TRANSMITTER SPURIOUS EMISSIONS (CONDUCTED)

SPECIFICATIONS: FCC 47 CFR 2.1051 RSS-119 5.8

GUIDE: TIA-603-E 2.2.13 (analogue)
TIA-102-CAAA-C 2.2.7 (digital)

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 10th Harmonic: 9 kHz to Fc-BW
   Fc+ BW to 10Fc (8.7 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 1GHz to 3.6 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.

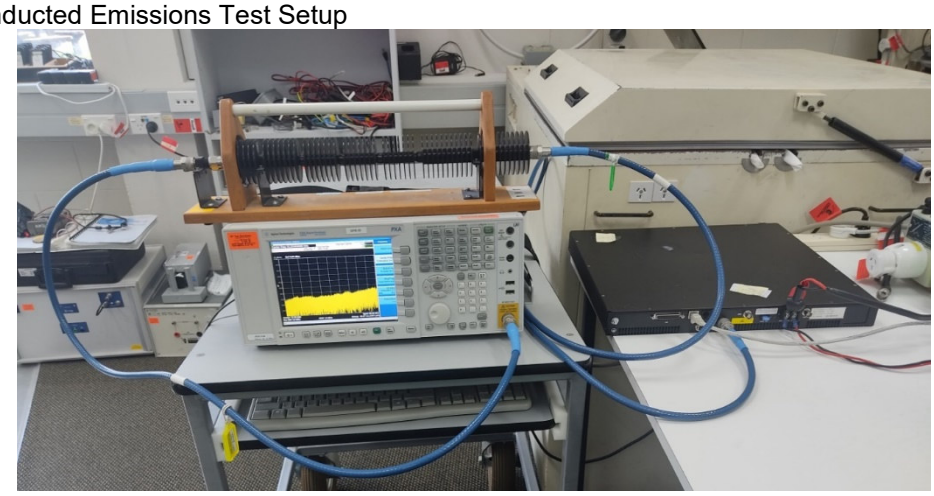
Example of attenuation correction: (dB)

E5023 30dB 350W CK9178	32.09	
E5028 1m5 Blue 501868	0.28	
E5015 3m Blue 503429	0.65	
Total Attenuation @ 500 MHz	33.02	Sum of component attenuation (a)
Amplitude offset	33.02	(b)
Correction @ 500 MHz	0.0	(a-b)

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)

