

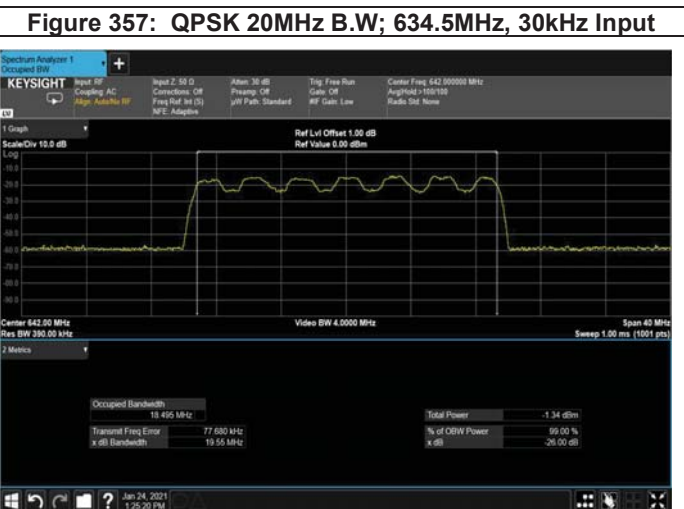
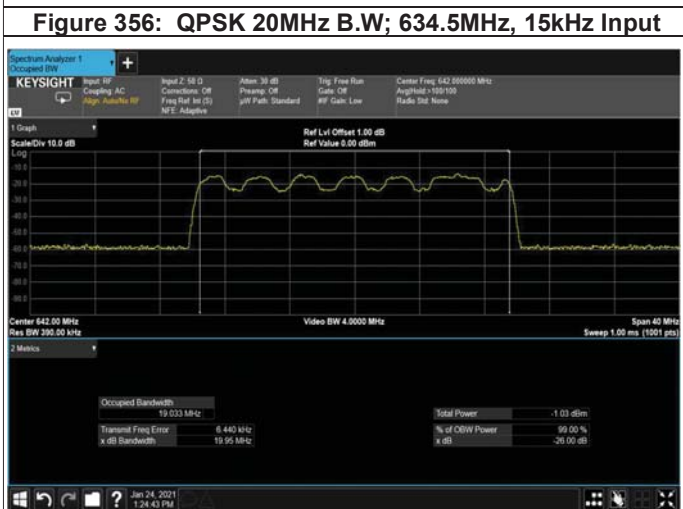




Figure 360: 16QAM 5MHz B.W; 619.5MHz, 15kHz Output



Figure 361: 16QAM 5MHz B.W; 619.5MHz, 30kHz Output



Figure 362: 16QAM 5MHz B.W; 634.5MHz, 15kHz Output



Figure 363: 16QAM 5MHz B.W; 634.5MHz, 30kHz Output



Figure 364: 16QAM 5MHz B.W; 649.5MHz, 15kHz Output

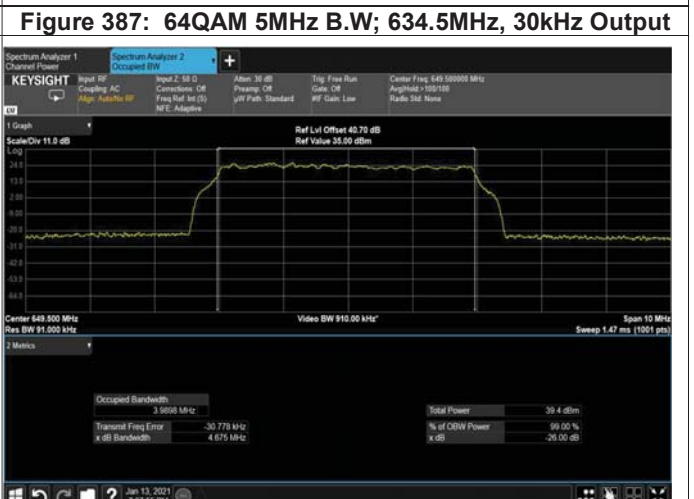
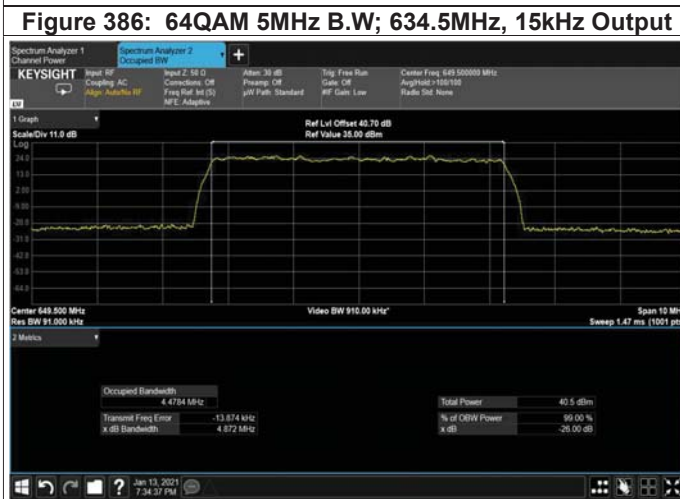


