







#### LTE Band 5 99%&26dB Bandwidth 10MHz/QPSK / LCH 10MHz/16QAM / LCH 02:41:10 PMDec 27, 2018 Radio Std: None Radio Std: None Center Freq: 829.000000 MHz Trig: Free Run Avg|Held>10/10 Center Freq: 829.000000 MHz Trig: Free Run Avg|Heid>10/10 Ref 35.00 dB Ref 35.00 dB Center Free Center Free 30.4 dBm 9.0042 MHz 8.9799 MHz Freq Offs smit Freq Error 12.100 kHz 99.00 % Transmit Freq Error 15.126 kHz OBW Power 99.00 % 9.881 MHz -26.00 dB 9.756 MHz x dB -26.00 dB 10MHz/ 64QAM / LCH 10MHz/QPSK / MCH 09-19-29 4M to 10 20 Radio Std: None Radio Std: None Center Freq: 829.000000 MHz Trig: Free Run Avg|Heid>10/10 Ref 35.00 dE Ref 35.00 de Center Fre Center Free Span 20 MH: Sweep 1 ms Total Power 31.1 dBm 9.0069 MHz 8.9829 MHz Freq Offse 3.773 kHz 99.00 % 16.428 kHz 99.00 % 9.870 MHz x dB -26.00 dB x dB Bandwidth 9.824 MHz x dB -26.00 dB 10MHz/ 16QAM / MCH 10MHz/64QAM/MCH Ref 35.00 dB Ref 35.00 dBr Center Fre Center Free CF Step CF Ste #VBW 620 kHz #VBW 620 kHz 30.3 dBm Total Power 30.9 dBm 8.9406 MHz 8.9908 MHz Freq Offsi 22.365 kHz 15.676 kHz 99.00 % Transmit Freq Error OBW Power 99.00 % 9.732 MHz -26.00 dB 9.873 MHz -26.00 dB











#### LTE Band 7 99% & 26dB Bandwidth 5MHz/QPSK/LCH 5MHz /16QAM / LCH 02:10:16:PM (an)09, 2019 Radio Std: None G2:10:10 PM Jay 09, 201 Radio Std: None Center Freq. 2.502500000 GHz Trig: Free Run Avg|Hold>10/10 Center Freq: 2.502500000 GHz Trig: Free Run Avg|Held>10/10 Ref 35.00 dB Ref 35.00 dBr Of Of 28.7 dBm 27.7 dBm 4.5046 MHz 4.5044 MHz nsmit Freq Error 755 Hz 99.00 % Transmit Freq Error 2.503 kHz OBW Power 99.00 % 4.969 MHz -26.00 dB 4.945 MHz x dB -26.00 dB **5MHz / 64QAM / LCH** 5MHz / QPSK / MCH Radio Std: None Radio Std: None Ref 35.00 dB Ref 35.00 dB Center Free Of 28.6 dBm 4.5109 MHz 4.5005 MHz Freq Offs 7.244 kHz 99.00 % 4,990 MHz x dB -26.00 dB 5.003 MHz x dB -26.00 dB **5MHz / 16QAM / MCH 5MHz / 64QAM / MCH** Ref 35.00 dB Ref 35.00 dB Center Fred Of enter 2.535 GHz Res BW 100 kHz nter 2.535 GHz es BW 100 kHz Span 10 MHz Sweep 1 ms CF Ste 27.7 dBm Total Power 27.6 dBm 4.5073 MHz 4.5020 MHz Freq Offs 2.483 kHz 969 Hz 99.00 % **OBW Power** 4.994 MHz -26.00 dB 4.941 MHz







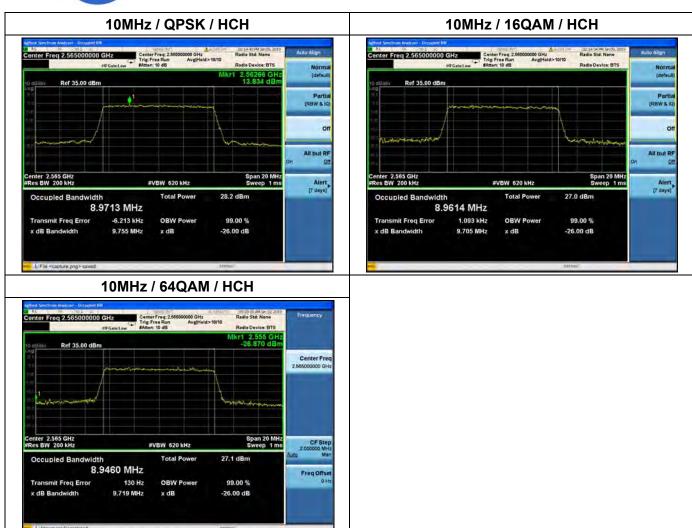




#### LTE Band 7 99% & 26dB Bandwidth 10MHz / QPSK / LCH 10MHz / 16QAM / LCH Radio Std. None 02:14:50 PM Jan 09, 201 Radio Std: None Center Free 2,505000000 GHz Trig: Free Run Avg|Held>10/10 Center Freq: 2.505000000 GHz Trig: Free Run Avg|Held>10/10 Ref 35.00 dB Ref 35.00 dB Of Of mus Hallander 15 MARININA Total Power 27.7 dBm 8.9906 MHz 8.9655 MHz smit Freq Error 13.834 kHz 99.00 % Transmit Freq Error 18.360 kHz OBW Power 99.00 % 9.779 MHz -26.00 dB 9.747 MHz -26.00 dB 10MHz / 64QAM / LCH 10MHz/QPSK/MCH Radio Std: None 2.5381 GI 14.016 dE Ref 35.00 dB Ref 35.00 de Center Fre Of 28.5 dBm 8.9608 MHz 9.0122 MHz Freq Offs 15.331 kHz 99.00 % x dB 9.713 MHz x dB -26,00 dB 9.845 MHz -26.00 dB 10MHz / 16QAM / MCH 10MHz / 64QAM / MCH Center Free 2.535000000 GHz Trig: Free Run Avg|Held>10/10 Ref 35.00 dB Ref 35.00 dB Center Fred Of nter 2.535 GHz es BW 200 kHz nter 2,535 GHz es BW 200 kHz CF Ste #VBW 620 kHz #VBW 620 kHz 27.7 dBm Total Power 27.5 dBm 8.9492 MHz 8.9655 MHz Freq Offs 6,157 kHz 10.026 kHz 99.00 % OBW Power -26.00 dB 9.767 MHz