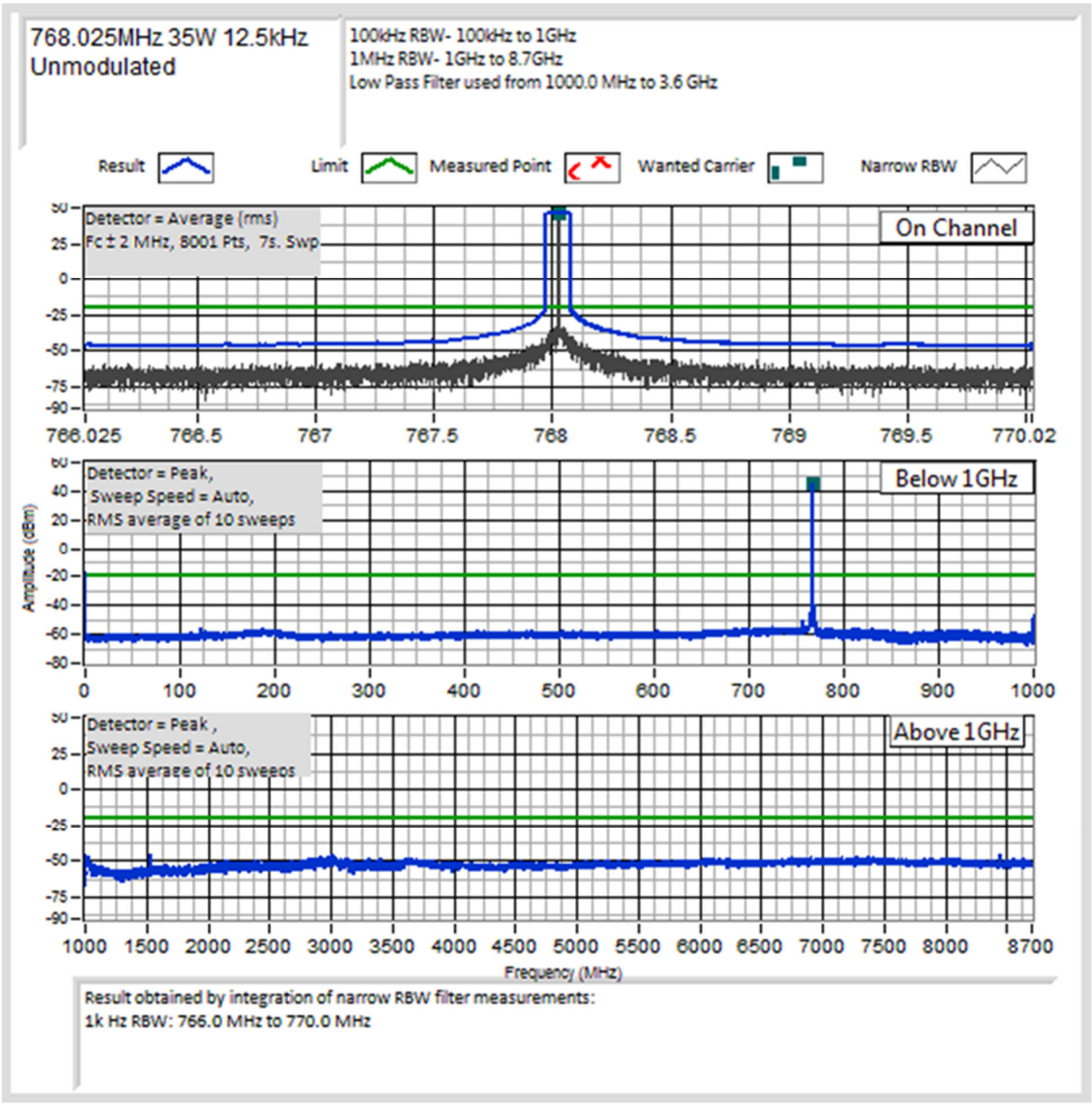
SPECIFICATION: FCC CFR 2.1051 RSS-119 5.8

