



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<sup>-6</sup> available
- Low Phase Noise

**Table 1**

Freq. Code	Tol. × 10 <sup>-6</sup>	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	-40 to +105	
6	± 50		

**How to Order**

**KC7050P** **100.000** **H** **□** **□** **J** **00**  
 ①                      ②                      ③ ④ ⑤ ⑥ ⑦

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

Packaging (Tape & Reel 1000 pcs./ reel)

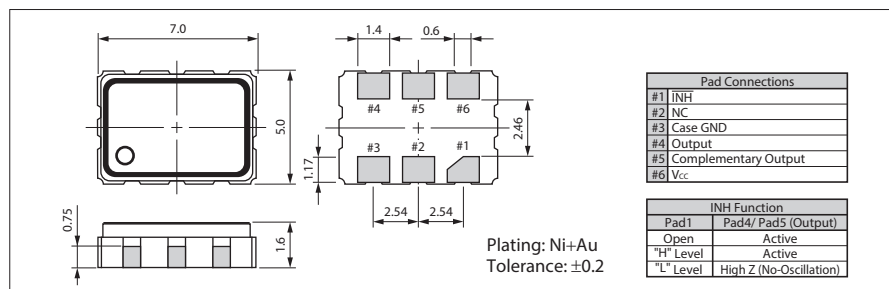
**Specifications**

Item	Symbol	Conditions	Specifications				Unit
			KC7050P-H2		KC7050P-H3		
			Min.	Max.	Min.	Max.	
Output Frequency Range <sup>Note1</sup>	f <sub>o</sub>		25	175	25	175	MHz
Frequency Tolerance	f <sub>tol</sub>	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 <sup>-6</sup>
Storage Temperature Range	T <sub>stg</sub>		-55	+125	-55	+125	°C
Operating Temperature Range	T <sub>use</sub>		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 <sub>cc</sub>		2.375	2.625	2.97	3.63	V
Current Consumption	I <sub>cc</sub>		—	50	—	50	mA
Stand-by Current	I <sub>std</sub>		—	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 <sup>Note2</sup>	V <sub>OL</sub>		-0.15	+0.15	-0.15	+0.15	V
High Level Output Voltage <sup>Note2</sup>	V <sub>OH</sub>		+0.66	+0.85	+0.66	+0.85	V
Output Load	RL	HCSL Output	50		50		ohm
Low Level Input Voltage	V <sub>IL</sub>		—	30% V <sub>cc</sub>	—	30% V <sub>cc</sub>	V
High Level Input Voltage	V <sub>IH</sub>		70% V <sub>cc</sub>	—	70% V <sub>cc</sub>	—	V
Disable Time	t <sub>dis</sub>		—	200	—	200	ns
Enable Time	t <sub>ena</sub>		—	10	—	10	ms
Start-up Time	t <sub>str</sub>	@Minimum operating voltage to be 0 sec.	—	10	—	10	ms
Deterministic Jitter	DJ		—	2	—	2	ps
1 sigma Jitter	J <sub>σ</sub>	Measured with Wavcrest SIA-3000	—	4	—	4	ps
Peak to Peak Jitter	J <sub>PK-PK</sub>		—	30	—	30	ps
Phase Jitter	J <sub>Phase</sub>		@100MHz V <sub>cc</sub> =3.3V	—	0.5	—	0.5
Phase Noise	—	@100MHz V <sub>cc</sub> =3.3V	BW : 12kHz to 20MHz	Typ. -77		dBc/ Hz	
			@10Hz offset	Typ. -107			
			@100Hz offset	Typ. -130			
			@1kHz offset	Typ. -142			
			@10kHz offset	Typ. -149			
			@100kHz offset	Typ. -150			
@1MHz offset	Typ. -152						
@10MHz offset							

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)

