



CMOS/ 3.3V/ 7.0×5.0mm



RoHS Compliant

### Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage  $V_{CC}=3.3V$
- $\pm 25 \times 10^{-6}$ ,  $\pm 20 \times 10^{-6}$  available

Table 1

Stability Code	$\times 10^{-6}$	Operating Temperature Range (°C)	Note
0	$\pm 50$	-10 to +70	Standard specifications
S	$\pm 30$		
U	$\pm 25$		
W	$\pm 20$		
F	$\pm 100$	-40 to +85	Please contact us for available frequencies.
G	$\pm 50$		
6	$\pm 50$	-40 to +105	

### How to Order

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

- ① Series
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (3.3V)
- 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)

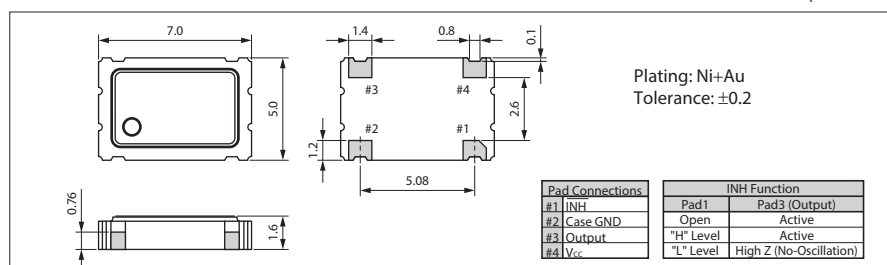
### Specifications

Item	Symbol	Conditions	Min.	Max.	Unit	
Output Frequency Range	$f_o$		1.8	170	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	Temp.: -40 to +85°C	-100	+100	$\times 10^{-6}$
			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	$T_{stg}$	Standard Specifications	-55	+125	°C	
			Extend (Option)	-40		+85
Operating Temperature Range	$T_{use}$		-40	+105	°C	
				-40		+85
Max. Supply Voltage	—	$f_o < 135\text{MHz}$	-0.5	+7.0	V	
		$f_o \geq 135\text{MHz}$	-0.5	+5.0		
Supply Voltage	$V_{CC}$	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)	$I_{CC}$	$1.8 \leq f_o \leq 20\text{MHz}$	—	10	mA	
		$20 < f_o \leq 40\text{MHz}$	—	15		
		$40 < f_o \leq 60\text{MHz}$	—	30		
		$60 < f_o \leq 100\text{MHz}$	—	35		
		$100 < f_o \leq 135\text{MHz}$	—	45		
Stand-by Current	$I_{std}$		—	10	$\mu\text{A}$	
Symmetry	SYM	@50% $V_{CC}$	45	55	%	
Rise/ Fall Time (10% $V_{CC}$ to 90% $V_{CC}$ Maximum Loaded)	$T_r / T_f$	$1.8 \leq f_o \leq 26\text{MHz}$	—	10	ns	
		$26 < f_o \leq 45\text{MHz}$	—	8		
		$45 < f_o \leq 100\text{MHz}$	—	5		
		$100 < f_o \leq 170\text{MHz}$	—	2.5		
Low Level Output Voltage	$V_{OL}$	$I_{OL} = 8\text{mA}$	—	10% $V_{CC}$	V	
High Level Output Voltage	$V_{OH}$	$I_{OH} = -8\text{mA}$	90% $V_{CC}$	—	V	
CMOS Load	$L_{CMOS}$	CMOS Output	—	15	pF	
Input Voltage Range	$V_{IN}$		0	$V_{CC}$	V	
Low Level Input Voltage	$V_{IL}$		—	30% $V_{CC}$	V	
High Level Input Voltage	$V_{IH}$		70% $V_{CC}$	—	V	
Disable Time	$t_{dis}$		—	150	ns	
Enable Time	$t_{ena}$		—	5	ms	
Start-up Time	$t_{str}$	@Minimum operating voltage to be 0 sec.	—	10	ms	
1 Sigma Jitter	$J_{\sigma}$	Measured with Wavcrest SIA-3000	$1.8 \leq f_o < 40\text{MHz}$	—	8	ps
			$40 \leq f_o \leq 100\text{MHz}$	—	5	
			$100 < f_o \leq 170\text{MHz}$	—	4	
Peak to Peak Jitter	$J_{PK-PK}$	Measured with Wavcrest SIA-3000	$1.8 \leq f_o < 40\text{MHz}$	—	80	ps
			$40 \leq f_o \leq 100\text{MHz}$	—	40	
			$100 < f_o \leq 170\text{MHz}$	—	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)

