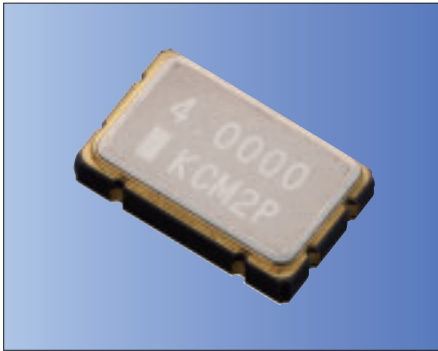




# Clock Oscillators Surface Mount Type KC5032A-C1 Series (High Frequency)



CMOS/ 1.8V to 3.3V/ 5.0×3.2mm



RoHS Compliant

## Features

- Wide operating voltage range 1.6 to 3.3V
- $\pm 25 \times 10^{-6}$  available
- Highly reliable with seam welding
- Miniature ceramic package
- CMOS output

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	Please contact us for available frequencies.
G	$\pm 50$	-40 to +85	
6	$\pm 50$	-40 to +105	

## How to Order

KC5032A 100.000 C 1 □ E 00  
① ② ③ ④ ⑤ ⑥ ⑦

- ① Series
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (1.8V, 2.5V, 3.3V Compatible)
- 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)

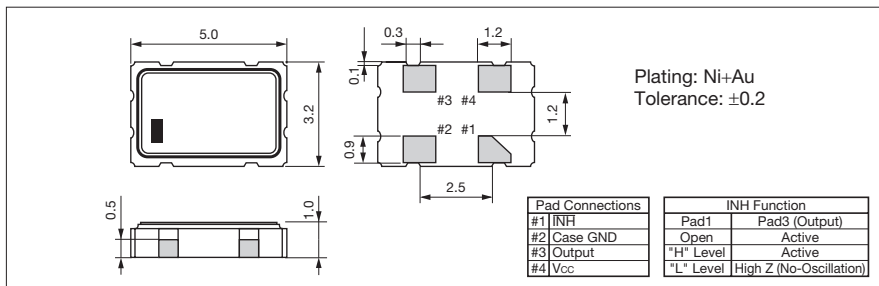
## Specifications

Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range	fo	fo>50MHz	50	135	MHz	
Frequency Tolerance	f <sub>tol</sub>	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 +105°C	-50	+50	
			Op. Temp.: -10 to +70°C	-30	+30	
			Op. Temp.: -10 to +70°C	-25	+25	
Storage Temperature Range	T <sub>stg</sub>	Standard Specification	-55	+125	°C	
Operating Temperature Range	T <sub>use</sub>	Standard Specification	-10	+70	°C	
		Extend (Option)	-40	+85		
Max. Supply Voltage	—		-0.3	+4.0	V	
Supply Voltage	V <sub>cc</sub>		+1.6	+3.63	V	
Current Consumption (Loaded) (1.6<V <sub>cc</sub> ≤2.0V)	I <sub>cc</sub>	50<fo≤85MHz	—	10	mA	
		85<fo≤105MHz	—	15		
		105<fo≤135MHz	—	16		
Current Consumption (Loaded) (2.0<V <sub>cc</sub> ≤2.8V)	50<fo≤85MHz	—	14			
	85<fo≤105MHz	—	17			
	105<fo≤135MHz	—	18			
Current Consumption (Loaded) (2.8<V <sub>cc</sub> ≤3.63V)	50<fo≤85MHz	—	17			
	85<fo≤105MHz	—	19			
	105<fo≤135MHz	—	22			
Stand-by Current	I <sub>std</sub>		—	10	μA	
Symmetry	SYM	@50% V <sub>cc</sub>	45	55	%	
Rise/ Fall Time (10% V <sub>cc</sub> to 90% V <sub>cc</sub> Maximum Loaded)	tr/ tf	1.6≤V <sub>cc</sub> ≤2V	—	3.5	ns	
		2<V <sub>cc</sub> ≤2.8V	—	3.0		
		2.8<V <sub>cc</sub> ≤3.63V	—	2.5		
Low Level Output Voltage	V <sub>OL</sub>		—	10% V <sub>cc</sub>	V	
High Level Output Voltage	V <sub>OH</sub>		90% V <sub>cc</sub>	—	V	
Output Load	L <sub>CMOS</sub>	1.6≤V <sub>cc</sub> ≤3.63V	—	15	pF	
Input Voltage Range	V <sub>IN</sub>		0	V <sub>cc</sub>	V	
Low Level Input Voltage	V <sub>IL</sub>		—	30% V <sub>cc</sub>	V	
High Level Input Voltage	V <sub>IH</sub>		70% V <sub>cc</sub>	—	V	
Disable Time	t <sub>dis</sub>		—	150	ns	
Enable Time	t <sub>ena</sub>		—	5	ms	
Start-up Time	t <sub>str</sub>	@Minimum operating voltage to be 0 sec.	—	10	ms	
1 Sigma Jitter	J <sub>Sigma</sub>	Measured with Wavecrest SIA-3000	50<fo≤100MHz	—	5	ps
			100<fo≤135MHz	—	4	
Peak to Peak Jitter	J <sub>PK-PK</sub>	Measured with Wavecrest SIA-3000	50<fo≤100MHz	—	40	ps
			100<fo≤135MHz	—	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.

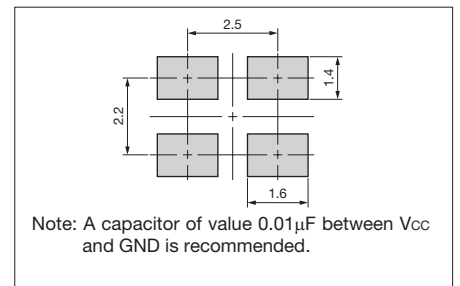
## Dimensions

(Unit: mm)



## Recommended Land Pattern

(Unit: mm)



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