

Clock Oscillators Surface Mount Type KC7050A-C2 Series (K53-2C Series)



CMOS/ 2.5V/ 7.0x5.0mm



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

Table 1

Stability Code	Stability $\times 10^{-6}$	Operating Temperature Range (°C)	Note
O	± 50	-10 to +70	Standard specifications
S	± 30		
U	± 25		
W	± 20	-40 to +85	With only certain frequencies
F	± 100		
G	± 50		

How to Order

KC7050A 25.0000 C 2 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 (2.5V)
- 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)

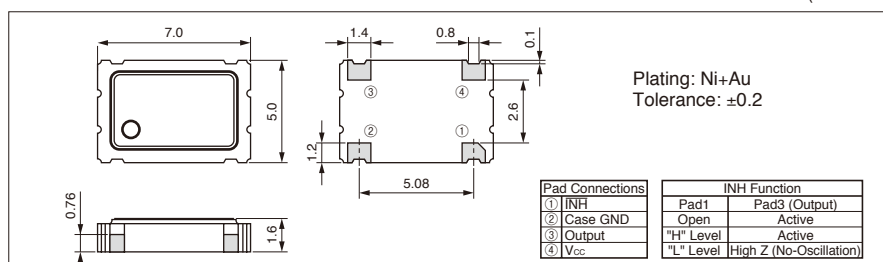
Specifications

Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range	f_o		1.8	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	-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: 0, S, F	2.25	2.75	V	
		Freq. Tol.Code: U, G	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 DTS-2079 V/Sl 6.3.1	1.8 $\leq f_o < 40$ MHz	—	8	pS
			40 $\leq f_o \leq 100$ MHz	—	5	pS
			100 $< f_o \leq 125$ MHz	—	4	pS
Peak to Peak Jitter	J_{PK-PK}		1.8 $\leq f_o < 40$ MHz	—	80	pS
			40 $\leq f_o \leq 100$ MHz	—	40	pS
			100 $< f_o \leq 125$ MHz	—	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)