Figure 365: 16QAM 5MHz B.W; 649.5MHz, 30kHz Output









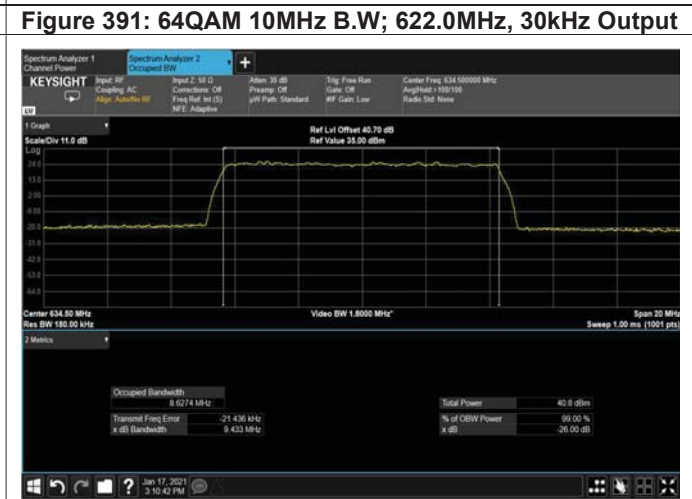












Figure 420: 256QAM 15MHz B.W; 624.5MHz, 15kHz Output



Figure 421: 256QAM 15MHz B.W; 624.5MHz, 30kHz Output



Figure 422: 256QAM 15MHz B.W; 634.5MHz, 15kHz Output



Figure 423: 256QAM 15MHz B.W; 634.5MHz, 30kHz Output



Figure 424: 256QAM 15MHz B.W; 644.5MHz, 15kHz Output



Figure 425: 256QAM 15MHz B.W; 644.5MHz, 30kHz Output



Figure 426: 256QAM 20MHz B.W; 627.0MHz, 15kHz Output



Figure 427: 256QAM 20MHz B.W; 627.0MHz, 30kHz Output



Figure 428: 256QAM 20MHz B.W; 634.5MHz, 15kHz Output



Figure 429: 256QAM 20MHz B.W; 634.5MHz, 30kHz Output



Figure 430: 256QAM 20MHz B.W; 642.0MHz, 15kHz Output



Figure 431: 256QAM 20MHz B.W; 642.0MHz, 30kHz Output



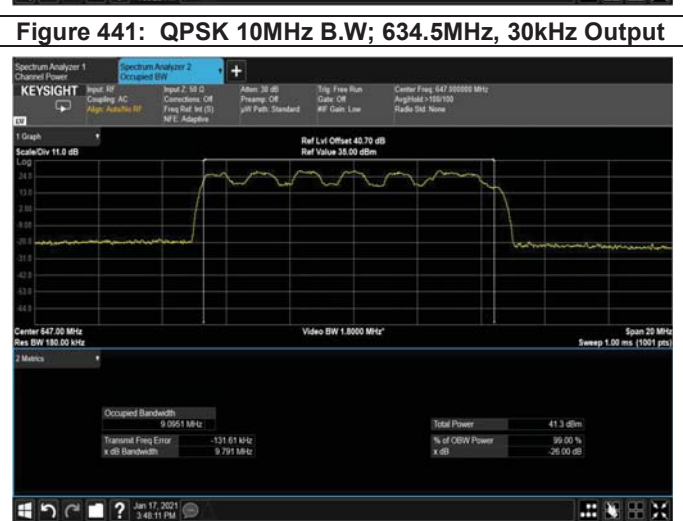
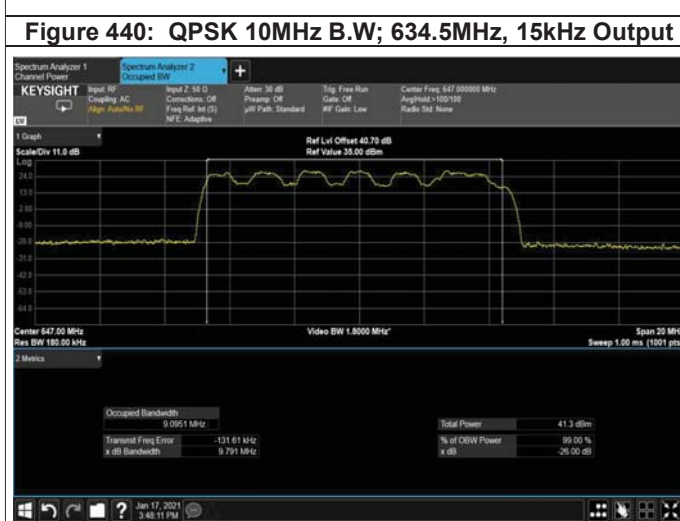
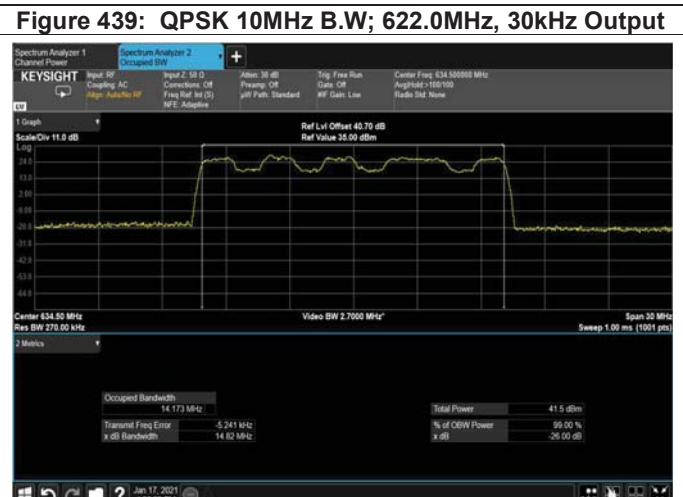
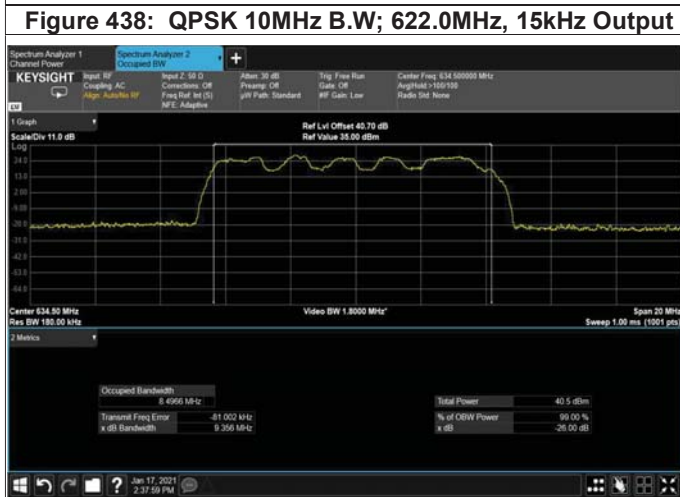


Figure 442: QPSK 10MHz B.W; 647.0MHz, 15kHz Output

Figure 443: QPSK 10MHz B.W; 647.0MHz, 30kHz Output



Figure 444: QPSK 15MHz B.W; 624.5MHz, 15kHz Output

Figure 445: QPSK 15MHz B.W; 624.5MHz, 30kHz Output



Figure 446: QPSK 15MHz B.W; 634.5MHz, 15kHz Output

Figure 447: QPSK 15MHz B.W; 634.5MHz, 30kHz Output



Figure 448: QPSK 15MHz B.W; 644.5MHz, 15kHz Output

Figure 449: QPSK 15MHz B.W; 644.5MHz, 30kHz Output

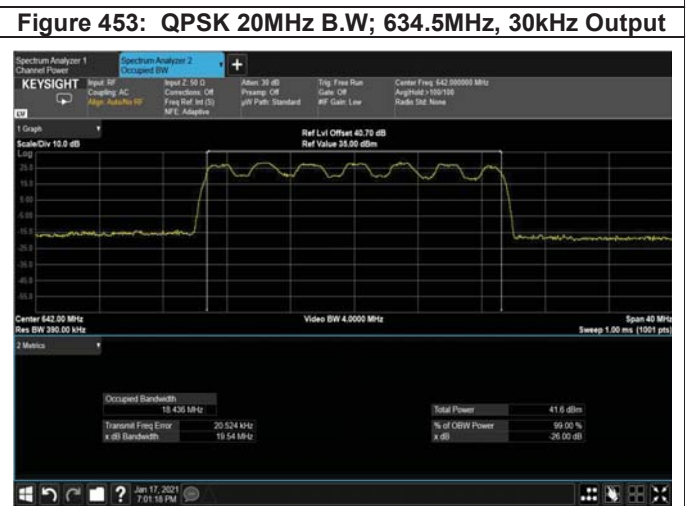
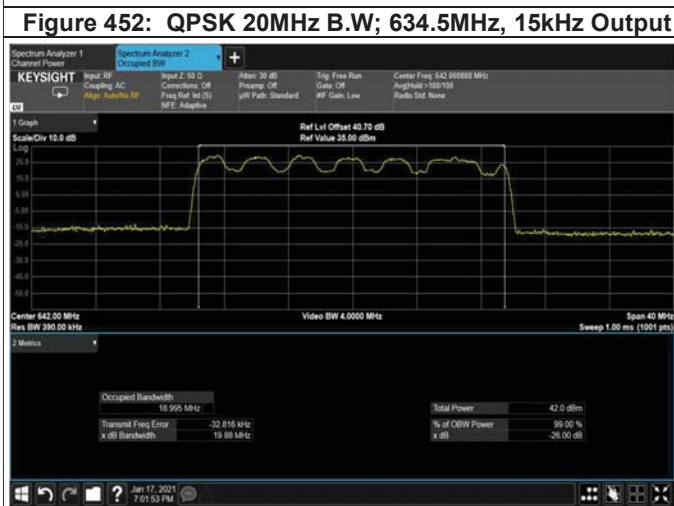
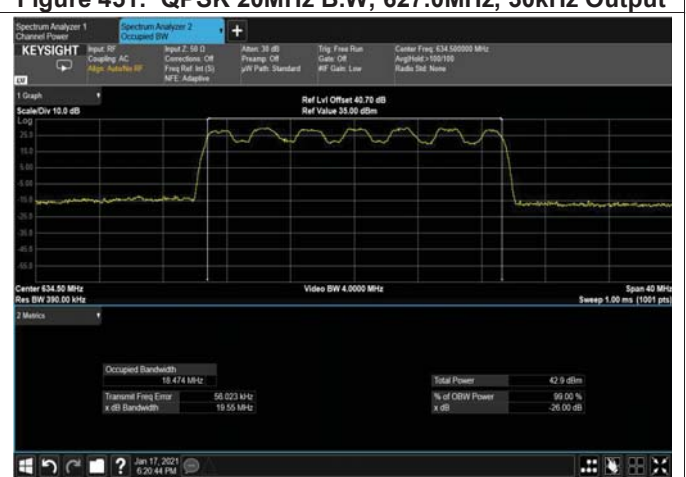
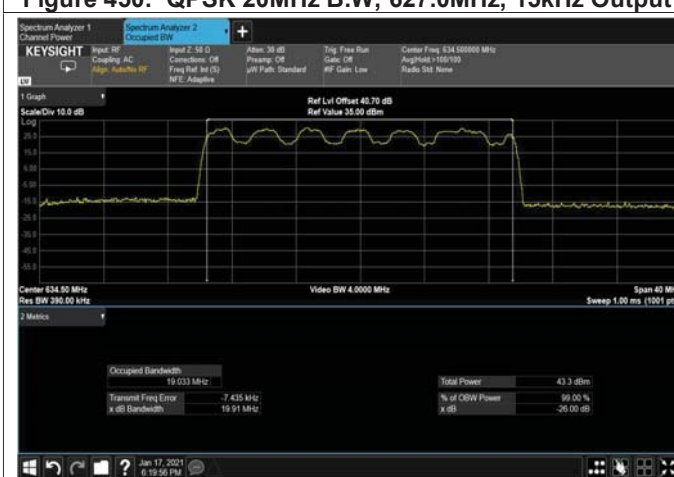


Figure 454: QPSK 20MHz B.W; 642.0MHz, 15kHz Output

Figure 455: QPSK 20MHz B.W; 642.0MHz, 30kHz Output



7.5 Test Equipment Used; Occupied Bandwidth

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibration Date	Next Calibration Due
EXA signal Analyzer	Keysight	UXA N9040B	MY56080119	January 31, 2020	January 31, 2022
EXG Vector Signal Generator	Agilent Technologies	N5172B	MY53051952	January 17, 2019	January 17, 2022
40 dB Attenuator	Weinschel Associates	WA 39-40-33	-	November 1, 2020	November 1, 2021
RF Coaxial Cable	Huber-Suner	SLLS210B	-	November 1, 2020	November 1, 2021

Table 24 Test Equipment Used



8 Spurious Emissions at Antenna Terminals

8.1 Test Specification

FCC Part 27, Subpart C, Sections 53(g)

8.2 Test Procedure

(Temperature (20°C)/ Humidity (46%RH))

The E.U.T. antenna terminal was connected to the spectrum analyzer through an external attenuator and an appropriate coaxial cable (max loss=42.0dB).

8.3 Test Limit

The power of any emission outside of the authorized operating frequency ranges (617 -652 MHz) must be attenuated below the transmitting power (P) by a factor of $43 + 10 \log (P)$ dB.

8.4 Test Results

JUDGEMENT: Passed

See additional information in Figure 456 to Figure 551.

