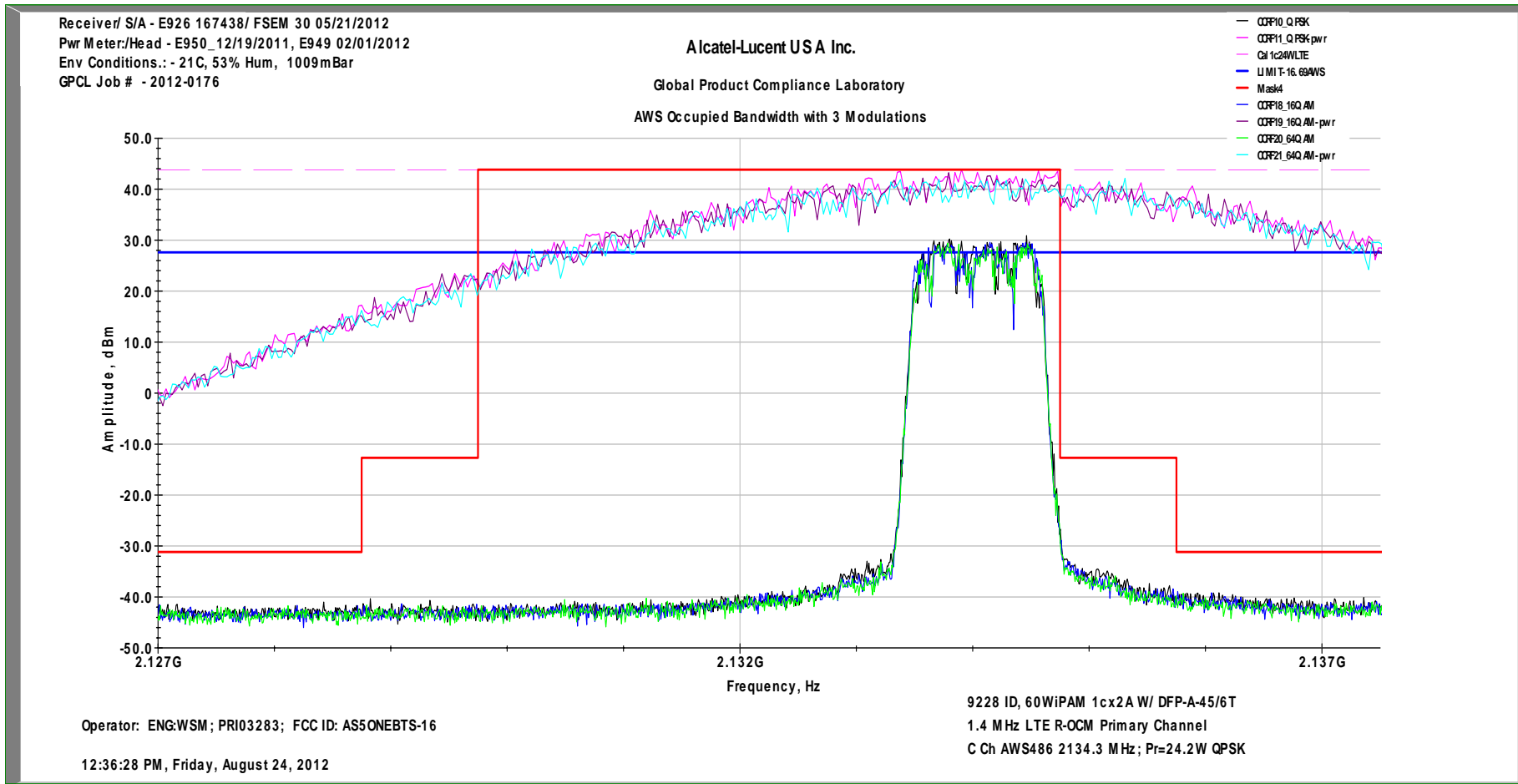
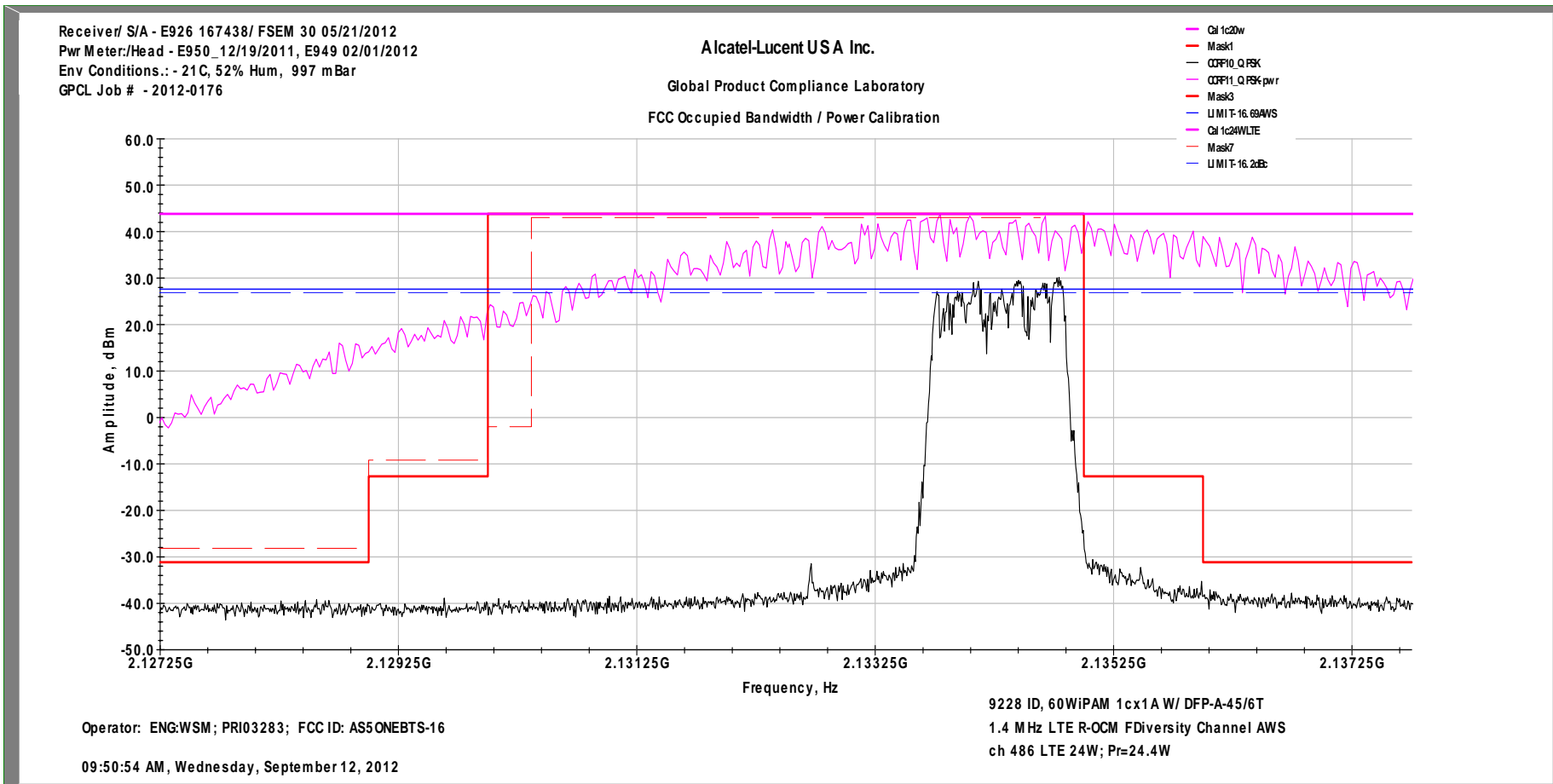


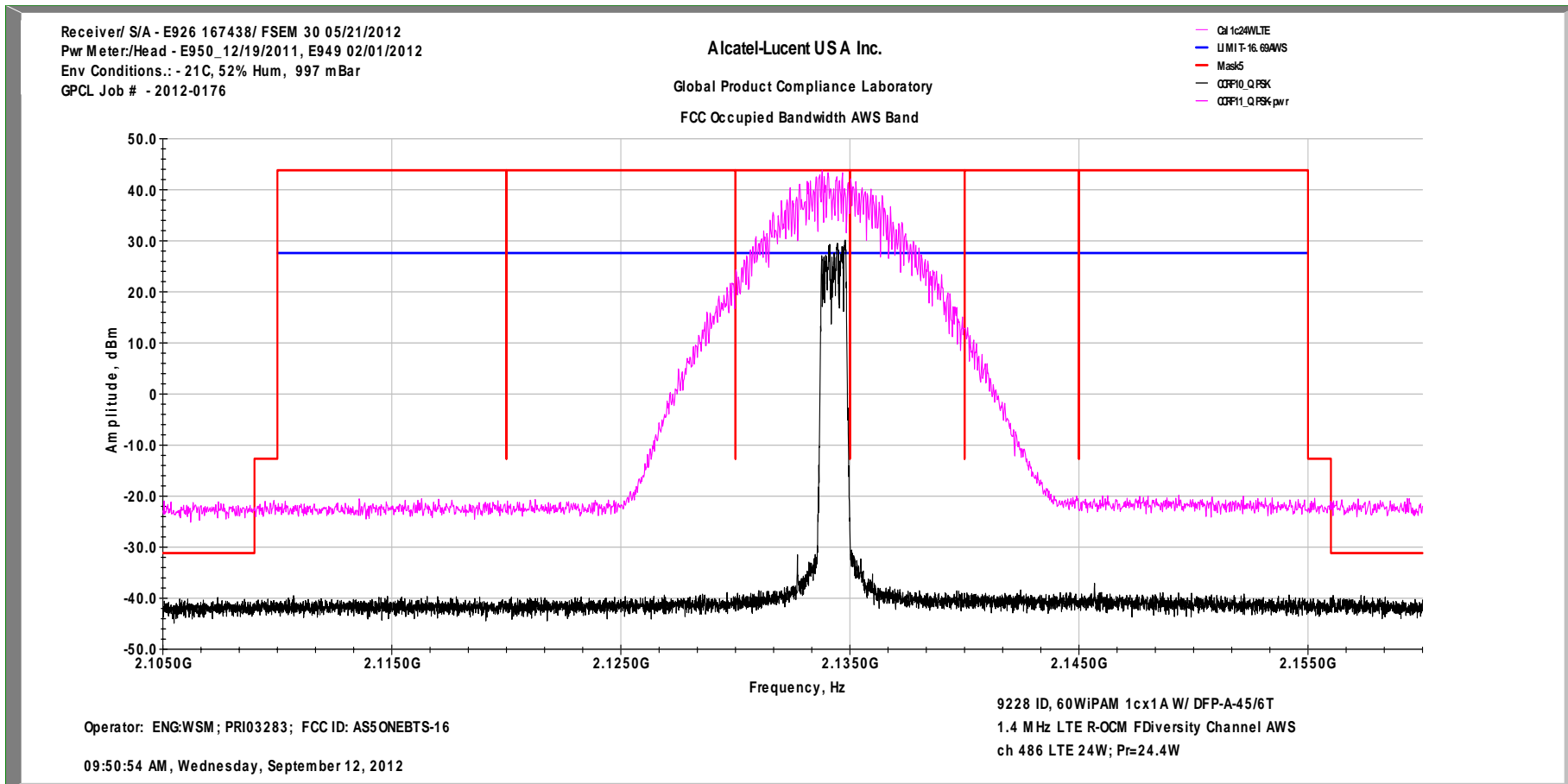
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch C-486 1cx2A 24.2W/c QPSK, 16QAM and 64QAM Primary Tx1



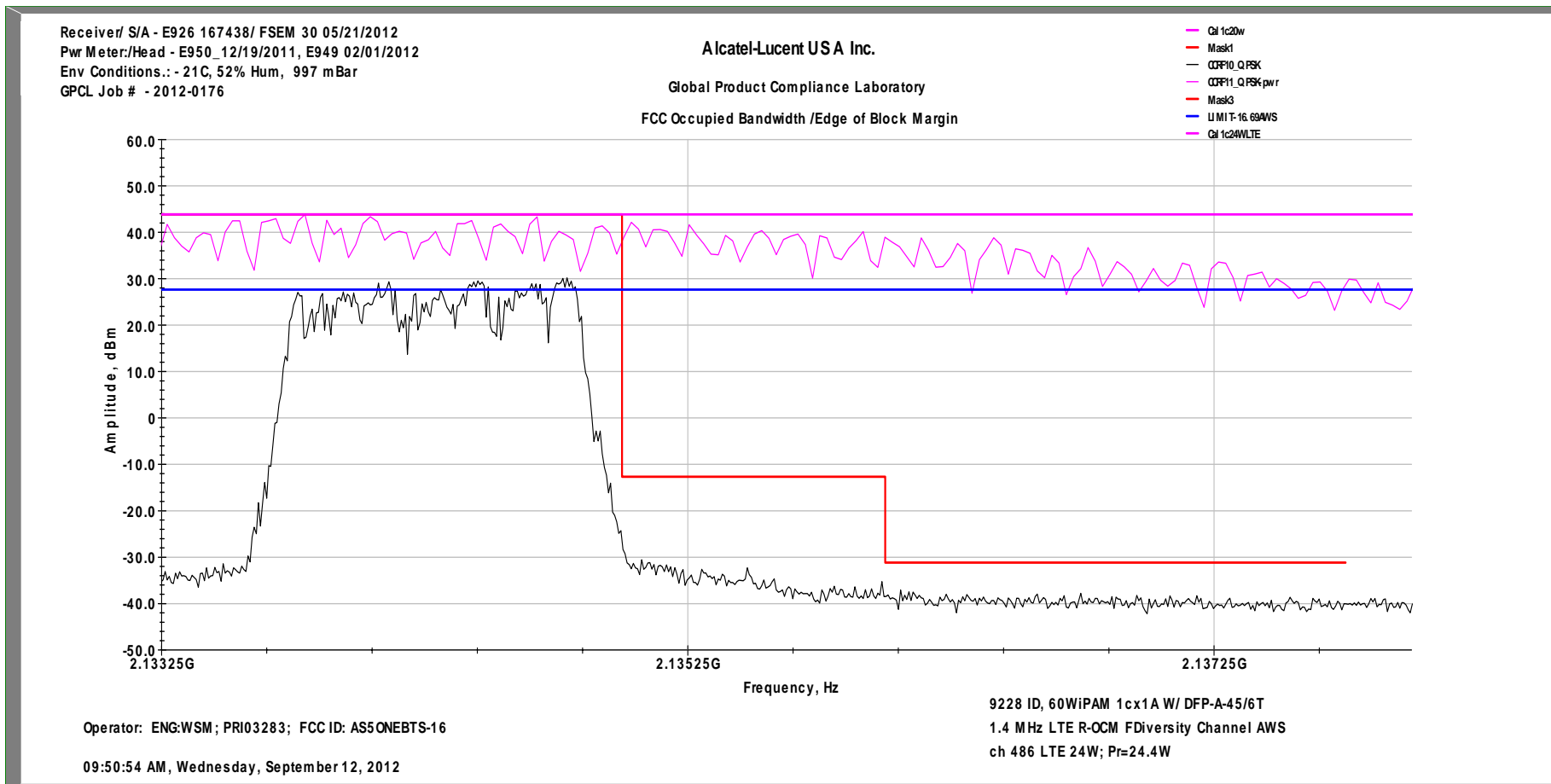
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch C-486 1cx1A 24.2W/c QPSK Diversity Tx2



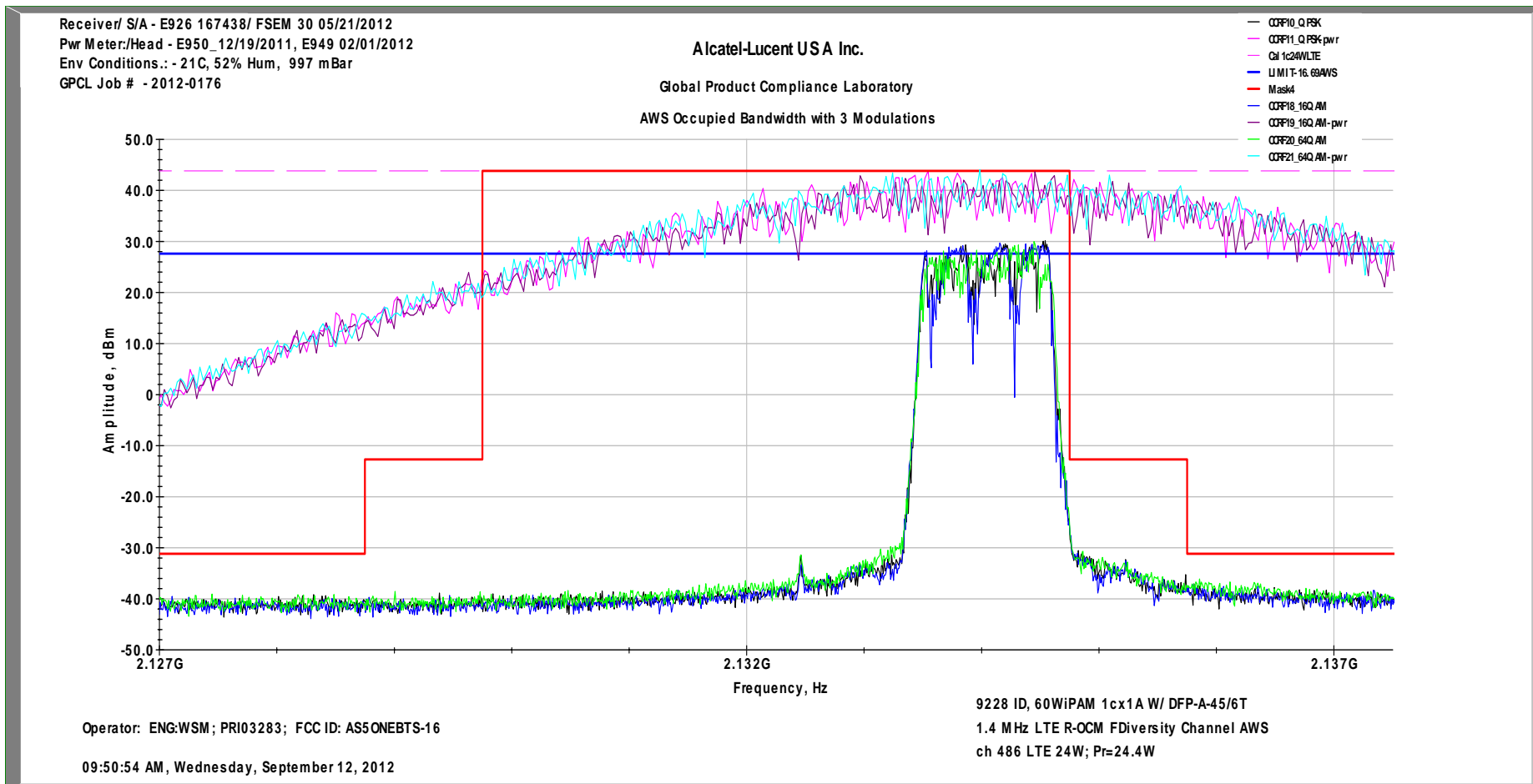
In-Band Intermodulation Graph AWS 1.4 MHz Ch C-486 1cx1A 24.2W/c QPSK Diversity Tx2



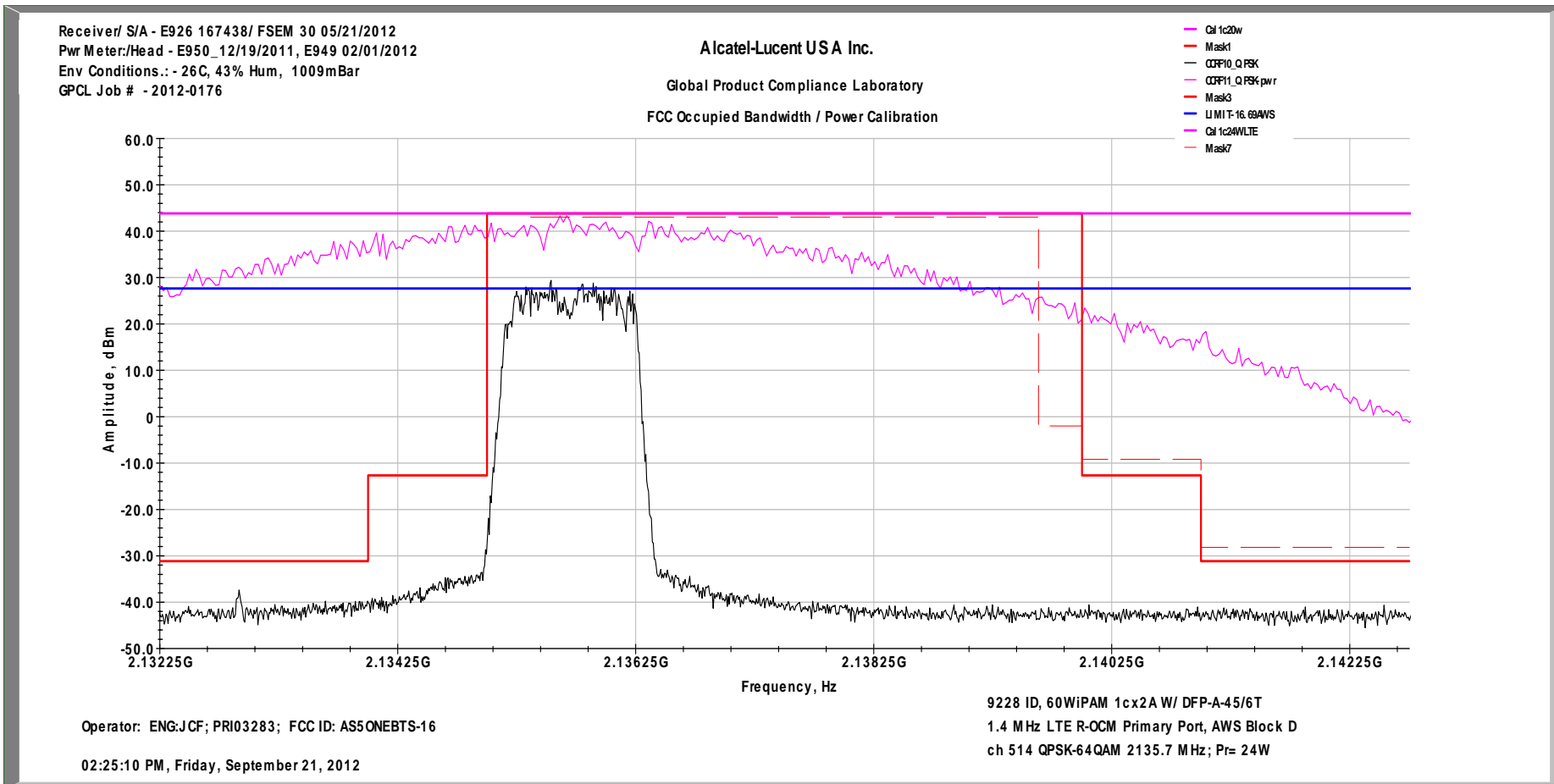
FCC Edge of Block Margin AWS 1.4 MHz Ch C-486 1cx1A 24.2W/c QPSK Diversity Tx2



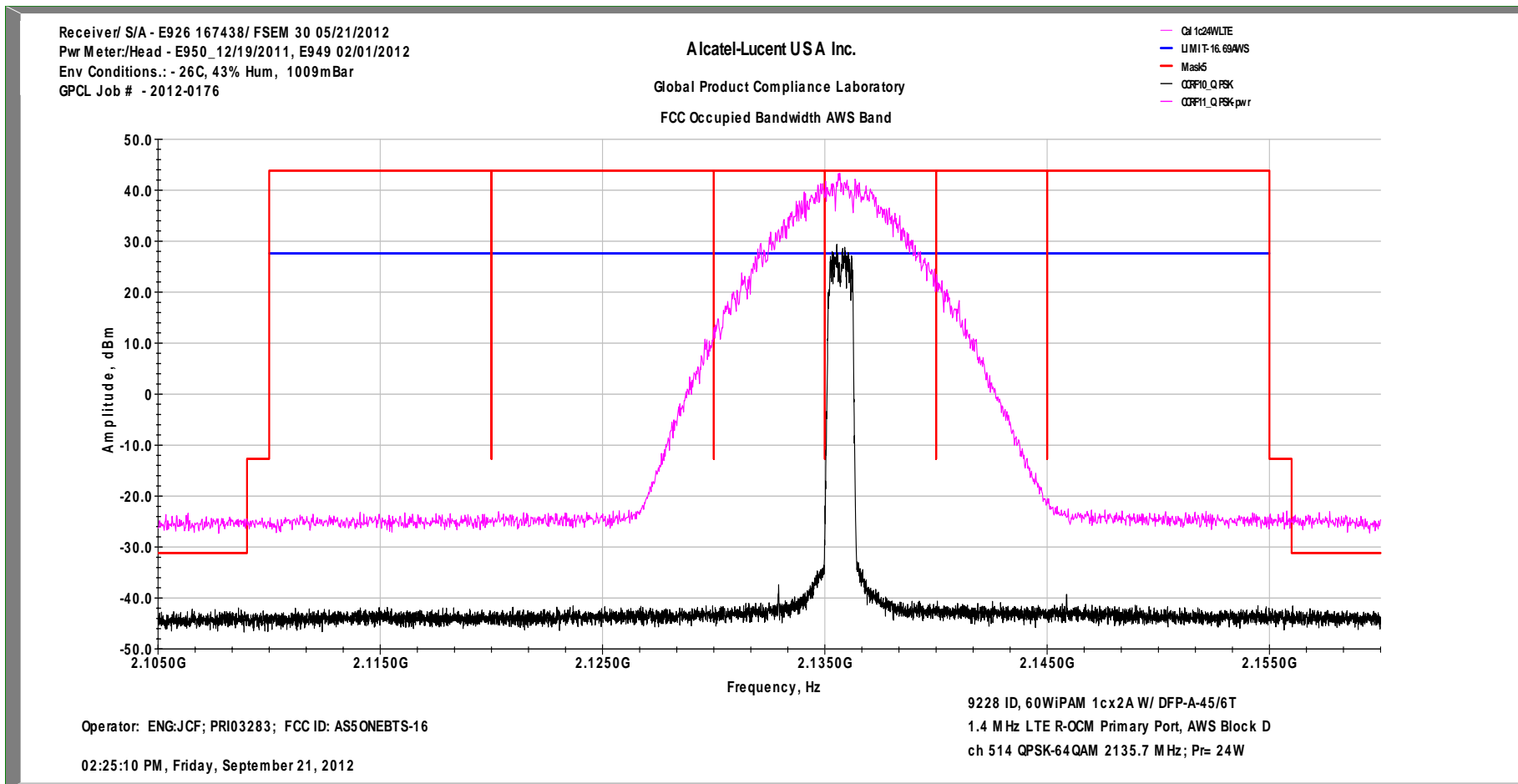
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch C-486 1cx1A 24.2W/c QPSK, 16QAM and 64QAM Diversity Tx2



