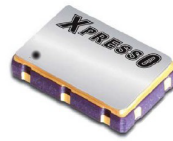


Features

- 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.

Electrical Specification

Frequency Range:	0.750MHz ~ 180.0MHz
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:	$+2.5\text{VDC} \pm 5\%$
Input Current	
0.75 ~ 20.0MHz:	22mA
20+ ~ 50.0MHz:	25mA
50+ ~ 100.0MHz:	29mA
100+ ~ 130.0MHz:	32mA
130+ ~ 160.0MHz:	35mA
160+ ~ 180.0MHz:	37mA
Output Load:	15pF
Start-up Time:	10ms
Output Enable/Disable Time:	100ns
Control Voltage Tuning Slope:	40 ~ 75ppm/V typical
Control Voltage Linearity:	$\pm 10\%$
Control Voltage Tuning Range:	0V ~ 2.5V
Modulation Bandwidth:	10kHz minimum
Nominal Control Voltage:	1.25 volts
Output Low Voltage	
0.75 ~ 160MHz:	10% Vdd maximum
160+ ~ 180MHz:	20% Vdd maximum
Output High Voltage:	
0.75 ~ 160MHz:	90% Vdd minimum
160+ ~ 180MHz:	80% Vdd minimum

Typical applications

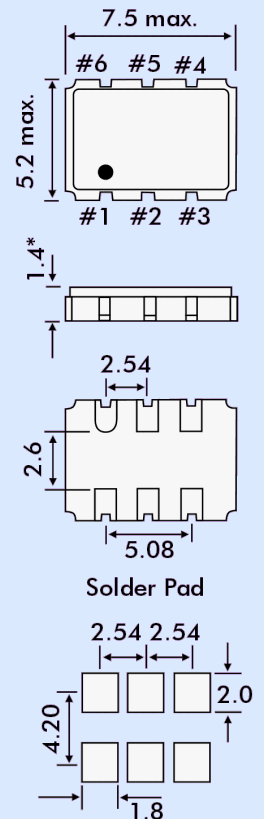
- Any application requiring an oscillator.
- SONET
- Ethernet
- Storage Area Networks
- Broadband Access
- Microprocessors/DSP/FPGA
- Industrial Controllers
- Test and measurement
- Fibre Channel

Output Symmetry:	45/55%
Output Enable Voltage:	$>70\%$ Vdd max.
Output Disable Voltage:	$<30\%$ Vdd max.
Rise/Fall Times:	3.5ns maximum

Supply Format

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

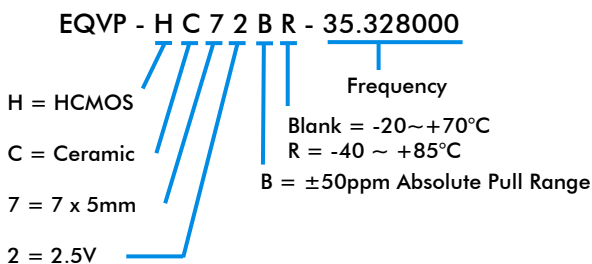
OUTLINE & DIMENSIONS



Pad Connections

- 1 Voltage Control
- 2 Enable/Disable
- 3 Ground
- 4 Output
- 5 Not connected
- 6 Vdd

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	2.1	3.1	1.3	8.4	27.6
106.25	1.2	3.5	1.4	8.3	27.7
125.0	1.1	2.7	1.3	6.7	25.6
156.25	0.8	3.7	1.4	9.7	29.5