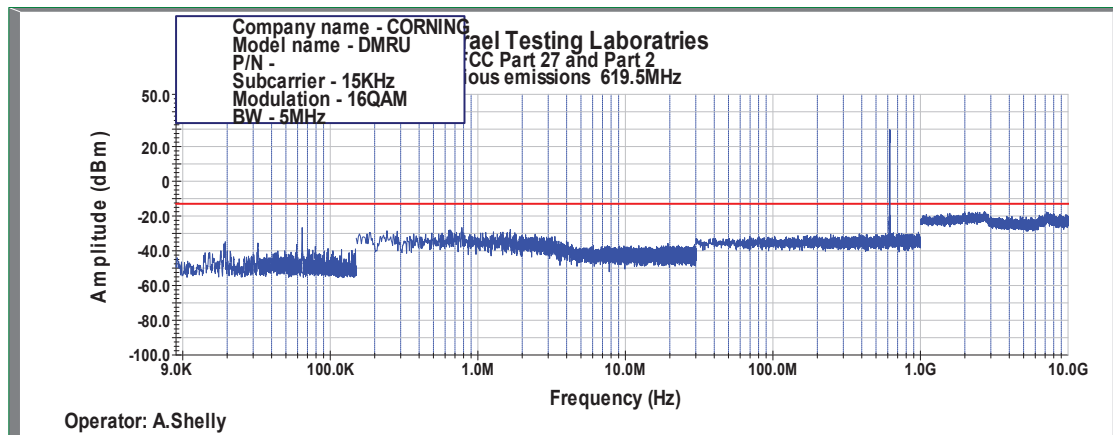


Figure 456: Spurious Emissions at Antenna Terminal 16QAM, 619.5MHz,
B.W. 5MHz, Sub Carrier 15kHz

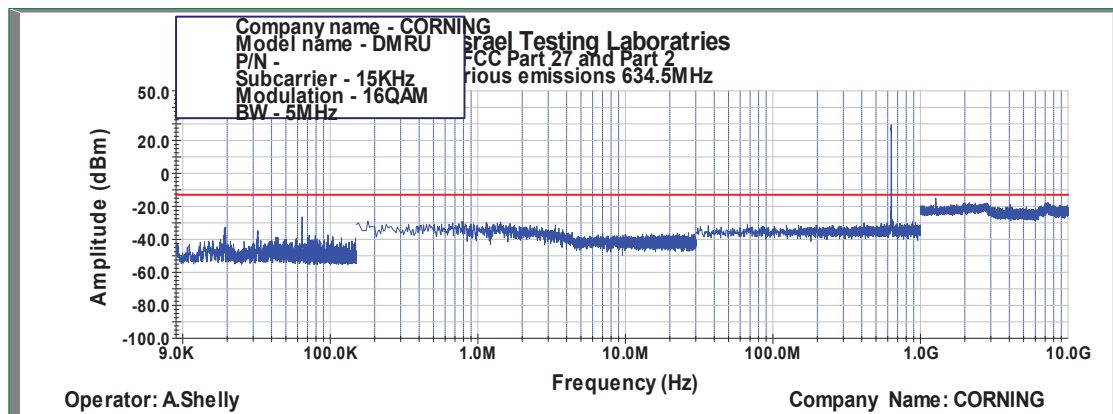


Figure 457: Spurious Emissions at Antenna Terminal 16QAM, 634.5MHz,
B.W. 5MHz, Sub Carrier 15kHz

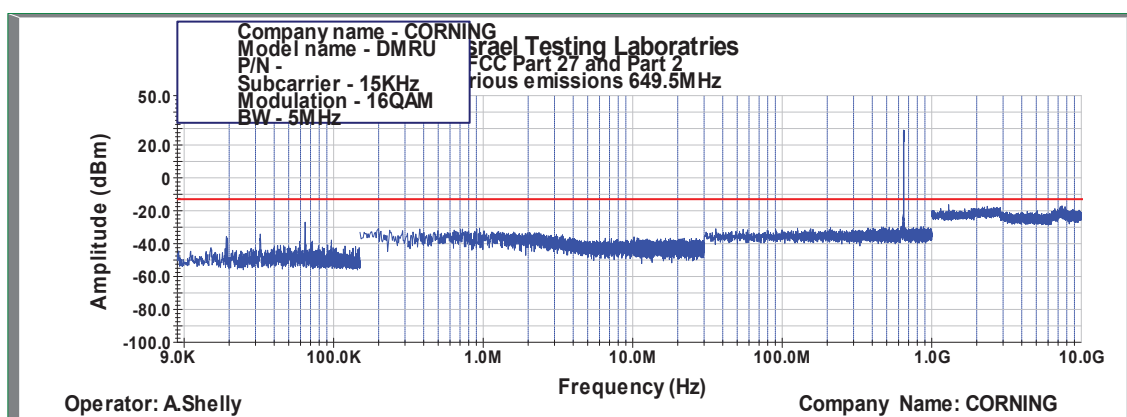


Figure 458: Spurious Emissions at Antenna Terminal 16QAM, 649.5MHz,
B.W. 5MHz, Sub Carrier 15kHz

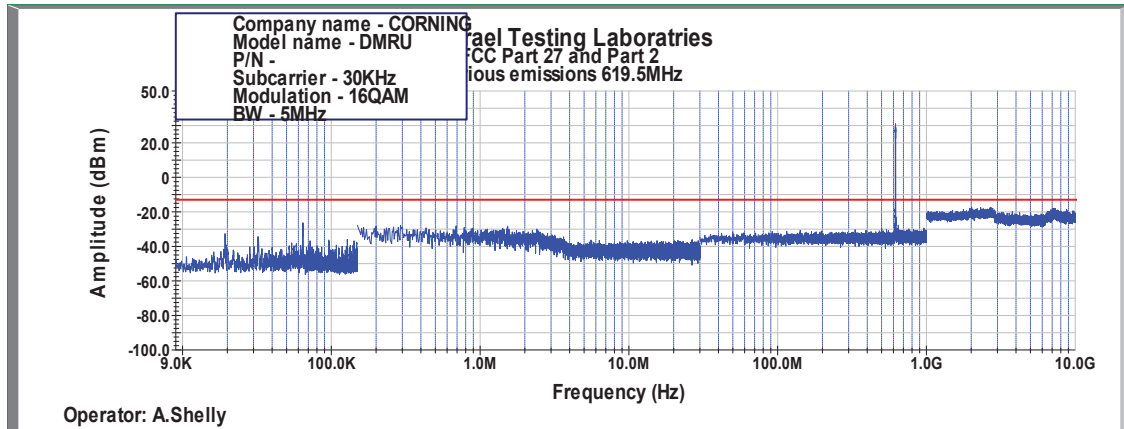


Figure 459: Spurious Emissions at Antenna Terminal 16QAM, 619.5MHz,
B.W. 5MHz, Sub Carrier 30kHz

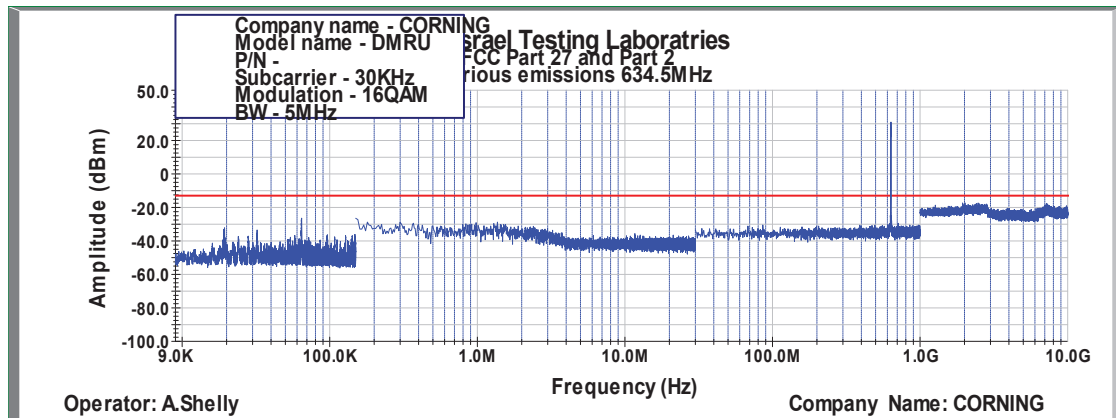


Figure 460: Spurious Emissions at Antenna Terminal 16QAM, 634.5MHz,
B.W. 5MHz, Sub Carrier 30kHz

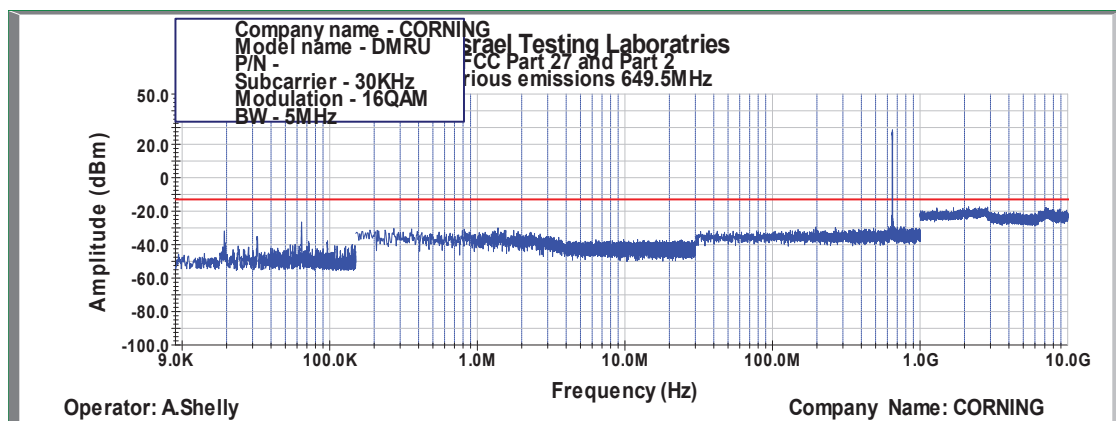


Figure 461: Spurious Emissions at Antenna Terminal 16QAM, 649.5MHz,
B.W. 5MHz, Sub Carrier 30kHz