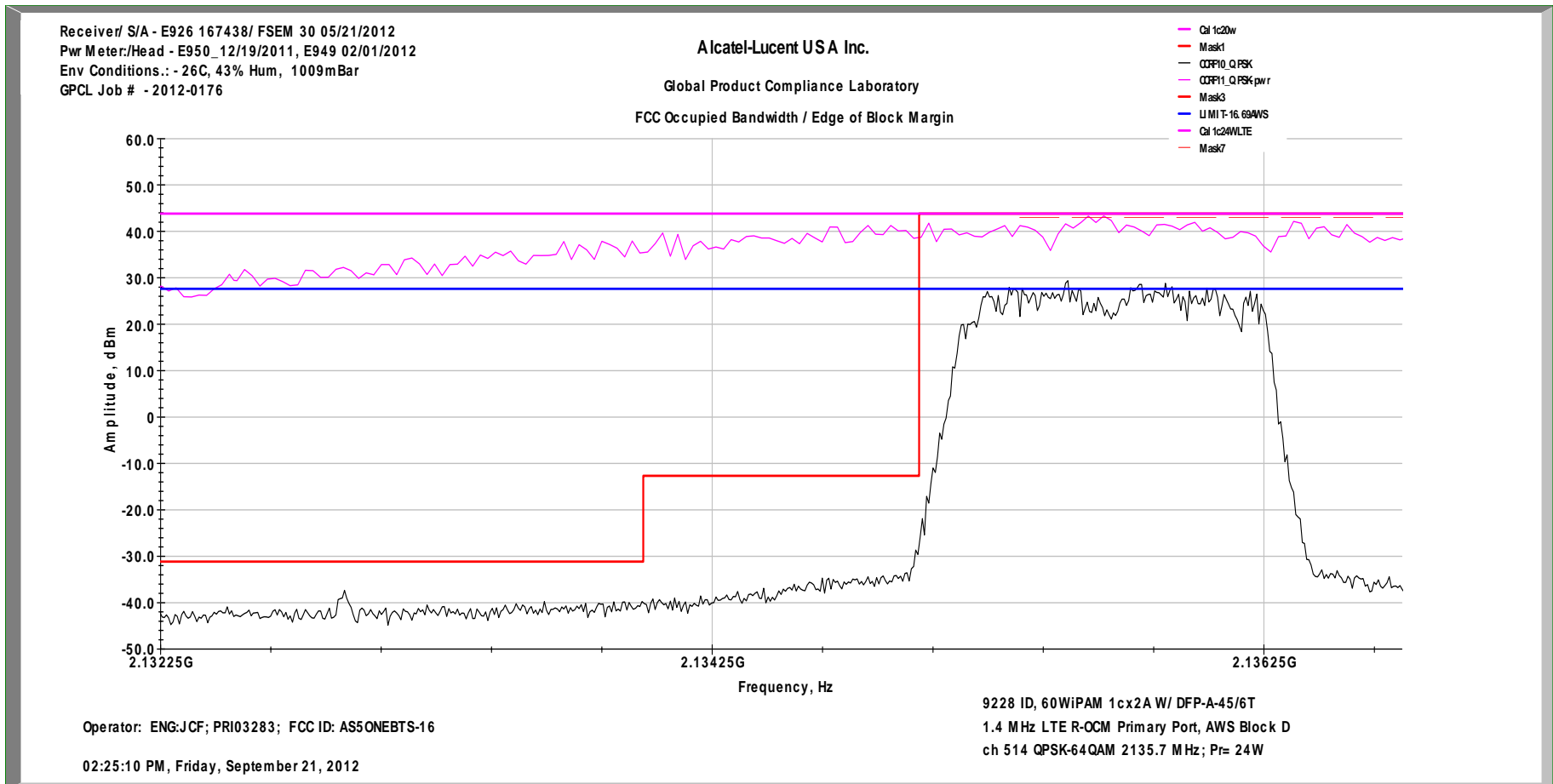
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch D-514 1cx2A 24.2W/c QPSK Primary Tx1



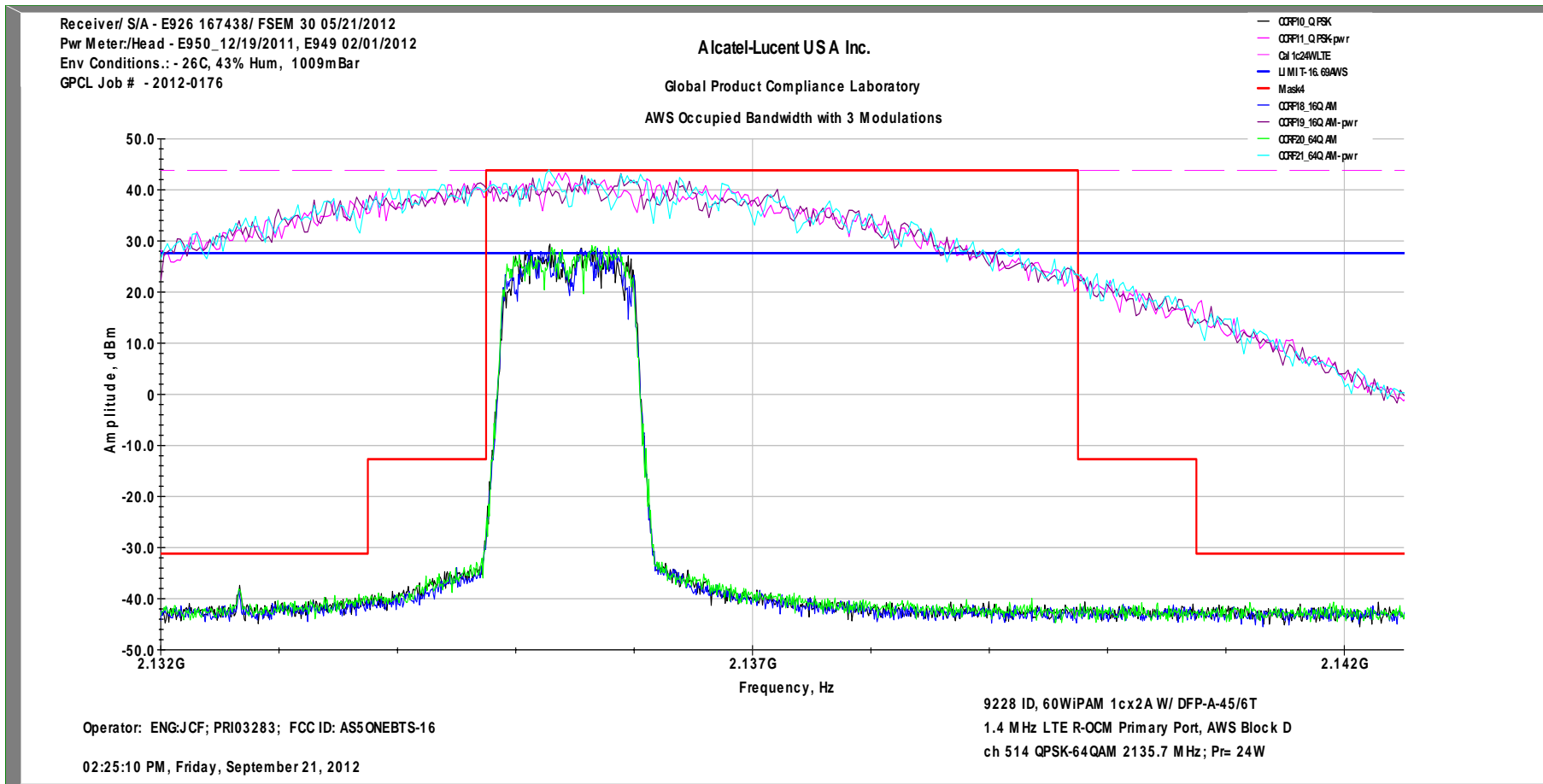
In-Band Intermodulation Graph AWS 1.4 MHz Ch D-514 1cx2A 24.2W/c QPSK Primary Tx1



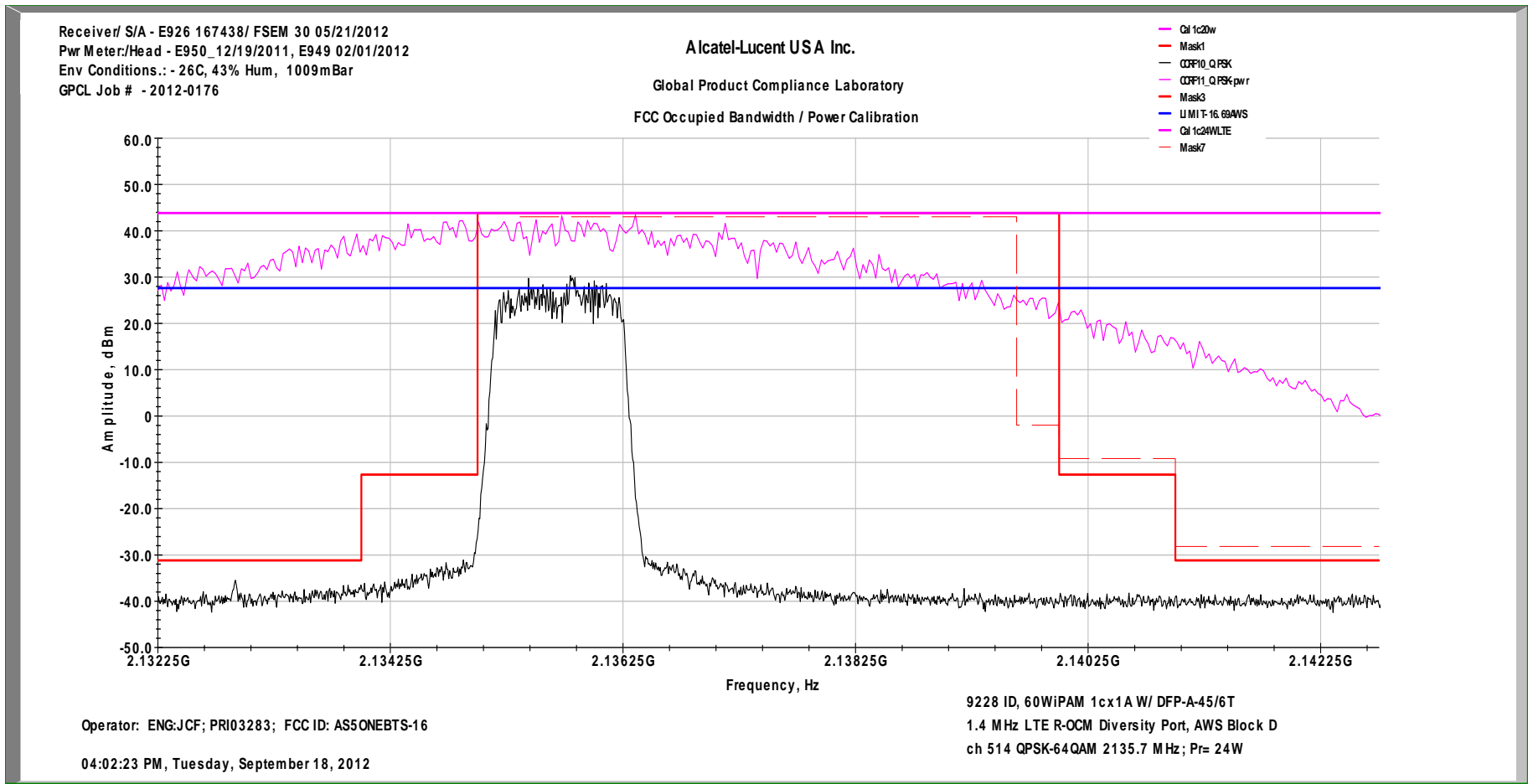
FCC Edge of Block Margin AWS 1.4 MHz Ch D-514 1cx2A 24.2W/c QPSK Primary Tx1



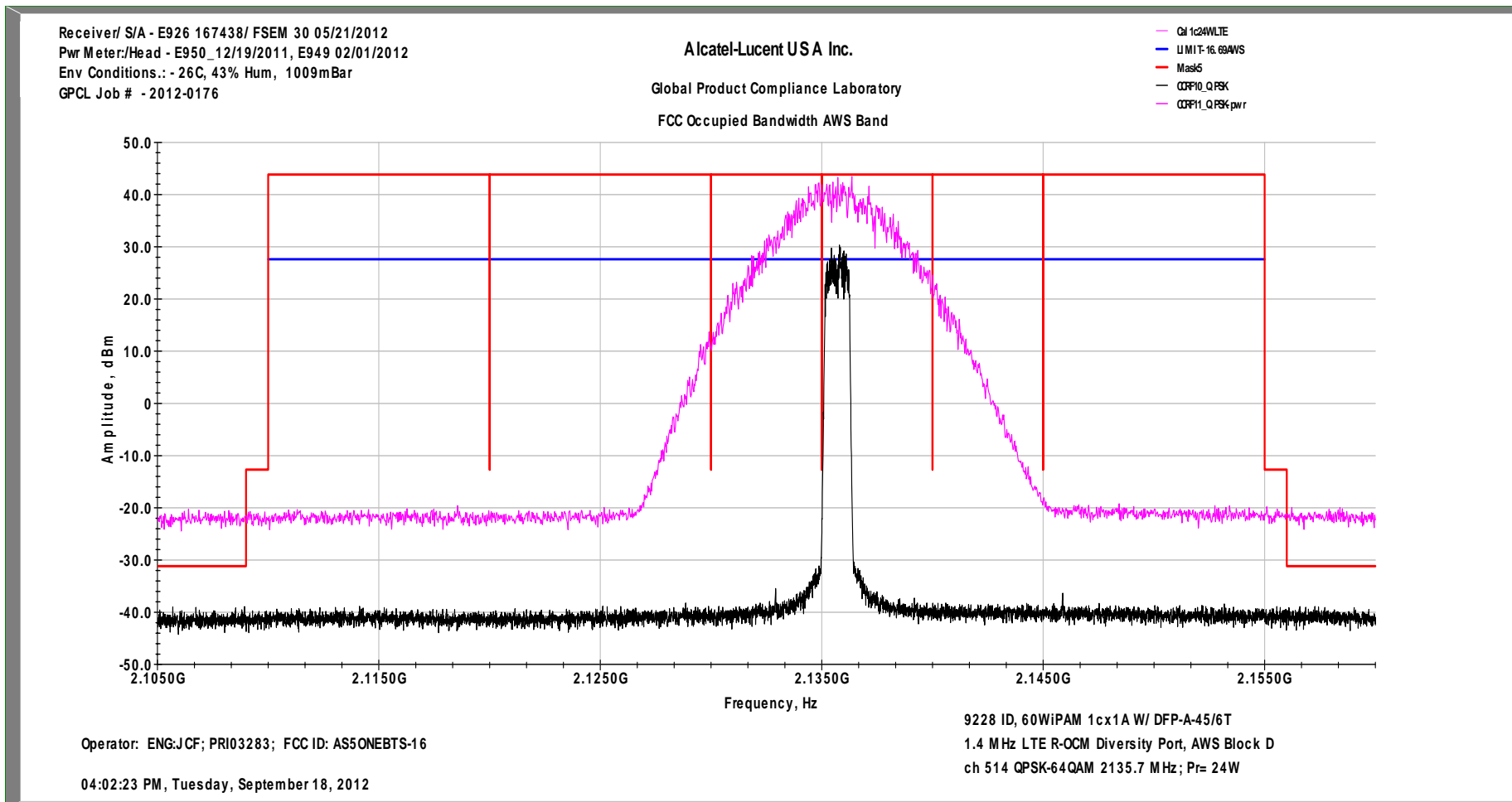
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch D-514 1cx2A 24.2W/c QPSK, 16QAM and 64QAM Primary Tx1



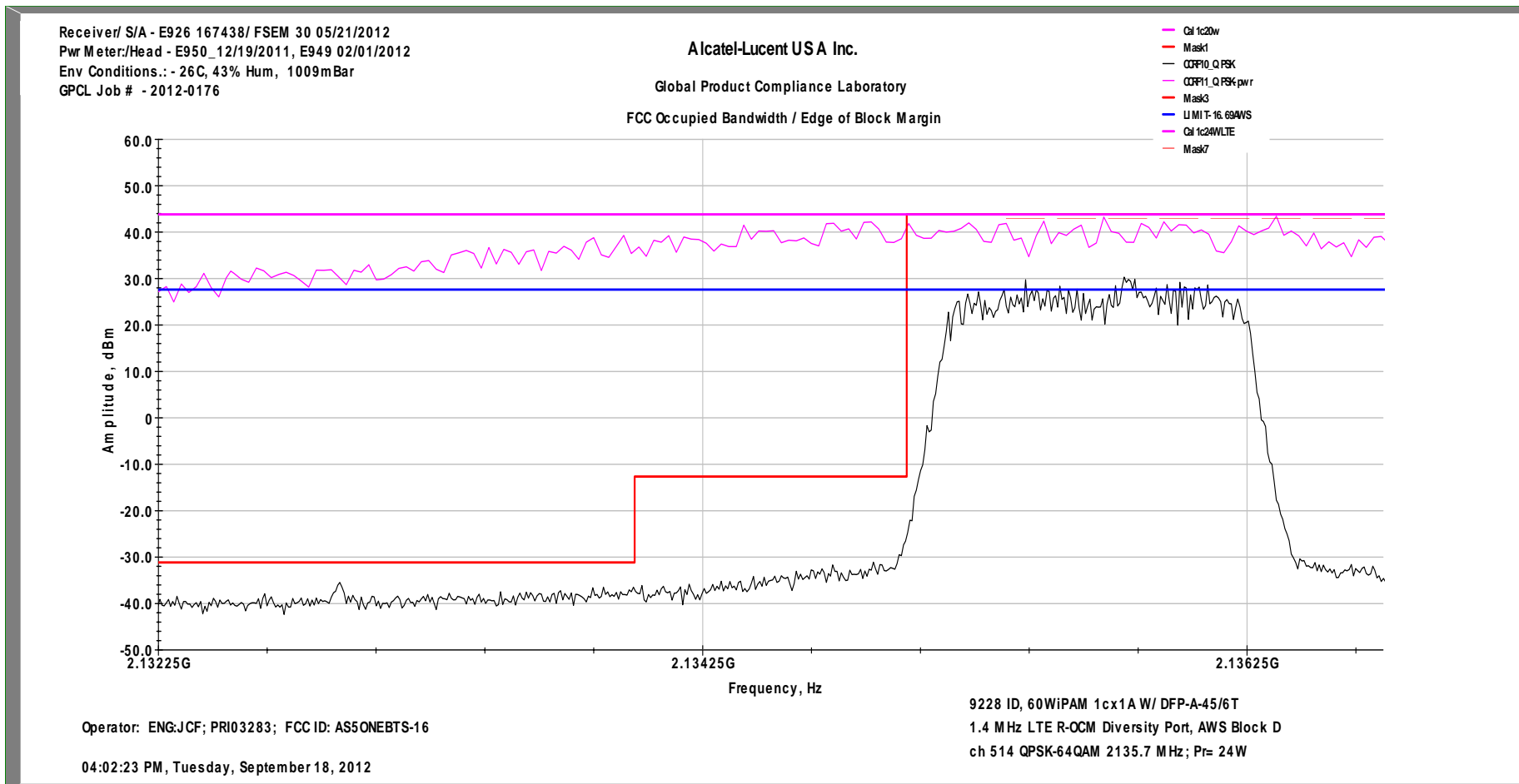
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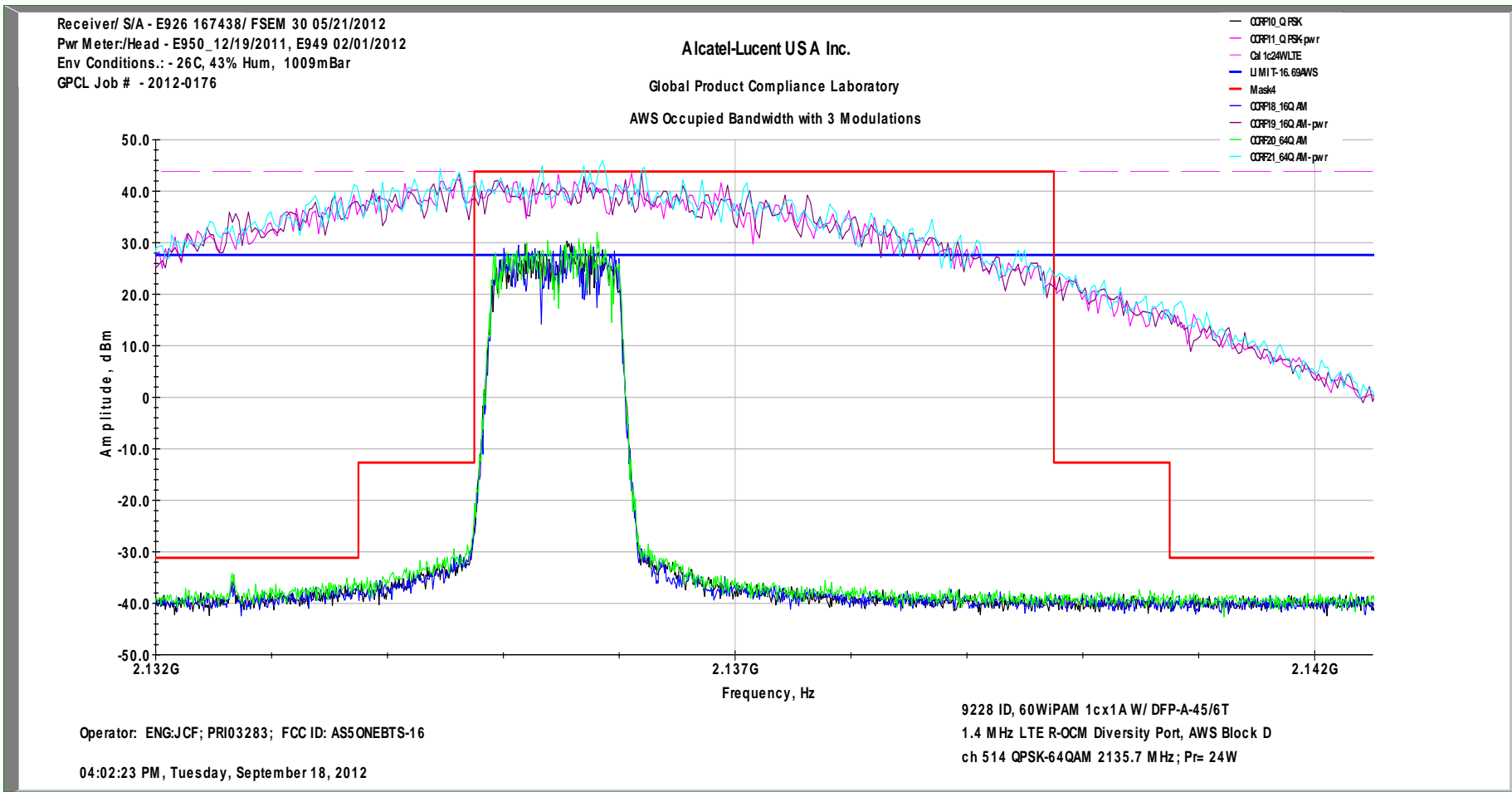
In-Band Intermodulation Graph AWS 1.4 MHz Ch D-514 1cx1A 24.2W/c QPSK Diversity Tx2



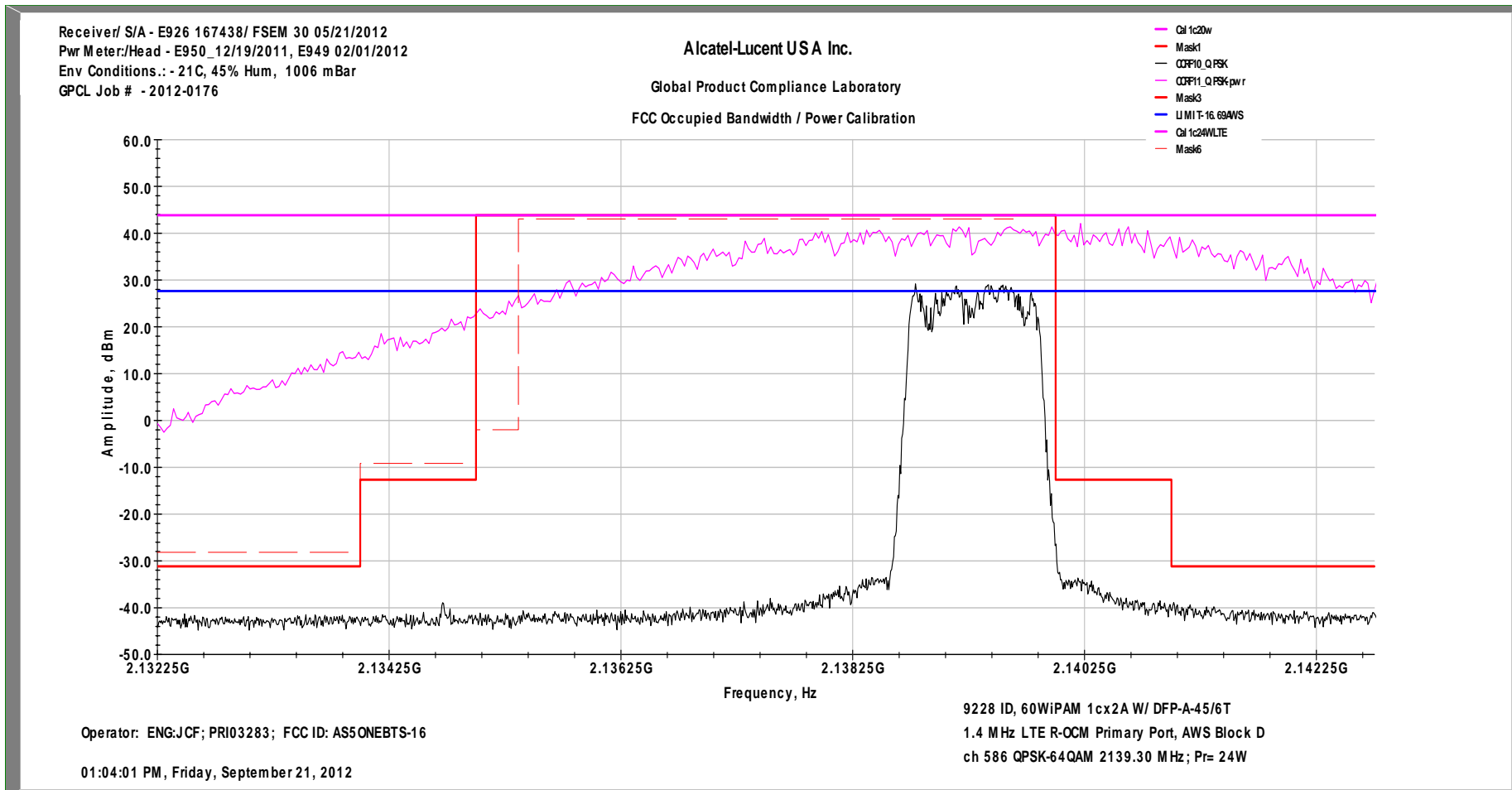
FCC Edge of Block Margin AWS 1.4 MHz Ch D-514 1cx1A 24.2W/c QPSK Diversity Tx2



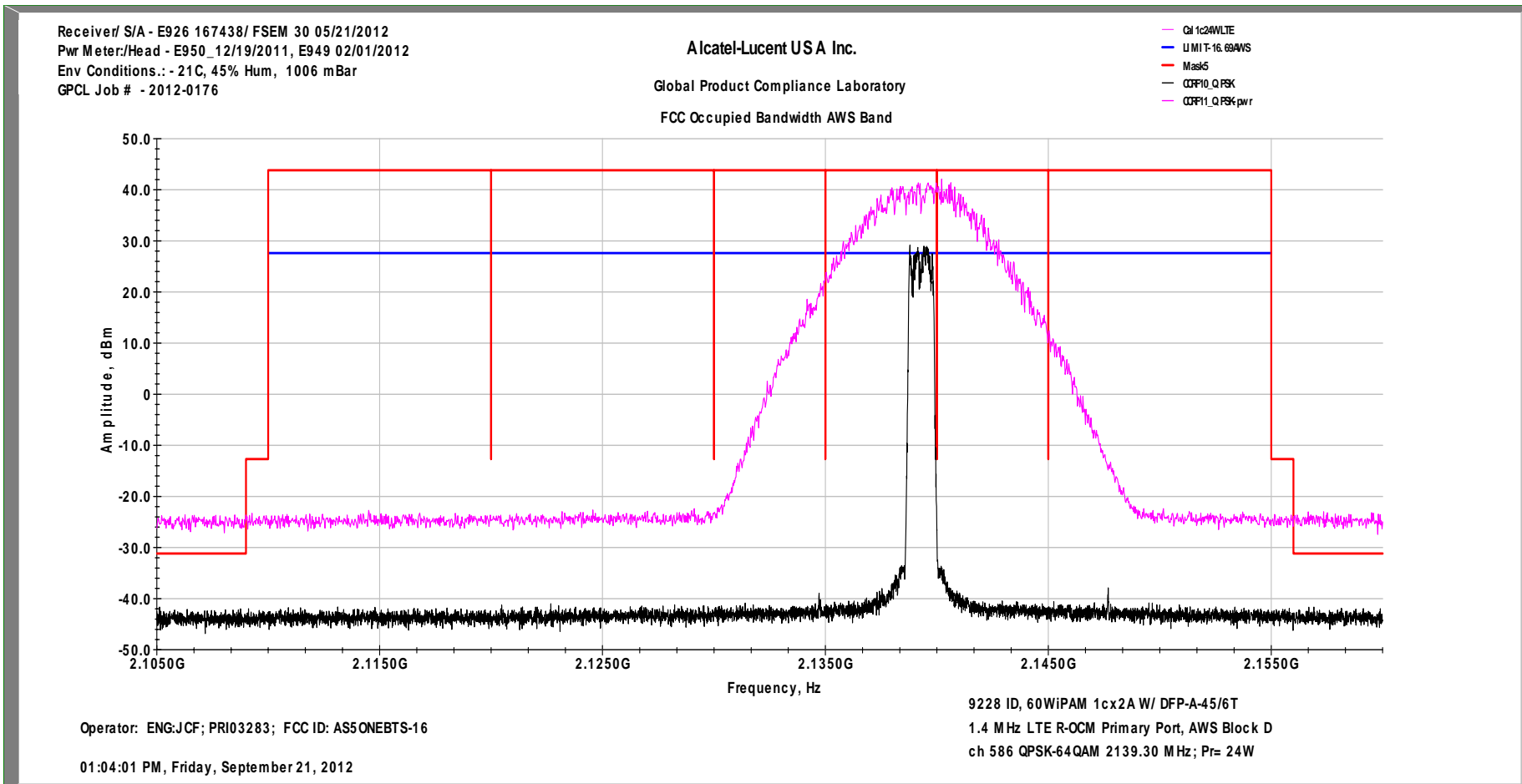
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch D-514 1cx1A 24.2W/c QPSK, 16QAM and 64QAM Diversity Tx2



