

## **Elcom Technologies, Inc.**

### **Innovative Designs for the Future**

Established in 1995, Elcom Technologies, Inc. is fast becoming a significant and recognized source for microwave signaling devices and subsystems designed for the satellite communication, fiber optics and the expanding wireless communications markets.

Elcom's automated, high volume manufacturing capabilities reduce response time in order to keep your project cost-effective and on schedule.

#### **Rugged Frequency Synthesizers**

A new series of rugged frequency synthesizers designed for high capacity MW and MMW digital radios up to 18 GHz. With an emphasis on Guaranteed Zero Phase Hints<sup>153</sup>, the DFS Series offers extremely low microphonics and wide operating temperature range. These low noise sources meet the needs of high-speed data transmissions utilizing up to 256 QAM.

DC power consumption below 4 watts is maintained by utilizing low power components resulting in low junction temperatures and overall high reliability. The series features tuning bandwidths up to 1000 MHz and step sizes from 0.125 to 10 MHz.

#### **Additional Specifications**

&#149Frequency Range: 0.5-23 GHz

&#149Switching Speed: < 25 ms

&#149Phase noise meets 16, 32, 128 & 256 QAM requirements

&#149output Power Range: 12-18 dBm

&#149Load VSWR 1.5:1

#### **Microwave Frequency Synthesizers**

This new line of low-power, compact frequency synthesizers employs a single module design implemented with CMOS, ASIC, advanced RF MMIC and a dedicated microcomputer. A Ku-band synthesizer with 1 KHz step, 2.2 GHz bandwidth and integrated L-band. LFLO consumers only 8 watts &#151 a 65% savings compared to competing units.

Low profile construction (only 73 high) and very low phase noise makes the MFS Series ideal for applications in Satcom converters (L, X, C, Ku, and Ka bands), Digital Radios (C, X, and Ku Bands), Instrumentation and Wireless Communications.

The MFS Series of synthesizers meet, with large safety margins, the requirements of IESS, Eutelsat, and MIL-STD-188 for fixed and mobile satcom ground stations.

#### **Additional Specifications**

&#149Output Frequency: 1-23 GHz

&#149Frequency Bandwidth:

1 GHz at L-Band

1.2 GHz at C-Band

2.25 GHz at Ku-Band

Phase Noise 20 dB Better than IESS

Step Size: 1 KHz or 125 KHz

Switching Speed: 50 ms

Power Output: 12-16 dBm

Load VSWR: 2.0:1 In-Band Spurious: -70 dBc

Out-of-Band Spurious: -82 dBc

Fixed L-Band Output:

Frequency Range: 0.5 to 30. GHz

Power Output: 12 dBm to 17 dBm

Spurious: -95 dBc

### Phase Locked Oscillators

The PDRO series of oscillators employs a unique technique to phase lock microwave DRO's to a 5 or 10 MHz crystal reference. Several models in the series require only a single loop for reliable phase-lock performance. By utilizing just one loop, size and power consumption are minimized and multiple frequencies can be realized from the same reference. The low profile and small size (2.5 inches x 3.5 inches x 0.65 inches) features ultra low phase noise and low DC power consumption with a ruggedized design and wide operating temperature range. Frequency ranges from 0.5 to 18 GHz.

#### Additional Specifications

Fractional Reference Multiplier

-100 dBc Spurious

Meets MIL-STD-188 & IESS 308

Integrated Reference Optional (Same Package)

### Miniature Phase Locked Oscillators

Elcom technologies miniature MPDRO sources employ a unique technology to phase-lock microwave DRO to a 5 to 100 MHz crystal reference. The technique requires only a single loop for reliable phase-lock performance. By using just one loop, size, power consumption and cost are minimized.

#### Additional Specifications for the MPDRO Series

0.5 to 26 GHz Operation

Single Loop, locks to 5 to 100 MHz Reference

Ultra Low Phase Noise

Integrated Buffer Amplifier

-100 dBc Spurious

Ruggedized

Wide Operating Temperature Range

Low DC Power Consumption

Small 2.25 x 1.4 inches x 0.8 inches Size

Meets MIL-STD-188 and IESS 308

Both the PDRO and MPDRO series of Phase Locked Oscillators are ideal for applications in Satcom converters, Digital radios and Instrumentation. In addition,

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the MPDRO series has applications as a fiber optic clock generator.

### **Customization**

The engineers at Elcom work closely with our customers to provide higher volume manufacturing capabilities for their individual product needs.

### **Facility Expansion**

Since 1995, Elcom Technologies, Inc., has experienced a rapid growth rate. We have always set the highest standard for quality, service and reliability with our products. As a result of our success, we are moving to new, 32,000 sq. ft. modern facility in order to maximize our ability to meet our ever growing customer needs.

### **Elcom Technologies**

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