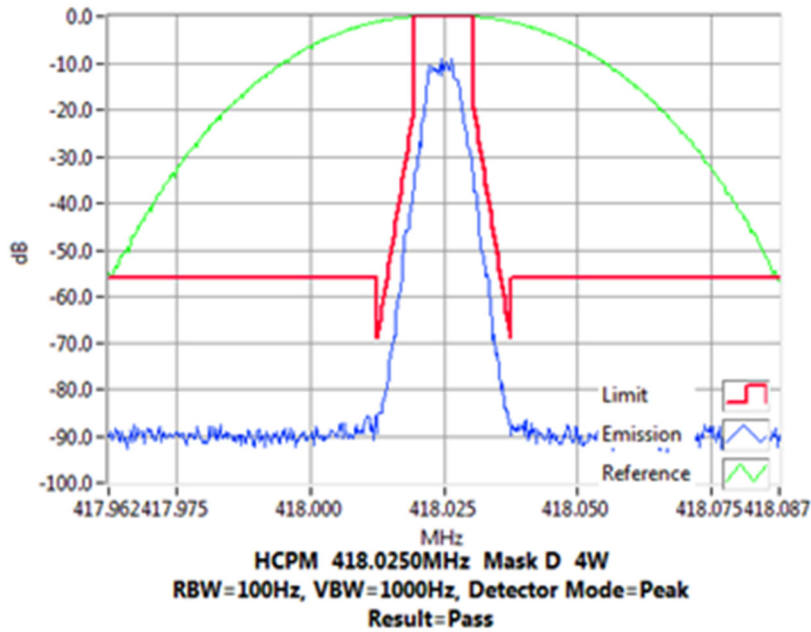


## Transmitter Spectrum Masks

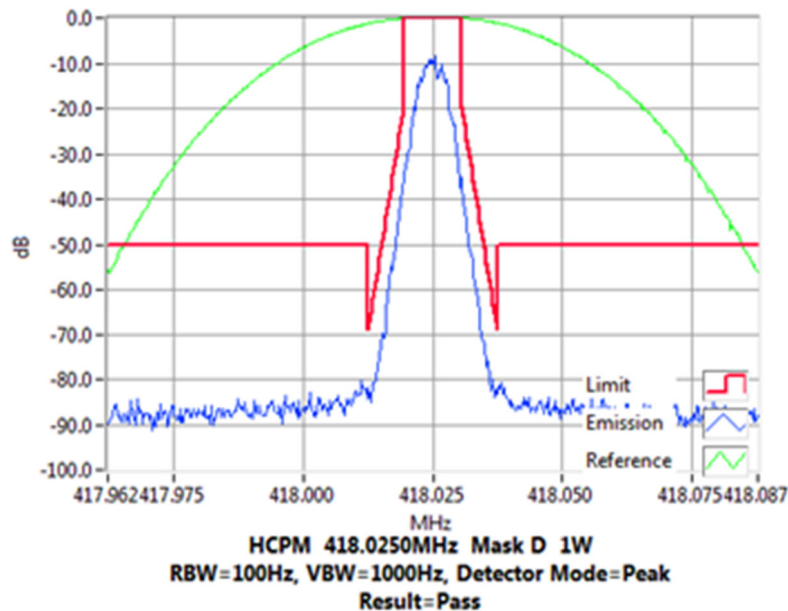
APCO P25 phase-2

SPECIFICATION: FCC 47 CFR 2.1049 (c) RSS-119 5.5

Tx FREQUENCY: 418.025 MHz 4 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 418.025 MHz 1 W 12.5 kHz Channel Spacing

