



CMOS/ 3.3V/ 7.0×5.0mm



RoHS Compliant

**Features**

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage Vcc=3.3V
- ±25×10<sup>-6</sup>, ±20×10<sup>-6</sup> available

Table 1

Stability Code	× 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	

**How to Order**

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

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

Packaging (Tape & Reel 1000 pcs./ reel)

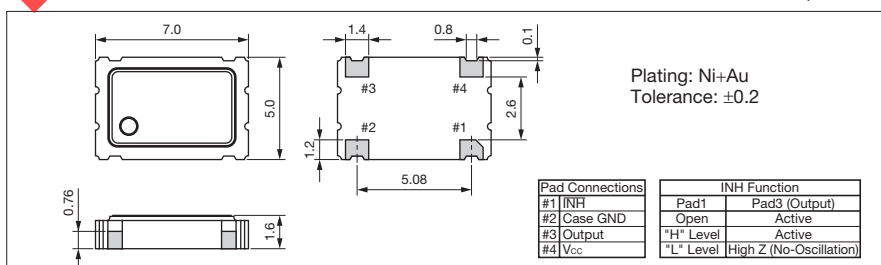
**Specifications**

Item	Symbol	Conditions	Min.	Max.	Unit	
Output Frequency Range	f <sub>o</sub>		1.8	170	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	
			Temp.: -10 to +70°C	-20	+20	
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	—	f <sub>o</sub> < 135MHz	-0.5	+7.0	V	
		f <sub>o</sub> ≥ 135MHz	-0.5	+5.0		
Supply Voltage	V <sub>cc</sub>	Freq. Tol. Code: 0, S, F	+2.97	+3.63	V	
		Freq. Tol. Code: U, G, 6	+3.14	+3.46		
		Freq. Tol. Code: W	+3.20	+3.40		
Current Consumption (Maximum Loaded)	I <sub>cc</sub>	1.8 ≤ f <sub>o</sub> ≤ 20MHz	—	10	mA	
		20 < f <sub>o</sub> ≤ 40MHz	—	15		
		40 < f <sub>o</sub> ≤ 60MHz	—	30		
		60 < f <sub>o</sub> ≤ 100MHz	—	35		
		100 < f <sub>o</sub> ≤ 135MHz	—	45		
		135 < f <sub>o</sub> ≤ 170MHz	—	60		
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> ≤ 26MHz	—	10	ns	
		26 < f <sub>o</sub> ≤ 45MHz	—	8		
		45 < f <sub>o</sub> ≤ 100MHz	—	5		
		100 < f <sub>o</sub> ≤ 170MHz	—	2.5		
Low Level Output Voltage	V <sub>OL</sub>	I <sub>OL</sub> = -8mA	—	10% V <sub>cc</sub>	V	
High Level Output Voltage	V <sub>OH</sub>	I <sub>OH</sub> = -8mA	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 Wavcrest SIA-3000	1.8 ≤ f <sub>o</sub> < 40MHz	—	8	ps
			40 ≤ f <sub>o</sub> ≤ 100MHz	—	5	
			100 < f <sub>o</sub> ≤ 170MHz	—	4	
Peak to Peak Jitter	J <sub>PK-PK</sub>	Measured with Wavcrest SIA-3000	1.8 ≤ f <sub>o</sub> < 40MHz	—	80	ps
			40 ≤ f <sub>o</sub> ≤ 100MHz	—	40	
			100 < f <sub>o</sub> ≤ 170MHz	—	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)

