

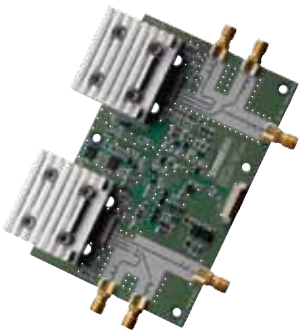
"PEAK PERFORMANCE MICROWAVE SOURCES"

SIVERS IMA IS A LEADING INDEPENDENT MANUFACTURER OF ADVANCED TUNABLE MICROWAVE OSCILLATOR PRODUCTS

SIVERSIMA

Product Selection Guide

August 29 2011



Millimeter Wave



FMCW Sensor



Ultra Wide Band VCO



PLL & Synthesizers

Millimeter Wave Products

| Product number | Frequency | Description |
|----------------|-----------|------------------|
| FC1002V/00 | 57-63 GHz | V-band Converter |
| FC1001E/01 | 71-86 GHz | E-band Converter |
| FC1001E/03 | 71-86 GHz | E-band Converter |



E- and V-band Converter Platforms

This converter platform is a broadband and versatile building block for radio link applications. It is intended as a platform where customer requirements (such as extra gain, LO synthesizers, filters, diplexer, etc.) will be implemented upon request. It consists of one up- and one down-converter in a single unit. The up- and down-converter function independently, and can thus be used in both frequency multiplexed and time multiplexed applications. The converter may use internal or external LO synthesizers, depending on the needs of the user.

Main features

- Platform concept, easy to customize
- Optional synthesizers, fully computer controlled through serial I2C interface
- Optional filters or diplexer with very high isolation
- Standard waveguide and SMA interface
- Small size and weight

Applications

- Point-to-point or multi-point radio
- Multi-Gbps wireless transfer
- Measurement systems
- Electronic defense and security systems

FMCW Front End, Synthesized Version



| Product number | Frequency | Bandwidth |
|----------------|-----------|-----------|
| RS3400S/00 | 5 GHz | 750 MHz |
| RS3400X/00 | 10 GHz | 1500 MHz |
| RS3400K/00 | 24 GHz | 1500 MHz |

Interface board for easy evaluation is available. Other frequencies available upon request. Separate TX/RX ports available.

The RS3400 series is a family of synthesized S,X and K band FMCW radar front end modules. They are designed according to previously proven concepts for intrinsic safety resulting in highly reliable units with low power consumption.

The RS3400 series is very flexible and can be used in several different configurations. The frequency is digitally controlled via a standard, 3-wire serial interface, which programs a modern high performance synthesizer circuit. The synthesizer can use either an internal or external reference signal.

A basic kit for controlling the unit through RS-232 or USB from a PC for evaluation is available. This controller board allows for control of basic sensor features, while allowing for easy processing and interpretation of the output using your own software packages or instrumentation.

Features

- Available in 5, 10, and 24 GHz center frequencies
- Bandwidths of 750 or 1500 MHz
- Compact size
- Intrinsically safe design

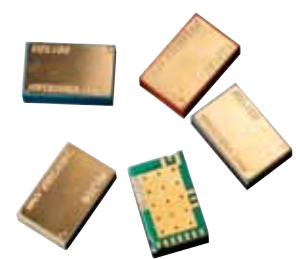
Applications

- Distance measurement
- Speed measurement
- Level gauging
- Surveillance and security
- Traffic measurement



True SMD Wide Band VCOs with secondary output

| Product number | Frequency | Phase noise @ 100kHz offset | Output Power Typical RF1/RF2 |
|----------------|---------------|--------------------------------|---------------------------------|
| V05180S/00 | 2.0-3.0 GHz | -96 dBc | 5 dBm/-5 dBm |
| V05180S/01 | 3.0-5.0 GHz | -96 dBc | 5 dBm/-5 dBm |
| V05180C/00 | 4.5-8.5 GHz | -94 dBc | 5 dBm/-5 dBm |
| V05180X/00 | 8.4-13.5 GHz | -78 dBc | 5 dBm/-5 dBm |
| V05180P/00 | 13.5-20.0 GHz | -73 dBc | 5 dBm/-5 dBm |



Mini Ultra Wide Band VCOs Drop in Versions

| Product number | Frequency | Output Power |
|----------------|---------------|--------------|
| V03280S/00 | 3.0-5.0 GHz | 14-19 dBm |
| V03280C/00 | 5.0-8.4 GHz | 14-19 dBm |
| V03280X/00 | 8.4-13.5 GHz | 14-19 dBm |
| V03280P/00 | 13.5-20.0 GHz | 14-19 dBm |



