

SELECTABLE FREQUENCY SYNTHESIZER

SURFACE MOUNT MODEL: FCPH183187-10

OPTIMIZED LOOP PARAMETERS

1830 - 1870 MHz

FEATURES:

- ▶ Exceptionally Low Phase Noise
- ▶ No Programming Required
- ▶ Lead Free - RoHS Compliant
- ▶ Patented REL-PRO® Technology
- ▶ Small Size, Surface Mount



SPECIFICATIONS (Rev. J 10/05/09)

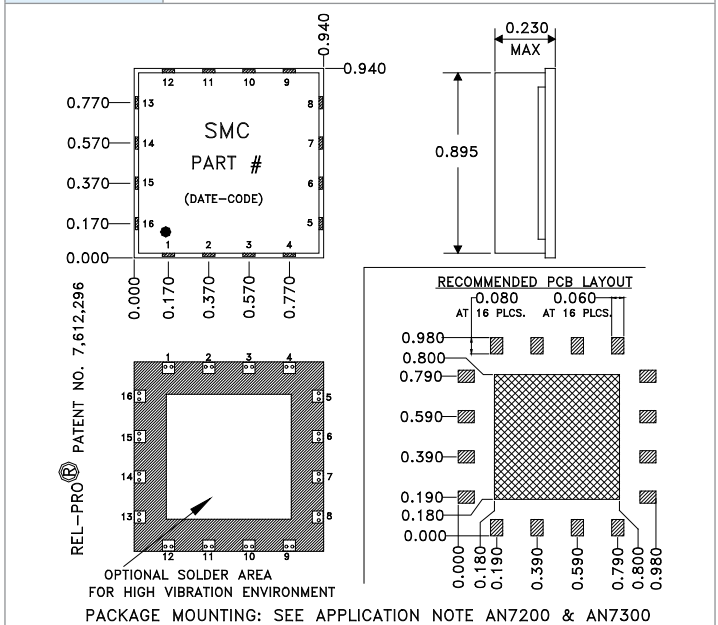
| | | | |
|-----------------------------|-----------------------------|-------------|-------------|
| Frequency | 1830 - 1870 MHz | | |
| Reference Input Frequency | 10 MHz | | |
| Reference Input Voltage | 1 V p-p to 3 V p-p | | |
| Bias Voltage | Vcc | V (Vdc) | I (mA Max.) |
| | Vcc1 (Digital) | +5 | 25 |
| | Vcc2 (VCO) | +5 | 28 |
| Lock Detect Indicator | CMOS 3.3 V | | |
| Output Power | -2 dBm (Min.) | | |
| Spurious Suppression | 90 dB (Typ.) | | |
| Harmonic Suppression | 20 dB (Typ.) | | |
| Power Up Time | 90 mSec (Max.) ¹ | | |
| Output Impedance | 50 Ohms (Nom.) | | |
| Typical Phase Noise | Offset | Phase Noise | |
| | @ 1 kHz | -98 dBc/Hz | |
| | @ 10 kHz | -98 dBc/Hz | |
| | @ 100 kHz | -112 dBc/Hz | |
| Operating Temperature Range | -40 to +85 °C | | |

¹ From stable power on to stable lock detect.

Absolute Maximum Ratings

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

Package # 273LF



Binary Frequency Selection Table

| D3 | D2 | D1 | Freq. (MHz) |
|----|----|----|-------------|
| 0 | 0 | 0 | 1835 |
| 0 | 0 | 1 | 1840 |
| 0 | 1 | 0 | 1845 |
| 0 | 1 | 1 | 1850 |
| 1 | 0 | 0 | 1855 |
| 1 | 0 | 1 | 1860 |
| 1 | 1 | 0 | 1865 |
| 1 | 1 | 1 | 1870 |

D1, D2, D3 Voltage levels: 0V or gnd. / +5V or open.

Pin-Out

| | | |
|-----------------|------------------------|----------------------------|
| Pin 2 - D1 | Pin 7 - Vcc1 (PLL) | Pin 1, 5, 15, 16 - NC |
| Pin 3 - D2 | Pin 8 - Vcc 2(VCO) | Pin 9, 10, 11, 12 - Ground |
| Pin 4 - D3 | Pin 13 - RF Out | NC - No Connection |
| Pin 6 - Ref. In | Pin 14 - Lock Detect * | |

* High when locked (source/sink 500 uA)