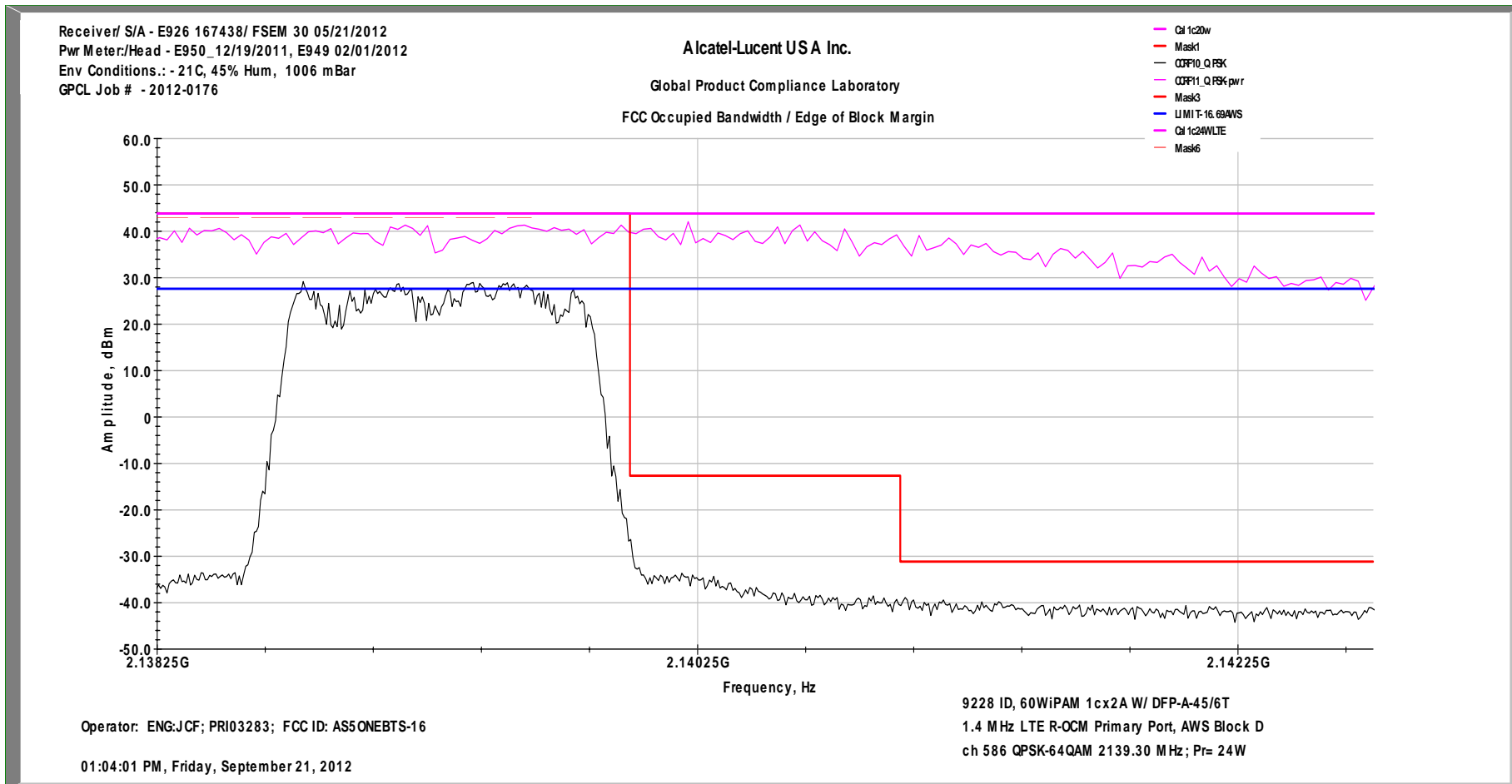
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch D-586 1cx2A 24.2W/c QPSK Primary Tx1



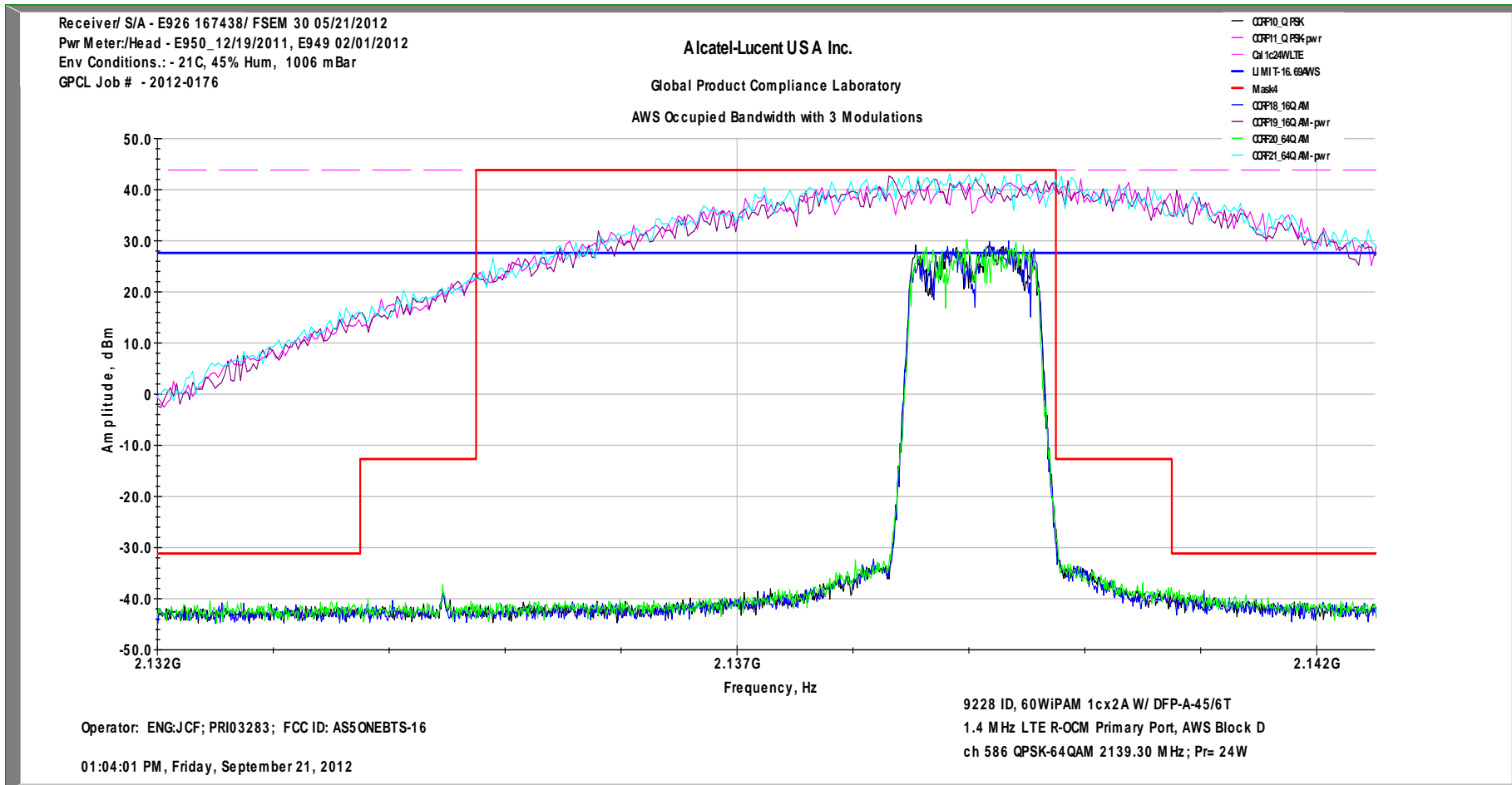
In-Band Intermodulation Graph AWS 1.4 MHz Ch D-586 1cx2A 24.2W/c QPSK Primary Tx1



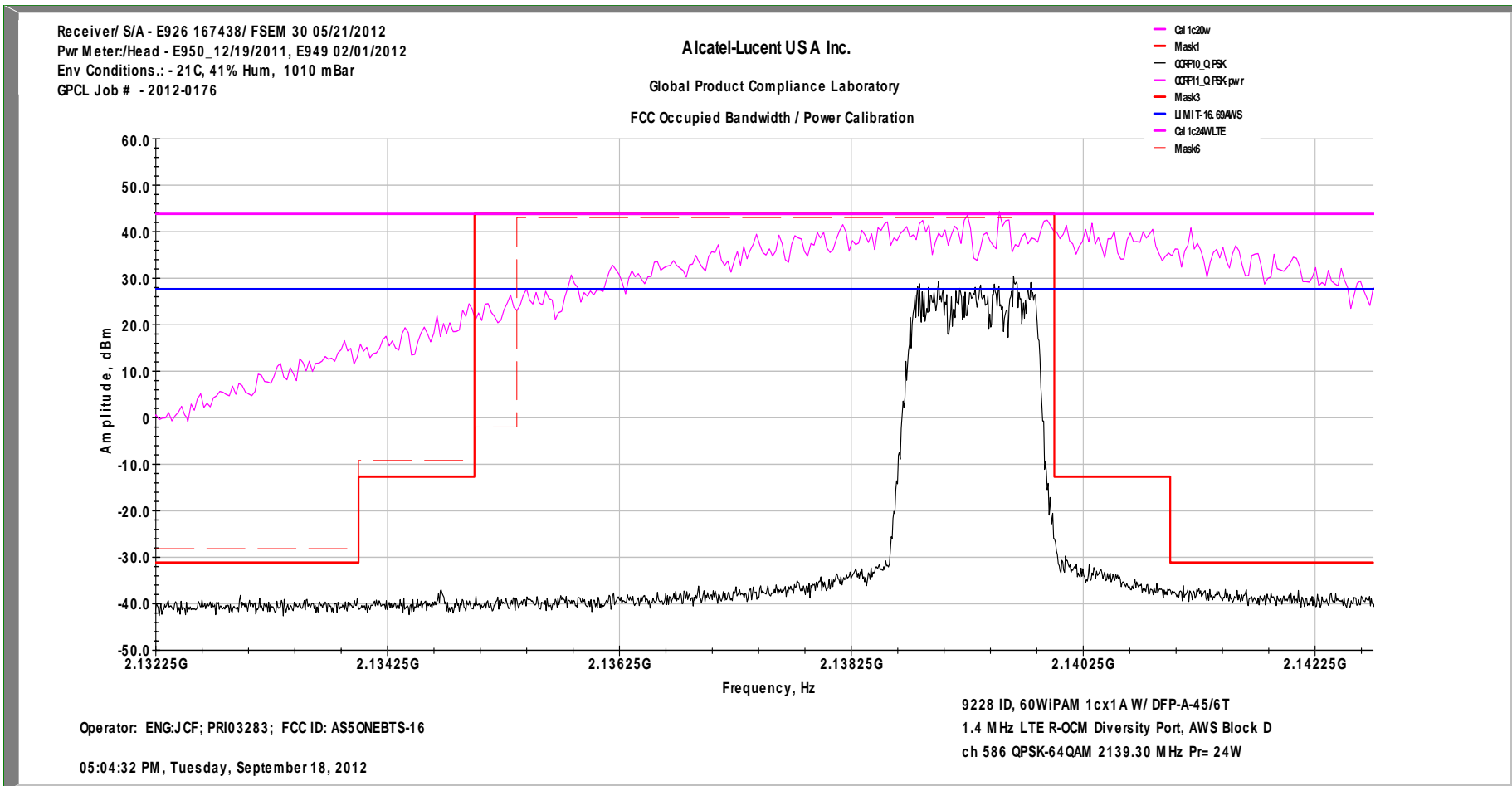
FCC Edge of Block Margin AWS 1.4 MHz Ch D-586 1cx2A 24.2W/c QPSK Primary Tx1



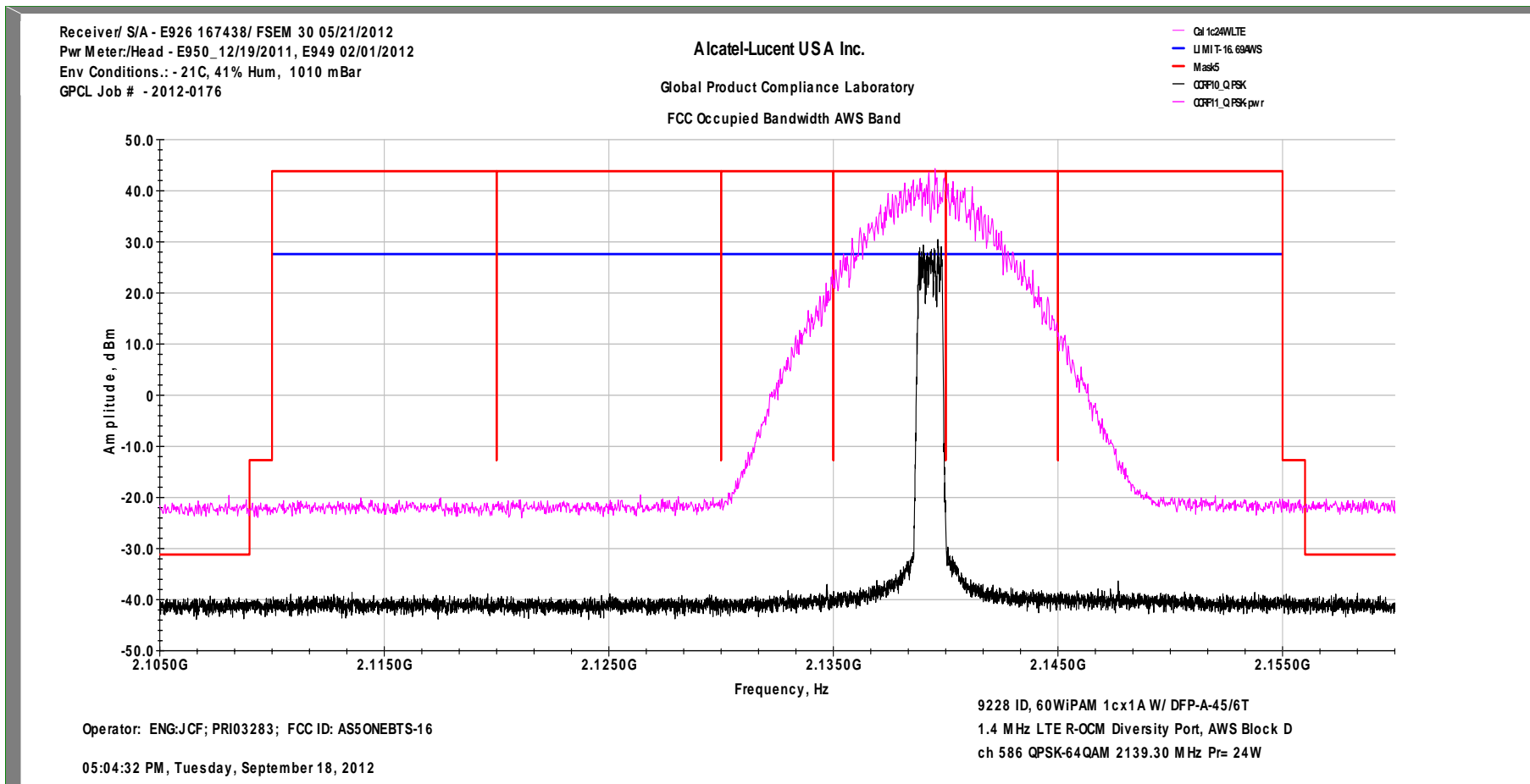
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch D-586 1cx2A 24.2W/c QPSK, 16QAM and 64QAM Primary Tx1



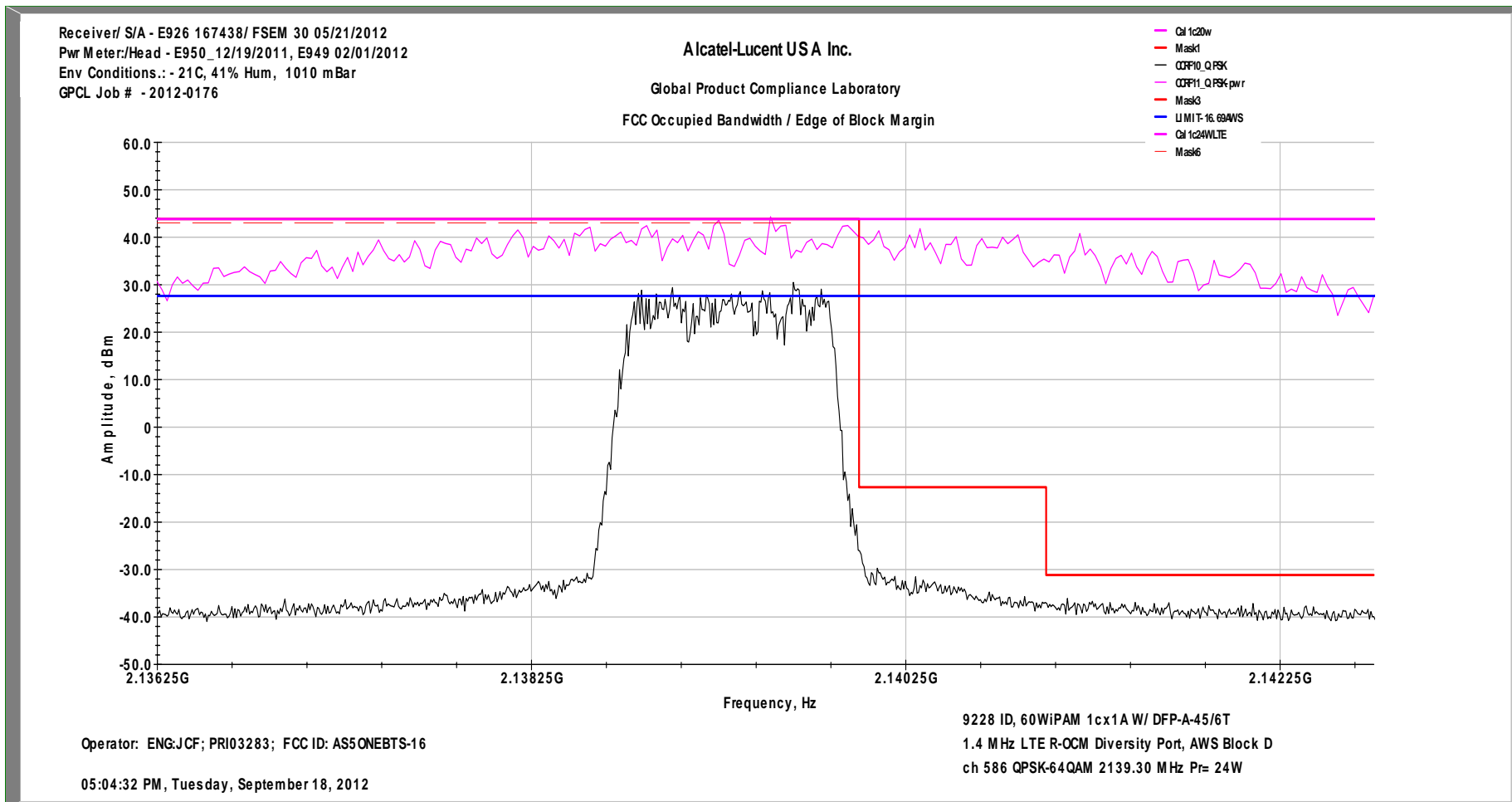
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch D-586 1cx1A 24.2W/c QPSK Diversity Tx2



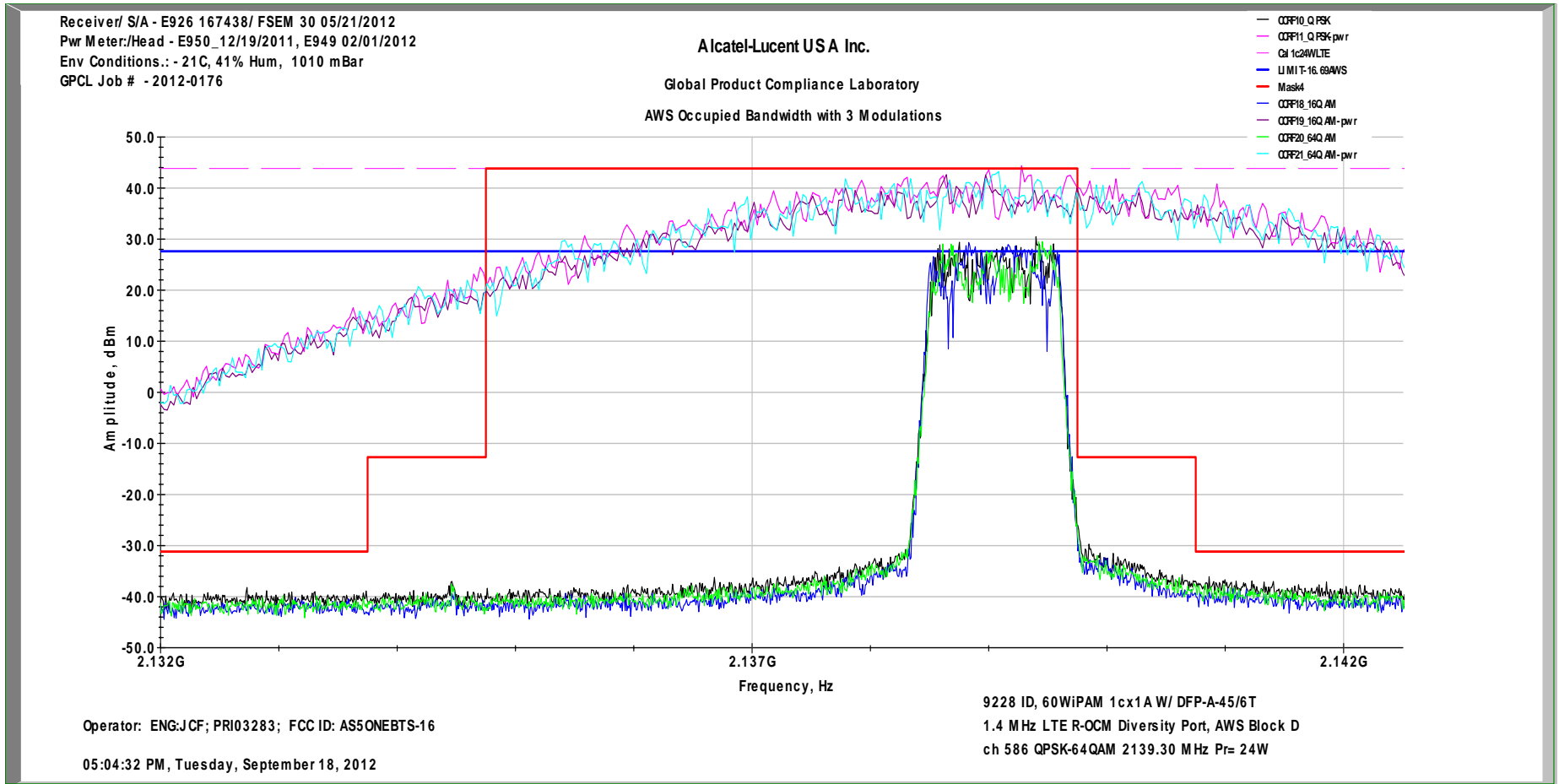
In-Band Intermodulation Graph AWS 1.4 MHz Ch D-586 1cx1A 24.2W/c QPSK Diversity Tx2



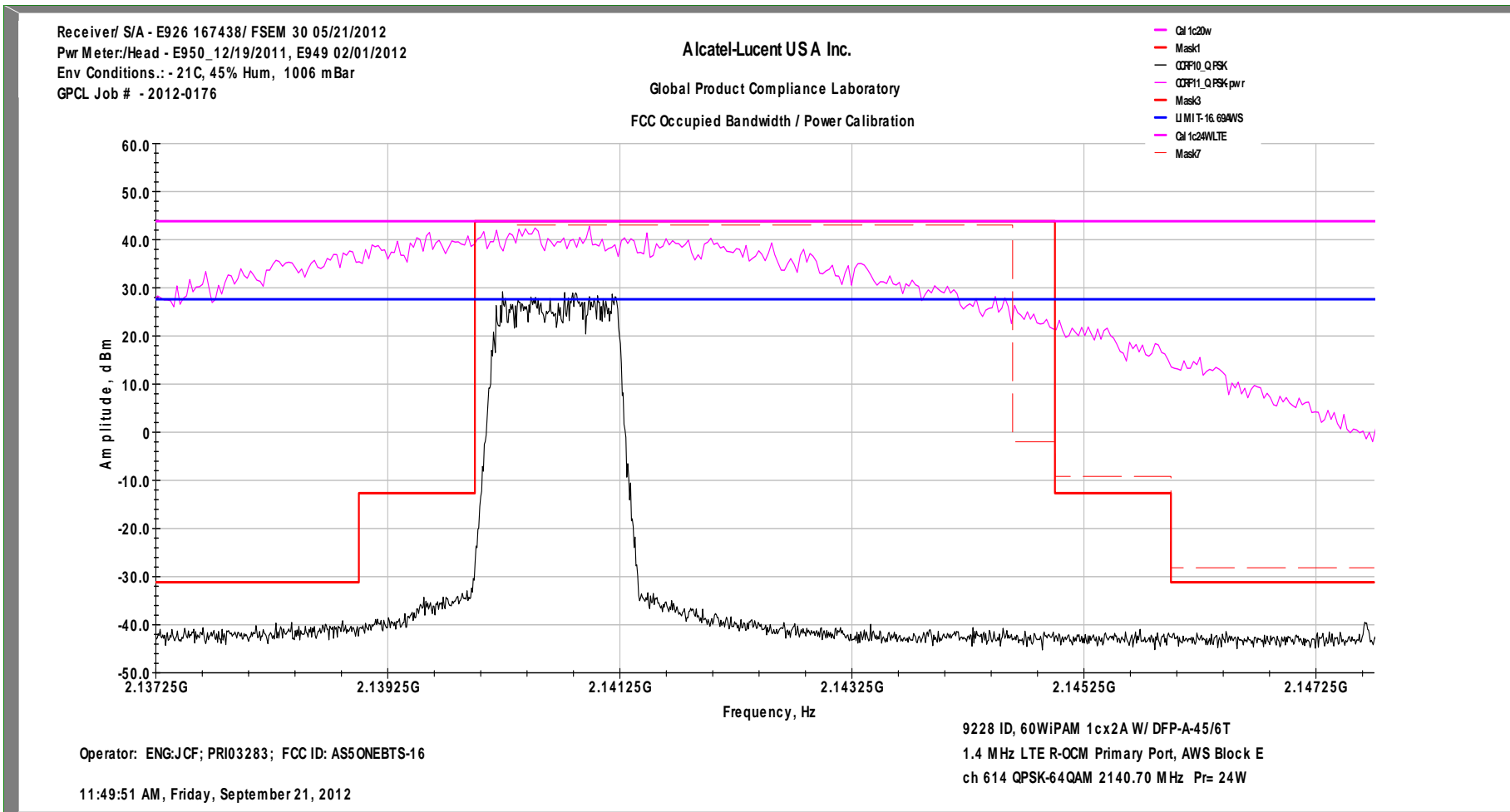
FCC Edge of Block Margin AWS 1.4 MHz Ch D-586 1cx1A 24.2W/c QPSK Diversity Tx2



