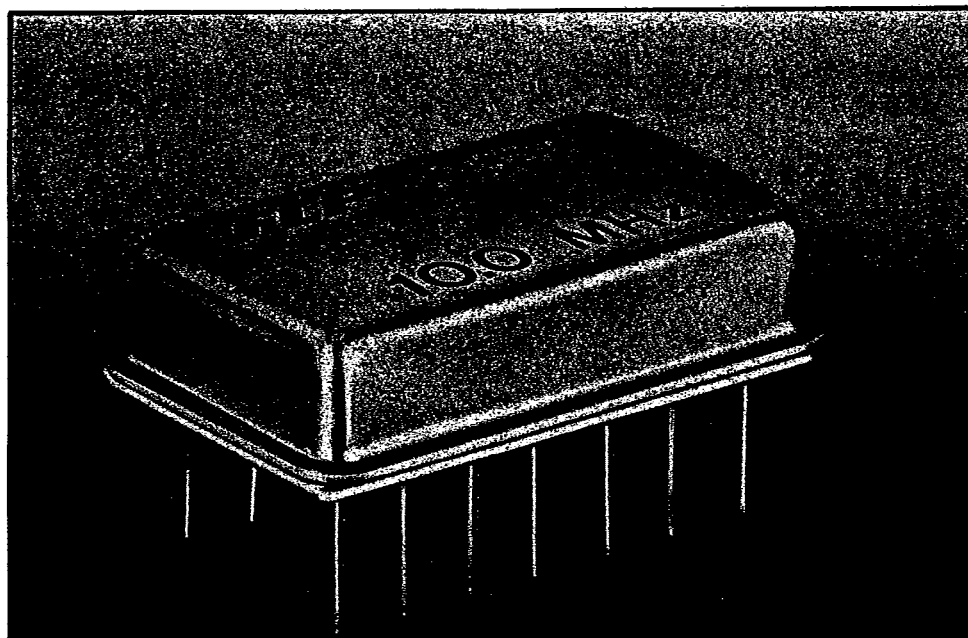




FREQUENCY CONTROL PRODUCTS, INC.

HI-TEMP CMOS Crystal Clock Oscillators



CMOS HI-TEMP SERIES

Features:

- Up to 200°C
- Miniature: 0.815" x 0.515"
- Low Profile: seated height 0.200"
- DIP Types in Commercial and Military Versions
- 500 Hz to 15 MHz

These FCP Dual In-Line Quartz Crystal Clock Oscillators are designed for use as clock generators and timing sources where high temperature, miniature size, and high reliability are of paramount importance.

Hermetically sealed to assure superior performance, the CMOS HI-TEMP SERIES covers a frequency range of 500 Hz to 15 MHz, and are available in frequency tolerances ranging from 1000 ppm to 100 ppm. Temperature ranges of up to 200°C are available in this series.

TEST DATA

- Seal tested per MIL-STD-202
- Hybrid construction to MIL-M-38510
- Available screen tested to MIL-STD-883
- Meets MIL-O-55310

ENVIRONMENTAL DATA

Vibration: 50G Peak, 2 kHz
Shock: 1000G, 1msec, Half Sine
Acceleration: 10,000G, 1 Min.

PIN CONNECTIONS

	Output	B-(Gnd)	B+	N.C.
A	8	7	14	1-6, 9-13
B	5	7	4	1-3, 6, 8-14
C	1	8	14	3-7, 9-13

