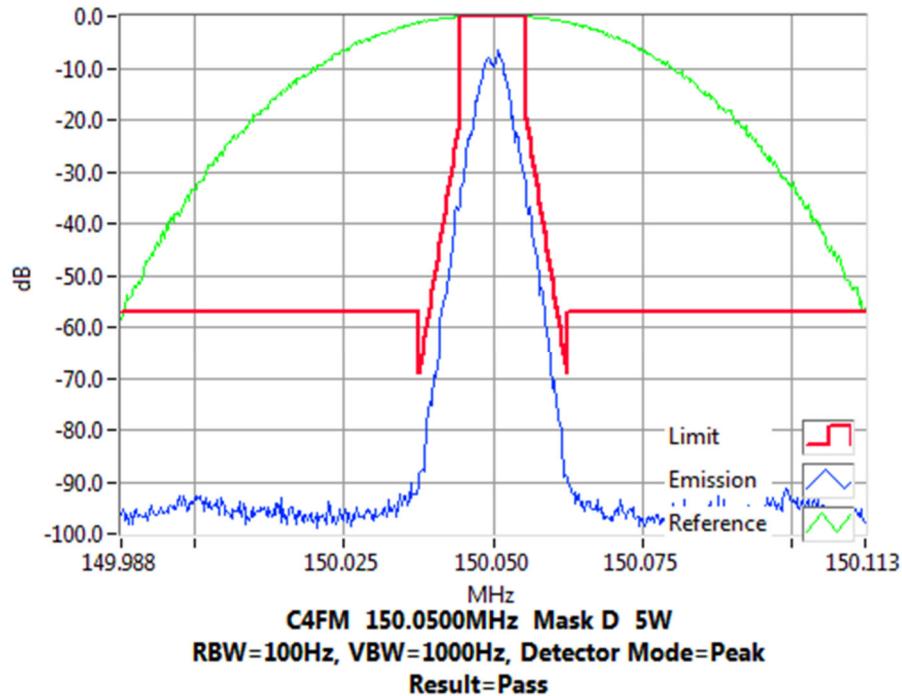


## Transmitter Spectrum Masks

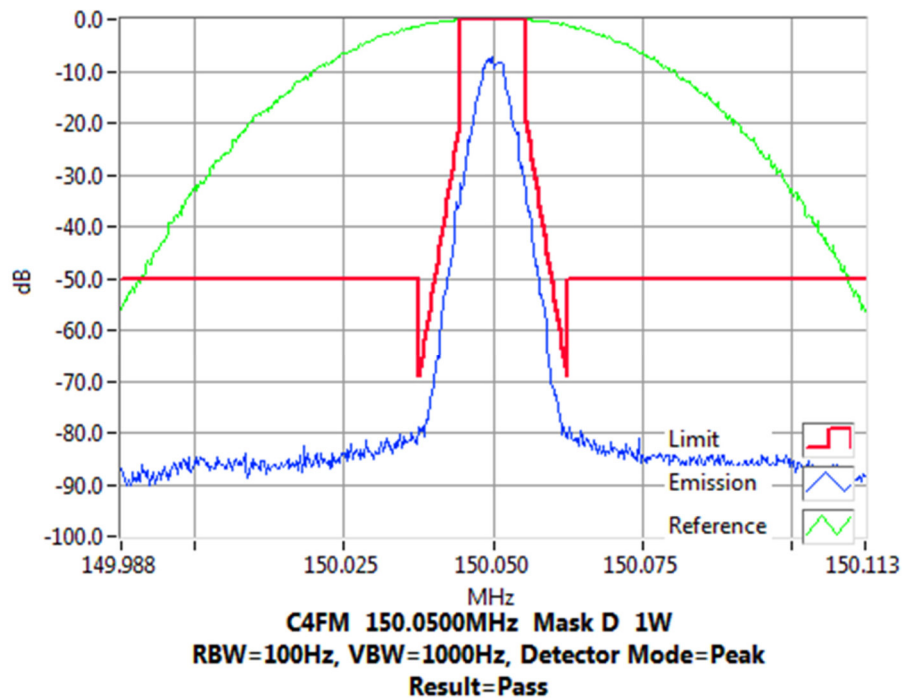
APCO P25 phase-1

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

Tx FREQUENCY: 150.05 MHz 5 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 150.05 MHz 1 W 12.5 kHz Channel Spacing