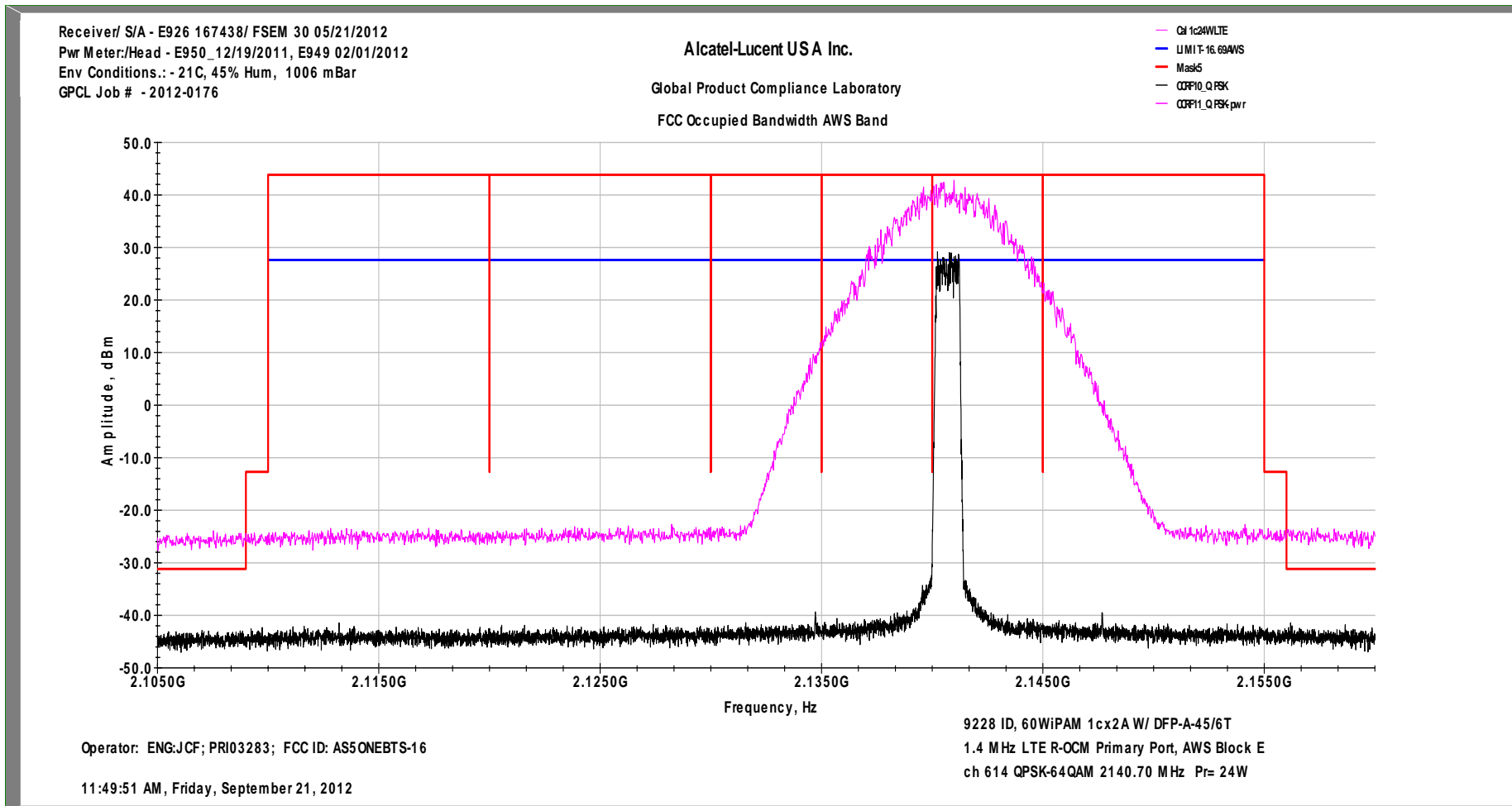
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch D-586 1cx1A 24.2W/c QPSK, 16QAM and 64QAM Diversity Tx2



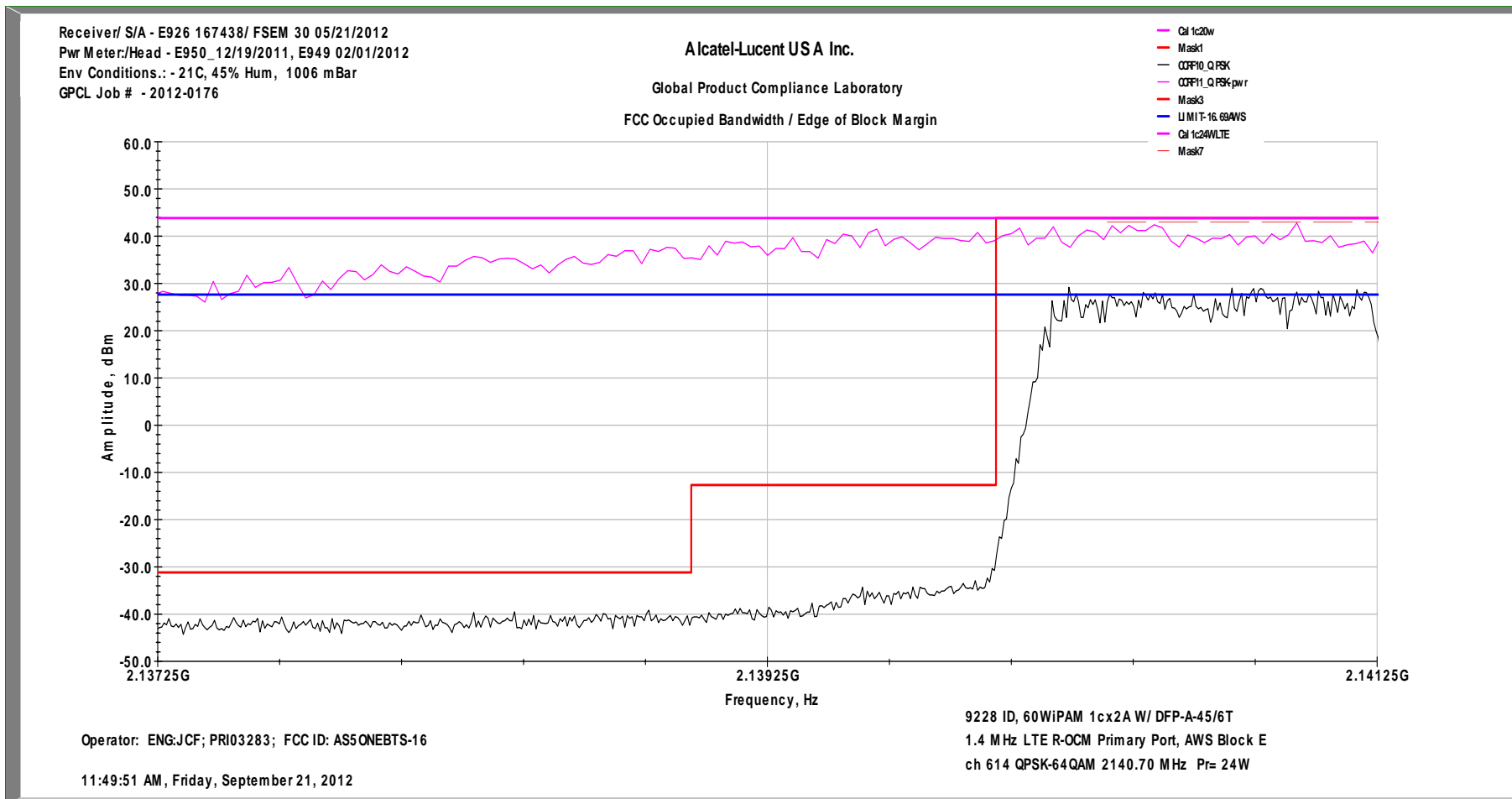
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch E-614 1cx2A 24.2W/c QPSK Primary Tx1



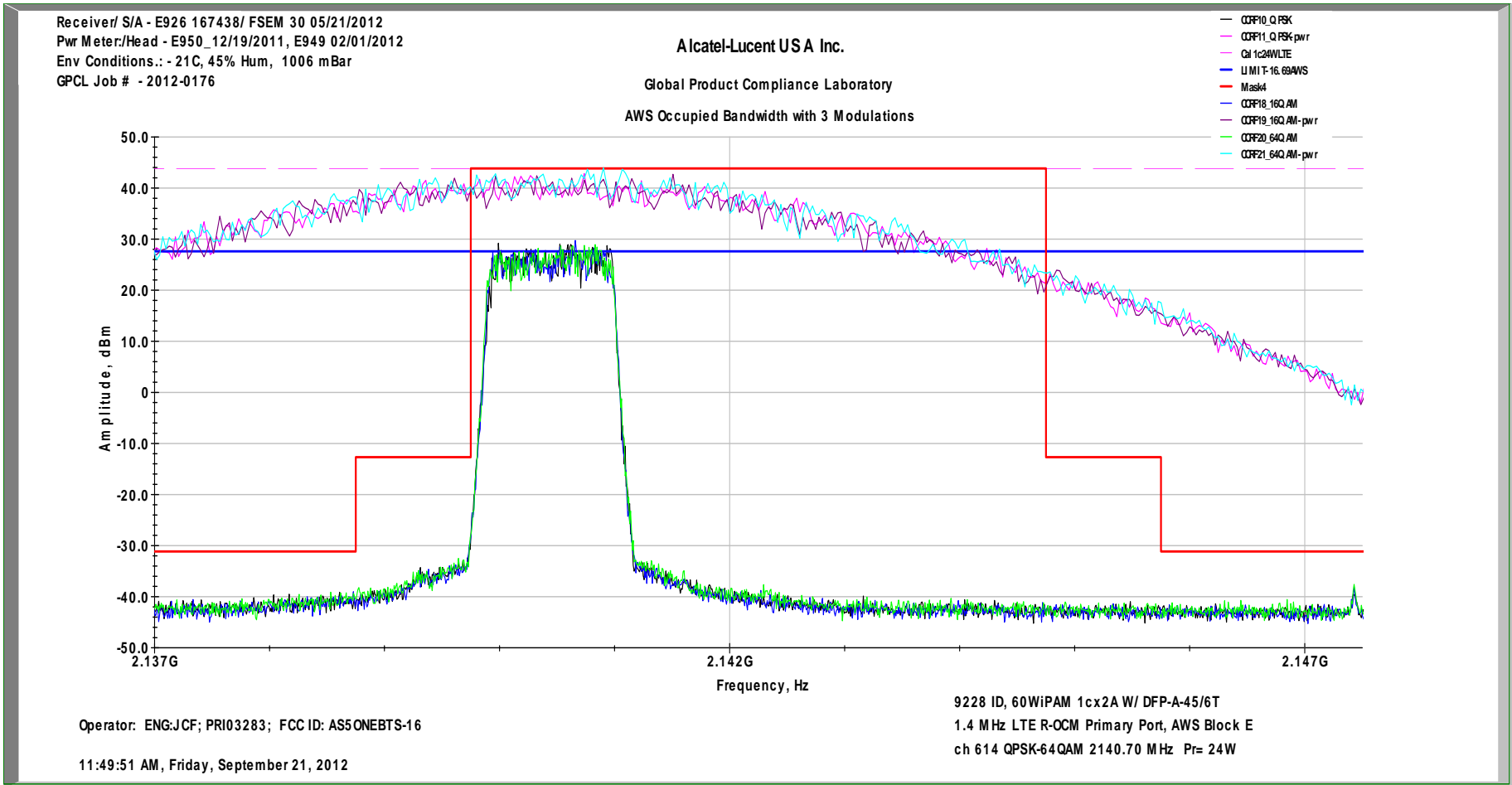
In-Band Intermodulation Graph AWS 1.4 MHz Ch E-614 1cx2A 24.2W/c QPSK Primary Tx1



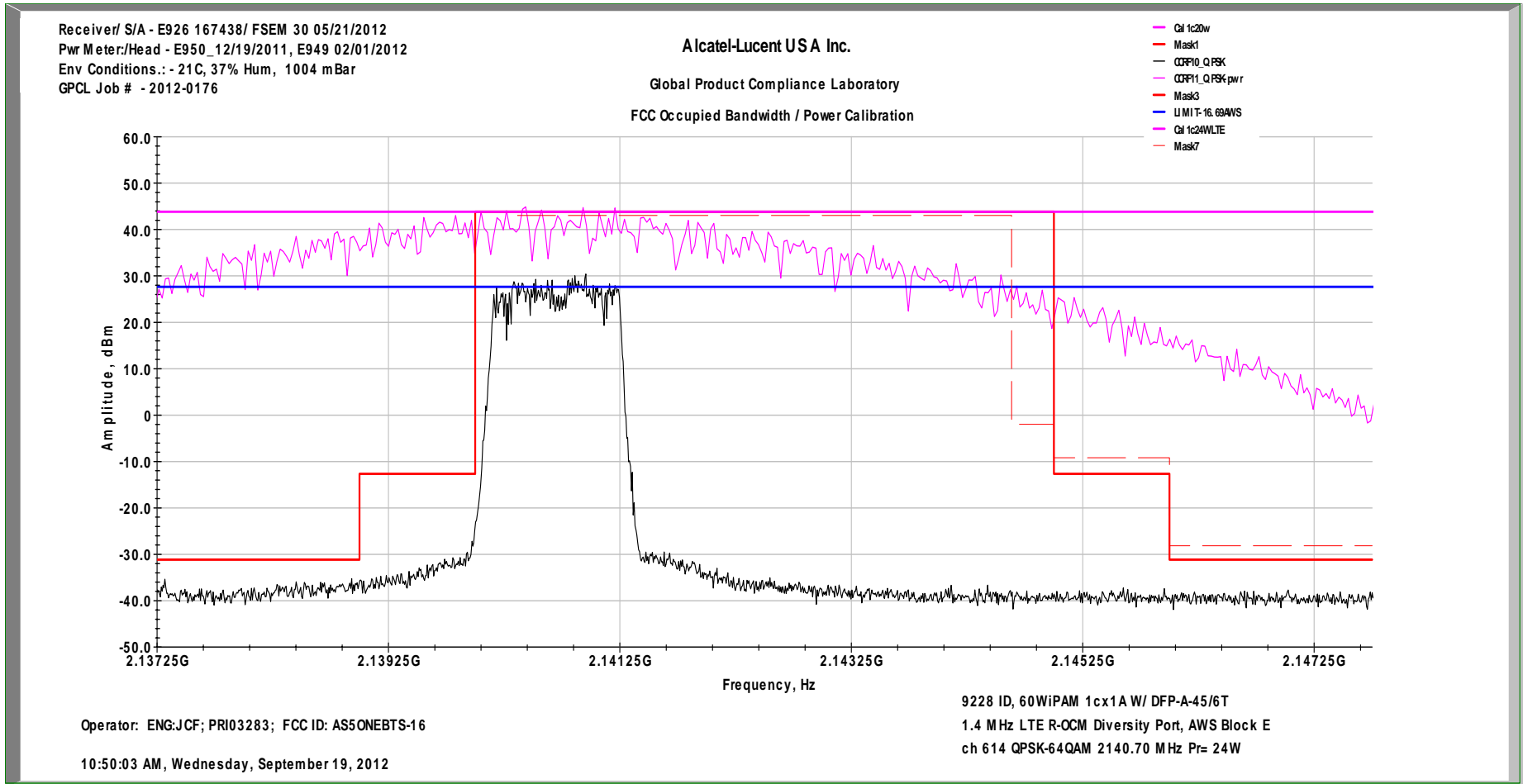
FCC Edge of Block Margin AWS 1.4 MHz Ch E-614 1cx2A 24.2W/c QPSK Primary Tx1



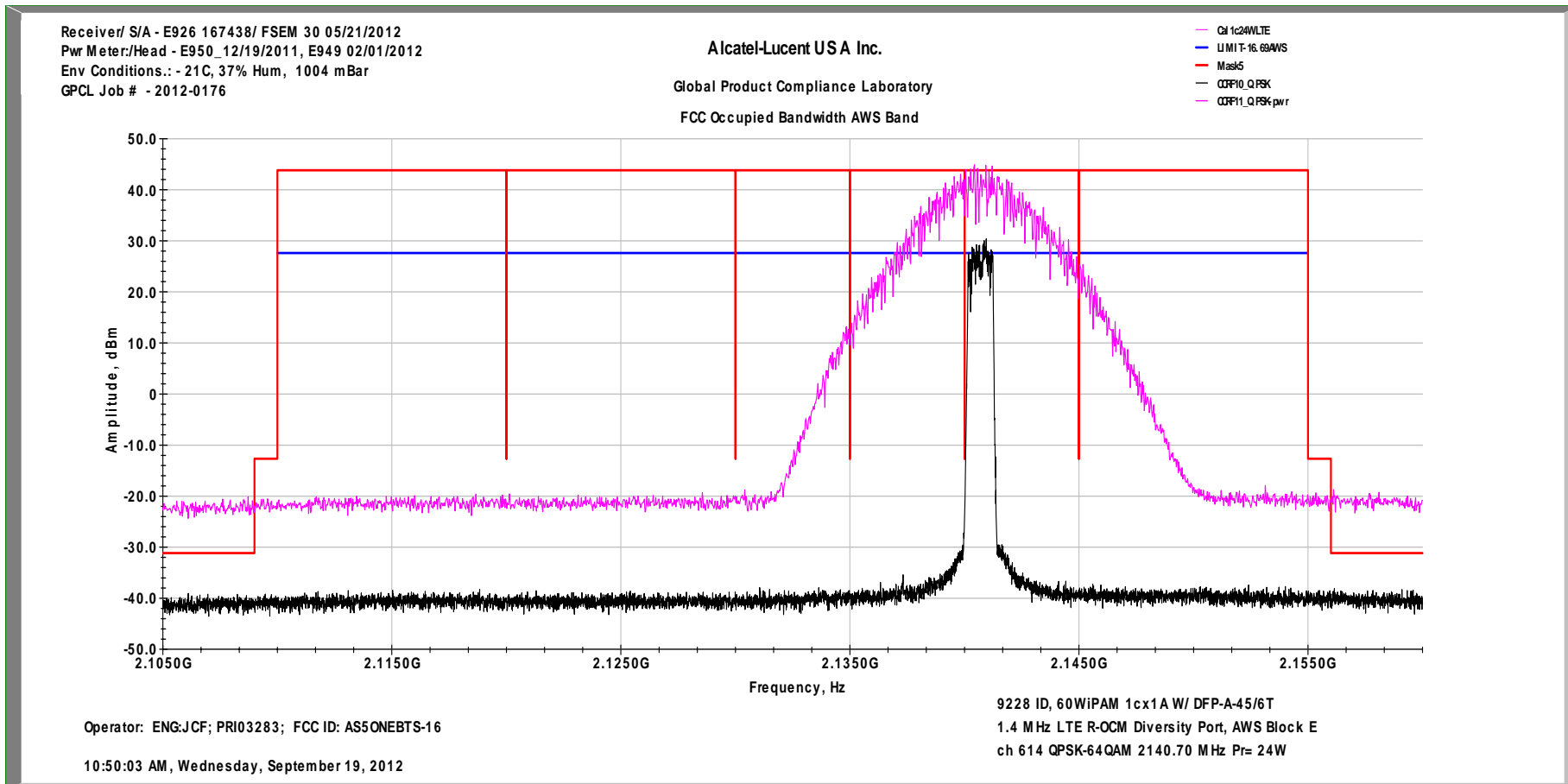
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch E-614 1cx2A 24.2W/c QPSK, 16QAM and 64QAM Primary Tx1



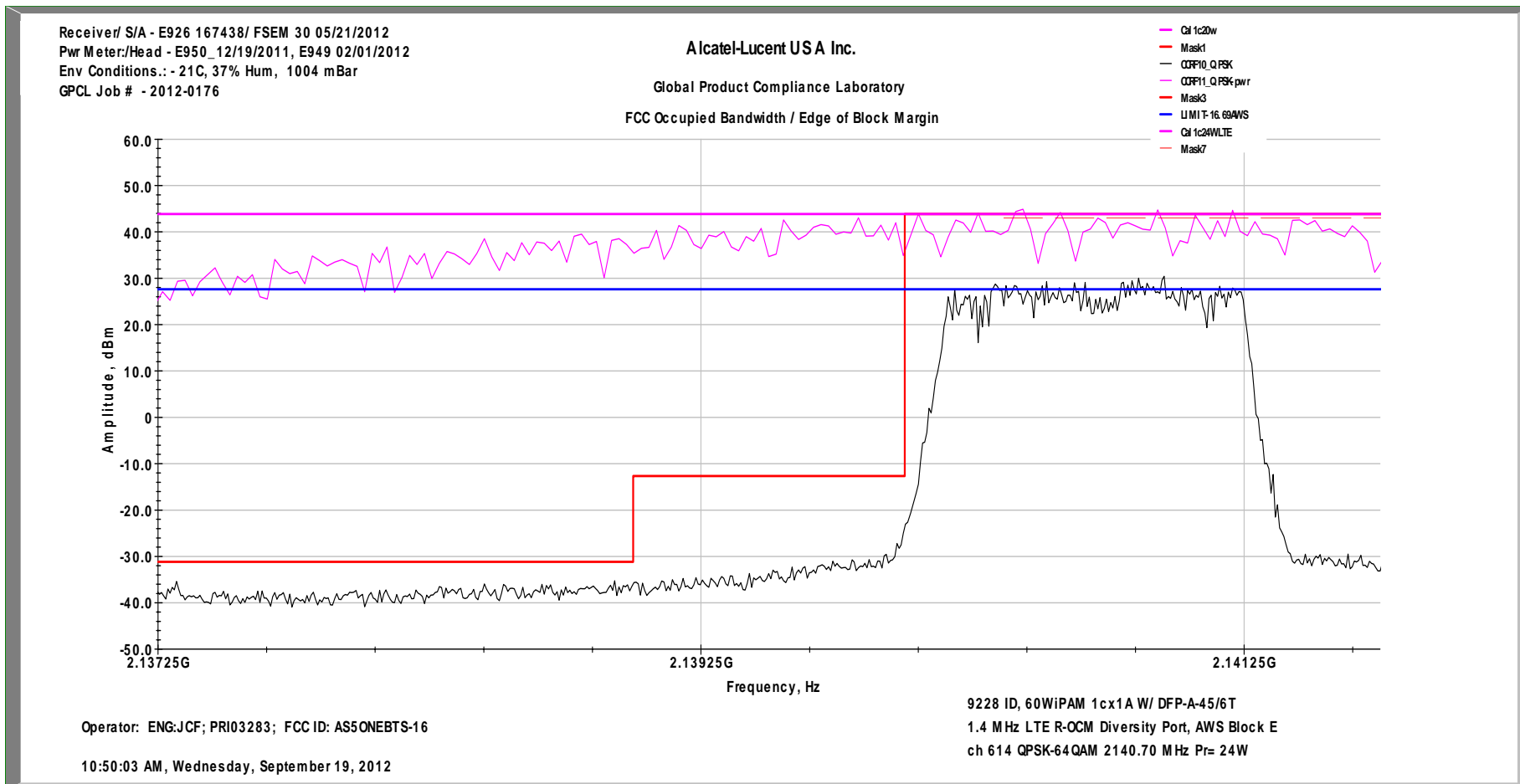
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch E-614 1cx1A 24.2W/c QPSK Diversity Tx2



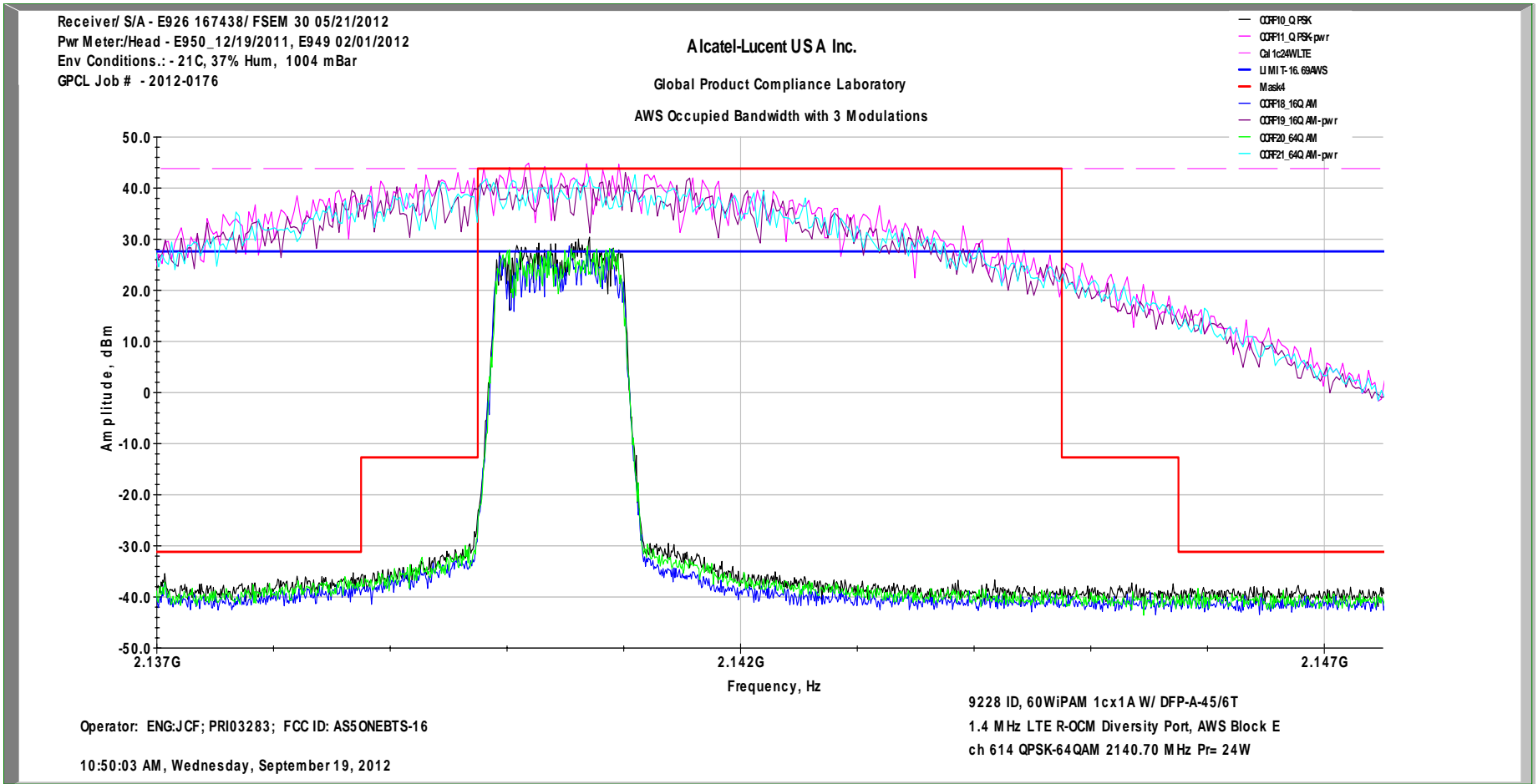
In-Band Intermodulation Graph AWS 1.4 MHz Ch E-614 1cx1A 24.2W/c QPSK Diversity Tx2



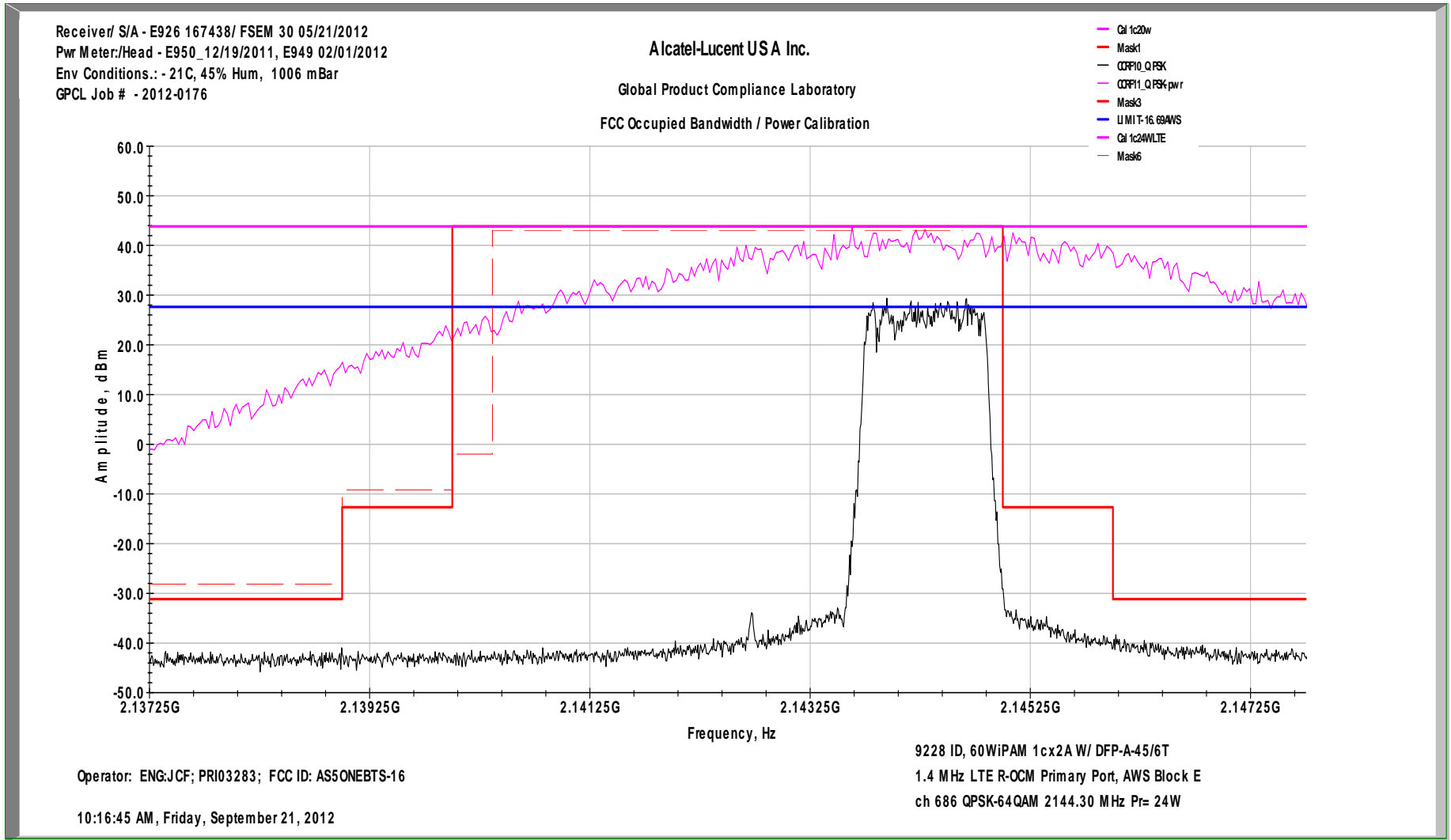
FCC Edge of Block Margin AWS 1.4 MHz Ch E-614 1cx1A 24.2W/c QPSK Diversity Tx2



