

INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW80150-10

WIDE BANDWIDTH

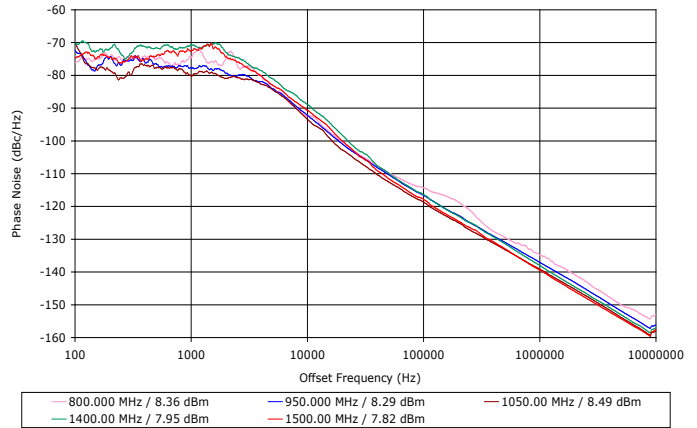
800 - 1500 MHz

FEATURES:

- ▶ Exceptionally Low Phase Noise
- ▶ Interactive Communication
- ▶ Standard Programming Interface
- ▶ Ultra Wide Tuning Range
- ▶ Lead Free - RoHS Compliant
- ▶ Patent Pending REL-PRO® Technology
- ▶ Small Size, Surface Mount
- ▶ Buffered Output



Phase Noise

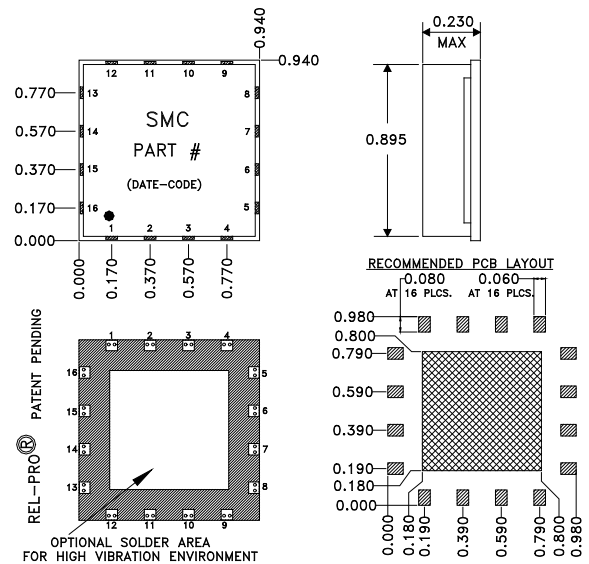


SPECIFICATIONS (Rev. B 06/02/08)

| | | | |
|------------------------------------|------------------------------|--------------------|--------------------|
| Frequency | 800 - 1500 MHz | | |
| Step Size | 100 kHz | | |
| Reference Input Frequency | 10 MHz * | | |
| Reference Input Voltage | 1.0 V p-p to 3.3 V p-p | | |
| Bias Voltage | Vcc | V (Vdc) | I (mA Max.) |
| | Digital | +5 | 15 |
| | VCO | +5 | 55 |
| | Tune | +15 | 10 |
| Output Power | +5 dBm (Min.) | | |
| Spurious Suppression | 70 dB (Typ.) | | |
| Harmonic Suppression | 15 dB (Typ.) | | |
| Settling Time | 20 mSec (Max.) ** | | |
| Output Impedance | 50 Ohms (Nom.) | | |
| Typical Phase Noise | Offset | Phase Noise | |
| | @ 1 kHz | -75 dbc/Hz | |
| | @ 10 kHz | -92 dbc/Hz | |
| | @ 100 kHz | -118 dbc/Hz | |
| Operating Temperature Range | -40 to +85 °C | | |
| Programming | See Application Note: AN7100 | | |

* Reference input frequency is programmable in multiples of the step size, 10 MHz is the default setting. 150 MHz (Max.)
 ** From the rising edge of LE to stable lock detect

Package # 273LF



PACKAGE MOUNTING: SEE APPLICATION NOTE AN7200

Absolute Maximum Ratings

| | |
|-------------------------------------|----------------|
| Storage Temp. Range | -55 to +125 °C |
| Bias Voltage (Digital) | +5.25 V |
| Bias Voltage (Tune) | +17 V |
| Bias Voltage (VCO) | +5.5 V |
| DC Voltage Applied to RF Out | ±25 V |

