



CMOS/ 2.5V/ 7.0×5.0mm



RoHS Compliant

**Features**

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage Vcc=2.5V  
Lower voltage available
- ±25×10<sup>-6</sup>, ±20×10<sup>-6</sup> available

**How to Order**

KC7050A 25.0000 C 2 □ E 00  
① ② ③ ④ ⑤ ⑥ ⑦

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

Packaging (Tape & Reel 1000 pcs./ reel)

**Table 1**

Stability Code	Stability × 10 <sup>-6</sup>	Operating Temperature Range (°C)	Note
0	± 50	-10 to +70	Standard specifications
S	± 30		
U	± 25		
W	± 20		
F	±100	-40 to +85	Please contact us for available frequencies.
G	± 50		
6	± 50	-40 to +105	

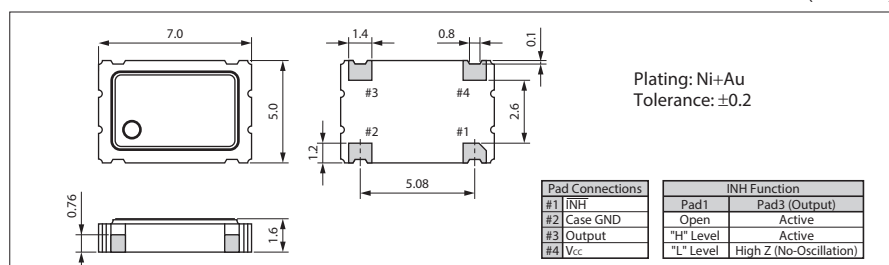
**Specifications**

Item	Symbol	Conditions	Min.	Max.	Unit	
Output Frequency Range	f <sub>o</sub>		1.8	125	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	Temp.: -40 to +85°C	-100	+100	× 10 <sup>-6</sup>
			Temp.: -10 to +70°C/ -40 to +85°C/ -40 to +105°C	-50	+50	
			Temp.: -10 to +70°C	-30	+30	
			Temp.: -10 to +70°C	-25	+25	
Storage Temperature Range	T <sub>stg</sub>		-55	+125	°C	
Operating Temperature Range	T <sub>use</sub>	Standard Specifications	-10	+70	°C	
		Extend (Option)	-40	+85		
Max. Supply Voltage	—		-0.5	+7.0	V	
Supply Voltage	V <sub>cc</sub>	Freq. Tol. Code: 0, S, F	+2.25	+2.75	V	
		Freq. Tol. Code: U, G, 6	+2.38	+2.62		
		Freq. Tol. Code: W	+2.43	+2.57		
Current Consumption (Maximum Loaded)	I <sub>cc</sub>	1.8 ≤ f <sub>o</sub> ≤ 20MHz	—	5	mA	
		20 < f <sub>o</sub> ≤ 40MHz	—	10		
		40 < f <sub>o</sub> ≤ 60MHz	—	15		
		60 < f <sub>o</sub> ≤ 85MHz	—	20		
		85 < f <sub>o</sub> ≤ 100MHz	—	22		
		100 < f <sub>o</sub> ≤ 125MHz	—	27		
Stand-by Current	I <sub>std</sub>		—	10	µA	
Symmetry	SYM	@50% V <sub>cc</sub>	45	55	%	
Rise/ Fall Time (10% V <sub>cc</sub> to 90% V <sub>cc</sub> Maximum Loaded)	Tr/ Tf	1.8 ≤ f <sub>o</sub> ≤ 40MHz	—	7	ns	
		40 < f <sub>o</sub> ≤ 85MHz	—	4		
		85 < f <sub>o</sub> ≤ 125MHz	—	3		
Low Level Output Voltage	V <sub>OL</sub>	I <sub>oL</sub> =4mA/ 8mA (40MHz < f <sub>o</sub> )	—	10% V <sub>cc</sub>	V	
High Level Output Voltage	V <sub>OH</sub>	I <sub>oH</sub> =-4mA/ -8mA (40MHz < f <sub>o</sub> )	90% V <sub>cc</sub>	—	V	
CMOS Load	L <sub>CMOS</sub>	CMOS Output	—	15	pF	
Input Voltage Range	V <sub>IN</sub>		0	V <sub>cc</sub>	V	
Low Level Input Voltage	V <sub>IL</sub>		—	30% V <sub>cc</sub>	V	
High Level Input Voltage	V <sub>IH</sub>		70% V <sub>cc</sub>	—	V	
Disable Time	t <sub>dis</sub>		—	150	ns	
Enable Time	t <sub>ena</sub>		—	5	ms	
Start-up Time	t <sub>str</sub>	@Minimum operating voltage to be 0 sec.	—	10	ms	
1 Sigma Jitter	J <sub>sigma</sub>	Measured with Wavecrest SIA-3000	1.8 ≤ f <sub>o</sub> < 40MHz	—	8	ps
			40 ≤ f <sub>o</sub> ≤ 100MHz	—	5	
			100 < f <sub>o</sub> ≤ 125MHz	—	4	
Peak to Peak Jitter	J <sub>PK-PK</sub>	Measured with Wavecrest SIA-3000	1.8 ≤ f <sub>o</sub> < 40MHz	—	80	ps
			40 ≤ f <sub>o</sub> < 100MHz	—	40	
			100 ≤ f <sub>o</sub> ≤ 125MHz	—	30	

Note: All electrical characteristics are defined at the maximum load and operating temperature range. Please contact us for inquiry about operating temperature range, available frequencies and other conditions.

**Dimensions**

(Unit: mm)



**Recommended Land Pattern**

(Unit: mm)

