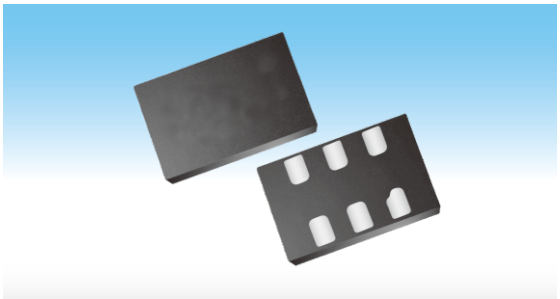
MEMS Oscillator-Low Jitter Differental Output

SJK9121/SJK9122 Low-Jitter MEMS Oscillator 1MHz~625MHz Output: LVPECL/LVDS Package: 3225~7050



Features

- Any frequency from 1MHz~220MHz(SJK9121), 220MHz~625MHz (SJK9122), accurate to 6 decimal places
- 0.6ps RMS phase jitter (random) over 12KHz~20MHz bandwidth
- LV-PECL /LVDS compliant output
- Excellent total frequency stability: ±10ppm
- Application for 10Gb Ethernet, SONET, SATA, SAS, Fibre channel, PCI-Express, Instrumentation, Storage, Server, Telecom, etc
- RoHS Compliant /Pb Free

Standard Specifications

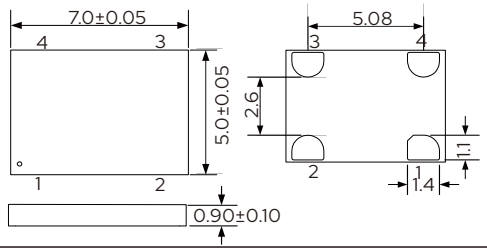
Item \ Type		SJK9121 Low Jitter MEMS Oscillator	SJK9122 Low Jitter MEMS Oscillator
Output Type		LV-PECL / LVDS	
Frequency Range		1MHz~220MHz	220MHz~625MHz
Supply Voltage		2.5V, 3.3V, 2.25V~3.63V	
Frequency Stability (All Condition)		±10ppm, ±20ppm, ±25ppm, ±50ppm	
Aging (@ 25°C)		±2ppm max.(First year); ±5ppm max. (10-year)	
Operating Temperature Range		-20~+70°C, -40~+85°C	
Storage Temperature Range		-65~+150°C	
Input Voltage High (V_{IH})		0.7×Vcc min.	
Input Voltage Low (V_{IL})		0.3×Vcc max.	
Input Pull-up Impedance		50~150KΩ (Pin1 OE or ST logic high)	
		2MΩ min. (Pin1 ST logic low)	
Start-up Time		2.7ns max.	
Resume Time		0.3×Vcc max.	
Duty Cycle		0.7×Vcc min.	
LV-PECL	Current Comsumption	69mA max.	
	OE Disable Supply Current	35mA max.	
	Output Disable Leakage Current	1μA max.	
	Standby Current	100μA max.	
	Maximum Output Current	30mA max.	
	Output High Voltage (V_{OL})	Vcc-1.9V~Vcc-1.5V	
	Output Low Voltage (V_{OH})	Vcc-1.1V~Vcc-0.7V	
	Output Differential Voltage Swing	1.6V Typ. (1.2V~2.0V)	
	Rise /Fall Time	300ps Typ. (700ps max.)	300ps Typ. (500ps max.)
	OE Enable/Disable Time	115ns max.	
	RMS Period Jitter	1.7ps max.	
	RMS Phase Jitter (12KHz~20MHz)	0.6ps Typ. (0.85ps max.)	
LVDS	Current Comsumption	55mA max.	
	OE Disable Supply Current	35mA max.	
	Differential Output Voltage	450mV max.	
	Output Disable Leakage Current	1μA max.	
	Standby Current	100μA max.	
	Delta VOD	50mV max.	
	Offset Voltage	1.2V Typ. (1.125V~1.375)	
	Delta VOS	50mV max.	
	Rise /Fall Time	495ps Typ. (700ps max.)	495ps Typ. (600ps max.)
	OE Enable/Disable Time	115ns max.	
	RMS Period Jitter	1.7ps max.	
	RMS Phase Jitter (12KHz~20MHz)	0.6ps Typ. (0.85ps max.)	
Package Size (L×W×H) (Unit: mm)		3.2×2.5×0.8, 5.0×3.2×0.8, 7.0×5.0×1.0	
Footprint Package		6-Pin Package	