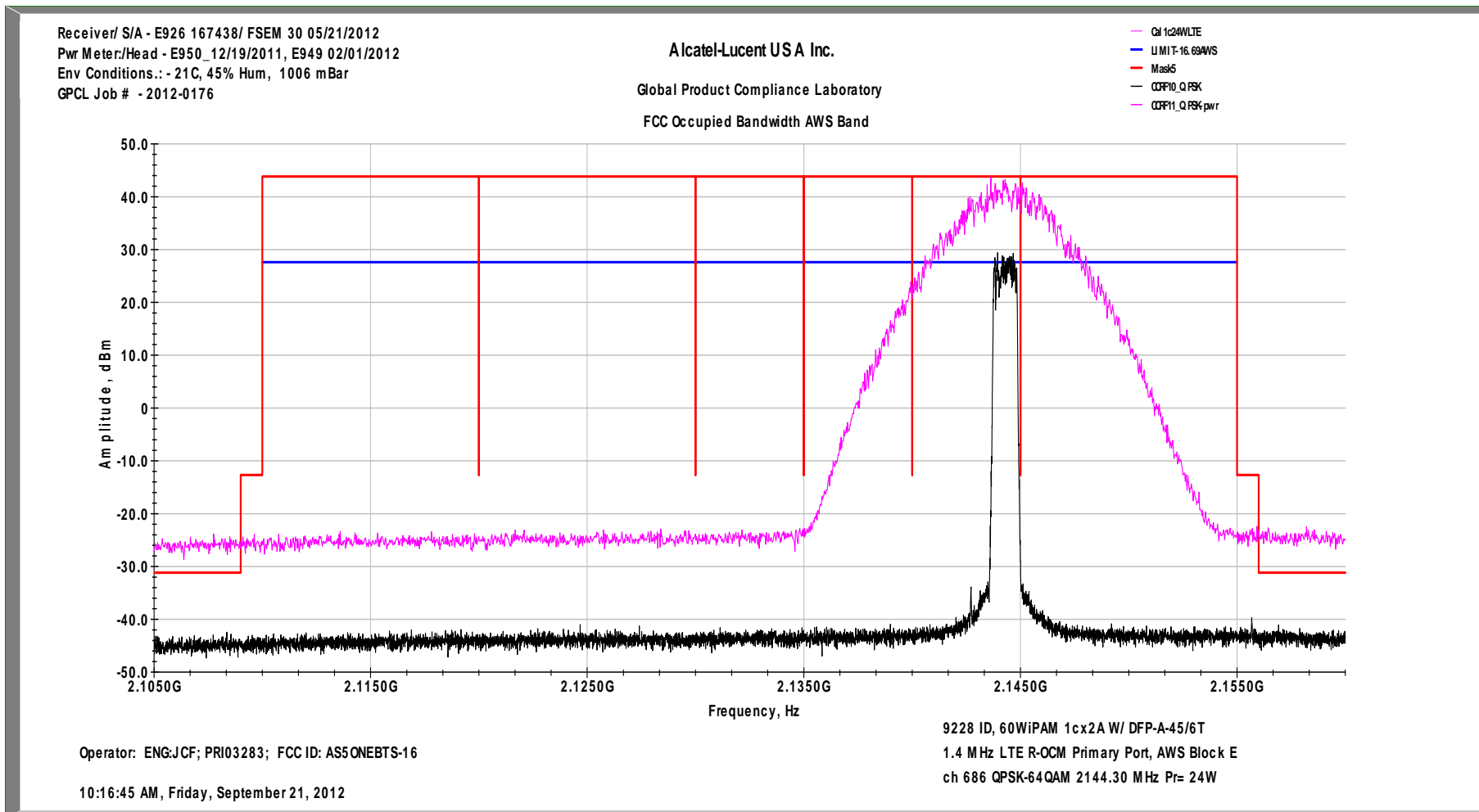
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch E-614 1cx1A 24.2W/c QPSK, 16QAM and 64QAM Diversity Tx2



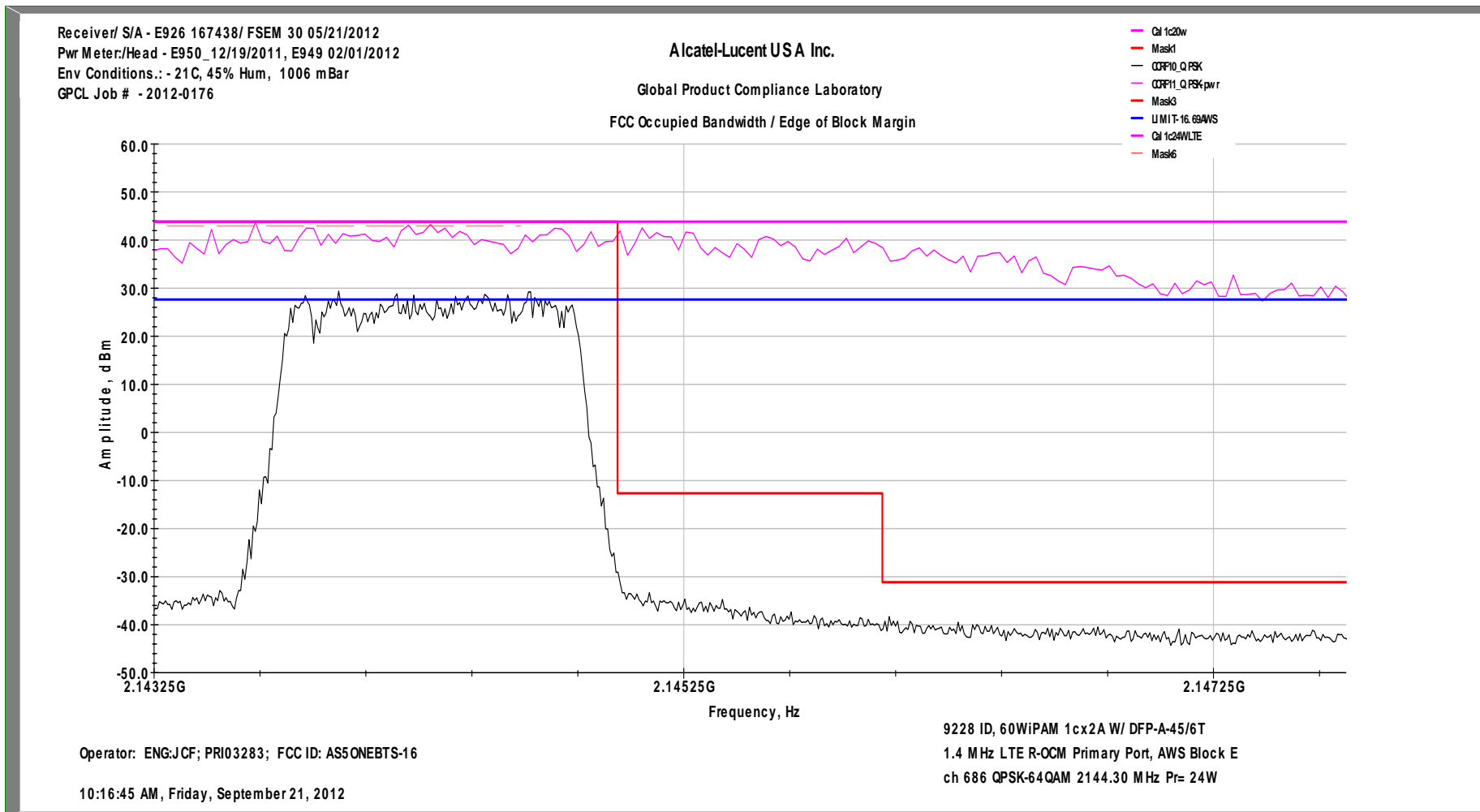
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch E-686 1cx2A 24.2W/c QPSK Primary Tx1



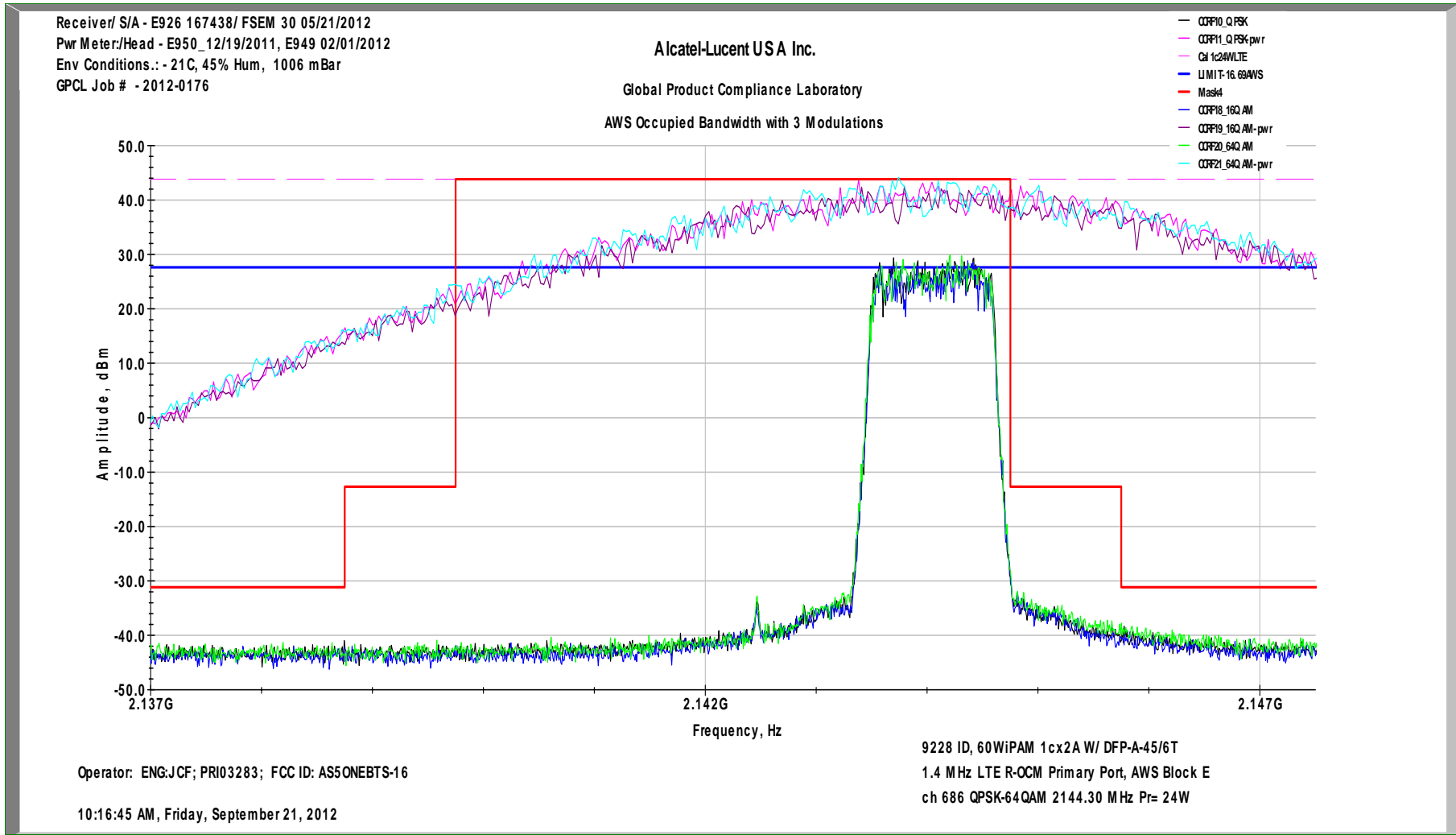
In-Band Intermodulation Graph AWS 1.4 MHz Ch E-686 1cx2A 24.2W/c QPSK Primary Tx1



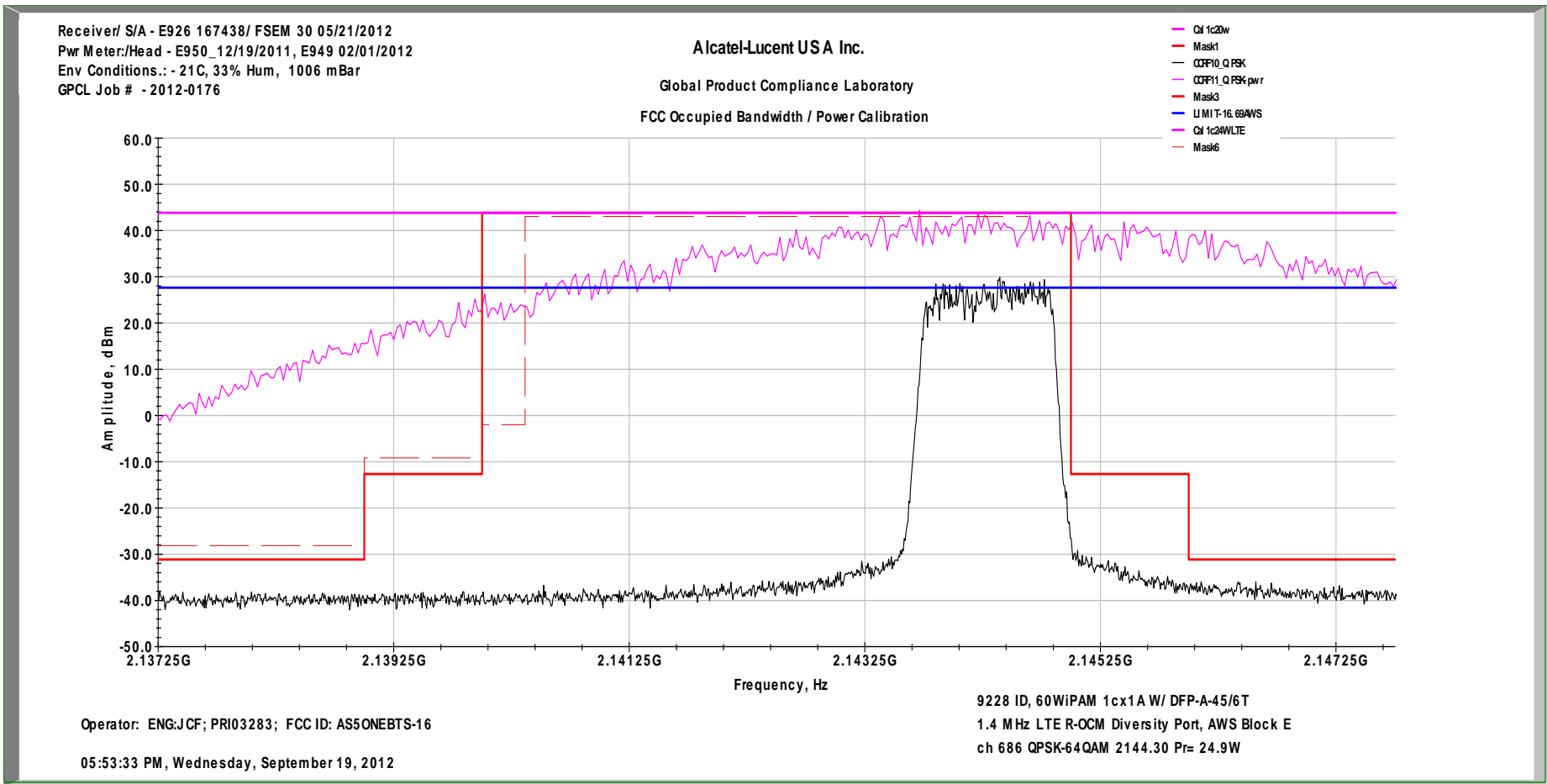
FCC Edge of Block Margin AWS 1.4 MHz Ch E-686 1cx2A 24.2W/c QPSK Primary Tx1



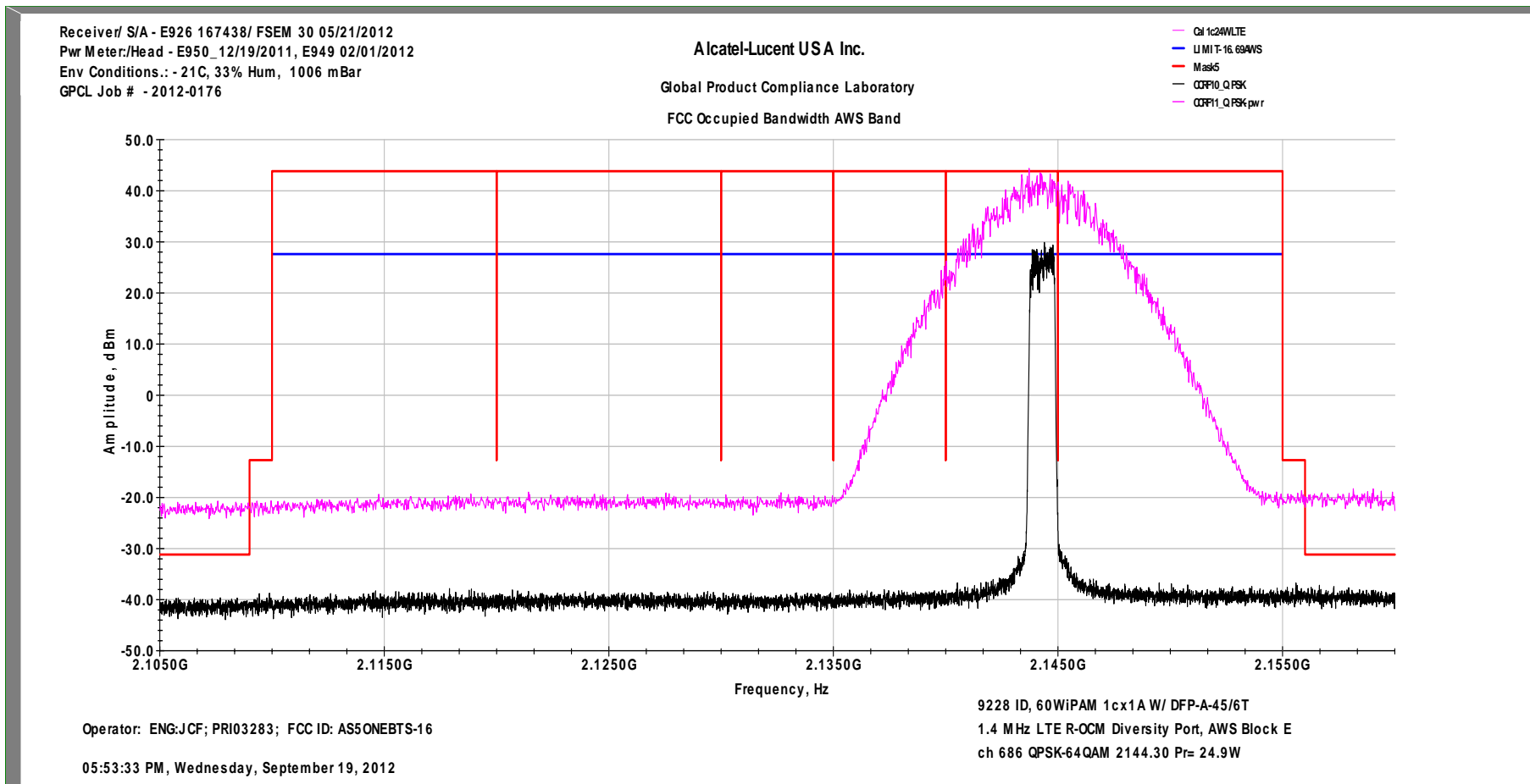
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch E-686 1cx2A 24.2W/c QPSK, 16QAM and 64QAM Primary Tx1



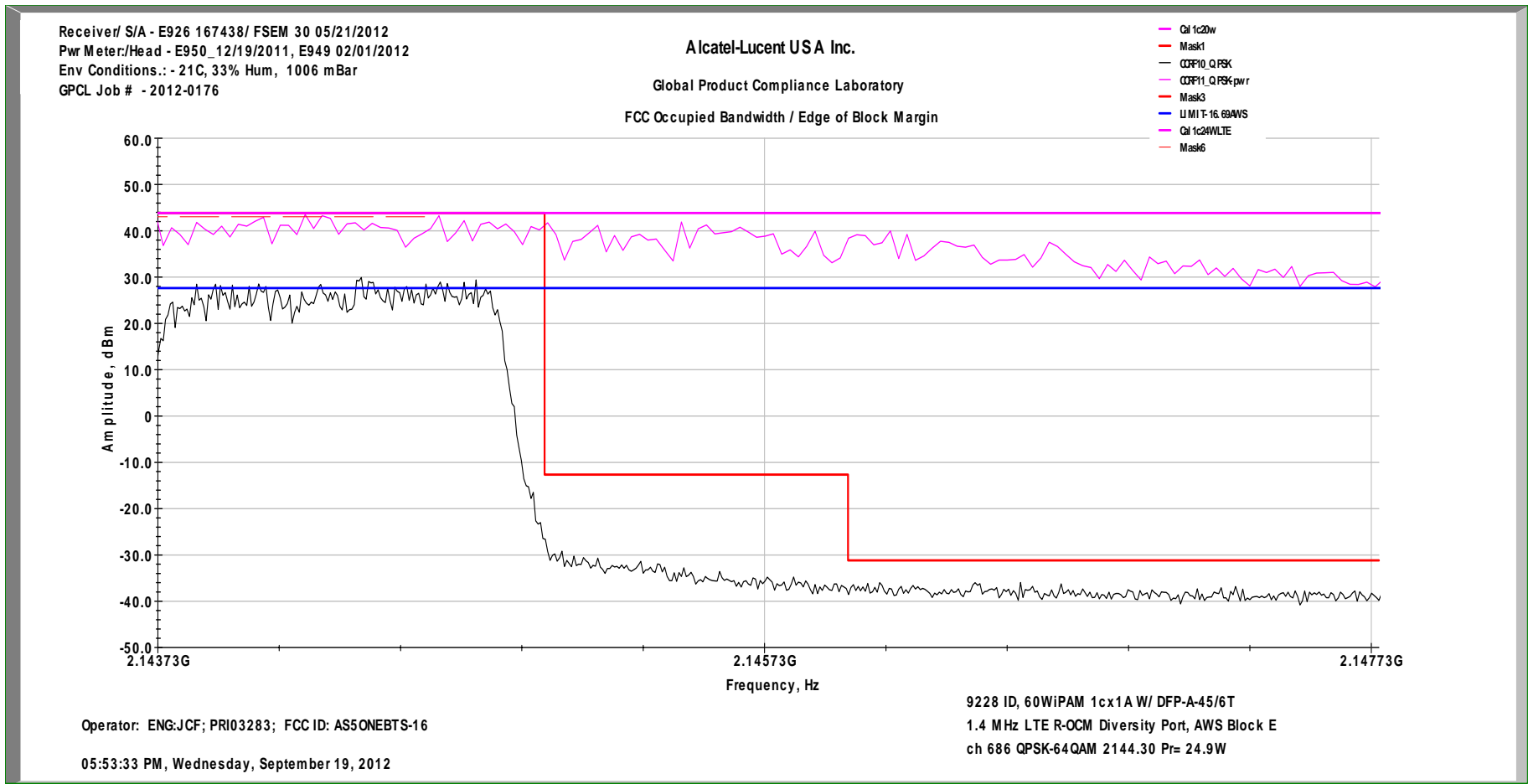
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch E-686 1cx1A 24.2W/c QPSK Diversity Tx2



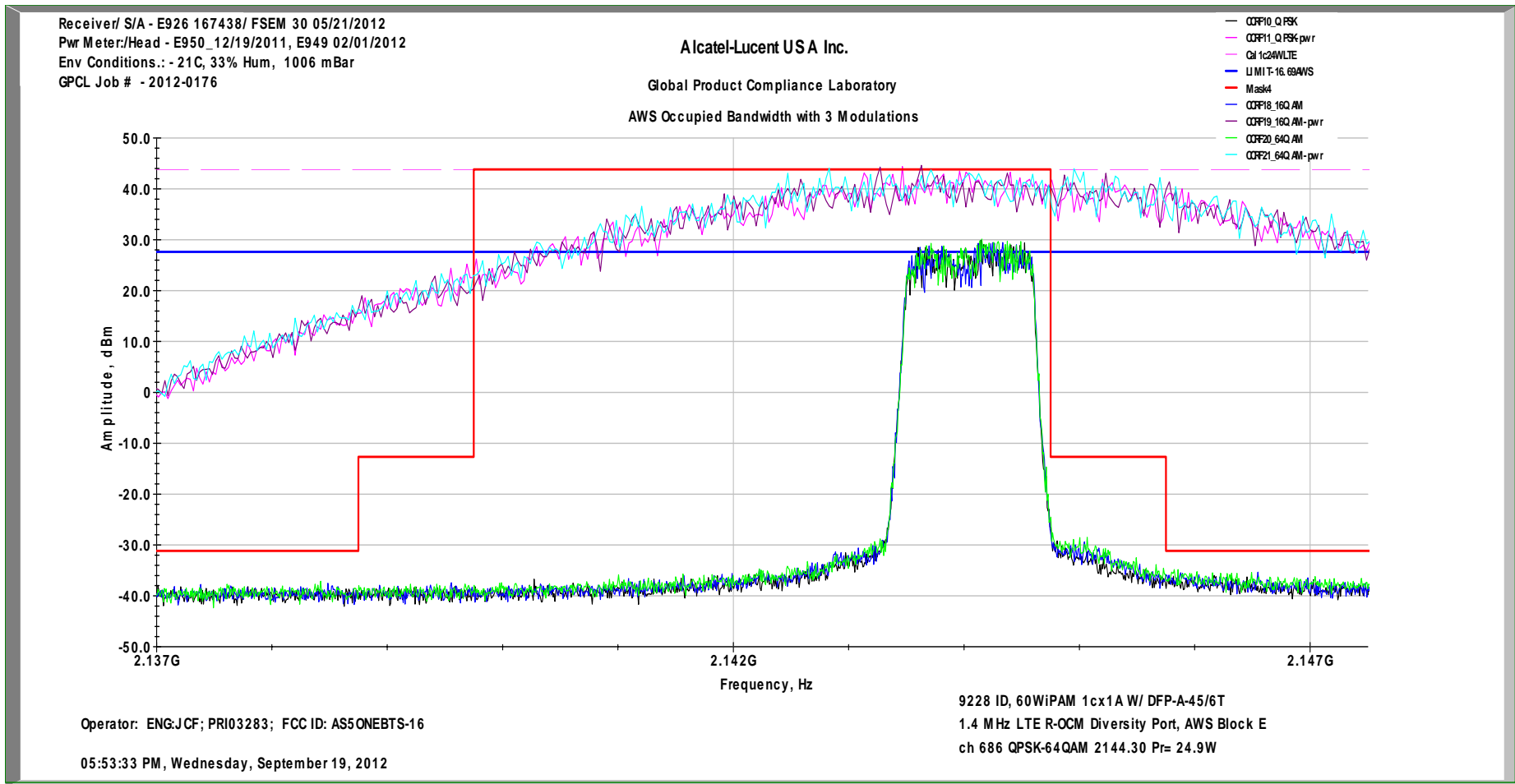
In-Band Intermodulation Graph AWS 1.4 MHz Ch E-686 1cx1A 24.2W/c QPSK Diversity Tx2



