

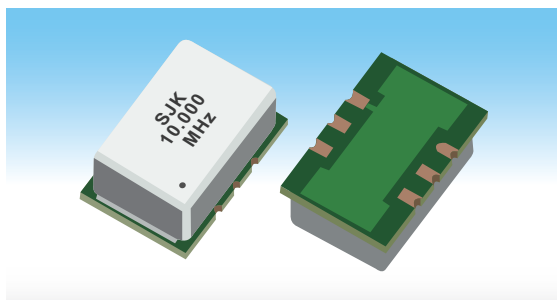
OCXO / oven Controlled Crystal Oscillator

9X Series SMD 14×9 OCXO

10MHz~50MHz

O: CMOS/Sine-Wave

Size: 14.9×9.7×8.2mm



Features

- High Q factory crystal, high reliability
- Small size SMD package OCXO with 14.9×9.7×8.2mm
- Low power consumption, Fast warm-up
- Voltage control (Electronic Frequency Tuning) is standard
- CMOS/Sine-wave output with frequency range: 10MHz~50MHz
- Low aging, high stability, frequency stability best to ± 1.0 ppb
- Application for small base communication, Test & Measurement, Frequency synthesis, Wireless communication, Radar system, etc
- RoHS Compliant /Pb Free



Standard Specifications

Item	Type	9X Series SMD 14×9 OCXO	
Frequency Range		10MHz~50MHz	
Initial Frequency Accuracy		± 50 ppb max.	
Frequency Stability	vs. Supply Voltage	± 0.5 ppb max. ($V_{cc} \pm 5\%$)	
	vs. Load	± 0.5 ppb max. (Load $\pm 5\%$)	
	vs. Aging	± 0.5 ppb max./after 30 days ; ± 50 ppb max./first year	
Short Term Stability@100MHz		≤ 0.1 ppb/s	
Supply Voltage		+3.3V / +5.0V	
Power Consumption		2.5W max. ; 0.6W max. at steady-state.	
Output Level		LVC MOS	Sine-Wave
Output Load		15pF	50 Ω
Harmonics		-40dBc max.	
Spurious		-80dBc max.	
Voltage Control Characteristics		$\geq \pm 1.0$ ppm min.	
		$V_c = 1.65 \pm 1.65V$; $V_c = 2.0 \pm 2.0V$; $V_c = 2.5 \pm 2.5V$;	
		Fixed frequency (without voltage control)	
Storage Temperature		-55~+105°C	
Package Size (mm)		14.9×9.7×8.2	

Note: Final product specifications are subject to official specifications.

Frequency Stability vs Operating Temperature Range

Frequency Stability	Temp. Range	-20~+70°C	-40~+70°C	-40~+85°C	-55~+85°C
$\leq \pm 1.0$ ppb		Δ	Δ	Δ	Δ
$\leq \pm 3.0$ ppb		$\bigcirc$	$\bigcirc$	$\bigcirc$	Δ
$\leq \pm 5.0$ ppb		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
$\leq \pm 10$ ppb		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
$\leq \pm 20$ ppb		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Note: $\bigcirc$: Available; Δ : Contact Us; X: Not available					

Phase Noise @20MHz

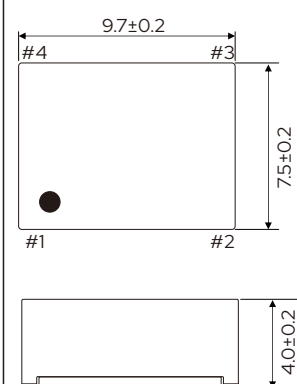
Phase Noise (dBc/Hz)					
1Hz	10Hz	100Hz	1KHz	10KHz	100KHz
-90 max.	-120 max.	-140 max.	-150 max.	-155 max.	-155 max.

OCXO / oven Controlled Crystal Oscillator

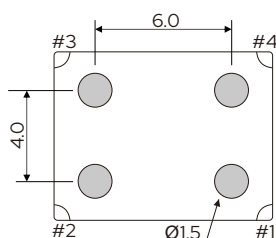
OCXO Package Size And Pin Function

Unit: mm

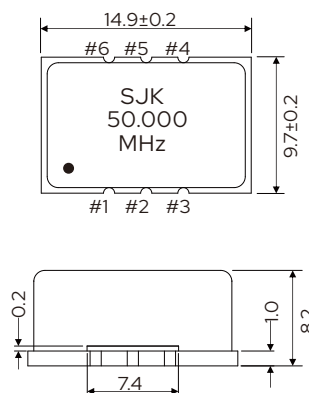
9×7 (SMD)