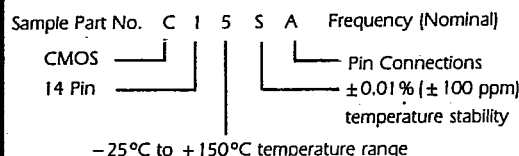
HOW TO ORDER

TEMPERATURE RANGE

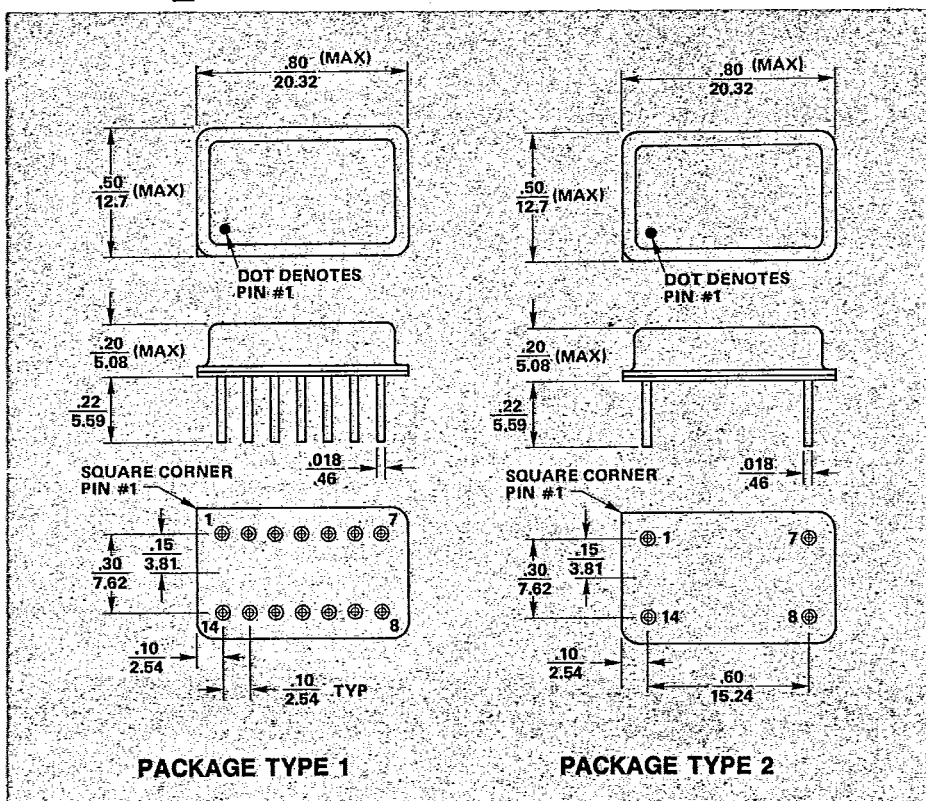
5 = -25°C to + 150°C
6 = -20°C to + 175°C
7 = 0°C to + 200°C
8 = -20°C to + 200°C
9 = -55°C to + 200°C

TEMPERATURE STABILITY

Q = ± 1000 ppm
R = + 500 ppm
W = ± 200 ppm
S = ± 100 ppm



Note: These oscillators are available subject to screening as per MIL-O55310 and MIL-STD-883. If desired add 'screened' after frequency.



MECHANICAL SPECIFICATIONS

Leak Rate: 1 (10)⁻⁸ ATM cc/sec, Hermetically sealed package.
Bend Test: Will withstand two bends of 90° reference to base.
Marking: Epoxy ink, heat cured
Solvent Resistance: Isopropyl alcohol, trichloroethane, freon for 1 minute immersion
Terminal Finish: Gold

ELECTRICAL SPECIFICATIONS

Frequency Range: 500 Hz to 15.0MHz
Accuracy at +25°C: ±0.0015%
Supply Voltage, VDD: +5VDC to +15VDC
Supply Current ID: 2mA (Max) at +5VDC
14mA (Max) at +15VDC
Output, Load: CMOS Compatible
Symmetry: 50/50%, ±10%, 60/40%
Rise and Fall Times: 140nsec (Max) at +5V CL = 50 pf
45nsec (Max) at +15V RL = 200k Ω

LOGIC LEVELS
'0' Level: +0.5V 50k Ω Load to input voltage
'1' Level: VDD - 1.0V (Min), 50k Ω Load to ground
Aging: 5 ppm/yr (Max)
Storage Temperature: -55°C to +200°C
Operating Temperature: -25°C/+150°C to -55°C/+200°C
Stability: ±100 ppm to ±1000 ppm



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