12.5 kHz Channel Spacing 768.025 MHz @ 35 W Emission Mask D

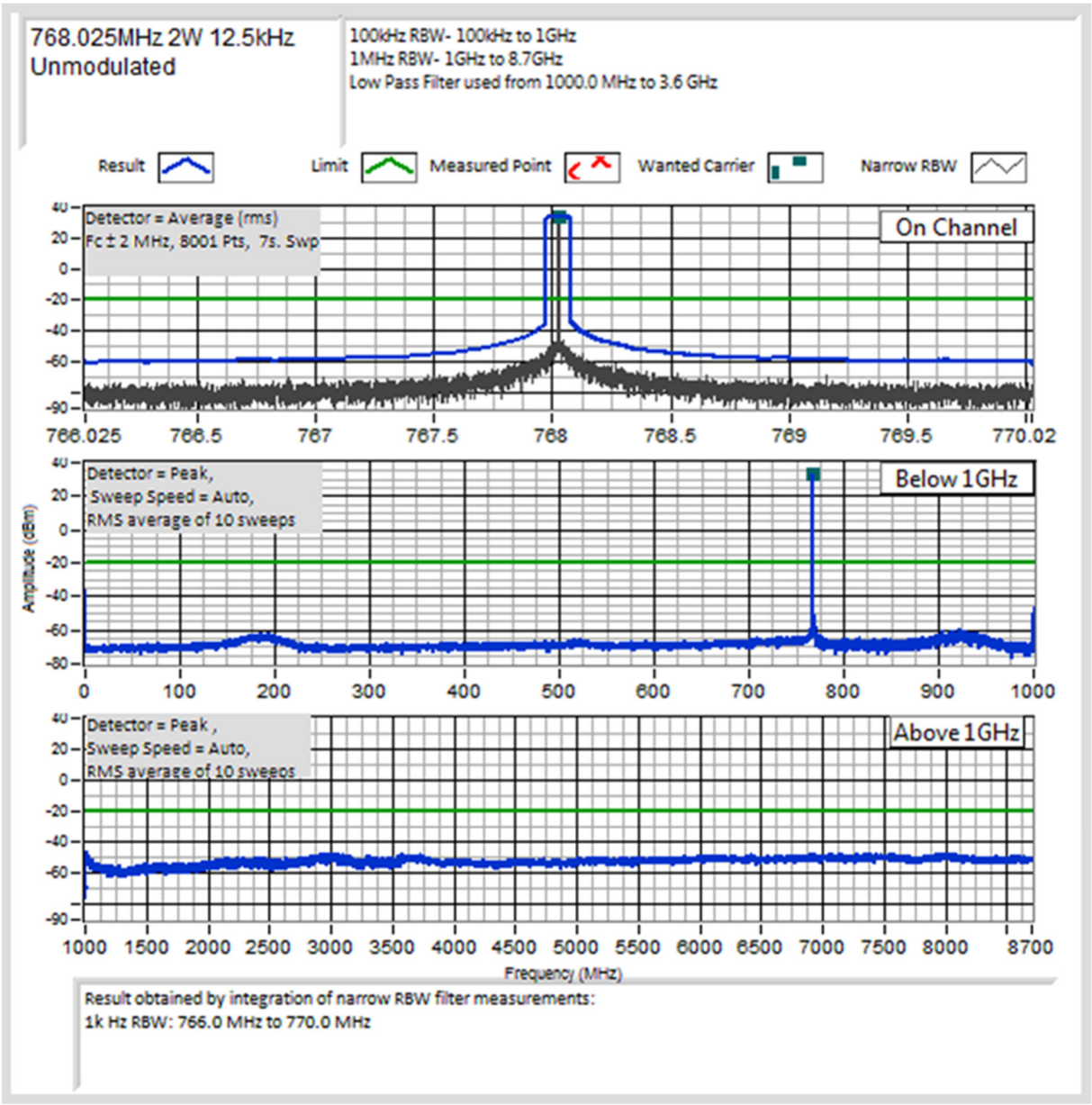
Emission Frequency (MHz)	Level (dBm)	Level (dBc)
~	~	~

12.5 kHz Channel Spacing 768.025 MHz @ 2 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)



Spurious Emissions (Tx Conducted)

