



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 Vcc=3.3V, 2.5V
- ±25×10⁻⁶ available
- Low Phase Noise

Table 1

Freq. Tol. Code	Tol. × 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

KC7050P 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%)
- ⑦ Individual Specification (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

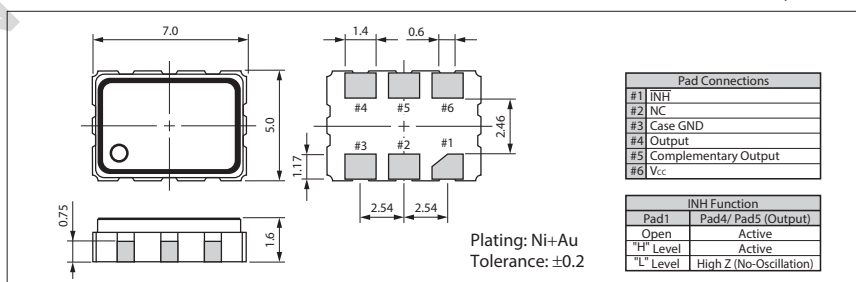
Specifications

Item	Symbol	Conditions	Specifications				Unit
			KC7050P-H2		KC7050P-H3		
			Min.	Max.	Min.	Max.	
Output Frequency Range ^{Note1}	f _o		25	175	25	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	-50	+50	-50	+50	×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	Tr/ Tf	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
1 sigma 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	—	0.5	—	0.5	ps
			BW : 12kHz to 20MHz				
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

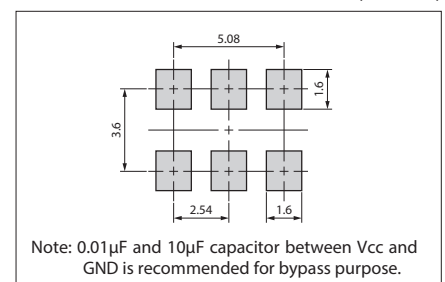
Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)



Clock Oscillators

