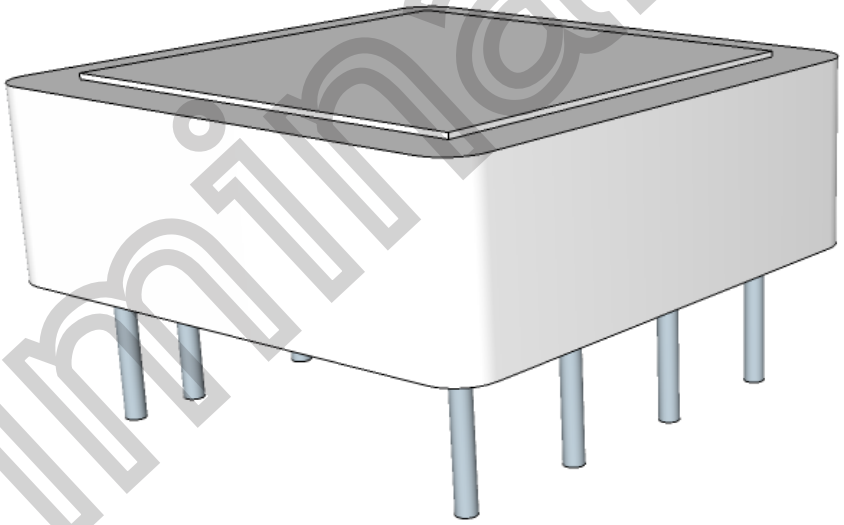
SCT101 Series

Software-Compensated LVCMOS-Output TCXO

Preliminary

Key Features

- OCXO performance without the negative warm-up and input power characteristics of an OCXO
- Compensated for trim effect
- Temperature stability as low as ±0.02 ppm



Common Applications

- Test Instrumentation
- Low-power communication systems
- GPS applications
- OCXO replacement

Functional Description

The SCT-series TCXO combines Esterline Research and Design's new patent-pending M-SAC compensation technology with state-of-the-art oscillator designs to produce TCXOs that outperform many OCXO designs for stability, warm-up time, and input power. The new SCT-series TCXO offers temperature performance unmatched by any other TCXO on the market today and is offered in a small footprint, one-square-inch hermetic package.

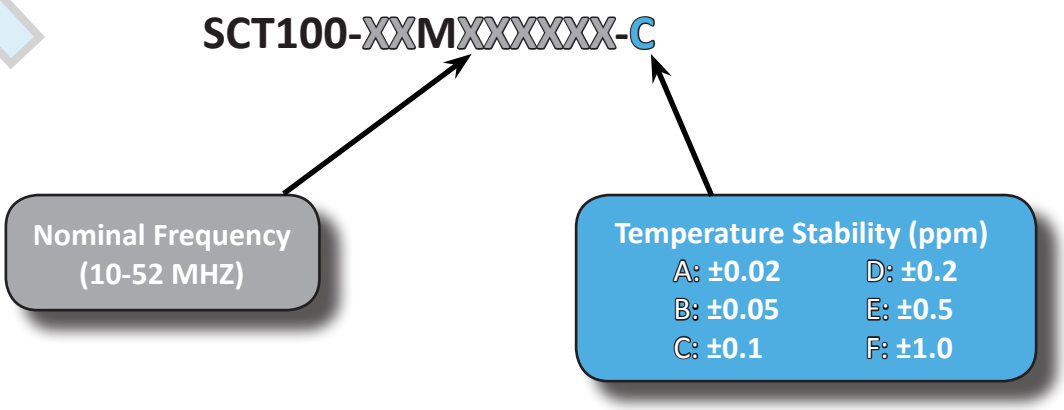
This product is compensated for trim effect to ensure the temperature stability performance is maintained as the frequency is adjusted by the user to correct for aging (drift over time). Stability degradation resulting from frequency adjustment is virtually ignored by most manufacturers, and the M-SAC compensation ensures the low-ppb temperature stability achieved by SCT-series TCXOs is maintained at frequency adjustment extremes.

