

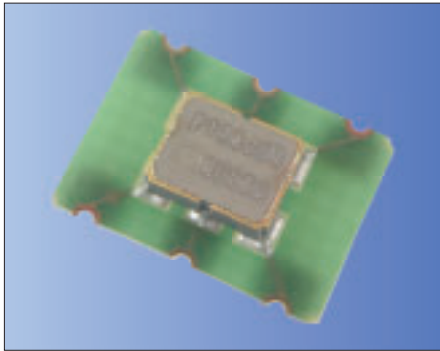


Clock Oscillators Surface Mount Type

KC7050L-H2/ KC7050L-H3 Series



HCSL/ 3.3V or 2.5V/ 7.0×5.0mm



RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- HCSL 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	-40 to +85	Please contact us for available frequencies.
F	± 100		
G	± 50		
6	± 50		

How to Order

KC7050L 100.000 H J 00
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Series
- ② Output Frequency
- ③ Output Type (HCSL)
- 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	
			KC7050L-H2		KC7050L-H3			
			Min.	Max.	Min.	Max.		
Output Frequency Range ^{Note1}	f_o		100	140	100	140	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	-50	+50	-50	+50	$\times 10^{-6}$	
Storage Temperature Range	T_{stg}		-55	+125	-55	+125	°C	
Operating Temperature Range	T_{use}		0	+70	0	+70	°C	
			-40	+85	-40	+85		
			-40	+105	-40	+105		
Max. Supply Voltage	—		-0.3	+4.0	-0.3	+4.0	V	
Supply Voltage	V_{CC}		2.375	2.625	2.97	3.63	V	
Current Consumption	I_{CC}		—	50	—	50	mA	
Stand-by Current	I_{std}		—	20	—	20	μA	
Symmetry	SYM	50ohm @crossing point	45	55	45	55	%	
Rise/ Fall Time 0.175V to 0.525V	t_r / t_f	50ohm	—	0.5	—	0.5	ns	
Low Level Output Voltage ^{Note2}	V_{OL}		-0.15	+0.15	-0.15	+0.15	V	
High Level Output Voltage ^{Note2}	V_{OH}		+0.66	+0.85	+0.66	+0.85	V	
Output Load	RL	HCSL Output	50		50		ohm	
Low Level Input Voltage	V_{IL}		—	30% V_{CC}	—	30% V_{CC}	V	
High Level Input Voltage	V_{IH}		70% V_{CC}	—	70% V_{CC}	—	V	
Disable Time	t_{dis}		—	200	—	200	ns	
Enable Time	t_{ena}		—	10	—	10	ms	
Start-up Time	t_{str}	@Minimum operating voltage to be 0 sec.	—	10	—	10	ms	
Deterministic Jitter	DJ		—	2	—	2	ps	
1sigma Jitter	J_{Sigma}	Measured with Wavecrest SIA-3000	—	4	—	4	ps	
Peak to Peak Jitter	J_{PK-PK}		—	30	—	30	ps	
Phase Jitter	J_{Phase}	@100MHz $V_{CC} = 3.3V$	BW : 12kHz to 20MHz	—	0.5	—	0.5	ps
Phase Noise	—	@100MHz $V_{CC} = 3.3V$	@10Hz offset	Typ. -77		dBc/ Hz		
			@100Hz offset	Typ. -107				
			@1kHz offset	Typ. -130				
			@10kHz offset	Typ. -142				
			@100kHz offset	Typ. -149				
			@1MHz offset	Typ. -150				
			@10MHz offset	Typ. -152				

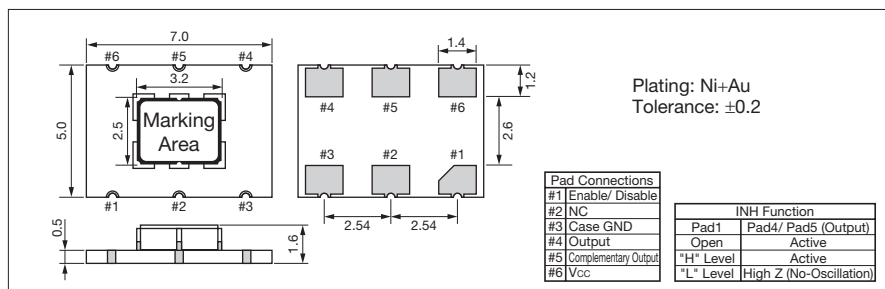
Note : All electrical characteristics are defined at the maximum load and operating temperature range.

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)

