 \text{ dBm} - 10 \cdot \log(4)$) per FCC KDB 662911D01v02r01.

Conducted Spurious Emissions

5 MHz / 1 Carrier (20 W)

Test Result for Output Port 0

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1932.50	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1992.50	-	-	-	-	-	-
16QAM	Low	1932.50	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1992.50	-	-	-	-	-	-
64QAM	Low	1932.50	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1992.50	-	-	-	-	-	-
256QAM	Low	1932.50	-29.295	-31.152	-50.633	-28.567	-31.772	-26.376
	Middle	1962.50	-28.018	-29.090	-50.773	-28.881	-31.550	-26.141
	High	1992.50	-28.300	-28.994	-51.108	-28.394	-31.215	-26.402

Test Result for Output Port 1

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1932.50	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1992.50	-	-	-	-	-	-
16QAM	Low	1932.50	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1992.50	-	-	-	-	-	-
64QAM	Low	1932.50	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1992.50	-	-	-	-	-	-
256QAM	Low	1932.50	-28.942	-31.089	-51.113	-28.440	-31.118	-26.246
	Middle	1962.50	-29.241	-29.487	-50.623	-29.131	-31.492	-26.319
	High	1992.50	-29.078	-29.199	-50.666	-28.585	-31.139	-26.361

Test Result for Output Port 2

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1932.50	-28.788	-30.756	-51.468	-28.878	-31.483	-26.397
	Middle	1962.50	-26.605	-30.231	-50.892	-28.279	-31.490	-26.226
	High	1992.50	-29.123	-30.191	-51.298	-28.471	-31.624	-26.288
16QAM	Low	1932.50	-26.646	-30.082	-50.488	-28.123	-31.296	-26.531
	Middle	1962.50	-28.473	-29.365	-51.303	-28.971	-31.295	-26.089
	High	1992.50	-28.165	-30.452	-51.211	-28.790	-30.888	-26.295
64QAM	Low	1932.50	-27.806	-29.410	-50.882	-28.785	-31.552	-26.295
	Middle	1962.50	-28.694	-28.341	-50.819	-28.271	-31.807	-26.059
	High	1992.50	-29.097	-29.016	-50.924	-28.648	-30.949	-26.518
256QAM	Low	1932.50	-28.941	-30.973	-50.987	-28.670	-31.501	-25.986
	Middle	1962.50	-29.288	-30.264	-51.087	-28.719	-31.251	-26.709
	High	1992.50	-29.185	-29.983	-50.702	-28.638	-31.560	-26.227

Test Result for Output Port 3

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1932.50	-29.057	-30.197	-50.847	-28.347	-31.312	-26.096
	Middle	1962.50	-28.282	-29.576	-51.123	-28.083	-31.196	-26.707
	High	1992.50	-28.122	-29.676	-50.961	-28.211	-31.820	-26.120
16QAM	Low	1932.50	-28.849	-30.180	-50.968	-27.656	-31.396	-26.101
	Middle	1962.50	-28.849	-29.995	-51.173	-28.658	-31.116	-26.213
	High	1992.50	-28.114	-28.946	-50.558	-28.270	-31.023	-26.688
64QAM	Low	1932.50	-28.256	-29.454	-50.780	-28.651	-31.157	-25.977
	Middle	1962.50	-28.281	-30.253	-50.750	-28.141	-32.072	-26.362
	High	1992.50	-28.905	-29.418	-50.960	-28.126	-31.284	-26.463
256QAM	Low	1932.50	-28.692	-29.644	-50.892	-28.406	-30.532	-26.399
	Middle	1962.50	-29.627	-31.538	-51.296	-28.634	-31.810	-26.571
	High	1992.50	-28.154	-28.704	-50.514	-28.100	-31.505	-26.271

5 MHz + 5 MHz / 2 Carriers (20 W + 20 W)

Test Result for Output Port 0

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
16QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
64QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
256QAM	Low	1935.00	-28.158	-28.077	-49.969	-26.961	-30.874	-26.511
	Middle	1962.50	-28.986	-30.458	-48.802	-28.261	-31.751	-26.351
	High	1990.00	-28.544	-31.052	-48.764	-28.090	-31.175	-26.122

