**INTELLIGENT INTERACTIVE SYNTHESIZER**

**SURFACE MOUNT MODEL: FSW1857-100**

**WIDE BANDWIDTH**

**180 - 570 MHz**

**FEATURES:**
- Exceptionally Low Phase Noise
- Interactive Communication
- Standard Programming Interface
- Ultra Wide Tuning Range
- Lead Free - RoHS Compliant
- Patented REL-PRO® Technology
- Small Size, Surface Mount

**SPECIFICATIONS (Rev. H 03/24/11)**

**Frequency**
180 - 570 MHz

**Step Size**
1 MHz

**Reference Input Frequency**
10 MHz

**Reference Input Voltage**
1.0 V p-p to 3.3 V p-p

**Bias Voltage**
- Vcc (Vdc) I (mA Max.)
  - Digital +5 15
  - VCO +5 32
  - Tune +24 10

**Output Power**
+3 dBm (Min.)

**Spurious Suppression**
90 dB (Typ.)

**Harmonics Suppression**
15 dB (Typ.)

**Output Impedance**
50 Ohms (Nom.)

**Lock Detect Indicator**
CMOS 3.3 V

**Typical Phase Noise**
- Offset
  - @ 1 kHz: -107 dbc/Hz
  - @ 10 kHz: -107 dbc/Hz
  - @ 100 kHz: -126 dbc/Hz

**Operating Temperature Range**
-40 to +85 °C

**Programming**
See Application Note: AN7100

**Absolute Maximum Ratings**

**Storage Temp. Range**
-55 to +125 °C

**Bias Voltage (Digital)**
+5.25 V

**Bias Voltage (Tune)**
+28 V

**Bias Voltage (VCO)**
+5.5 V

**DC Voltage Applied to RF Out**
±25 V

---

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; 2,563,174; 7,580,693; 7,612,296; 2,524,751

Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; 1,259766; 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

Copyright © Synergy Microwave Corporation

201 McLean Boulevard • Paterson, New Jersey 07504 USA • Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymwave.com • World Wide Web: http://www.synergymwave.com
INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: FSW1857-100

WIDE BANDWIDTH

180 - 570 MHz

HARMONIC SUPPRESSION

REFERENCE SIDEBAND SUPPRESSION

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; 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; 7,605,670; 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; 1 1/259766; 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; 7,583,663; 7,612,296; 2,524,751

Copyright © Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 USA • Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymwave.com • World Wide Web: http://www.synergymwave.com
INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: FSW1857-100
WIDE BANDWIDTH 180 - 570 MHz

REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS
INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: FSW1857-100

WIDE BANDWIDTH
180 - 570 MHz

REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS
INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: FSW1857-100

WIDE BANDWIDTH

180 - 570 MHz

HARMONIC SUPPRESSION

REFERENCE SIDEBAND SUPPRESSION
INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: FSW1857-100

WIDE BANDWIDTH

180 - 570 MHz

REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS