



Technisonic Industries Limited

240 Traders Blvd.
Tel.: (905) 890-2113

Mississauga, Ontario L4Z 1W7
Fax: (905) 890-5338

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Nov. 07, 2013

Annette Allender
ATC Spectrum Engineering Services
Federal Aviation Administration

This letter has been prepared by Technisonic Industries Ltd. to notify the FAA of a certification application (87.147 Authorization of Equipment) for our new VHF AM Transceiver Module.

Equipment Description

The VHF AM Transceiver will be a module in our existing TDFM-9300. The TDFM-9300 is meeting environment requirements of D0160C and also is STC approved for rotorcraft and fixed wing aircraft. We are not seeking TSO approval for the VHF transceiver. The Transceiver will be used for non-primary communication for the National Guard, Police, Border Protection, and other United States and Canadian government agencies.

FCC Identification number

IMA-T3400

Manufacture and Model number

T3400

Rated Power Output

Nominal RF power will be 5.0W (PEP), 2.5W (CW). Modulation depth will not Exceed 95% and Occupied bandwidth will comply with applicable FCC rules part 87.

Frequencies Range

The Transceiver will operate from 118 MHz - 136.975 MHz for 25 kHz Ch Spacing & 118 MHz - 136.992 MHz for 8.33 kHz Ch Spacing

Method of tuning

Synthesizer

Channeling capability

25 kHz and 8.33 kHz for transmitter
25 kHz for receiver



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Frequency stability

2.5 ppm

Emission Bandwidth

6 kHz

Emission Type

Emission Designator - 6K00A3E 25 kHz Ch Spacing and 5K6A3E 8.33 kHz Ch Spacing
Class of Emission – A3E

Antenna Characteristics

Antenna used will be TSO approved VHF/AM Comant CI 121 or equivalent with max. antenna Gain of 3 dBi.

Receiver Characteristics

The receiver is Dual Conversion with first IF 10.7 MHz and second IF 455 kHz. The nominal sensitivity will be 12dB SINAD at 2uV. No special protection will be required.

Desensitization (2.2.11 DO-186)

Transceiver meets the standard for desensitization specified in section 2.2.11 of RTCA DO-186 only on 25KHz channel spacing.

Emission Plots

118MHz – See figures 1, 2 and 3
127.5MHz – See figures 4, 5 and 6
136.975MHz – See figures 7, 8 and 9

Harmonic Levels in GNSS Band (2.3.7 DO-186)

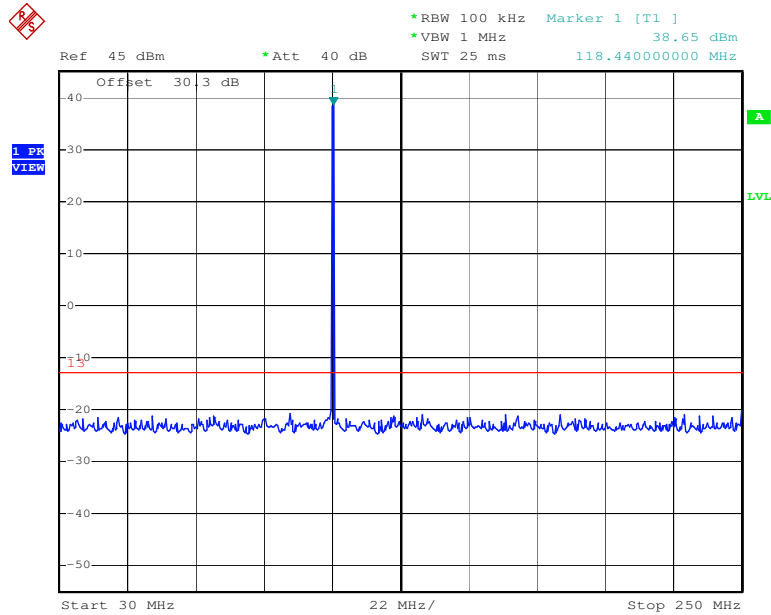
TX Frequency (MHz)	Harmonic	Harmonic Frequency (MHz)	See Figure
130.625	12	1567.500	10
131.275	12	1575.300	11
134.150	12	1609.800	12
120.925	13	1572.025	13
121.175	13	1575.275	14
123.825	13	1609.725	15