Test Result for Output Port 1

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
16QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
64QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
256QAM	Low	1935.00	-28.377	-31.167	-49.500	-27.598	-31.391	-26.278
	Middle	1962.50	-28.541	-30.303	-47.989	-28.666	-31.327	-26.594
	High	1990.00	-29.702	-29.980	-48.771	-27.877	-31.594	-26.250

Test Result for Output Port 2

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1935.00	-27.437	-30.917	-50.073	-28.571	-31.784	-26.441
	Middle	1962.50	-27.574	-30.295	-48.676	-28.845	-31.057	-26.539
	High	1990.00	-26.980	-29.885	-48.515	-27.254	-28.840	-26.346
16QAM	Low	1935.00	-28.711	-30.093	-49.569	-28.723	-31.536	-26.680
	Middle	1962.50	-28.289	-31.439	-48.611	-28.776	-31.658	-26.089
	High	1990.00	-28.845	-30.193	-48.659	-28.089	-30.777	-26.395
64QAM	Low	1935.00	-28.224	-29.669	-49.916	-28.065	-31.780	-26.085
	Middle	1962.50	-29.415	-28.873	-48.877	-28.825	-30.822	-26.159
	High	1990.00	-29.309	-29.350	-47.983	-27.785	-31.408	-26.311
256QAM	Low	1935.00	-28.260	-30.228	-49.938	-27.277	-31.040	-26.291
	Middle	1962.50	-28.643	-29.734	-48.137	-28.294	-30.426	-26.308
	High	1990.00	-28.106	-30.558	-48.780	-28.009	-29.940	-26.427

Test Result for Output Port 3

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1935.00	-27.389	-30.615	-49.405	-28.115	-31.505	-26.012
	Middle	1962.50	-28.231	-29.626	-47.879	-28.351	-31.366	-26.401
	High	1990.00	-27.832	-28.362	-47.722	-28.175	-28.317	-26.302
16QAM	Low	1935.00	-27.786	-30.266	-49.142	-26.199	-31.560	-26.299
	Middle	1962.50	-26.478	-31.675	-47.933	-28.015	-31.478	-26.523
	High	1990.00	-26.575	-29.249	-47.888	-28.183	-31.075	-26.196
64QAM	Low	1935.00	-27.930	-30.029	-49.425	-28.246	-31.478	-26.544
	Middle	1962.50	-29.166	-30.648	-48.074	-28.350	-31.193	-26.173
	High	1990.00	-28.207	-31.808	-48.797	-28.557	-28.785	-26.523
256QAM	Low	1935.00	-28.948	-31.339	-49.455	-27.876	-31.822	-26.432
	Middle	1962.50	-27.746	-29.704	-47.807	-28.633	-31.452	-26.639
	High	1990.00	-28.740	-28.404	-48.512	-28.119	-30.734	-26.450

10 MHz / 1 Carrier (20 W)

Test Result for Output Port 0

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
16QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
64QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
256QAM	Low	1935.00	-28.483	-29.896	-51.186	-28.807	-31.326	-26.545
	Middle	1962.50	-29.488	-28.885	-51.183	-28.445	-31.869	-26.502
	High	1990.00	-28.703	-29.968	-51.252	-28.471	-31.665	-26.357

Test Result for Output Port 1

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
16QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
64QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
256QAM	Low	1935.00	-29.897	-30.913	-51.099	-28.972	-31.259	-26.444
	Middle	1962.50	-29.967	-28.708	-51.315	-28.521	-30.743	-26.345
	High	1990.00	-27.593	-29.851	-50.635	-28.560	-31.591	-25.996

Test Result for Output Port 2

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
16QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
64QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
256QAM	Low	1935.00	-29.456	-29.881	-51.360	-28.347	-31.491	-26.367
	Middle	1962.50	-29.573	-30.929	-51.488	-28.546	-31.635	-26.224
	High	1990.00	-28.936	-28.875	-50.607	-28.018	-31.490	-26.318

Test Result for Output Port 3

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
16QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
64QAM	Low	1935.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1990.00	-	-	-	-	-	-
256QAM	Low	1935.00	-30.140	-28.580	-51.202	-28.681	-31.398	-26.573
	Middle	1962.50	-28.226	-30.096	-51.382	-28.900	-31.475	-26.406
	High	1990.00	-26.818	-30.782	-51.012	-28.916	-31.637	-26.384