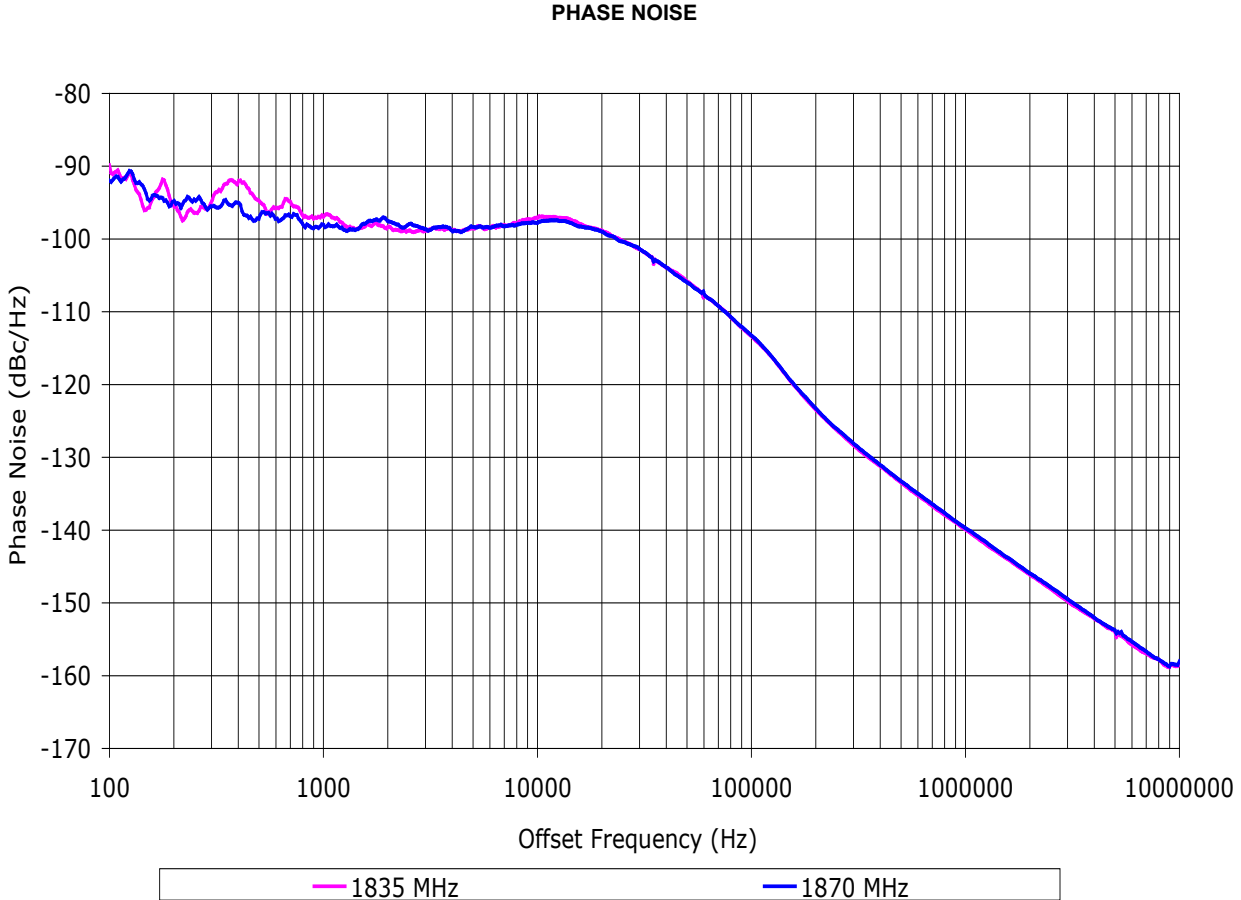
This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113; 7,365,612; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 7,580,693; 7,586,381; 7,605,670; 7,636,021; 2,533,623 | Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 2,563,174; 7,580,693; 7,612,296; 2,524,751

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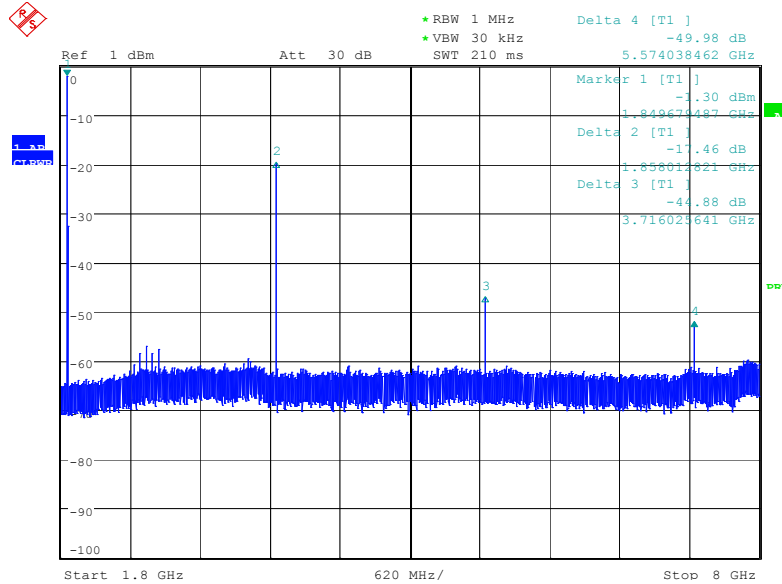
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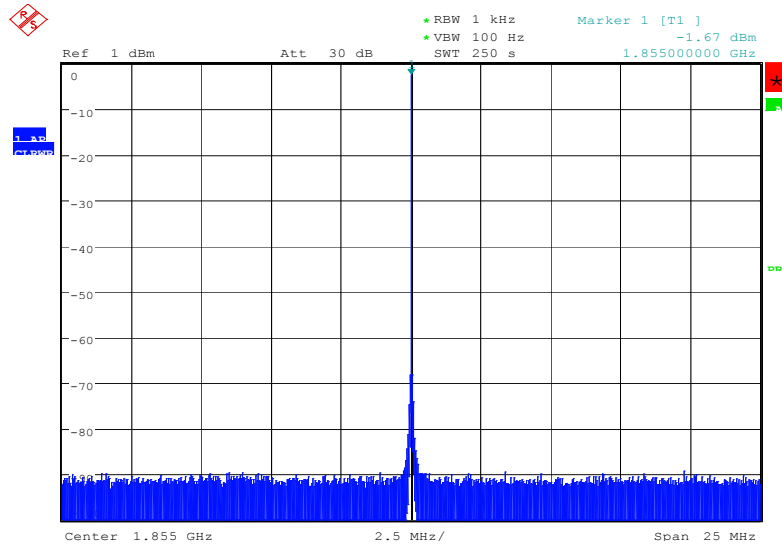
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HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



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