M-tron® INDUSTRIES, INC.
P.O. Box 630 100 Douglas Ave. Yankton, SD 57078 USA
Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709
Website: www.mtron.com

# SPECIFICATION FOR VCXO
# M-TRON P/N 1121-003
# (Ref. Advanced Energy P/N 1651039)
# Effective Date: January 20, 2000
# (Supersedes August 18, 1995 Release)

## I. GENERAL & ELECTRICAL REQUIREMENTS:

1. FREQUENCY: 13.560000 MHz
2. FREQUENCY STABILITY OVER TEMPERATURE RANGE: ± 50 ppm
3. OPERATING TEMPERATURE RANGE: -40°C to +85°C
4. OPERATING VOLTAGE: 5.0 V ± 10%
5. OPERATING CURRENT: 35 mA max.
6. OUTPUT TYPE: HCMOS/TTL Compatible
7. SYMMETRY: 45/55% ref. to ½ Vdd
8. RISE/FALL TIME: 5 nS max. ref. 20% and 80% Vdd
9. OUTPUT LOGIC LEVELS: $V_{OL}$ = 20% Vdd max. $V_{OH}$ = 80% Vdd min.
11. OUTPUT LOAD: 50 pF /10 TTL
12. PULLABILITY: ± 50 ppm min.
13. CONTROL VOLTAGE (Pin 1): 0.5 V to 4.5 V (2.5 V for center frequency)
14. PIN 1 INPUT IMPEDANCE: 75K min.
15. LINEARITY: 10% max. with positive monotonic slope.

## II. ENVIRONMENTAL/MECHANICAL REQUIREMENTS:

1. SHOCK: MIL-STD-202, Method 213, Condition C.
2. VIBRATION: MIL-STD-202, Methods 201 & 204.
3. HERMETICITY: 1X $10^{-8}$ atm cc/sec min.
4. STORAGE TEMPERATURE: -55°C to +125°C
5. REFLOW SOLDER CONDITIONS: +250°C for 10 secs. max.
6. PACKAGE: 14-pin dip compatible resistance weld package. (MV24V1CD type)

## DIMENSIONS