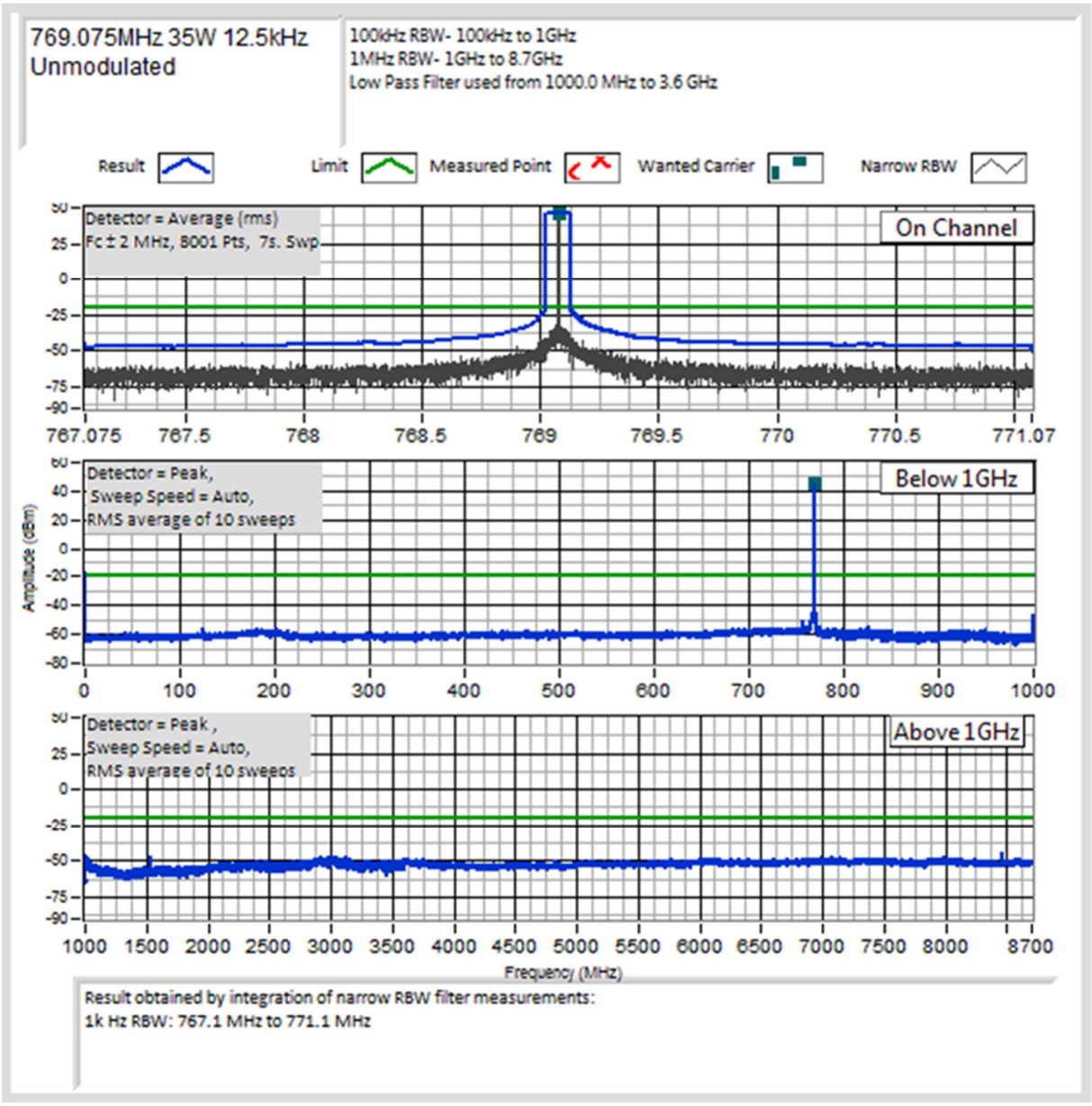
SPECIFICATION: FCC CFR 2.1051 RSS-119 5.8

