

INTELLIGENT INTERACTIVE SYNTHESIZER SURFACE MOUNT MODEL: MTS2500-110250-10

WIDE BANDWIDTH

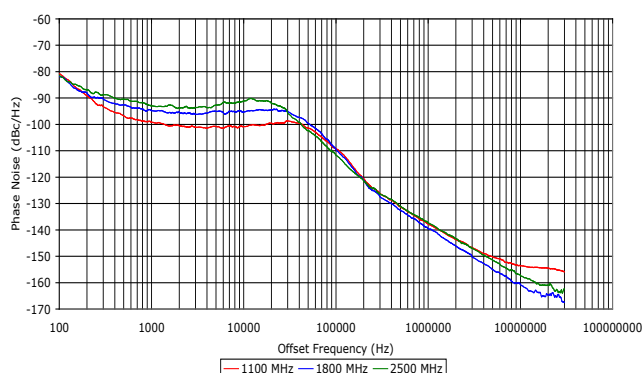
1100 - 2500 MHz

FEATURES:

- ▶ Over an octave bandwidth tuning
- ▶ Small step size resolution
- ▶ Outstanding spectral purity
- ▶ High spurious rejection
- ▶ Fast lock settling time
- ▶ Easy programmable format
- ▶ Patented Rel-Pro® Technology
- ▶ Buffered Output



Phase Noise



SPECIFICATIONS (Rev. C 04/22/11)

Output Frequency	1100 - 2500 MHz
Bandwidth	1400 MHz
External Reference ¹	10 MHz
External Reference Input	1 V p-p to 3.3 V p-p
Step Size	Programmable to 1 Hz
Bias Voltage	
VCC1 (VCO)	+5 VDC @ 70 mA (Max.)
VCC2 (Analog)	+3.3 VDC @ 140 mA (Max.)
VCC3 (Digital)	+3.3 VDC @ 50 mA (Max.)
VCC4 (Converter)	+5 VDC @ 45 mA (Max.)
VCC5 (Converter Output)	+25 VDC
VCC6 (PLL)	+5 VDC @ 2 mA (Max.)
VCC7 (PLL)	+3.3 VDC @ 20 mA (Max.)
VCC8 (Vtune) ²	+28 VDC @ 5 mA (Max.)
Output Power	+9 dBm (Min.)
Spurious Suppression	55 dB (Typ.)
Harmonic Suppression	15 dB (Typ.)

Typical Phase Noise	Offset	dBc/Hz.
	1 kHz	-93
	10 kHz	-95
	100 kHz	-110
Settling Time³	Within 1 kHz	<22 mSec
	Within 10 Hz	<36 mSec
Output Impedance	50 Ohms (Nom.)	
Operating Temperature Range	-20 to +70 °C	
Non-Operating Temperature Range	-40 to +85 °C	
Programming	See Application Note: AN7400	
Programming Bus⁴	Specify SPI or RS-232	

Absolute Maximum Ratings

Storage Temp. Range	-55 to +125 °C
Bias Voltage (+3.3 V)	+3.6 V
Bias Voltage (+5 V)	+5.5 V
DC Voltage Applied to RF Out	± 25 V

¹ Reference input frequency can be factory programmed for requested common reference frequencies from 10 - 25 MHz. Unless otherwise specified, the reference frequency is factory programmed for 10 MHz.

² If supply voltage from converter output is not used.

³ Time between latch enable (LE) high (after user command) and final output frequency.