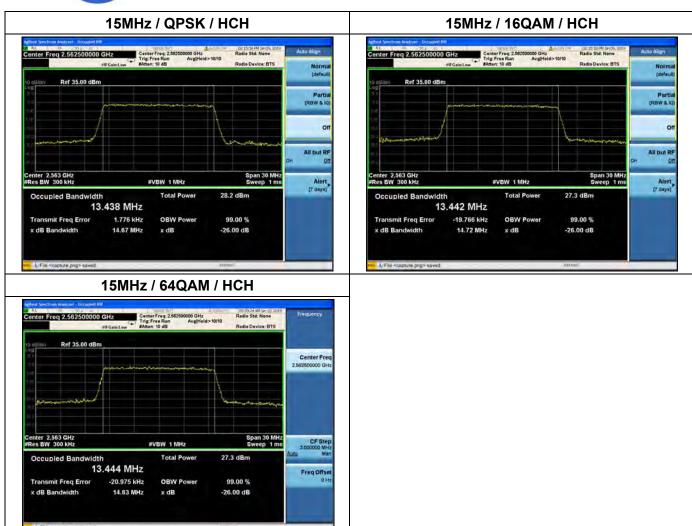




#### LTE Band 7 99% & 26dB Bandwidth 15MHz / QPSK / LCH 15MHz /1 6QAM / LCH Radio Std: None Center Freq. 2.507600000 GHz Trig: Free Run Avg|Hold>10/10 Center Freq: 2.507600000 GHz Trig: Free Run Avg|Held>10/10 2.51398 GH 12.341 dB Ref 35.00 dB Ref 35.00 dB Of Of 26.3 dBm 13.458 MHz 13.408 MHz smit Freq Error 27.618 kHz 99.00 % Transmit Freq Error 30.946 kHz OBW Power 99.00 % 14.65 MHz -26.00 dB 14.60 MHz x dB -26,00 dB 15MHz / 64QAM / LCH 15MHz/QPSK/MCH Radio Std: None Radio Std: None Ref 35.00 dB Ref 35.00 de Center Fre Of 28.5 dBm 13.435 MHz 13,439 MHz Freq Offs 99.00 % 14.69 MHz x dB -26,00 dB 14.57 MHz x dB -26.00 dB 15MHz / 16QAM / MCH 15MHz / 64QAM / MCH Center Free 2.535000000 GHz Trig: Free Run Avg|Held>10/10 Ref 35.00 dB Ref 35.00 dB Center Fred Of nter 2,535 GHz es BW 300 kHz nter 2,535 GHz es BW 300 kHz CF Ste 27.7 dBm Total Power 27.7 dBm 13.455 MHz 13.466 MHz Freq Offs -3.142 kHz -3.135 kHz 99.00 % OBW Power 14.71 MHz -26.00 dB 14.63 MHz



















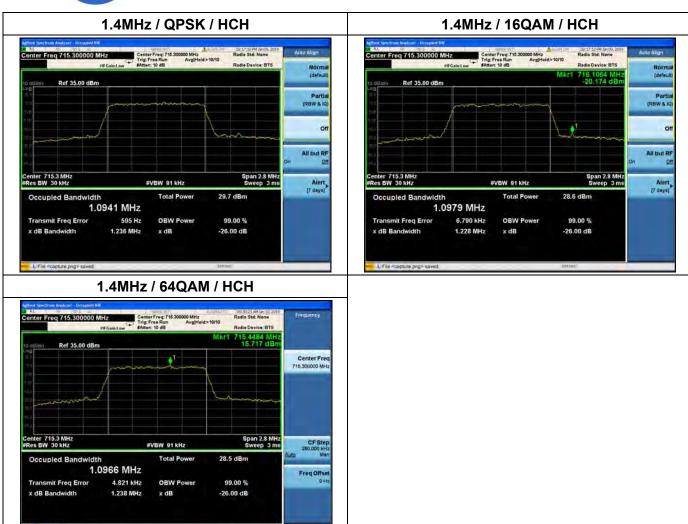




#### LTE Band 12 99% & 26dB Bandwidth 1.4MHz / QPSK / LCH 1.4MHz / 16QAM / LCH 02:17:43 PM Jan09, 205 Radio Std: None Radio Std. None Center Freq. 699.700000 MHz Trig: Free Run Avg|Hold>10/10 Center Freq: 699.700000 MHz Trig: Free Run Avg|Heid>10/10 Ref 35.00 dBm Ref 35.00 dBm Center Free Center Free CF Step 280,000 kHz Mar nter 699.7 MHz es BW 30 kHz CF Ste 28.6 dBm 1.0967 MHz 1.0985 MHz Freq Offsi nsmit Freq Error -3.233 kHz 99.00 % Transmit Freq Error 1.559 kHz OBW Power 99.00 % 1.239 MHz -26.00 dB dB Bandwidth 1.252 MHz x dB -26.00 dB 1.4MHz / 64QAM / LCH 1.4MHz / QPSK / MCH Radio Std. None 707.4944 MI 15.474 dE Ref 35.00 dBm Ref 35.00 dB Center Fre Center Fred Span 2.8 MHz Sweep 3 ms Span 2.8 MHz Sweep 3 ms ter 707.5 MH; s BW 30 kHz #VBW 91 kHz #VBW 91 kHz Total Power 29.1 dBm 1.0946 MHz 1.0938 MHz Freq Offs 99.00 % 99.00 % 1,246 MHz x dB -26,00 dB x dB Bandwidth 1.248 MHz x dB -26.00 dB 1.4MHz / 16QAM / MCH 1.4MHz / 64QAM / MCH Center Freq: 707.500000 MHz Trig: Free Run Avg|Held>10/10 Center Freq: 707.500000 MHz Trig: Free Run Avg|Heid>10/10 Radio Device: BTS Ref 35.00 dBm Ref 35.00 dBm Center Freq 707 500000 MHz Of Span 2.8 MHz Sweep 3 ms nter 707.5 MHz es BW 30 kHz enter 707.5 MHz Res BW 30 kHz CF Ste 280,000 ki #VBW 91 kHz #VBW 91 kHz 28.5 dBm Total Power 28.3 dBm 1.0986 MHz 1.0954 MHz Freq Offs 7.408 kHz 5.059 kHz 99.00 % OBW Power 1.241 MHz -26.00 dB 1.236 MHz -26.00 dB











#### LTE Band 12 99% & 26dB Bandwidth 3MHz / QPSK / LCH 3MHz /16QAM / LCH 02:10:21 PM Jay09, 205 Radio Std: None Radio Std: None Center Freq. 700.500000 MHz Trig: Free Run Avg|Hold>10/10 Center Freq: 700.500000 MHz Trig: Free Run Avg|Heid>10/10 Ref 35.00 dB Ref 35.00 dB Center Free Center Free CF Step 600,000 kHz Mar Span 6 MHz Sweep 1.533 ms CF Ste 28.9 dBm 2.7012 MHz 2.6972 MHz Freq Offsi smit Freq Error -10.017 kHz 99.00 % Transmit Freq Error -7.231 kHz OBW Power 99.00 % 3.015 MHz -26.00 dB 2.992 MHz x dB -26.00 dB 3MHz / 64QAM / LCH 3MHz /QPSK / MCH Radio Std. None Radio Std: None Center Freq: 700.500000 MHz Trig: Free Run Avg|Hold>10/10 Ref 35.00 dB Ref 35.00 dB Center Fre Center Fred Span 6 MH: Sweep 1.533 m 29.6 dBm 2.6998 MHz 2.6949 MHz Freq Offs -9.205 kHz 99.00 % 9.671 kHz 99.00 % 2.974 MHz x dB -26,00 dB x dB Bandwidth 3.015 MHz x dB -26.00 dB 3MHz / 16QAM / MCH 3MHz / 64QAM / MCH Center Freq: 707.500000 MHz Trig: Free Run Avg|Hold>10/10 Center Freq: 707.500000 MHz Trig: Free Run Avg|Held>10/10 Ref 35.00 dBr Ref 35.00 dB Center Free 707 500000 MH Center Freq 707 500000 MHz CF Step 600,000 NH Span 6 MHz Sweep 1.533 ms Span 6 MH: Sweep 1.533 m CF Ste #VBW 200 kHz 28.9 dBm Total Power 28.8 dBm 2.6995 MHz 2.7039 MHz Freq Offsi Freq Offs 13.388 kHz 12.153 kHz 99.00 % **OBW Power** 3.003 MHz -26.00 dB 3.002 MHz -26.00 dB







