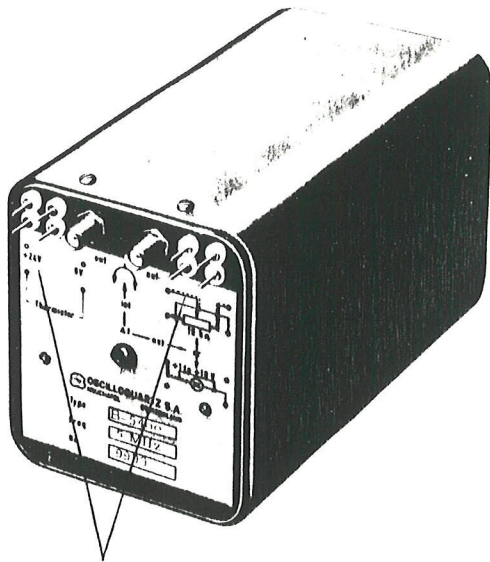


HIGH STABILITY QUARTZ CRYSTAL OSCILLATOR

8601



D type connectors

FEATURES

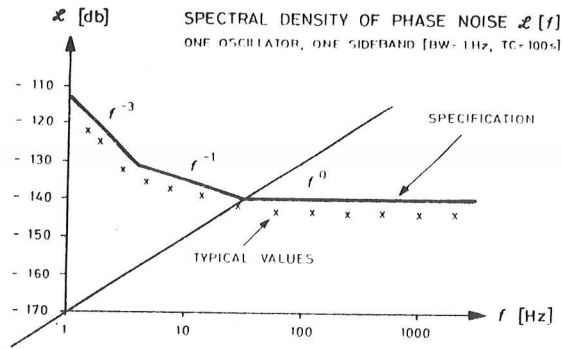
- Lowest Phase Noise Commercially Available
- State-of-the-art Short Term Stability
- Aging below 2.10^{-11} per Day
- Voltage-Controlled Adjustment Permits Phase-Lock Operation in Communication Applications

The Oscilloquartz 8601 quartz crystal oscillator is a compact, versatile 5 MHz signal source combining exceptionally high short-term frequency stability with excellent spectral purity and long-term aging performance. Extremely low close-in phase noise (1 to 100 Hz away from the carrier) makes this oscillator ideal for narrow-band communication systems, frequency synthesizers, coherent radar and navigation systems, and other applications where signal multiplication to high frequencies is required.

Low drift rate and relative immunity to environmental effects permit direct utilization of the oscillator as the reference in many frequency measurement and timing systems. The external frequency-control voltage input allows phase-locked operation with other signal sources, in such applications as tracking receivers, atomic frequency standards, and sensitive noise-measurement systems.

TECHNICAL SPECIFICATIONS

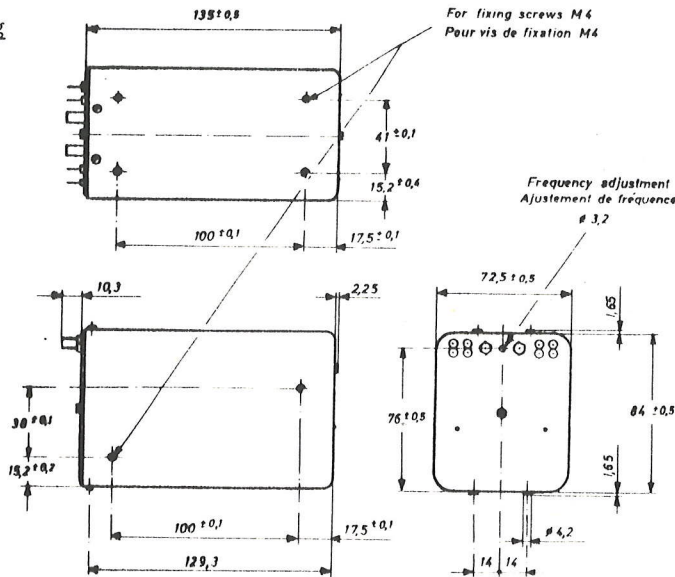
<u>Output</u>	Frequency	: 5 MHz
	Voltage	: 2 outputs with each .5 Vrms into 50Ω (short circuit protected), connector OSM 211
	Waveform	: Sinusoidal
<u>Stability</u>	Aging rate	: $< 2.10^{-11}$ per day after 90 days of continuous operation
	Short term stability	
	$\tau = 1 \text{ s}$ $\tau = 10 \text{ s}$: 2.10^{-13} : 2.10^{-13} ($B = 100 \text{ Hz}$, $T = \tau$)



~ 10 dB lower

<u>Frequency adjustment</u>	Coarse adjustment range	:	smaller ranges compatible with lower aging
	Electronic adjustment range		
<u>Operating conditions</u>	Temperature	$\frac{\Delta f}{f}$	$< 5 \cdot 10^{-10}$ over ambient range -30 to $+55^{\circ}$ C
	Load	$\frac{\Delta f}{f}$	$< 5 \cdot 10^{-11}$ for a 10 % change from 50Ω
	Supply voltage	$\frac{\Delta f}{f}$	$\pm 5 \cdot 10^{-11}$ max. for 24 V ± 10 %
	Input voltage	:	+24 V (operates from +20 to +30 V)
	Input power	:	10 W during warm up 3 W operating at 25° C
	Warm up time	:	2,5 hours typ.
<u>Environmental</u>	Temperature		-55° to $+55^{\circ}$ C
	Altitude		25000 ft (7,6 km)
	Humidity		95 % relative humidity at 55° C
	Vibration		1,5 to 0,5 mm peak to peak } (MIL-STD-167B) 8 to 50 Hz
	Shock		36 G 11 ms (all axes)
<u>Dimensions</u>	Size	:	72,5 x 84 x 135 mm 2 55/64 x 3 5/16 x 5 5/16 inches
<u>Weight</u>		:	830 gr. 1,72 lbs

Outline drawing



In accordance with our policy of continual improvement, we reserve the right to modify the design of any of our products without prior notice.

October 1981