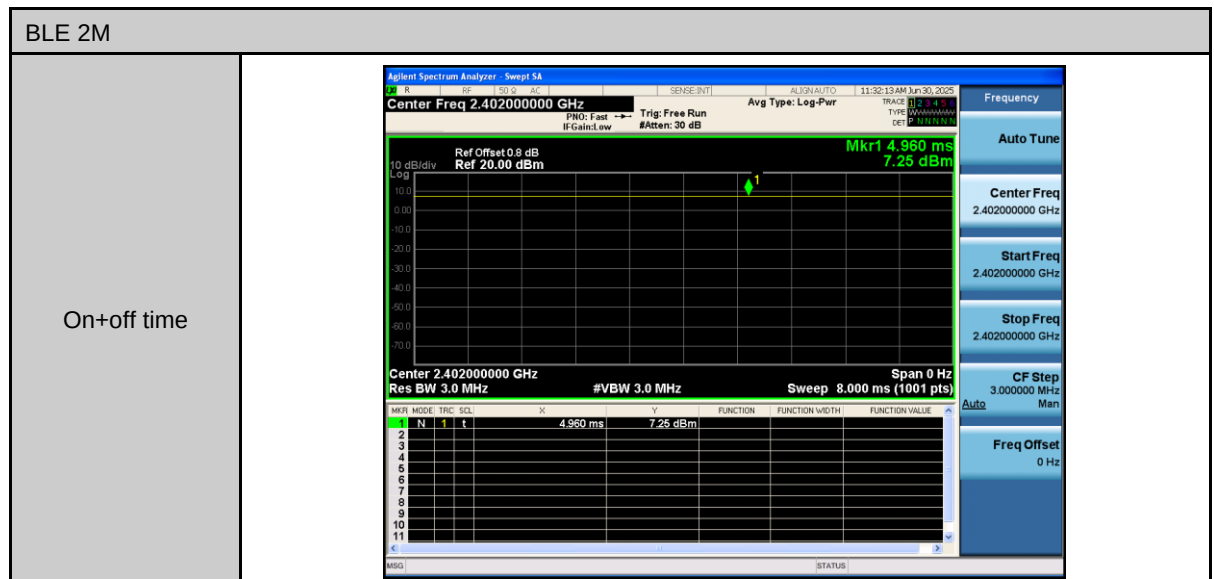
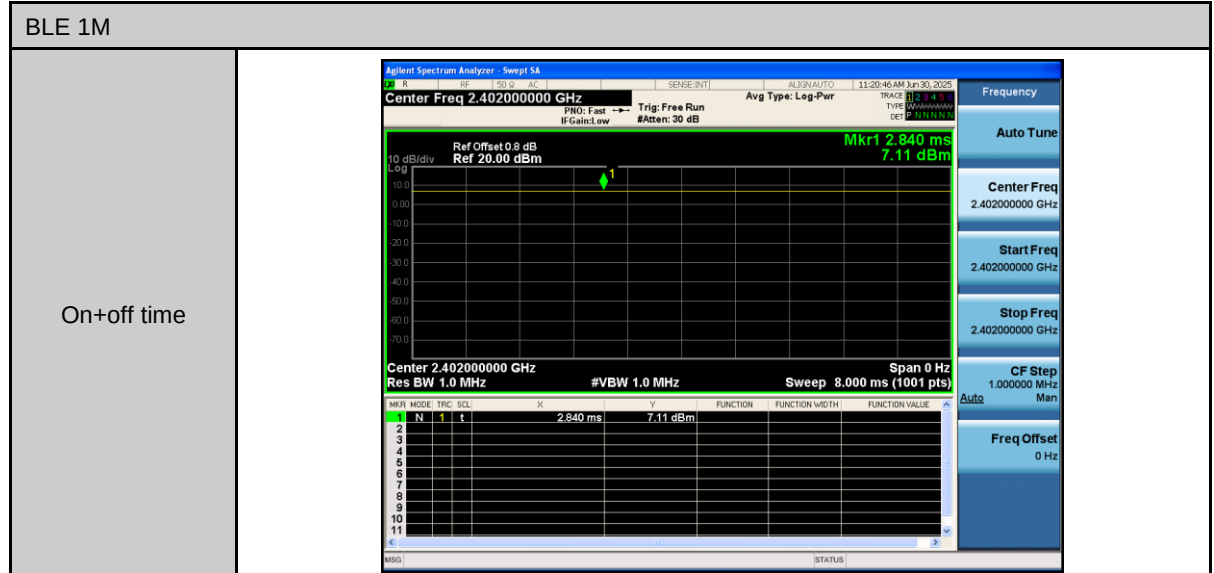
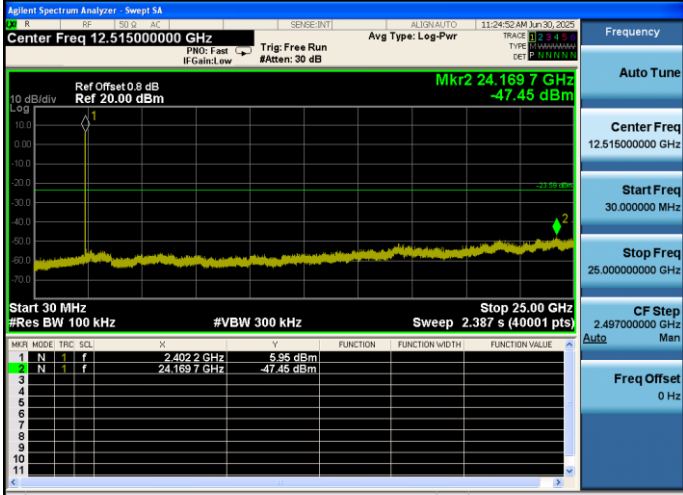