10 MHz + 10 MHz / 2 Carriers (20 W + 20 W)

Test Result for Output Port 0

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
16QAM	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
64QAM	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
256QAM	Low	1940.00	-28.589	-29.534	-49.661	-27.076	-31.174	-26.503
	Middle	1962.50	-28.925	-29.443	-50.027	-28.479	-31.221	-26.125
	High	1985.00	-28.824	-30.449	-49.266	-28.209	-30.830	-26.426

Test Result for Output Port 1

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
16QAM	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
64QAM	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
256QAM	Low	1940.00	-28.962	-30.047	-49.909	-28.027	-31.270	-26.487
	Middle	1962.50	-29.508	-28.468	-49.375	-28.958	-31.462	-26.565
	High	1985.00	-28.650	-28.459	-49.082	-28.399	-31.178	-26.245

Test Result for Output Port 2

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
16QAM	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
64QAM	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
256QAM	Low	1940.00	-27.663	-29.914	-49.926	-28.455	-31.580	-26.380
	Middle	1962.50	-28.300	-30.255	-49.522	-28.044	-31.864	-26.407
	High	1985.00	-27.752	-30.173	-49.643	-28.618	-30.942	-26.044

Test Result for Output Port 3

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
16QAM	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
64QAM	Low	1940.00	-	-	-	-	-	-
	Middle	1962.50	-	-	-	-	-	-
	High	1985.00	-	-	-	-	-	-
256QAM	Low	1940.00	-29.626	-30.001	-50.257	-28.139	-31.737	-26.643
	Middle	1962.50	-28.832	-30.274	-49.771	-29.010	-31.542	-26.345
	High	1985.00	-29.027	-29.793	-49.377	-28.157	-30.931	-26.448

15 MHz / 1 Carrier (30 W)

Test Result for Output Port 0

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1937.50	-30.109	-29.926	-50.253	-28.228	-31.677	-26.157
	Middle	1962.50	-28.482	-28.392	-50.782	-28.620	-31.568	-26.029
	High	1987.50	-30.026	-28.674	-50.539	-28.600	-31.781	-26.074
16QAM	Low	1937.50	-28.405	-30.573	-50.645	-29.162	-31.482	-25.889
	Middle	1962.50	-28.370	-30.315	-50.631	-28.602	-31.471	-26.403
	High	1987.50	-28.073	-28.808	-50.432	-28.225	-31.042	-26.601
64QAM	Low	1937.50	-28.454	-29.277	-50.786	-28.724	-31.186	-26.301
	Middle	1962.50	-28.686	-29.640	-50.194	-28.915	-31.514	-26.180
	High	1987.50	-29.019	-29.213	-50.184	-29.116	-31.898	-26.499
256QAM	Low	1937.50	-29.807	-30.328	-50.324	-28.437	-31.430	-26.369
	Middle	1962.50	-28.604	-30.317	-50.647	-28.557	-31.388	-26.571
	High	1987.50	-29.903	-30.131	-50.592	-28.538	-31.260	-26.506

Test Result for Output Port 1

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1937.50	-30.276	-29.929	-50.050	-28.598	-30.976	-26.426
	Middle	1962.50	-27.960	-29.640	-50.669	-28.918	-31.302	-25.841
	High	1987.50	-28.238	-30.231	-50.636	-28.730	-31.621	-26.582
16QAM	Low	1937.50	-29.500	-30.869	-50.477	-28.624	-31.088	-26.037
	Middle	1962.50	-28.591	-28.781	-50.641	-27.586	-31.493	-26.509
	High	1987.50	-29.378	-29.020	-50.470	-28.441	-31.167	-26.549
64QAM	Low	1937.50	-29.384	-29.379	-50.632	-27.740	-31.318	-26.269
	Middle	1962.50	-28.838	-30.250	-50.616	-28.863	-31.484	-26.712
	High	1987.50	-28.970	-28.693	-50.804	-28.438	-31.399	-26.116
256QAM	Low	1937.50	-28.947	-30.483	-50.689	-28.475	-31.470	-26.027
	Middle	1962.50	-27.317	-29.275	-50.210	-29.246	-31.438	-26.623
	High	1987.50	-27.868	-30.260	-50.417	-29.028	-31.657	-26.504