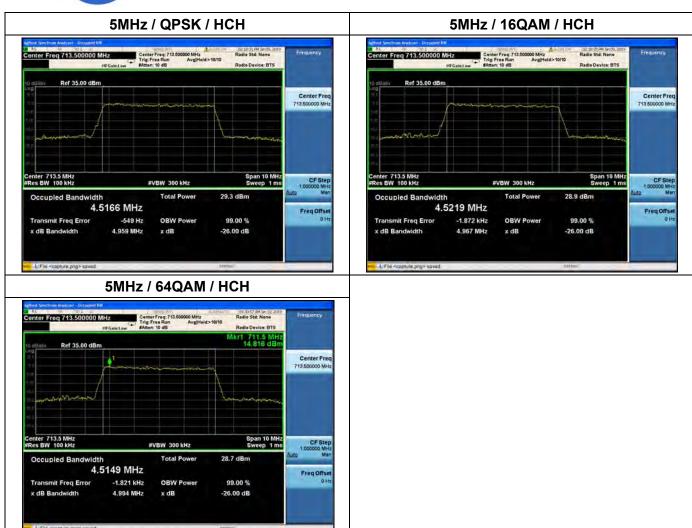




#### LTE Band 12 99% & 26dB Bandwidth 5MHz / QPSK / LCH 5MHz /16QAM / LCH 02:18:15 PM Jan 09, 2019 Radio Std: None Radio Std: None Center Freq: 701.500000 MHz Trig: Free Run Avg|Hold>10/10 Center Freq: 701.500000 MHz Trig: Free Run Avg|Hold>10/10 Ref 35.00 dB Ref 35.00 dB Center Free Center Free nter 701.5 MHz es BW 100 kHz CF Ste 29.0 dBm 4.5168 MHz 4.5108 MHz Freq Offsi smit Freq Error -16.259 kHz 99.00 % Transmit Freq Error -10.808 kHz OBW Power 99.00 % 4.979 MHz -26.00 dB 4.953 MHz x dB -26.00 dB **5MHz / 64QAM / LCH** 5MHz/QPSK/MCH Radio Std: None 02:18-43 PM Jan09, Radio Std: None Center Freq: 701.500000 MHz Trig: Free Run Avg|Hold>10/10 Ref 35.00 dB Ref 35.00 dB Center Fre Center Free r 701.5 MHz er 707.5 MHz BW 100 kHz 29.7 dBm 4.5133 MHz 4.4756 MHz Freq Offs -9.687 kHz 99.00 % 23.036 kHz 99.00 % 4.911 MHz x dB -26,00 dB x dB Bandwidth 4,939 MHz x dB -26.00 dB **5MHz / 16QAM / MCH 5MHz / 64QAM / MCH** Center Freq: 707.500000 MHz Trig: Free Run Avg|Hold>10/10 Akr1 707.5 M 11.375 dE Ref 35.00 dBr Ref 35.00 dB Center Fre Center Freq 707 500000 MHz nter 707.5 MHz es BW 100 kHz nter 707.5 MHz es BW 100 kHz Span 10 MHz Sweep 1 ms CF Step 1.000000 MHz Mar CF Ste 28.8 dBm Total Power 28.7 dBm 4.4957 MHz 4.4944 MHz Freq Offsi Freq Offs 18.051 kHz 17.469 kHz 99.00 % **OBW Power** 4.943 MHz -26.00 dB











#### LTE Band 12 99% & 26dB Bandwidth 10MHz / QPSK / LCH 10MHz /16QAM / LCH 02:30:21 PM Jan09, 205 Radio Std: None Radio Std: None Center Freq: 709.000000 MHz Trig: Free Run Avg|Hold>10/10 Center Freq: 709.000000 MHz Trig: Free Run Avg|Heid>10/10 Ref 35.00 dB Ref 35.00 dB Center Free Center Free 28.8 dBm 8.9062 MHz 8.8542 MHz Freq Offs smit Freq Error 101 Hz 99.00 % Transmit Freq Error -259 Hz OBW Power 99.00 % 9.585 MHz -26.00 dB 9.669 MHz x dB -26.00 dB 10MHz / 64QAM / LCH 10MHz/QPSK/MCH Center Freq: 704.000000 MHz Trig: Free Run Avg|Heid>10/10 Radio Std: None 1 707.9 M 14.907 dE Ref 35.00 dB Ref 35.00 dB Center Fre Center Free nter 710 MHz es BW 200 kHz 29.7 dBm 8.9023 MHz 9.0240 MHz 28.512 kHz 99.00 % -7.612 kHz 99.00 % 9.805 MHz x dB -26,00 dB x dB Bandwidth 9,660 MHz x dB -26.00 dB 10MHz / 16QAM / MCH 10MHz / 64QAM / MCH Center Freq: 707.500000 MHz Trig: Free Run Avg|Heid>10/10 #Atten: 10 d8 Ref 35.00 dBr Ref 35.00 dB Center Fre Center Freq 707 500000 MHz enter 710 MHz Res BW 200 kHz nter 707.5 MHz es BW 200 kHz CF Step 2.000000 MHz Mar CF Ste #VBW 620 kHz #VBW 620 kHz 28.9 dBm Total Power 28.8 dBm 8.8502 MHz 8.8712 MHz Freq Offs Freq Offs -6.585 kHz 33.961 kHz 99.00 % **OBW Power** -26.00 dB 9.611 MHz



