MEMS Oscillator-Dimensions

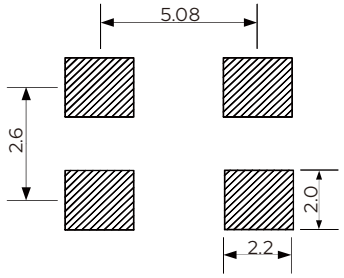
MEMS Oscillator Dimensions

Package Size - Dimensions (Unit:mm)	Recommended Land Pattern (Unit: mm)

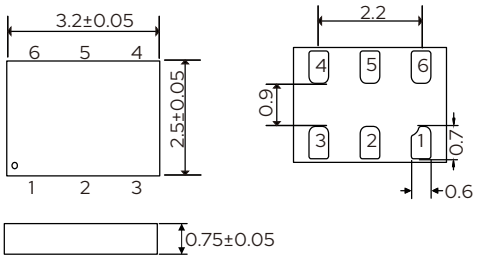
SJK8008 SJK8009 SJK8208 SJK8209 SJK8918 SJK8919 For 7.0×5.0



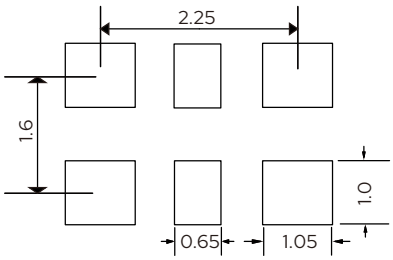
Pin No.	Function
1	OE/ST/NC
2	GND
3	Output
4	Vcc



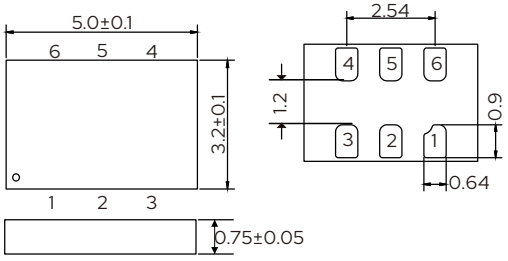
SJK9121 SJK9122 For 3.2×2.5



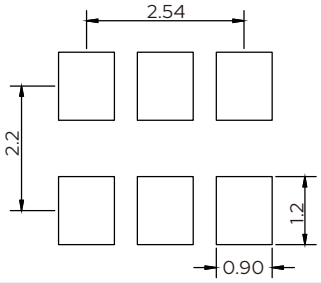
Pin No.	Function
1	OE/ST/NC
2	NC
3	GND
4	Output+
5	Output-
6	Vcc



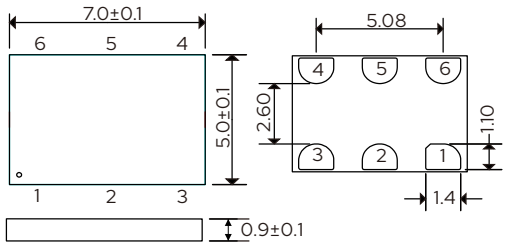
SJK9121 SJK9122 For 5.0×3.2



Pin No.	Function
1	OE/ST/NC
2	NC
3	GND
4	Output+
5	Output-
6	Vcc



SJK9121 SJK9122 For 7.0×5.0



Pin No.	Function
1	OE/ST/NC
2	NC
3	GND
4	Output+
5	Output-
6	Vcc