12.5 kHz Channel Spacing 769.075 MHz @ 35 W Emission Mask D

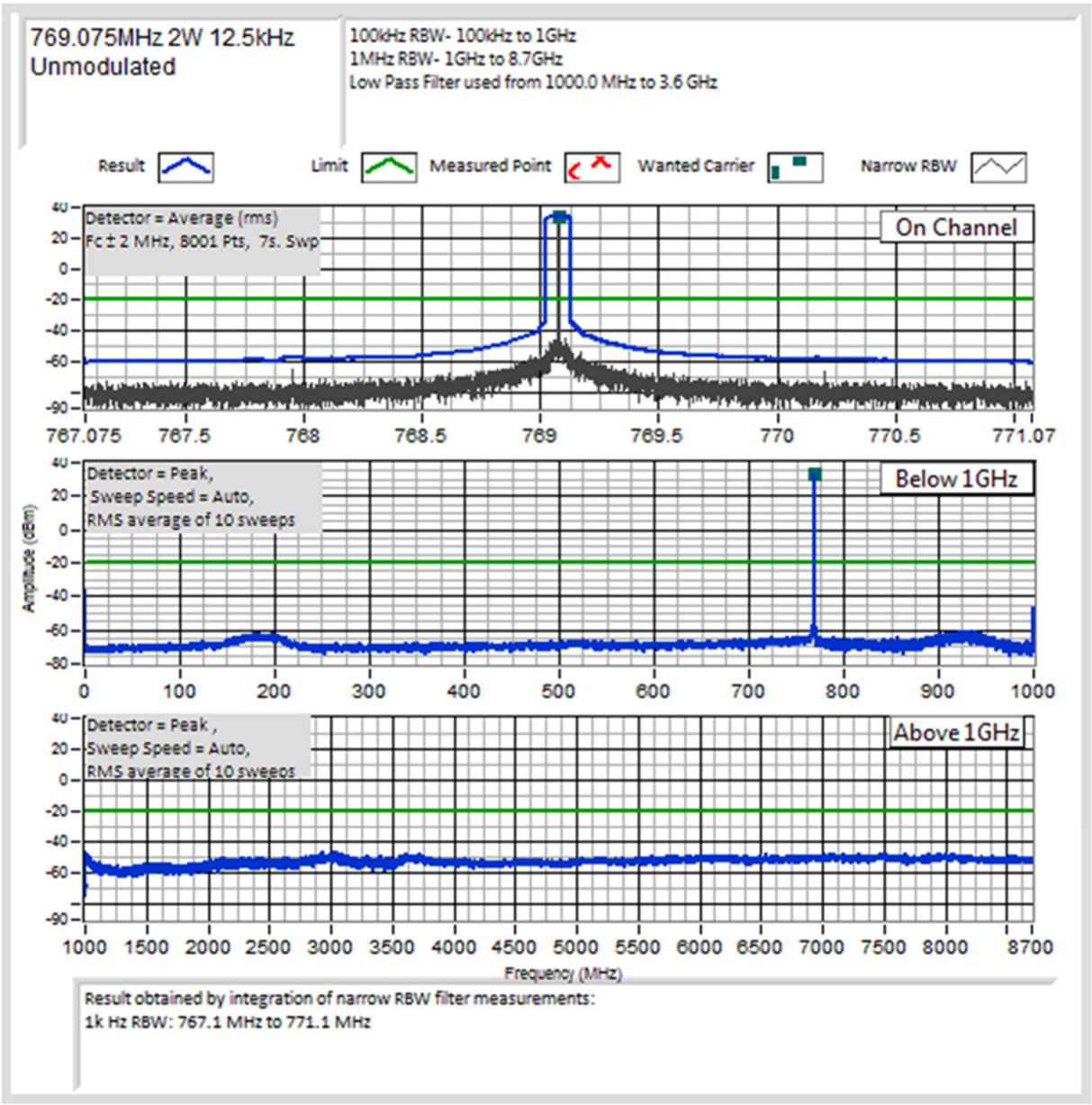
Emission Frequency (MHz)	Level (dBm)	Level (dBc)
~	~	~

12.5 kHz Channel Spacing 769.075 MHz @ 2 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)



Spurious Emissions (Tx Conducted)

