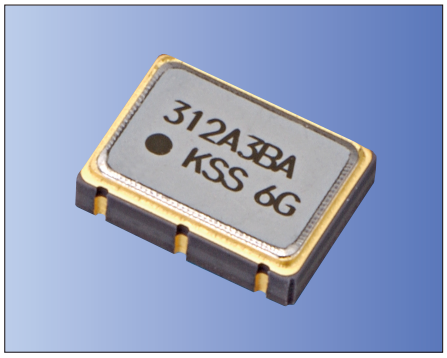
SAW Clock Oscillators Surface Mount Type
KC7050S-L2 Series

KYOCERA

LVDS/ 2.5V/ 7.0×5.0mm



Pb Free RoHS Compliant

Features

- Low Voltage 2.5V
- Low Jitter
- LVDS output
- Operation at Fundamental high frequency

Table 1

Freq. Tol. Code	× 10⁻⁶	Operating Temperature Range (°C)	Note
1	±100	0 to +70	Standard specifications

How to Order

KC7050S 312.500 L 2 1 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)

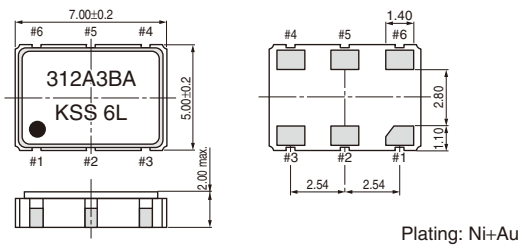
Specifications

Item	Symbol	Conditions		Min.	Max.	Units
Output Frequency Range	fo			50	700	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.: 0 to +70°C	–100	+100	×10⁻⁶
Storage Temperature Range	T_stg			–55	+125	°C
Operating Temperature Range	T_use	Standard Specifications		0	+70	°C
Max. Supply Voltage	—			–0.5	+5	V
Supply Voltage	Vcc	2.5V		2.38	2.62	V
Current Consumption (Standard Loaded)	Icc			—	70	mA
Symmetry	SYM			45	55	%
Rise/ Fall Time (20% to 80% Output Level Standard Loaded)	tr/ tf			—	600	pS
Low Level Output Voltage	VOL	Typ. 1.1V		0.9	—	V
High Level Output Voltage	VOH	Typ. 1.43V		—	1.6	V
Diffrentical Output Voltage	VOD	Typ. 330mV		247	454	mV
Diffrentical Output Voltage Error	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 DTS-2079 *VISI 6.3.1*		0.2 typ.		pS
1 Sigma Jitter	Jsigma			2 typ.		pS
Peak to Peak Jitter	JPK-PK			20 typ.		pS

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

Dimensions

(Unit: mm)



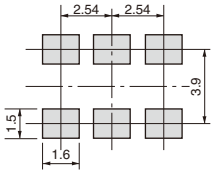
Plating: Ni+Au

Pad Connections
① Enable/ Disable
② NC
③ Case GND
④ Output
⑤ Output N
⑥ Vcc

Enable/ Disable 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 between Vcc and GND is recommended.