

## **SYM 4435-USB**



## RF Synthesizer

35MHz - 4,4GHz

SYM4435-USB module is a very wideband / low noise RF synthesizer, providing many unprecedented features in its volume and price range. Offering as standard fast serial USB hi-speed interface, it allows very easy integration. The module takes its single voltage power supply from the USB connector. On / off pulse modulation is also available as standard, allowing fast signals through very short rise and fall times (typ. 25ns).

Powered by a powerful ARM7 32 bits micro-controller, it reacts fast to control commands and can also work without an host thanks to an internal EEPROM memory and the possibility to store a number of discrete frequencies that can be programmed with a precise timing. Output level can be set in the -20 to +10 dBm with 1 dB steps.

*SYM4435-USB synthesizer module will ideally come as a replacement for laboratory synthesizers to integrate in production test benches, in multi-carriers test equipments, or as local oscillator sources. Provided with Windows control software, it can also be used as an auxiliary RF signal generator in laboratory.*

### Features :

- 35 MHz to 4400 MHz, 1 kHz frequency step
- USB interface as standard with USB mini-B connector.
- Output level range +10 to -20 dBm
- Phase noise: <-100 dBc at 100kHz offset from carrier at 1GHz
- Frequency stability : +/- 0,5 ppm with internal reference. (+/-2,5ppm on temperature range)
- Harmonics : < -30 dBc (>200MHz), Non-harmonics : < -70 dBc
- Single voltage supply : 5 V dc, 250 mA through USB)
- External reference input, programmable frequency.
- Switching time : < 1 ms
- Temperature range : -40 .. +85°C
- Configuration memories : 100
- Dimensions : 115(L) x 55(l) x 25(h) mm
- Weight : 125 g.

### Interfacing :

The SYM4435-USB module can be controlled through a USB serial link (hi-speed) which also provides power to the module.

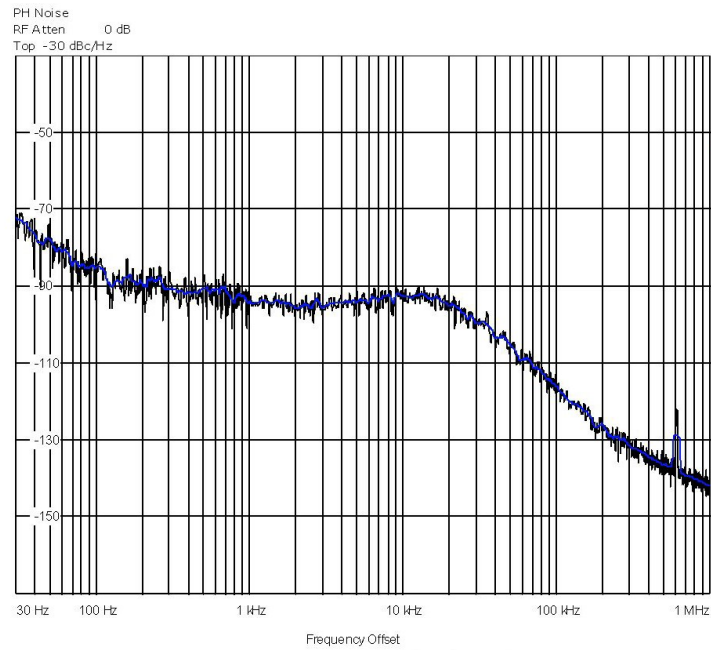
SMB connectors on front panel give access to external reference input and pulse modulation input.

### Main commands :

- ◆ Frequency
- ◆ Amplitude
- ◆ RF On/off
- ◆ Modulation on/off
- ◆ Ref int / ext.
- ◆ Save/ load configuration memories.
- ◆ Sequencer control

## Typical phase noise at 500 MHz :

(level 0dBm, modulation off).



Mechanical drawings :

