

CMOS/ 3.3V/ 7.0×5.0mm



RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage $V_{CC}=3.3V$
- $\pm 25 \times 10^{-6}$, $\pm 20 \times 10^{-6}$ available

Table 1

Stability Code	$\times 10^{-6}$	Operating Temperature Range (°C)	Note
0	± 50	-10 to +70	Standard specifications
S	± 30		
U	± 25		
W	± 20	-40 to +85	With only certain frequencies
F	± 100		
G	± 50		
6	± 50	-40 to +105	

How to Order

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

- ① Type (7.0×5.0mm SMD)
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (3.3V)
- 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)

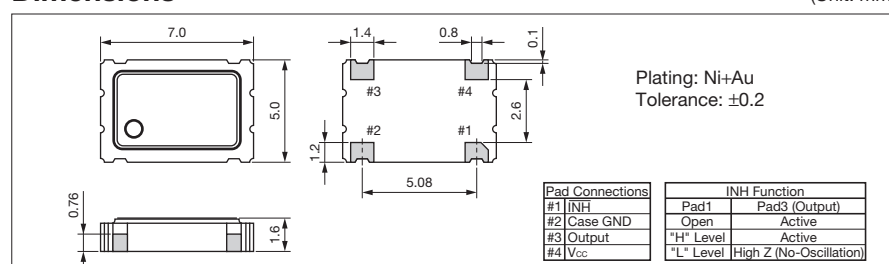
Specifications

Item	Symbol	Conditions		Min.	Max.	Units
Output Frequency Range	f _o			1.8	170	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	×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	+105	
Max. Supply Voltage	—	f _o <135MHz		-0.5	+7.0	V
		f _o ≥135MHz		-0.5	+5.0	
Supply Voltage	V _{CC}	Freq. Tol.Code: 0, S, F		+2.97	+3.63	V
		Freq. Tol.Code: U, G, 6		+3.14	+3.46	
		Freq. Tol.Code: W		+3.20	+3.40	
Current Consumption (Maximum Loaded)	I _{CC}	1.8≤f _o ≤20MHz		—	10	mA
		20<f _o ≤40MHz		—	15	
		40<f _o ≤60MHz		—	30	
		60<f _o ≤100MHz		—	35	
		100<f _o ≤135MHz		—	45	
		135<f _o ≤170MHz		—	60	
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	1.8≤f _o ≤26MHz		—	10	ns
		26<f _o ≤45MHz		—	8	
		45<f _o ≤100MHz		—	5	
		100<f _o ≤170MHz		—	2.5	
Low Level Output Voltage	V _{OL}	I _{OL} =8mA		—	10% V _{CC}	V
High Level Output Voltage	V _{OH}	I _{OH} =-8mA		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≤f _o <40MHz	—	8	ps
			40≤f _o ≤100MHz	—	5	
			100<f _o ≤170MHz	—	4	
Peak to Peak Jitter	J _{PK-PK}	Measured with Wavecrest SIA-3000	1.8≤f _o <40MHz	—	80	ps
			40≤f _o ≤100MHz	—	40	
			100<f _o ≤170MHz	—	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.

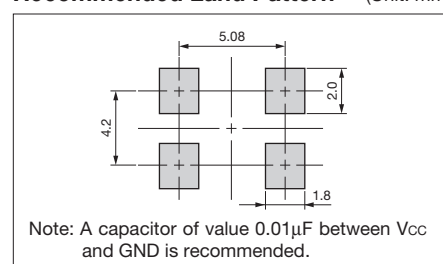
Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)



Mouser Electronics

Authorized Distributor

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AVX:

KC7050A106.250C30E00	KC7050A100.000C30E00	KC7050A150.000C30E00	KC7050A125.000C30E00
KC7050A75.0000C30E00	KC7050A14.3182C30E00	KC7050A16.0000C30E00	KC7050A20.0000C30E00
KC7050A24.0000C30E00	KC7050A24.5760C30E00	KC7050A25.0000C30E00	KC7050A27.0000C30E00
KC7050A29.4989C30E00	KC7050A3.68640C30E00	KC7050A30.0000C30E00	KC7050A32.0000C30E00
KC7050A33.8688C30E00	KC7050A40.0000C30E00	KC7050A44.0000C30E00	KC7050A49.1520C30E00
KC7050A50.0000C30E00	KC7050A53.1250C30E00	KC7050A64.0000C30E00	KC7050A66.6667C30E00
KC7050A8.00000C30E00	KC7050A33.3333C30E00	KC7050A32.7680C3GE00	KC7050A32.0000C3GE00
KC7050A12.0000C3GE00	KC7050A40.0000C3GE00	KC7050A16.3840C3GE00	KC7050A50.0000C3GE00
KC7050A27.0000C3GE00	KC7050A14.3182C3GE00	KC7050A18.4320C3GE00	KC7050A7.37280C3GE00
KC7050A60.0000C3GE00	KC7050A48.0000C3GE00	KC7050A1.84320C3GE00	KC7050A20.0000C3GE00
KC7050A3.68640C3GE00	KC7050A49.1520C3GE00	KC7050A80.0000C3GE00	KC7050A25.0000C3GE00
KC7050A64.0000C3GE00	KC7050A24.5760C3GE00	KC7050A16.0000C3GE00	KC7050A10.0000C3GE00
KC7050A30.0000C3GE00	KC7050A8.00000C3GE00	KC7050A4.00000C3GE00	KC7050A33.3333C3GE00
KC7050A100.000C3GE00	KC7050A106.250C3GE00	KC7050A125.000C3GE00	