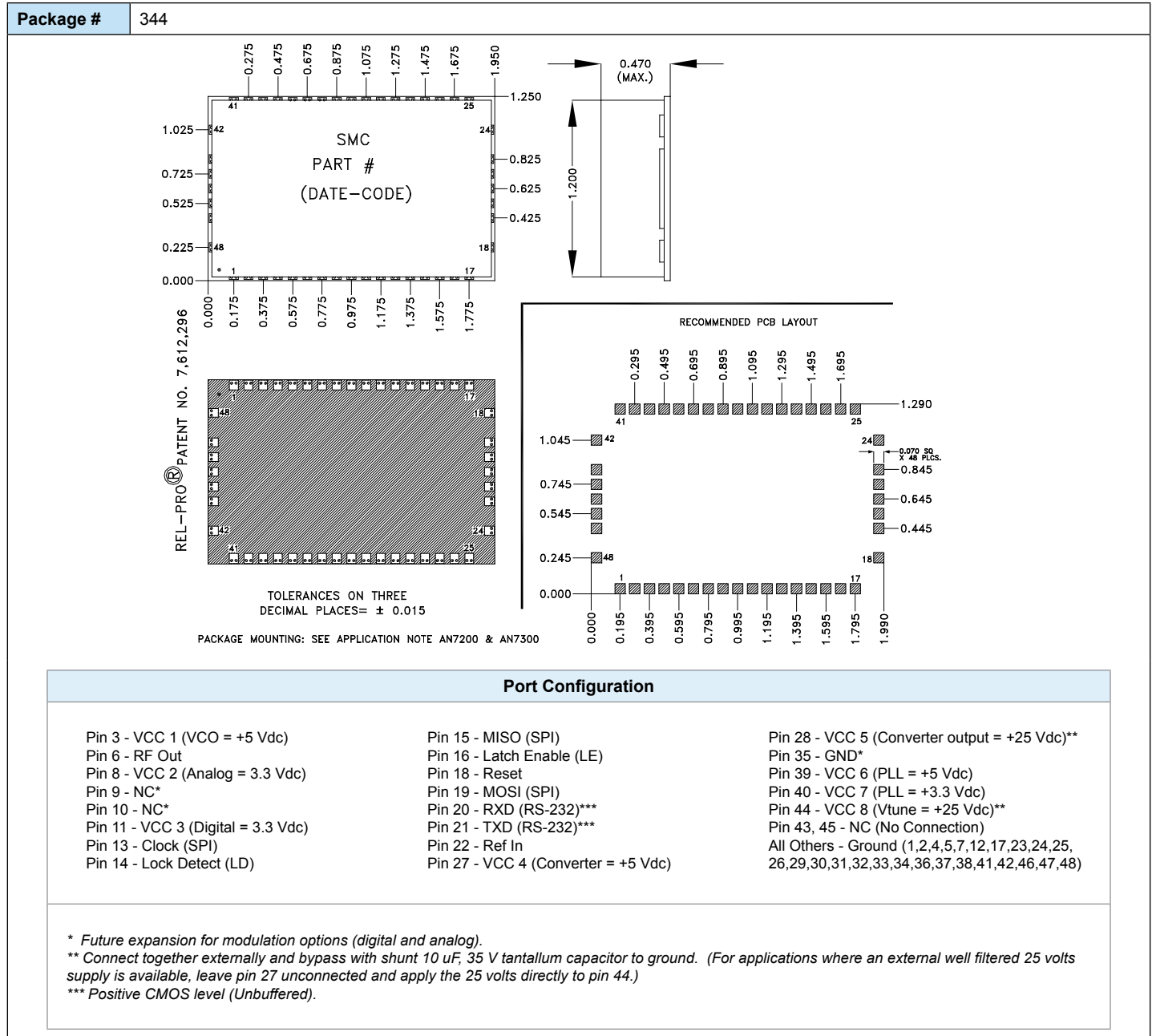
⁴ Default bus (if unspecified) is SPI.