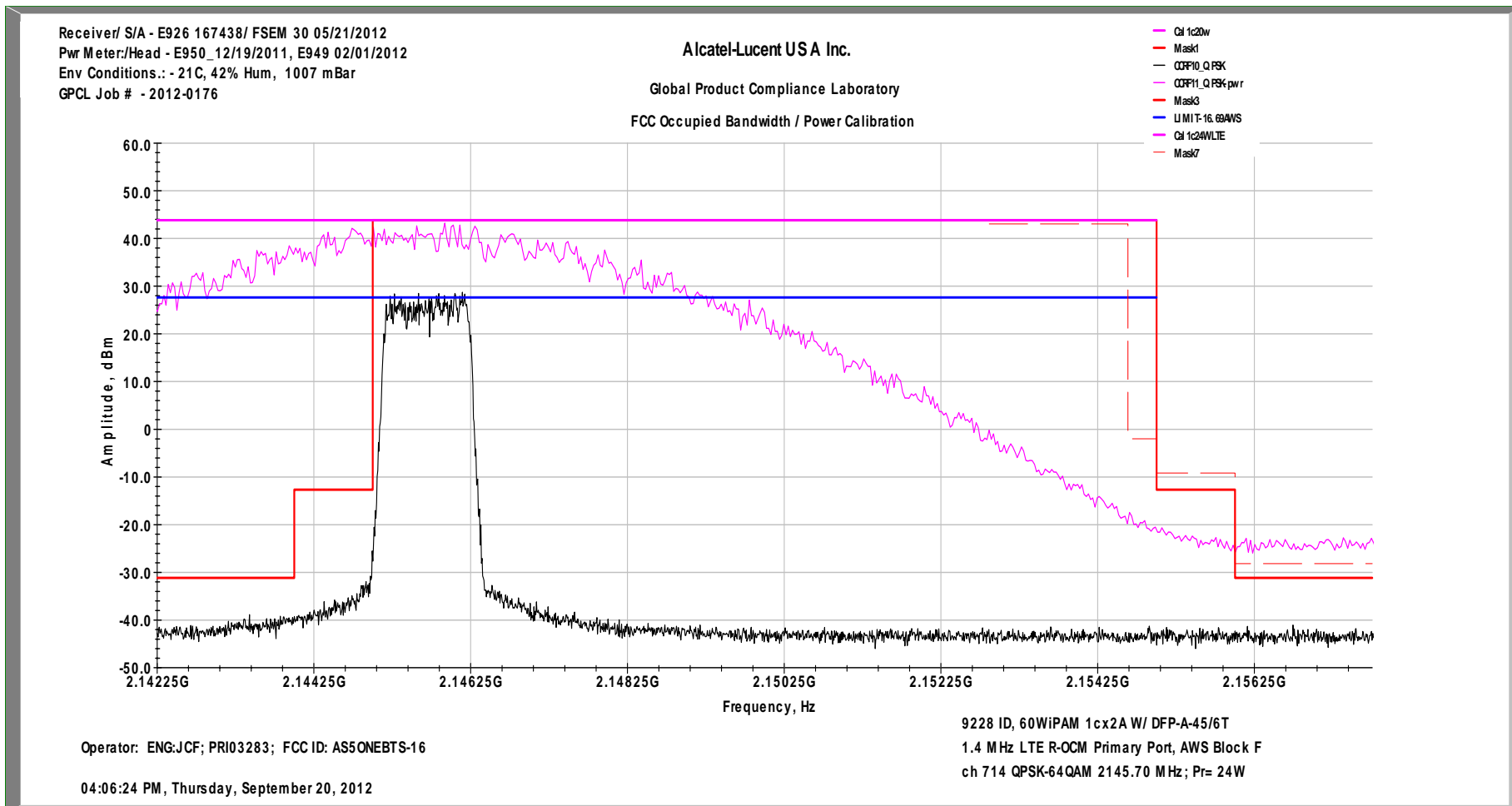
FCC Edge of Block Margin AWS 1.4 MHz Ch E-686 1cx1A 24.2W/c QPSK Diversity Tx2



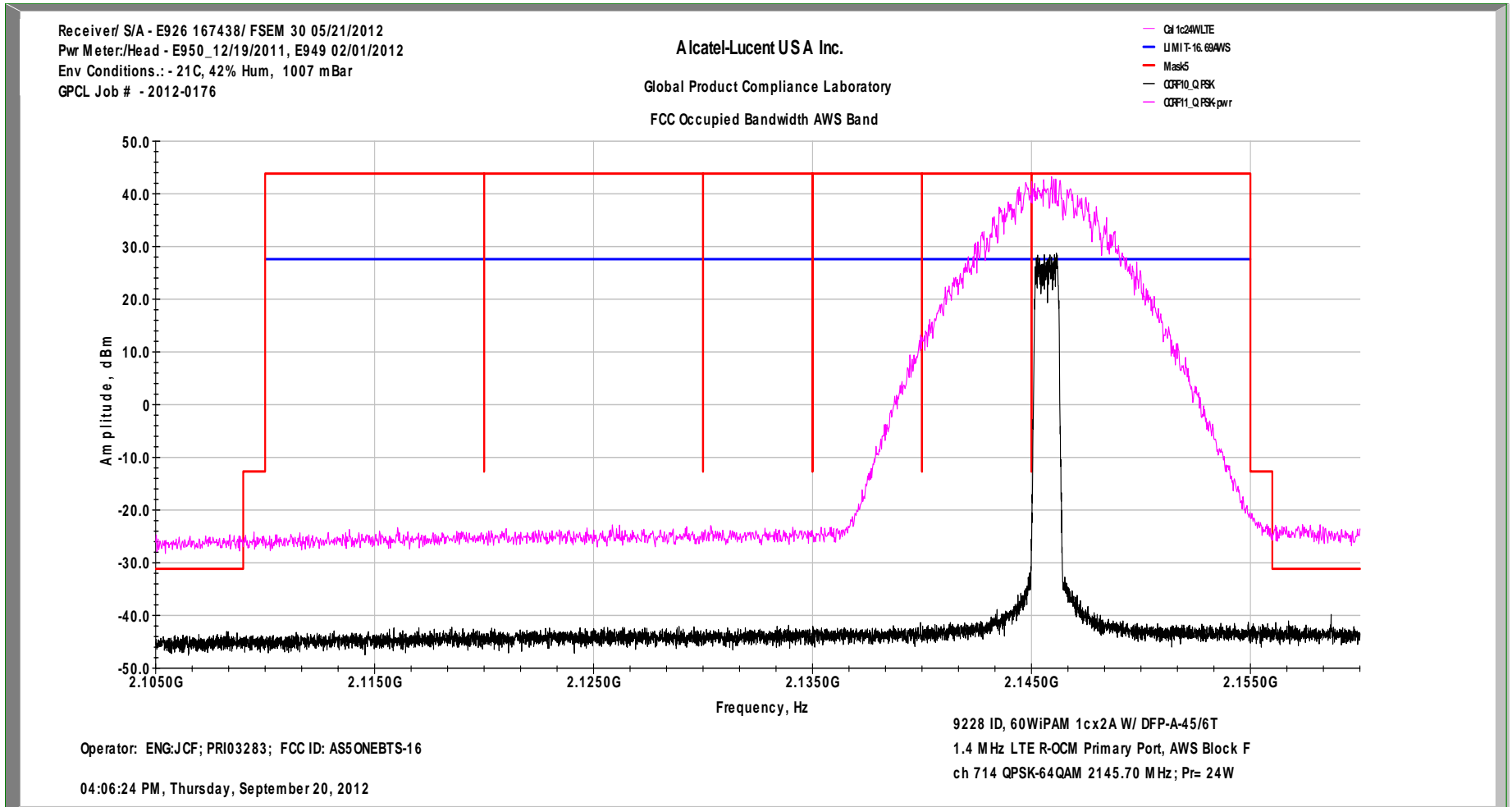
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch E-686 1cx1A 24.2W/c QPSK, 16QAM and 64QAM Diversity Tx2



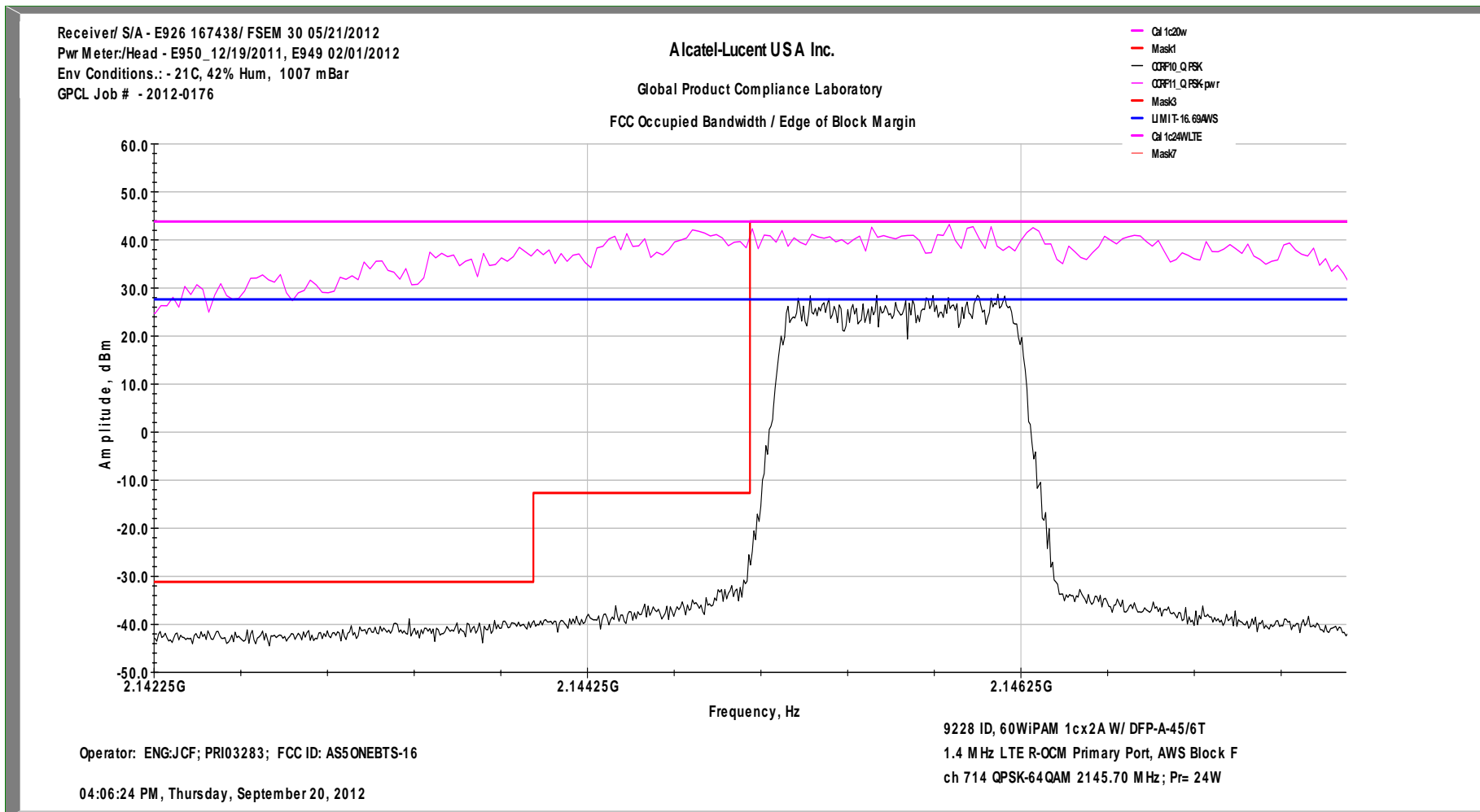
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch F-714 1cx2A 24.2W/c QPSK Primary Tx1



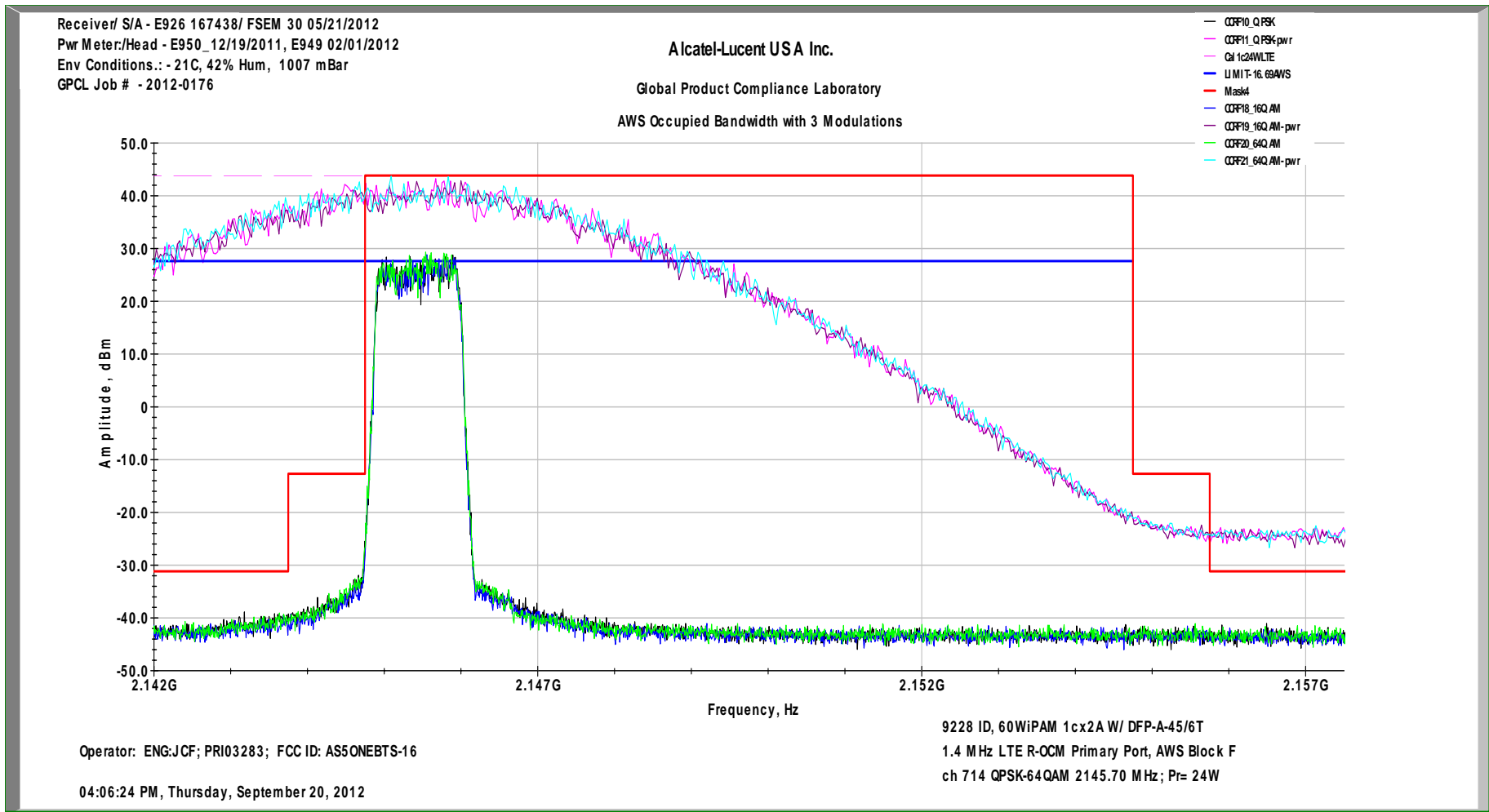
In-Band Intermodulation Graph AWS 1.4 MHz Ch F-714 1cx2A 24.2W/c QPSK Primary Tx1



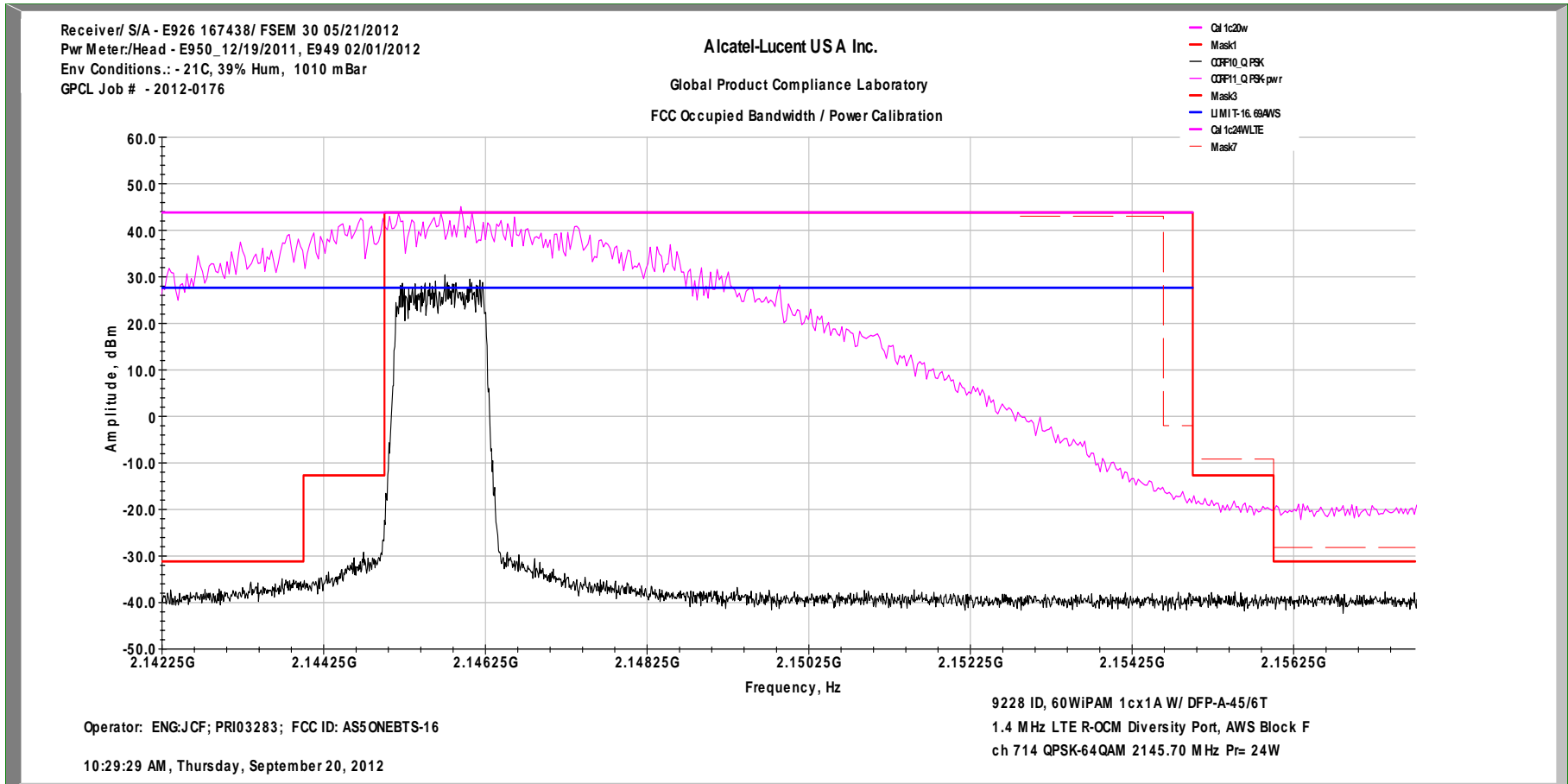
FCC Edge of Block Margin AWS 1.4 MHz Ch F-714 1cx2A 24.2W/c QPSK Primary Tx1



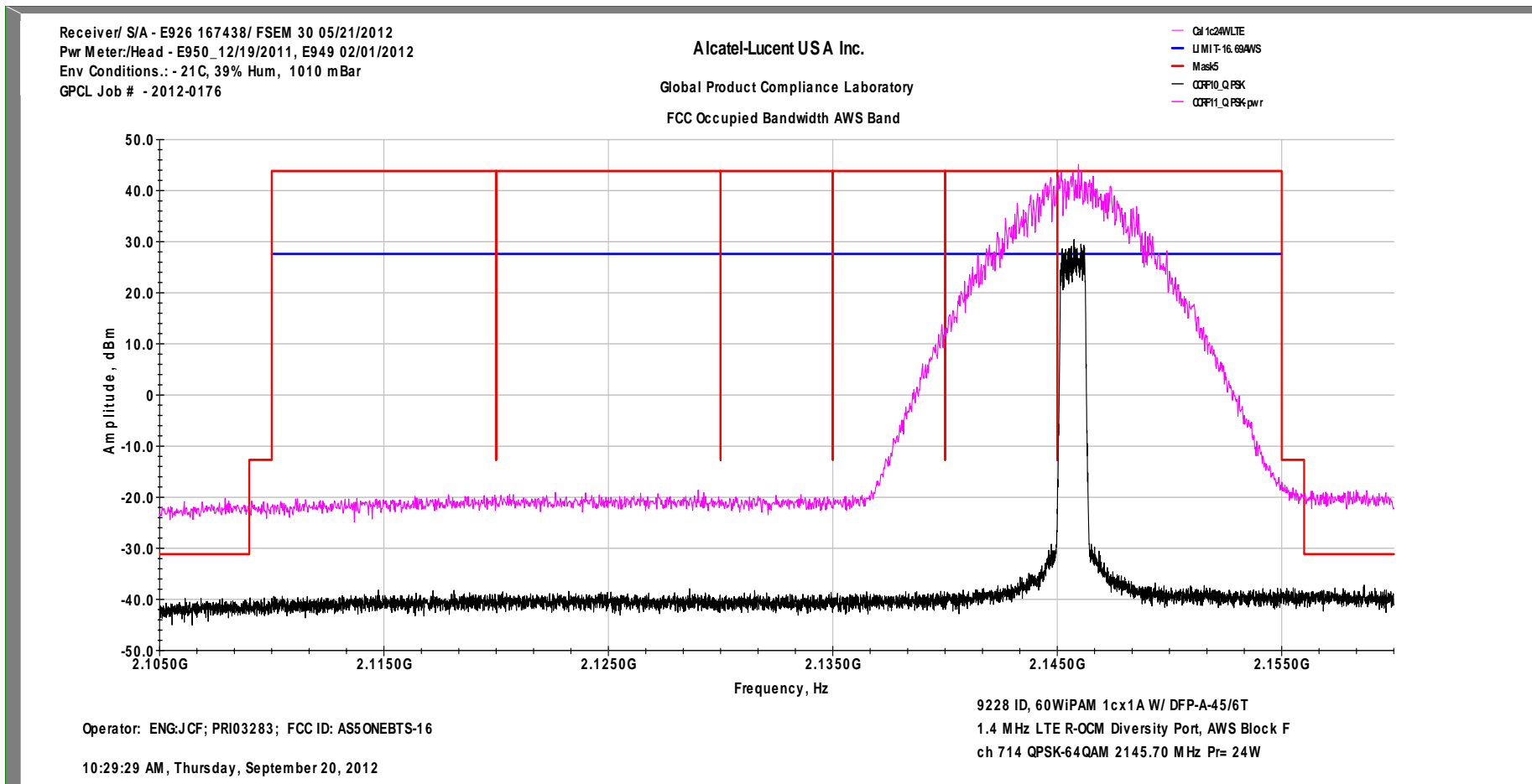
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch F-714 1cx2A 24.2W/c QPSK, 16QAM and 64QAM Primary Tx1



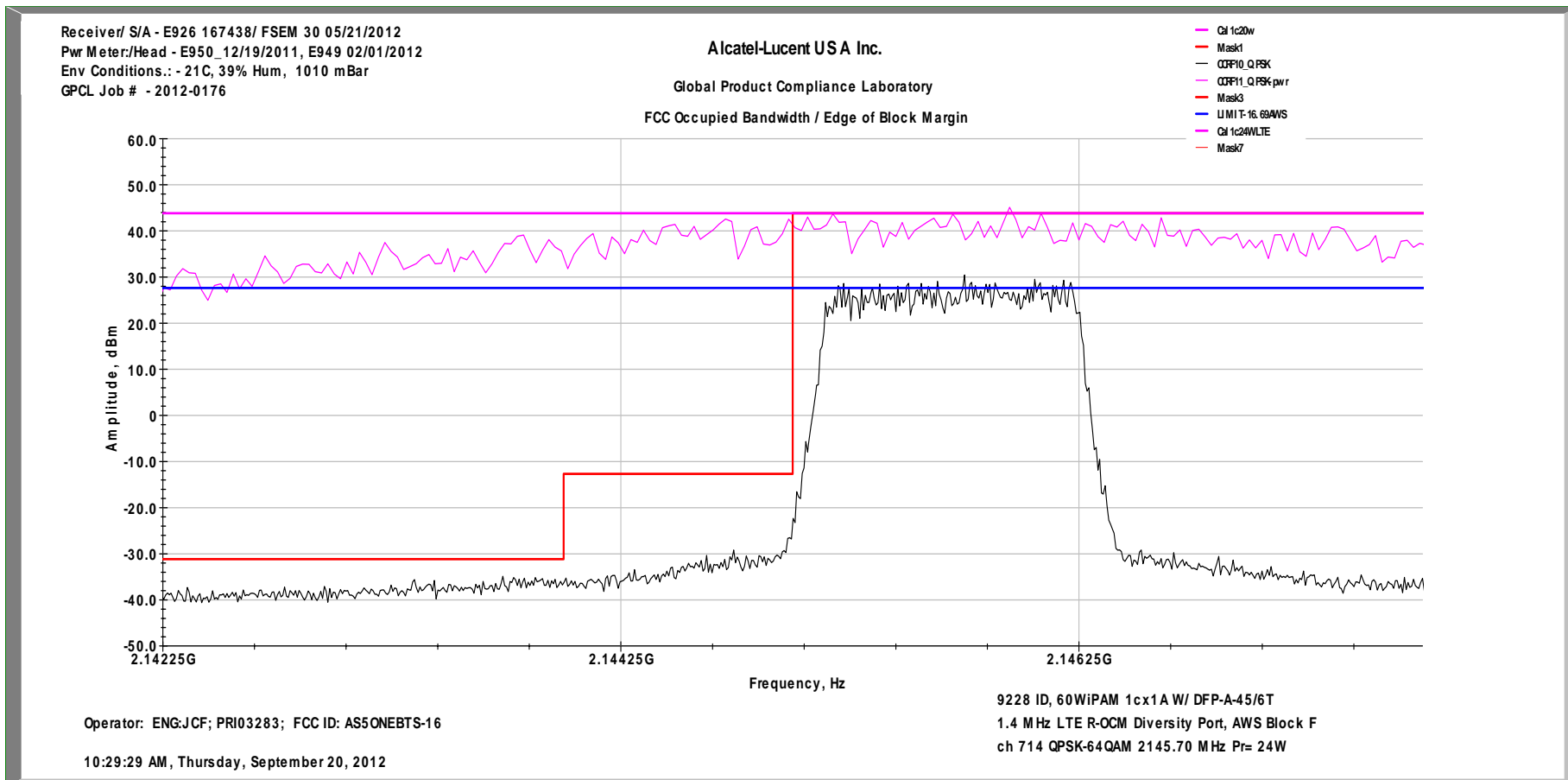
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch F-714 1cx1A 24.2W/c QPSK Diversity Tx2



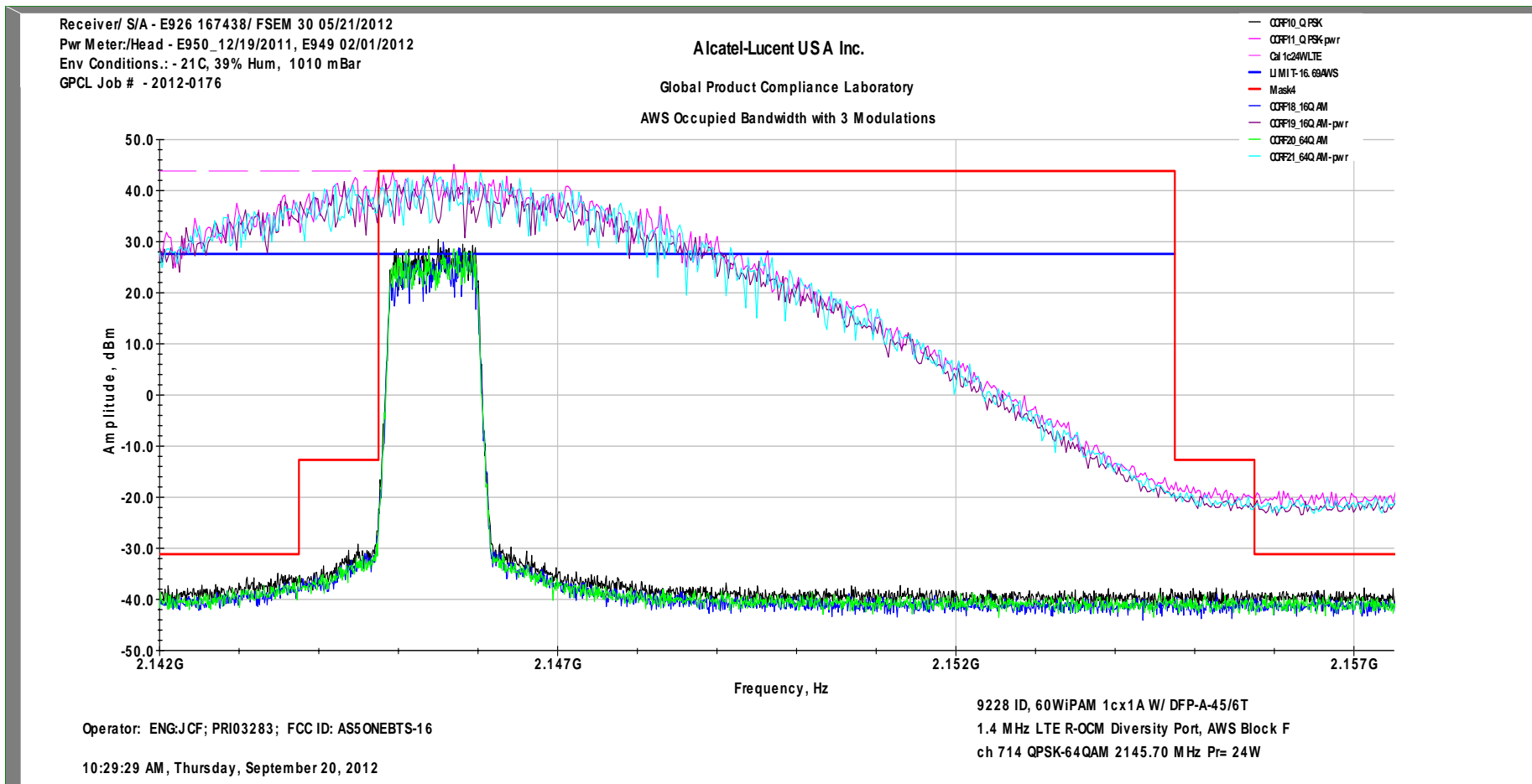
In-Band Intermodulation Graph AWS 1.4 MHz Ch F-714 1cx1A 24.2W/c QPSK Diversity Tx2



