



OCXO 8742 / 8743

19 mm high package

Oven Controlled Crystal Oscillator

The **8743** series is an oven controlled crystal oscillators designed to meet high performances in an industry standard 19mm high package.

The **long term stability** of this SC-cut OCXO allows a reachable operational period of up to 20 years.

Features

- Excellent long term stability
- Single oven **SC cut 3rd** overtone crystal resonator
- Sine or HC-MOS / TTL-compatible output
- Low profile 19mm (0.75 inch) High

Benefits

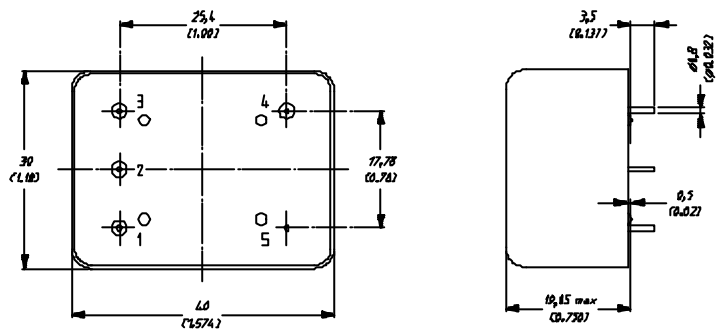
- Selectable long term stability
- Easily interfaces with analog or digital circuits
- Fits all telecommunications requirements
- Small volume CO8 footprint compatible

Applications

- Stratum III
- Frequency synthesizers, spectrum analysers and test equipments
- Digital switching
- Cellular base stations

Outline and Electrical connections

All dimensions in mm (inches)

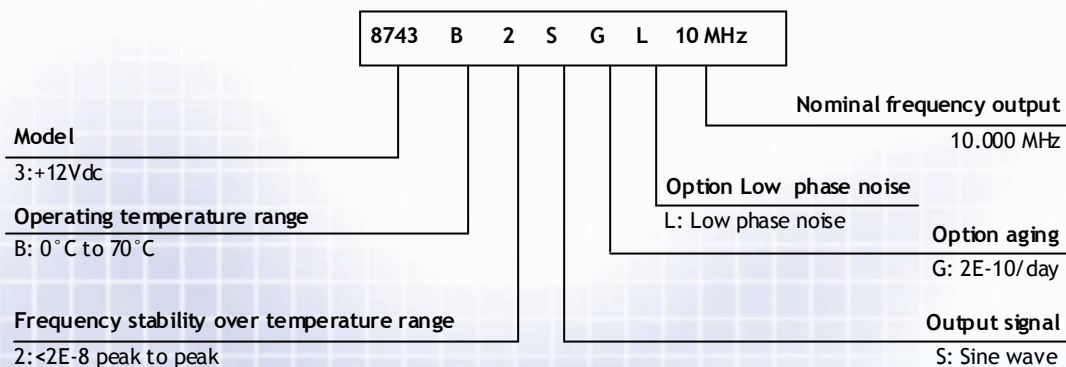


Pin-out connections

- 1: Vc input
- 2: Vref Output
- 3: +Power supply
- 4: Output
- 5: GND
- 6: Oven alarm (optional)



Ordering Information



Standard / Option	Standard	Option	
Crystal Oscillator	SC-cut, 3rd overtone		
Standard frequencies	8.192/10/13/16.384/26 MHz	6.480 to 30.000 MHz	
Operating temperature range	A: -20°C to +70°C	B: 0°C to +70°C C: -0°C to +60°C	
Frequency stability ($\Delta f/f$)			
Long term stability (aging after 30 days of continuous operation)	5x10 ⁻¹⁰ /day	G: 2x10 ⁻¹⁰ /day H: 1x10 ⁻¹⁰ /day J: 7x10 ⁻¹¹ /day	
Over temperature range	Std : < 2x10 ⁻⁸ peak to peak	1: <1x10 ⁻⁸ peak to peak 6: <6x10 ⁻⁹ peak to peak	
Versus supply voltage changes (Vcc ± 5%)	< 1x10 ⁻⁹		
Versus load changes (50Ω ± 10%)	< 5x10 ⁻⁹		
Short term stability s (t) (0.2 to 10s) Allan variance	< 1x10 ⁻¹¹		
Electronic frequency control	>± 0,6 ppm (0 to +10 Volts) / Linearity < 5% / over consult factory		
Power Supply (P)			
Input voltage range (DC)	8743 : +12 Volts ± 5%	Over consult factory	
Power consumption	< 2.0W after warm-up at 25°C / < 7.5W 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)	40.0 x 30.0 x 19.0 mm (1.58"x1.18"x0.75")		
Weight	55g		
Outline and electrical connections	See drawing		
Outputs Characteristics	S	T	U
Wave form	Sine / 50Ω	Square	Square
Level (Tol.) / Impedance	> 0dBm	HCMOS	LV CMOS
Phase noise	See table	Not applicable	Not applicable
Harmonics / VH	< -25 dBc	VH: < 4.5 Volts	VH: > 3.0 Volts
Spurious / VL	< -70 dBc	VL: < 0,5 Volts	VL: < 0,2 Volts
Symmetry	Not applicable	40% -60%	40% -60%
Rise / Fall time (10 / 90%, 45pF)	Not applicable	< 15ns	< 15ns
Internal reference voltage Pin 2 : Vref out (R _{Load} > 20 kW)	Std: 7.8 Volts (Source, resistance 1 kΩ)		
Stability vs temperature range	Vref out ± 3 mV		

Phase noise (BW = 1 Hz)

Frequencies	8.192 MHz / 10 MHz	
Standard / Option L	Standard	Option L
Phase noise 1Hz	-95 dBc	-100 dBc
10 Hz	-125 dBc	-130 dBc
100 Hz	-135 dBc	-140 dBc
1'000 Hz	-145 dBc	-150 dBc

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