Pin-Out

| | | |
|-------------------------|----------------------------|---------------------|
| Pin 1 - Reset ** | Pin 7 - Vcc (Digital) | Pin 15 - Data In |
| Pin 2,3 - NC | Pin 8 - Vcc (Tune) | Pin 16 - Clock In |
| Pin 4 - Error flag | Pin 9 - Vcc (VCO) | All Others - Ground |
| Pin 5 - Latch Enable In | Pin 13 - RF Out | |
| Pin 6 - Ref. In | Pin 14 - Lock Detect Out * | NC - No Connection |

* High when locked (source/sink 500 uA)

** A low on this input will reset the internal controller. Leave unconnected for normal operation.

This product is manufactured under one or more of the following patents: Approved: 5,180,810; 5,122,621; 5,390,346; 5,416,446; 5,630,754; 5,805,431; 6,325,623; 6,806,573; 7,088,189; 7,180,381; 7,185,591; 7,262,670; 7,265,642; 7,292,113
 Pending: 65/48,307; 60/50,1371 & 65/50,179; 60/50,7937 & 65/52,675; 60/263,481; 60/56,4173; 60/58,0083; 60/60,822; 60/60,5791; 61/31,268,034;
 61/25,768; 60/62,2485 & 65/7,0319; 60/67,325,607 & 65/901; 60/7,32787

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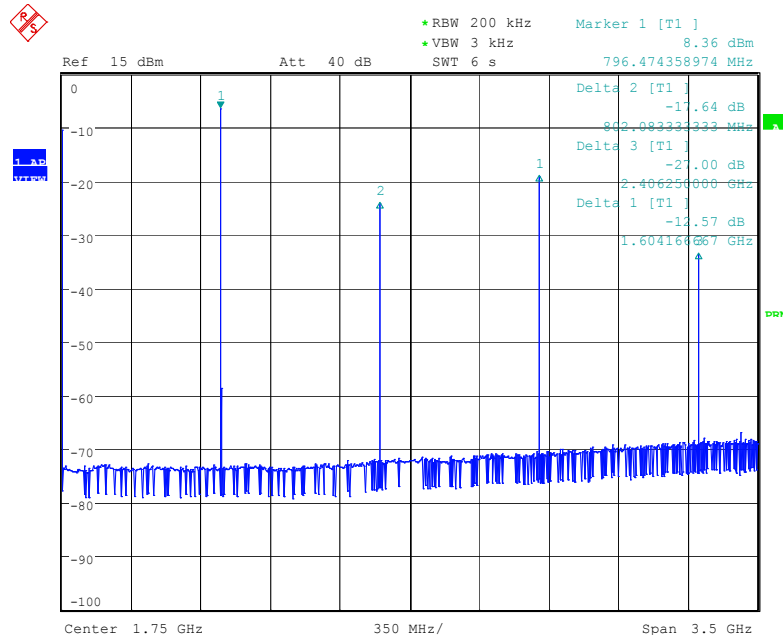
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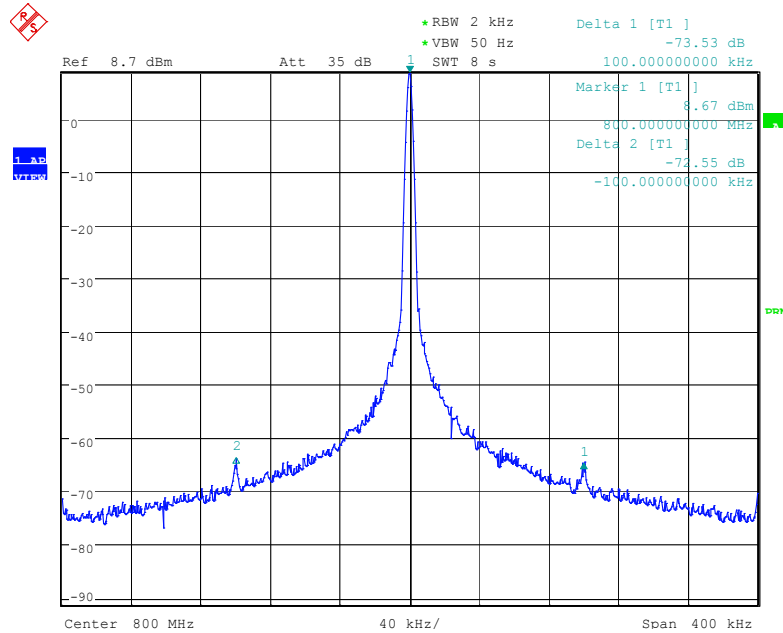
WIDE BANDWIDTH