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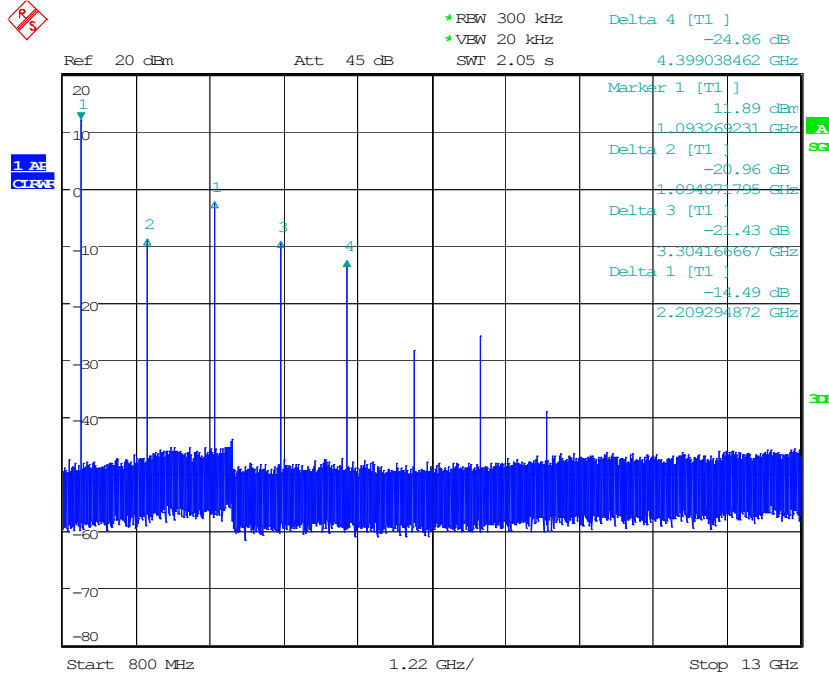
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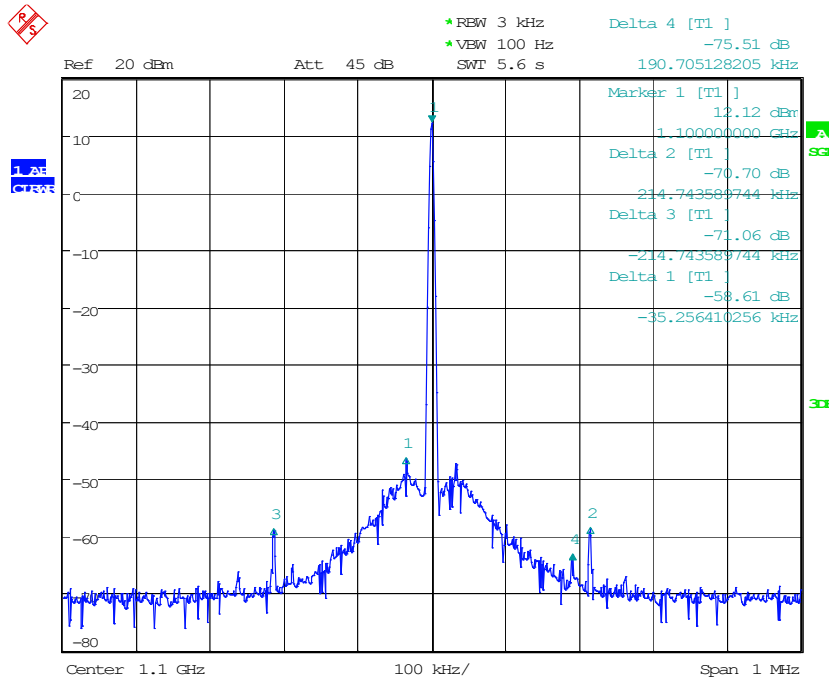
