

Clock Oscillators Surface Mount Type

KC5032A-CM Series



CMOS/ 1.8V, 2.5V, 3.3V, 5.0V/ 5.0×3.2mm



RoHS Compliant

Features

- Wide operating voltage range 1.6 to 5.5V
- $\pm 25 \times 10^{-6}$ 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	± 50	-10 to +70	Standard specifications
S	± 30		
U	± 25		
F	± 100	-40 to +85	With only certain frequencies
G	± 50		

How to Order

KC5032A 25.0000 C M 0 E 00
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Type (5.0×3.2mm SMD)
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (1.8V, 2.5V, 3.3V, 5V Compatible)
- 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)

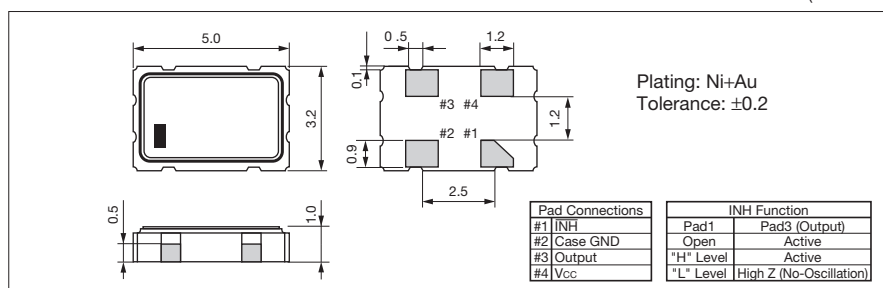
Specifications

Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range	fo		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}		-40	+85	°C	
Max. Supply Voltage	—		-0.6	+6.5	V	
Supply Voltage	V _{CC}		+1.6	+5.5	V	
Current Consumption (Loaded) (1.6<V _{CC} <2.0V)	I _{CC}	1.8≤fo≤20MHz	—	3.5	mA	
		20<fo≤40MHz	—	4.5		
		40<fo≤50MHz	—	5.0		
Current Consumption (Loaded) (2.0<V _{CC} <2.8V)	I _{CC}	1.8≤fo≤20MHz	—	4.0		
		20<fo≤40MHz	—	5.0		
		40<fo≤50MHz	—	6.0		
Current Consumption (Loaded) (2.8<V _{CC} <3.63V)	I _{CC}	1.8≤fo≤20MHz	—	5.0		
		20<fo≤40MHz	—	6.0		
		40<fo≤50MHz	—	7.0		
Current Consumption (Loaded) (3.63<V _{CC} <5.5V)	I _{CC}	1.8≤fo≤20MHz	—	7.0		
		20<fo≤40MHz	—	8.0		
		40<fo≤50MHz	—	9.5		
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)	tr/ tf	1.6≤V _{CC} ≤2V	—	8	ns	
		2<V _{CC} ≤2.8V	—	7		
		2.8<V _{CC} ≤3.63V	—	6		
		4.5≤V _{CC} ≤5.5V	—	5		
Low Level Output Voltage	V _{OL}	I _{OL} =4mA	—	10% V _{CC}	V	
High Level Output Voltage	V _{OH}	I _{OH} =-4mA	90% V _{CC}	—	V	
Output Load	L _{CMOS}	1.6≤V _{CC} ≤5.5V	—	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≤fo≤40MHz	—	8	ps
			40<fo≤50MHz	—	5	
Peak to Peak Jitter	J _{PK-PK}	Measured with Wavecrest SIA-3000	1.8≤fo≤40MHz	—	80	ps
			40<fo≤50MHz	—	50	

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)