Test Result for Output Port 2

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	-28.062	-28.062	-27.747	-50.184	-28.944	-31.622	-26.327
	Middle	-28.209	-28.209	-31.803	-49.555	-28.821	-31.674	-26.758
	High	-29.158	-29.158	-31.508	-50.449	-28.819	-31.245	-26.137
16QAM	Low	-27.726	-27.726	-30.780	-50.353	-28.514	-31.377	-26.373
	Middle	-28.627	-28.627	-29.616	-50.105	-28.876	-31.325	-26.911
	High	-29.466	-29.466	-30.078	-50.296	-29.087	-31.223	-26.521
64QAM	Low	-28.533	-28.533	-29.680	-49.946	-28.896	-31.679	-26.980
	Middle	-28.636	-28.636	-29.877	-50.434	-28.183	-31.478	-26.804
	High	-29.411	-29.411	-31.036	-50.317	-28.720	-31.312	-26.373
256QAM	Low	-29.510	-29.510	-30.590	-50.539	-27.554	-31.435	-26.711
	Middle	-28.830	-28.830	-28.390	-50.231	-27.941	-31.848	-26.755
	High	-29.412	-29.412	-29.985	-50.852	-28.986	-31.442	-26.367

Test Result for Output Port 3

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1937.50	-29.025	-29.369	-50.412	-29.447	-31.753	-26.709
	Middle	1962.50	-29.304	-30.938	-50.621	-28.816	-31.217	-26.580
	High	1987.50	-29.140	-29.698	-50.331	-28.308	-31.546	-26.287
16QAM	Low	1937.50	-27.246	-30.635	-50.548	-28.791	-31.324	-26.802
	Middle	1962.50	-27.808	-29.805	-50.215	-29.016	-30.618	-26.525
	High	1987.50	-28.061	-31.018	-50.535	-28.506	-31.401	-26.623
64QAM	Low	1937.50	-29.094	-30.263	-50.414	-28.417	-31.231	-26.754
	Middle	1962.50	-28.981	-30.600	-50.210	-28.762	-31.692	-26.208
	High	1987.50	-29.089	-28.985	-50.497	-27.909	-31.703	-26.275
256QAM	Low	1937.50	-28.940	-30.230	-50.367	-28.085	-31.751	-26.849
	Middle	1962.50	-29.091	-29.413	-49.959	-28.641	-31.523	-26.446
	High	1987.50	-28.826	-29.328	-50.808	-28.975	-31.814	-26.469

15 MHz + 5 MHz / 2 Carriers (30 W + 10 W)

Test Result for Output Port 0

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1940.00	-28.387	-30.840	-50.114	-28.321	-31.134	-26.487
	Middle	1962.50	-28.154	-29.833	-49.159	-28.526	-31.265	-26.218
	High	1985.00	-28.760	-29.911	-49.808	-28.550	-30.810	-26.335
16QAM	Low	1940.00	-27.112	-29.325	-50.192	-28.561	-30.918	-26.337
	Middle	1962.50	-28.550	-30.277	-49.504	-28.284	-31.672	-26.205
	High	1985.00	-28.399	-30.703	-49.975	-28.685	-31.195	-26.756
64QAM	Low	1940.00	-29.757	-30.388	-50.254	-27.885	-30.907	-26.172
	Middle	1962.50	-28.584	-29.319	-49.932	-28.233	-31.404	-26.200
	High	1985.00	-29.860	-28.839	-49.700	-28.487	-30.617	-26.556
256QAM	Low	1940.00	-29.597	-29.368	-49.908	-28.574	-31.667	-26.235
	Middle	1962.50	-28.985	-30.076	-49.259	-28.313	-31.499	-26.192
	High	1985.00	-28.580	-29.560	-49.831	-28.684	-31.389	-26.595