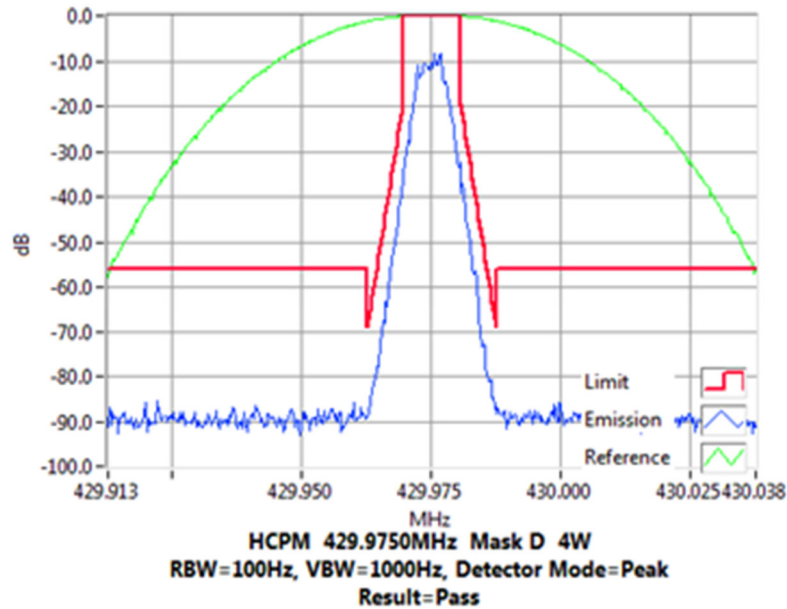


## Transmitter Spectrum Masks

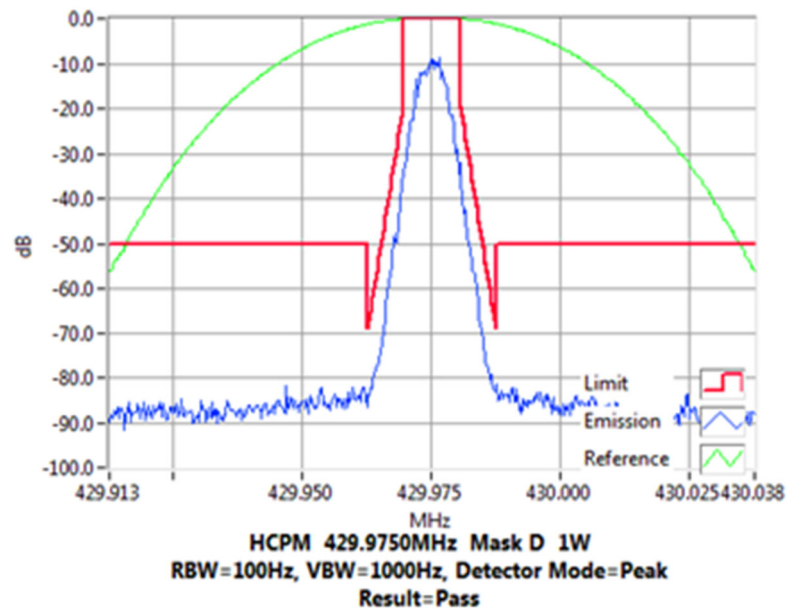
APCO P25 phase-2

SPECIFICATION: FCC 47 CFR 2.1049 (c) RSS-119 5.5

Tx FREQUENCY: 429.975 MHz 4 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 429.975 MHz 1 W 12.5 kHz Channel Spacing

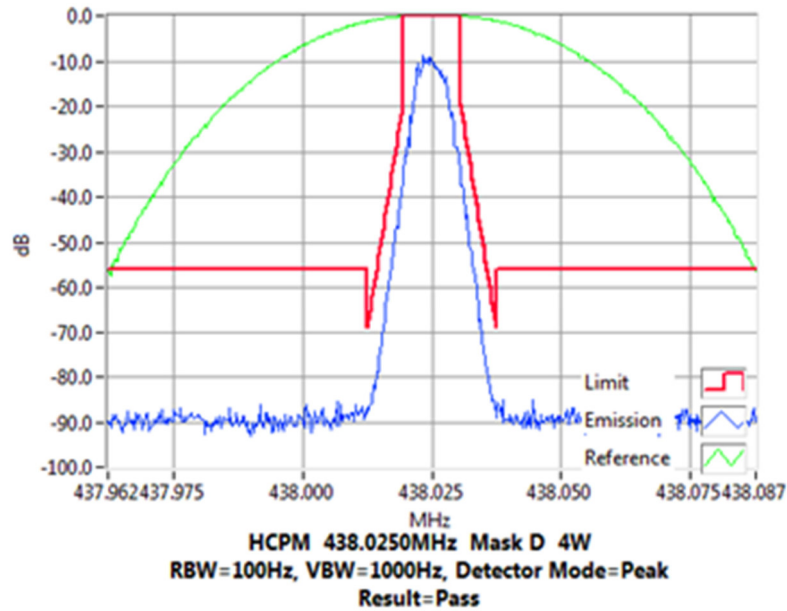


## Transmitter Spectrum Masks

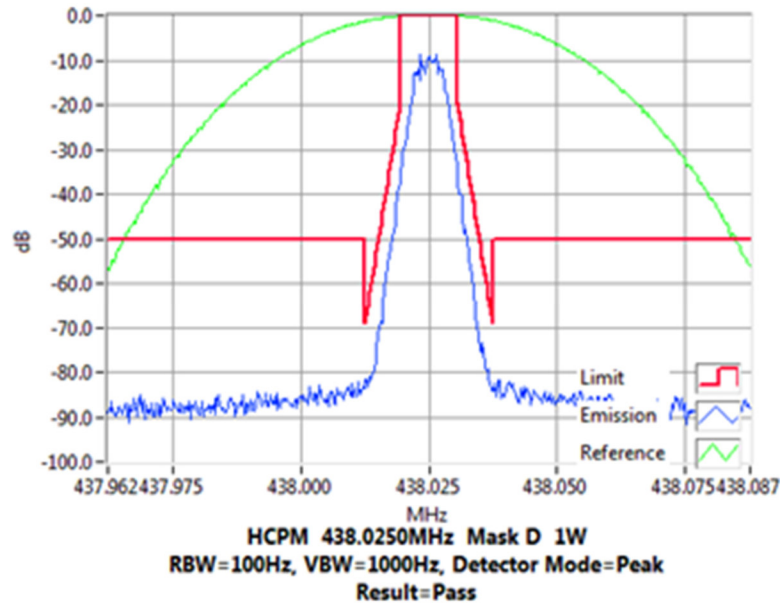
APCO P25 phase-2

SPECIFICATION: FCC 47 CFR 2.1049 (c) RSS-119 5.5

Tx FREQUENCY: 438.025 MHz 4 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 438.025 MHz 1 W 12.5 kHz Channel Spacing

