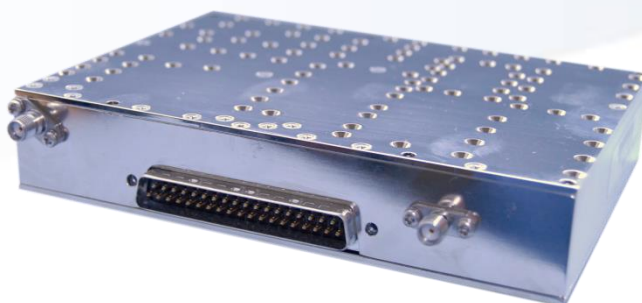




Frequency Synthesizer

RS-1094



FREQUENCY RANGE:
1.7 – 3.1 GHz

FEATURES

- Low Phase Noise, Low Spurious
- Near Octave Tuning Range
- 5 KHz Step Size
- Parallel Port for Fast Tuning Speed
- Ruggedized Packaging

APPLICATIONS

- Local Oscillator for High Rate Data Communications Systems
- Local Oscillator for Direction Finding Systems
- High Speed Automated Test Sets
- OEM Systems

GENERAL DESCRIPTION

The RS-1094 is a compact, rugged modular frequency synthesizer covering 1.7 to 3.1 GHz with 5 KHz step size and it delivers +14 dBm output power, adequate for directly driving the mixer port on a frequency converter. The unit is controlled remotely through a parallel digital interface allowing for fast 100 microsecond tuning speed. The architecture of the synthesizer is based on an analog PLL configuration enhanced with a DDS and digital processor operating with an external 100 MHz reference. This design delivers exceptionally low spurious and phase noise.

The synthesizer requires DC inputs of +12 volts at 0.3 A and +5.25 volts at 1.7 A. The RS-1094 is ideal for a wide range of critical signal source requirements in the areas of high rate communications, radar and high throughput testing. This synthesizer is suitable for operation in both ground based and aircraft avionics applications.



SPECIFICATIONS

Frequency Range	1.7-3.1 MHz
Frequency Accuracy	Same as external reference
Step Size	5 KHz
Reference	100 MHz External Reference
Reference Level	+3 dBm \pm 3 dB
Output Power	+14 dBm \pm 2 dBm
DC Power	+12V, 300 mA max +5.25V, 1.7A max
Tuning Time	100 microseconds max
Harmonics	-30 dBc
Sub Harmonics	-30 dBc
Spurious	-70 dBc
Operational Temp	0° C to +70° C
RF Connectors	SMA Female
Lock Detection	TTL: Low unlocked, High Locked
Programming	Parallel Interface
Phase Noise	100 Hz -85 dBc 1 KHz -95 dBc 10 KHz -95 dBc 100 KHz -110 dBc 1 MHz -126 dBc 10 MHz -150 dBc

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