

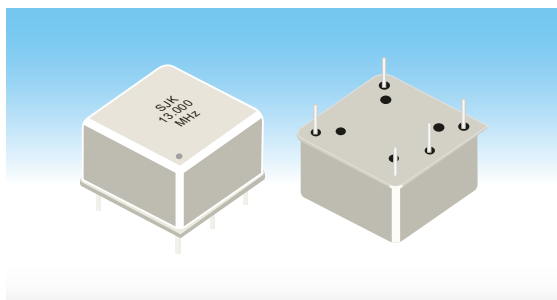
OCXO / oven Controlled Crystal Oscillator

3X Series DIP 2020 OCXO

10MHz~125MHz

O: Sine Wave /CMOS

Size: 20.6×20.6×11.0mm



Features

- High Q factory / Low aging crystal, high reliability
- Thru-hole DIP OCXO with 20.6×20.6×11.0mm
- Voltage control (Electronic Frequency Tuning) is standard
- CMOS/Sine-wave output with frequency range: 10MHz~125MHz
- High stability, frequency stability best to ± 0.5 ppb
- Application for base, Test & Measurement, Broadcasting system, Frequency synthesis, Wireless communication, Radar system, etc
- RoHS Compliant /Pb Free



Standard Specifications

Item	Type	3X Series Thru-hole DIP 20×20 OCXO	
Frequency Range		10MHz~125MHz	
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	± 0.2 ppb max./after 30 days ; ± 20 ppb max./first year	
Short Term Stability@100MHz		≤ 0.01 ppb/s	≤ 0.005 ppb/s
Supply Voltage		+3.3V /+5.0V /12.0V	
Power Consumption		3.5W (max.) ; 1.0W max. (@steady-state.)	
Output Level		LVC MOS	Sine-Wave
Output Load		15pF	50 Ω
Harmonics		-40dBc max.	
Spurious		-80dBc max.	
Voltage Control Characteristics		Analog $\geq \pm 0.5$ 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)		20.6×20.6×10.2(11.0) /21.7×21.7×10.2(11.0)	

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
$\leq \pm 0.5$ ppb		○	○	○	△
$\leq \pm 1.0$ ppb		○	○	○	△
$\leq \pm 3.0$ ppb		○	○	○	○
$\leq \pm 5.0$ ppb		○	○	○	○
$\leq \pm 10$ ppb		○	○	○	○
$\leq \pm 20$ ppb		○	○	○	○

Note: ○: Available; △: Contact Us; X: Not available

G-Sensitivity Indicators

Code	Spec.	ppb/g		
	G1	G2	G3	
10MHz	1	0.5	0.3	

Phase Noise @100MHz

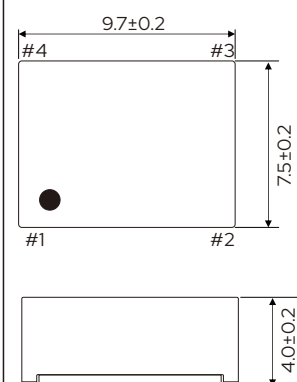
Phase Noise (dBc/Hz)					
1Hz	10Hz	100Hz	1KHz	10KHz	100KHz
-100 max.	-110 max.	-140 max.	-164 max.	-175 max.	-180 max.

OCXO / oven Controlled Crystal Oscillator

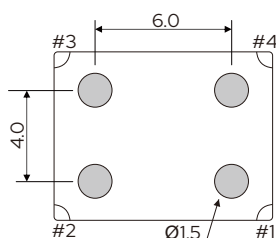
OCXO Package Size And Pin Function

Unit: mm

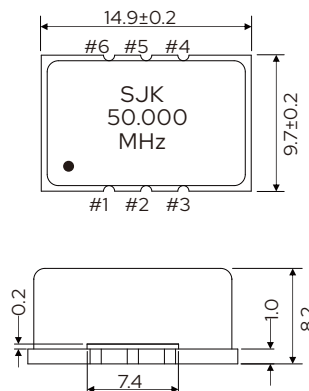
9×7 (SMD)



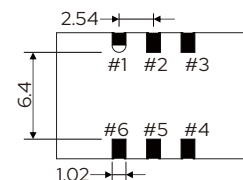
Pin Connections	
Pin No.	Connection
#1	Vcont: EFC NC
#2	GND
#3	Output
#4	Vcc