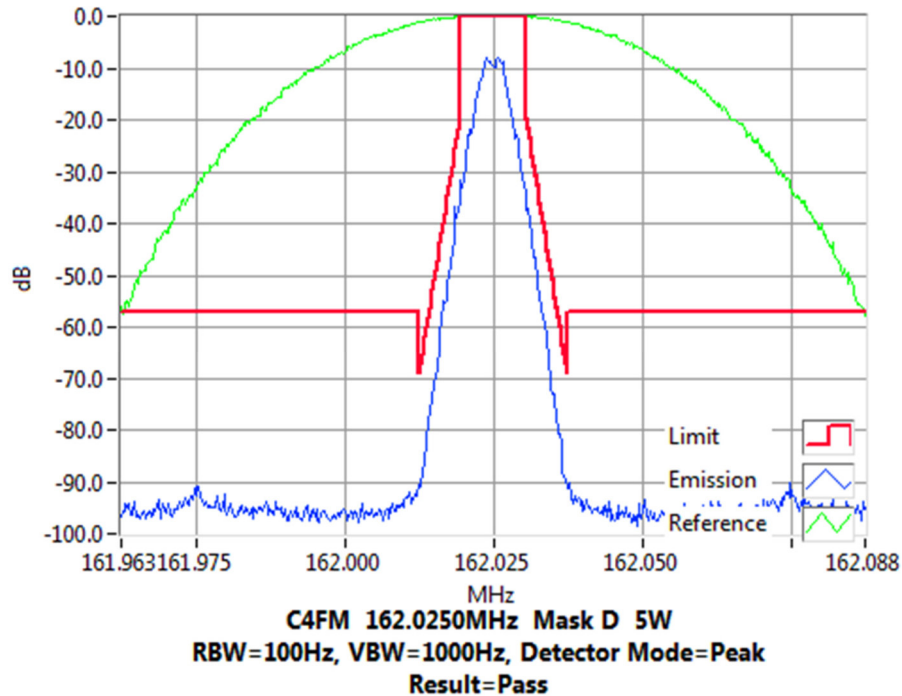


## Transmitter Spectrum Masks

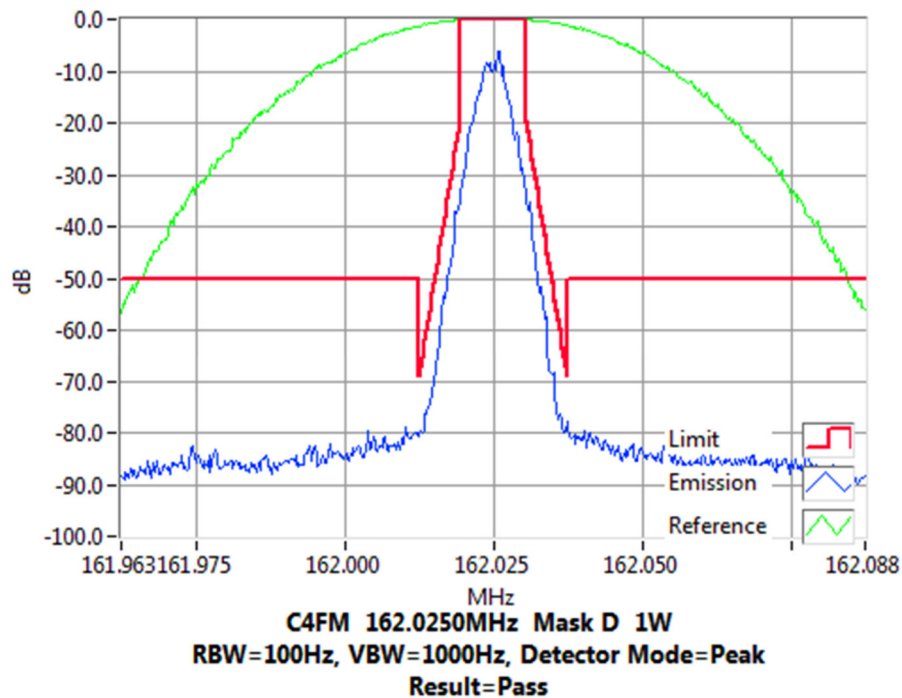
APCO P25 phase-1

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

Tx FREQUENCY: 162.025 MHz 5 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 162.025 MHz 1 W 12.5 kHz Channel Spacing

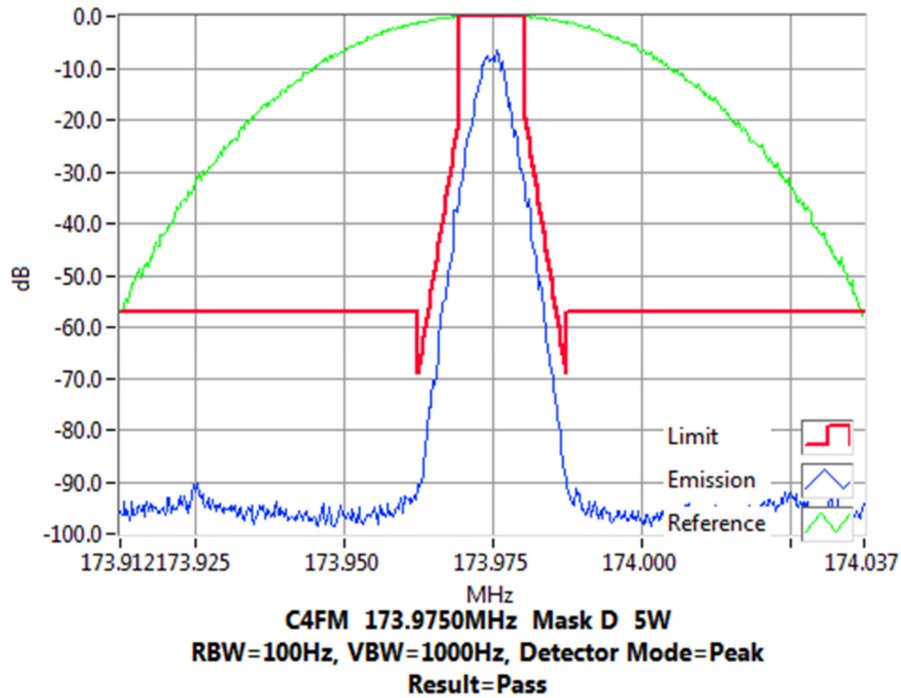


## Transmitter Spectrum Masks

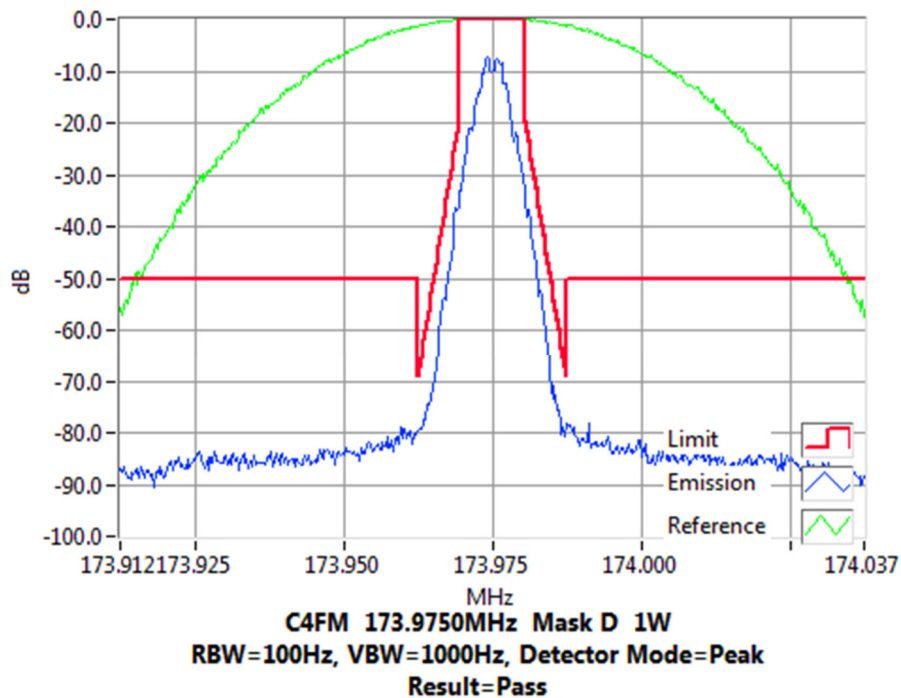
APCO P25 phase-1

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

Tx FREQUENCY: 173.975 MHz 5 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 173.975 MHz 1 W 12.5 kHz Channel Spacing

