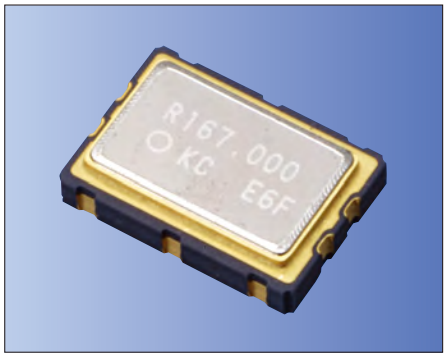
Clock Oscillators Surface Mount Type
KC7050P-L2 Series

KYOCERA

LVDS/ 2.5V/ 7.0×5.0mm



Pb Free

RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- LVDS output
- Supply voltage V_{CC}=2.5V
- ±25×10^{-6} available

Table 1

Freq. Tol. Code	× 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 2 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 (2.5V)
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)

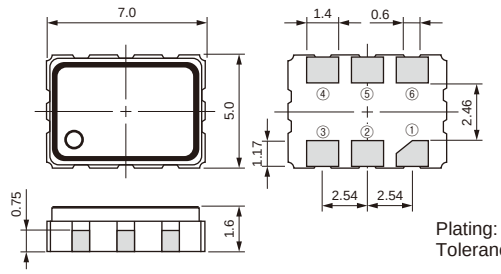
Specifications

Item	Symbol	Conditions		Min.	Max.	Units
Output Frequency Range	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	V
Supply Voltage	V_{CC}			2.375	2.625	V
Current Consumption	I_{CC}			—	70	mA
Stand-by Current	I_{std}			—	30	µA
Symmetry	SYM	100ohm @50% Output Swing		45	55	%
Rise/ Fall Time (20% to 80% Output Level)	tr/ tf	100ohm		—	0.6	nS
Low Level Output Voltage	V_{OL}	Typ. 1.1V		0.9	—	V
High Level Output Voltage	V_{OH}	Typ. 1.43V		—	1.6	V
Diffrentical Output Voltage	V_{OD}	Typ. 330mV		247	454	mV
Diffrentical Output Voltage Error	dV_{OD}	$dV_{OD}=\lvert V_{OD1}-V_{OD2}\rvert$		—	50	mV
Offset Voltage	V_{OS}	Typ. 1.25V		1.125	1.375	V
Offset Voltage Error	dV_{OS}	$dV_{OS}=\lvert V_{OS1}-V_{OS2}\rvert$		—	50	mV
Output Load	RL	LVDS Output		100		ohm
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}			—	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 DTS-2079 *VISI 6.3.1*		—	2	pS
1 Sigma Jitter	J_{Sigma}			—	4	pS
Peak to Peak Jitter	J_{PK-PK}			—	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)



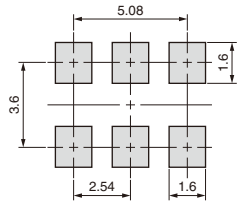
Pad Connections
① Enable/ Disable
② NC
③ Case GND
④ Output
⑤ Complementary Output
⑥ V_{CC}

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

Plating: Ni+Au
Tolerance: ±0.2

Recommended Land Pattern

(Unit: mm)



Note: A capacitor of value 0.01µF and 10µF Between V_{CC} and GND is recommended.