



Fast Tune Direct Digital Synthesizer Module 1 Hz to 120 MHz

Features

- Programmable Output
 - Frequency Tuning Range 1 μ Hz to 120 MHz
 - Step Size 1 μ Hz
 - Amplitude Max 7 dBm
 - Phase
- Inverse SINC filter SIN (x)/x correction
- Harmonic Spurious – 37 dBc
- Non-Harmonic Spurious
 - –60 dBc with PLL off
 - -50 dBc with PLL on
- PLL off SSB Phase noise dBc/Hz
 - 1 KHz offset -110
 - 10 KHz offset -117
 - 100 KHz offset -120
- PLL on SSB Phase noise dBc/Hz
 - 1 KHz offset -105
 - 10 KHz offset -110
 - 100 KHz offset -115
- Modulations Supported
 - Frequency Modulation
 - Amplitude Modulation
 - Phase Modulation
 - Frequency Shift Keying
 - Phase Shift Keying
 - Amplitude Shift Keying
- Reference Clock (CLK)
 - PLL On
 - Ref CLK 5 MHz to 75 MHz
 - 4 X to 20 X Ref CLK multiplier
 - PLL Off
 - Ref CLK DC to 300 MHz
- Single ended reference clock input
- 8 Bit ATMEL AVR Micro-Controller (Optional)
- Digital Control ports
 - 4 wire SPI (UPD, SCLK, SDI, and I/O RST)
 - RS-232 (TXD, RXD, and GND) Optional
- SPI interface speed 10 MHz (Freq Tune speed 6 μ s)
- RS-232 I/F speed 57k baud (Freq Tune speed 900 μ s)

Maximum Operating conditions :

DC Power:

12 Volts @ 1 Amp

Operating Temperature:

Temp, Case Operating: -10 to 60°C

Temp, Storage: -35 to 120°C

Picture from Ad Here

Description:

This Direct Digital Synthesizer (DDS) module is controlled by commands written to the RS-232 or the 4 wire SPI TTL interface. The synthesizer tunes from 1 μ Hz to 120 MHz. The minimum tuning step size is micro-hertz. The digital control ports can accept commands to adjust the amplitude, phase or the frequency of the synthesizer output. The fast tuning speed changing the frequency is 6 μ s. The RF out phase or amplitude can be changed every 3 μ s.

Praxsym Part Numbers:

DDS Module : 310-010089-001

No CPU; No RS-232

External REF CLK

DDS Module : 310-010089-002

CPU; RS-232

On board TCXO 50 MHz REF CLK

DDS Module : 310-010089-003

CPU; RS-232

External REF CLK

J4- I/O Pin out			
Pin Number	Pin Name	Input/ Output	Comment
1	SCLK	TTL Input	SPI CLK
2	TXD	RS-232 Input	RS-232 Input
3	SDI	TTL Input	SPI DATA
4	RXD	RS-232 Output	RS-232 Output
5	UPD	TTL Input	SPI Latch Enable
6, 7, 8, 10, 12, 13, 14, 16, 17, 18, 19, 20	GND	Power	Board GND
9	I/O RST	TTL Input	SPI I/O Reset
11	NC	NC	NC
15	+12V	Power	+12 Volts DC
J1- I/O Pin out			
Pin Number	Pin Name	Input/ Output	Comment
Center Conductor	RF Out	RF Output	Synthesizer out
Connector Shield	GND	RF Shield	RF Shield
J2- I/O Pin out			
Pin Number	Pin Name	Input/ Output	Comment
Center Conductor	Ref Clock In	RF Input	Reference Clock Input
Connector Shield	GND	RF Shield	RF Shield

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