



# OCXO 8711 / 8712 Low aging / 19 mm C08-C package

## Oven Controlled Crystal Oscillator

The 8711 / 8712 series offer low aging and excellent stability options in CO-08 style package

### Features

- Low power supply
- High stability performance thermal & long term
- CO-08 footprint low profile 19.4 mm (0.76") tall

### Benefits

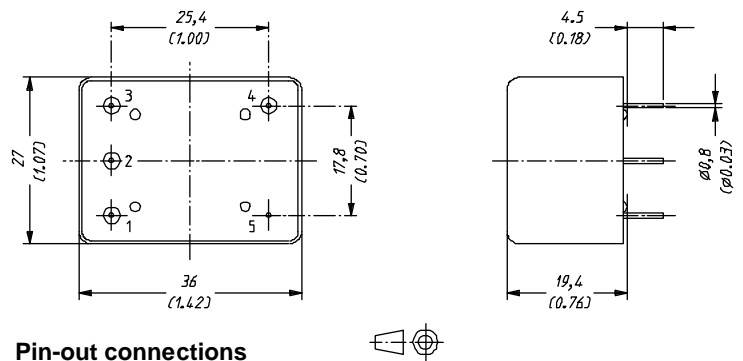
- Simple power supply design
- Easily interfaces with analog or digital circuits
- Fits all telecommunications requirements
- Can be used in difficult thermal condition
- Small volume

### Applications

- High speed data transmission
- Reference clock for digital telecommunications equipment: **Switching, MUX, PABX, DACS**

### Outline and Electrical connections

All dimensions in mm (inches)



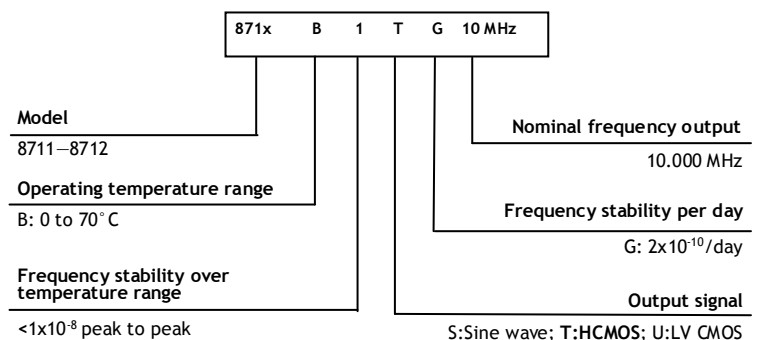
### Pin-out connections

- 1: Vc input
- 2: Vref Output
- 3: +Power supply
- 4: Output
- 5: GND

Contact factory for special specifications 8711.x and 8712.x

Phase noise L (f) (BW = Hz)				
Frequency	10 MHz	T	10 MHz	S
Phase noise	1Hz	- 90 dBc	- 90 dBc	- 90 dBc
	10 Hz	- 120 dBc	- 120 dBc	- 120 dBc
	100 Hz	- 135 dBc	- 135 dBc	- 135 dBc
	1k Hz	- 140 dBc	- 140 dBc	- 140 dBc
	10k Hz	- 145 dBc	- 145 dBc	- 150 dBc

### Ordering Information



# Technical Specifications

# OCXO 8711 / 8712

## Oven Controlled Crystal Oscillator

Standard / Option	Standard		Option
Crystal Oscillator	SC-cut, 3rd overtone		
Standard frequencies	4.096/5/8.192/10/16.384/20 MHz		4.096 to 40.000 MHz
Operating temperature range	<b>A:</b> -20°C to +70°C <b>B:</b> 0°C to +70°C <b>C:</b> 0°C to +60°C <b>D:</b> -10°C to +70°C		<b>E:</b> -40°C to +70°C (< 5W during warm up)
Frequency stability ( $\Delta f/f$ )			
Long term stability (aging after 30 days of continuous operation)	5x10 <sup>-10</sup> /day 1x10 <sup>-7</sup> /year		<b>G:</b> 2x10 <sup>-10</sup> /day <b>H:</b> 1x10 <sup>-10</sup> /day <b>J:</b> 7x10 <sup>-11</sup> /day
Over temperature range	< 2x10 <sup>-8</sup> peak to peak		1: < 1x10 <sup>-8</sup> peak to peak
Versus supply voltage changes (Vcc ± 5%) Steady state	± 5x10 <sup>-10</sup>		
Versus load changes (50Ω ± 10%) Steady state	± 5x10 <sup>-10</sup>		
Short term stability $\sigma$ ( $\tau$ ) (0.2 to 10s)	< 5x10 <sup>-11</sup>		
Warm up (25°C in calm air)	< 7 min (to be within ± 10 <sup>-8</sup> x F <sub>0</sub> , F <sub>0</sub> refers to frequency after 1hr operation)		
Electronic frequency control	>± 0.6 ppm (0 to +5 Volts) / Linearity < 10% / Positive slope		
Power Supply (P)	<b>8712</b>		<b>8711</b>
Input voltage range (DC)	+5 Volts ± 5%		+12 Volts ± 10%
Power consumption	< 1.4W after warm-up at 25°C, < 4W during warm up		< 1.4W after warm-up at 25°C, < 5W during warm up
Environment (Not operating)			
Storage temperature	-40°C to +100°C		
Vibration	IEC 68-2-6 Test Fc : 10 Hz–500 Hz, 10g		
Shock	IEC 68-2-27 : Half-sine 50g, 11ms		
Size (L x W x H)	36.0 x 27.0 x 19.4 mm (1.42"x1.07"x0.76")		
Weight	35g		
Outline and electrical connections	See drawing		
Outputs Characteristics	<b>S</b>	<b>T</b>	<b>U</b>
Wave form	Sine	Square	Square
Level (Tol.) / Impedance	> -1.5 dBm/50Ω (8712) > 4 dBm/50Ω (8711)	H CMOS compatible	LV CMOS compatible
Phase noise	See table		
Harmonics / VH	< -30 dBc	VH: > 4.5 Volts	VH: > 3.0 Volts
Spurious / VL	< -70 dBc	VL: < 0.5 Volts	VL: < 0.3 Volts
Symmetry	Sub harmonics: -40 dBc	45% - 55%	45% - 55%
Rise / Fall time (10 / 90%, 15pF)	Not applicable	< 10ns	< 5ns
Internal reference voltage	8712 : 4Volts ± 0.08(Vcc = 5V)		8711 : 8Volts ± 0.16(Vcc = 12V)
Source Impedance	1kΩ		

Oscilloquartz SA reserves the right to change all specifications contained herein at any time without prior notice.



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