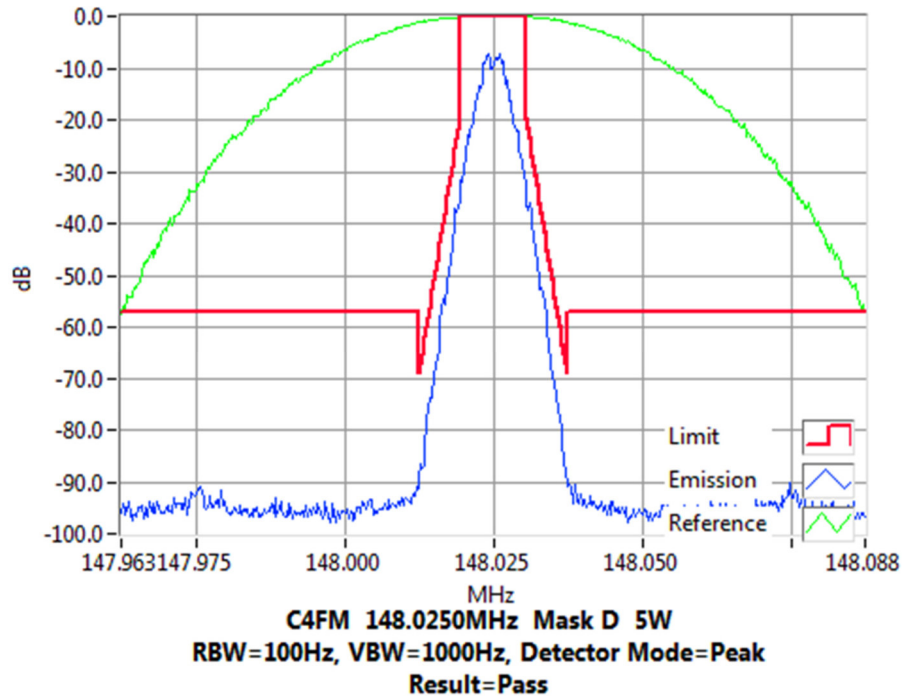


## Transmitter Spectrum Masks

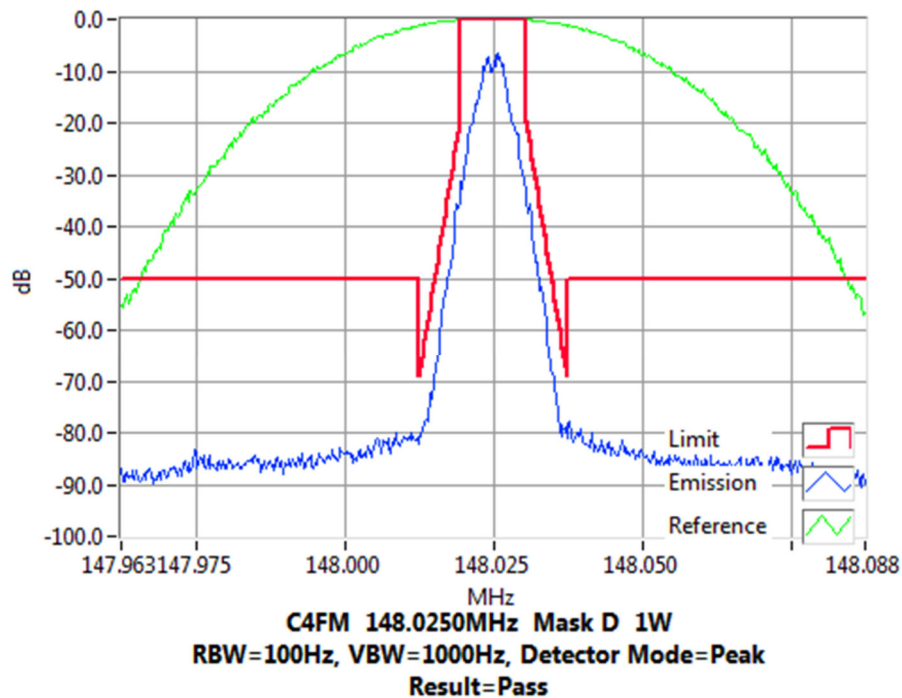
APCO P25 phase-1

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

Tx FREQUENCY: 148.025 MHz 5 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 148.025 MHz 1 W 12.5 kHz Channel Spacing

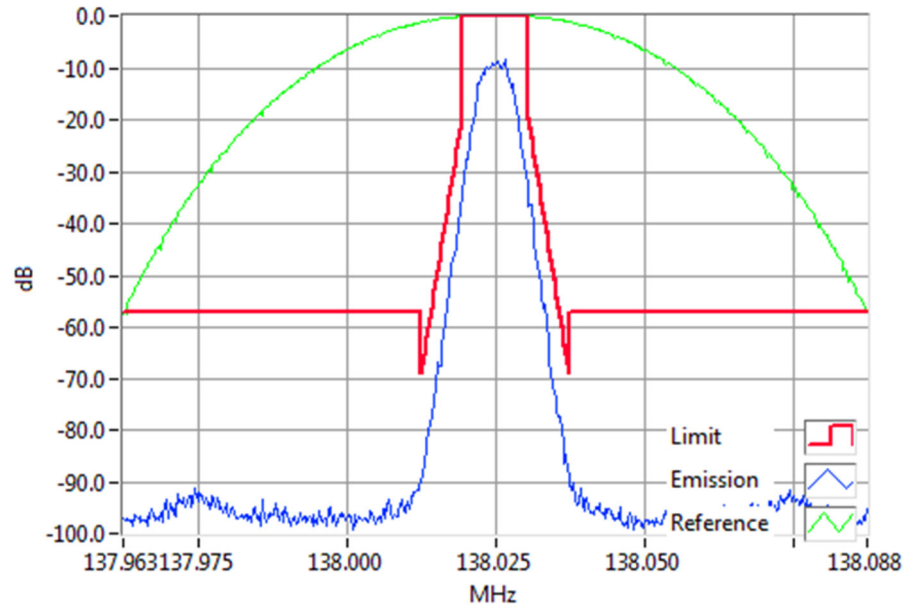


## Transmitter Spectrum Masks

APCO P25 phase-2

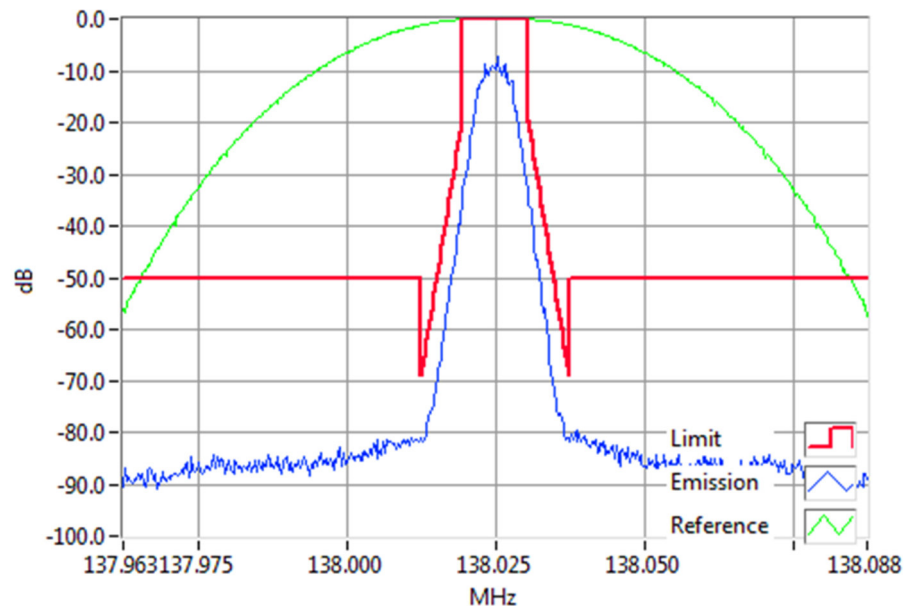
SPECIFICATION: FCC 47 CFR 2.1049 (c) RSS-119 5.5