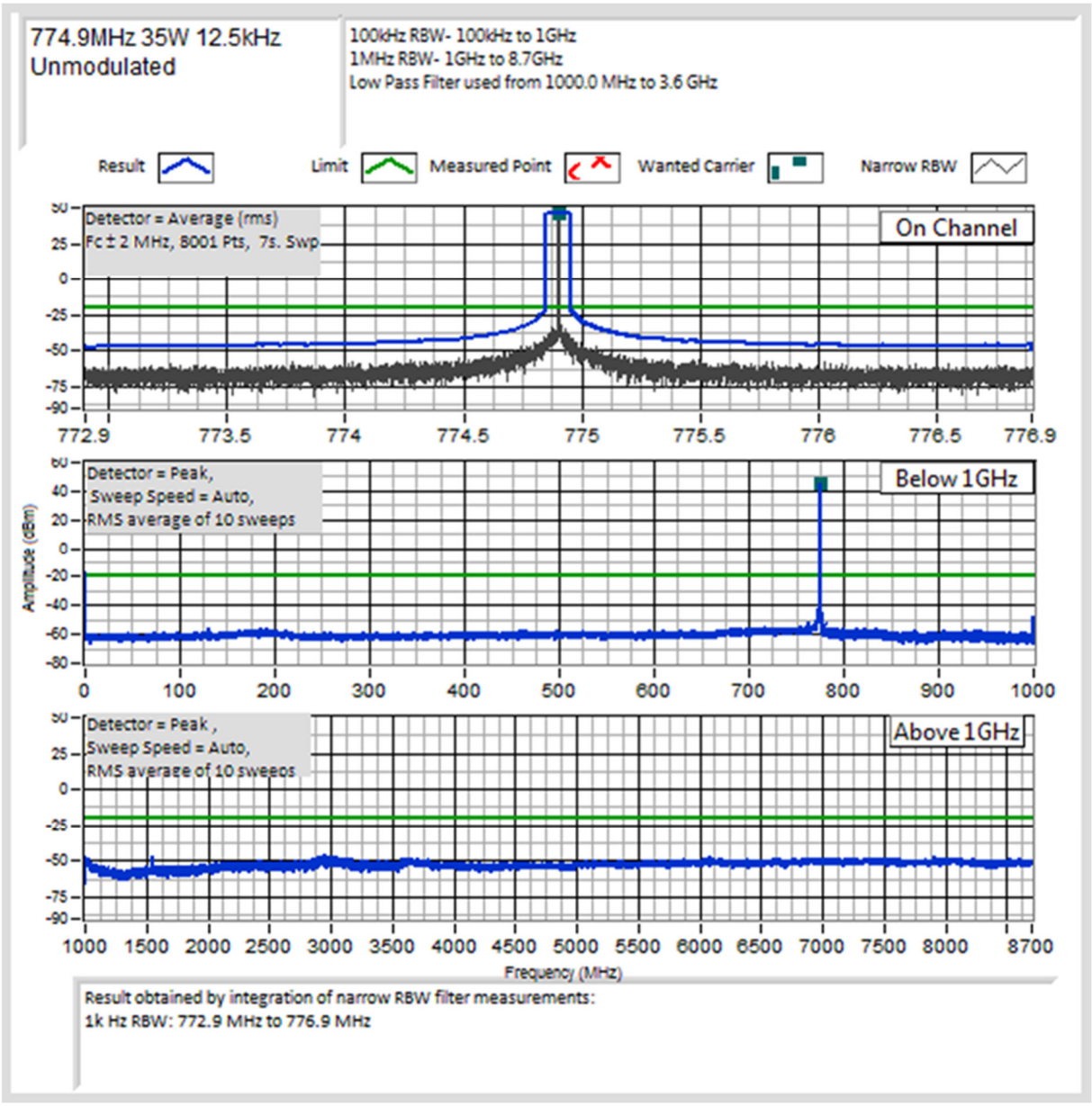
SPECIFICATION: FCC CFR 2.1051 RSS-119 5.8