800 - 1500 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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Pending: 6549,3075; 60501371 & 65561756; 60527937 & 65533675; 60263481; 60564173; 60580083; 60661822; 60605791; EV31268034;
RU258768; 60622485 & 65710312; RU60732560/736901; 60732737

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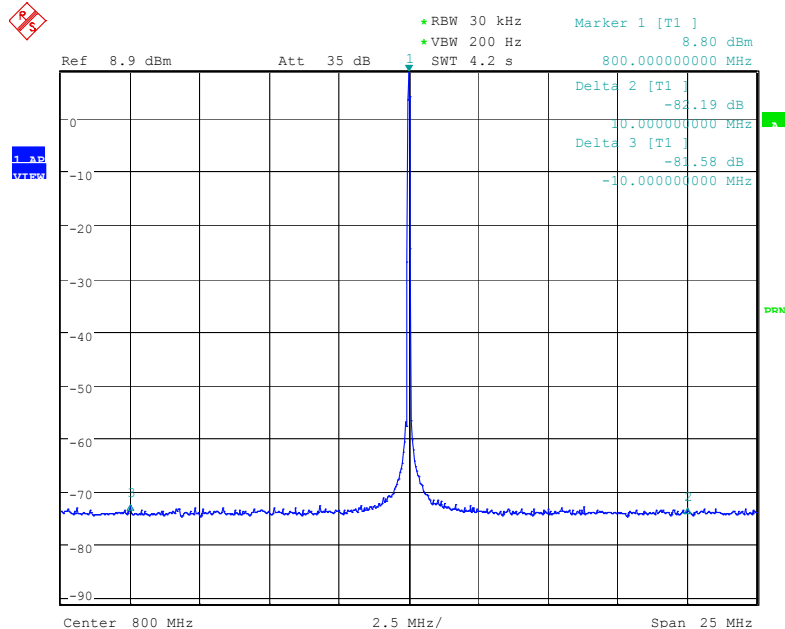
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 Pending: 66/48,307; 66/50,137; 66/50,179; 66/52,793; 66/53,675; 66/56,481; 66/56,473; 66/58,083; 66/61,822; 66/60,579; EV31368034;
 RU258768; 66/62,485 & 66/71,031; RU60732560/736901; 66/73,078