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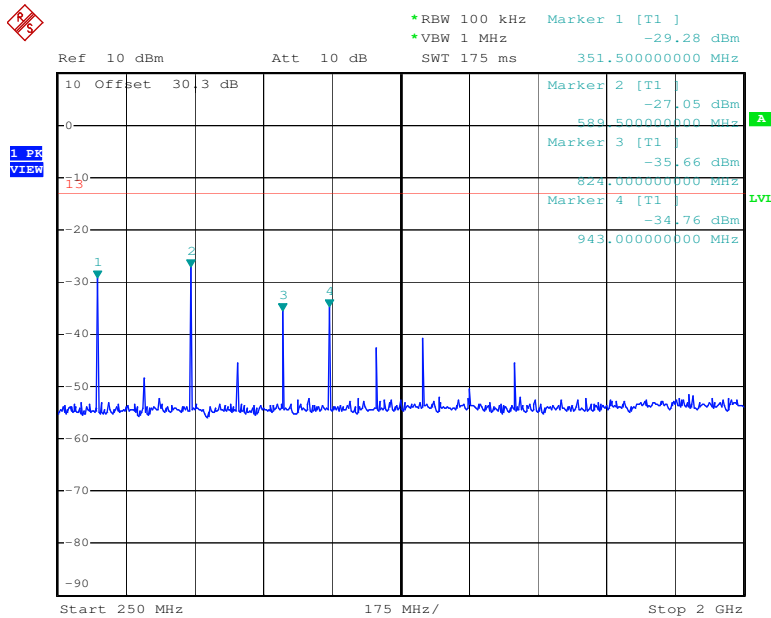
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Date: 7.OCT.2013 15:43:04