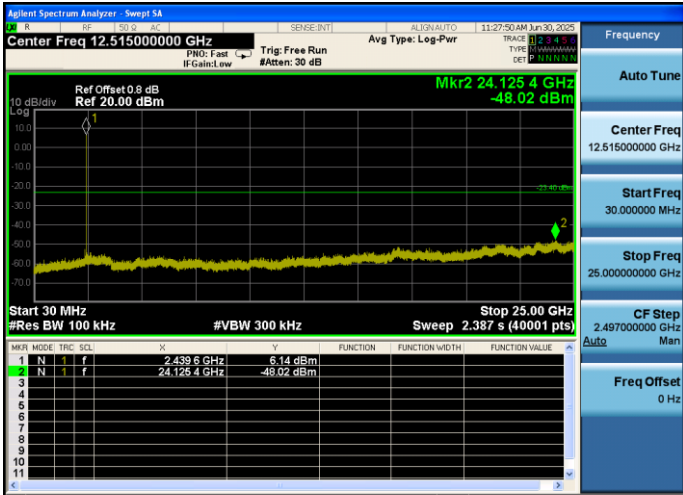
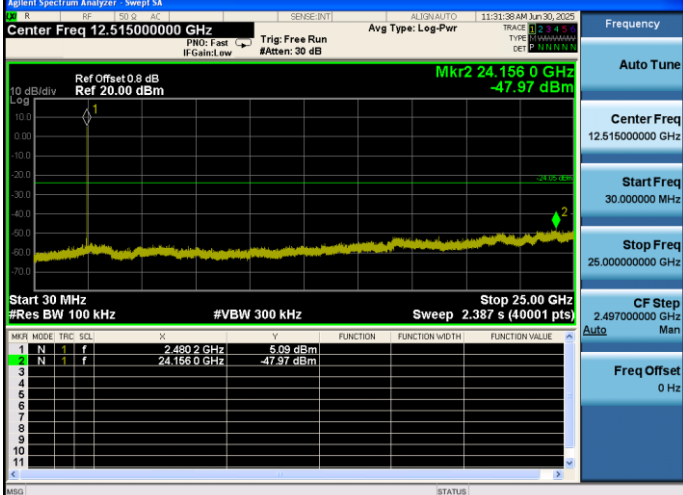