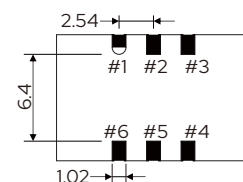
Pin Connections	
Pin No.	Connection
#1	Vcont: EFC NC
#2	GND
#3	Output
#4	Vcc



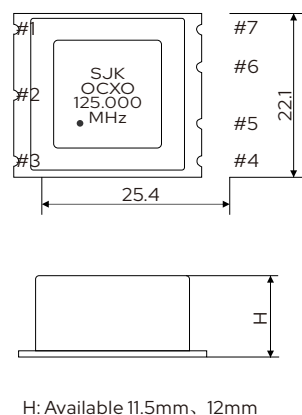
14×9 (SMD)



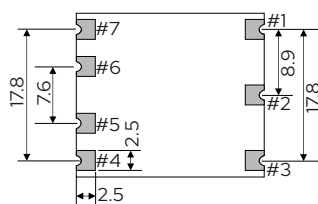
Pin Connections	
Pin No.	Connection
#1	Vcont: EFC GND/NC
#2	NC
#3	GND
#4	Output
#5	NC
#6	Vcc



25×22 (SMD)

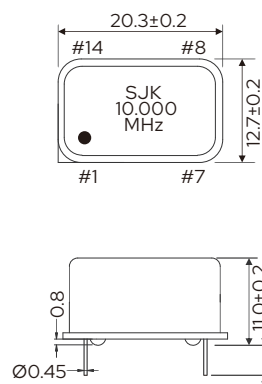


Pin Connections	
Pin No.	Connection
#1	Vcont: EFC NC
#2	Reference Voltage/NC
#3	Vcc
#4	Output
#5	Oven monitor /NC
#6	NC
#7	GND

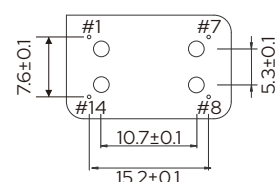


H: Available 11.5mm, 12mm

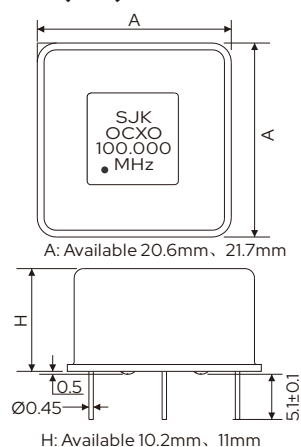
20×14 (DIP14)



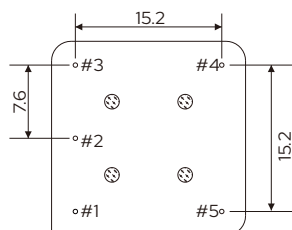
Pin Connections	
Pin No.	Connection
#1	Vcont: EFC GND/NC: OCXO
#7	GND
#8	Output
#14	Vcc



20×20 (DIP)

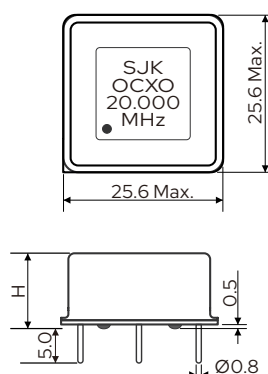


Pin Connections	
Pin No.	Connection
#1	Vcc
#2	Output
#3	GND
#4	Vcont: EFC NC: OCXO
#5	Reference Voltages / NC

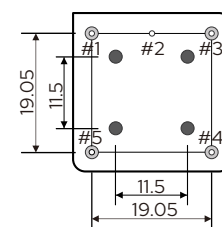


H: Available 10.2mm, 11mm

25×25 (DIP)

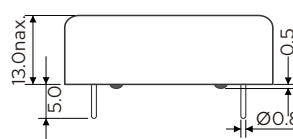
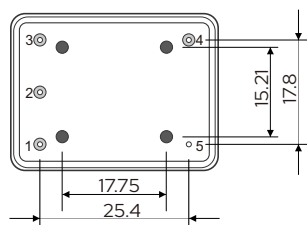
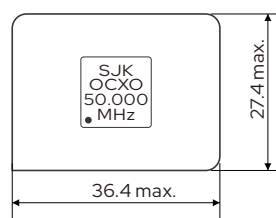


Pin Connections	
Pin No.	Connection
#1	Output
#2	GND
#3	Vcont: EFC / NC: OCXO
#4	Reference Voltages / NC
#5	Vcc



H: Available 10mm, 12.5mm, 13mm

36×27 (DIP)



Pin Connections	
Pin No.	Connection
#1	Vcont: EFC GND/NC
#2	Reference Voltages / NC
#3	Vcc
#4	Output
#5	GND