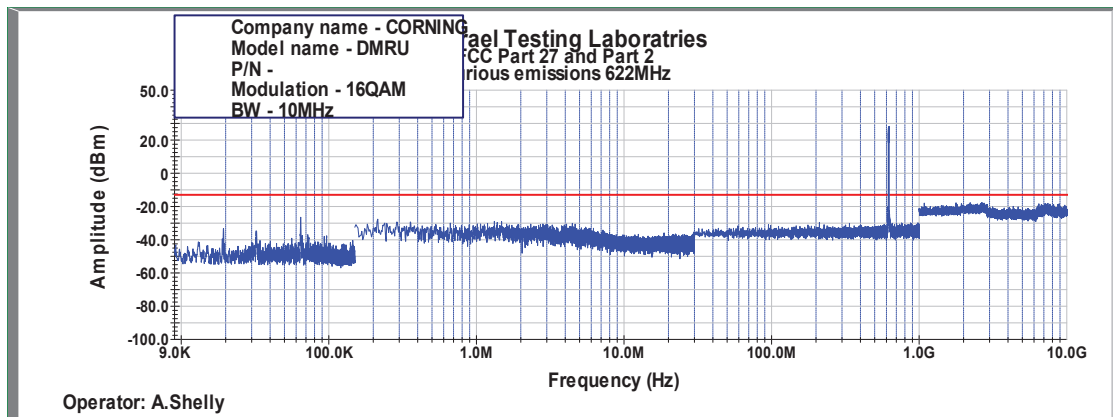


Figure 462: Spurious Emissions at Antenna Terminal 16QAM, 622.0MHz,
B.W. 10MHz, Sub Carrier 15kHz

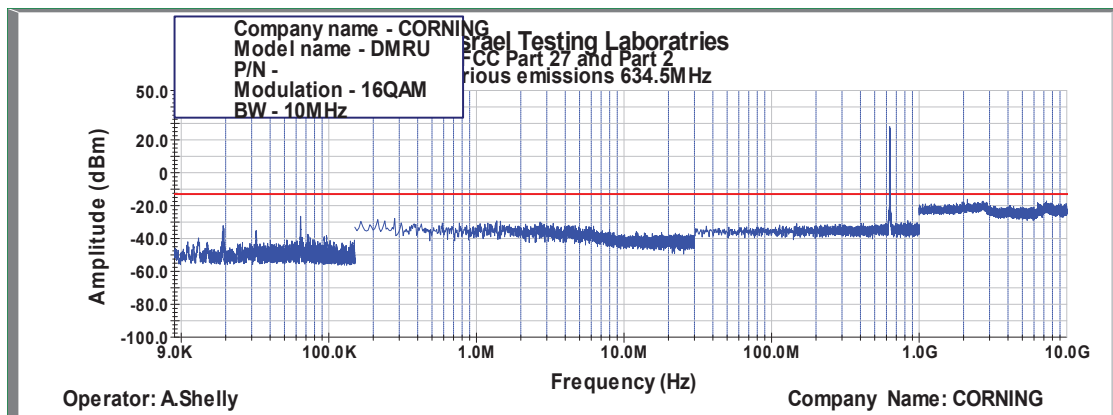


Figure 463: Spurious Emissions at Antenna Terminal 16QAM, 634.5MHz,
B.W. 10MHz, Sub Carrier 15kHz

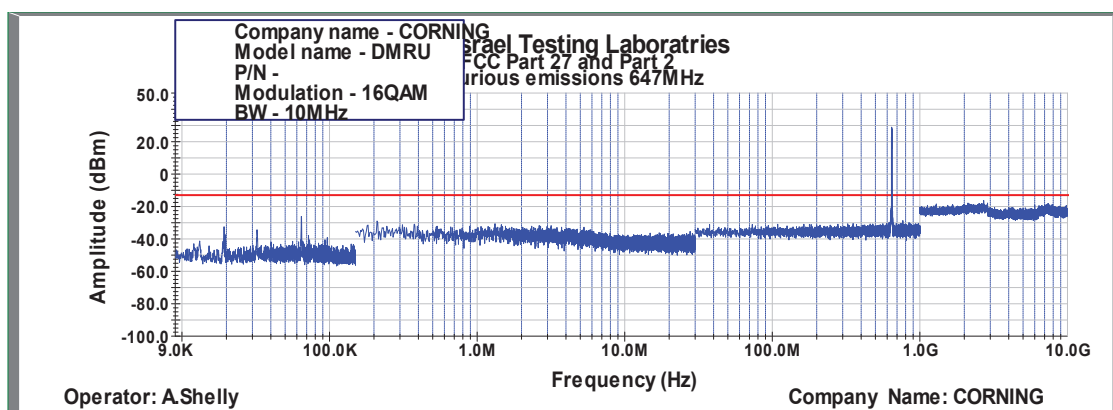


Figure 464: Spurious Emissions at Antenna Terminal 16QAM, 647.0MHz,
B.W. 10MHz, Sub Carrier 15kHz

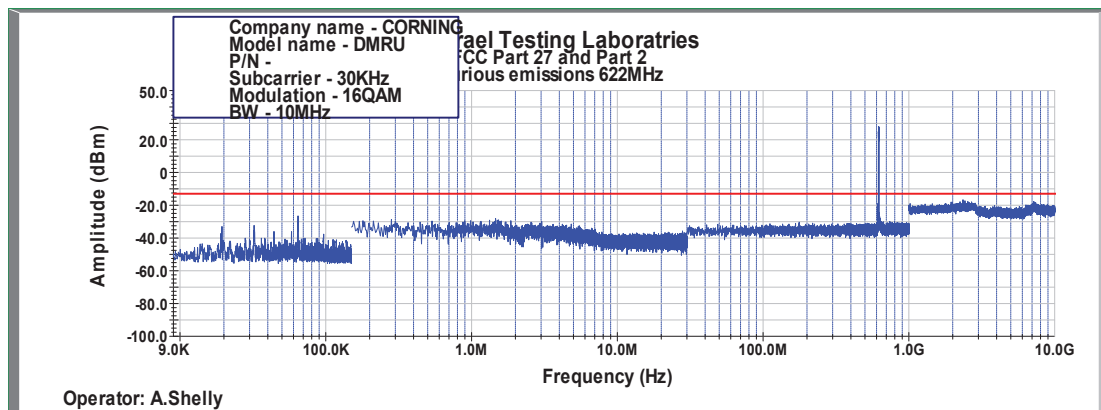


Figure 465: Spurious Emissions at Antenna Terminal 16QAM, 622.0MHz,
B.W. 10MHz, Sub Carrier 30kHz

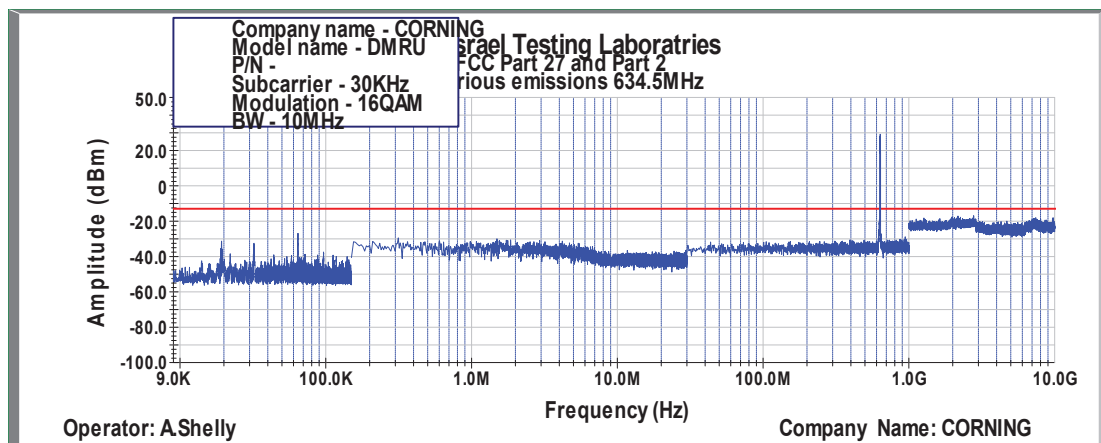


Figure 466: Spurious Emissions at Antenna Terminal 16QAM, 634.5MHz,
B.W. 10MHz, Sub Carrier 30kHz

