



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
O	$\pm 50$	-10 to +70	Standard specifications
S	$\pm 30$		
U	$\pm 25$		
W	$\pm 20$	-40 to +85	With only certain frequencies
F	$\pm 100$		
G	$\pm 50$		

### How to Order

KC7050A 25.0000 C 3 0 E 00  
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Type (7.0x5.0mm SMD)
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (3.3V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ INH Function (45/ 55%, Stand-by)
- ⑦ Customer Special Model Suffix (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

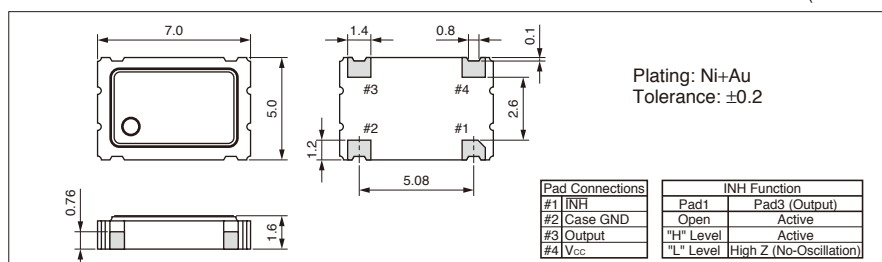
### Specifications

Item	Symbol	Conditions	Min.	Max.	Units	
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	Op. Temp.: -40 to +85°C	-100	+100	$\times 10^{-6}$
			Op. Temp.: -10 to +70°C / -40 to +85°C	-50	+50	
			Op. Temp.: -10 to +70°C	-30	+30	
			Op. Temp.: -10 to +70°C	-25	+25	
Storage Temperature Range	$T_{stg}$		-55	+125	°C	
Operating Temperature Range	$T_{use}$	Standard Specifications	-10	+70	°C	
		Extend (Option)	-40	+85		
Max. Supply Voltage	—		-0.5	+7	V	
Supply Voltage	$V_{CC}$	Freq. Tol.Code: O, S, F	2.97	3.63	V	
		Freq. Tol.Code: U, G	3.14	3.46		
		Freq. Tol.Code: W	3.20	3.40		
Current Consumption (Maximum Loaded)	$I_{CC}$	1.8 < $f_o$ <= 20MHz	—	10	mA	
		20 < $f_o$ <= 40MHz	—	15		
		40 < $f_o$ <= 60MHz	—	30		
		60 < $f_o$ <= 100MHz	—	35		
		100 < $f_o$ <= 135MHz	—	45		
135 < $f_o$ <= 170MHz	—	60				
Stand-by Current	$I_{std}$		—	10	$\mu A$	
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 < $f_o$ <= 26MHz	—	10	ns	
		26 < $f_o$ <= 45MHz	—	8		
		45 < $f_o$ <= 100MHz	—	5		
		100 < $f_o$ <= 170MHz	—	2.5		
Low Level Output Voltage	$V_{OL}$	$I_{OL} = -8mA$	—	10% $V_{CC}$	V	
High Level Output Voltage	$V_{OH}$	$I_{OH} = -8mA$	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 Wavecrest DTS-2079 VSI 6.3.1	1.8 < $f_o$ <= 40MHz	—	8	ps
			40 < $f_o$ <= 100MHz	—	5	ps
			100 < $f_o$ <= 170MHz	—	4	ps
Peak to Peak Jitter	$J_{PK-PK}$		1.8 < $f_o$ <= 40MHz	—	80	ps
			40 < $f_o$ <= 100MHz	—	40	ps
			100 < $f_o$ <= 170MHz	—	30	ps

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)