Appendix B. Test Plots

Duty cycle

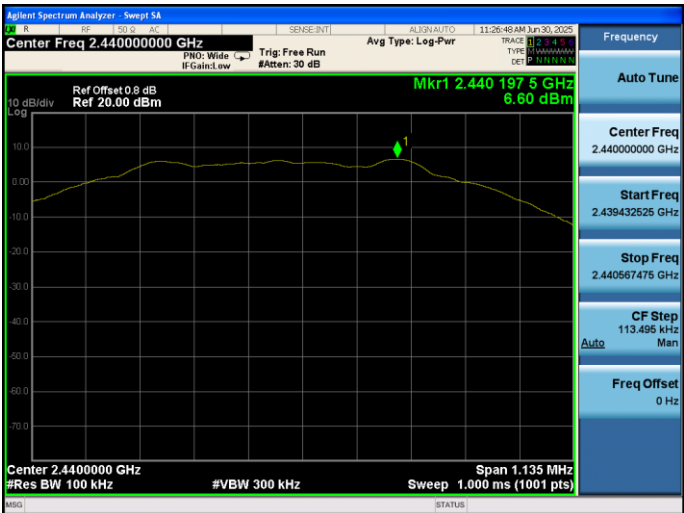


Out of Band Conducted Spurious Emission

BLE 1M	
Low ch	
Mid ch	
High ch	

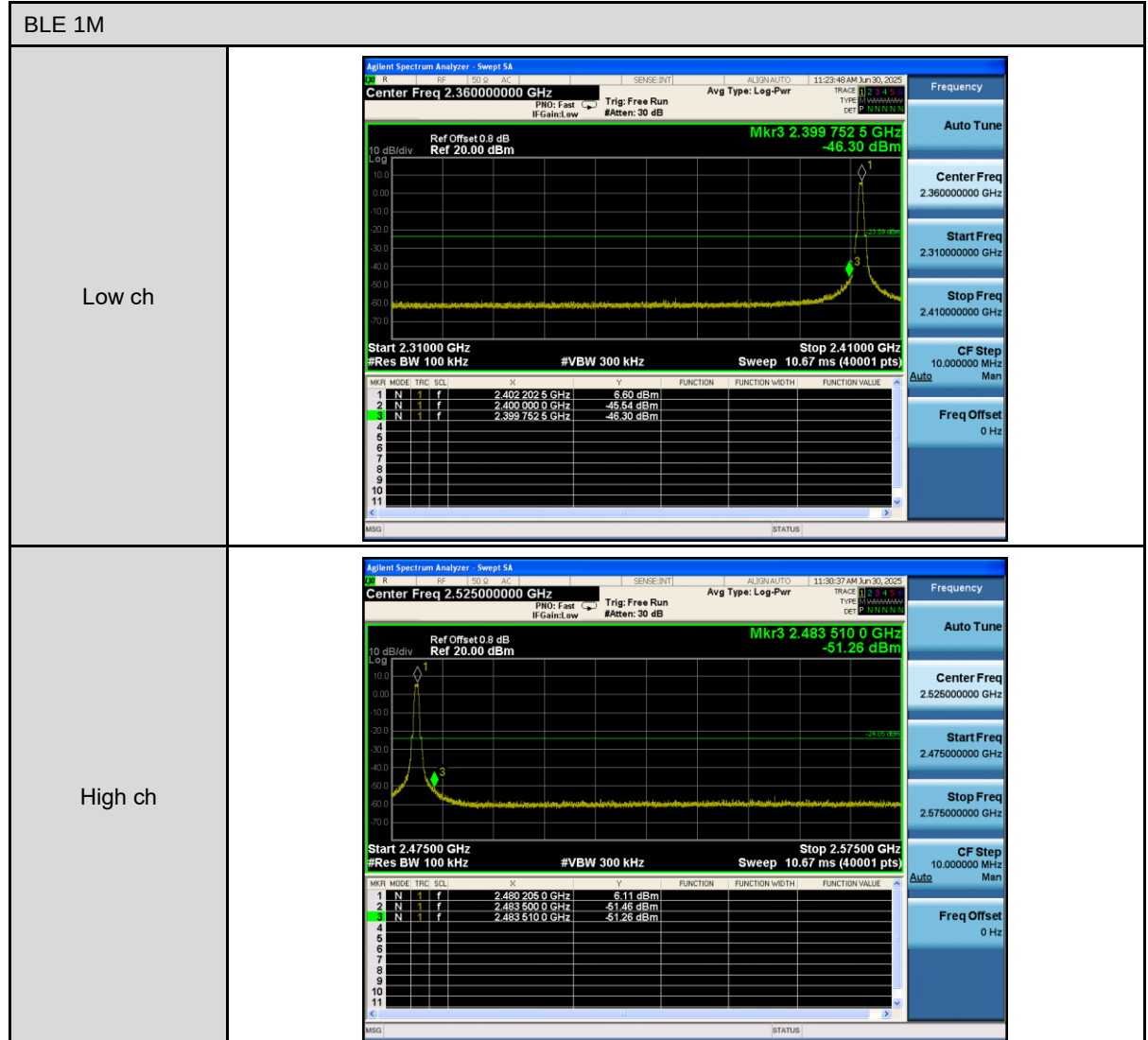
BLE 2M	
Low ch	Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr2 24.786 5 GHz -48.31 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.387 s (40001 pts) Stop 25.00 GHz CF Step 2.497000000 GHz Freq Offset 0 Hz
Mid ch	Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr2 23.301 4 GHz -48.31 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.387 s (40001 pts) Stop 25.00 GHz CF Step 2.497000000 GHz Freq Offset 0 Hz
High ch	Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr2 24.167 3 GHz -47.97 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.387 s (40001 pts) Stop 25.00 GHz CF Step 2.497000000 GHz Freq Offset 0 Hz