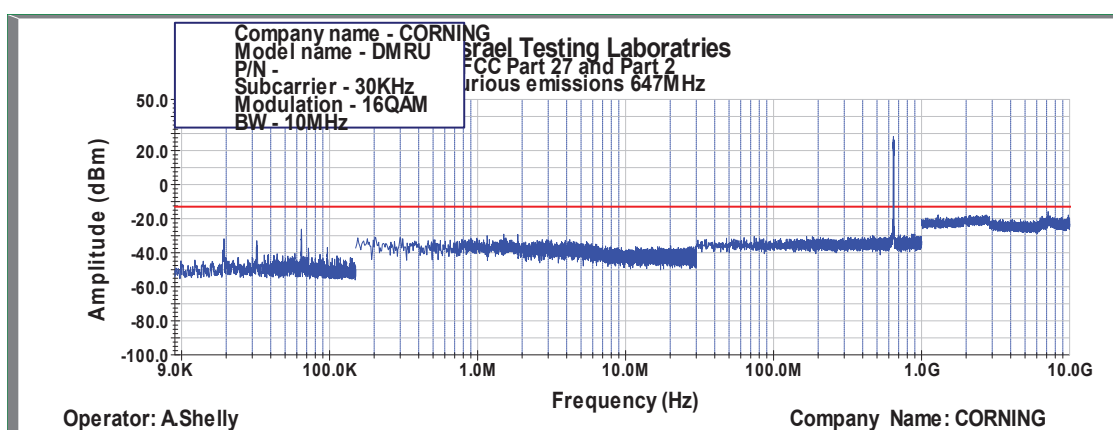


Figure 467: Spurious Emissions at Antenna Terminal 16QAM, 647.0MHz,
B.W. 10MHz, Sub Carrier 30kHz

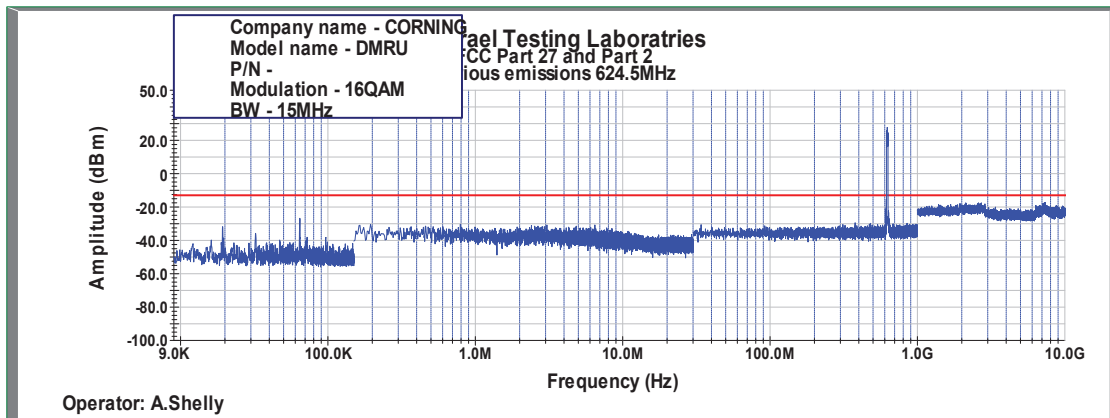


Figure 468: Spurious Emissions at Antenna Terminal 16QAM, 624.5MHz,
B.W. 15MHz, Sub Carrier 15kHz

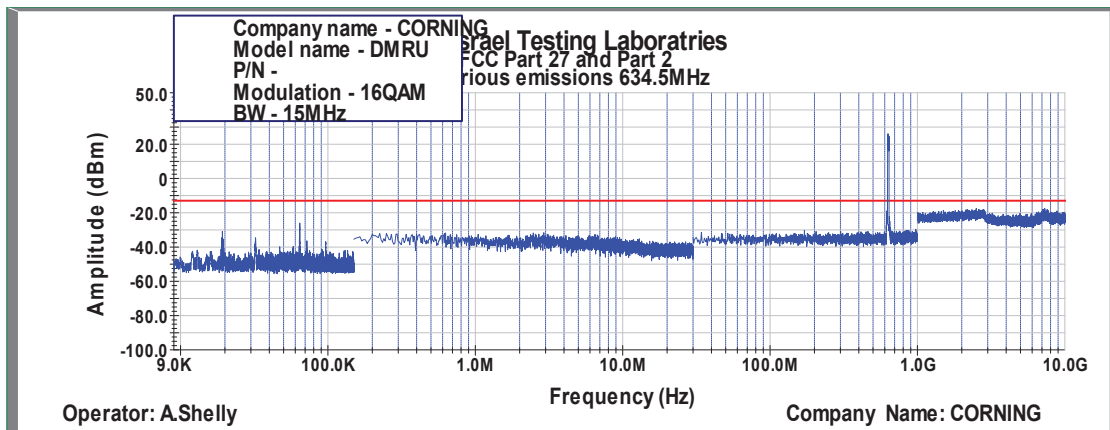


Figure 469: Spurious Emissions at Antenna Terminal 16QAM, 634.5MHz,
B.W. 15MHz, Sub Carrier 15kHz

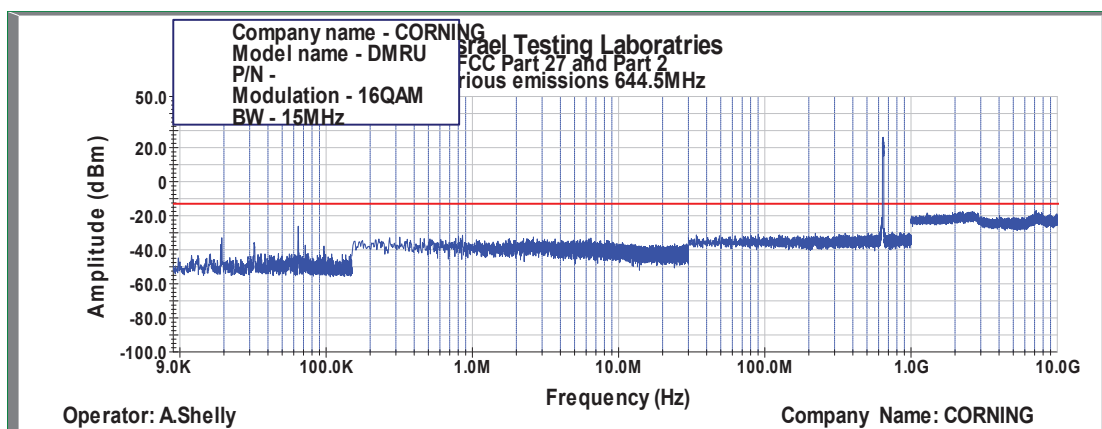


Figure 470: Spurious Emissions at Antenna Terminal 16QAM, 644.5MHz,
B.W. 15MHz, Sub Carrier 15kHz

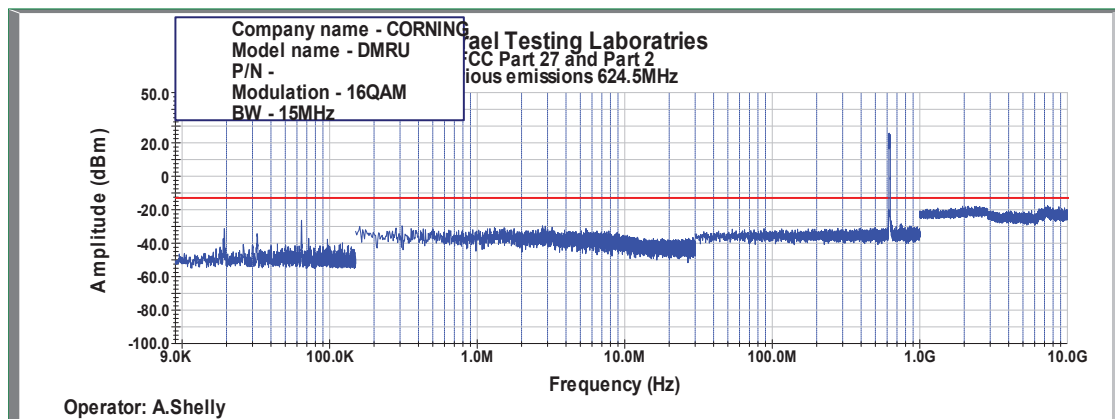


Figure 471: Spurious Emissions at Antenna Terminal 16QAM, 624.5MHz,
B.W. 15MHz, Sub Carrier 30kHz

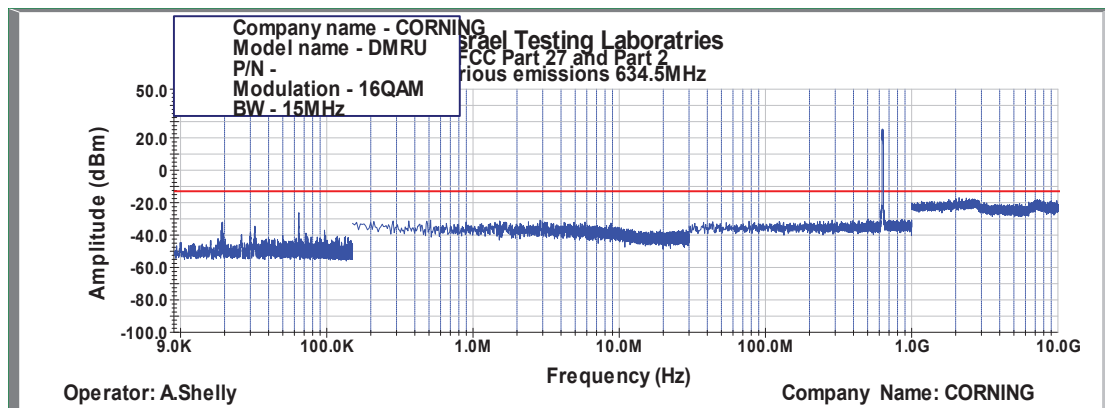


Figure 472: Spurious Emissions at Antenna Terminal 16QAM, 634.5MHz,
B.W. 15MHz, Sub Carrier 30kHz

