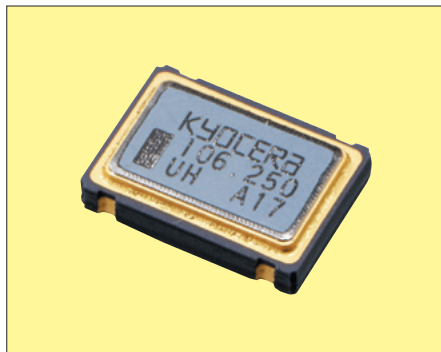


# Clock Oscillators Surface Mount Type KC7050H-C3 Series (K50H-3C Series)



CMOS/ 3.3V/ 7.0×5.0mm



Ph Free

RoHS Compliant

## Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage  $V_{CC} = 3.3V$
- With built-in by-pass capacitor

Table 1

Freq. Tol. Code	Tol. $\times 10^{-6}$	Operating Temperature Range (°C)	Note
0	$\pm 50$	-10 to +70	Standard specifications
S	$\pm 30$		
U	$\pm 25$		
F	$\pm 100$	-40 to +85	With only certain frequencies
G	$\pm 50$		

## How to Order

KC7050H 125.0000 C 3 0 E 00  
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type (7.0×5.0mm SMD)
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (3.3V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ Enable Function (45/ 55%, Stand-by)
- ⑦ Customer Special Model Suffix (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

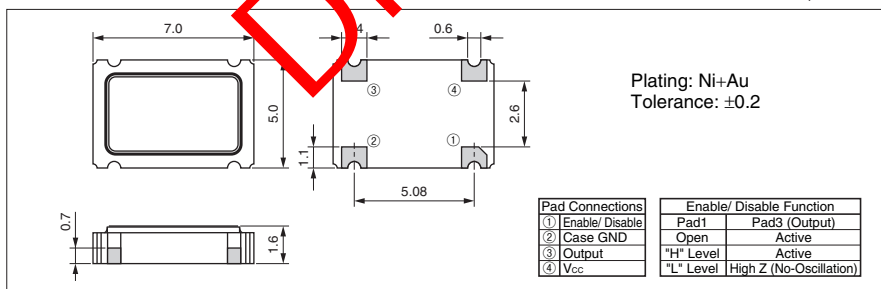
## Specifications

Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range	$F_o$		80	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	$10^{-6}$
			Op. Temp.: -10 to +70°C	-50	+50	
			Op. Temp.: -40 to +85°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	—		-5	+7	V	
Supply Voltage	$V_{CC}$	Freq. Tol.Code: 0, S, F	2.97	3.63	V	
		Freq. Tol.Code: U, G	3.14	3.46		
Current Consumption (Maximum Loaded)	$I_{CC}$	$80 \leq F_o \leq 100MHz$	—	40	mA	
		$100 < F_o \leq 135MHz$	—	50		
		$135 < F_o \leq 170MHz$	—	60		
Stand-by Current	$I_{std}$	$80 < F_o \leq 125MHz$	—	10	$\mu A$	
		$125 < F_o \leq 170MHz$	—	150		
Symmetry	SYM	@50% $V_{CC}$	45	55	%	
Rise/ Fall Time (10% $V_{CC}$ to 90% $V_{CC}$ Maximum Loaded)	$t_r / t_f$	$80 \leq F_o \leq 100MHz$	20% $V_{CC}$ to 80% $V_{CC}$ Maximum Loaded	—	3.5	nS
			90% $V_{CC}$ to 90% $V_{CC}$ Maximum Loaded	—	5	
		$100 < F_o \leq 170MHz$	20% $V_{CC}$ to 80% $V_{CC}$ Maximum Loaded	—	1.5	
			10% $V_{CC}$ to 90% $V_{CC}$ Maximum Loaded	—	2	
Low Level Output Voltage	$V_{OL}$	$I_{OH} = 8mA$	—	10% $V_{CC}$	V	
High Level Output Voltage	$V_{OH}$	$I_{OH} = 8mA$	90% $V_{CC}$	—	V	
Output Load	CL	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 operation voltage to be 0 sec.	—	10	mS	
Deterministic Jitter (DJ)	DJ	Measured with Wavecrest DTS-2079 VIS/ 6.3.1	—	2	pS	
1 Sigma Jitter	JSigma		—	4	pS	

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

## Dimensions

(Unit: mm)



## Recommended Land Pattern

(Unit: mm)

