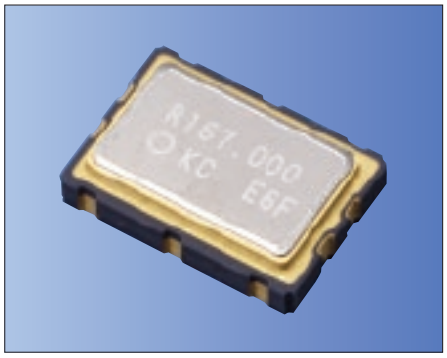
Clock Oscillators Surface Mount Type
KC7050P-L3 Series

KYOCERA

LVDS/ 3.3V/ 7.0×5.0mm



RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- LVDS output
- Supply voltage Vcc=3.3V
- ±25×10^{-6} available

Table 1

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

How to Order

KC7050P 125.000 L 3 0 E 00
① ② ③ ④ ⑤ ⑥ ⑦

① Type (7.0×5.0mm SMD)
② Output Frequency
③ Output Type (LVDS)
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)

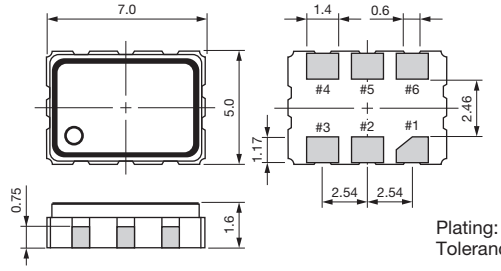
Specifications

Item	Symbol	Conditions		Min.	Max.	Units
Output Frequency Range[Note1]	fo			50	190	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.: 0 to +70°C/ –40 to +85°C	–50	+50	
			Op. Temp.: 0 to +70°C	–30	+30	
			Op. Temp.: 0 to +70°C	–25	+25	
Storage Temperature Range	T_stg			–55	+125	°C
Operating Temperature Range	T_use	Standard Specifications		0	+70	°C
		Extend (Option)		–40	+85	
Max. Supply Voltage	—			–0.5	+5.0	V
Supply Voltage	Vcc	Freq. Tol.Code: 0, S, F		+2.97	+3.63	V
		Freq. Tol.Code: U, G		+3.14	+3.46	
Current Consumption	Icc			—	70	mA
Stand-by Current	I_std			—	30	µA
Symmetry	SYM	100ohm @crossing point		45	55	%
Rise/ Fall Time (20% to 80% Output Level)	tr/ tf	100ohm		—	0.6	ns
Low Level Output Voltage[Note2]	VOL	Typ. 1.1V		0.9	—	V
High Level Output Voltage[Note2]	VOH	Typ. 1.43V		—	1.6	V
Diffrentical Output Voltage[Note2]	VOD	Typ. 330mV		247	454	mV
Diffrentical Output Voltage Error[Note2]	dVOD	dVOD=|VOD1–VOD2|		—	50	mV
Offset Voltage	VOS	Typ. 1.25V		1.125	1.375	V
Offset Voltage Error	dVOS	dVOS=|VOS1–VOS2|		—	50	mV
Output Load	RL	LVDS Output		100		ohm
Input Voltage Range	VIN			0	Vcc	V
Low Level Input Voltage	VIL			—	30% Vcc	V
High Level Input Voltage	VIH			70% Vcc	—	V
Disable Time	t_dis			—	200	ns
Enable Time	t_ena			—	10	ms
Start-up Time	t_str	@Minimum operating voltage to be 0 sec.		—	10	ms
Deterministic Jitter (DJ)	DJ	Measured with Wavecrest SIA-3000		—	2	ps
1 Sigma Jitter	Jsigma			—	4	ps
Peak to Peak Jitter	JPK-PK			—	30	ps

Note : All electrical characteristics are defined at the maximum load and operating temperature range.
Note1: Please contact us for inquiry about operating temperature range, available frequencies and other conditions.
Note2: DC characteristic

Dimensions

(Unit: mm)



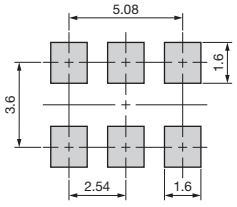
Plating: Ni+Au
Tolerance: ±0.2

Pad Connections	
#1	INH
#2	NC
#3	Case GND
#4	Output
#5	Complementary Output
#6	Vcc

INH Function	
Pad1	Pad4/ Pad5 (Output)
Open	Active
"H" Level	Active
"L" Level	High Z (No-Oscillation)

Recommended Land Pattern

(Unit: mm)



Note: A capacitor of value 0.01µF and 10µF Between Vcc and GND is recommended.