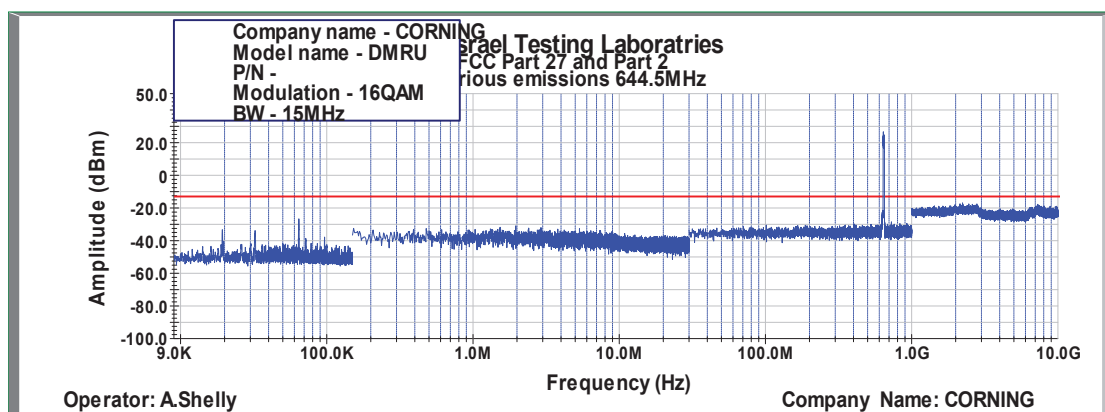


Figure 473: Spurious Emissions at Antenna Terminal 16QAM, 644.5MHz,
B.W. 15MHz, Sub Carrier 30kHz

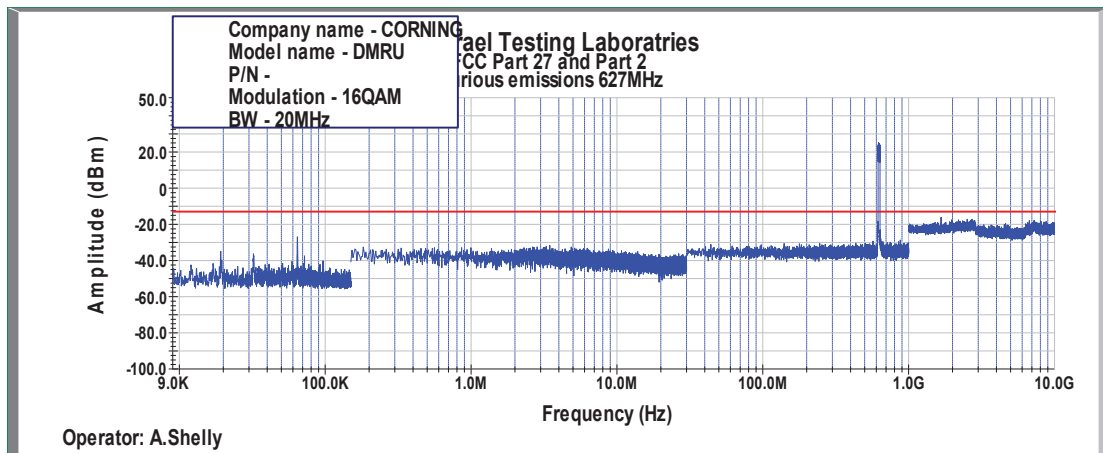


Figure 474: Spurious Emissions at Antenna Terminal 16QAM, 627.0MHz,
B.W. 20MHz, Sub Carrier 15kHz

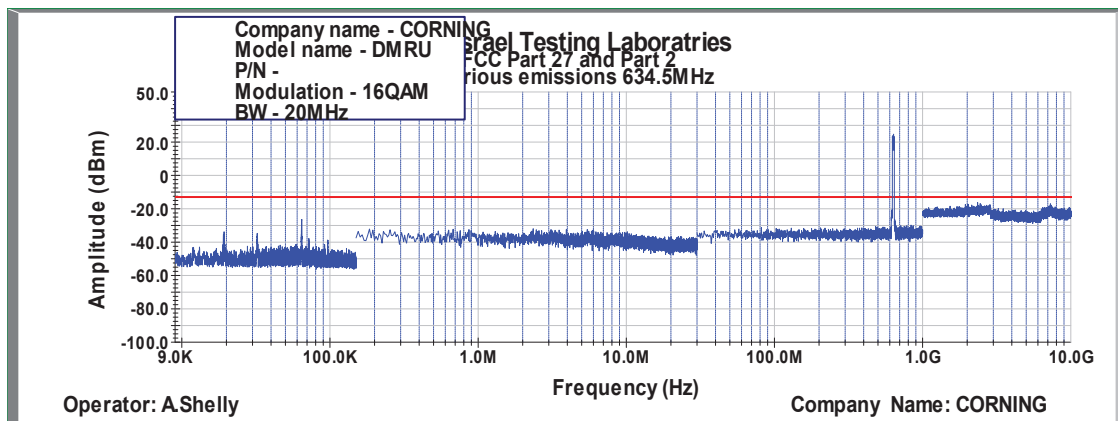


Figure 475: Spurious Emissions at Antenna Terminal 16QAM, 634.5MHz,
B.W. 20MHz, Sub Carrier 15kHz

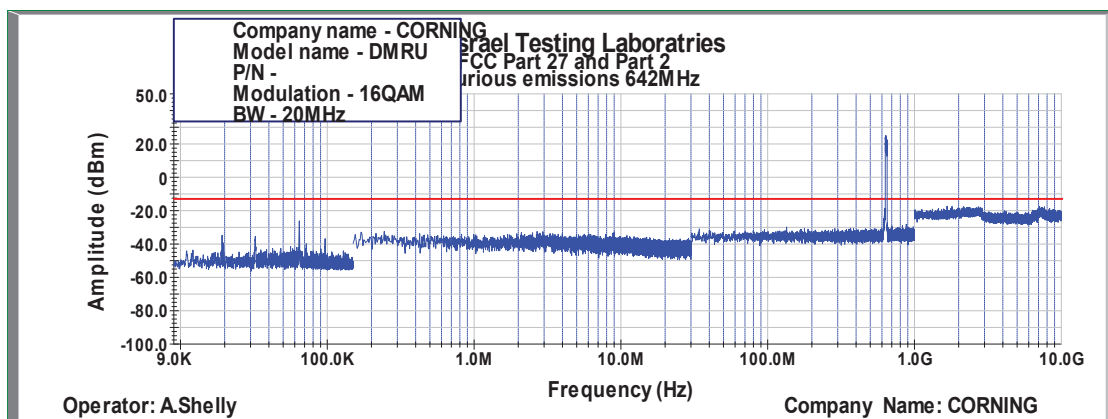


Figure 476: Spurious Emissions at Antenna Terminal 16QAM, 642.0MHz,
B.W. 20MHz, Sub Carrier 15kHz

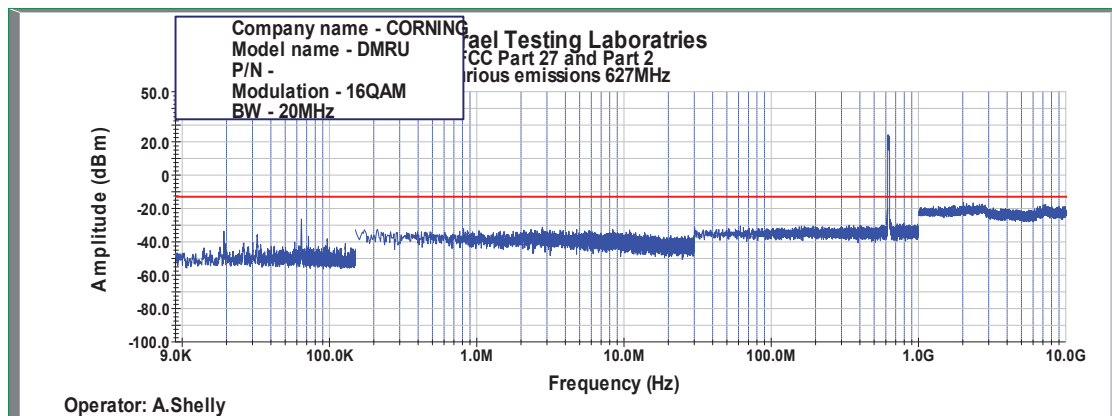


Figure 477: Spurious Emissions at Antenna Terminal 16QAM, 627.0MHz,
B.W. 20MHz, Sub Carrier 30kHz