Tx FREQUENCY: 138.025 MHz 5 W 12.5 kHz Channel Spacing



HCPM 138.0250MHz Mask D 5W  
RBW=100Hz, VBW=1000Hz, Detector Mode=Peak  
Result=Pass

Tx FREQUENCY: 138.025 MHz 1 W 12.5 kHz Channel Spacing



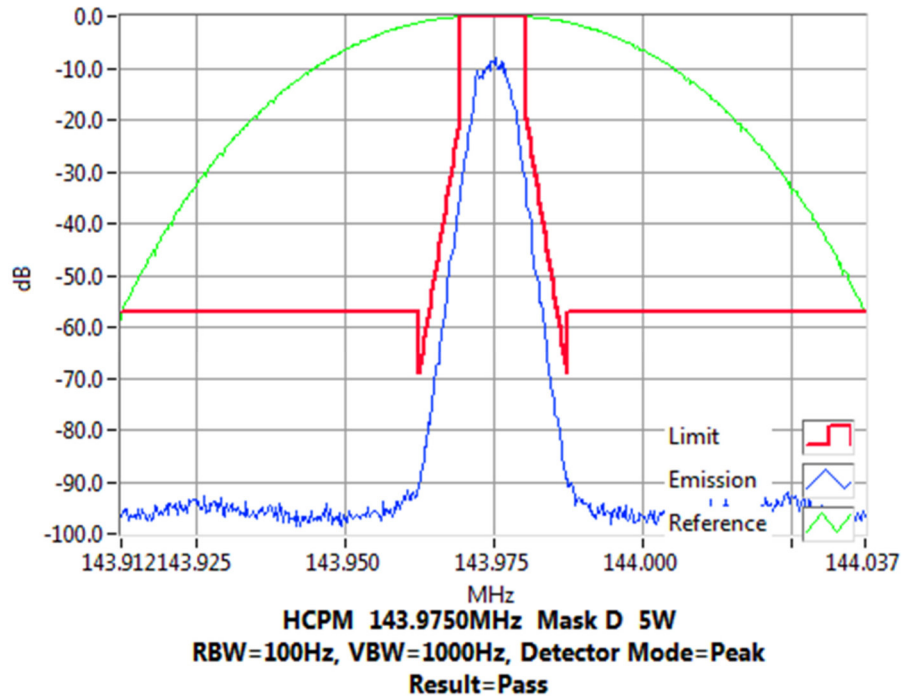
HCPM 138.0250MHz Mask D 1W  
RBW=100Hz, VBW=1000Hz, Detector Mode=Peak  
Result=Pass

## Transmitter Spectrum Masks

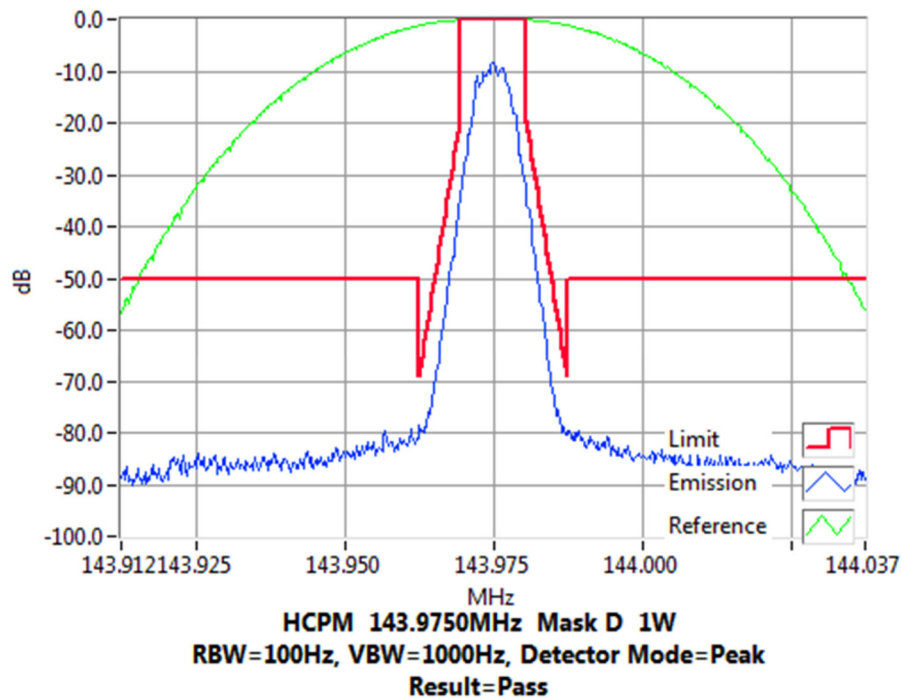
APCO P25 phase-2

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

Tx FREQUENCY: 143.975 MHz 5 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 143.975 MHz 1 W 12.5 kHz Channel Spacing