12.5 kHz Channel Spacing 774.9 MHz @ 35 W Emission Mask D

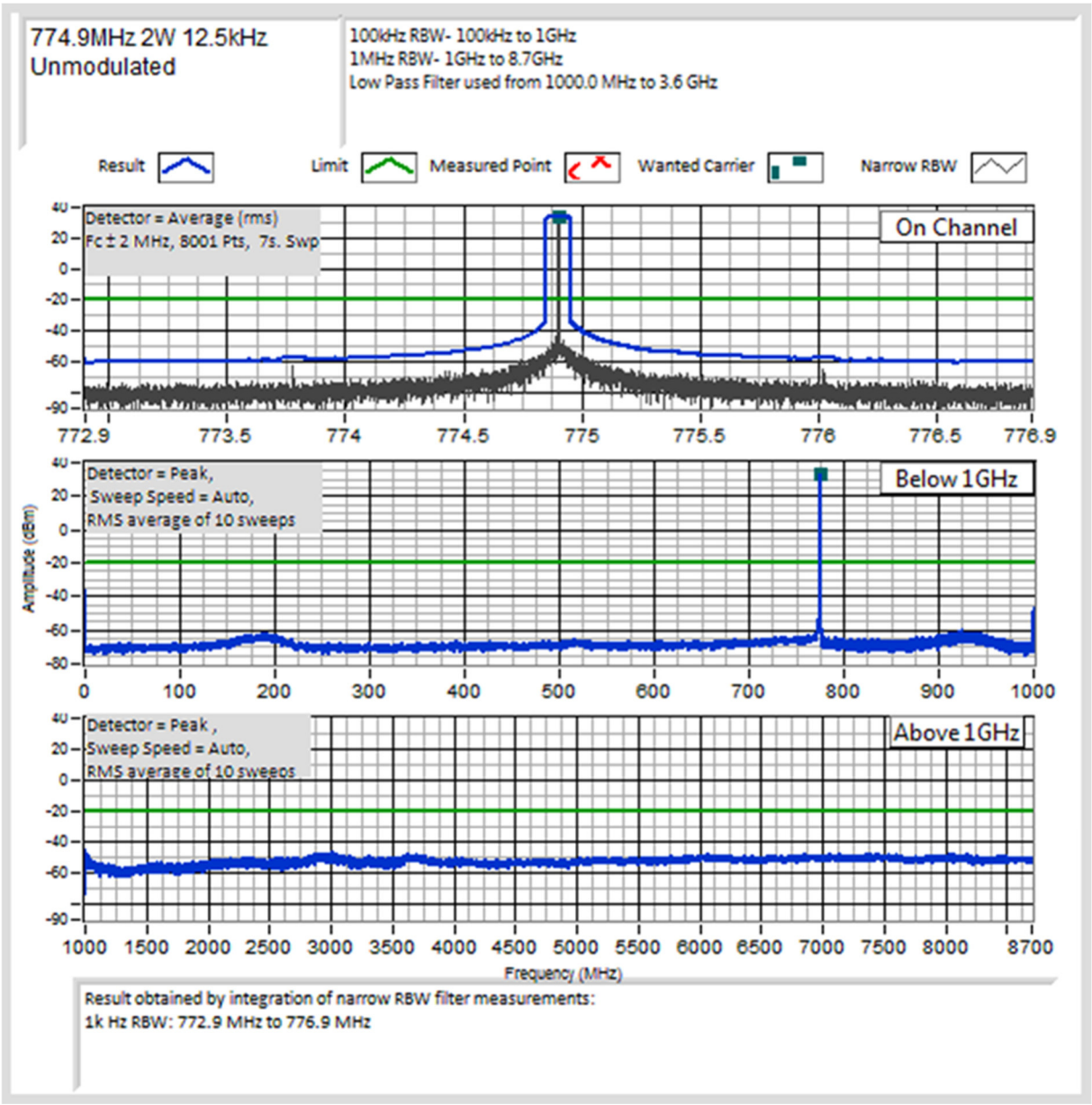
Emission Frequency (MHz)	Level (dBm)	Level (dBc)
~	~	~

12.5 kHz Channel Spacing 774.9 MHz @ 2 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)



Spurious Emissions (Tx Conducted)