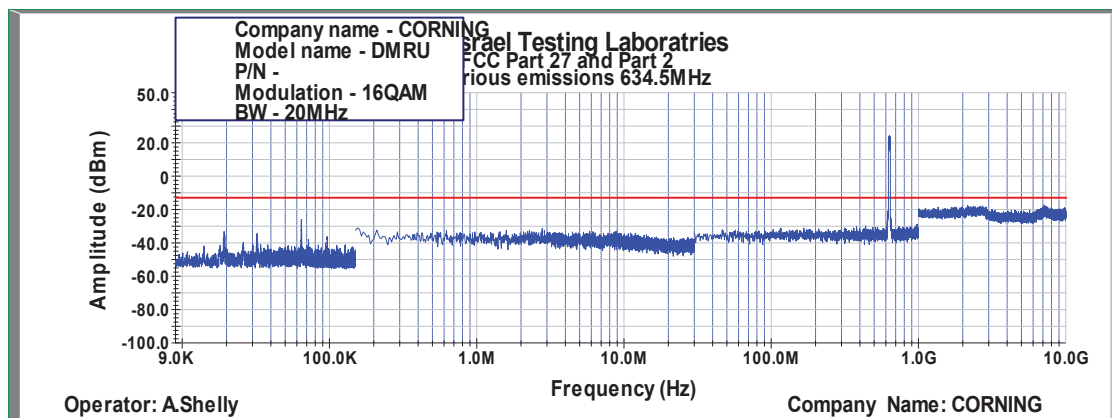


Figure 478: Spurious Emissions at Antenna Terminal 16QAM, 634.5MHz,
B.W. 20MHz, Sub Carrier 30kHz

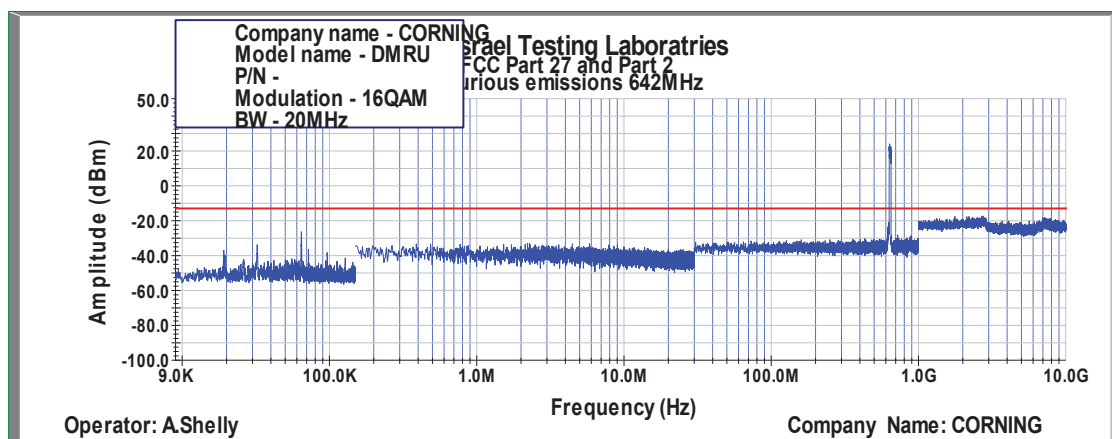


Figure 479: Spurious Emissions at Antenna Terminal 16QAM, 642.0MHz,
B.W. 20MHz, Sub Carrier 30kHz

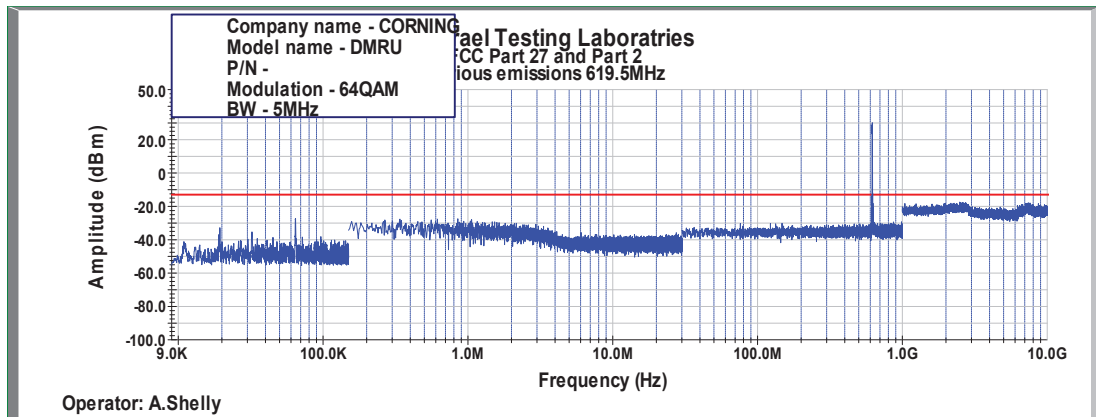


Figure 480: Spurious Emissions at Antenna Terminal 64QAM, 619.5MHz,
B.W. 5MHz, Sub Carrier 15kHz

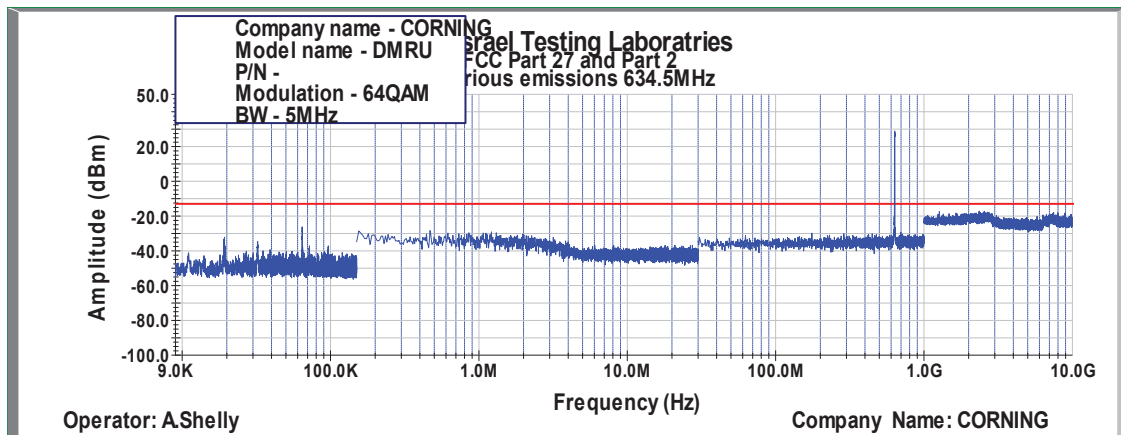


Figure 481: Spurious Emissions at Antenna Terminal 64QAM, 634.5MHz,
B.W. 5MHz, Sub Carrier 15kHz

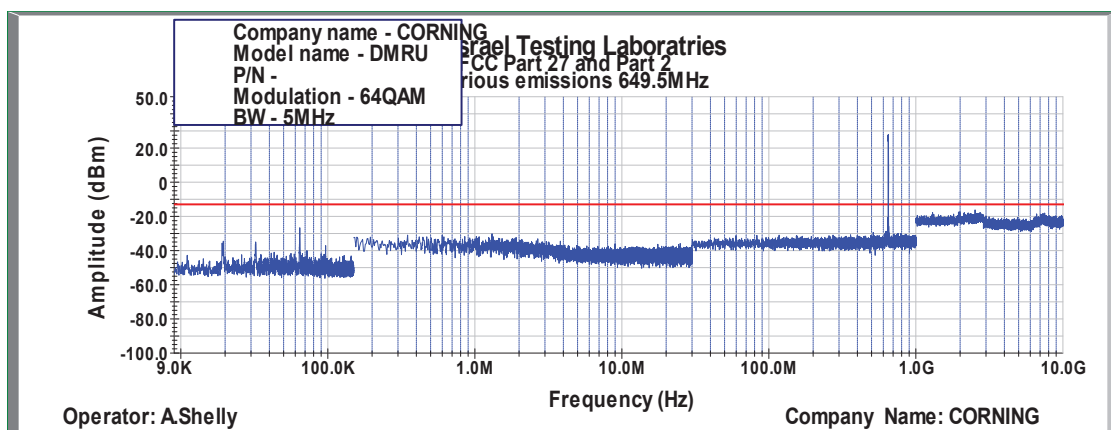


Figure 482: Spurious Emissions at Antenna Terminal 64QAM, 649.5MHz,
B.W. 5MHz, Sub Carrier 15kHz

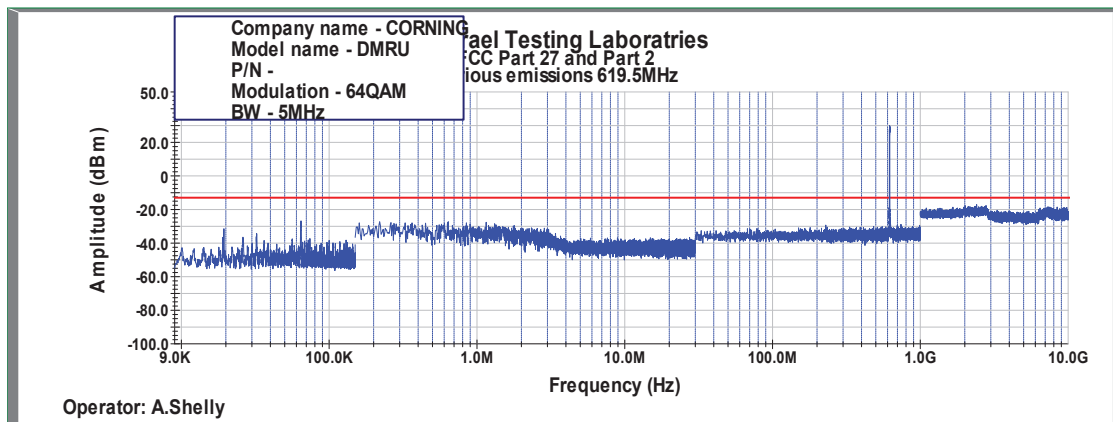


Figure 483: Spurious Emissions at Antenna Terminal 64QAM, 619.5MHz,
B.W. 5MHz, Sub Carrier 30kHz

