# **LOW** PHASE NOISE **QUARTZ OSCILLATORS**

Series FE-102A

The FEI Series FE-102A-100 features operation at 100 MHz, Low Phase Noise of -172 dBc, VCO Range of ±6 PPM for 0 to +10 V min, and a Low Profile of only 1". Time stability is 3 PPM/Year and 5 PPM/5 Years. Temperature stability is ±1 PPM over 0° to 55°C.

The FE-102A features the best phase noise performance available today in a quartz oscillator operating directly at 100 MHz. Typical phase noise is -135 dBc at 100 Hz from the carrier, -163 dBc at 1 kHz from the carrier and -173 dBc at 10 kHz from the carrier. FEI manufacturers a fifth overtone SC-cut crystal for this application.

The unit was designed for applications such as Low Noise Frequency Synthesis, Doppler Radar, Low Noise PLL Systems and Phase Noise Reference.



# **FEATURES**

Operation @ 100 MHz

Low Phase Noise: -172 dBc

VCO Range: ±6 PPM for 0 to +10V

• Low Profile: only 1" high



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# **SPECIFICATIONS**

#### MODEL FE-102A OSCILLATOR

#### **FREQUENCY:**

100 MHz

## **STABILITY TIME:**

3 PPM/Year 5 PPM/5 Year

#### **TEMPERATURE STABILITY:**

±1 PPM Over 0° to 55°C

### **VCO RANGE:**

±6 PPM, 0 to +10V Minimum

#### **OUTPUT POWER:**

+13 dBm Nominal

#### PHASE NOISE:

100 Hz -130 dBc/Hz 1 kHz -157 dBc/Hz 10 kHz -171 dBc/Hz 100 kHz -172 dBc/Hz

#### D.C. POWER:

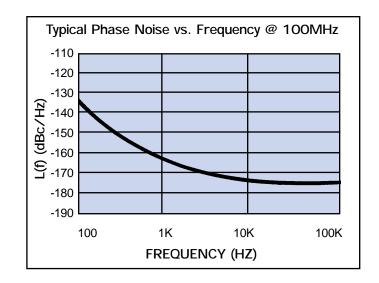
**15 VDC** 

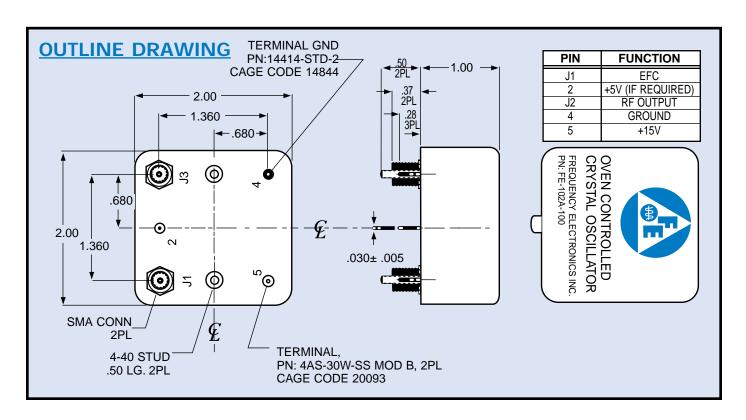
**SIZE:** 2"x 1" high

#### **CONNECTORS:**

RF - SMA

Voltage Tune - SMA





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