

FEATURES	APPLICATIONS
<ul style="list-style-type: none"> - ±10ppb (Frequency Stability) Available - Sinewave - OCXO - RoHS Compliant 	<ul style="list-style-type: none"> - Military Communication equipment - Base Stations - Test Equipment - Synthesizers - Digital Switching



PART NUMBERING GUIDE

SUNTSU OCXO → **SOC 38 S 12 K 27 - 10.000M** ← **FREQUENCY (MHz)**

38.1mm x 38.1mm

SINEWAVE

SUPPLY VOLTAGE
 05: 5.0V±5%
 09: 9.0V±5%
 12: 12.0V±5%
 15: 15.0V±5%

OPERATING TEMPERATURE RANGE
 05: 0°C to + 50°C
 15: -10°C to + 55°C
 27: -20°C to + 70°C
 37: -30°C to + 70°C

FREQUENCY STABILITY
 F: ±500ppb
 I: ±200ppb
 J: ±100ppb
 K: ±50ppb
 L: ±20ppb
 M: ±10ppb

Cage Code: 4GUT4
 To customize your parameters contact a Suntsu representative.

ELECTRICAL PARAMETERS	UNITS	MIN.	TYP.	MAX.	REMARKS	
Frequency Range	MHz	5		100		
Frequency Tolerance at +25°C		-100		100		
Frequency Stability vs. Operating Temperature (Ref. 25°C)		-10		10	See part numbering guide for options.	
vs. Supply Voltage	ppb	-2		2	V _{DD} ±5% change.	
vs. Load		-2		2	±10% change.	
vs. Aging/Year		-50		50	For year.	
Operating Temperature	°C	-30		+70	See part numbering guide for options.	
Storage Temperature		-45		+85		
Supply Voltage (V _{DD})	V	V _{DD} -5%	V _{DD}	V _{DD} +5%	See part numbering guide for options.	
Power Consumption at Turn On	W			4.5		
Power Consumption at 25°C (Steady State)				1.8		
Control Voltage (V _C)	V	0.0		5.0		
Control Middle Voltage			2.5			
Pullability	ppm	±0.7				
Linearity	%			10		
V _C Input Impedance	kΩ	50				
Deviation Slope			Positive			
Output Logic (Sinewave)	Load	Ω		50		
	Waveform	dBm	7			
	Spurious (Harmonic)	dBc			-30	
	Spurious (Non-Harmonic)				-70	
Reference Voltage Output (V _{ref})	V			5		
Symmetry (Duty Cycle)	%	45	50	55		
Start-Up Time	ms			3		
Warm-Up Time	ppb	-10		10	At 25°C after 20 min.	

OUTLINE DRAWING

NOTE: Dimensions in millimeters (mm).

PIN	FUNCTION
1	V _{DD}
2	REFERENCE VOLTAGE OUTPUT
3	VOLTAGE CONTROL
4	OUTPUT
5	GROUND

TEST CIRCUIT (SINEWAVE)	WAVEFORM (SINEWAVE)
	<p>Sinewave Output, +7dBm mim. Into 50Ω</p>

TYPICAL PHASE NOISE AND JITTER PERFORMANCE (MEASURED BY AGILENT E5052A)	
<p>Frequency 40.000MHz</p>	<p>Frequency 40.000MHz</p>

ENVIRONMENTAL & MECHANICAL SPECIFICATIONS		MARKING
Temperature Cycling	MIL-STD-883, Method 1010, Condition B	<p>Frequency in MHz</p> <p>↓</p> <p>Line 1: $\overline{X X . X X X}$</p> <p>Line 2: $\overline{S F Y W W}$</p> <p>Suntsu Manufacturing Identifier Week Year</p>
Lead Integrity	MIL-STD-883, Method 2004	
Gross Leak Test	MIL-STD-883, Method 1014, Condition C	
Mechanical Shock	MIL-STD-202, Method 213, Condition C	
Vibration	MIL-STD-883, Method 2007, Condition A	
Resistance to Soldering Heat	MIL-STD-202, Method 210	
Resistance to Solvents	MIL-STD-202, Method 215	
Solderability	MIL-STD-883, Method 2003	