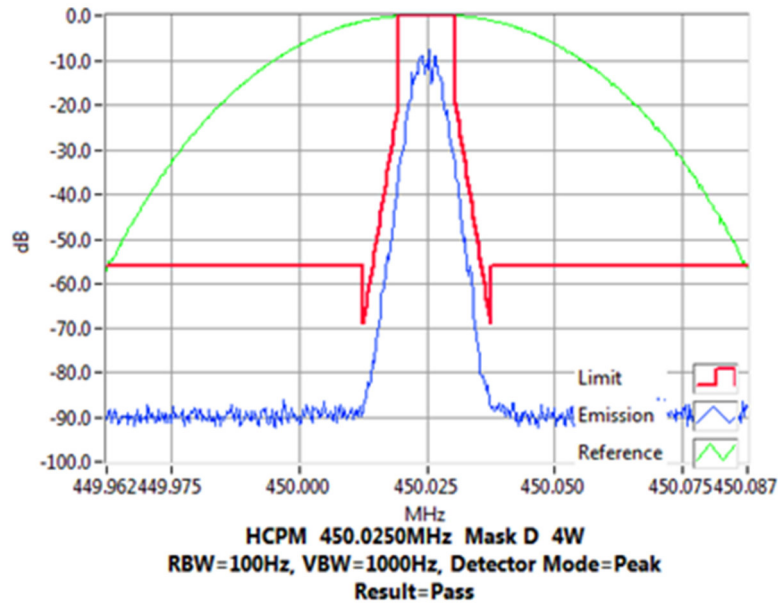


## Transmitter Spectrum Masks

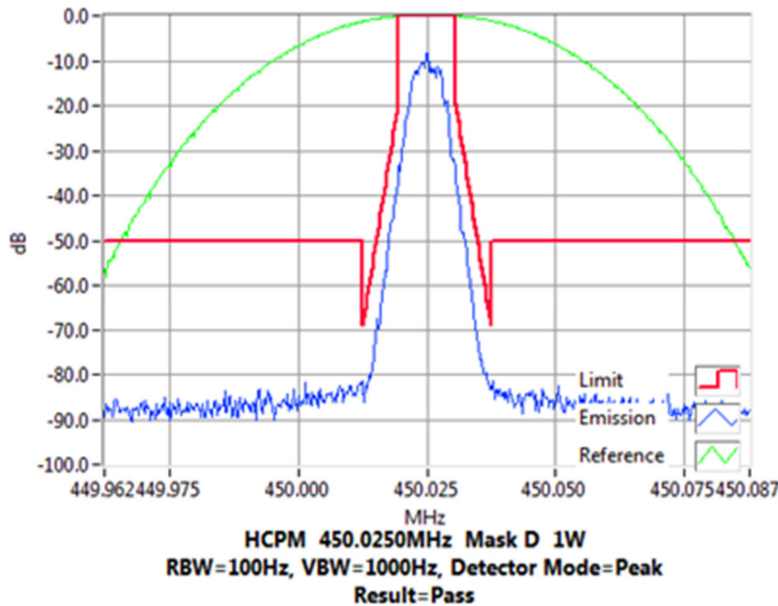
APCO P25 phase-2

SPECIFICATION: FCC 47 CFR 2.1049 (c) RSS-119 5.5

Tx FREQUENCY: 450.025 MHz 4 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 450.025 MHz 1 W 12.5 kHz Channel Spacing