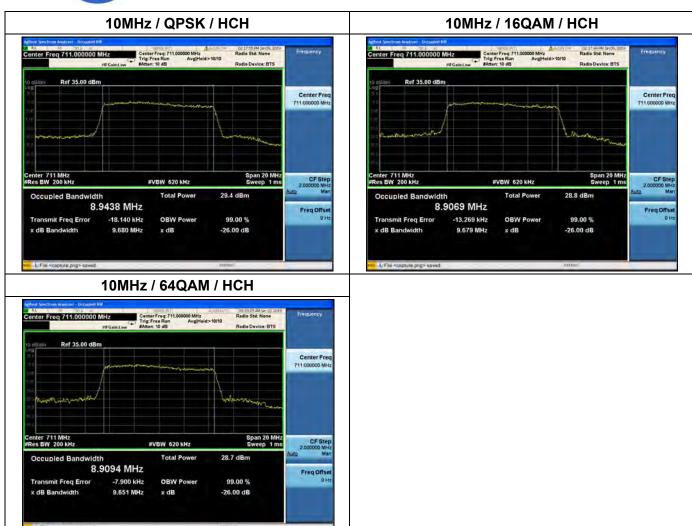




#### LTE Band 17 99% & 26dB Bandwidth 10MHz / QPSK / LCH 10MHz /16QAM / LCH 02:10:19 PM Jan09, 205 Radio Std: None Radio Std: None Center Freq: 704.000000 MHz Trig: Free Run Avg|Hold>10/10 Center Freq: 704.000000 MHz Trig: Free Run Avg|Heid>10/10 Ref 35.00 dBr Ref 35.00 dB Center Free Center Free 28.8 dBm 9.0552 MHz 9.0323 MHz Freq Offs smit Freq Error 26.882 kHz 99.00 % Transmit Freq Error 32.594 kHz OBW Power 99.00 % 9,915 MHz -26.00 dB 9,818 MHz x dB -26.00 dB 10MHz / 64QAM / LCH 10MHz/QPSK/MCH Radio Std. None Radio Std: None Center Freq: 709.000000 MHz Trig: Free Run Avg|Held>10/10 Ref 35.00 dB Ref 35.00 dB Center Fre Center Free r 707.5 MHz BW 200 kHz 29.5 dBm 8.9400 MHz 8.8569 MHz Freq Offs 9.454 kHz 99.00 % 24.194 kHz 99.00 % 9.568 MHz x dB -26,00 dB 9.668 MHz x dB -26.00 dB 10MHz / 16QAM / MCH 10MHz / 64QAM / MCH Center Freq: 707.500000 MHz Trig: Free Run Avg|Hold>10/10 Center Freq: 710.000000 MHz Trig: Free Run Avg|Heid>10/10 #Atten: 10 d8 Ref 35.00 dBr Ref 35.00 dBr Center Fre Center Fred enter 710 MHz Res BW 200 kHz CF Step CF Ste #VBW 620 kHz #VBW 620 kHz 28.7 dBm Total Power 28.3 dBm 8.8634 MHz 8.8906 MHz Freq Offs Freq Offs 27.266 kHz -3.806 kHz 99.00 % OBW Power -26.00 dB 9.663 MHz

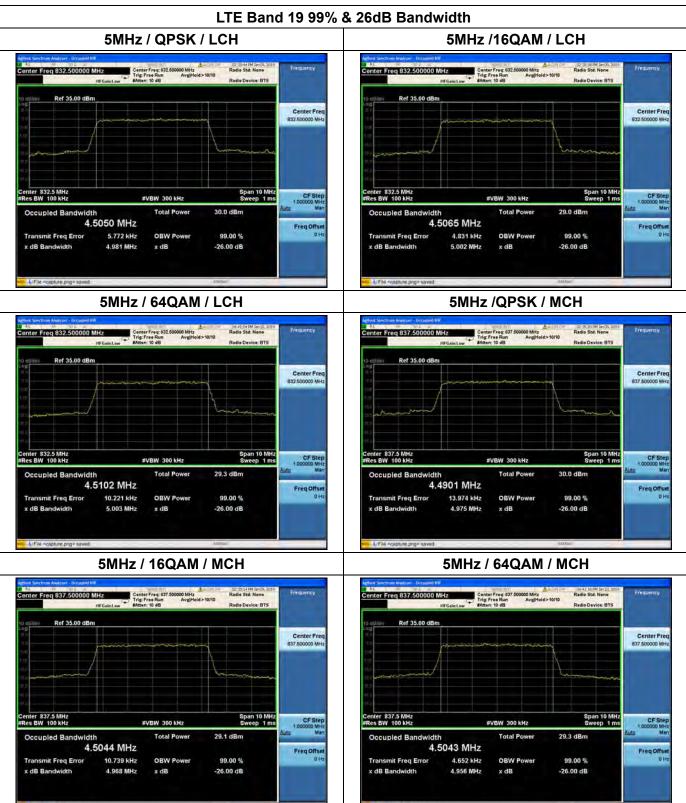




















#### LTE Band 19 99% & 26dB Bandwidth 10MHz / QPSK / LCH 10MHz /16QAM / LCH G2: 20:00 PM Jan 09, 2059 Radio Std: None Radio Std: None Center Freq: 835.000000 MHz Trig: Free Run Avg|Heid>10/10 Center Freq: 835.000000 MHz Trig: Free Run Avg|Heid>10/10 Ref 35.00 dBr Ref 35.00 dB Center Free Center Free CF 5t 29.2 dBm 8.9981 MHz 8.9588 MHz Freq Offsi nsmit Freq Error 15.817 kHz 99.00 % Transmit Freq Error 26.307 kHz OBW Power 99.00 % 9.833 MHz -26.00 dB 9.714 MHz x dB -26.00 dB 10MHz / 64QAM / LCH 10MHz/QPSK/MCH Radio Std: None Radio Std: None Ref 35.00 dB Ref 35.00 dB Center Free Span 20 MHz Sweep 1 ms ter 837.5 MHz s BW 200 kHz Total Power 29.8 dBm 8.9510 MHz 8.9774 MHz Freq Offse 99.00 % 18.704 kHz 99.00 % 9.764 MHz -26.00 dB x dB Bandwidth 9.786 MHz x dB -26.00 dB 10MHz / 16QAM / MCH 10MHz / 64QAM / MCH Ref 35.00 dBr Ref 35.00 dBr Center Fred VO Config nter 837.5 MHz es BW 200 kHz nter 837.5 MHz es BW 200 kHz Span 20 MHz Sweep 1 ms CF Ste #VBW 620 kHz #VBW 620 kHz 28.6 dBm Total Power 28.9 dBm 8.9399 MHz 8.9478 MHz 25.099 kHz 12.658 kHz mit Freq Error 99.00 % Transmit Freq Error OBW Power 9.678 MHz -26.00 dB 9.712 MHz -26.00 dB More 1 of 2







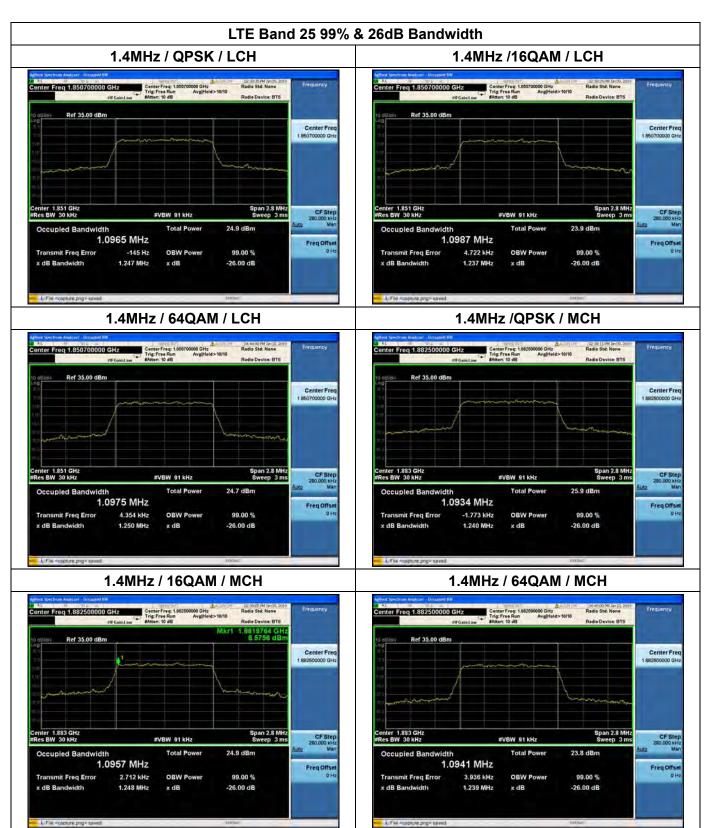




#### LTE Band 19 99% & 26dB Bandwidth 15MHz/QPSK/MCH 15MHz / 16QAM / MCH Radio Std: None Center Freq: 837.500000 MHz Trig: Free Run Avg|Held>10/10 Center Freq: 837.500000 MHz Trig: Free Run Avg|Hold>10/10 835.76 MH 14.016 dB Ref 35.00 dB Ref 35.00 dB Center Free Center Free nter 837.5 MHz es BW 300 kHz Occupied Bandwidth 13.427 MHz Occupied Bandwidth 13.404 MHz 28.4 dBm Freq Offsi nsmit Freq Error 15.359 kHz 99.00 % Transmit Freq Error -4.922 kHz 99.00 % 14.58 MHz -26.00 dB 14.55 MHz x dB -26.00 dB 15MHz / 64QAM / MCH Radio Std: None Ref 35.00 dB Center Fre 13.410 MHz 14.60 MHz -26.00 dB