Standard Specifications:

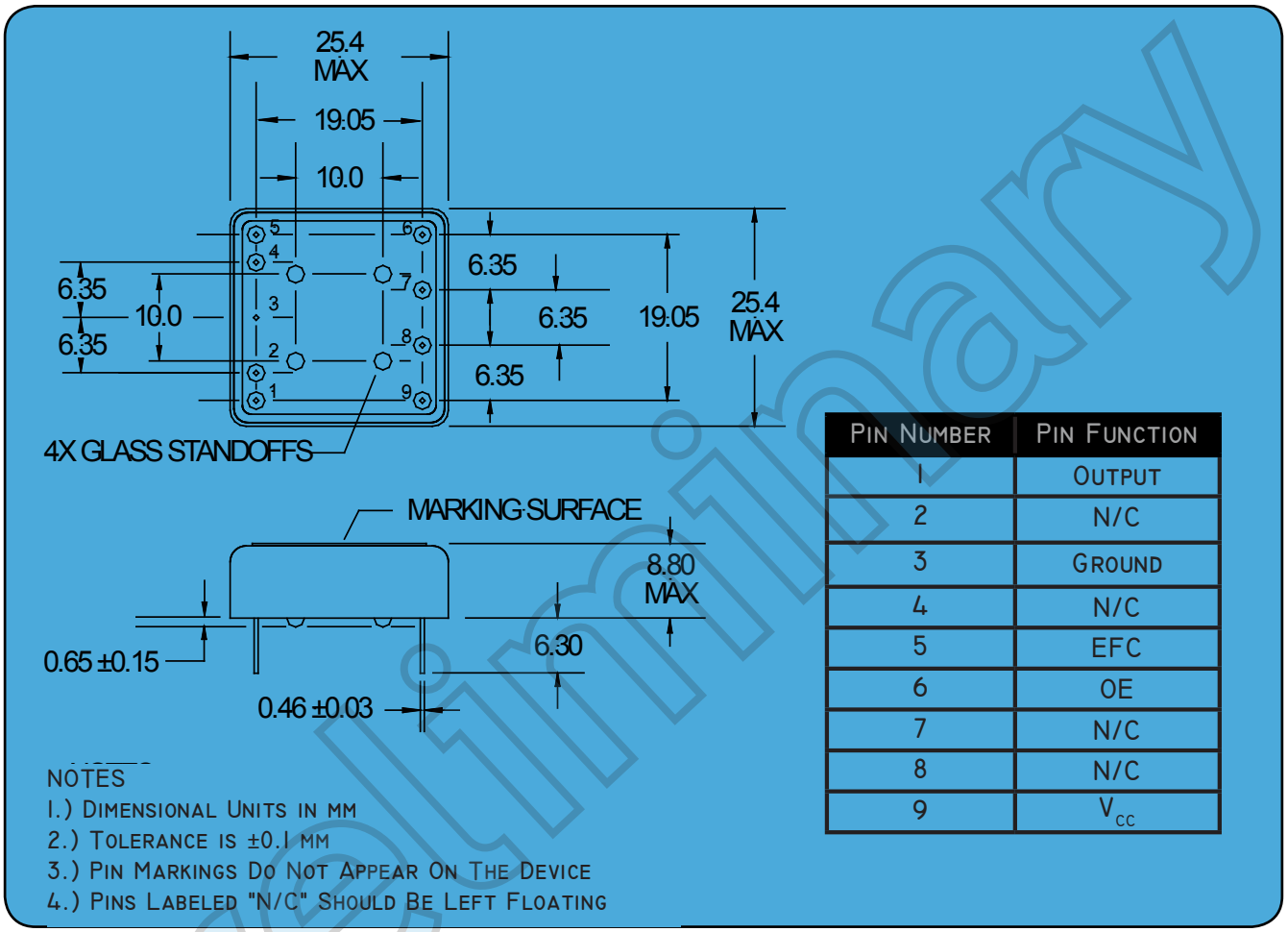
Parameter	Minimum	Typical	Maximum	Units	Notes
Frequency Range	10		52	MHz	
Operational Temperature Range	-45		+90	°C	
Frequency vs. Temperature	±20			ppb	See ordering info for other options.
Frequency vs. Supply			±10	ppb	
Hysteresis			20	ppb	10 °C/hour
Aging			±2.0	ppb/day	
			±1.0	ppb/1st year	
			±0.5	ppm/2nd year	
Supply Voltage (Vcc)	3.135	3.3	5.5	Volts	
Input Current			25	mA	
Load Impedence	10pF || 10K-Ohm				
Duty Cycle	45	50	55	%	
Startup Time			1.5	ms	To provide an output signal
			1000	ms	To achieve temperature stability
Output Levels					
Logic '0'			0.3	V	
Logic '1'	2.97		3.46	V	
Voltage Control Characteristics					
Voltage Range (EFC)	0.0		3.3	Volts	
Pullability	±8			ppm	
Input Z	47K			Ohms	
Harmonics			-5	dBc	
Phase Noise Characteristics					
1 KHz Offset		-136		dBc/Hz	Performance at 26 MHz

Preliminary

Ordering Information:



Outline Drawing:



PIN NUMBER	PIN FUNCTION
1	OUTPUT
2	N/C
3	GROUND
4	N/C
5	EFC
6	OE
7	N/C
8	N/C
9	V_{CC}

Preliminary