Mini Ultra Wide Band VCOs in SMA Housing

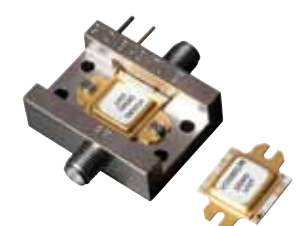
| Product number | Frequency | Output Power |
|----------------|---------------|--------------|
| V04280S/00 | 3.0-5.0 GHz | 14-19 dBm |
| V04280C/00 | 5.0-8.4 GHz | 14-19 dBm |
| V04280X/00 | 8.4-13.5 GHz | 14-19 dBm |
| V04280P/00 | 13.5-20.0 GHz | 14-19 dBm |



All VCOs can be tailored to customer needs

Ultra Wide Band VCOs Drop in Versions

| Product number | Frequency | Output Power |
|----------------|---------------|--------------|
| V03260S/00 | 3.0-5.0 GHz | 14-19 dBm |
| V03260C/00 | 5.0-8.4 GHz | 14-19 dBm |
| V03260X/00 | 8.4-13.5 GHz | 14-19 dBm |
| V03260P/00 | 13.5-20.0 GHz | 14-19 dBm |
| V03260K/00 | 20.0-24.0 GHz | 14-19 dBm |
| V03262S/00 | 3.0-5.0 GHz | 21-28 dBm |
| V03262C/00 | 5.0-8.4 GHz | 21-28 dBm |
| V03262X/00 | 8.4-13.5 GHz | 21-28 dBm |
| V03262P/00 | 13.5-20.0 GHz | 21-28 dBm |
| V03262K/00 | 20.0-24.0 GHz | 21-28 dBm |



SMA adapter available.

PLLs and Synthesizers

Fast Sweep SMT Microwave Frequency Synthesizers

| Product Number | Frequency | Phase Noise | Tuning Bandwidth |
|----------------|-----------|------------------|------------------|
| SS5210S/00 | 6 GHz | -80dBc/Hz@100kHz | 33% |



Custom PLLs and Synthesizers

Sivers IMA has extensive expertise in phase locked VCOs, microwave frequency synthesizers, DDS-based microwave frequency synthesizers and SMD microwave frequency synthesizers. All of our products in this program have low phase noise and power consumption. Custom designs made to your specifications are available in order quantities starting at 10 units.

Designed to your specification

For customer specific applications Sivers IMA offers all steps from development to product engineering to manufacturing. Sivers IMA also offers microwave product engineering and manufacturing of prototypes and small series of products developed by the customer.

About Sivers IMA

Sivers IMA is a ISO 9001:2008 certified company and one of the leading independent European manufacturer of advanced tuneable microwave oscillator products. Our specifications outperform competitors. The company has been in the industry since 1951 and our corporate facility is located in Kista, Sweden. We have a dedicated sales office in the USA, along with 15 distributors and agents around the world represent us.

Our customers primarily use our microwave products for Military, Industrial and Test & Measurement applications. Our strengths are unique skills in complex design and high-end frequencies. Sivers IMA offers customized microwave products in addition to our standard products.

Our Core Products can be divided in 3 areas.

- 1. Signal Sources - Different types of VCOs and PLLs ranging from 2 to 25.5 GHz*
- 2. Sensors Products - FMCW Microwave Front Ends at 5, 10 and 24 GHz*
- 3. Millimetre Wave Products. Products for different applications ranging from 35 GHz to above 100GHz.*

In order to enhance our competitive edge we will strengthen our long lasting cooperation with the GigaHertz Centre at Chalmers University. As a result of this competence center we have access to more than fifty world leading scientists in the microwave and millimetre wave field, paired with one of the most advanced laboratories available worldwide.

Our standard warranty time is one year.

We look forward to assisting you with your business.

Olle Westblom
President

Sivers IMA AB (HQ)
Box 1274 (Mail Address)
SE-164 29 KISTA, Sweden
Torshamnsgatan 9 (Delivery Address)
Tel: +46 8 703 68 00
Fax: +46 8 751 92 71
E-mail: sales@siversima.com

Sivers IMA AB (U.S. Office)
164 Old Country Rd
New Ipswich, NH 03071
USA
Tel: +1-603-878-4566
Fax: +1-603-878-9843
E-mail: brucebaker1@comcast.net

www.siversima.com