Figure 1



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Date: 7.OCT.2013 16:56:03

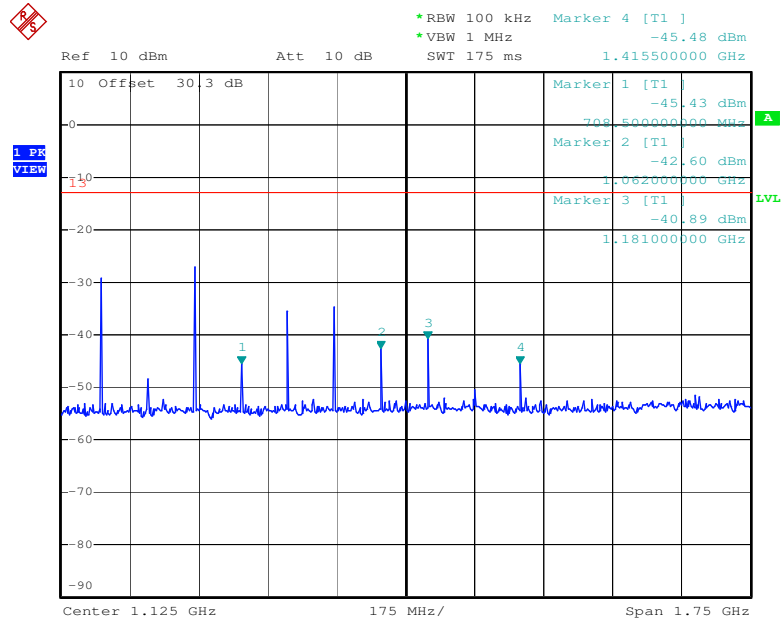
Figure 2



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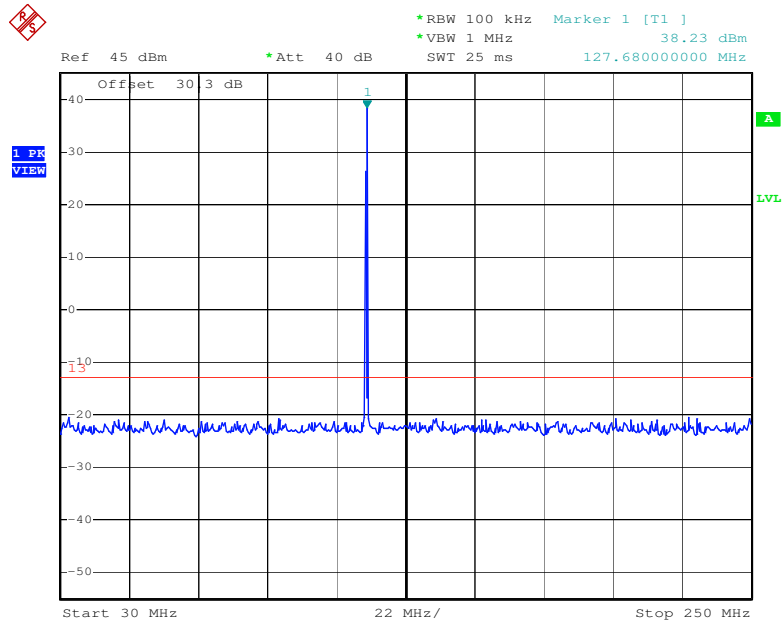
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Figure 3