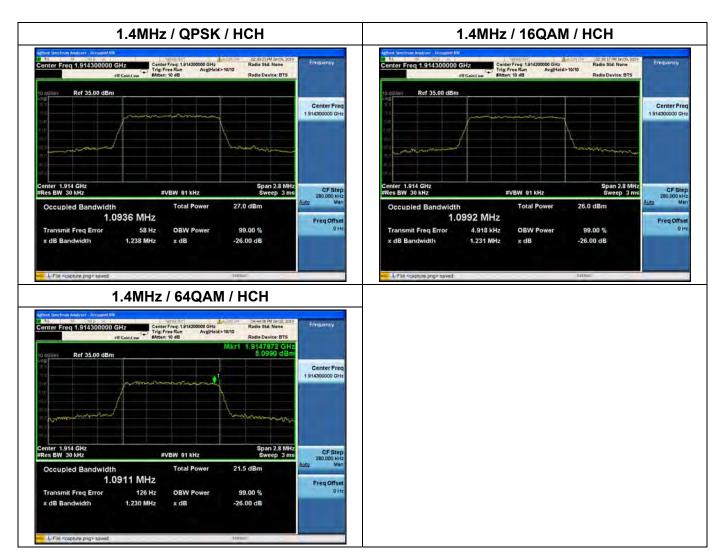






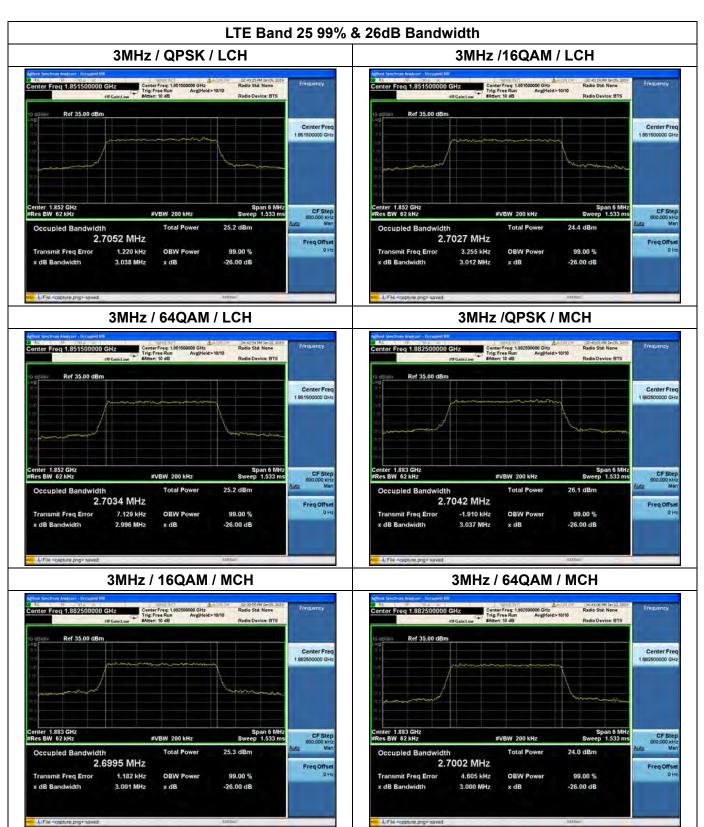


















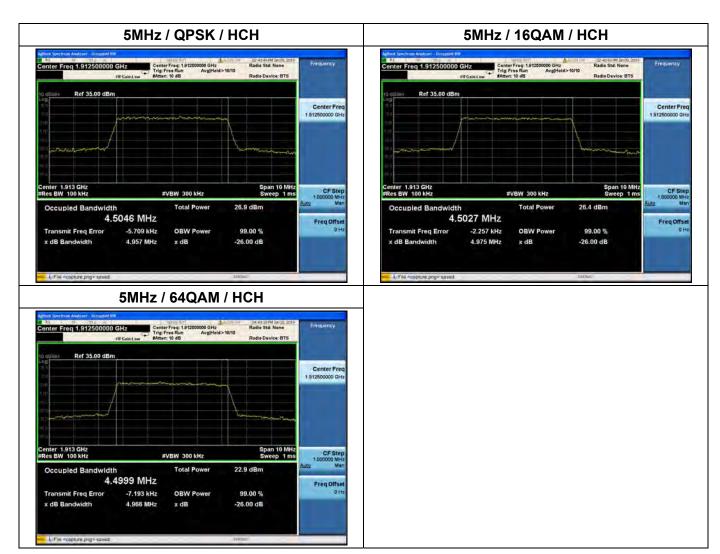






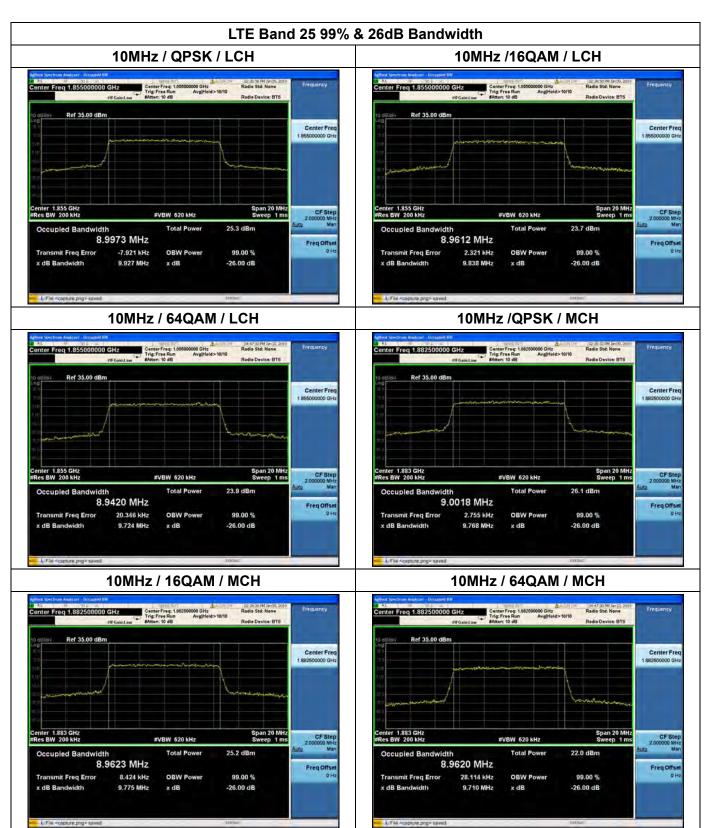






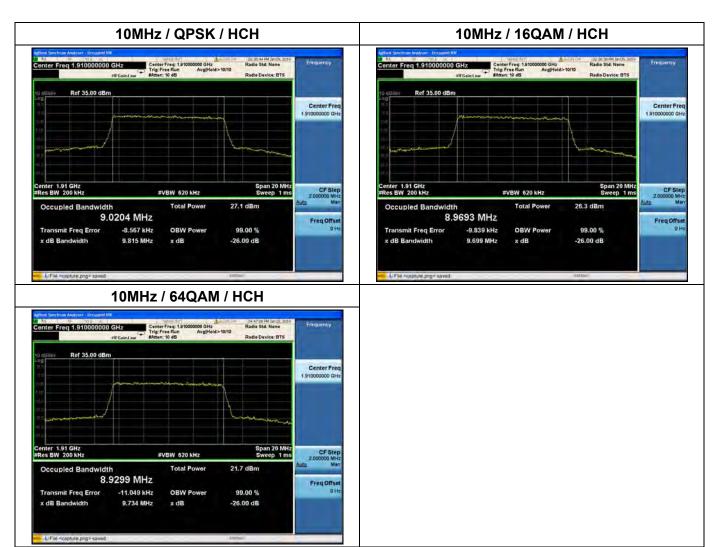












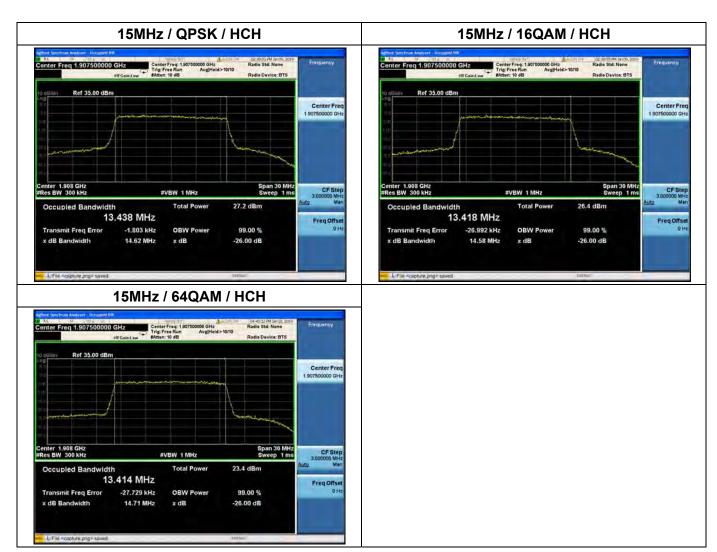






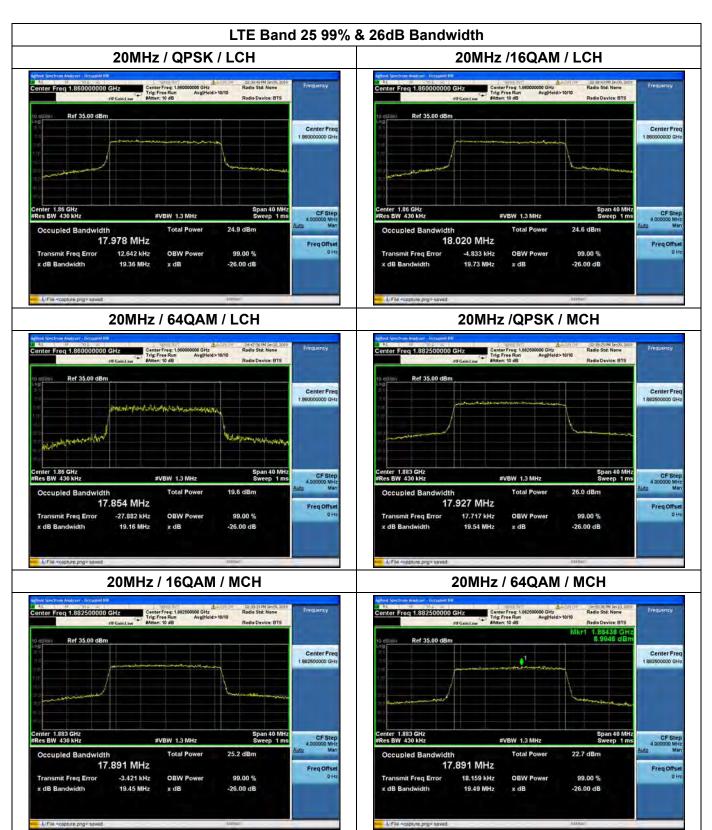






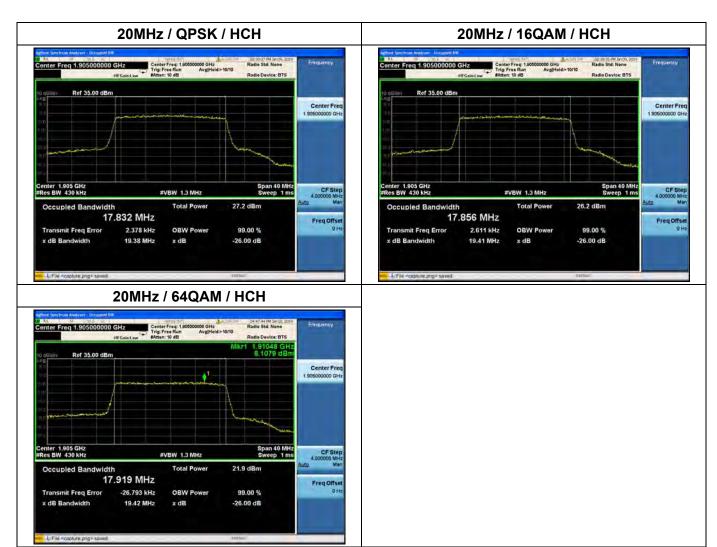






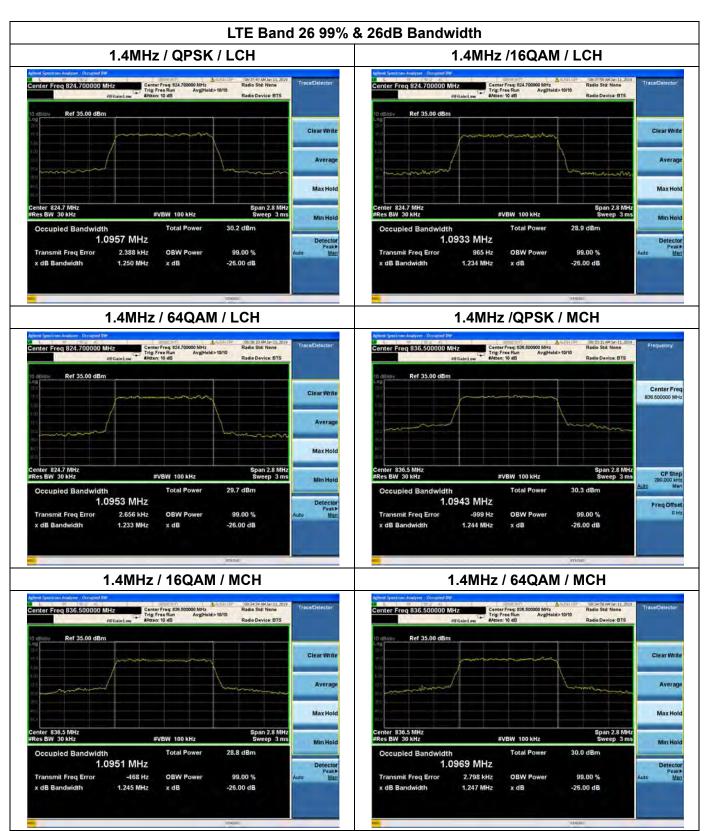












