

## TRANSMITTER SPURIOUS EMISSIONS (CONDUCTED)

SPECIFICATIONS: FCC 47 CFR 2.1051

RSS-119 5.8

GUIDE: TIA-102.CAAA-C 2.2.7

### 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:
 

100 kHz to Fc-BW
Fc+ BW to 10Fc (2 GHz)
3. The EUT was set to transmit high or low power, modulated with DMR (4FSK). 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. A filter was used for frequencies just below the second harmonic to 2 GHz.
4. 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.  
 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:

30dB 350W CK9178	32.03	
2m Black5	0.29	
2m Black6	0.31	
E3382 135_175MHz HPBRF	0.76	
Total Attenuation @ 296.200 MHz	33.38	Sum of component attenuation (a)
Amplitude offset	33.66	(b)
Correction @ 296.200M Hz	-0.28	(a-b)

A photograph of the test set-up is included below.

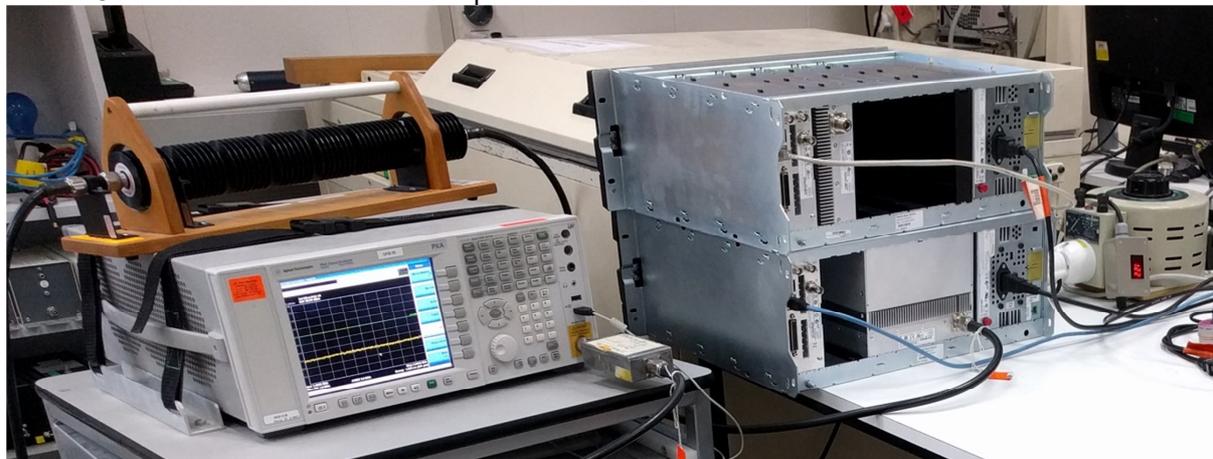
### MEASUREMENT RESULTS:

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

LIMIT CLAUSES: FCC 47 CFR 90.210

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Photo: Conducted Emissions Test Setup



Spurious Emissions (Tx Conducted)

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12.5 kHz Channel Spacing

148.1 MHz @ 100 W

Emission Mask D

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

12.5 kHz Channel Spacing

148.1 MHz @ 10 W

Emission Mask D

Emission Frequency (MHz)	Level (dBm)	Level (dBc)
~	~	~
Measurement Uncertainty:	≤12.75 GHz ± 3.0 dB	
No emissions were detected at a level greater than 20 dB below the limit.		

Spurious Emissions (Tx Conducted)

