

Clock Oscillators Surface Mount Type KC7050A-C5 Series (K53-HC Series)



CMOS/ 5.0V/ 7.0x5.0mm



RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage $V_{CC}=5.0V$

Table 1

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

How to Order

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

- ① Type (7.0x5.0mm SMD)
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (5.0V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ INH Function (45/ 55%, Disable)
- ⑦ Customer Special Model Suffix (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

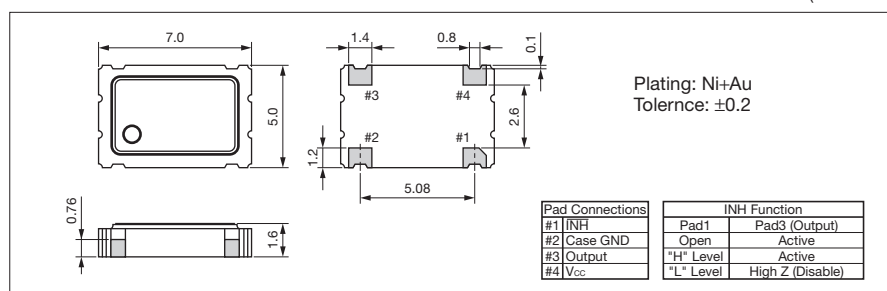
Specifications

Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range	f_o		1.8	50	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	+7.0	V	
Supply Voltage	V_{CC}	Freq. Tol.Code: 0, S, F	+4.5	+5.5	V	
		Freq. Tol.Code: U, G	+4.75	+5.25		
Current Consumption (Maximum Loaded)	I_{CC}	$1.8 < f_o \leq 20\text{MHz}$	—	25	mA	
		$20 < f_o \leq 40\text{MHz}$	—	35		
		$40 < f_o \leq 50\text{MHz}$	—	50		
Disable Current	I_{dis}		—	30	mA	
Symmetry	SYM	@50% V_{CC}	45	55	%	
Rise/ Fall Time (10% V_{CC} to 90% V_{CC} Maximum Loaded)	t_r / t_f	$1.8 < f_o \leq 26\text{MHz}$	—	10	ns	
		$26 < f_o \leq 50\text{MHz}$	—	8		
Low Level Output Voltage	V_{OL}	$I_{OL} = 16\text{mA}$	—	10% V_{CC}	V	
High Level Output Voltage	V_{OH}	$I_{OH} = -16\text{mA}$	90% V_{CC}	—	V	
CMOS Load	L_{CMOS}	CMOS Output	—	50	pF	
Input Voltage Range	V_{IN}		0	V_{CC}	V	
Low Level Input Voltage	V_{IL}		—	0.8	V	
High Level Input Voltage	V_{IH}		2.2	—	V	
Disable Time	t_{dis}		—	100	ns	
Enable Time	t_{ena}		—	100	ns	
Start-up Time	t_{str}	@Minimum operating voltage to be 0 sec.	—	10	ms	
1 Sigma Jitter	J_{Sigma}	Measured with Wavecrest SIA-3000	$1.8 < f_o < 40\text{MHz}$	—	8	ps
			$40 \leq f_o \leq 50\text{MHz}$	—	5	
Peak to Peak Jitter	J_{PK-PK}	Measured with Wavecrest SIA-3000	$1.8 < f_o < 40\text{MHz}$	—	80	ps
			$40 \leq f_o \leq 50\text{MHz}$	—	40	

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)