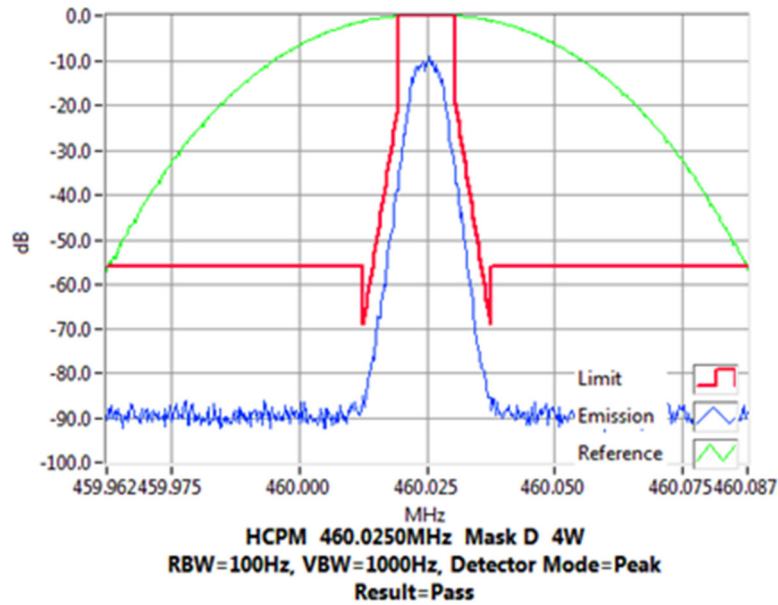


## Transmitter Spectrum Masks

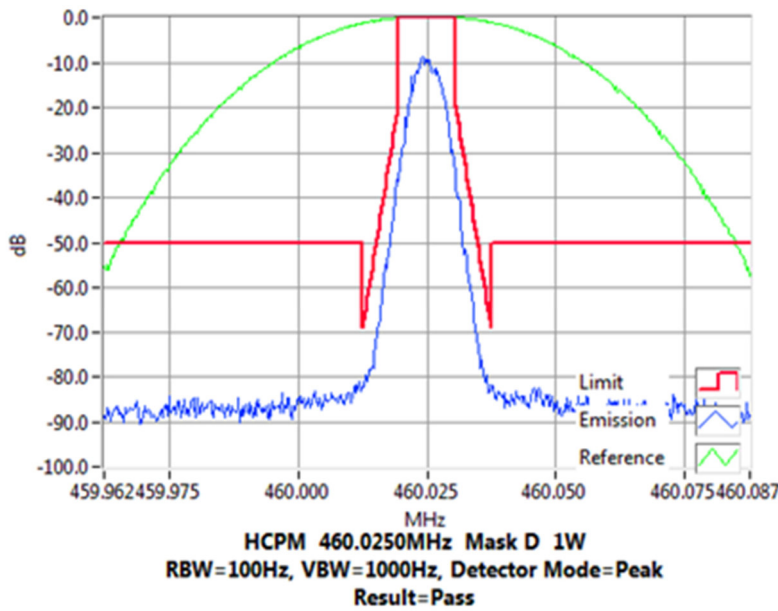
APCO P25 phase-2

SPECIFICATION: FCC 47 CFR 2.1049 (c) RSS-119 5.5

Tx FREQUENCY: 460.025 MHz 4 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 460.025 MHz 1 W 12.5 kHz Channel Spacing

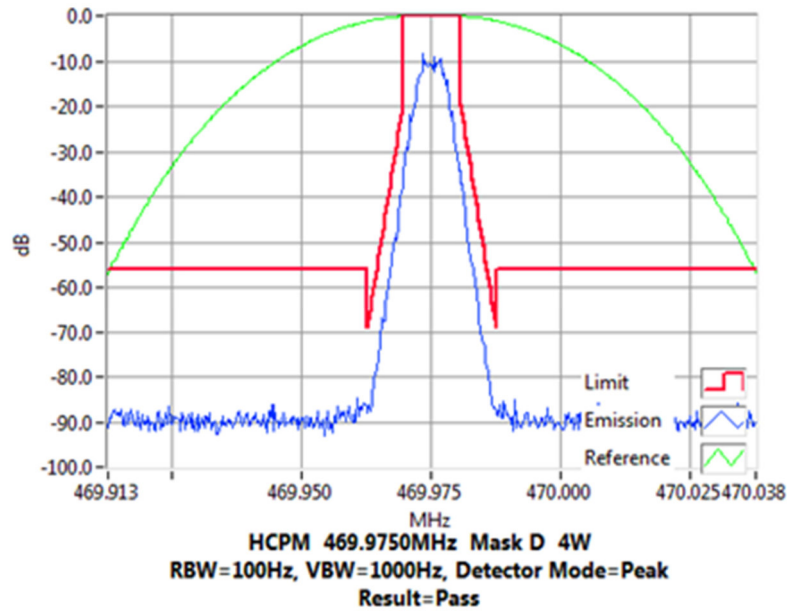


## Transmitter Spectrum Masks

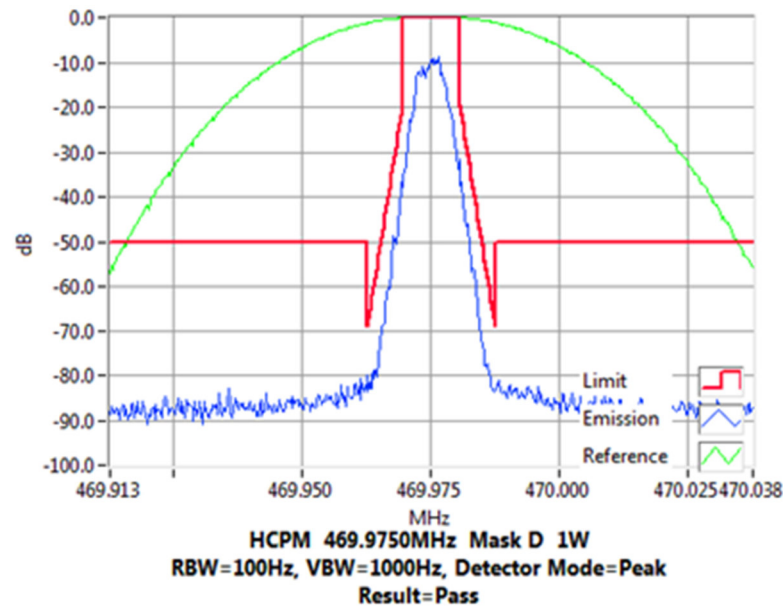
APCO P25 phase-2

SPECIFICATION: FCC 47 CFR 2.1049 (c) RSS-119 5.5

Tx FREQUENCY: 469.975 MHz 4 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 469.975 MHz 1 W 12.5 kHz Channel Spacing



