

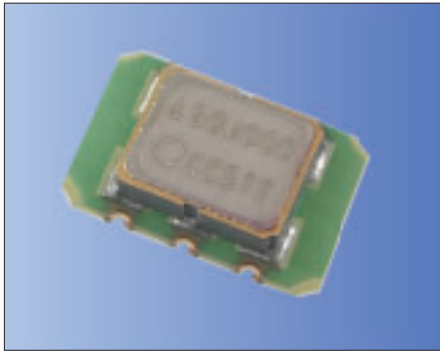


Clock Oscillators Surface Mount Type

KC5032L-L2/ KC5032L-L3 Series



LVDS/ 3.3V or 2.5V/ 5.0×3.2mm



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

How to Order

KC5032L 100.000 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 (45/ 55%, Stand-by) J: Low Phase Noise
- ⑦ Individual Specification (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

Specifications

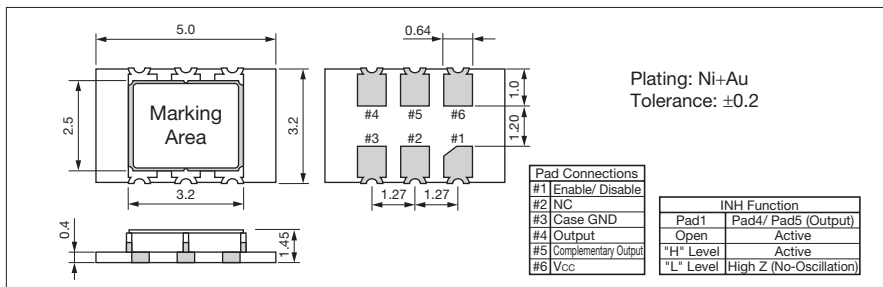
Item	Symbol	Conditions	Specifications		Units
			KC5032L-L2	KC5032L-L3	
Output Frequency Range ^{Note1}	f_o		25 to 170		MHz
Frequency Tolerance	f_{tol}	Initial tolerance, Operating temperature range, Rated power supply voltage change, Load change, Aging (1 year @25°C), Shock and vibration	$\pm 50/ -40$ 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}		-55 to +125		°C
Operating Temperature Range	T_{use}	Standard Specifications	0 to +70/ -40 to +85		°C
		Extend (Option)	-40 to +105		
Max. Supply Voltage	—		-0.3 to +4.0		V
Supply Voltage	V_{CC}		+2.25 to +2.75	+2.97 to +3.63	V
Current Consumption	I_{CC}		50 max.		mA
Stand-by Current	I_{std}		20 max.		µA
Symmetry	SYM	100ohm @crossing point	50±5		%
Rise/ Fall Time (20% V_{CC} to 80% V_{CC} Maximum Loaded)	t_r/ t_f	100ohm	0.4 max.		ns
Low Level Output Voltage ^{Note2}	V_{OL}		0.9 min. Typ.: 1.1		V
High Level Output Voltage ^{Note2}	V_{OH}		1.6 max. Typ.: 1.43		V
Differential Output Voltage ^{Note2}	V_{OD}		247 to 454 Typ.: 330		mV
Differential Output Voltage Error ^{Note2}	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		2 max.		ps
1 Sigma Jitter	J_{σ}	Measured with Wavecrest SIA-3000	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	0.3 max.	ps
Phase Noise	—	@156.25MHz $V_{CC} = 3.3V$	@10Hz offset	Typ. -77	dBc/ Hz
			@100Hz offset	Typ. -103	
			@1kHz offset	Typ. -133	
			@10kHz offset	Typ. -143	
			@100kHz offset	Typ. -149	
			@1MHz offset	Typ. -149	
@10MHz offset	Typ. -154				

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)