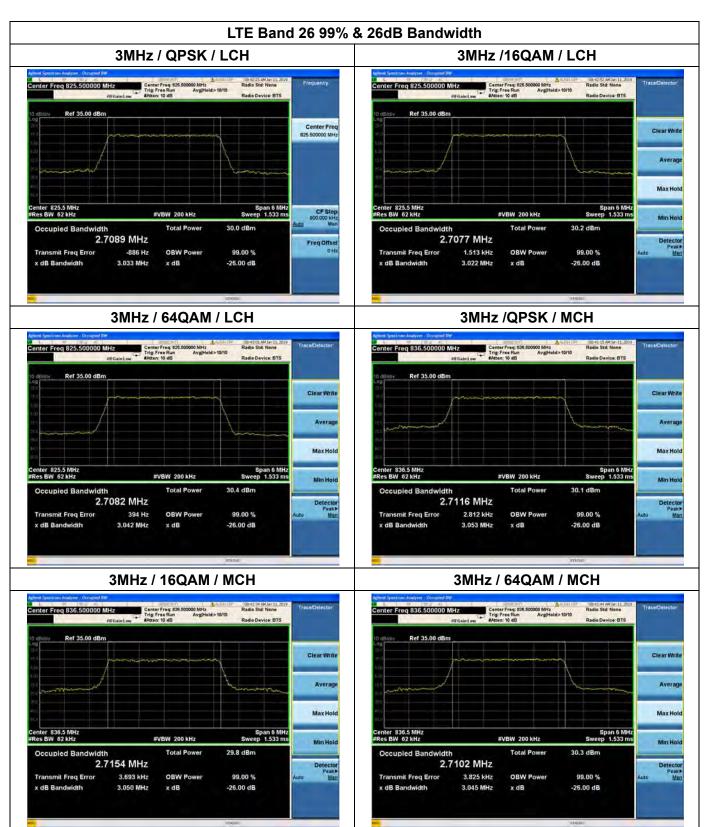






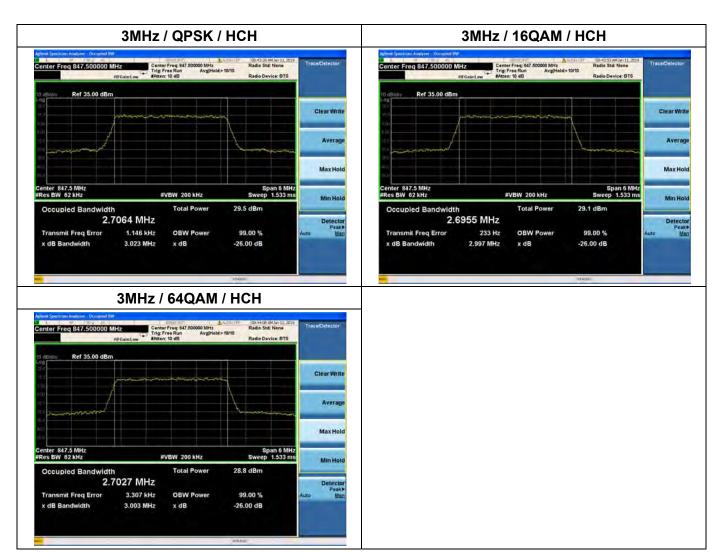












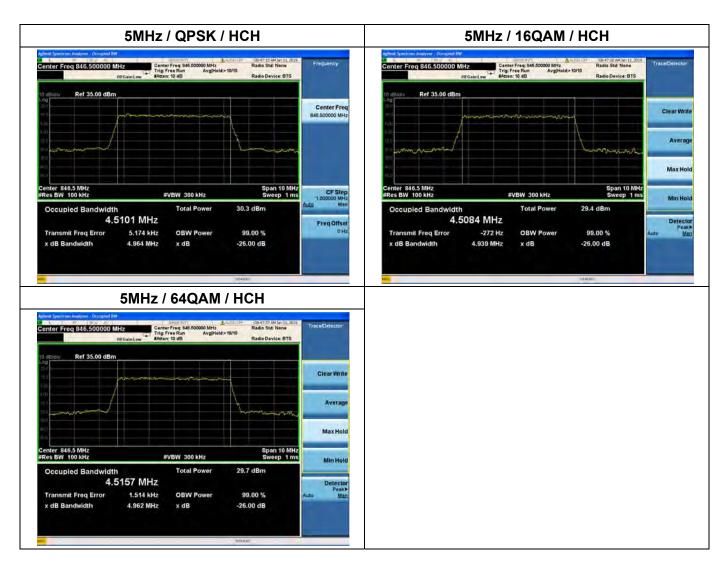






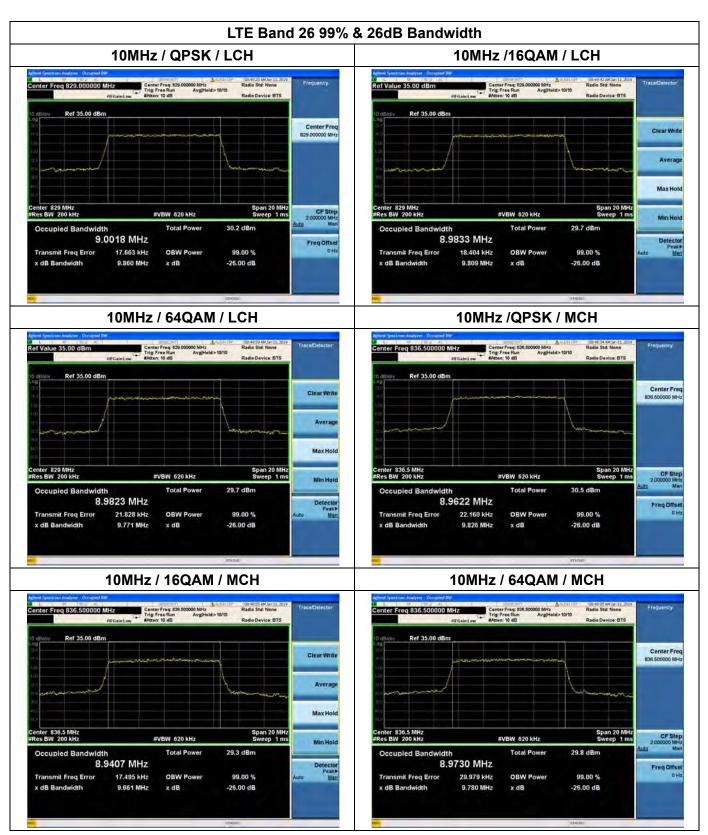






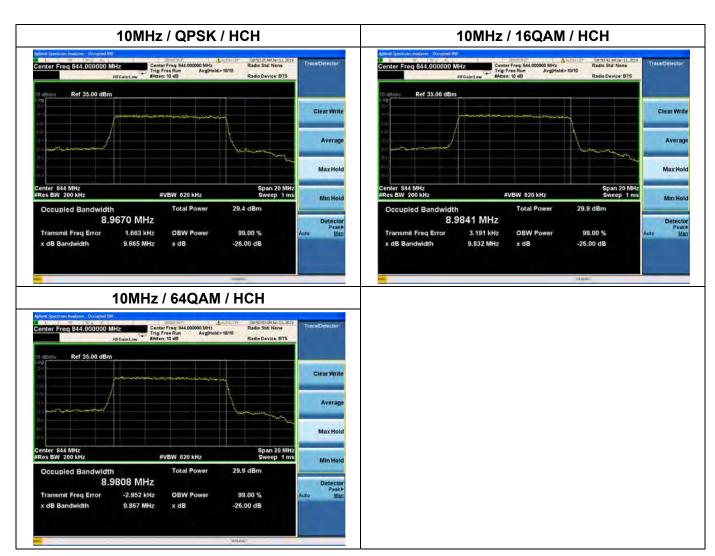






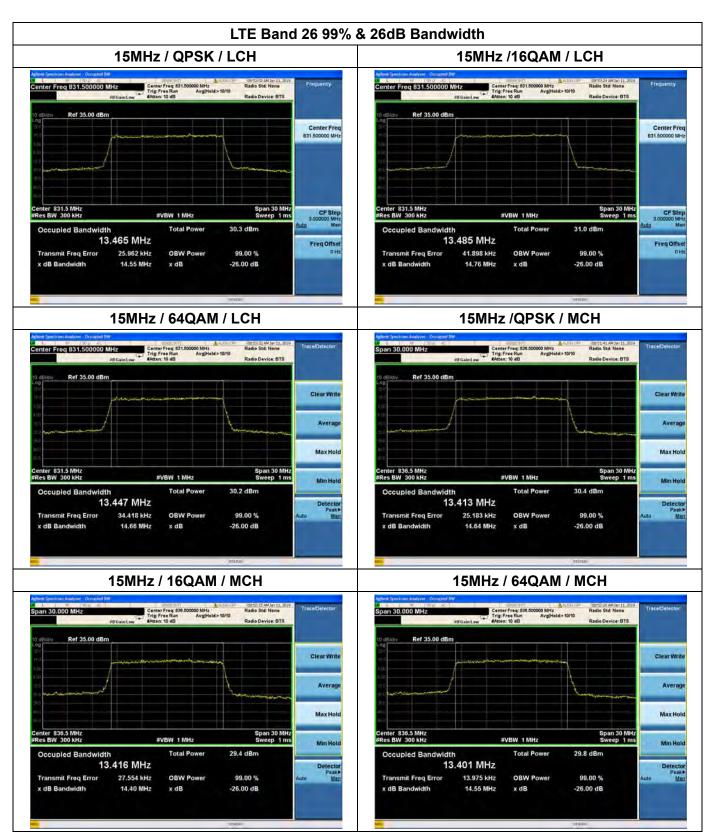






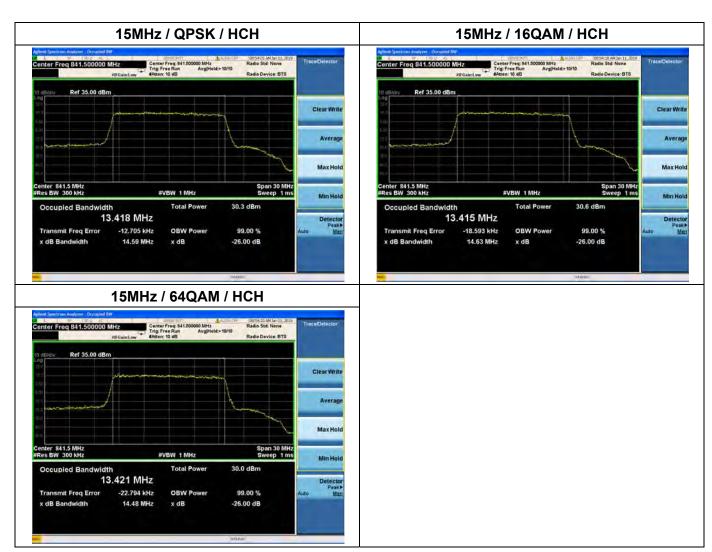












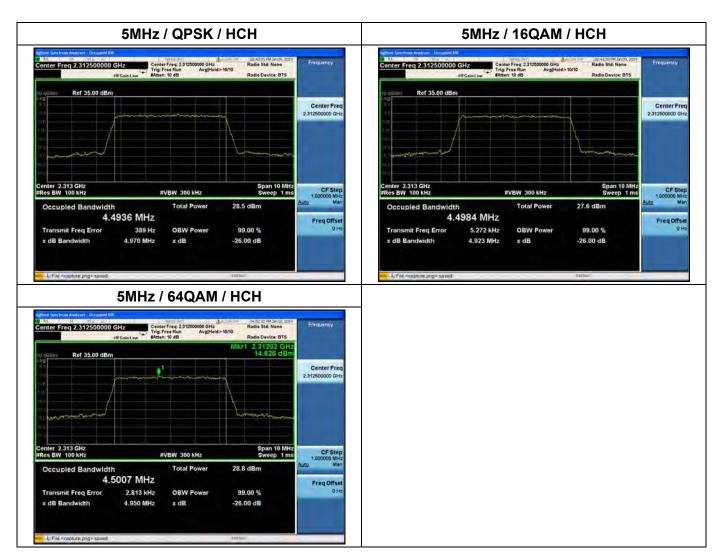






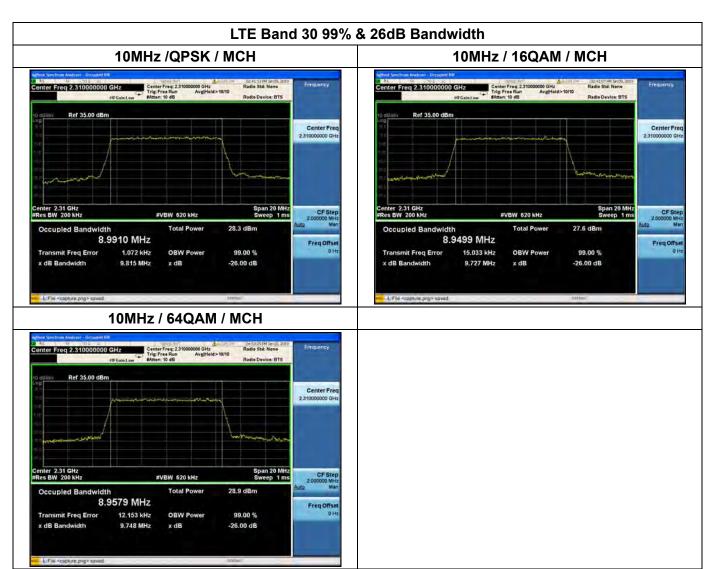
