## TRANSMITTER SPURIOUS EMISSIONS (CONDUCTED)

SPECIFICATIONS: FCC 47 CFR 2.1051

RSS-119 5.8

GUIDE: ANSI C63.26 5.7

### MEASUREMENT PROCEDURE:

1. Refer Annex A for equipment set up.
2. The frequency range examined was from the lowest frequency generated within the EUT, to a frequency higher than the 10<sup>th</sup> Harmonic:  
9 kHz to Fc-BW  
Fc+ BW to 10Fc (4.7GHz)
3. The EUT was set to transmit high or low power. A scan is performed with a resolution bandwidth of 100 kHz and a video bandwidth of 300 kHz for frequencies up to 1 GHz, and a resolution bandwidth of 1 MHz and a video bandwidth of 3 MHz for frequencies above 1 GHz.
4. For frequencies close to the carrier the spectrum was measured using a resolution bandwidth of 1kHz, the results were then integrated to give measurements for 100kHz bandwidth.
5. A high-pass, band reject filter was used for frequencies from 400MHz to 520MHz.
6. For each frequency range the spectrum analyser was loaded with the appropriate calibration figures to compensate for the cables, attenuator, and filter losses, allowing the emission levels to be read directly with no further calculation.
7. The results of the various sweeps were combined programmatically to give charts for frequencies near the carrier, up to 1GHz and above 1GHz.

The calibrations are loaded as an overall reference level offset plus a set of correction factors for the required frequency band.

Spurious emissions which were attenuated by more than 20 dB below the limit were not recorded.

Example of attenuation correction: (dB)

|                             |       |                                  |
|-----------------------------|-------|----------------------------------|
| E3673 20dB 25W BD5871       | 19.83 |                                  |
| E5028 1m5 Blue 501868       | 0.29  |                                  |
| E3384 400_520MHz HPBRF      | 37.67 |                                  |
| Total Attenuation @ 500 MHz | 57.79 | Sum of component attenuation (a) |
| Amplitude offset            | 27.01 | (b)                              |
| Correction @ 500 MHz        | 30.78 | (a-b)                            |

MEASUREMENT UNCERTAINTY:  $\leq 12.75$  GHz  $\pm 3.0$  dB

### MEASUREMENT RESULTS:

See the tables and plots on the following pages for 12.5 kHz channel spacing.

LIMIT CLAUSES: FCC 47 CFR 90.210

RSS-119 5.8

Photo: Conducted Emissions Test Setup



### Spurious Emissions (Tx Conducted)

SPECIFICATION: FCC 47 CFR 2.1051

RSS-119 5.8

12.5 kHz Channel Spacing

406.125 MHz @ 4 W

Emission Mask D

| Emission Frequency (MHz) | Level (dBm) | Level (dBc) |
|--------------------------|-------------|-------------|
| ~                        | ~           | ~           |

12.5 kHz Channel Spacing

406.125 MHz @ 1 W

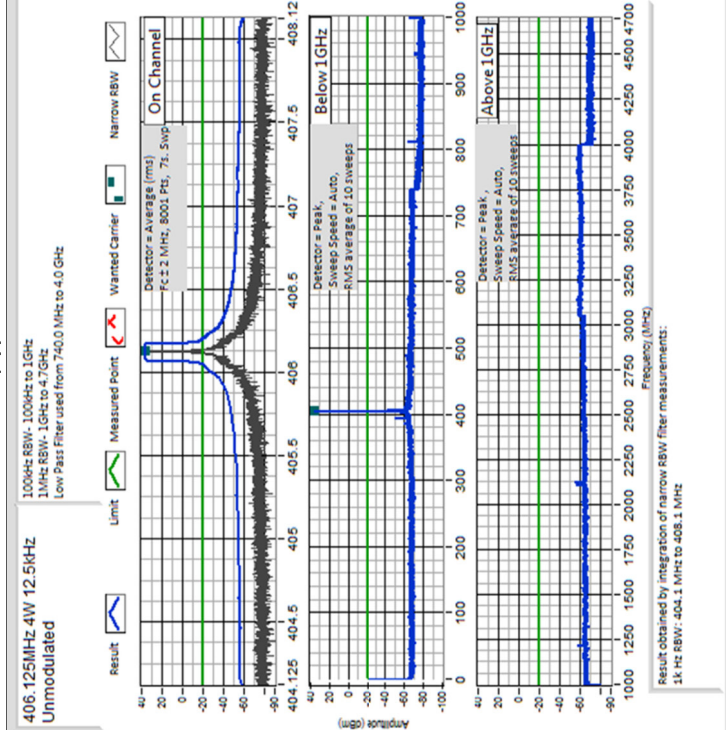
Emission Mask D

| Emission Frequency (MHz)                                                  | Level (dBm) | Level (dBc) |
|---------------------------------------------------------------------------|-------------|-------------|
| ~                                                                         | ~           | ~           |
| No emissions were detected at a level greater than 20 dB below the limit. |             |             |