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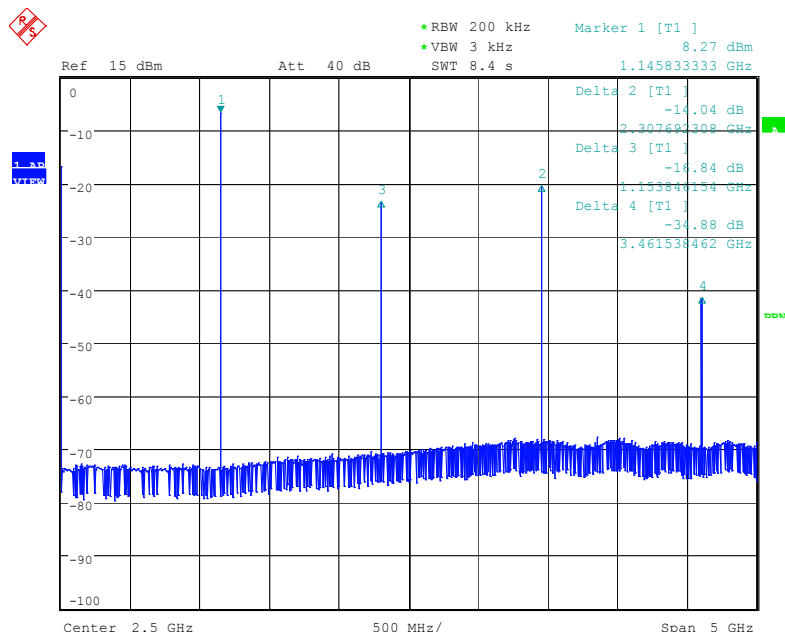
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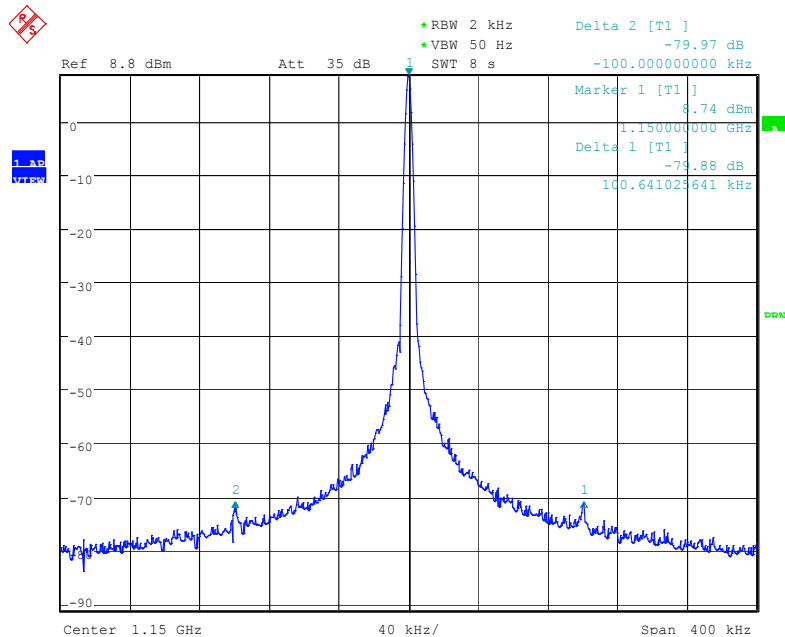
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 11,258,768; 66/622,485 & 66/710,112; 10/607,325/60736901; 60/732,737

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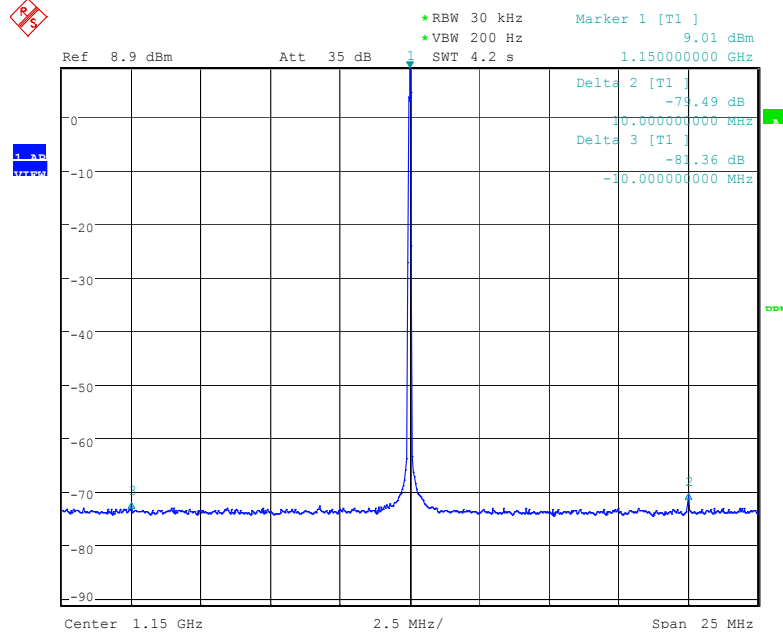
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RU258768; 65/62,2485 & 65/71,0219; RU60732560736901; 65/73,0737