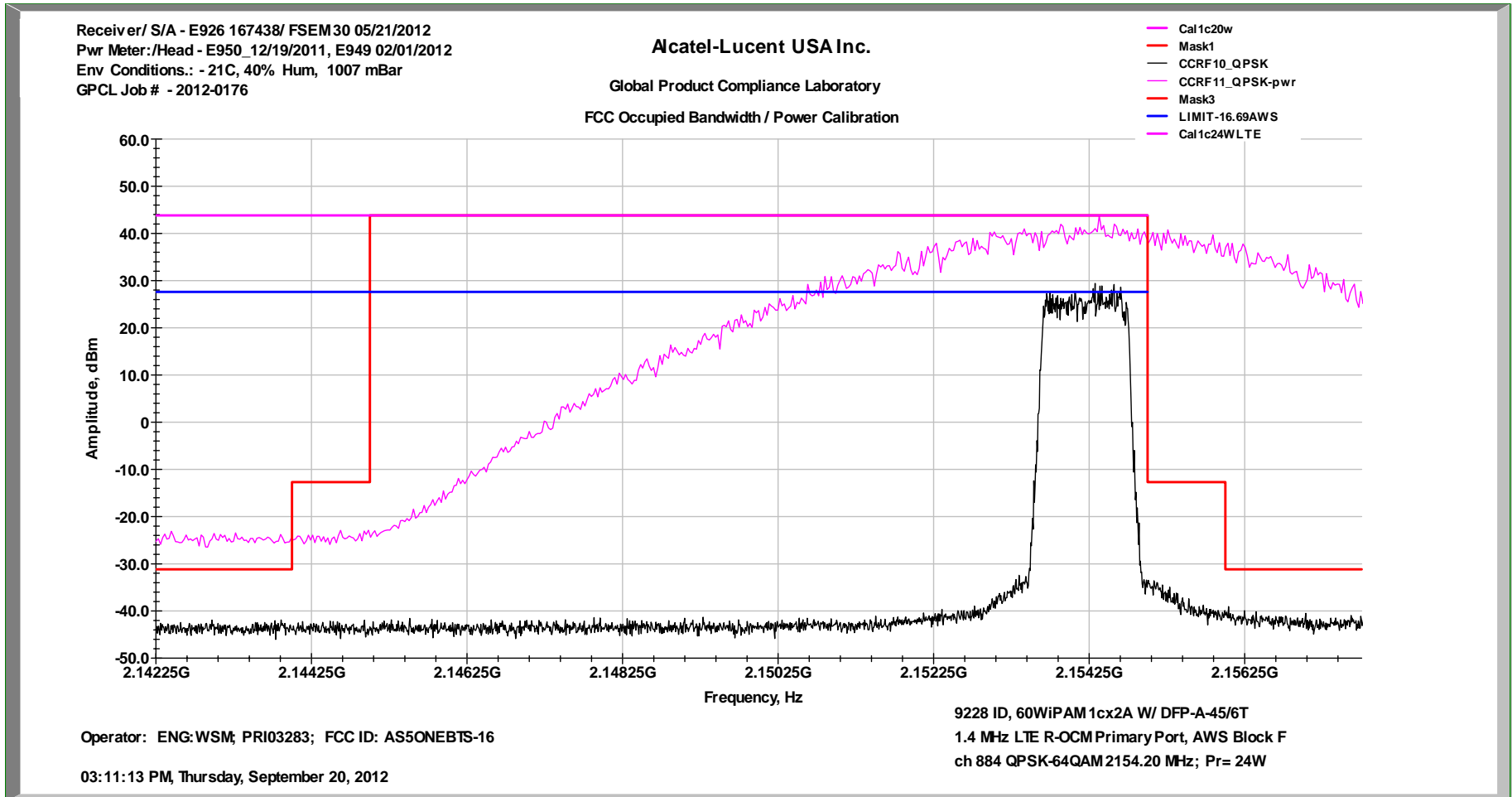
FCC Edge of Block Margin AWS 1.4 MHz Ch F-714 1cx1A 24.2W/c QPSK Diversity Tx2



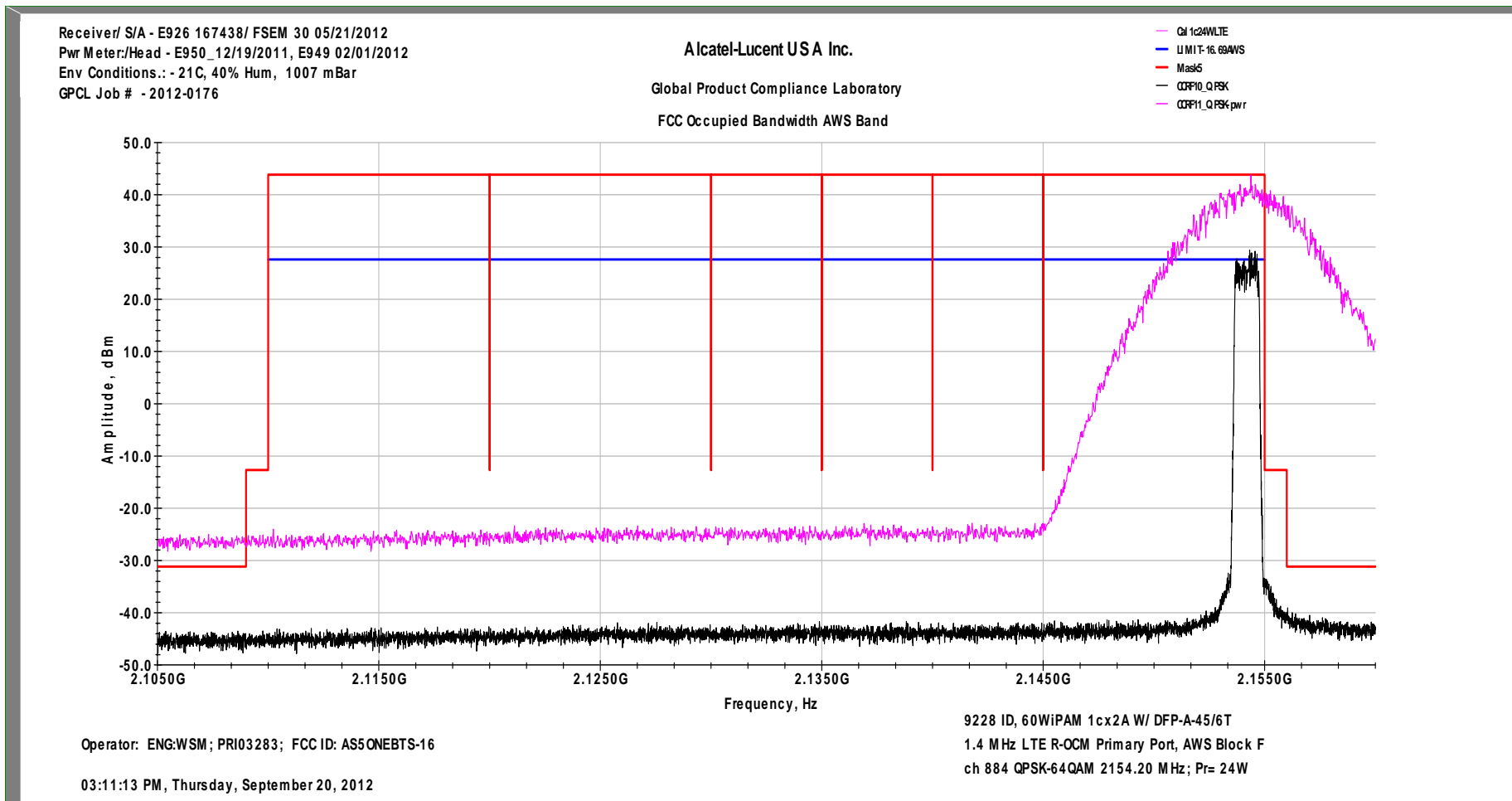
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch F-714 1cx1A 24.2W/c QPSK, 16QAM and 64QAM Diversity Tx2



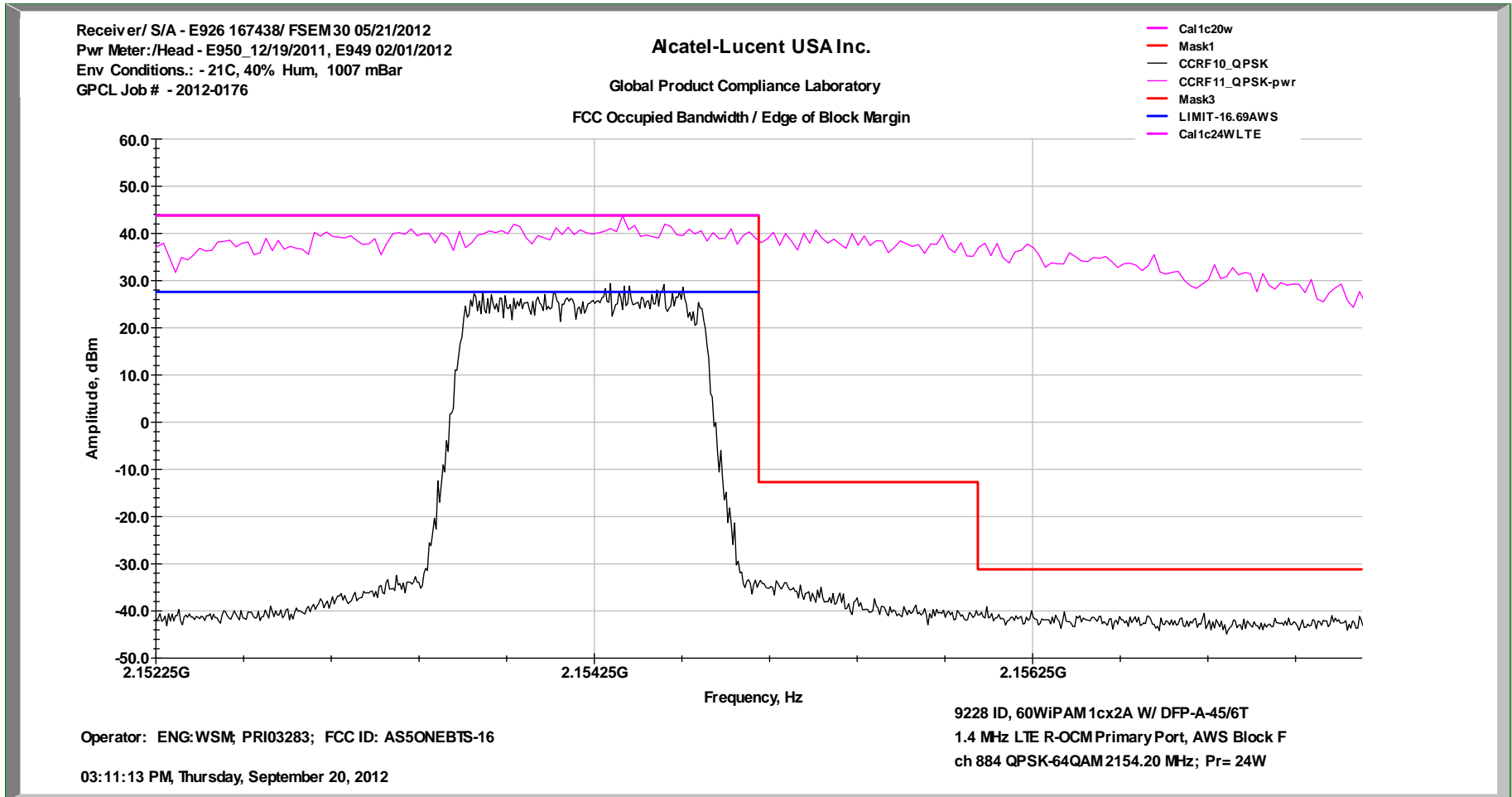
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch F-884 1cx2A 24.2W/c QPSK Primary Tx1



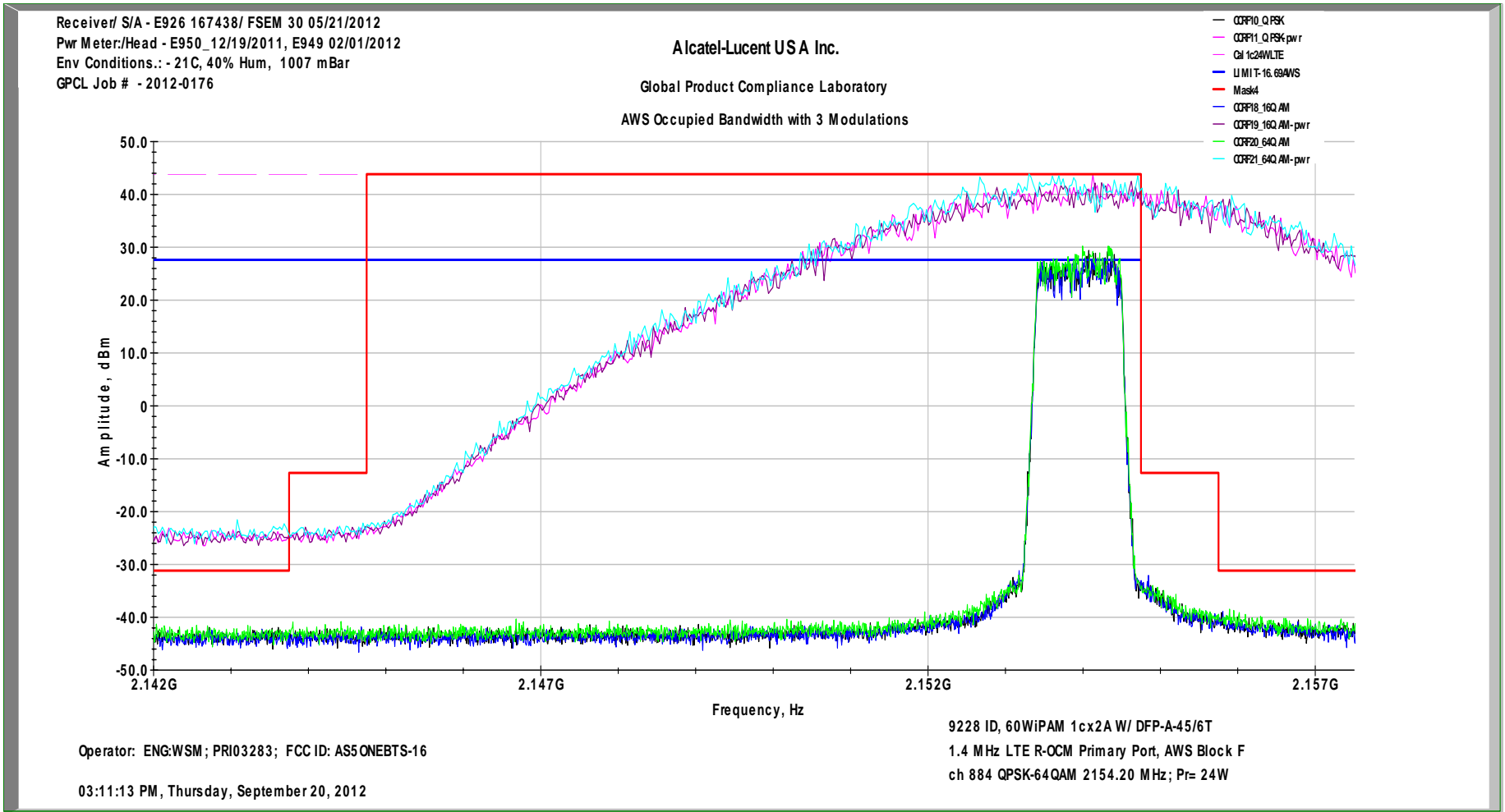
In-Band Intermodulation Graph AWS 1.4 MHz Ch F-884 1cx2A 24.2W/c QPSK Primary Tx1



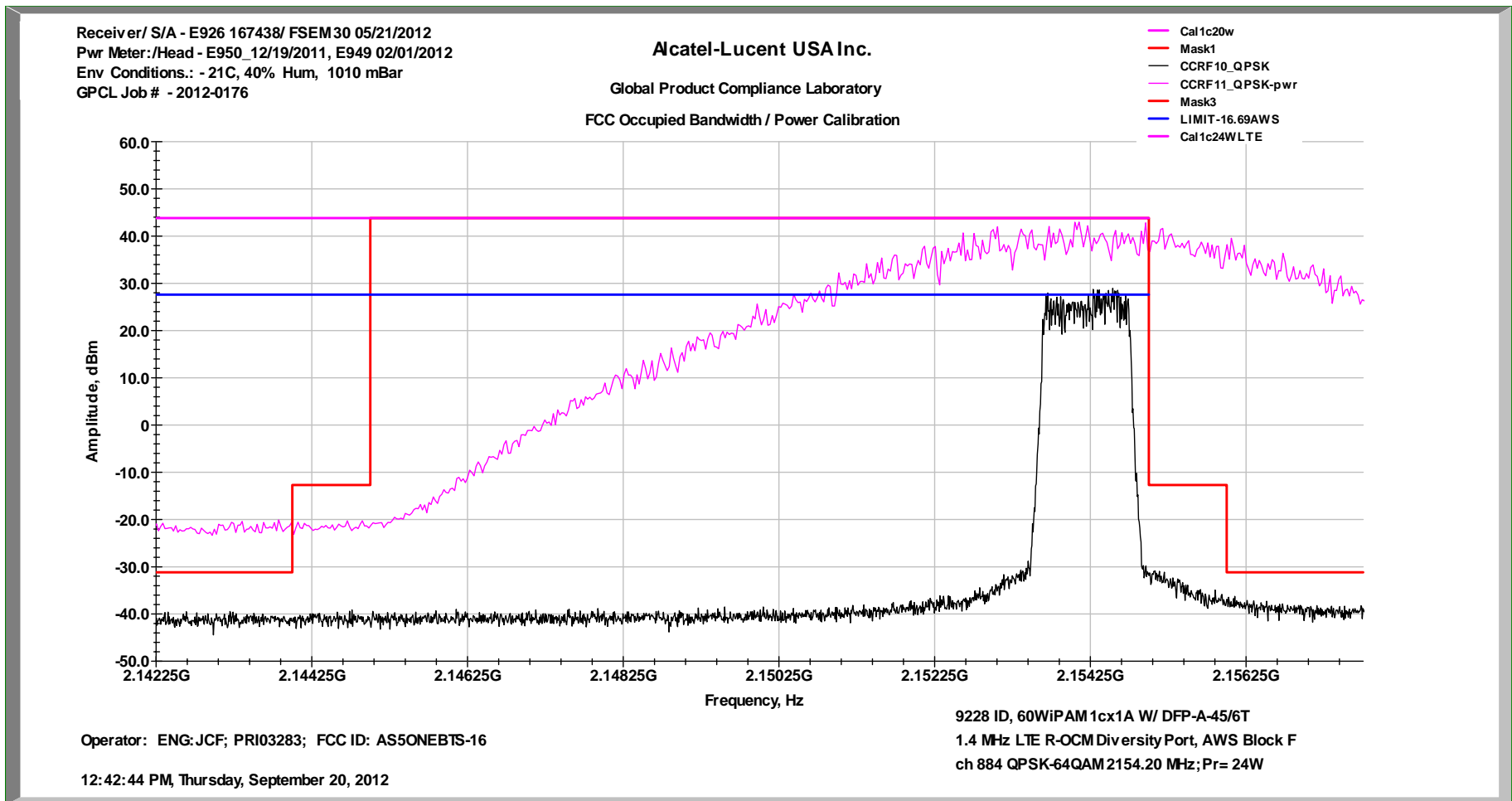
FCC Edge of Block Margin AWS 1.4 MHz Ch F-884 1cx2A 24.2W/c QPSK Primary Tx1



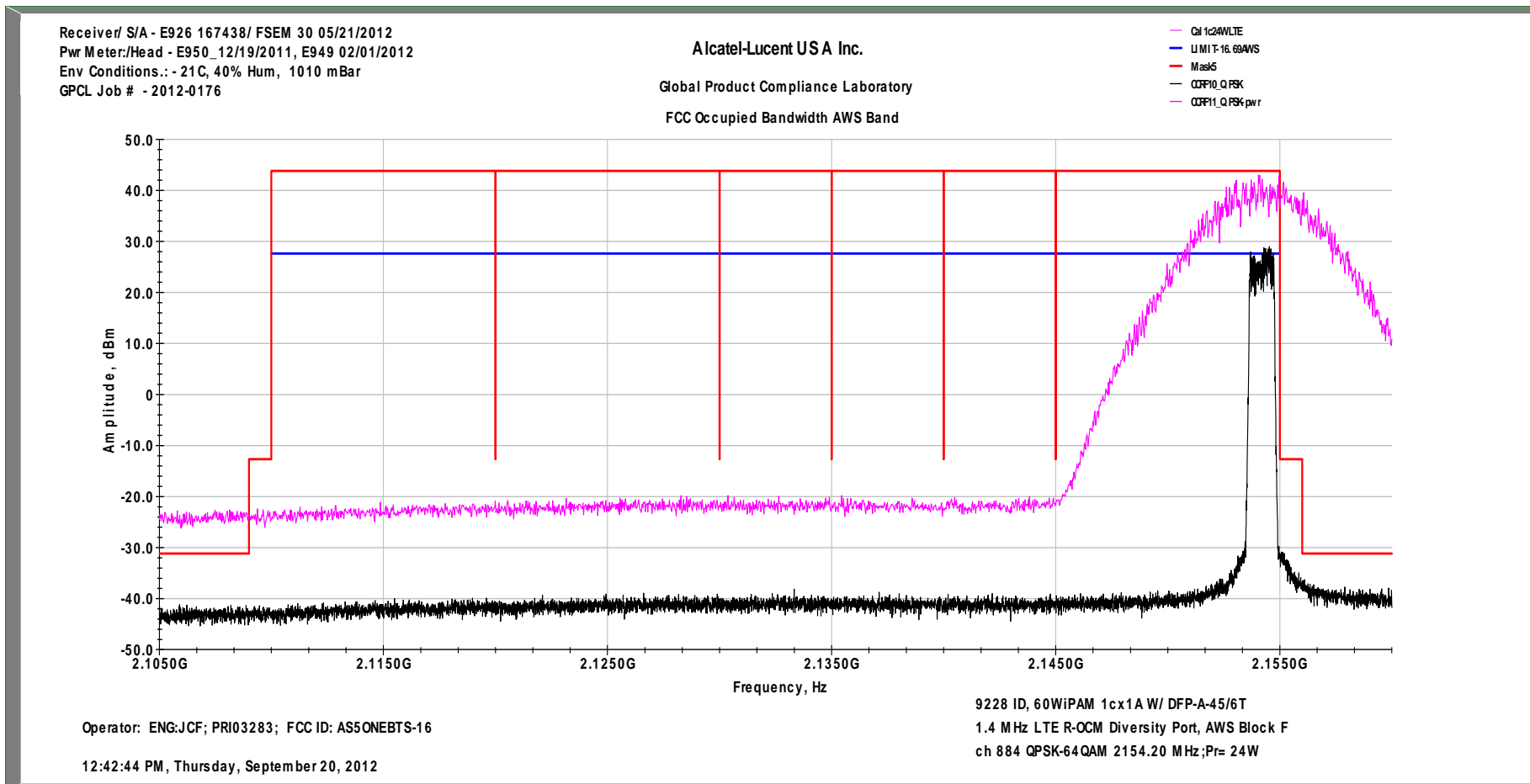
FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch F-884 1cx2A 24.2W/c QPSK, 16QAM and 64QAM Primary Tx1



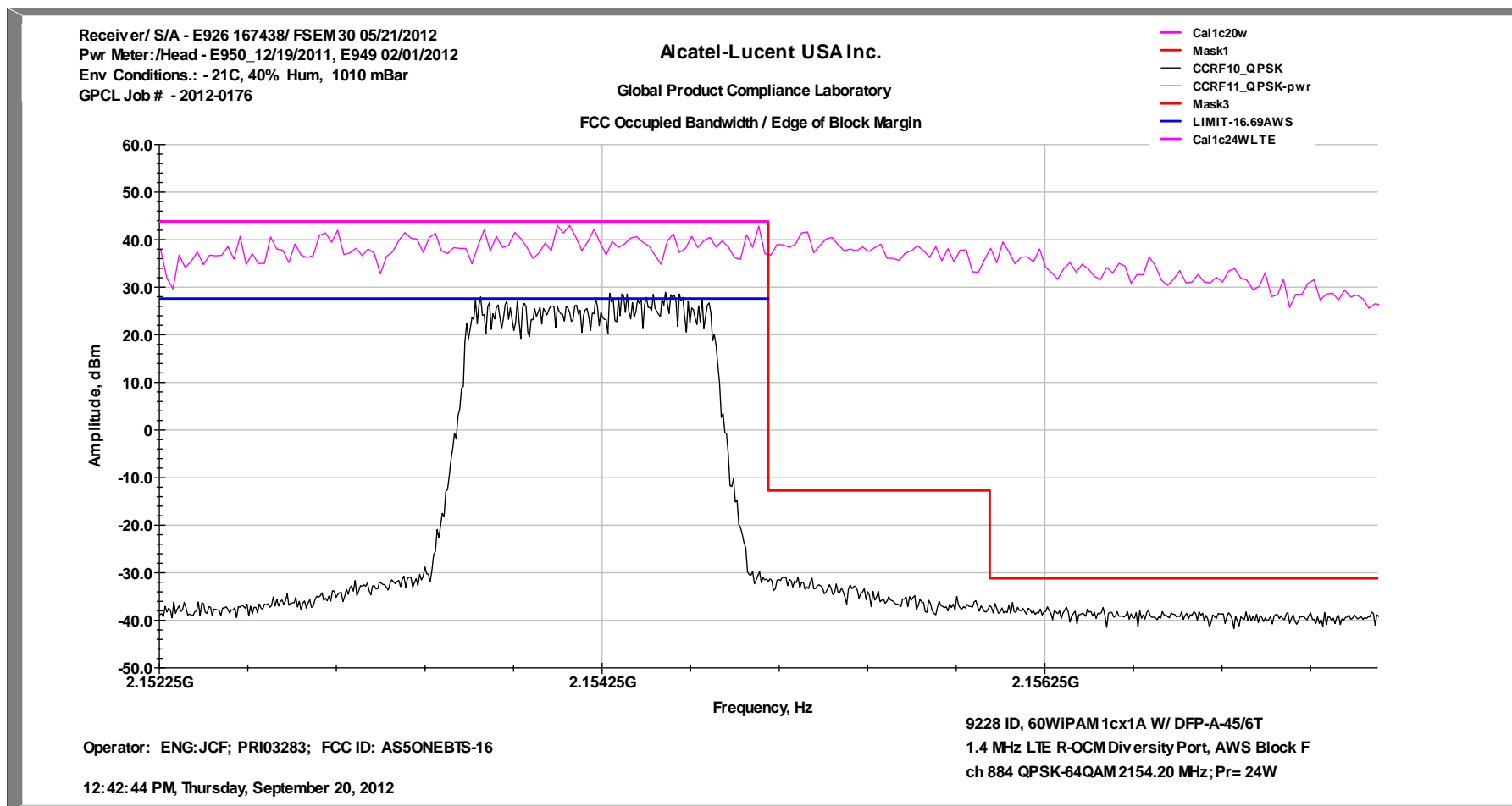
FCC Occupied Bandwidth Emissions AWS 1.4 MHz Ch F-884 1cx1A 24.2W/c QPSK Diversity Tx2



In-Band Intermodulation Graph AWS 1.4 MHz Ch F-884 1cx1A 24.2W/c QPSK Diversity Tx2