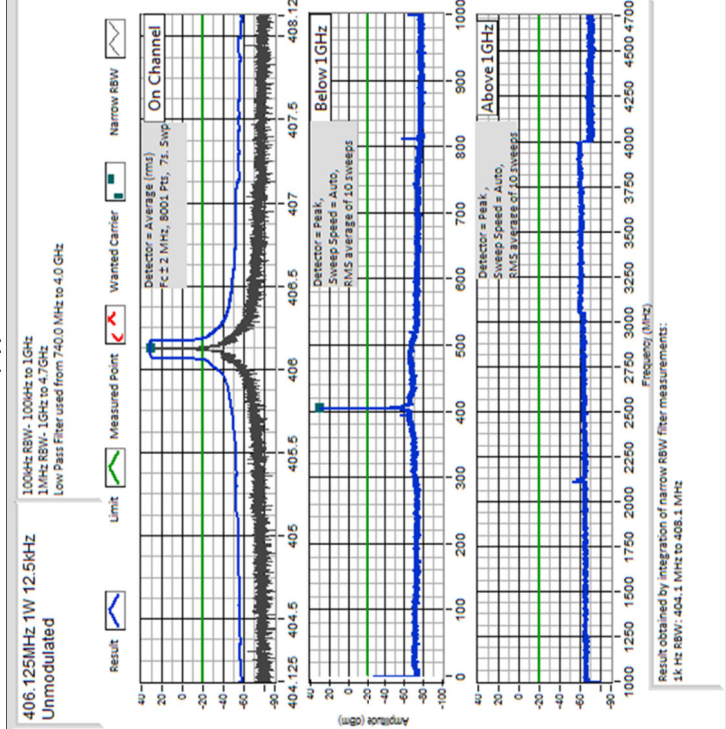
Spurious Emissions (Tx Conducted)

406.125 MHz, 9 kHz to 4.7 GHz scan

4 W



1 W



### Spurious Emissions (Tx Conducted)

SPECIFICATION: FCC 47 CFR 2.1051

RSS-119 5.8

12.5 kHz Channel Spacing

418.025 MHz @ 4 W

Emission Mask D

| Emission Frequency (MHz) | Level (dBm) | Level (dBc) |
|--------------------------|-------------|-------------|
| ~                        | ~           | ~           |

12.5 kHz Channel Spacing

418.025 MHz @ 1 W

Emission Mask D

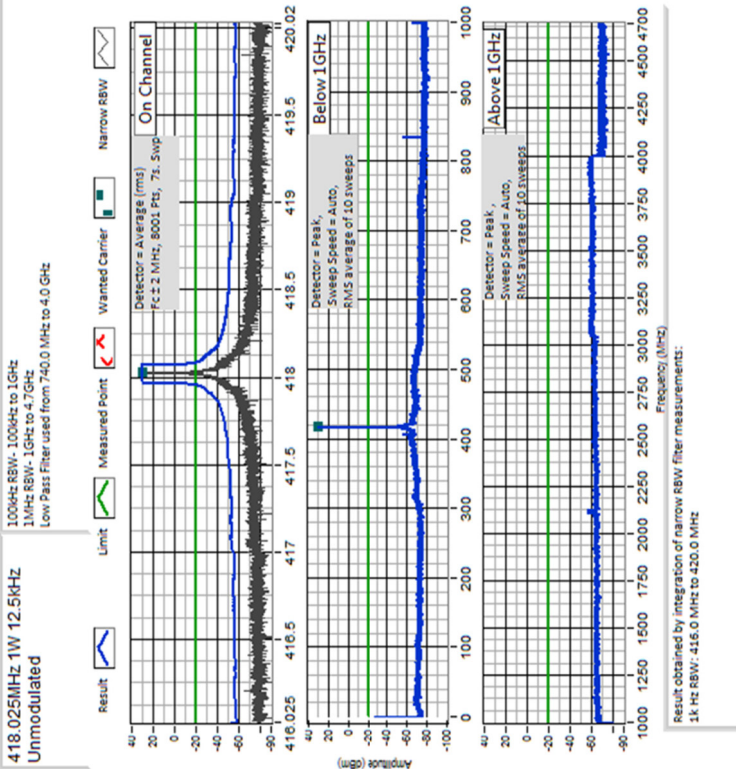
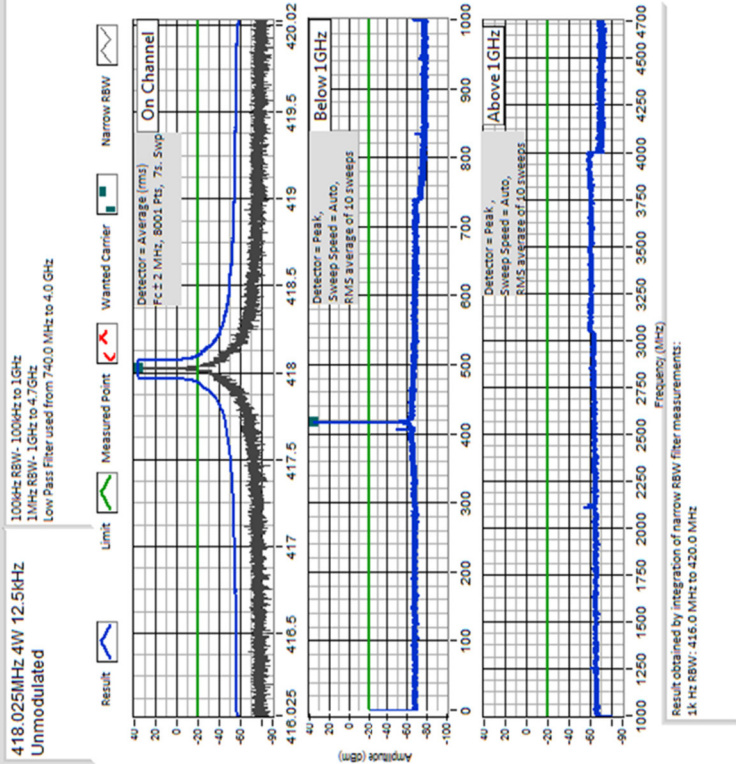
| Emission Frequency (MHz)                                                  | Level (dBm) | Level (dBc) |
|---------------------------------------------------------------------------|-------------|-------------|
| ~                                                                         | ~           | ~           |
| No emissions were detected at a level greater than 20 dB below the limit. |             |             |

