

Clock Oscillators Surface Mount Type KC7050A-C3 Series (K53-3C Series)



CMOS/ 3.3V/ 7.0×5.0mm



Pb Free

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

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/ Enable Function (45/ 55%, Stand-by)
- ⑦ Customer Special Model Suffix (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

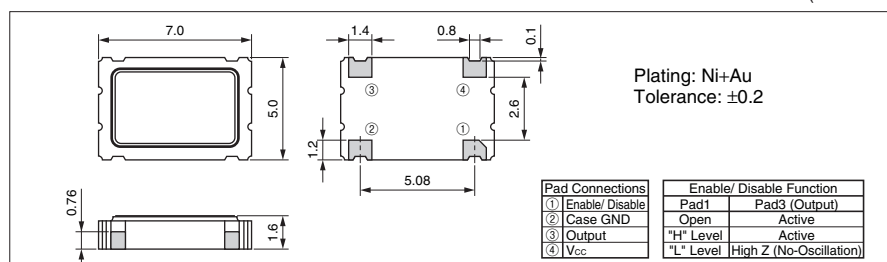
Specifications

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	-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	V
Supply Voltage	V _{CC}	Freq. Tol.Code: 0, S, F		2.97	3.63	V
		Freq. Tol.Code: U, G		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 operation voltage to be 0 sec.		—	10	mS
1 Sigma Jitter	J _{Sigma}	Measured with Wavecrest DTS-2079 VISI 6.3.1	1.8≤f _o <40MHz	—	8	pS
			40≤f _o ≤100MHz	—	5	pS
			100<f _o ≤170MHz	—	4	pS
Peak to Peak Jitter	J _{PK-PK}		1.8≤f _o <40MHz	—	80	pS
			40≤f _o ≤100MHz	—	40	pS
			100<f _o ≤170MHz	—	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.

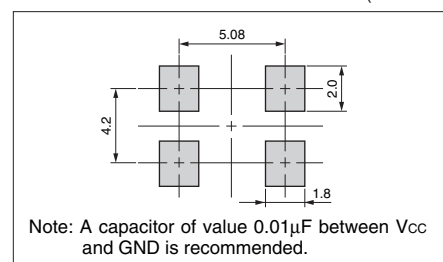
Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)



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