

OCXO 8741

Oven Controlled Crystal Oscillator



Product Description

The 8741 series are a single oven controlled crystal oscillators designed to meet Stratum 3E specification. This wide electronic frequency control range allows up to 20 years operation.

Features

- SC-cut fundamental mode crystal resonator
- Low aging options
- Sine or LV C-MOS 3.3V output
- Standard footprint (CO8 compatible)
- Low profile 20mm(0.79inch) High

Applications

- Stratum 3E
- Instrumentations
- X-connect

Technical Specification

Standard / Option	Standard	Option
Crystal resonator	SC-cut, fundamental mode	
Standard frequencies	4.096 / 8.192 MHz	4.096 - 19.440 MHz
Operating temperature range (X)	A: - 20°C to +70° C B: 0°C to +70° C C: 0°C to +60° C	
Frequency stability (Δ f/f)	Standard	Option G
Long term stability (aging after 30 days of continuous operation)	1×10^{-9} /day 2×10^{-8} /month 2×10^{-7} /year	5×10^{-10} /day 1×10^{-8} /month 1×10^{-7} /year
Over temperature range (Y)	$< 5 \times 10^{-8}$ pp	2: B / C $< 2 \times 10^{-8}$ pp
Versus supply voltage changes ($V_{cc} \pm 5\%$)	$< 1 \times 10^{-9}$	
Versus load changes ($\pm 10\%$)	$< 5 \times 10^{-9}$	
Short term stab. σ (τ) (0.2s to 10s)	$< 1 \times 10^{-10}$	
Electronic frequency control	$> \pm 7.6$ ppm (0V to 5V) / linearity $< 10\%$ / Impedance $> 10k\Omega$	
Power Supply (P)		
Input voltage range (DC)	+12 Volts $\pm 5\%$	
Power consumption	< 1.5 W after warm-up at 25°C, < 7.5 W during warm-up	
Environment (not operating)		
Storage temperature	-40°C to +100°C	
Vibration	IEC 68 - 2 - 6 Test Fc: 10Hz - 500Hz, 10g	
Shock	IEC 68 - 2 - 27: Half-sine, 50 g, 11ms	
Size (L x W x H)	40.0 x 30.0 x 20.0 mm (1.58" x 1.18" x 0.79")	
Weight	55 g	
Outline and electrical connections	see drawing	
Outputs Characteristics (Z)	S	T
Wave form	Sine	Square
Level (Tol.) / Impedance	> 0 dBm / 50 Ω	LV CMOS 3.3V
Phase noise	consult factory	
Harmonics / VH	$< - 25$ dBc	VH: > 3.0 V
Spurious / VL	$< - 70$ dBc	VL: < 0.2 V
Symmetry	not applicable	40% - 60%
Rise / Fall time (10 / 90%, 45pF)	not applicable	15 ns
Internal reference voltage		
Pin 3 : Vref out ($R_{Load} > 20 k\Omega$)	Std 7.3 Volts / on request 7.0 to 8.5 volts (source resistance 1 k Ω)	
Stability vs temperature range	Vref out ± 3 mV	



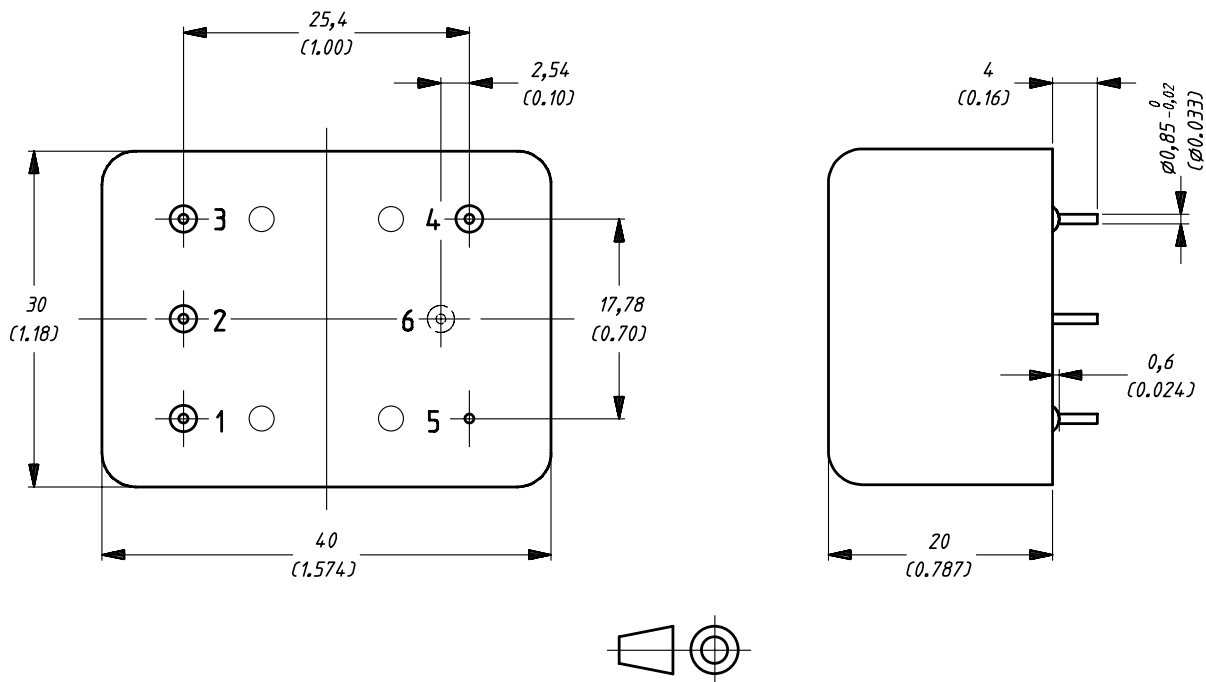
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Technical Specification

Outline and electrical connections

All dimensions in mm (inches)



Pin-out connections

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

Ordering Information

OCXO 8741

Example :

8741 - B 2 - U - G - 8.192 MHz

Type

Model

8741

Operating temperature range code(X)

B: -20 to 70°C

Frequency stability over temperature range (code Y)

2: < 2 E-8 peak to peak

Output signal (code Z)

U: LVC-MOS 3.3V

Option aging

G: 5 E-10/day

Nominal frequency output

8.192 MHz



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