Spurious Emissions (Tx Conducted)

418.025 MHz, 9 kHz to 4.7 GHz scan

4 W

1 W



### Spurious Emissions (Tx Conducted)

SPECIFICATION: FCC 47 CFR 2.1051

RSS-119 5.8

12.5 kHz Channel Spacing

429.975 MHz @ 4 W

Emission Mask D

| Emission Frequency (MHz) | Level (dBm) | Level (dBc) |
|--------------------------|-------------|-------------|
| ~                        | ~           | ~           |

12.5 kHz Channel Spacing

429.975 MHz @ 1 W

Emission Mask D

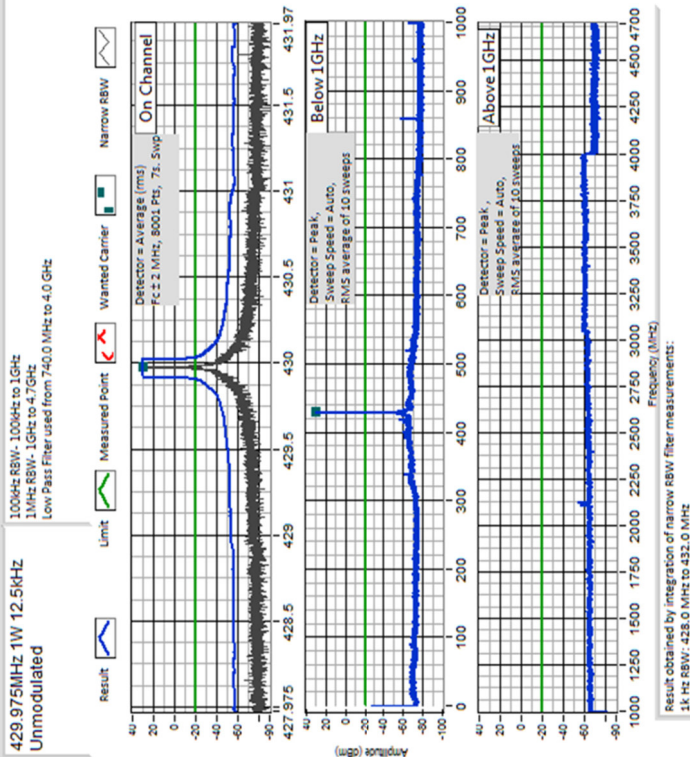
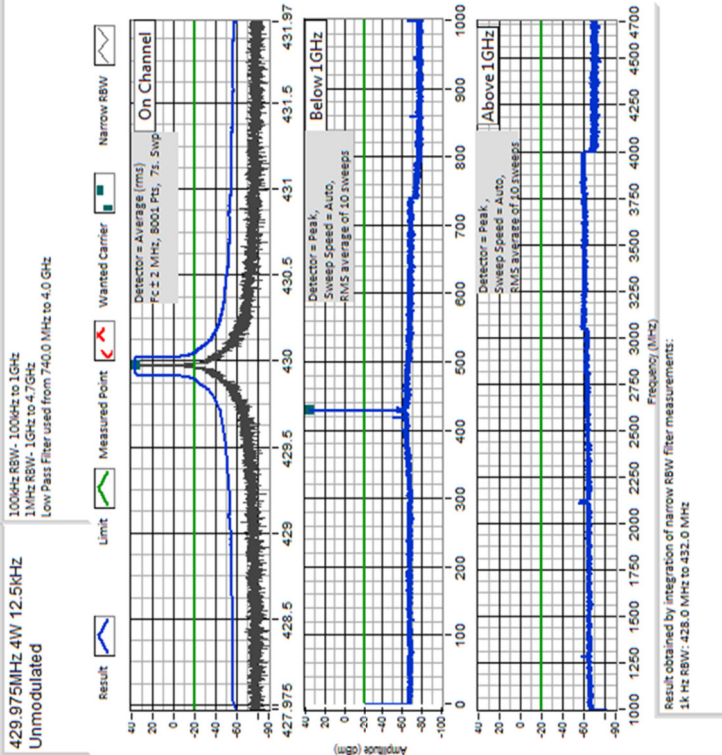
| Emission Frequency (MHz)                                                  | Level (dBm) | Level (dBc) |
|---------------------------------------------------------------------------|-------------|-------------|
| ~                                                                         | ~           | ~           |
| No emissions were detected at a level greater than 20 dB below the limit. |             |             |