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HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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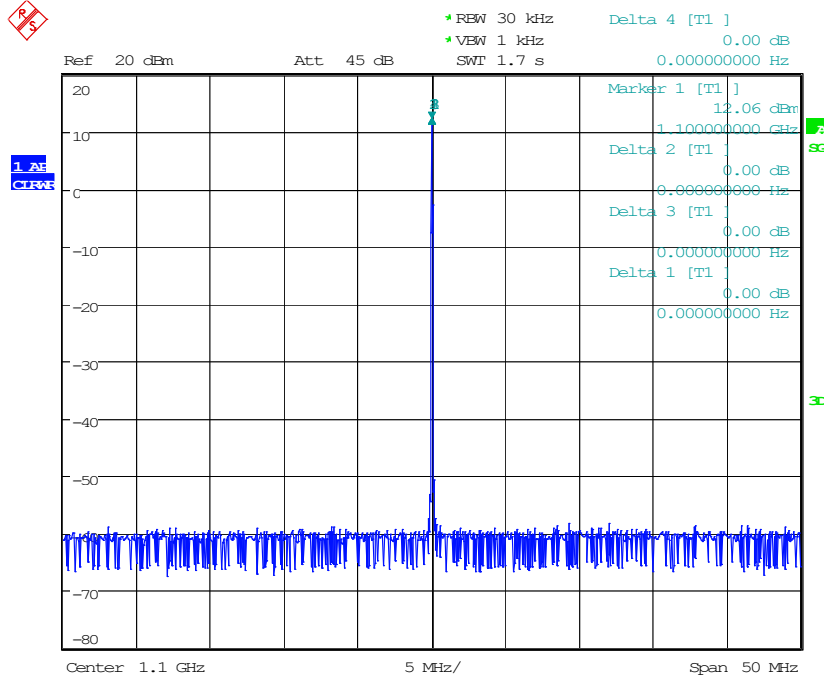