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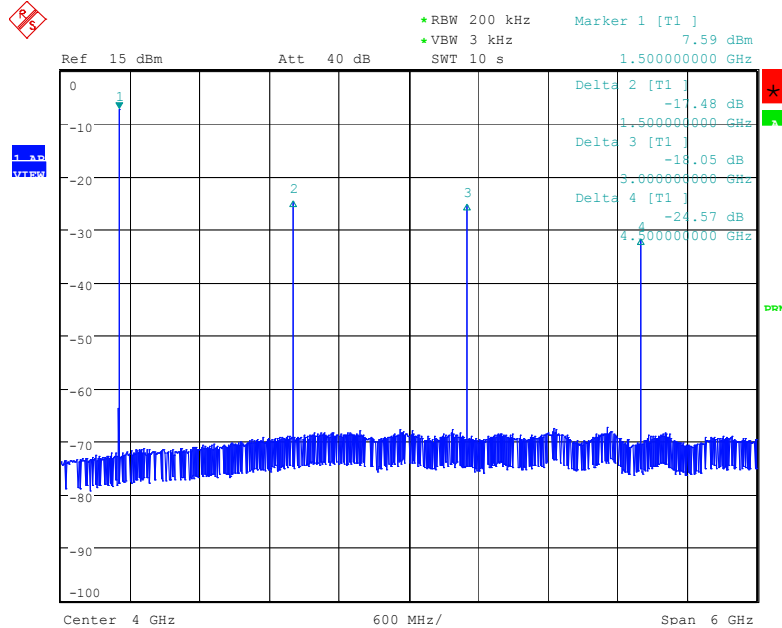
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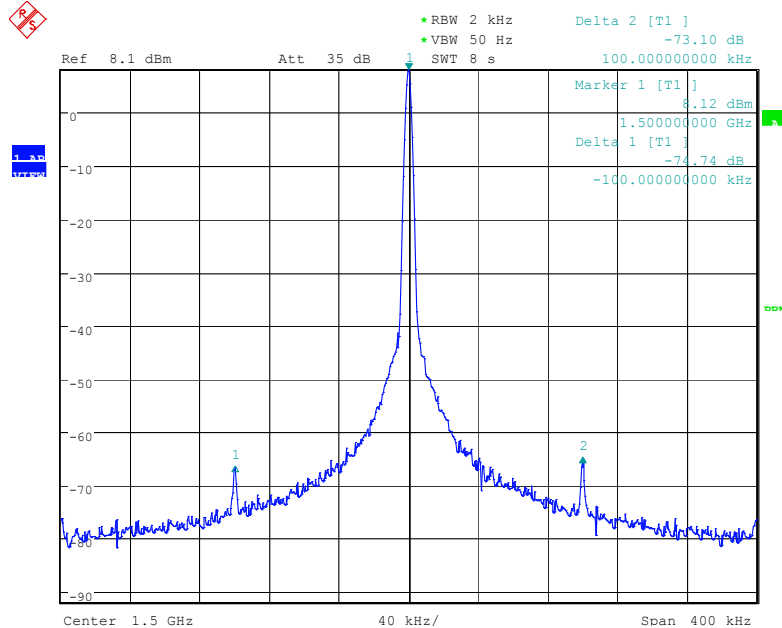
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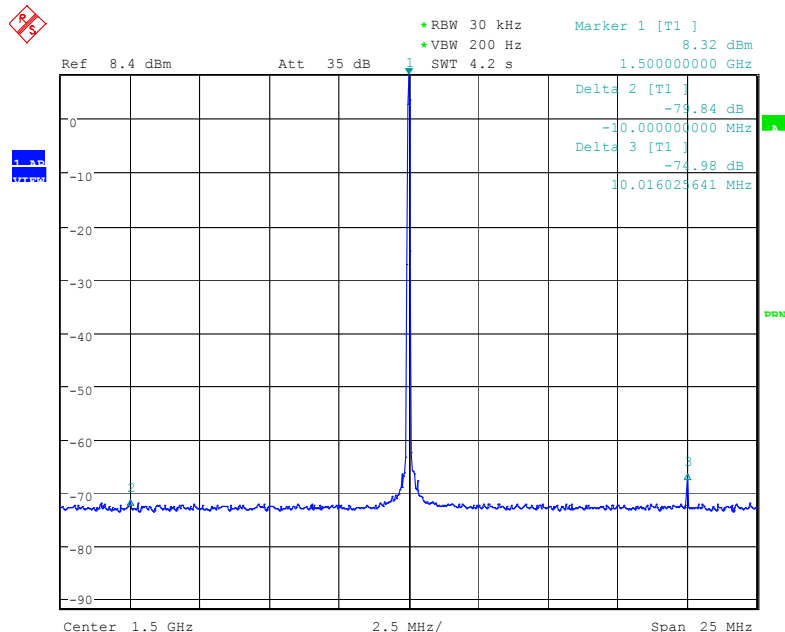
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