Spurious Emissions (Tx Conducted)

429.975 MHz, 9 kHz to 4.7 GHz scan

4 W

1 W



Spurious Emissions (Tx Conducted)

SPECIFICATION: FCC 47 CFR 2.1051

RSS-119 5.8

12.5 kHz Channel Spacing

438.025 MHz @ 4 W

Emission Mask D

| Emission Frequency (MHz) | Level (dBm) | Level (dBc) |
|--------------------------|-------------|-------------|
| ~                        | ~           | ~           |

12.5 kHz Channel Spacing

438.025 MHz @ 1 W

Emission Mask D

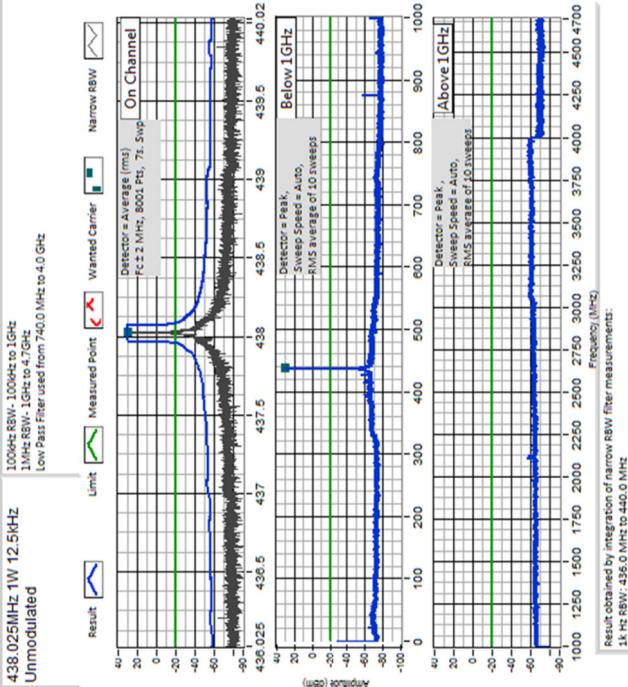
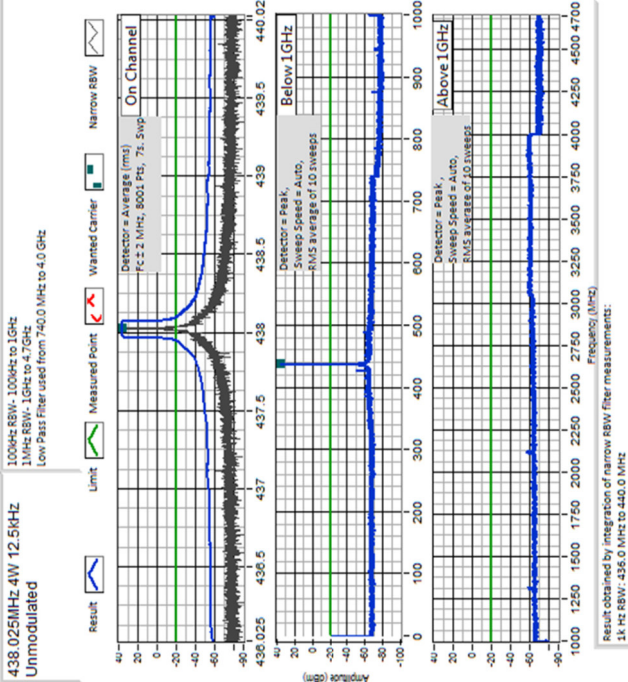
| Emission Frequency (MHz)                                                  | Level (dBm) | Level (dBc) |
|---------------------------------------------------------------------------|-------------|-------------|
| ~                                                                         | ~           | ~           |
| No emissions were detected at a level greater than 20 dB below the limit. |             |             |

Spurious Emissions (Tx Conducted)

438.025 MHz, 9 kHz to 4.7 GHz scan

4 W

1 W



### Spurious Emissions (Tx Conducted)

SPECIFICATION: FCC 47 CFR 2.1051

RSS-119 5.8

12.5 kHz Channel Spacing

450.025 MHz @ 4 W

Emission Mask D

| Emission Frequency (MHz) | Level (dBm) | Level (dBc) |
|--------------------------|-------------|-------------|
| ~                        | ~           | ~           |

12.5 kHz Channel Spacing

450.025 MHz @ 1 W

Emission Mask D

| Emission Frequency (MHz)                                                  | Level (dBm) | Level (dBc) |
|---------------------------------------------------------------------------|-------------|-------------|
| ~                                                                         | ~           | ~           |
| No emissions were detected at a level greater than 20 dB below the limit. |             |             |