FCC Edge of Block Margin AWS 1.4 MHz Ch F-884 1cx1A 24.2W/c QPSK Diversity Tx2



FCC Occupied Bandwidth with 3 Modulations AWS 3 MHz Ch F-884 1cx1A 24.2W/c QPSK, 16QAM and 64QAM Diversity Tx2

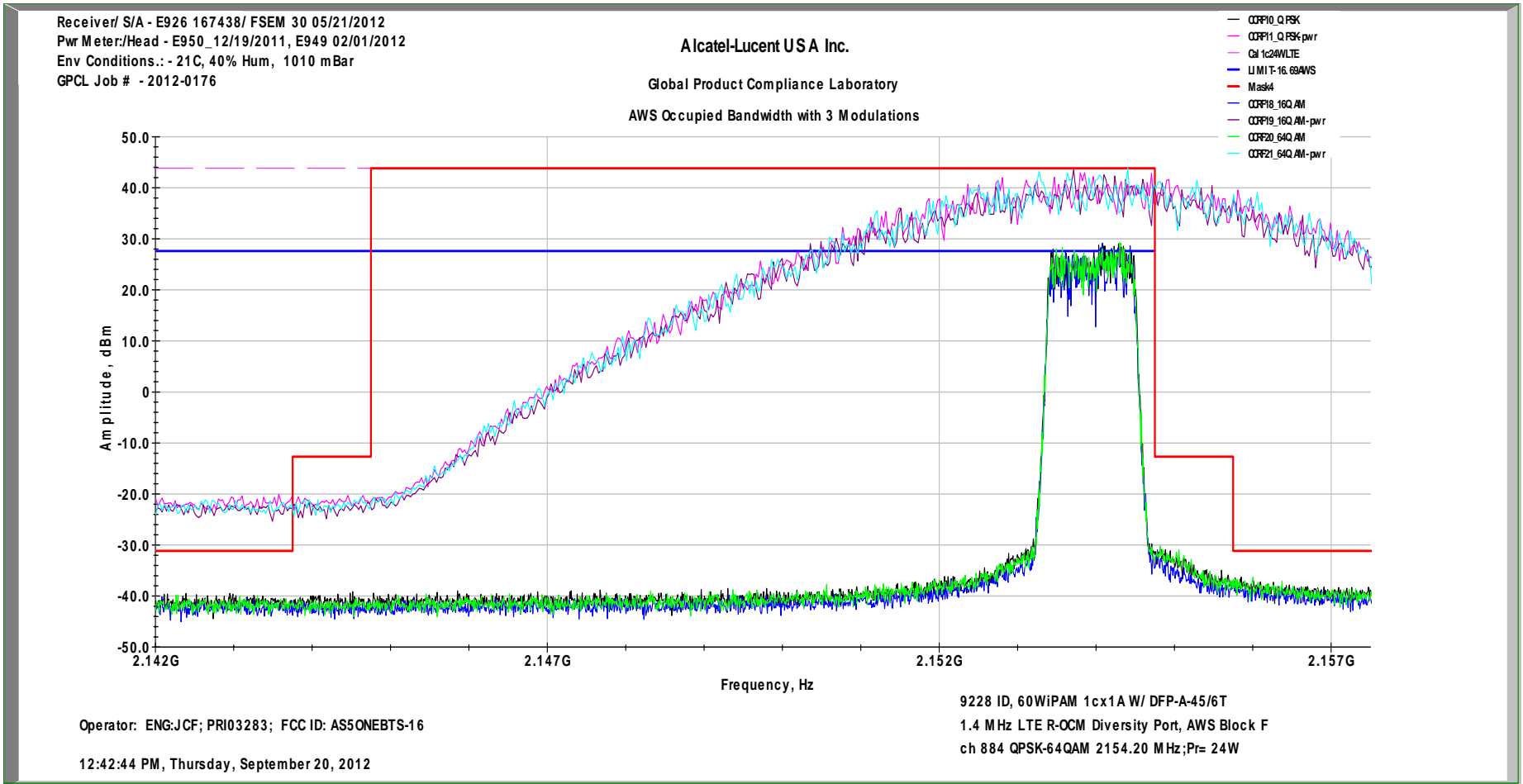


Exhibit 15: Conducted Spurious Emissions At Antenna Terminals

Section 2.1051 Spurious Emissions at Antenna Terminals

Spurious Emissions at the antenna terminals were investigated over the frequency range of 10 MHz to 21.75 GHz which is beyond the 10th harmonic of the carrier frequency. The RF output from the transmitter was reduced, to an amplitude usable by the spectrum analyzer, by use of a broadband attenuator. The complete RF test path was calibrated over the 10 MHz - 22 GHz range. The RF power level was measured and monitored prior to and during the test via the test setup in Figure 15A. The spurious measurements were made using an automated test system. The test system consists of a Rohde & Schwarz FSEM30 Spectrum Analyzer (or ESIB Test Receiver), a PC based computer test controller, calibrated test hardware and a TILE™ software program to acquire the test data. This system allows measurement and presentation of the data in an accurate and compact form for FCC review. The volume of collected data is greater than 2×10^6 data points over the frequency range of 10 MHz to 21.75 GHz.

The required emission limitation specified in Section 27.53(h) of Title 47 CFR was applied to these tests. Based upon the criterion given in Section 27.53(h)(1)(2)(3) of Title 47 CFR (1-Oct-2010) and as developed in Exhibit 14, the required emission limit for MIMO operation is -16.01 dBm when measured with a resolution bandwidth of 1 MHz. The measurements of the spurious signals were therefore made using a resolution bandwidth of 1 MHz. All spurious and harmonics of the LTE Carrier was also shown to be lower than the -16.01 dBm limit.

The carrier signal shown on these plots was measured at a resolution Bandwidths of 3 MHz. This was done so that the carrier plot correctly and accurately depicts the carrier output power in relation to the spurious signals and the defined limit. In this application the **AWS Base Station System** has a maximum power output of 24 Watts at the antenna terminals (43.8 dBm/carrier +2/-4 dB) for each 1.4 MHz LTE carrier. The signal applied to the **AWS Base Station System** is as defined in **3GPP TS 36.211 V9.1.0 (2010-03)**. The power was set to the specified 24 W/carrier maximum at each measurement frequency to verify the spectral performance at that power level at each specific frequency of interest. Power was also verified for the QPSK, 16QAM and 64QAM modulation configurations.

Test Results Summary:

Conducted Spurious measurements were performed for the **AWS Base Station System** configurations supporting 1.4 MHz LTE carrier operation at 24 Watts/c. Conducted Transmit Spurious measurements were performed as part of the test profile for Occupied bandwidth. Every AWS Block Edge measurements configuration therefore included a Conducted Transmit Spurious measurements as documented in Table 15.1.

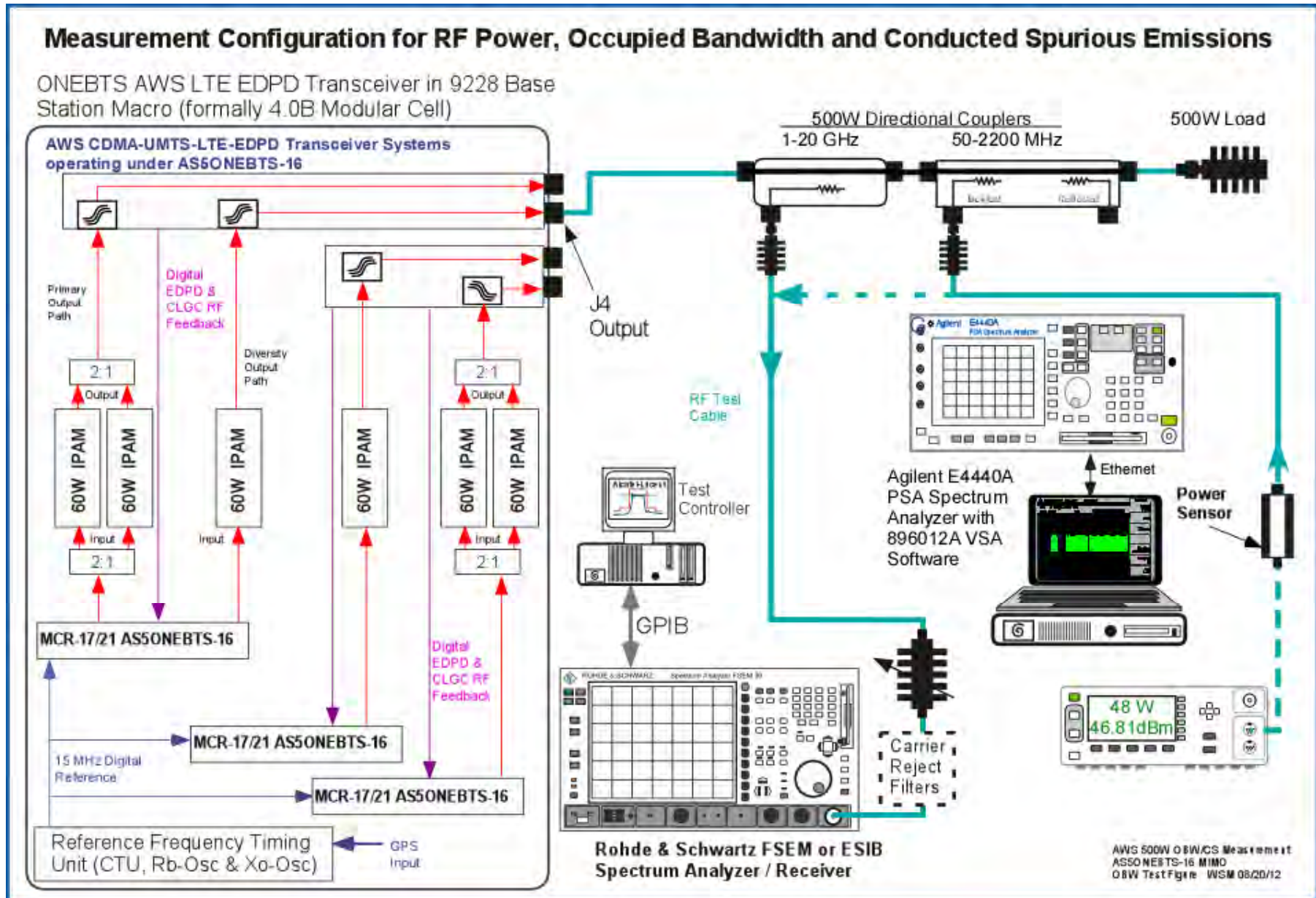
The attached spectral plots are representative of the Conducted Spurious compliance performance of the **AWS Base Station System**. The compliance for all of the representative transmit configurations are documented in Table 15.1. This Table lists AWS Blocks/ Channels tested the amplifier configuration and the status of the performance. The performance data, charts and tables all show that there are no "Out of Block" harmonics or spurious emissions above the applicable limit of -16.01 dBm. The attached table and sample data plots document the results. The results are compliant with FCC requirements.

Exhibit 15 *continued*

AWS - Block	AWS - Channels	Number of carriers	Sub-Carrier Modulation	Total Power Watts	Results Conducted Spurious
A	14	1	QPSK	24	Compliant
A	14	1	16QAM	24	Compliant
A	14	1	64QAM	24	Compliant
A	186	1	QPSK	24	Compliant
B	214	1	QPSK	24	Compliant
B	214	1	16QAM	24	Compliant
B	214	1	64QAM	24	Compliant
B	386	1	QPSK	24	Compliant
C	414	1	QPSK	24	Compliant
C	414	1	16QAM	24	Compliant
C	414	1	64QAM	24	Compliant
C	486	1	QPSK	24	Compliant
D	514	1	QPSK	24	Compliant
D	514	1	16QAM	24	Compliant
D	514	1	64QAM	24	Compliant
D	586	1	QPSK	24	Compliant
E	614	1	QPSK	24	Compliant
E	614	1	16QAM	24	Compliant
E	614	1	64QAM	24	Compliant
E	686	1	QPSK	24	Compliant
F	714	1	QPSK	24	Compliant
F	884	1	QPSK	24	Compliant
F	884	1	16QAM	24	Compliant
F	884	1	64QAM	24	Compliant

TABLE 15.1 AWS Conducted Spurious Compliance Tabulation

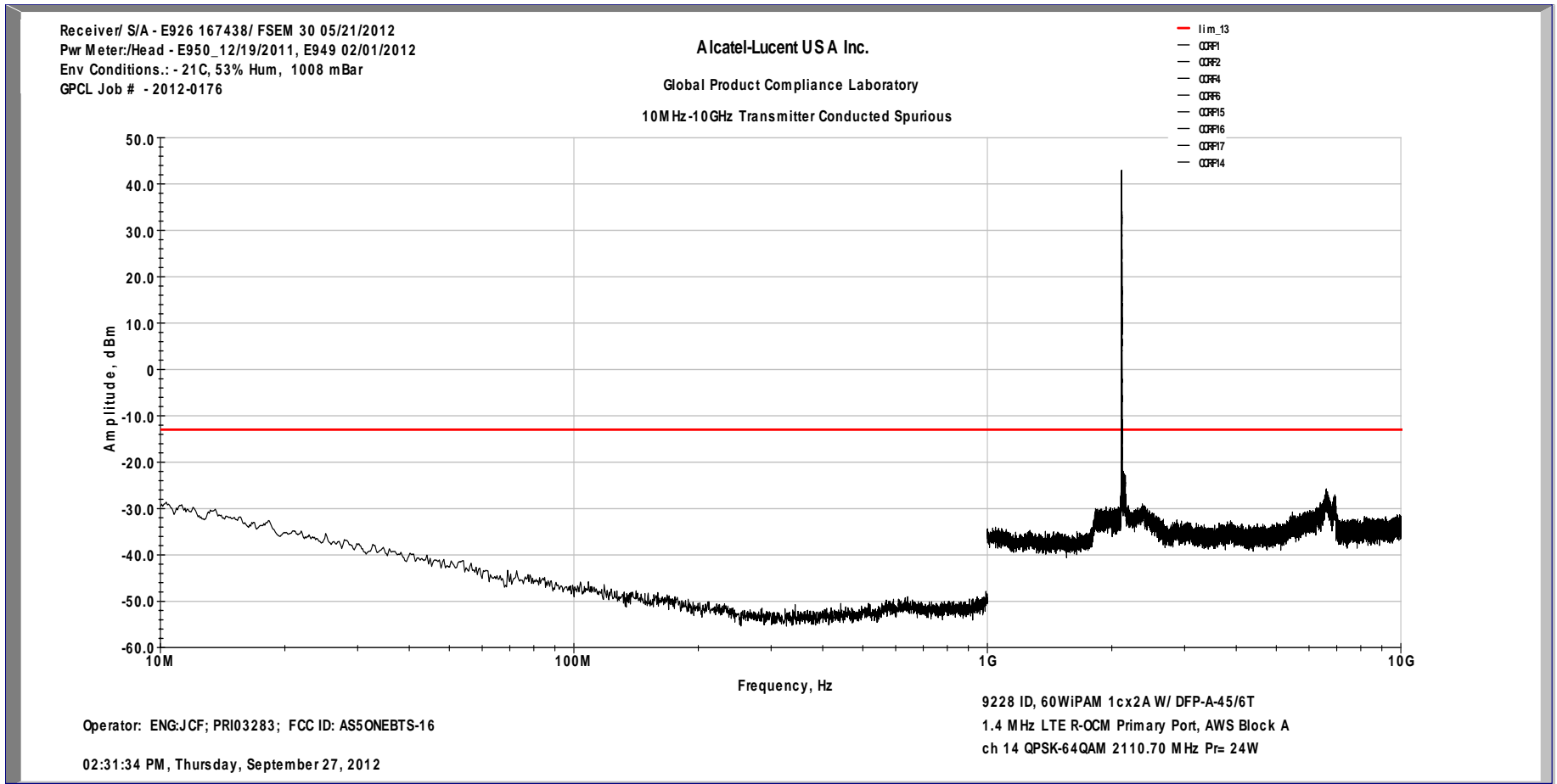
Figure 15A Test Setup for Antenna Port Measurement of Conducted Spurious Emissions



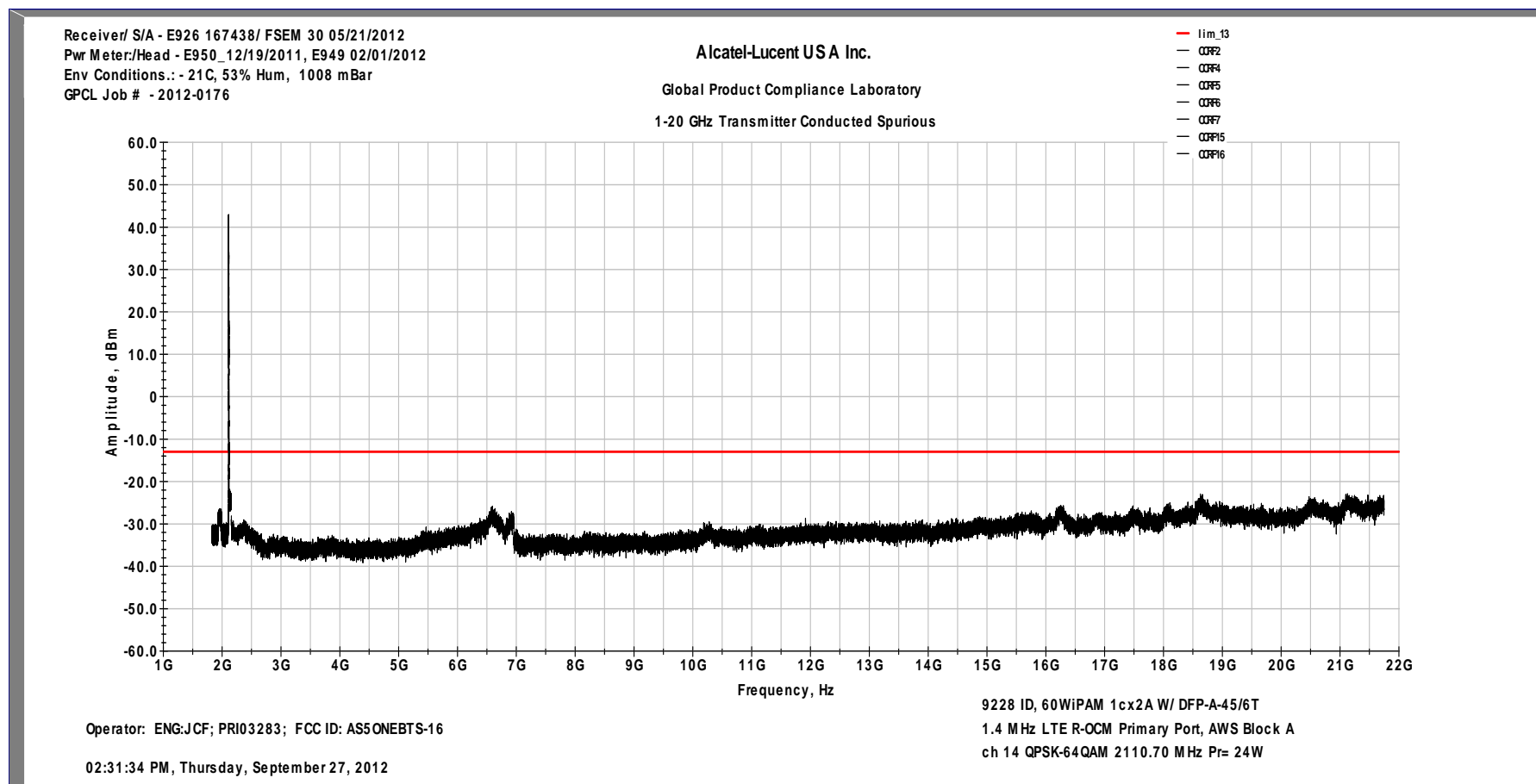
**Transmitter Measurements
of
Conducted Spurious Emissions
for
Alcatel-Lucent USA Inc.
AWS Base Station System
FCC ID: AS5ONEBTS-16
Installed in
LTE AWS 9228 Base Station Macro
Operational Configuration with
60W IPAMs at 24 W/carrier**

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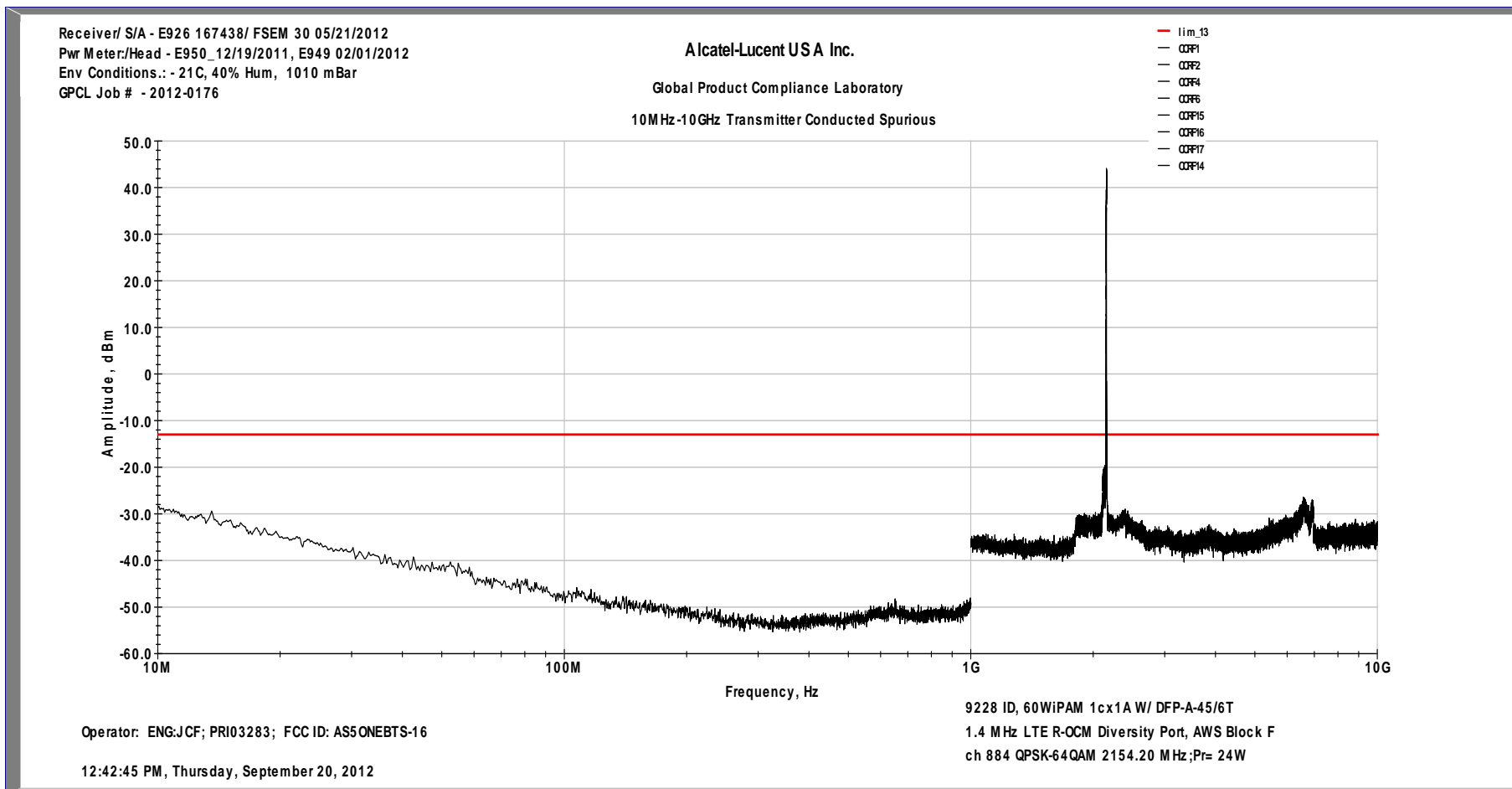
Conducted Spurious Emissions 10 MHz – 10 GHz AWS 1.4 MHz Ch A1-14 1cx2A 24 W/c QPSK



Conducted Spurious Emissions 1 – 22 GHz AWS 1.4 MHz Ch A1-14 1cx1A 24 W/c QPSK



Conducted Spurious Emissions 10 MHz – 10 GHz AWS 1.4 MHz Ch F7-884 1cx1A 24 W/c QPSK



Conducted Spurious Emissions 1 – 22 GHz AWS 1.4 MHz Ch F7-884 1cx1A 24 W/c QPSK

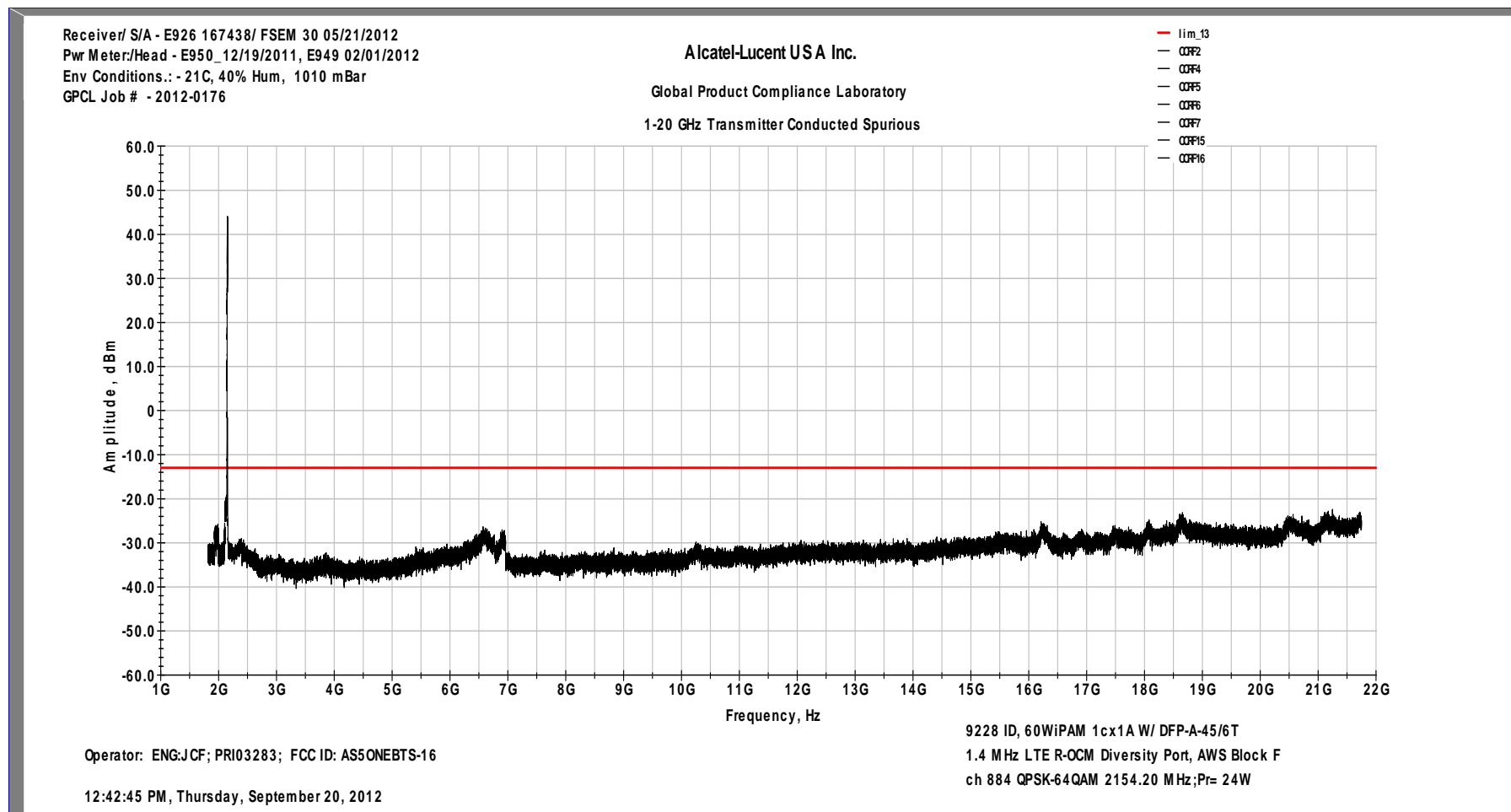


Exhibit 17 Measurement Of Frequency Stability

SECTION 2.1055 Measurement of Frequency Stability

The design and performance of the Frequency generating and stabilizing circuitry of the **AWS Base Station System** specifically the AWS MCR-1721 has not changed. The frequency stability performance remains within the parameters as previously filed.

Previous results:

The previously filed data documented that the maximum frequency drift at the antenna terminal of the Modular Cell 4.0B AWS system due to temperature and supply voltage is 0.00151 ppm which is below 3GPP2 ± 0.05 ppm requirement. The Alcatel-Lucent **AWS Base Station System** demonstrated full compliance with the Rules of the Commission.