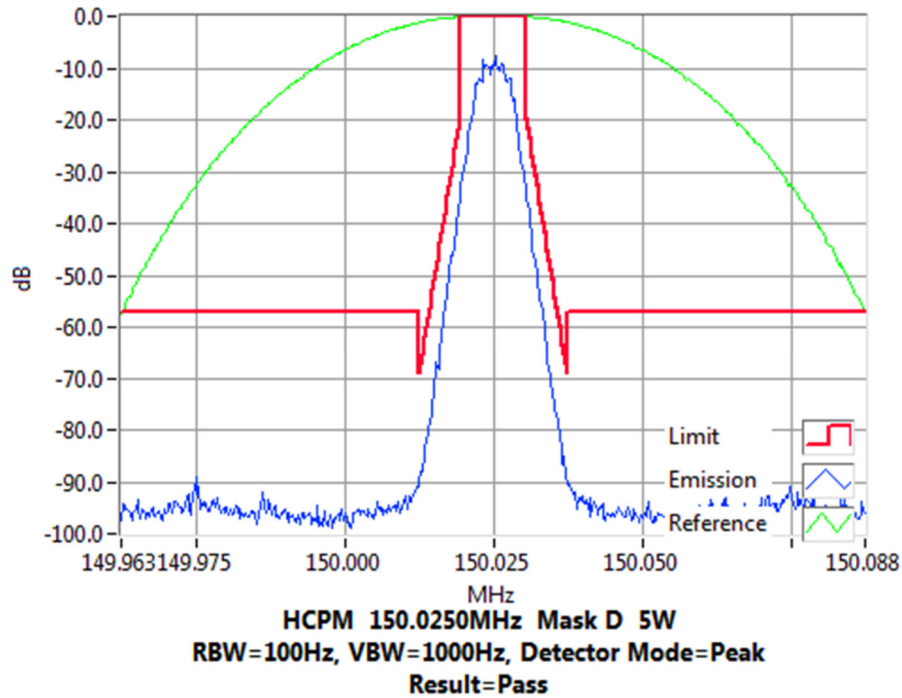


## Transmitter Spectrum Masks

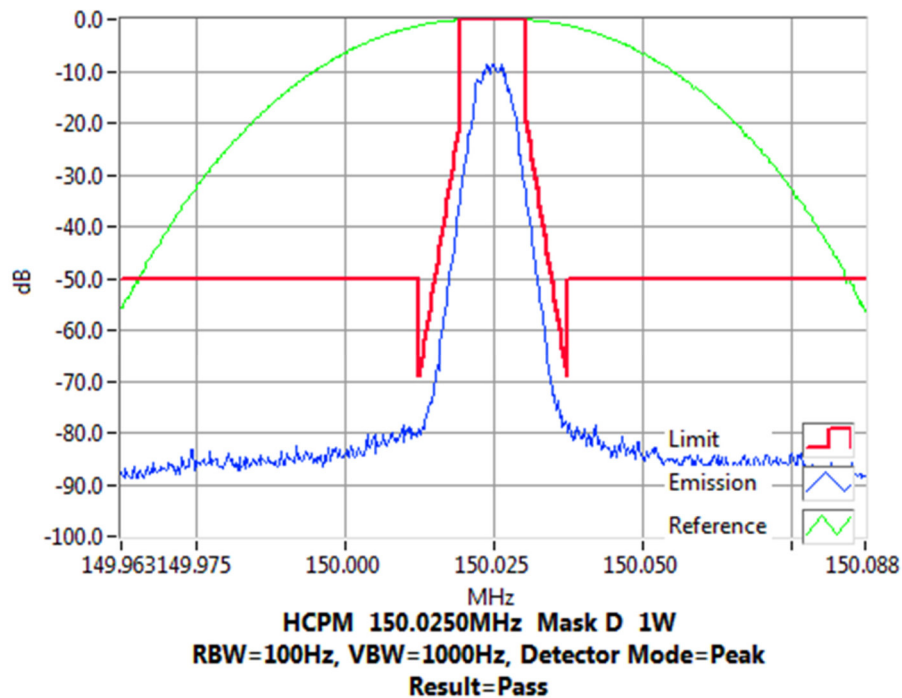
APCO P25 phase-2

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

Tx FREQUENCY: 150.025 MHz 5 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 150.025 MHz 1 W 12.5 kHz Channel Spacing

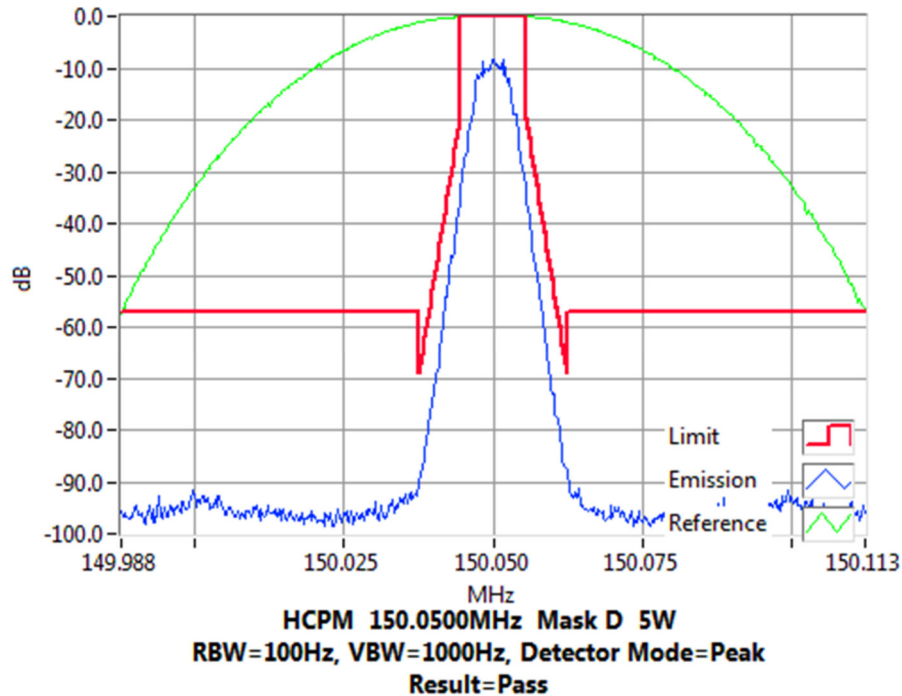


## Transmitter Spectrum Masks

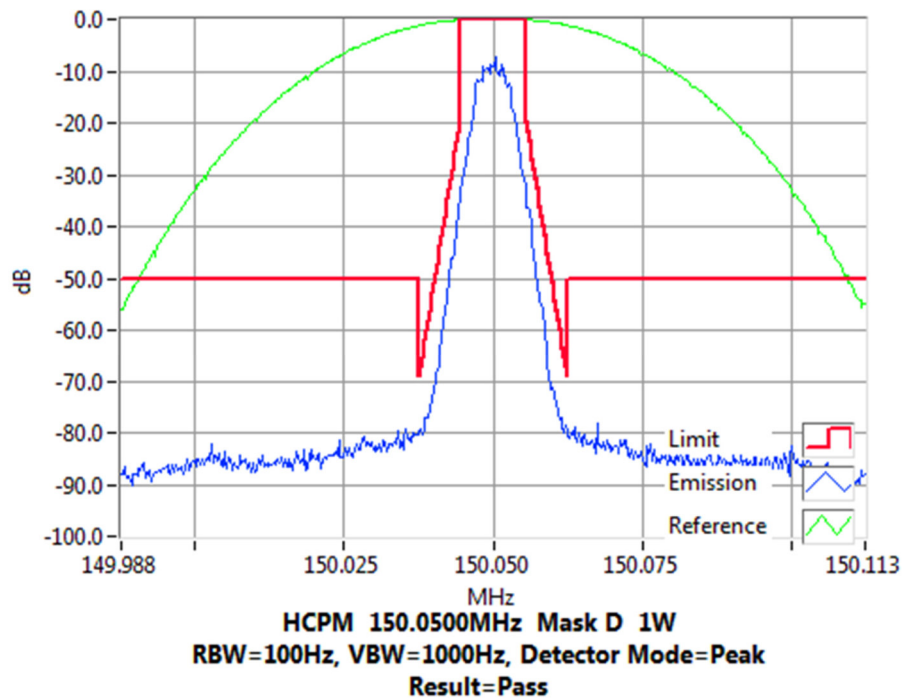
APCO P25 phase-2

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

Tx FREQUENCY: 150.05 MHz 5 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 150.05 MHz 1 W 12.5 kHz Channel Spacing

