Model 101
Ovenized Oscillator

Features:

- European Standard Package
- Low Aging Rate
- Precision Resonator
- Precision Temperature Stability
- Surface Mount Construction
- Low Cost

The use of an innovative thermal/mechanical design with precision resonators makes this ovenized oscillator series ideal for GPS, communications, and instrumentation applications. With a variety of options, the Model 101 is the workhorse of the CTS Reeves family of OCXOs.

Electrical Specifications:

Parameter	***Frequency Range (MHz)***	
	5.0 to 50 MHz	
Supply Voltage (Vdd) Operating	5 Vdc ±5% (OSC) 12 Vdc ±5% (Oven)	
Supply Current (@ 0°C) Warm Steady State (Typ. @ 25C)	7.6 watts Max. .75 watts	
Output T S	TTL Compatible Sine°, dbm Min.	
Load T / S	1 to 5 TTL / 50 ohms	
Rise & Fall Time (.4 to 2.4 Volts)	10 ns Max.	
Warm-up (@ 25°C) Ref. to Freq. at 1 hr.	$\pm 1 \times 10^{-7}$ / 5 Min. $\pm 1 \times 10^{-8}$ / 30 Min.	
Phase Noise (Typical) (1 Hz BW @ 10 MHz)	Offset	Level (dBc)
	10 Hz	-100
	100 Hz	-135
	1 kHz	-140
	10 kHz	-155
Electrical freq. adjust (Positive slope)	Sufficient for 10 yrs Aging (Range is ±3 ppm Typical)	

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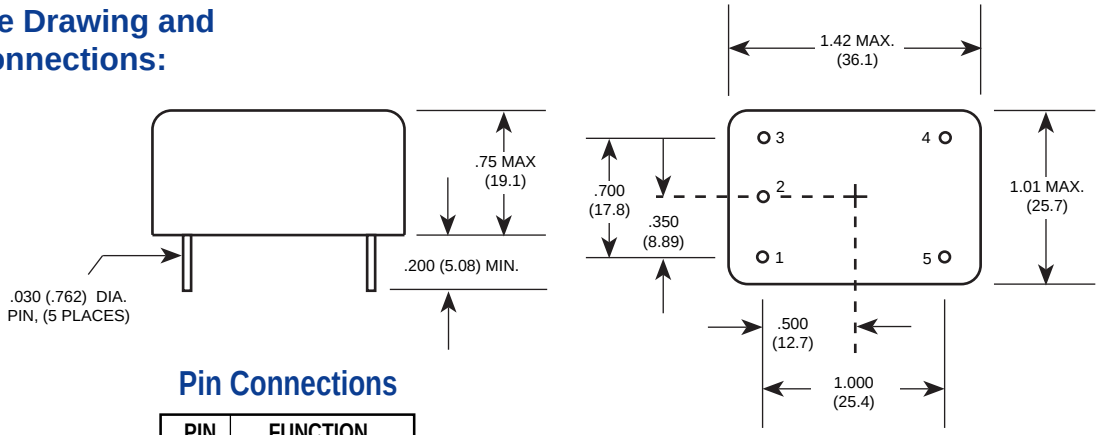
Outline Drawing and Pin Connections:



Pin Connections

PIN	FUNCTION
1	Freq. Adjust (NC)
2	V ref
3	+12 Vdc
4	Output
5	Case/Ckt. Gnd.

Dimensions in inches (millimeters)

Mechanical Specifications:

Case:
CRS, Hot Tin Dipped

Leads:
Nickel plated with solder coating

Seal:
Solder seal

Leak Test:
Leak rate less than $5x10^{-5}$ atmosphere-cc/sec of helium

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

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

Vibration:
10 G's rms, 20 to 2000 Hz

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

Ordering Information:

Model Type 101

Temp. Range | ***Stability*** | ***Aging*** | ***Freq. Adjust.*** | ***Output Type*** | ***Freq. in MHz***

Temp Stability		±5 x 10^{-9}	±1 x 10^{-8}	±2 x 10^{-8}	±5 x 10^{-8}	±1 x 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

1st Year Aging	***Code***
±0.5 ppm	A
±0.3 ppm	B
±0.1 ppm	C
±0.05 ppm	D

Freq. Adjust	***Code***
Electrical	E
Mechanical	M

Output	***Code***
TTL	T
Sine	S

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

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