Test Result for Output Port 1

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1940.00	-28.880	-29.807	-50.272	-28.357	-31.452	-26.462
	Middle	1962.50	-28.509	-29.555	-49.354	-28.561	-31.258	-26.080
	High	1985.00	-26.595	-30.804	-49.780	-28.866	-30.523	-26.506
16QAM	Low	1940.00	-27.465	-30.410	-49.823	-28.717	-31.054	-25.585
	Middle	1962.50	-28.999	-31.237	-49.697	-28.159	-31.007	-25.951
	High	1985.00	-28.119	-31.601	-49.332	-29.191	-30.341	-26.494
64QAM	Low	1940.00	-29.186	-29.707	-49.493	-28.053	-31.077	-25.886
	Middle	1962.50	-28.655	-28.911	-49.874	-28.150	-31.124	-26.065
	High	1985.00	-29.085	-28.618	-50.027	-28.366	-26.626	-26.188
256QAM	Low	1940.00	-28.260	-29.944	-49.774	-27.585	-31.016	-26.078
	Middle	1962.50	-29.037	-29.442	-49.033	-28.598	-31.529	-26.203
	High	1985.00	-28.857	-28.897	-50.046	-28.912	-31.034	-26.232

Test Result for Output Port 2

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1940.00	-28.376	-29.785	-49.685	-28.189	-31.115	-26.681
	Middle	1962.50	-28.699	-30.999	-49.370	-29.032	-31.195	-26.407
	High	1985.00	-28.451	-29.559	-49.799	-28.939	-31.056	-25.824
16QAM	Low	1940.00	-29.872	-30.479	-49.914	-28.108	-31.301	-26.544
	Middle	1962.50	-28.438	-29.336	-48.939	-28.990	-31.561	-26.555
	High	1985.00	-27.668	-30.017	-49.835	-28.889	-30.757	-26.477
64QAM	Low	1940.00	-29.231	-30.018	-49.919	-28.324	-31.606	-26.196
	Middle	1962.50	-28.125	-30.290	-49.741	-28.487	-31.185	-26.306
	High	1985.00	-28.671	-30.495	-49.883	-28.387	-31.120	-26.090
256QAM	Low	1940.00	-26.488	-29.308	-49.752	-28.943	-31.642	-26.615
	Middle	1962.50	-29.062	-28.028	-49.410	-28.055	-30.966	-26.121
	High	1985.00	-28.606	-29.812	-49.598	-27.651	-30.994	-26.788

Test Result for Output Port 3

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1940.00	-27.811	-29.849	-49.920	-28.386	-31.680	-26.426
	Middle	1962.50	-28.894	-29.571	-48.987	-27.513	-31.168	-26.434
	High	1985.00	-29.292	-29.294	-49.459	-27.604	-29.821	-26.057
16QAM	Low	1940.00	-28.501	-29.948	-50.037	-28.459	-30.845	-26.699
	Middle	1962.50	-27.893	-31.194	-50.010	-28.697	-31.331	-26.566
	High	1985.00	-28.693	-29.338	-49.620	-28.998	-28.003	-26.495
64QAM	Low	1940.00	-29.117	-27.553	-49.843	-28.619	-31.614	-25.673
	Middle	1962.50	-27.737	-29.564	-50.150	-28.280	-31.331	-26.256
	High	1985.00	-28.035	-28.417	-49.357	-28.818	-31.248	-26.508
256QAM	Low	1940.00	-27.405	-28.386	-49.541	-27.875	-31.600	-26.509
	Middle	1962.50	-28.033	-29.812	-49.623	-28.285	-31.483	-26.503
	High	1985.00	-29.279	-29.887	-49.737	-29.003	-31.084	-26.531

10 MHz + 5 MHz / 2 Carriers (20 W + 10 W)

Test Result for Output Port 0

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1937.50	-27.699	-29.967	-50.042	-28.234	-30.845	-26.280
	Middle	1962.50	-28.082	-31.534	-49.878	-29.093	-31.705	-26.119
	High	1987.50	-27.657	-29.441	-50.511	-29.209	-31.571	-27.026
16QAM	Low	1937.50	-29.345	-29.591	-49.731	-28.992	-31.785	-26.405
	Middle	1962.50	-28.885	-30.352	-50.086	-28.526	-31.696	-26.641
	High	1987.50	-27.671	-29.931	-48.878	-28.952	-31.770	-26.686
64QAM	Low	1937.50	-27.907	-30.143	-50.199	-28.959	-31.899	-26.478
	Middle	1962.50	-30.575	-29.645	-50.077	-28.569	-31.653	-26.492
	High	1987.50	-28.520	-30.154	-50.372	-28.535	-31.815	-26.290
256QAM	Low	1937.50	-28.614	-30.991	-50.414	-28.593	-31.602	-26.292
	Middle	1962.50	-29.473	-30.329	-49.689	-29.075	-31.530	-26.505
	High	1987.50	-27.898	-30.390	-50.159	-29.016	-31.915	-26.658