Reference level

BLE 1M Low ch	
Mid ch	
High ch	

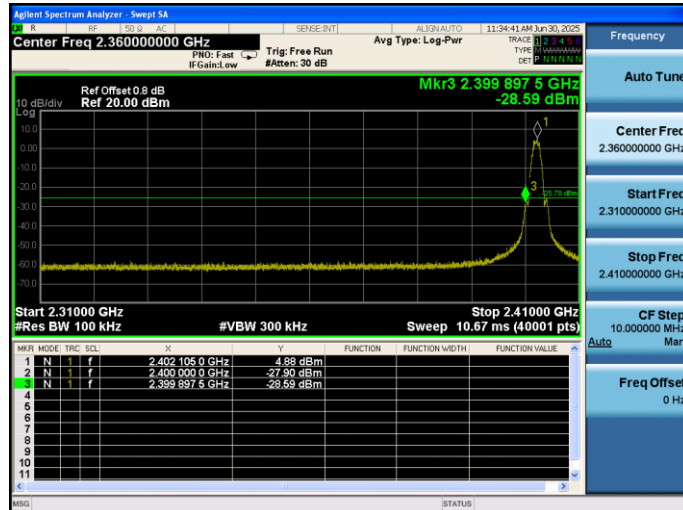


Conducted Band Edge

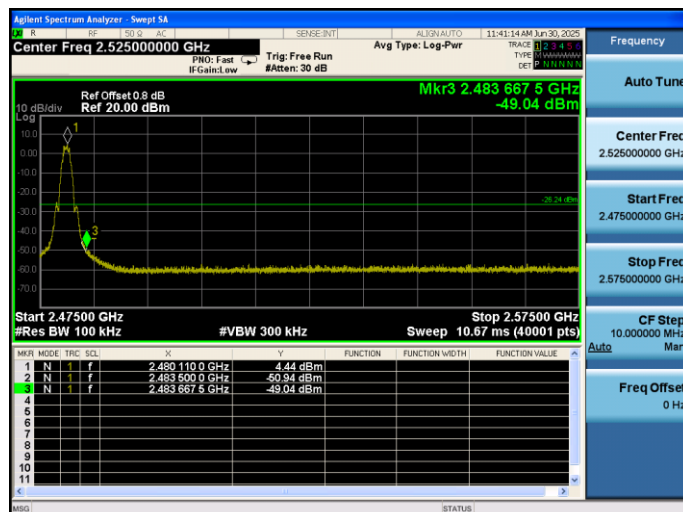


BLE 2M

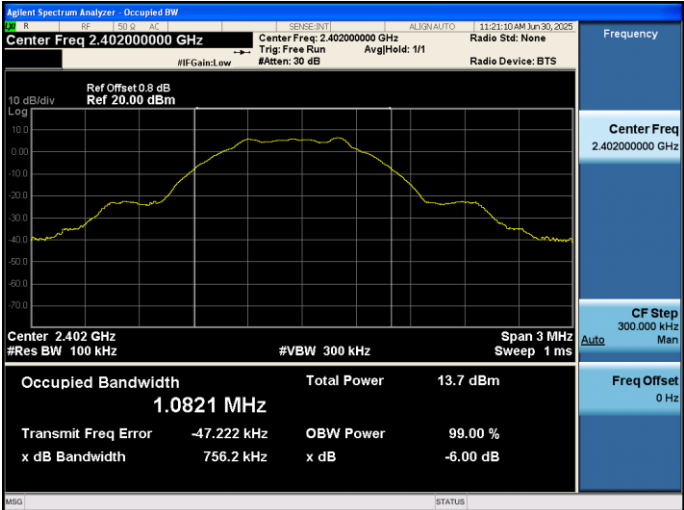