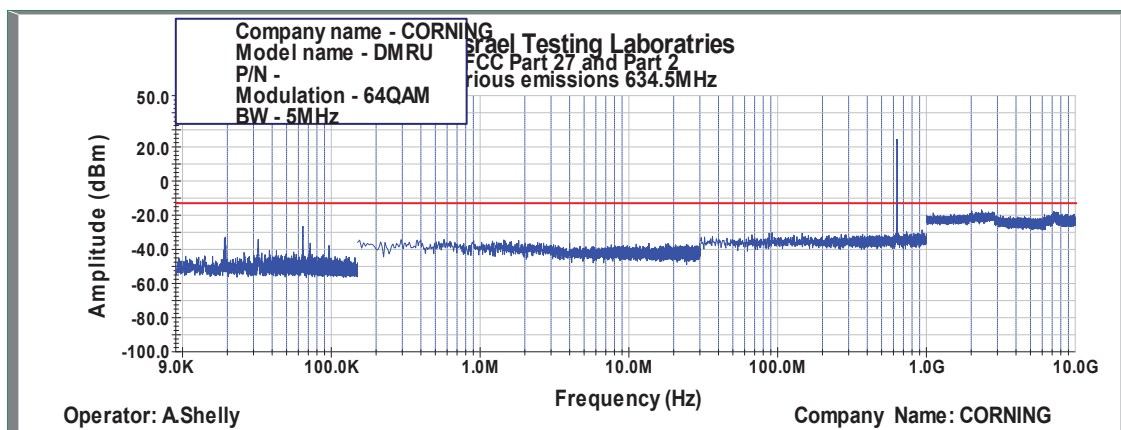


Figure 484: Spurious Emissions at Antenna Terminal 64QAM, 634.5MHz,
B.W. 5MHz, Sub Carrier 30kHz

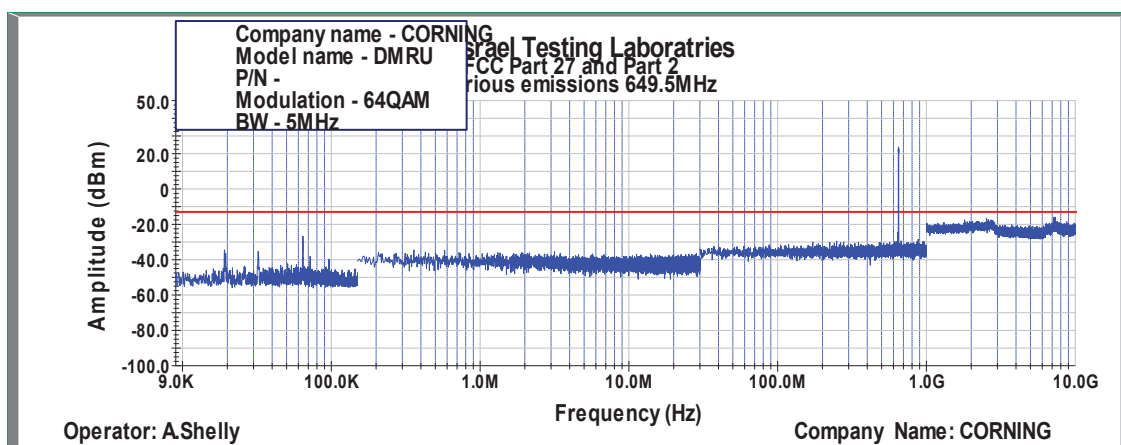


Figure 485: Spurious Emissions at Antenna Terminal 64QAM, 649.5MHz,
B.W 5MHz, Sub Carrier 30kHz

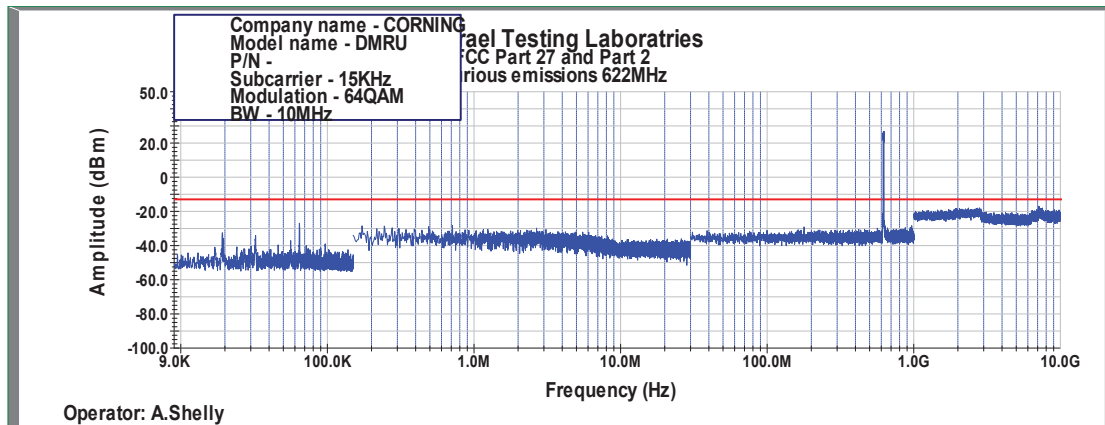


Figure 486: Spurious Emissions at Antenna Terminal 64QAM, 622.0MHz,
B.W. 10MHz, Sub Carrier 15kHz

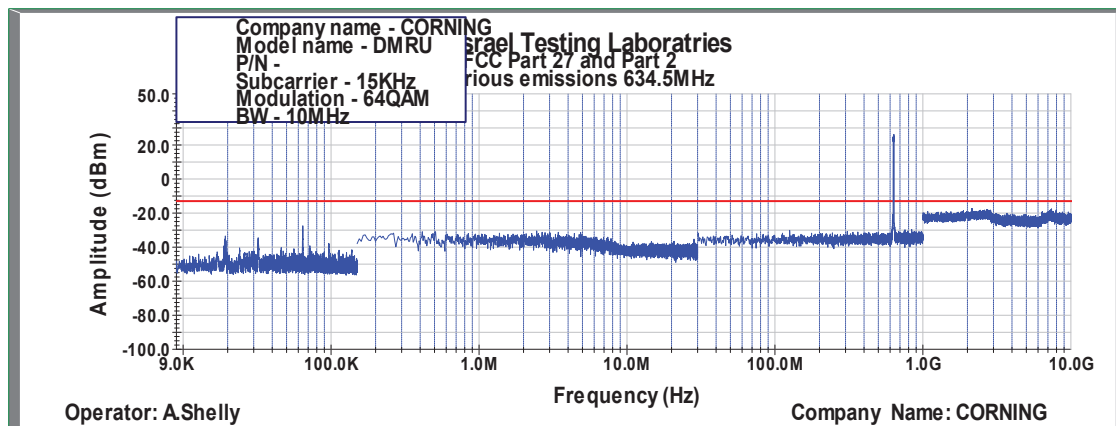


Figure 487: Spurious Emissions at Antenna Terminal 64QAM, 634.5MHz,
B.W. 10MHz, Sub Carrier 15kHz

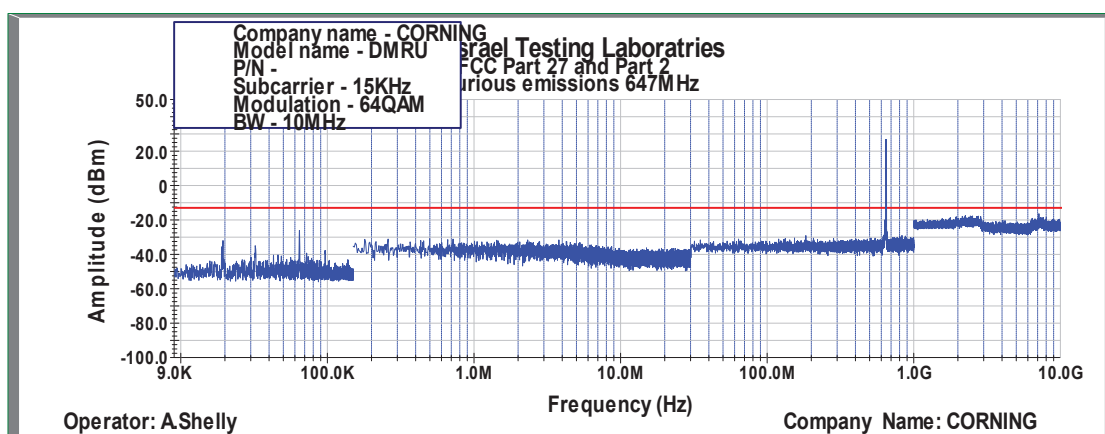


Figure 488: Spurious Emissions at Antenna Terminal 64QAM, 647.0MHz,
B.W. 10MHz, Sub Carrier 15kHz