Test Result for Output Port 1

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1937.50	-29.915	-29.204	-50.128	-28.629	-31.542	-26.905
	Middle	1962.50	-27.989	-28.887	-50.350	-28.667	-31.550	-25.733
	High	1987.50	-28.873	-29.304	-50.307	-29.228	-32.055	-26.657
16QAM	Low	1937.50	-28.808	-28.738	-50.338	-29.027	-31.385	-26.346
	Middle	1962.50	-27.752	-30.638	-49.659	-28.786	-31.610	-26.555
	High	1987.50	-26.907	-29.872	-50.020	-28.552	-30.052	-26.786
64QAM	Low	1937.50	-29.497	-30.530	-50.505	-28.936	-31.738	-26.752
	Middle	1962.50	-28.919	-29.680	-49.764	-28.274	-31.736	-26.747
	High	1987.50	-27.681	-30.791	-49.992	-28.971	-30.928	-26.362
256QAM	Low	1937.50	-30.032	-30.520	-50.250	-29.278	-31.251	-26.633
	Middle	1962.50	-29.62	-30.987	-49.968	-29.156	-31.197	-26.681
	High	1987.50	-27.385	-30.503	-50.453	-29.542	-31.949	-26.431

Test Result for Output Port 2

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1937.50	-28.359	-30.184	-49.954	-28.142	-31.752	-26.718
	Middle	1962.50	-29.003	-30.866	-50.160	-28.914	-31.714	-26.340
	High	1987.50	-29.203	-30.876	-50.387	-28.673	-32.104	-26.865
16QAM	Low	1937.50	-29.220	-30.364	-50.221	-28.725	-31.227	-26.308
	Middle	1962.50	-28.422	-30.377	-49.769	-28.701	-31.667	-26.544
	High	1987.50	-28.015	-30.399	-50.242	-29.123	-31.518	-26.799
64QAM	Low	1937.50	-28.944	-29.126	-50.176	-28.100	-31.513	-26.074
	Middle	1962.50	-28.887	-29.462	-49.752	-28.995	-31.743	-26.548
	High	1987.50	-28.157	-29.188	-50.281	-28.852	-31.158	-26.975
256QAM	Low	1937.50	-28.614	-29.707	-49.701	-29.251	-31.638	-26.945
	Middle	1962.50	-29.040	-30.376	-49.414	-28.903	-31.649	-26.180
	High	1987.50	-29.360	-30.588	-50.099	-28.882	-31.678	-26.846

Test Result for Output Port 3

Mod.	Channel	Frequency (MHz)	Measured Level (dBm)					
			9 kHz ~ 150 kHz	150 kHz~ 30 MHz	30 MHz ~ 1 GHz	1 GHz ~ 1.925 GHz	2 GHz ~ 12.75 GHz	12.75 GHz ~ 26.5 Hz
QPSK	Low	1937.50	-28.34	-29.785	-50.058	-28.077	-31.760	-26.267
	Middle	1962.50	-28.964	-30.350	-50.083	-28.461	-31.623	-26.559
	High	1987.50	-28.097	-29.353	-50.000	-29.325	-31.848	-26.828
16QAM	Low	1937.50	-29.135	-30.358	-50.018	-28.498	-31.741	-26.697
	Middle	1962.50	-28.634	-28.677	-49.796	-29.513	-31.210	-26.749
	High	1987.50	-28.863	-30.816	-49.783	-29.064	-31.835	-26.416
64QAM	Low	1937.50	-28.506	-30.232	-49.895	-28.567	-31.307	-26.611
	Middle	1962.50	-29.034	-31.217	-49.467	-28.928	-31.707	-25.877
	High	1987.50	-28.875	-30.868	-49.749	-29.031	-31.297	-26.291
256QAM	Low	1937.50	-30.100	-30.055	-49.711	-28.993	-31.873	-26.871
	Middle	1962.50	-28.766	-29.454	-49.832	-28.214	-31.640	-26.486
	High	1987.50	-28.005	-29.842	-49.976	-29.255	-31.162	-26.333

Note:

This test report only contains the worst case plot data for each port and modulation.

5 MHz / 1 Carrier (20 W)

Plot Data for Output Port 0_256QAM