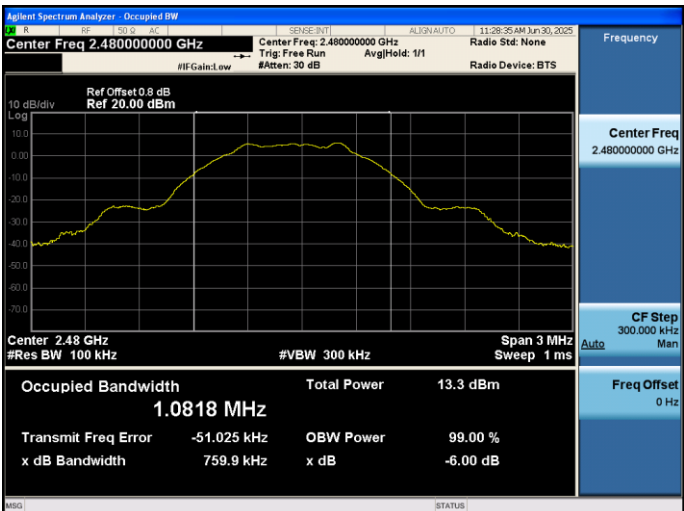
Low ch



High ch



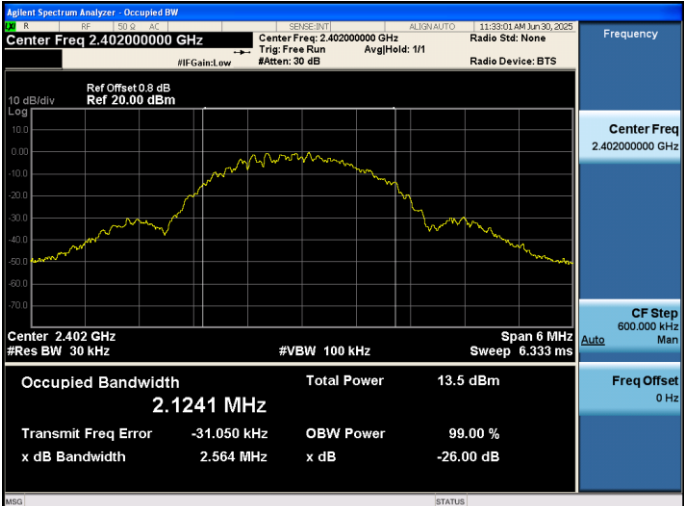
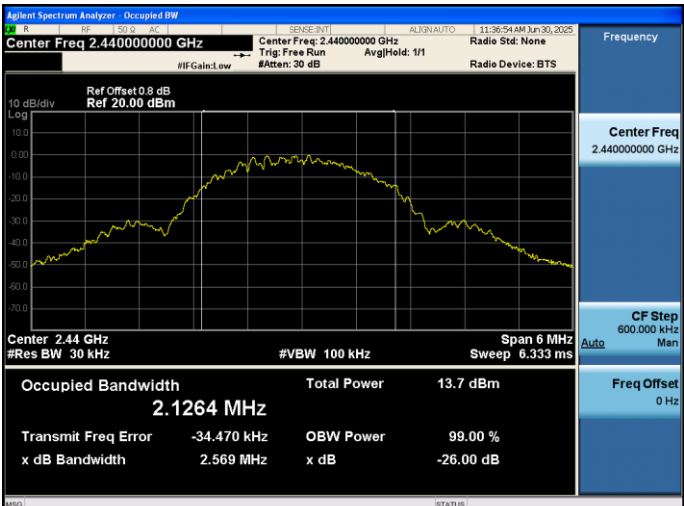
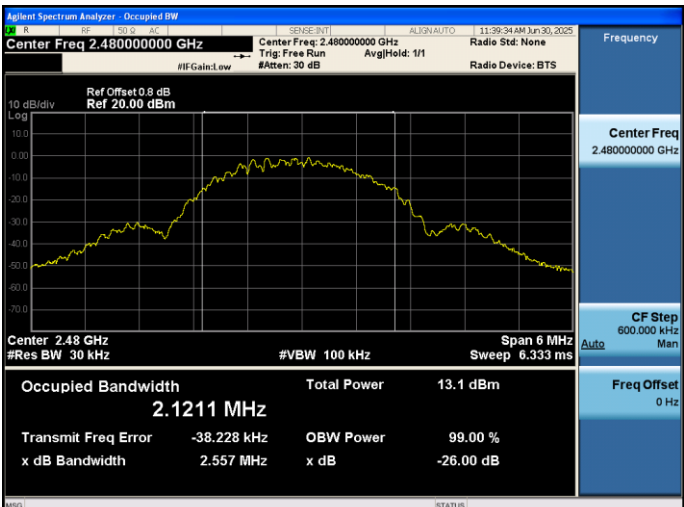
6 dB Bandwidth

