



Clock Oscillators Surface Mount Type

KC7050A-C2 Series



CMOS/ 2.5V/ 7.0×5.0mm



RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage $V_{CC} = 2.5V$
Lower voltage available
- $\pm 25 \times 10^{-6}$, $\pm 20 \times 10^{-6}$ available

How to Order

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

- ① Series
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (2.5V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ INH Function (45/ 55%, Stand-by)
- ⑦ Individual Specification (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

Table 1

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

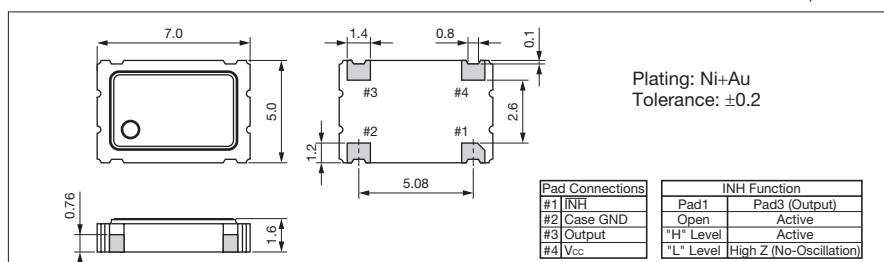
Specifications

Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range	f_o		1.8	125	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/ -40 to +105°C	-50	+50	
			Op. Temp.: -10 to +70°C	-30	+30	
			Op. Temp.: -10 to +70°C	-25	+25	
			Op. Temp.: -10 to +70°C	-20	+20	
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	+2.25	+2.75	V	
		Freq. Tol.Code: U, G, 6	+2.38	+2.62		
		Freq. Tol.Code: W	+2.43	+2.57		
Current Consumption (Maximum Loaded)	I_{CC}	1.8 $\leq f_o \leq 20$ MHz	—	5	mA	
		20 $< f_o \leq 40$ MHz	—	10		
		40 $< f_o \leq 60$ MHz	—	15		
		60 $< f_o \leq 85$ MHz	—	20		
		85 $< f_o \leq 100$ MHz	—	22		
		100 $< f_o \leq 125$ MHz	—	27		
Stand-by Current	I_{std}		—	10	μA	
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 $\leq f_o \leq 40$ MHz	—	7	ns	
		40 $< f_o \leq 85$ MHz	—	4		
		85 $< f_o \leq 125$ MHz	—	3		
Low Level Output Voltage	V_{OL}	$I_{OL} = 4mA / 8mA$ (40MHz $< f_o$)	—	10% V_{CC}	V	
High Level Output Voltage	V_{OH}	$I_{OH} = -4mA / -8mA$ (40MHz $< f_o$)	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 SIA-3000	1.8 $\leq f_o < 40$ MHz	—	8	ps
			40 $\leq f_o \leq 100$ MHz	—	5	
			100 $< f_o \leq 125$ MHz	—	4	
Peak to Peak Jitter	J_{PK-PK}	Measured with Wavecrest SIA-3000	1.8 $\leq f_o < 40$ MHz	—	80	ps
			40 $\leq f_o < 100$ MHz	—	40	
			100 $\leq f_o \leq 125$ 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)

