

SXO-8000K SERIES (+3.3V FIXED MODELS) 14.3x9.4 mm

STANDARD SMD OCXO

XTAL

CLK OSC

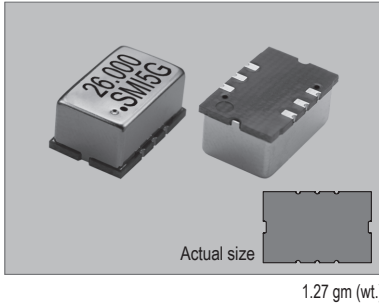
VCXO

TCXO

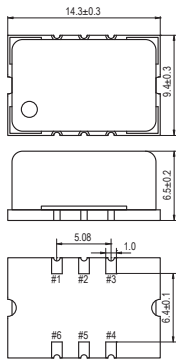
OCXO

MCF

SXO-8000K



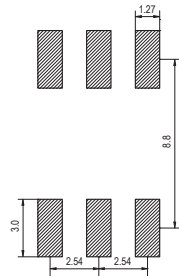
SXO-8000K



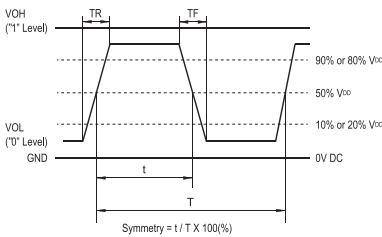
Pin	Connection	Pin	Connection
1	Vcon	4	Output
2	NC*	5	NC*
3	GND	6	V _{DD}

(* #2 & #5 : Pulled up internally and connected to #6 / +V DC. Connect #2, #5 & #6 to outer NC's.

SOLDERING PATTERN



OUTPUT WAVEFORM



STANDARD SPECIFICATIONS

● CMOS OUTPUT
● PACKAGE SIZE 14.3x9.4 mm

Item	Specifications	
General part number	SXO-8000K ^(*)	
Frequency range	5.000 MHz to 40.000 MHz	
Initial frequency tolerance at +25°C ±2°C	±0.5 ppm max. (V _{DD} = +3.3V, V _{con} = +1.65V, CL = 15 pF & 1 hour after warm-up time)	
Frequency Stability	Temperature range AA2 / iii : ±10 ppb max. over -20°C to +70°C (referred to +25°C) BB2 / iii : ±20 ppb max. over -20°C to +70°C (referred to +25°C) CC2 / iii : ±30 ppb max. over -20°C to +70°C (referred to +25°C) EE2 / iii : ±50 ppb max. over -20°C to +70°C (referred to +25°C) BB2 / mll : ±20 ppb max. over -40°C to +85°C (referred to +25°C) CC2 / mll : ±30 ppb max. over -40°C to +85°C (referred to +25°C) EE2 / mll : ±50 ppb max. over -40°C to +85°C (referred to +25°C)	
Input voltage change	±10 ppb max. at V _{DD} = +3.3V ±5% DC	
Output load change	±10 ppb max. at CL = 15 pF ±10%	
Aging (after 30 days) at +25°C ±2°C	±5 ppb max. per day ±500 ppb max. per year	
Operating Conditions	Operating temperature	-20°C to +70°C (Standard) -40°C to +85°C (W = Option)
	Supply voltage (V _{DD})	+3.3V DC ±5%
	Control voltage (V _{con})	+1.65V DC ±1.65V
Absolute Max. Ratings	Supply voltage	-0.6V to +4.0V DC
	Control voltage	-0.6V to V _{DD} +0.6V DC
	Storage temperature	-55°C to +85°C
Input current (max.)	600 mA (during warm-up) 200 mA (steady state at +25°C)	
Output (-40°C to +85°C)	Symmetry	45% to 55% at 1/2 V _{DD} level
	Rise and fall times	4 ns max. (10% V _{DD} to 90% V _{DD} level)
	"0" Level	V _{OL} : 10% V _{DD} max.
	"1" Level	V _{OH} : 90% V _{DD} min.
Load	15 pF max. (CMOS)	
Frequency Adjustment	Voltage control (+0.2V to +2.8V)	±5 ppm min.
Frequency slope		Positive
Linearity		5% max.
SSB phase noise (at 19.200 MHz & +25°C)	10 Hz	-94 dBc / Hz, Typical
	100 Hz	-124 dBc / Hz, Typical
	1 kHz	-145 dBc / Hz, Typical
	10 kHz	-155 dBc / Hz, Typical
Warm-up time	5 minutes to ±20 ppb of final frequency at +25°C	
Vcon input impedance	1 MΩ max.	
Short-term frequency stability	±1 ppb max. (Allan variance Tau = 0.1 sec.)	
Reflow condition	+250°C ±10°C for 10 seconds +170°C ±10°C for 1 to 2 minutes (preheating)	
Standard frequencies (MHz)	10.000, 12.800, 13.000, 16.384, 19.200, 20.000, 25.000, 26.000, 30.720, 38.400, 38.880, 40.000	

(*¹) Final part number to be assigned with package type, frequency stability and frequency.
e.g. SXO-8000K-CC2/iii-13.000MHz

PACKAGE DATA

Item	Package	SXO-8000K
Lid		Metal
Base		PCB
Sealing		Reflow soldering (4 corners)
Terminal		Tungsten (metalized)
Terminal plating		Gold / Nickel (surface) / (under)
RoHS		Compliant (Pb-free)

(*²) Cleaning is not recommended.

TAPE SPECIFICATIONS