BLE 1M	
Low ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.402000000 GHz Ref Offset: 0.8 dB Ref: 20.00 dBm Center 2.402 GHz #Res BW: 100 kHz Occupied Bandwidth: 1.0821 MHz Total Power: 13.7 dBm Transmit Freq Error: -47.222 kHz OBW Power: 99.00 % x dB Bandwidth: 756.2 kHz x dB: -6.00 dB
Mid ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.440000000 GHz Ref Offset: 0.8 dB Ref: 20.00 dBm Center 2.44 GHz #Res BW: 100 kHz Occupied Bandwidth: 1.0826 MHz Total Power: 13.9 dBm Transmit Freq Error: -48.784 kHz OBW Power: 99.00 % x dB Bandwidth: 756.6 kHz x dB: -6.00 dB
High ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.480000000 GHz Ref Offset: 0.8 dB Ref: 20.00 dBm Center 2.48 GHz #Res BW: 100 kHz Occupied Bandwidth: 1.0818 MHz Total Power: 13.3 dBm Transmit Freq Error: -51.025 kHz OBW Power: 99.00 % x dB Bandwidth: 759.9 kHz x dB: -6.00 dB

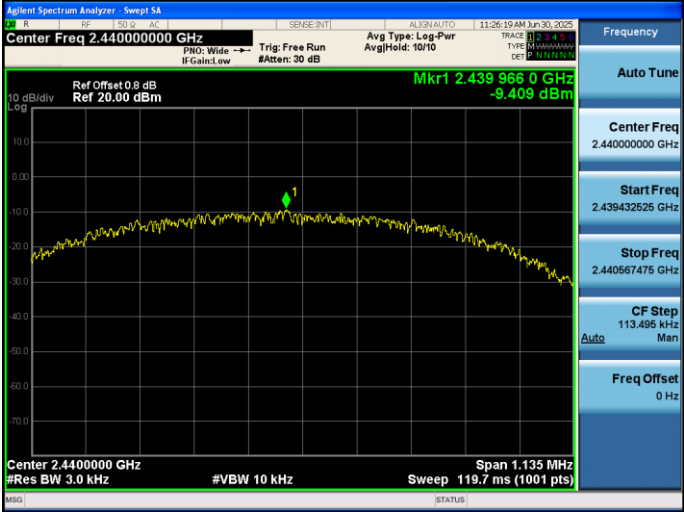
BLE 2M	
Low ch	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 0.8 dB Ref 20.00 dBm 10 dB/div Log Center 2.402 GHz #Res BW 100 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms Occupied Bandwidth 2.0913 MHz Total Power 14.0 dBm Transmit Freq Error -39.095 kHz OBW Power 99.00 % x dB Bandwidth 1.362 MHz x dB -6.00 dB Frequency Center Freq 2.402000000 GHz CF Step 600.000 kHz Auto Freq Offset 0 Hz
Mid ch	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 0.8 dB Ref 20.00 dBm 10 dB/div Log Center 2.44 GHz #Res BW 100 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms Occupied Bandwidth 2.0957 MHz Total Power 14.3 dBm Transmit Freq Error -43.304 kHz OBW Power 99.00 % x dB Bandwidth 1.363 MHz x dB -6.00 dB Frequency Center Freq 2.440000000 GHz CF Step 600.000 kHz Auto Freq Offset 0 Hz
High ch	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.480000000 GHz Center Freq: 2.480000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 0.8 dB Ref 20.00 dBm 10 dB/div Log Center 2.48 GHz #Res BW 100 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms Occupied Bandwidth 2.0894 MHz Total Power 13.6 dBm Transmit Freq Error -47.817 kHz OBW Power 99.00 % x dB Bandwidth 1.363 MHz x dB -6.00 dB Frequency Center Freq 2.480000000 GHz CF Step 600.000 kHz Auto Freq Offset 0 Hz

