Clock Oscillators Surface Mount Type
KC7050A-C5 Series (K53-HC Series)

KYOCERA

CMOS/ 5.0V/ 7.0×5.0mm

Pb Free RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage V_{CC}=5.0V

Table 1

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

How to Order

KC7050A 25.0000 C 5 0 D 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 (5.0V)
⑤ Frequency Tolerance (See Table 1)
⑥ Symmetry/ Enable Function (45/ 55%, Disable)
⑦ Customer Special Model Suffix (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

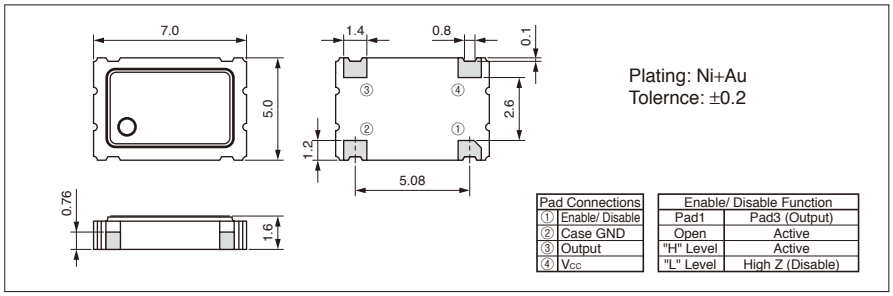
Specifications

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	×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	Vcc	Freq. Tol.Code: 0, S, F		4.5	5.5	V
		Freq. Tol.Code: U, G		4.75	5.25	
Current Consumption (Maximum Loaded)	Icc	1.8≤fo≤20MHz		—	25	mA
		20<fo≤40MHz		—	35	
		40<fo≤50MHz		—	50	
Disable Current	I_dis			—	30	mA
Symmetry	SYM	@50% Vcc		45	55	%
Rise/ Fall Time (10% Vcc to 90% Vcc Maximum Loaded)	tr/ tf	1.8≤fo≤26MHz		—	10	nS
		26<fo≤50MHz		—	8	
Low Level Output Voltage	VOL	IOL=16mA		—	10% Vcc	V
High Level Output Voltage	VOH	IOH=–16mA		90% Vcc	—	V
CMOS Load	L_CMOS	CMOS Output		—	50	pF
Input Voltage Range	VIN			0	Vcc	V
Low Level Input Voltage	VIL			—	0.8	V
High Level Input Voltage	VIH			2.2	—	V
Disable Time	t_dis			—	100	nS
Enable Time	t_ena			—	100	nS
Start-up Time	t_str	@Minimum operating voltage to be 0 sec.		—	10	mS
1 Sigma Jitter	JSigma	Measured with Wavecrest DTS-2079 *VISI 6.3.1*	1.8≤fo<40MHz	—	8	pS
			40≤fo≤50MHz	—	5	pS
Peak to Peak Jitter	JPK-PK		1.8≤fo<40MHz	—	80	pS
			40≤fo≤50MHz	—	40	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)



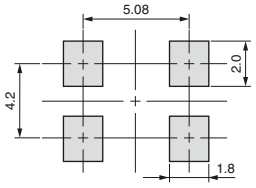
Plating: Ni+Au
Tolernce: ±0.2

Pad Connections	
①	Enable/ Disable
②	Case GND
③	Output
④	Vcc

Enable/ Disable Function	
Pad1	Pad3 (Output)
Open	Active
"H" Level	Active
"L" Level	High Z (Disable)

Recommended Land Pattern

(Unit: mm)



Note: A capacitor of value 0.01µF between Vcc and GND is recommended.