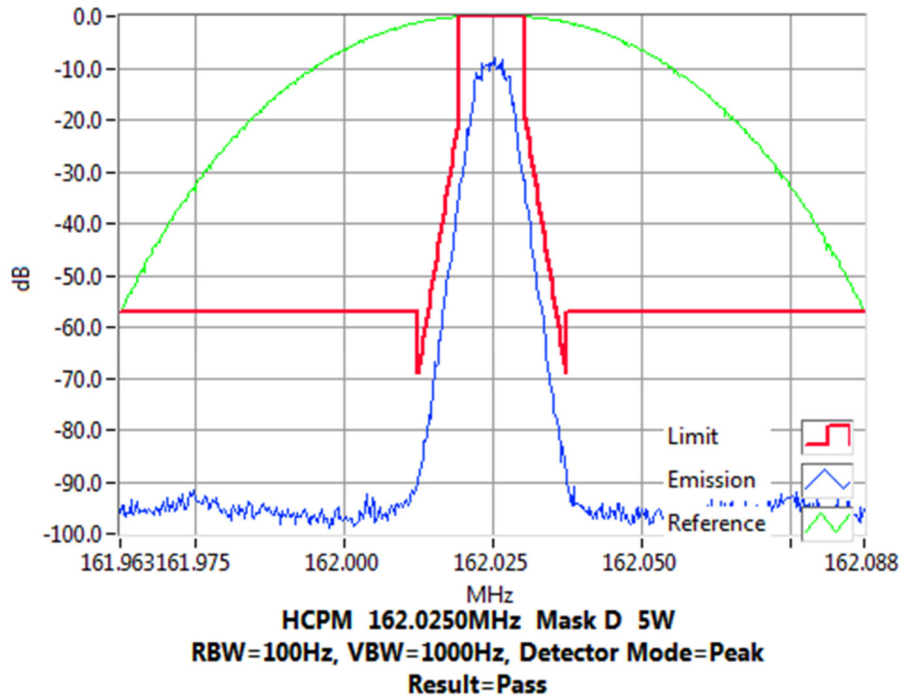


## Transmitter Spectrum Masks

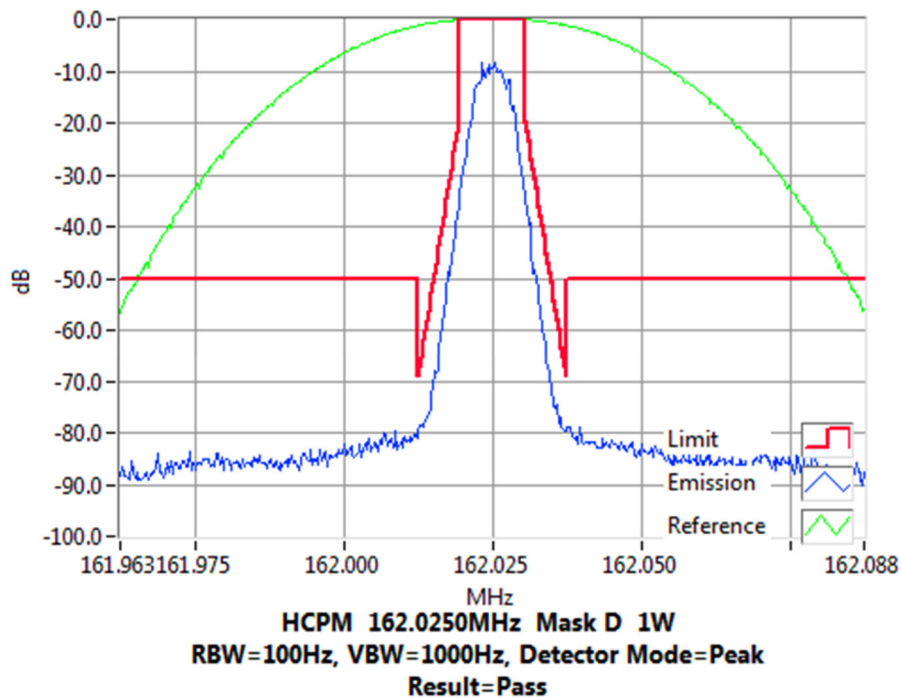
APCO P25 phase-2

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

Tx FREQUENCY: 162.025 MHz 5 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 162.025 MHz 1 W 12.5 kHz Channel Spacing