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Date: 7.OCT.2013 16:37:51

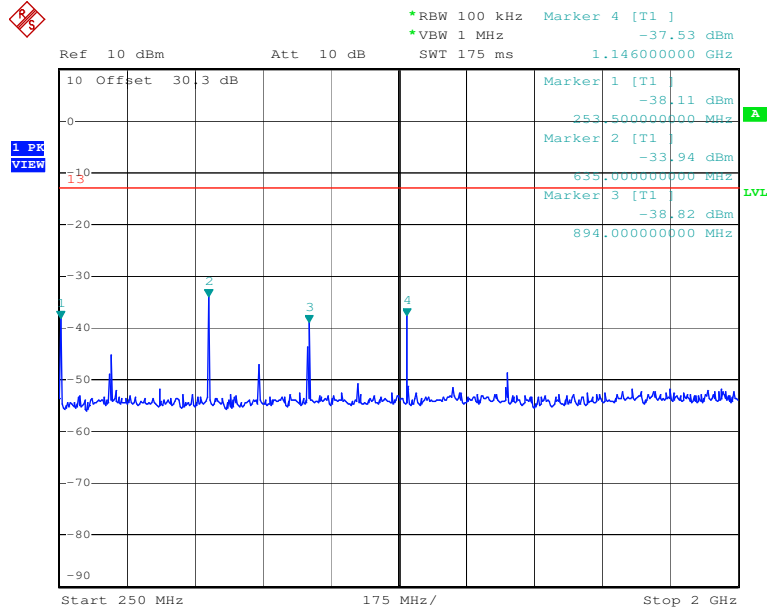
Figure 4



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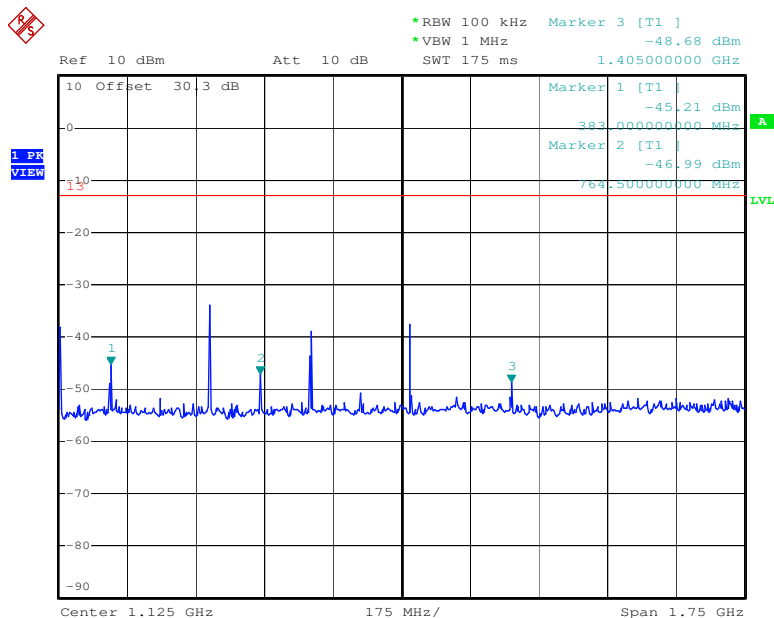
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Figure 5



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Date: 7.OCT.2013 16:53:01

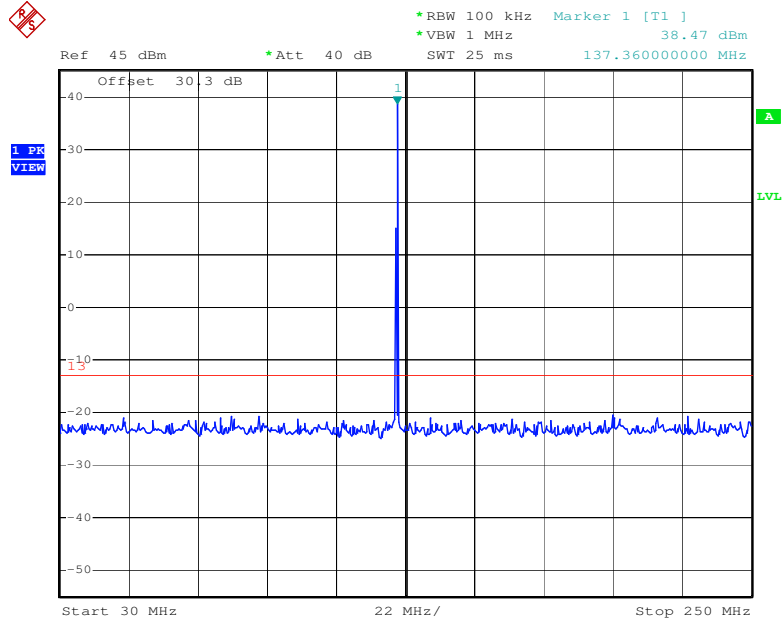
Figure 6



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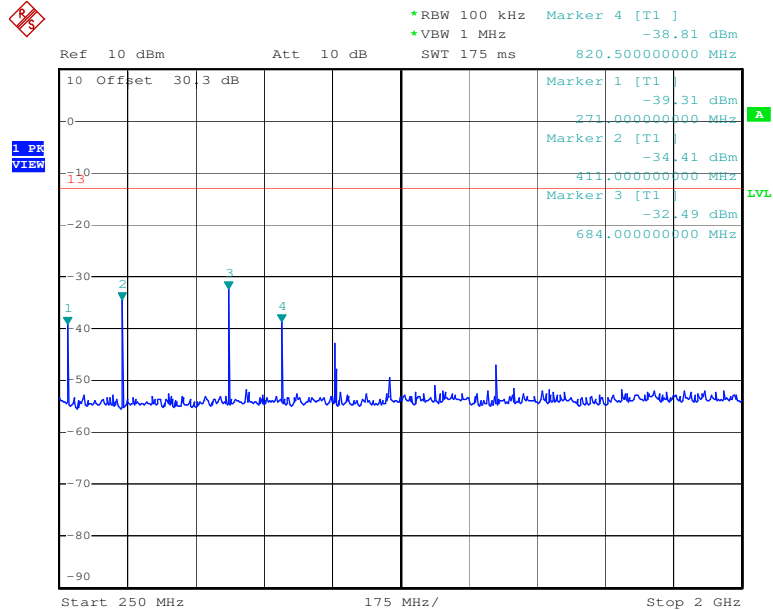
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Figure 7