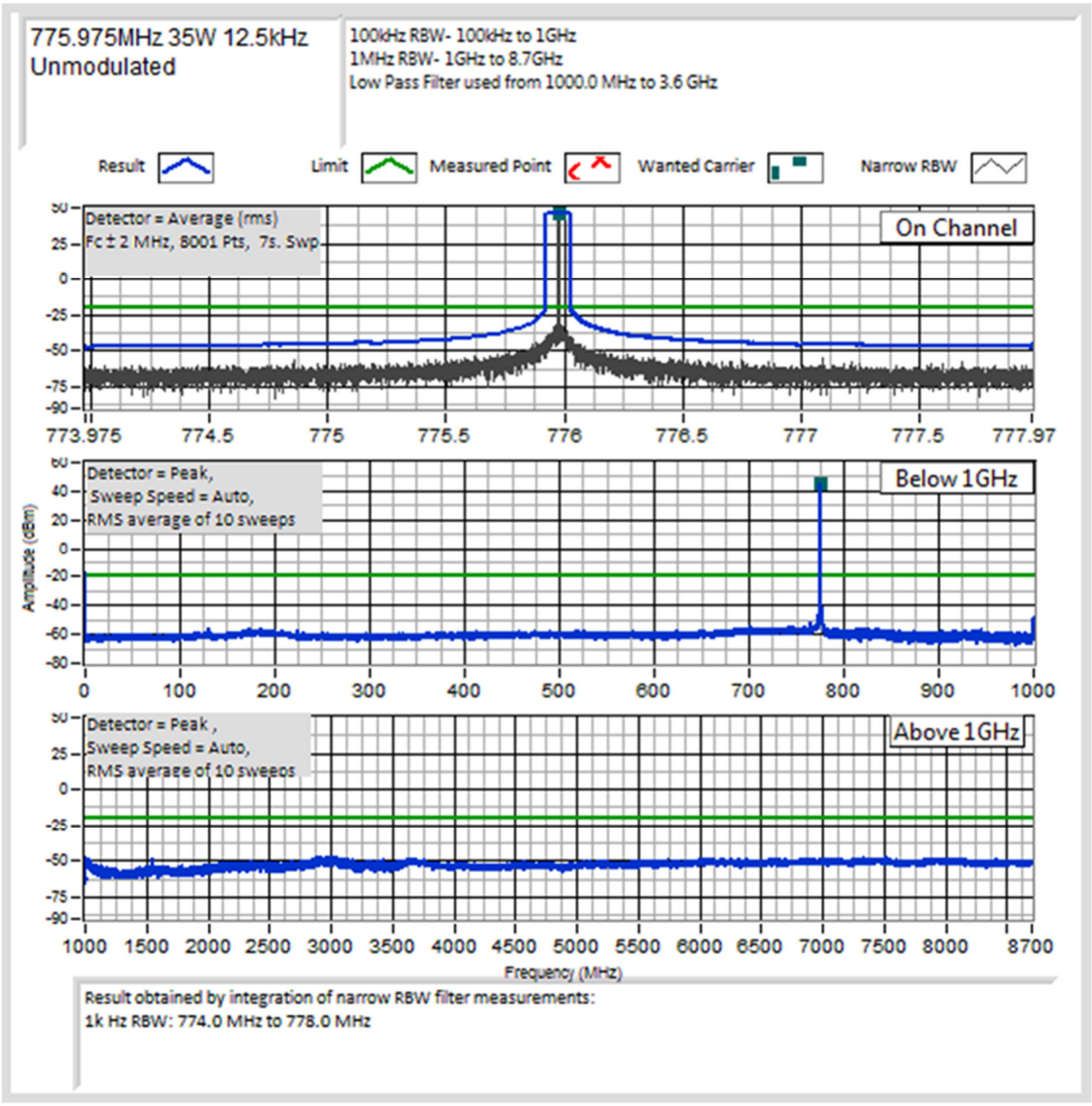
SPECIFICATION: FCC CFR 2.1051 RSS-119 5.8

12.5 kHz Channel Spacing 775.975 MHz @ 35 W Emission Mask D

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

12.5 kHz Channel Spacing 775.975 MHz @ 2 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)