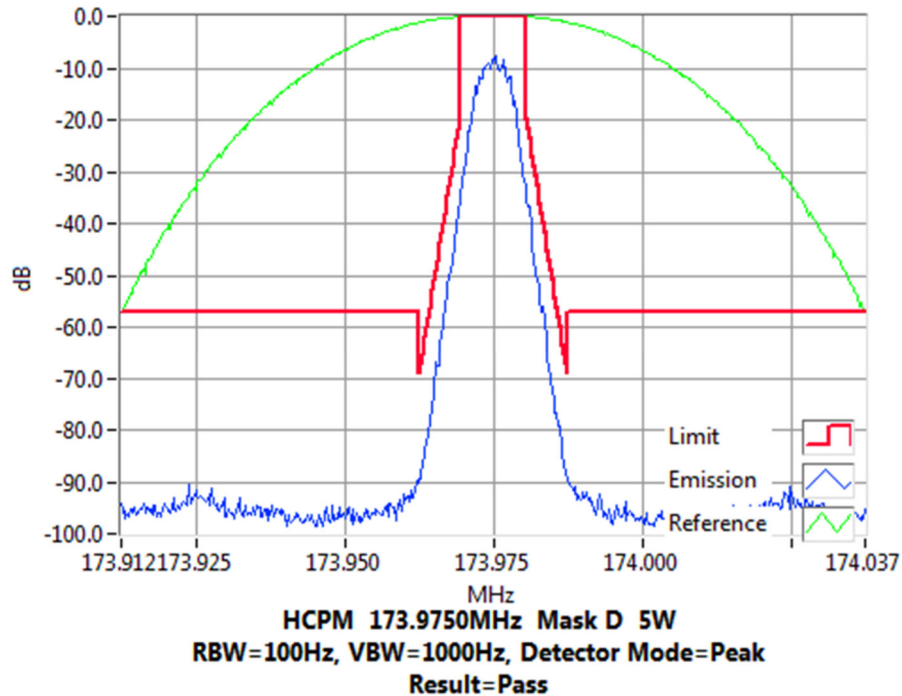


## Transmitter Spectrum Masks

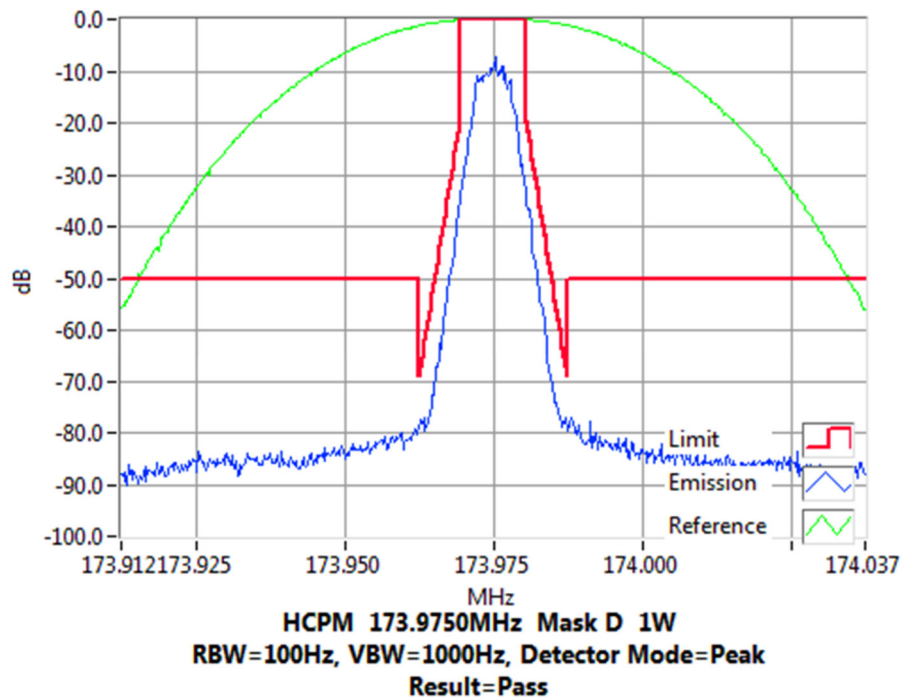
APCO P25 phase-2

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

Tx FREQUENCY: 173.975 MHz 5 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 173.975 MHz 1 W 12.5 kHz Channel Spacing

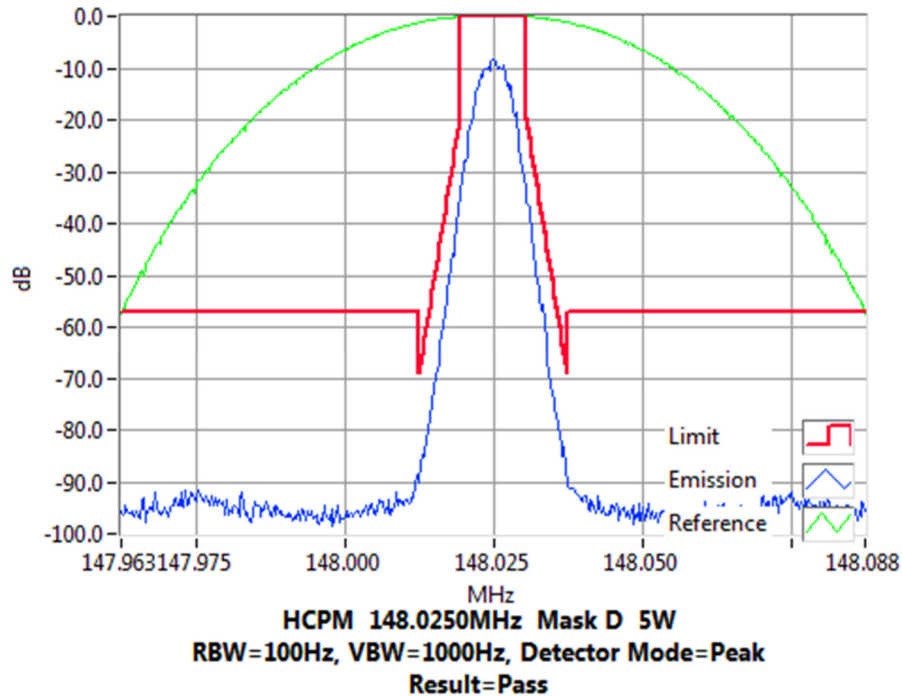


## Transmitter Spectrum Masks

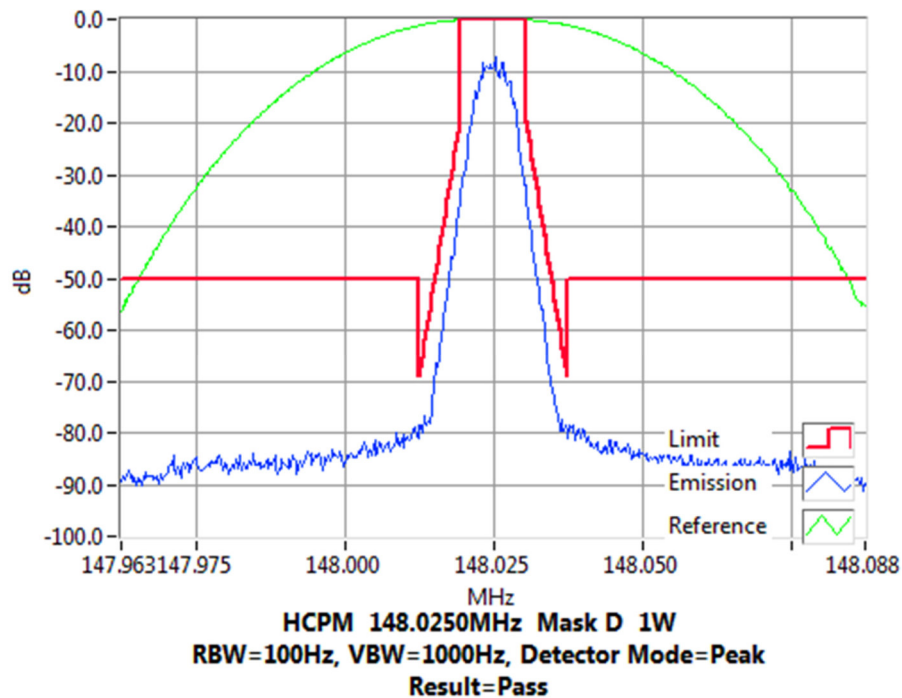
APCO P25 phase-2

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

Tx FREQUENCY: 148.025 MHz 5 W 12.5 kHz Channel Spacing



Tx FREQUENCY: 148.025 MHz 1 W 12.5 kHz Channel Spacing



## TRANSMITTER SPURIOUS EMISSIONS (CONDUCTED)

SPECIFICATIONS: FCC 47 CFR 2.1051

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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 (1.8 GHz)
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 low-pass filter was used for frequencies from 240 MHz to 1.8 GHz.
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)