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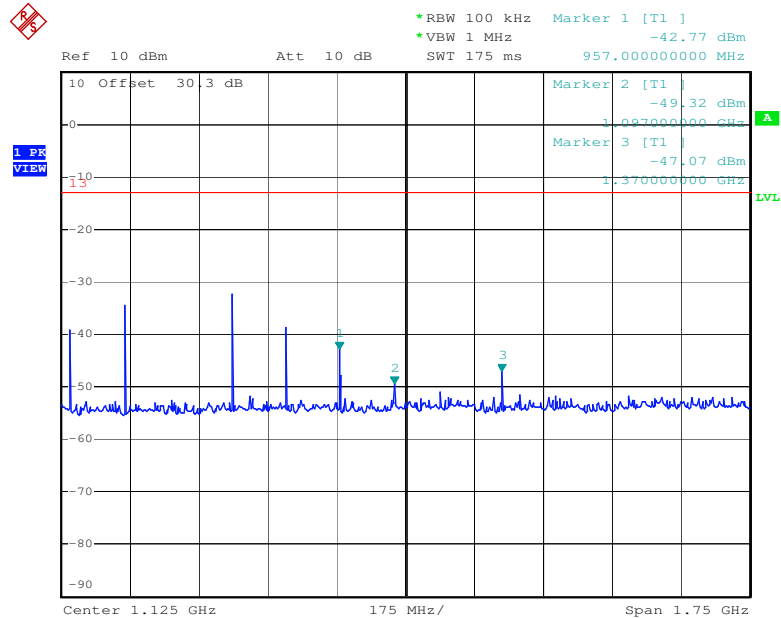
Figure 8



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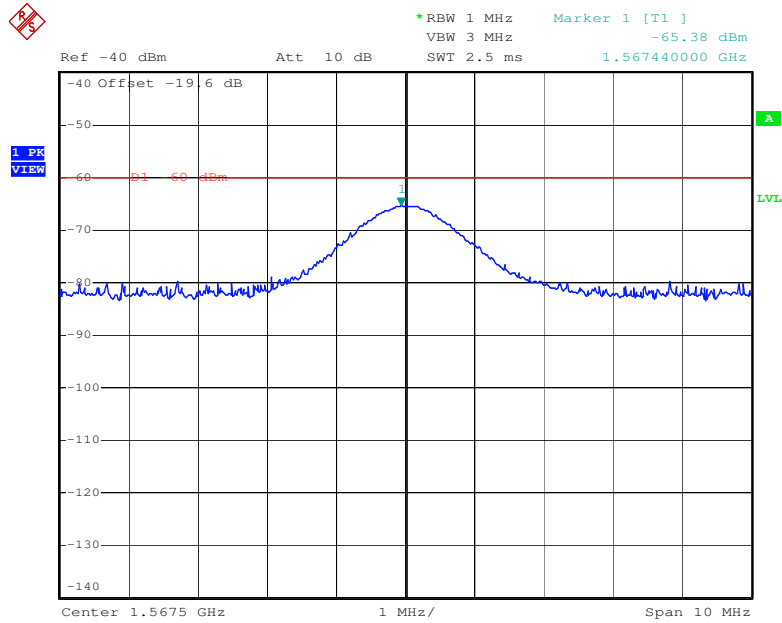
Figure 9



