SOC50C SERIES

50.0mm x 50.0mm DIP OCXO

FEATURES	APPLICATIONS
- ±5.0ppb (Frequency Stability) Available - HCMOS/TTL - OCXO - RoHS Compliant - AT-Cut or SC-Cut	- Military Communication equipment - Base Stations - Test Equipment - Synthesizers - Digital Switching

PART NUMBERING GUIDE

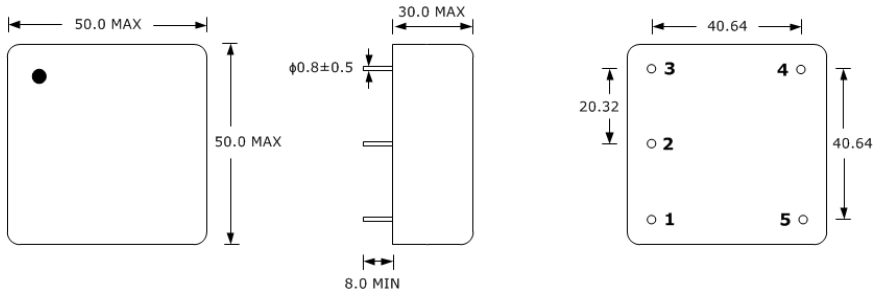
SOC 50 C 12 K 47 A – 10.000M

- **SUNTSU OCXO**
- **50.0mm x 50.0mm**
- **HCMOS**
- **SUPPLY VOLTAGE**
  - 05: 5.0V±5%
  - 09: 9.0V±5%
  - 12: 12.0V±5%
- **FREQUENCY (MHz)**
- **TYPE OF CRYSTAL**
  - A: AT-Cut
  - S: SC-Cut
- **OPERATING TEMPERATURE RANGE**
  - 05: 0°C to + 50°C
  - 15: -10°C to + 55°C
  - 26: -20°C to + 60°C
  - 37: -30°C to + 70°C
  - 47: -40°C to + 70°C
- **FREQUENCY STABILITY**
  - I: ±200ppb
  - J: ±100ppb
  - K: ±50ppb
  - L: ±20ppb
  - M: ±10ppb
  - N: ±7.5ppb
  - O: ±5.0ppb

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 +25ºC		ppb	-100		100	
Frequency Stability vs. Operating Temperature (Ref. 25°C)			-10		10	See part numbering guide for options.
vs. Supply Voltage			-5		5	V_{DD}±5% change.
vs. Load			-5		5	±10% change.
vs. Aging			±50		±300	AT-Cut: ±300/year, BT-Cut: ±50/year.
Operating Temperature		ºC	-40		+70	See part numbering guide for options.
Storage Temperature			-50		+90	
Supply Voltage (V_{DD})	5.0V Option	V	4.750	5.0	5.250	
	9.0V Option		8.550	9.0	9.450	
	12.0V Option		11.40	12.0	12.60	
Power Consumption at Turn On		W			6.0	
Power Consumption at 25°C (Steady State)					2.0	
Control Voltage (V_C)		V	0.0		5.0	
Control Middle Voltage				2.5		
Pullability		ppm	±2.0			AT-Cut.
			±0.5			SC-Cut.
Linearity		%			10	
V_C Input Impedance		kΩ	20			
Deviation Slope				Positive		
Output Load (HCMOS)		pF			15	
Output Logic Levels	Output Logic High (V_{OH})	V	0.9*V_{DD}			
	Output Logic Low (V_{OL})				0.1*V_{DD}	
Reference Voltage Output (Vref)		V			5	
Symmetry (Duty Cycle)		%	40	50	60	
Warm-Up Time		ppb	-50		50	At 25°C after 5 min.

OUTLINE DRAWING



PIN	FUNCTION
1	VOLTAGE CONTROL
2	V_{REF} OUTPUT
3	OUTPUT
4	GROUND
5	V_{DD}

NOTE: Dimensions in millimeters (mm).

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
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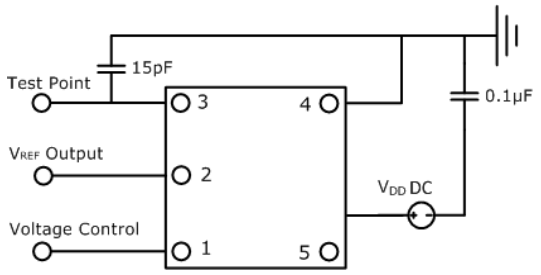
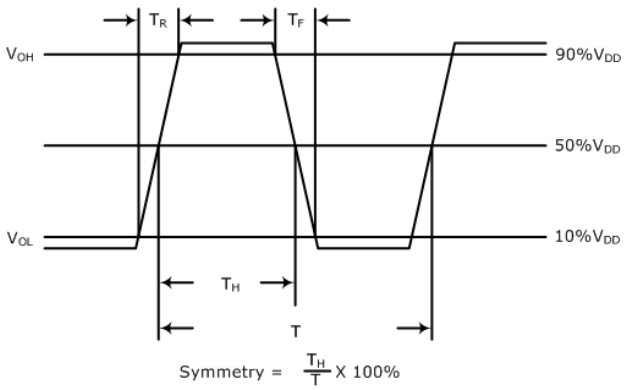
TEST CIRCUIT (HCMOS)

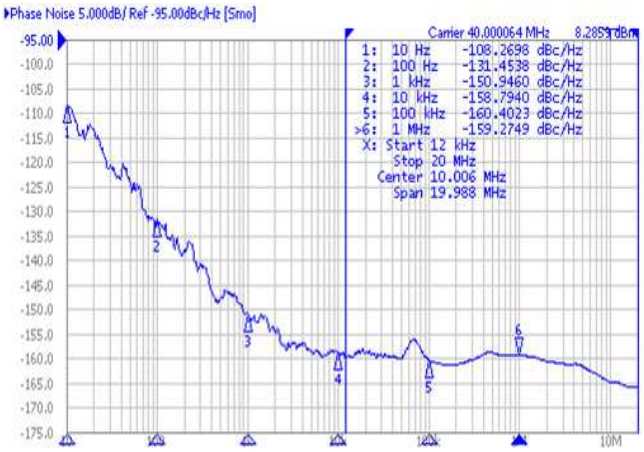


WAVEFORM (HCMOS)

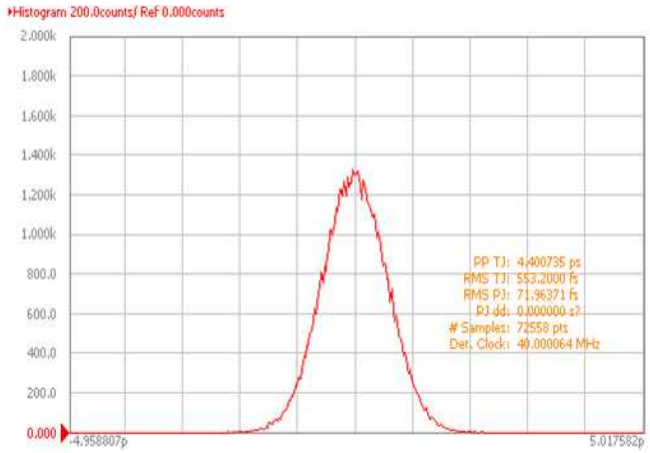


TYPICAL PHASE NOISE AND JITTER PERFORMANCE (MEASURED BY AGILENT E5052A)

Frequency 40.000MHz



Frequency 40.000MHz



ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

Temperature Cycling	MIL-STD-883, Method 1010, Condition B
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

MARKING