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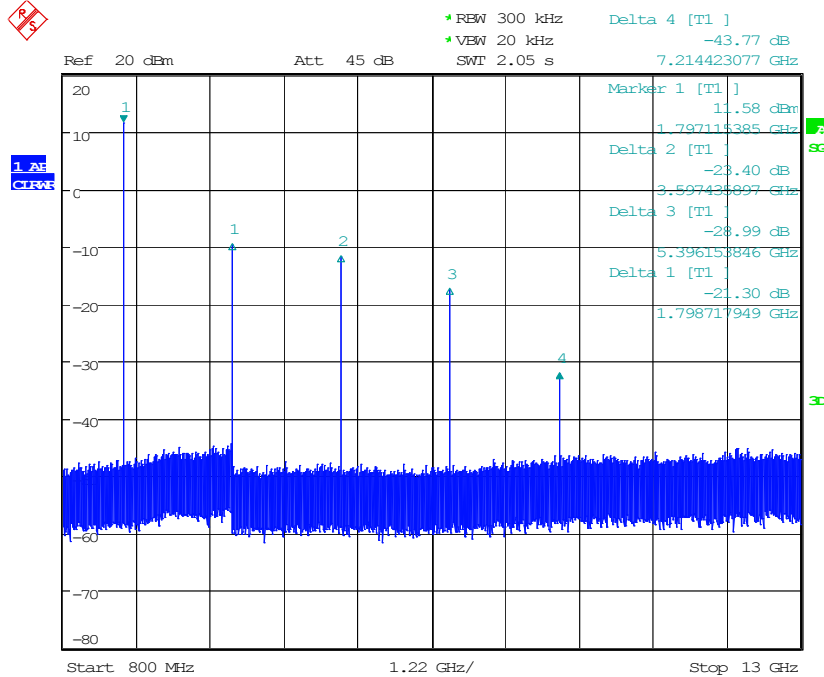
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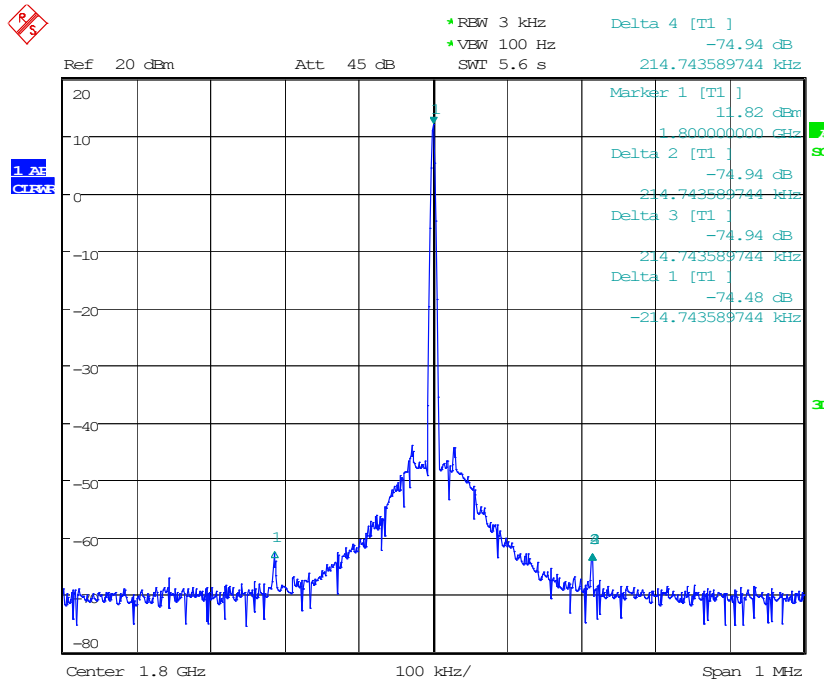
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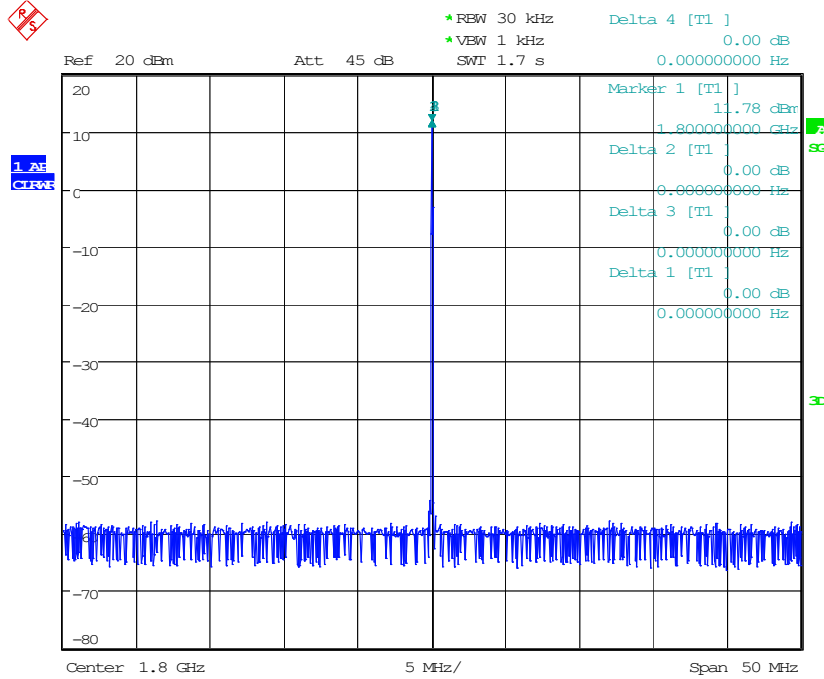