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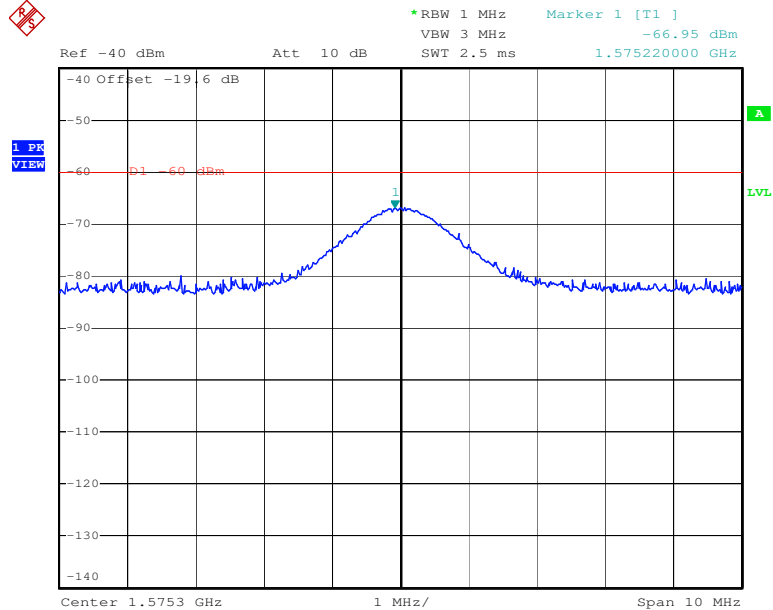
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Figure 10



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Date: 8.OCT.2013 10:07:22

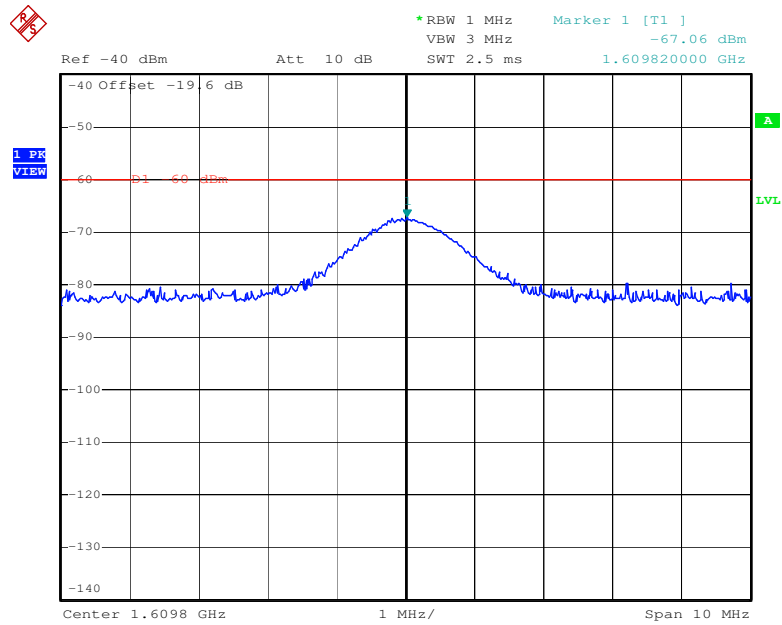
Figure 11



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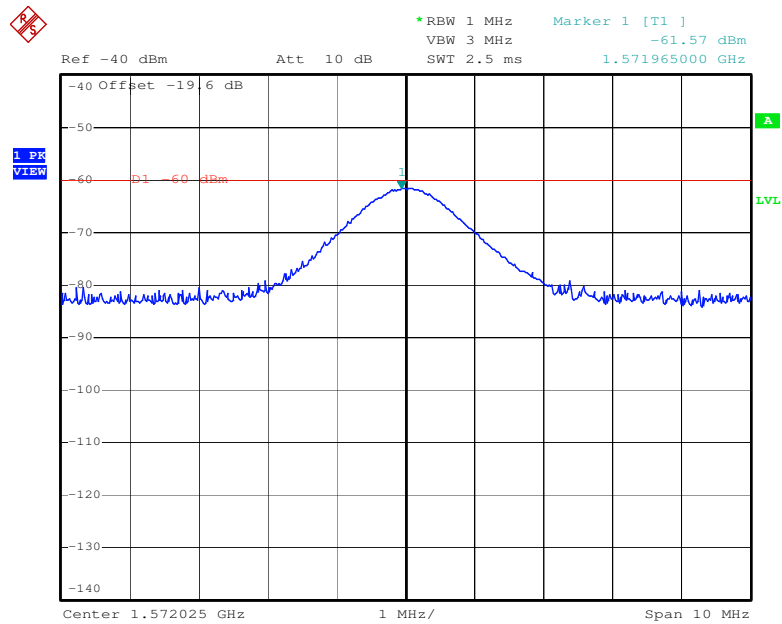
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Figure 12