99 % Occupied Bandwidth

BLE 1M	
Low ch	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 0.8 dB Ref 20.00 dBm 10 dB/div Log Center 2.402 GHz #Res BW 30 kHz #VBW 100 kHz Span 3 MHz Sweep 3.2 ms Occupied Bandwidth 1.0733 MHz Total Power 14.0 dBm Transmit Freq Error -43.130 kHz OBW Power 99.00 % x dB Bandwidth 1.342 MHz x dB -26.00 dB Frequency Center Freq 2.402000000 GHz CF Step 300.000 kHz Auto Freq Offset 0 Hz
Mid ch	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 0.8 dB Ref 20.00 dBm 10 dB/div Log Center 2.44 GHz #Res BW 30 kHz #VBW 100 kHz Span 3 MHz Sweep 3.2 ms Occupied Bandwidth 1.0738 MHz Total Power 14.2 dBm Transmit Freq Error -44.422 kHz OBW Power 99.00 % x dB Bandwidth 1.308 MHz x dB -26.00 dB Frequency Center Freq 2.440000000 GHz CF Step 300.000 kHz Auto Freq Offset 0 Hz
High ch	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.480000000 GHz Center Freq: 2.480000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 0.8 dB Ref 20.00 dBm 10 dB/div Log Center 2.48 GHz #Res BW 30 kHz #VBW 100 kHz Span 3 MHz Sweep 3.2 ms Occupied Bandwidth 1.0733 MHz Total Power 13.5 dBm Transmit Freq Error -46.482 kHz OBW Power 99.00 % x dB Bandwidth 1.309 MHz x dB -26.00 dB Frequency Center Freq 2.480000000 GHz CF Step 300.000 kHz Auto Freq Offset 0 Hz

BLE 2M Low ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 0.8 dB Ref 20.00 dBm 10 dB/div Log Center 2.402 GHz #Res BW 30 kHz #VBW 100 kHz Span 6 MHz Sweep 6.333 ms Occupied Bandwidth 2.1241 MHz Total Power 13.5 dBm Transmit Freq Error -31.050 kHz OBW Power 99.00 % x dB Bandwidth 2.564 MHz x dB -26.00 dB Frequency Center Freq 2.402000000 GHz CF Step 600.000 kHz Auto Freq Offset 0 Hz MSG STATUS
Mid ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 0.8 dB Ref 20.00 dBm 10 dB/div Log Center 2.44 GHz #Res BW 30 kHz #VBW 100 kHz Span 6 MHz Sweep 6.333 ms Occupied Bandwidth 2.1264 MHz Total Power 13.7 dBm Transmit Freq Error -34.470 kHz OBW Power 99.00 % x dB Bandwidth 2.569 MHz x dB -26.00 dB Frequency Center Freq 2.440000000 GHz CF Step 600.000 kHz Auto Freq Offset 0 Hz MSG STATUS
High ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.480000000 GHz Center Freq: 2.480000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 0.8 dB Ref 20.00 dBm 10 dB/div Log Center 2.48 GHz #Res BW 30 kHz #VBW 100 kHz Span 6 MHz Sweep 6.333 ms Occupied Bandwidth 2.1211 MHz Total Power 13.1 dBm Transmit Freq Error -38.228 kHz OBW Power 99.00 % x dB Bandwidth 2.557 MHz x dB -26.00 dB Frequency Center Freq 2.480000000 GHz CF Step 600.000 kHz Auto Freq Offset 0 Hz MSG STATUS

Power Density

BLE 1M	
Low ch	
Mid ch	
High ch	

