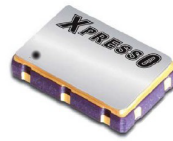


Features

- Extremely low jitter
- Low cost
- Express delivery
- Stability from ± 20 ppm, -40 to $+85^\circ\text{C}$
- Absolute pull range ± 50 ppm
- Serial ID with comprehensive traceability



Description

The XPRESSO range of fully configurable VCXOs utilizes a family of proprietary ASICs developed for noise reduction to provide oscillators with noise levels comparable to traditional bulk-produced quartz and SAW-based VCXOs.

XPRESSO VCXOs are low-cost, low-noise, have a wide frequency range, excellent ambient performance and are available on very short leadtimes. All XPRESSO VCXOs are 100% final tested.

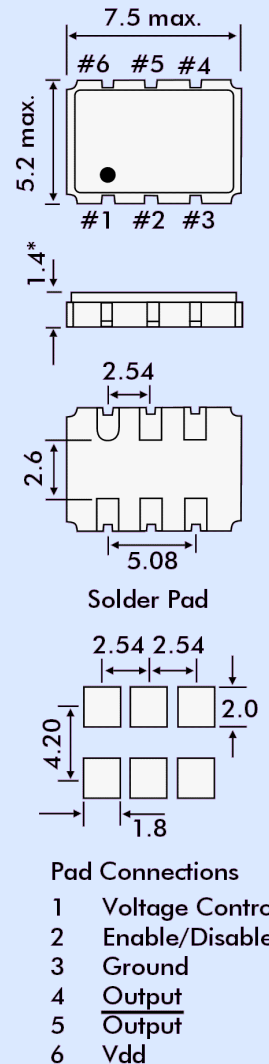
Typical applications

- Any application requiring an oscillator.
- SONET
- Ethernet
- Storage Area Networks
- Broadband Access
- Microprocessors/DSP/FPGA
- Industrial Controllers
- Test and measurement
- Fibre Channel

Electrical Specification

Frequency Range:	0.750MHz ~ 1.35GHz
Absolute Pull Range:	± 50 ppm
Operating Temperature Range:	$-20^\circ \sim +70^\circ$ to $-40^\circ \sim +85^\circ\text{C}$
Storage Temperature Range:	-55 to $+125^\circ\text{C}$
Supply Voltage:	$+3.3\text{VDC} \pm 5\%$
Input Current:	120mA
Output Load:	50Ω into Vdd-2VDC typical
Start-up Time:	10ms
Output Enable/Disable Time:	100ns
Control Voltage Tuning Slope:	$40 \sim 75$ ppm/V typical
Control Voltage Linearity:	$\pm 10\%$
Control Voltage Tuning Range:	$0\text{V} \sim 3.3\text{V}$
Modulation Bandwidth:	10kHz minimum
Nominal Control Voltage:	1.65 volts
Low Output Voltage:	$1.305\text{V} \sim 1.65\text{V}$
High Output Voltage:	$2.055\text{V} \sim 2.405\text{V}$
Typical Complimentary Difference:	0.75V p-p typical
Output Enable (Pad 2) Voltage:	$>70\%$ Vdd
Output Disable (Pad 2) Voltage:	$<30\%$ Vdd
Rise/Fall Times:	400ps
Moisture Sensitivity Level:	1
Termination Finish:	Au

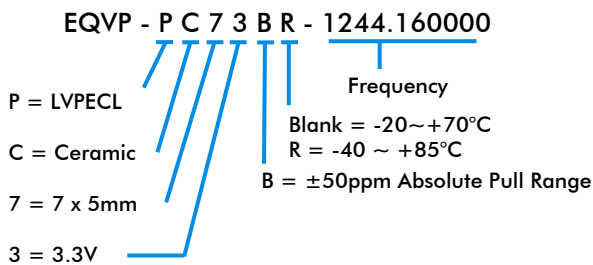
OUTLINE & DIMENSIONS



Supply Format

- Tape and Reel, 16mm tape, 8.0mm pitch,
- 1k reel = 178mm \emptyset
- 2k reel = 255mm \emptyset

Model Selection Guide



Jitter Measurements

Frequency (MHz)	Phase Jitter (12kHz~20MHz) (ps RMS)	Time Interval Error σ of jitter distribution (ps RMS)	Rj/Dj Composition		
			Random Jitter (Rj) (ps RMS)	Deterministic Jitter (Dj) (ps p-p)	Total Jitter (Tj) ($14 \cdot Rj + Dj$) (ps)
62.5	1.01	3.1	1.27	8.1	26.2
156.25	0.86	3.5	1.29	9.3	27.7
212.5	1.05	3.6	1.22	8.6	26.1
622.08	0.94	3.5	1.21	9.6	26.8