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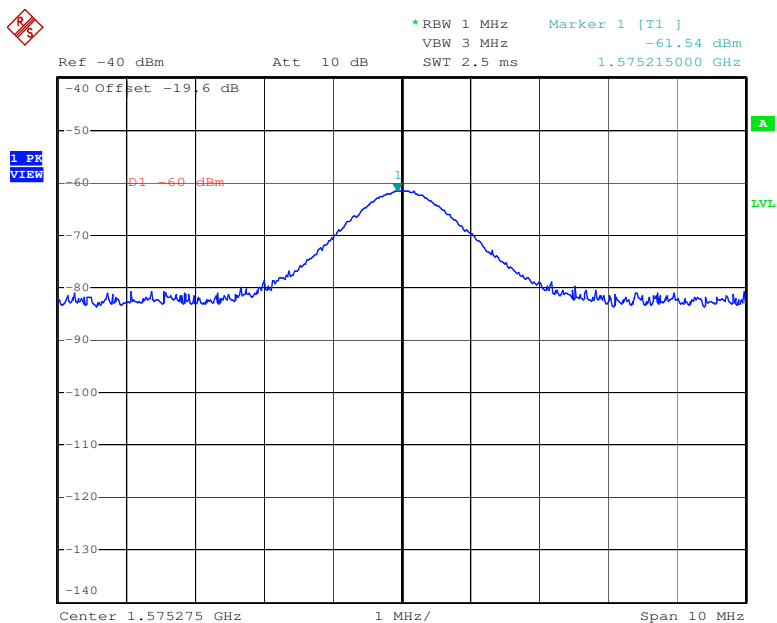
Figure 13



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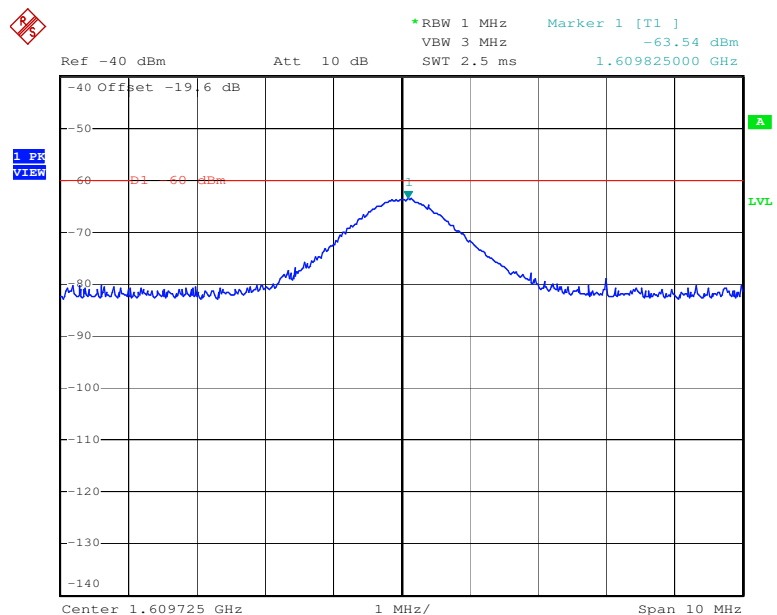
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Figure 14



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Figure 15



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If you have any questions, concerns, or need any other information please contact us.

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Sincerely,

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