

AVS-1010 Coherent Direct Digital Synthesizer



Description:

The AVS- 1010 sets a new standard for digital frequency synthesis. The AVS- 1010 is an FPGA based synthesizer capable of running at 4GHz and providing a continuous coherent output from 15 MHz to 1.5 GHz in ½ Hz increments with the extended frequency option. Switching speeds to any frequency in 55 ns with phase noise better than - 85 dBc/Hz @ 100 Hz offset with spurious of > 65 dBc

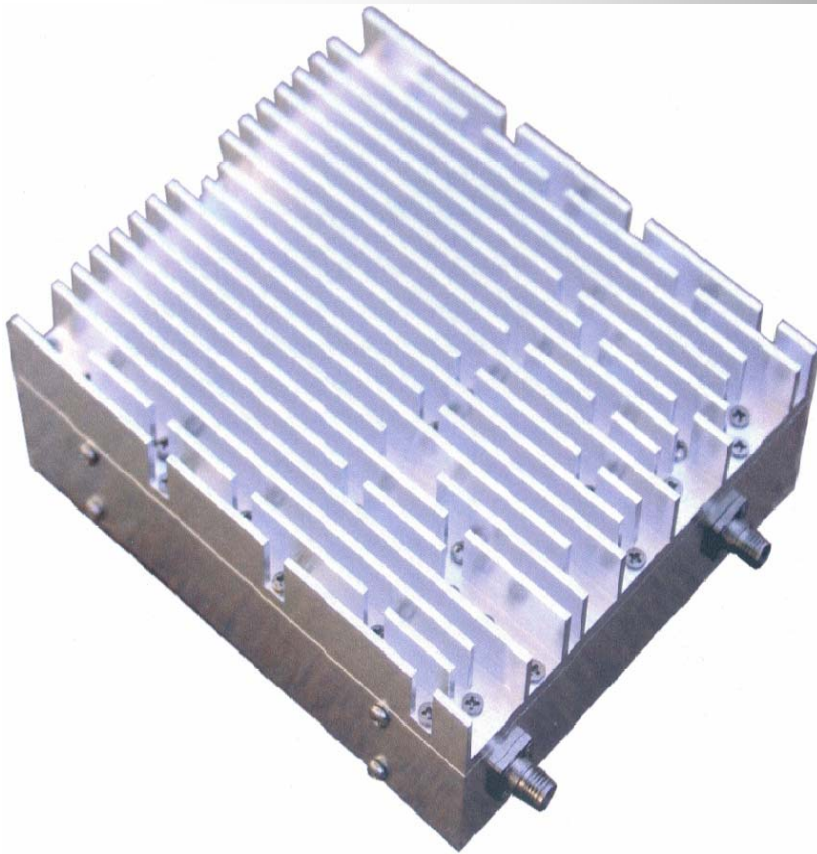
Applications:

- Anti IED Jammer
- Frequency Hop Follower
- Microwave Synthesizers
- Electronic Warfare
- Electronic Counter Measures
- Digital RF Memory
- Radar Simulator
- Waveform Generation

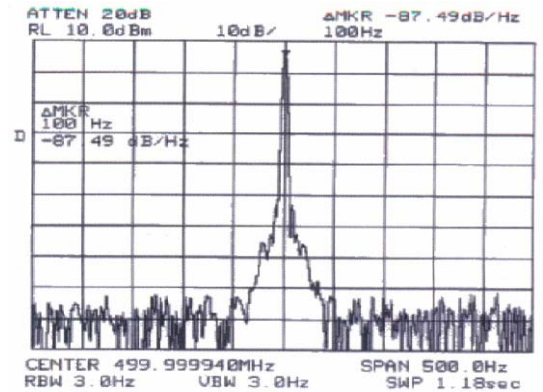
Key Features:

- | | |
|----------------------------|--------------------------|
| ▪ Frequency Range | 15 MHz – 800 MHz |
| ▪ Extended Frequency Range | 15 MHz – 1.5 GHz |
| ▪ Switching Speed | 55 ns |
| ▪ Spurious Signal | > 65 dBc |
| ▪ Harmonic Distortion | 54 dB |
| ▪ Output Power | +5 dBm +/- 1 dBm |
| ▪ Frequency Programming | BCD Code via 51 pin D |
| ▪ Power Connector | 9 pin micro D |
| ▪ DDS Output | SMA |
| ▪ Clock Input | SMA |
| ▪ Power | +5V @ 1.5A + 15V @ 330mA |
| ▪ Dimensions | 4.5" X 4.0" X 1" |
| ▪ Optional Modulation | AM, PM, FM, PSK, FSK |

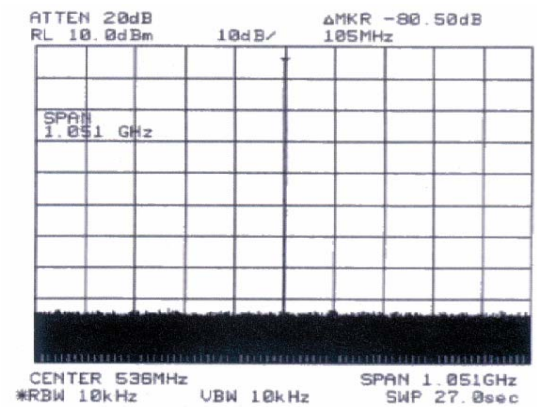
Performance Plots



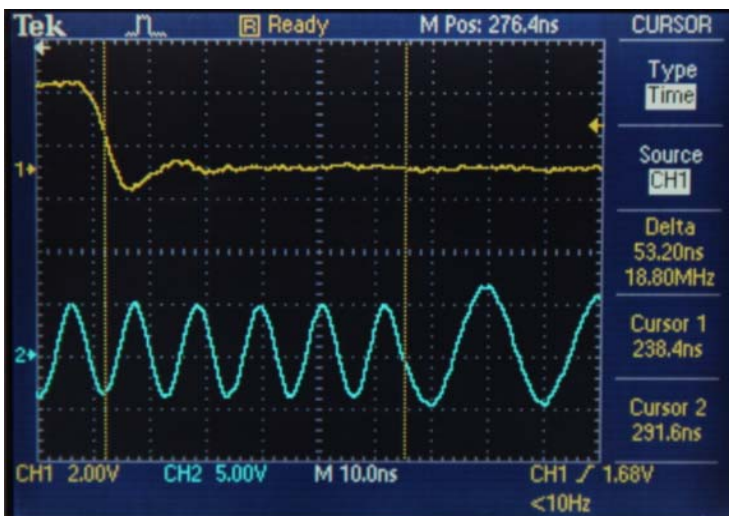
AVS-1010 High Speed FPGA Based DDS



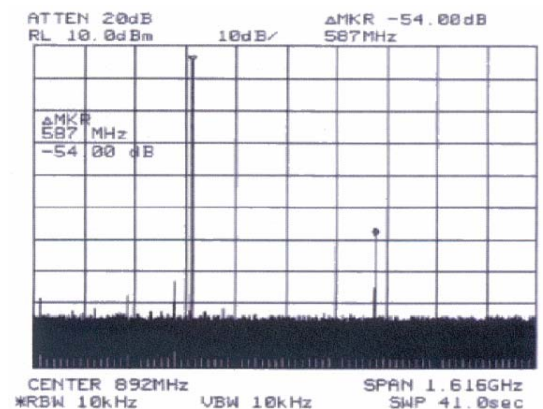
Excellent Phase Noise > 85 dBc/Hz @ 100 Hz Offset



Outstanding Spurious Performance > 65 dB



Switching Speed 55 ns



Harmonic Distortion 54 dB