E3562 20dB 50W AW1266	19.89	
E5028 1m5 Blue 501868	0.15	
Total Attenuation @ 150.025MHz	20.04	Sum of component attenuation (a)
Amplitude offset	20.21	(b)
Correction @ 150.025MHz	-0.17	(a-b)

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

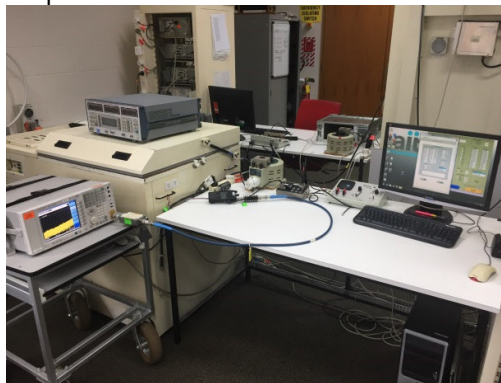
### MEASUREMENT RESULTS:

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

Conducted Emissions Test Setup



### Spurious Emissions (Tx Conducted)

SPECIFICATION: FCC 47 CFR 2.1051

RSS-119 5.8

12.5 kHz Channel Spacing

138.025 MHz @ 5 W

Emission Mask D

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

12.5 kHz Channel Spacing

138.025 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.		

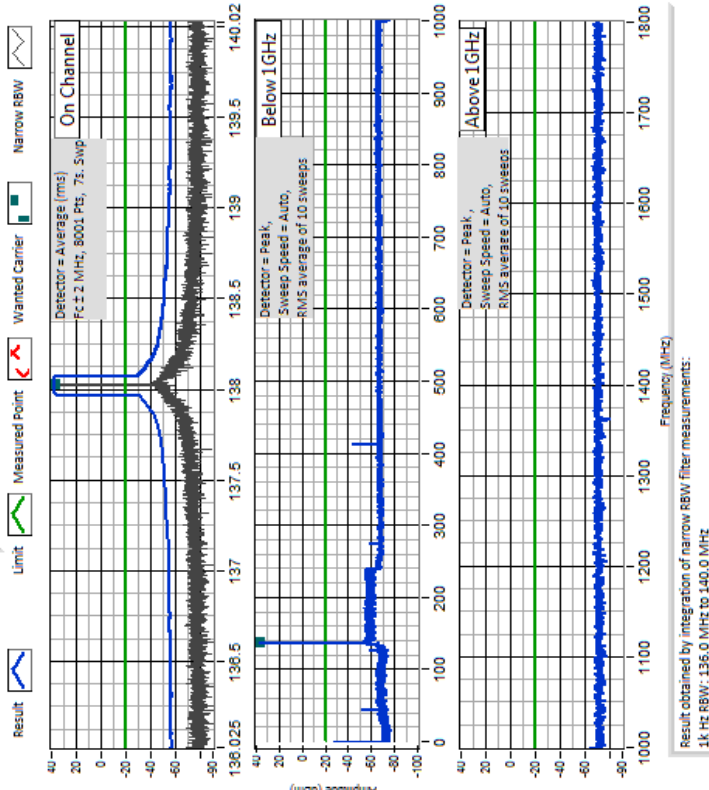
Spurious Emissions (Tx Conducted)

138.025 MHz, 9 kHz to 1.8 GHz scans

5 W

138.025MHz 5W 12.5kHz  
Unmodulated

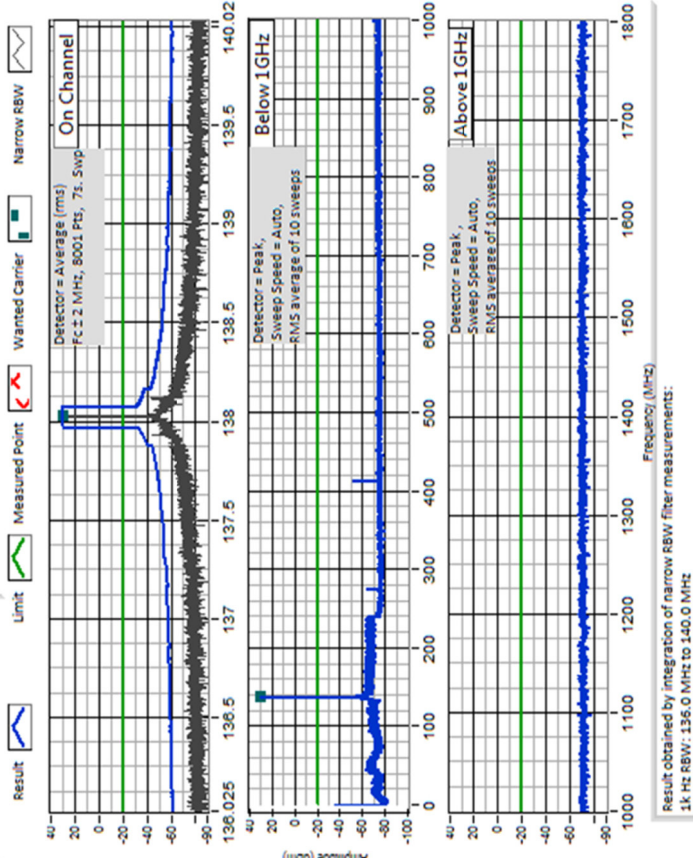
100kHz RBW- 100kHz to 1GHz  
1MHz RBW- 1GHz to 1.8GHz  
Low Pass Filter used from 240.0 MHz to 1.8 GHz



1 W

138.025MHz 1W 12.5kHz  
Unmodulated

100kHz RBW- 100kHz to 1GHz  
1MHz RBW- 1GHz to 1.8GHz  
Low Pass Filter used from 240.0 MHz to 1.8 GHz



### Spurious Emissions (Tx Conducted)

SPECIFICATION: FCC 47 CFR 2.1051

RSS-119 5.8

12.5 kHz Channel Spacing

143.975 MHz @ 5 W

Emission Mask D

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

12.5 kHz Channel Spacing

143.975 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.		