## LTE Band 38 99% & 26dB Bandwidth 5MHz / QPSK / LCH 5MHz /16QAM / LCH Radio Std: None Radio Std: None Center Freq: 2.672500000 GHz Trig: Free Run Avg|Held>10/10 Center Freq: 2.572500000 GHz Trig: Free Run Avg|Held>10/10 Ref 35.00 dE Ref 35.00 dB Center Free Center Free nter 2.573 GHz s BW 100 kHz 26.6 dBm 4.5062 MHz 4.5157 MHz Freq Offs smit Freq Error 4.245 kHz 99.00 % Transmit Freq Error 2.186 kHz OBW Power 99.00 % 4.975 MHz -26.00 dB 5.339 MHz x dB -26.00 dB **5MHz / 64QAM / LCH** 5MHz/QPSK/MCH Radio Std: None Ref 35.00 dB Ref 35.00 dB Center Free Center Free W WWW MANAMA 4.5109 MHz 4.5088 MHz Freq Offs 99.00 % 99.00 % 4.982 MHz -26.00 dB 4.972 MHz x dB -26.00 dB **5MHz / 16QAM / MCH 5MHz / 64QAM / MCH** Ref 35.00 dB Ref 35.00 dB Center Fre Center Free and the sallen nter 2.595 GHz es BW 100 kHz CF Step 1.000000 MH: Mar CF St Total Powe 28.0 dBm 4.5102 MHz 4.4995 MHz 1.133 kHz 99.00 % Transmit Freq Error -403 Hz OBW Power 5.074 MHz -26.00 dB