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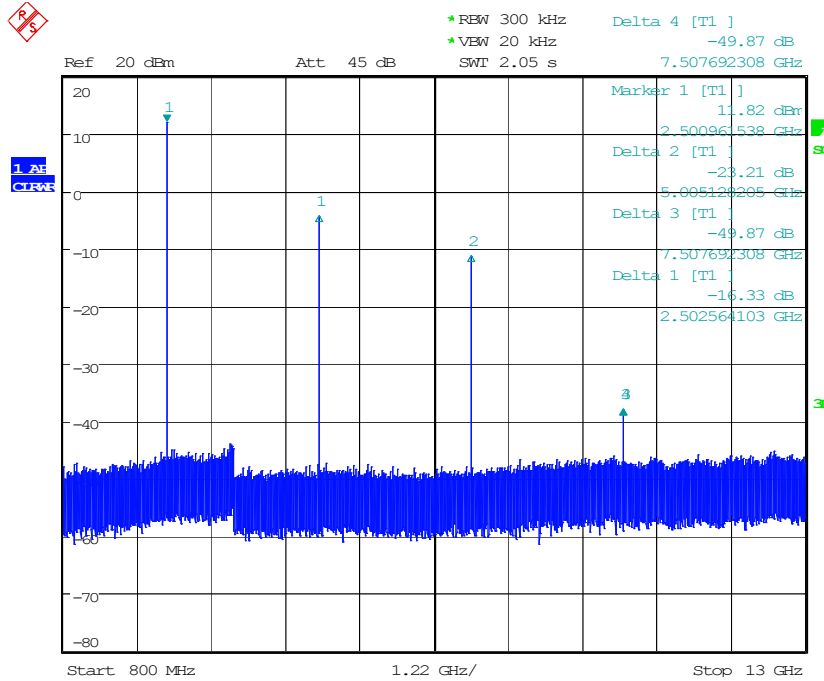
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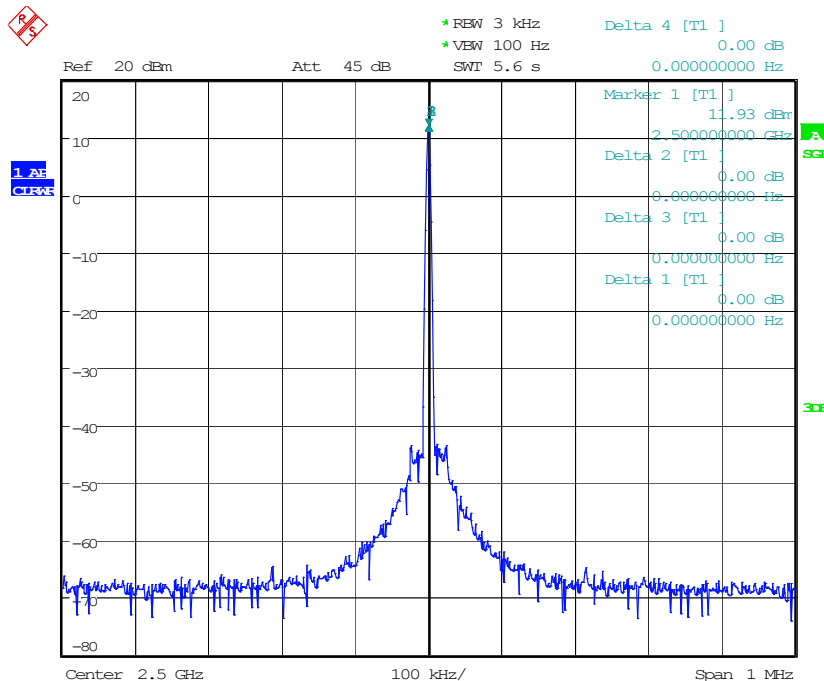
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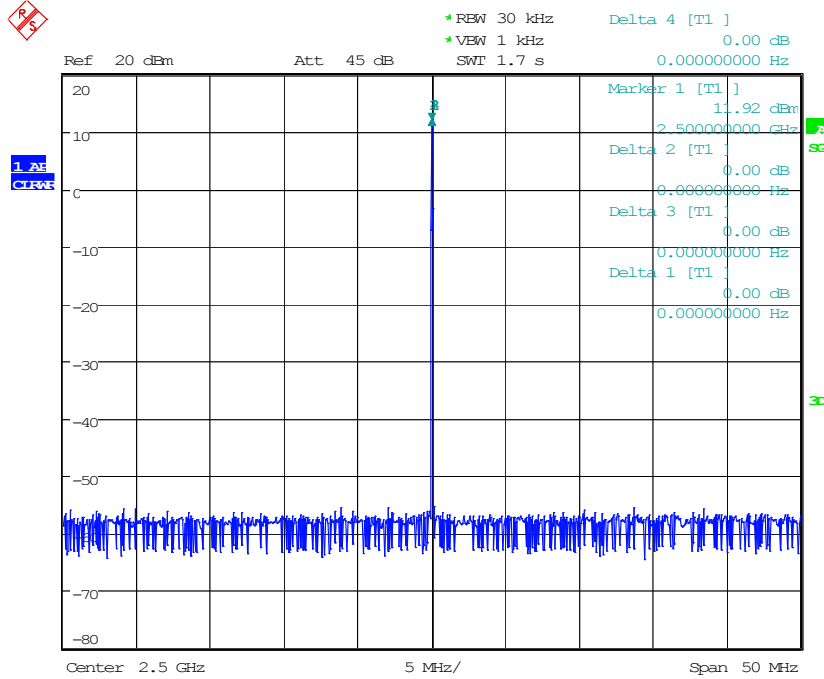
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