

SCV101 Series

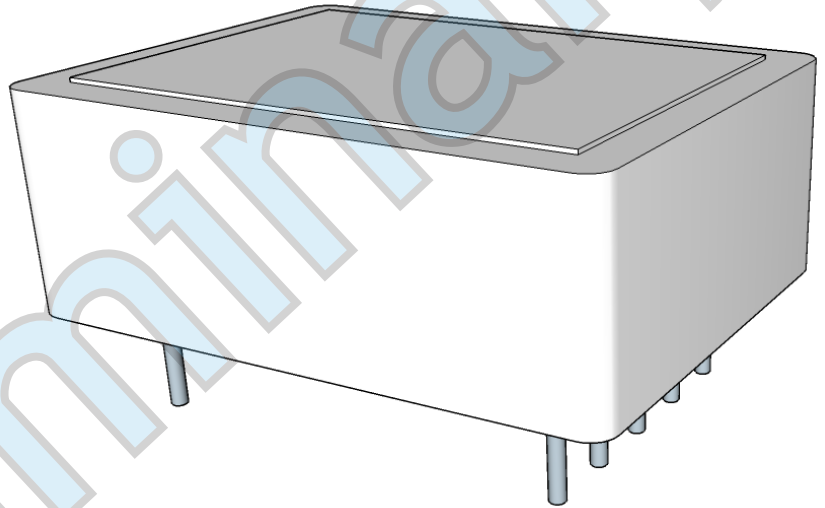
Software-Compensated LVCMOS VCXO

Key Features

- Wide-pull VCXO with precision TCXO performance
- Unmatched wide temperature range and stability
- Ultra-low phase noise
- Temperature stability as low as ± 0.1 ppm

Common Applications

- Test instrumentation
- LTE, SONET
- Picocell
- Military weapon/communication systems



Functional Description

Esterline Research and Design's new oscillator class, the SCV-series VCXOs, combines our patent-pending M-SAC technology with state-of-the-art oscillator designs and high-quality resonators, allowing system designers to leverage unprecedented combinations of pullability, stability, and phase noise performance.

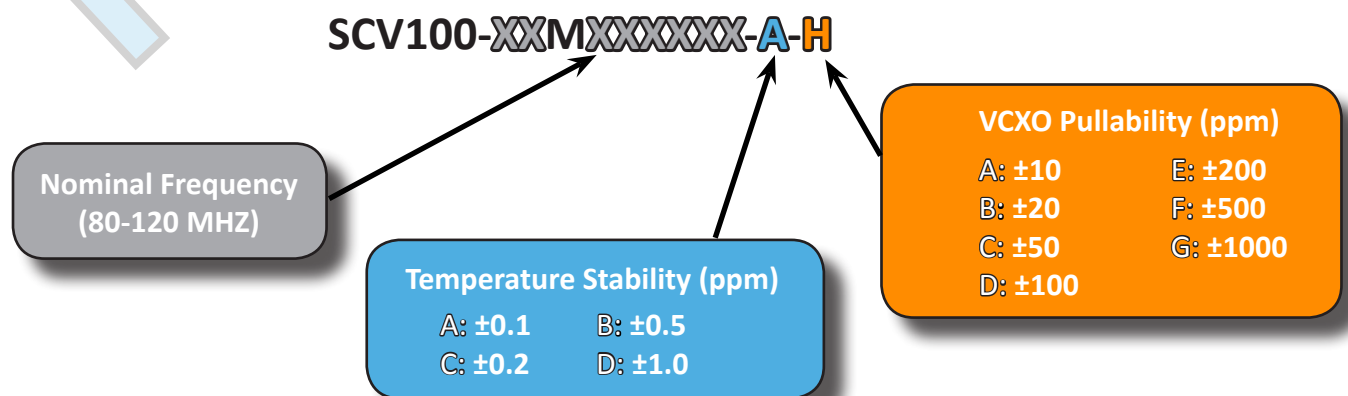
This series is compensated for trim effect to ensure that temperature stability performance is maintained as the frequency is adjusted by the user to correct for aging (drift over time). Stability degradation resulting from frequency adjustment is virtually ignored by other manufacturers and our compensation ensures that ppb-level stability is maintained even for pullability in excess of ± 1000 ppm!

The 36 mm X 27 mm CO8, or "EURO" package makes the SCV-series VCXO an ideal choice for both new designs as well as upgrade opportunities.

Standard Specifications:

Parameter	Minimum	Typical	Maximum	Units	Notes
Frequency Range	80		120	MHz	
Operational Temperature Range	-45		+90	°C	
Frequency vs. Temperature	±0.1			ppm	See ordering information for options.
Frequency vs. Supply			±0.3	ppm	
Hysteresis			TBD	ppm	10 °C/hour
Aging			±2.0	ppb/day	
			±1.0	ppb/1 st year	
			±0.5	ppm/2 nd year	
Supply Voltage (Vcc)	3.135	3.3	3.465	Volts	
Input Current		60	80	mA	
Load Impedence	15 pF 10K-Ohm				
Duty Cycle	45	50	55	%	
Output Levels	0.9 * V _{cc}		0.1 * V _{cc}	V	
Voltage Control Characteristics					See ordering information for options.
Voltage Range (EFC)	0.0		3.3	Volts	
Pullability	±10		±1000	ppm	
Input Z	47K			Ohms	
Mod Bandwith	20			KHz	
Phase Noise Characteristics					Performance at 26 MHz
10 Hz Offset		-87	-82	dBc/Hz	
100 Hz Offset		-117	-112	dBc/Hz	
1 KHz Offset		-144	-139	dBc/Hz	
10 KHz Offset		-170	-165	dBc/Hz	
100 KHz Offset		-173	-168	dBc/Hz	

Ordering Information:



Outline Drawing:

