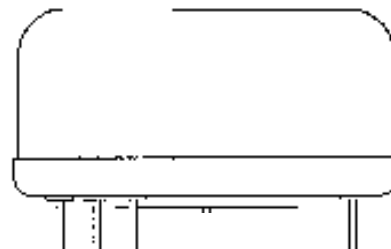


**Features:**

- Internal 12 BIT Serial DAC
- Small Size
- High Stability
- Digitally Adjustable



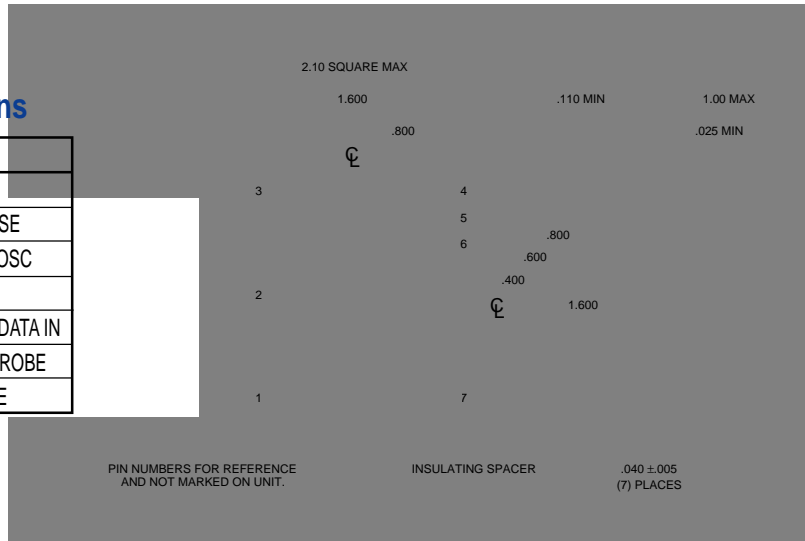
The Model 120 features an internal 12 BIT digital to analog converter (DAC) which is serially addressable. The inclusion of the DAC in the OCXO adds additional ambient temperature control to this device, thus minimizing frequency error due to DAC reference voltage changes.

**Electrical Specifications:**

<i>Parameter</i>	<i>Available Frequencies</i>	
	4.8, 32.768 MHz	
Input Voltage	+12.0 Vdc ±30%	
Supply Current - Warm-up Steady State @ -40°C	10 Watts max. 4 Watts Typical	
Output	HCMOS Compatible	
Load	20 pf	
Warm-up Referenced to the frequency @ 1 hr.	±5 x 10 <sup>-8</sup> in 15 minutes	
Phase Noise (1 Hz Bandwidth) @8.192 MHz	Offset	Level (dBc/Hz)
	1 Hz	-115
	100 Hz	-140
	1 kHz	-145
	10 kHz	-145
Frequency vs Power Supply (±5%)	±5 x 10 <sup>-9</sup>	
Digital Frequency Adjust DAC Type Tuning Range Tuning Linearity	12 BIT Serial, MSB first Format Sufficient for 15 years ±10%	

**Pin Connections**

PIN	FUNCTION
1	RF OUTPUT
2	GROUND, CASE
3	+19 TO +26V OSC
4	CLK - CLOCK
5	SDI - SERIAL DATA IN
6	LD - LOAD STROBE
7	N/C - CTS USE



**Mechanical Specifications:**

**Case:**

Metal, hermetically sealed

**Leads:**

Kovar, solder coated

**Seal:**

Solder Seal

**Leak Test:**

Leak rate less than  $5 \times 10^{-5}$   
Atmosphere-cc/sec of helium

**Solderability:**

95% solder coverage, using RMA flux 63  
SN/37 Pb at +245°C ±5°C

**Temperature:**

Operating: See chart  
Storage: -55° to 85°C

**Vibration:**

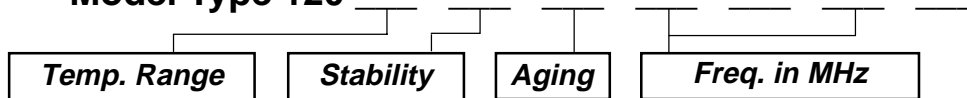
5 G's sine, 10 to 500 Hz

**Mechanical Shock:**

50 G's 5ms pulse (3 shock/plane)

**Ordering Information:**

**Model Type 120**



Temp Stability		$\pm 5 \times 10^{-9}$	$\pm 1 \times 10^{-8}$	$\pm 2 \times 10^{-8}$	$\pm 5 \times 10^{-8}$	$\pm 1 \times 10^{-7}$
Temp Range	Code	A	B	C	D	E
0° to 50° C	A	X	X	X	X	X
0° to 70° C	B		X	X	X	X
-30° to 70° C	C			X	X	X
-40° to +85° C	D				X	X

1 <sup>st</sup> Year Aging	Code
±0.5 ppm	A
±0.3 ppm	B
±0.1 ppm	C
±0.05 ppm	D

Note: Not all Options are Available at all Frequencies. Consult Factory for Details.