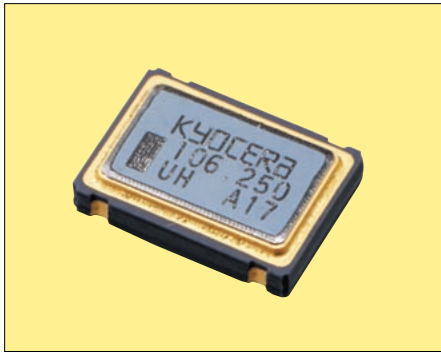




# Clock Oscillators Surface Mount Type KC7050H-C3 Series (K50H-3C Series)

CMOS / 3.3V / 7.0×5.0mm



Pb Free

RoHS Compliant

## Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage  $V_{DD}=3.3V$
- 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 125.000 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 1000pcs./reel)

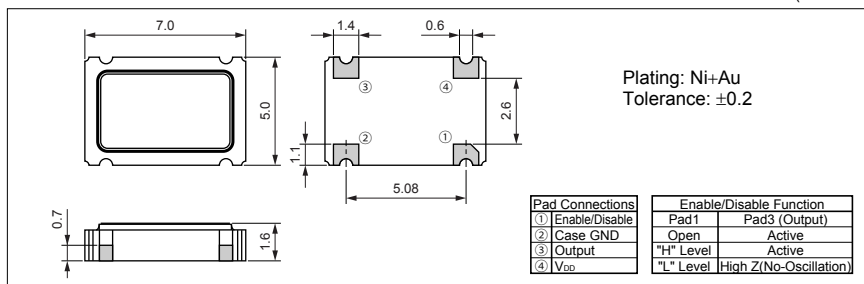
## Specifications

Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range	Fo		80	170	MHz	
Frequency Tolerance	F <sub>tol</sub>	Initial tolerance, Operating temperature range, Rated power supply voltage change, Load change, Aging (1year @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/ -40 to +85°C	-30	+30	
			Op. 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	V	
Supply Voltage	V <sub>DD</sub>	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 <sub>DD</sub>	80≤Fo≤100MHz	—	40	mA	
		100<Fo≤135MHz	—	50		
		135<Fo≤170MHz	—	60		
Stand-by Current	I <sub>std</sub>	80≤Fo≤125MHz	—	10	μA	
		125<Fo≤170MHz	—	150		
Symmetry	SYM	@50% V <sub>DD</sub>	45	55	%	
Rise/ Fall Time (10% V <sub>DD</sub> to 90% V <sub>DD</sub> Maximum Loaded)	Tr/Tf	80≤Fo<100MHz	20% V <sub>DD</sub> to 80% V <sub>DD</sub> Maximum Loaded	—	3.5	nS
			10% V <sub>DD</sub> to 90% V <sub>DD</sub> Maximum Loaded	—	5	
		100≤Fo≤170MHz	20% V <sub>DD</sub> to 80% V <sub>DD</sub> Maximum Loaded	—	1.5	
			10% V <sub>DD</sub> to 90% V <sub>DD</sub> Maximum Loaded	—	2	
Output Voltage-"L"	V <sub>OL</sub>	I <sub>OL</sub> =8mA	—	10% V <sub>DD</sub>	V	
Output Voltage-"H"	V <sub>OH</sub>	I <sub>OH</sub> =-8mA	90% V <sub>DD</sub>	—	V	
Output Load	L <sub>CMOS</sub>	CMOS Output	—	15	pF	
Input Voltage Range	V <sub>IN</sub>		0	V <sub>DD</sub>	V	
Input Voltage-"L"	V <sub>IL</sub>		—	30% V <sub>DD</sub>	V	
Input Voltage-"H"	V <sub>IH</sub>		70% V <sub>DD</sub>	—	V	
Disable Time	—		—	150	nS	
Enable Time	—		—	5	mS	
Start-up Time	ST	@ Minimum Operation Voltage to be 0 sec.	—	10	mS	
Deterministic Jitter (DJ)	DJ	Measured with Wavecrest DTS-2079 VIS/6.3.1	—	2	pS	
1Sigma Jitter	1sigma		—	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)