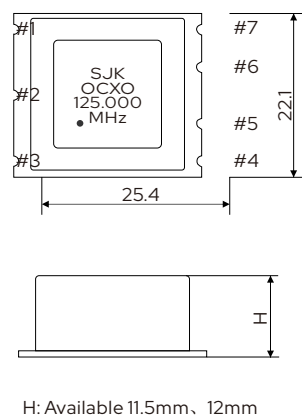
14×9 (SMD)



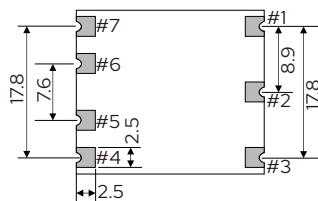
Pin Connections	
Pin No.	Connection
#1	Vcont: EFC GND/NC
#2	NC
#3	GND
#4	Output
#5	NC
#6	Vcc



25×22 (SMD)

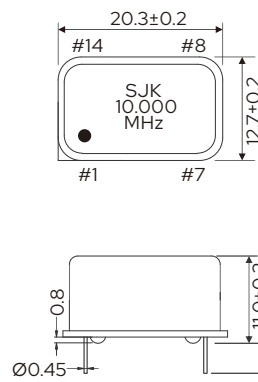


Pin Connections	
Pin No.	Connection
#1	Vcont: EFC NC
#2	Reference Voltage/NC
#3	Vcc
#4	Output
#5	Oven monitor /NC
#6	NC
#7	GND

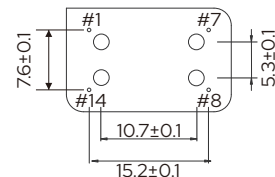


H: Available 11.5mm, 12mm

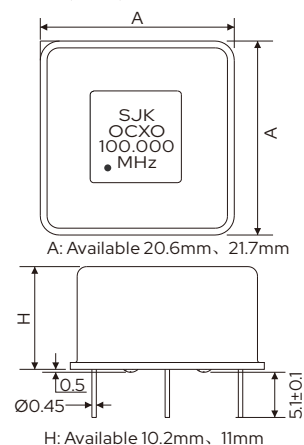
20×14 (DIP14)



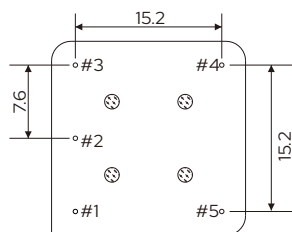
Pin Connections	
Pin No.	Connection
#1	Vcont: EFC GND/NC: OCXO
#7	GND
#8	Output
#14	Vcc



20×20 (DIP)

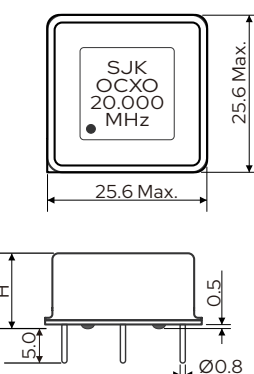


Pin Connections	
Pin No.	Connection
#1	Vcc
#2	Output
#3	GND
#4	Vcont: EFC NC: OCXO
#5	Reference Voltages / NC

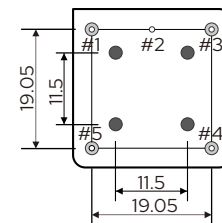


H: Available 10.2mm, 11mm

25×25 (DIP)

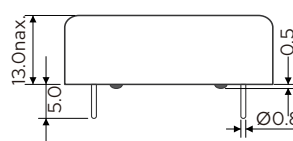
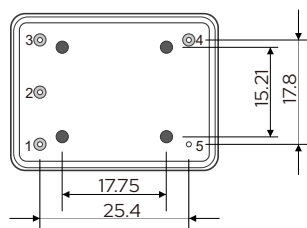
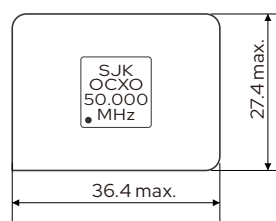


Pin Connections	
Pin No.	Connection
#1	Output
#2	GND
#3	Vcont: EFC / NC: OCXO
#4	Reference Voltages / NC
#5	Vcc



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