



# Clock Oscillators Surface Mount Type

## KC7050P-L2/ KC7050P-L3 Series



LVDS/ 3.3V or 2.5V/ 7.0×5.0mm



RoHS Compliant

### Features

- Miniature ceramic package
- Highly reliable with seam welding
- LVDS output
- Supply voltage  $V_{CC} = 3.3V, 2.5V$
- $\pm 25 \times 10^{-6}$  available
- Low Phase Noise

### Table 1

Freq. Tol. Code	Tolerance $\times 10^{-6}$	Operating Temperature Range (°C)	Note
0	$\pm 50$	0 to +70	Standard specifications
S	$\pm 30$		
U	$\pm 25$	-40 to +85	Please contact us for available frequencies.
F	$\pm 100$		
G	$\pm 50$		
6	$\pm 50$	-40 to +105	

### How to Order

KC7050P 125.000 L □ □ J 00  
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Series
- ② Output Frequency
- ③ Output Type (LVDS)
- ④ Supply Voltage (3 : 3.3V or 2 : 2.5V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ INH Function  
J : 45/ 55%, Stand-by
- ⑦ Individual Specification (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

### Specifications

Item	Symbol	Conditions	Specifications		Units
			KC7050P-L2	KC7050P-L3	
Output Frequency Range <sup>Note1</sup>	$f_o$		25 to 175		MHz
Frequency Tolerance	$f_{tol}$	Initial tolerance, Operating temperature range, Rated power supply voltage change, Load change, Aging (1 year @25°C), Shock and vibration	$\pm 50/ -40$ to $+105^\circ\text{C}$		ppm
			$\pm 100/ -40$ to $+85^\circ\text{C}$		
			$\pm 50/ -40$ to $+85^\circ\text{C}$		
			$\pm 50/ 0$ to $+70^\circ\text{C}$		
			$\pm 30/ 0$ to $+70^\circ\text{C}$		
Storage Temperature Range	$T_{stg}$	Standard Specifications	-55 to +125		°C
			Extend (Option)		
Operating Temperature Range	$T_{use}$	Standard Specifications	0 to +70/ -40 to +85		°C
		Extend (Option)	-40 to +105		
Max. Supply Voltage	—		-0.5 to +5.0		V
Supply Voltage	$V_{CC}$		+2.375 to +2.625	+2.97 to +3.63	V
Current Consumption	$I_{CC}$		50 max.		mA
Stand-by Current	$I_{std}$		20 max.		$\mu\text{A}$
Symmetry	SYM	100ohm @crossing point	50 $\pm$ 5		%
Rise/ Fall Time (20% $V_{CC}$ to 80% $V_{CC}$ Maximum Loaded)	tr/ tf	100ohm	0.6 max.		ns
Low Level Output Voltage <sup>Note2</sup>	$V_{OL}$		0.9 min. Typ.:1.1		V
High Level Output Voltage <sup>Note2</sup>	$V_{OH}$		1.6 max. Typ.:1.43		V
Differential Output Voltage <sup>Note2</sup>	$V_{OD}$		247 to 454 Typ.:330		mV
Differential Output Voltage Error <sup>Note2</sup>	$dV_{OD}$	$dV_{OD} =  V_{OD1} - V_{OD2} $	50 max.		mV
Offset Voltage	$V_{OS}$		1.125 to 1.375		V
Offset Voltage Error	$dV_{OS}$	$dV_{OS} =  V_{OS1} - V_{OS2} $	50 max.		mV
Output Load	RL	LVDS Output	100		ohm
Input Voltage Range	$V_{IN}$		0 to $V_{CC}$		V
Low Level Input Voltage	$V_{IL}$		30% $V_{CC}$ max.		V
High Level Input Voltage	$V_{IH}$		70% $V_{CC}$ min.		V
Disable Time	$t_{dis}$		200 max.		ns
Enable Time	$t_{ena}$		10 max.		ms
Start-up Time	$t_{str}$	@Minimum operating voltage to be 0 sec.	10 max.		ms
Deterministic Jitter	DJ	Measured with Wavecrest SIA-3000	2 max.		ps
1 Sigma Jitter	$J_{\sigma}$		4 max.		ps
Peak to Peak Jitter	$J_{PK-PK}$		30 max.		ps
Phase Jitter	$J_{Phase}$	@156.25MHz $V_{CC} = 3.3V$	BW : 12kHz to 20MHz	0.3max.	ps

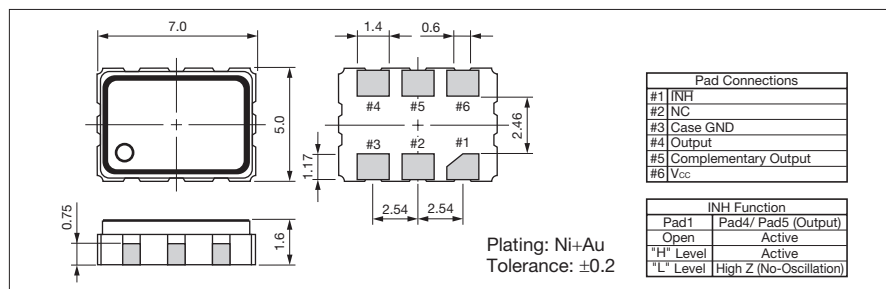
Note : All electrical characteristics are defined at the maximum load and operating temperature range.

Note1: Please contact us for inquiry about operating temperature range, available frequencies and other conditions.

Note2: DC characteristic

### Dimensions

(Unit: mm)



### Recommended Land Pattern

(Unit: mm)

