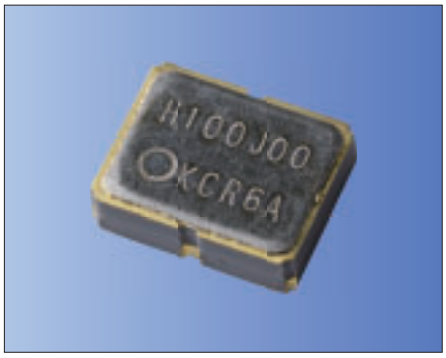
Clock Oscillators Surface Mount Type
KC3225L-H2/ KC3225L-H3 Series

HCSL/ 3.3V or 2.5V/ 3.2×2.5mm



RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- HCSL output
- Supply voltage Vcc = 3.3V, 2.5V
- ±25×10^{-6} available
- Low Phase Noise

Table 1

Freq. Tol. Code	× 10^{-6}	Operating Temperature Range (°C)	Note
0	± 50	0 to +70	Standard specifications
S	± 30		Please contact us for available frequencies.
U	± 25		
F	±100	–40 to +85	
G	± 50		
6	± 50	–40 to +105	

How to Order

KC3225L 100.000 H □ □ J 00
① ② ③ ④ ⑤ ⑥ ⑦

① Series
② Output Frequency
③ Output Type (HCSL)
④ Supply Voltage (3 : 3.3V or 2 : 2.5V)
⑤ Frequency Tolerance (See Table 1)
⑥ Symmetry/ INH Function
J : 45/ 55%, Stand-by
⑦ Customer Special Model Suffix
(STD Specification is "00")

Packaging (Tape & Reel 2000 pcs./ reel)

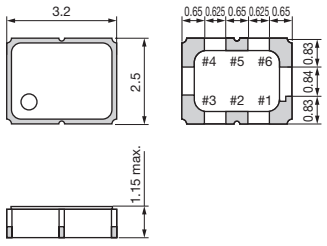
Specifications

Item	Symbol	Conditions		Specifications KC3225L-H2 Min.	KC3225L-H2 Max.	KC3225L-H3 Min.	KC3225L-H3 Max.	Units
Output Frequency Range[Note1]	fo			25	175	25	175	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		–50	+50	–50	+50	×10^{-6}
Storage Temperature Range	T_stg			–55	+125	–55	+125	°C
Operating Temperature Range	T_use			0	+70	0	+70	°C
				–40	+85	–40	+85	
				–40	+105	–40	+105	
Max. Supply Voltage	—			–0.3	+4.0	–0.3	+4.0	V
Supply Voltage	Vcc			2.375	2.625	2.97	3.63	V
Current Consumption	Icc			—	50	—	50	mA
Stand-by Current	I_std			—	20	—	20	µA
Symmetry	SYM	50ohm @crossing point		45	55	45	55	%
Rise/ Fall Time 0.175V to 0.525V	tr/ tf	50ohm		—	0.5	—	0.5	ns
Low Level Output Voltage[Note2]	VOL			–0.15	+0.15	–0.15	+0.15	V
High Level Output Voltage[Note2]	VOH			+0.66	+0.85	+0.66	+0.85	V
Output Load	RL	HCSL Output		50		50		ohm
Low Level Input Voltage	VIL			—	30% Vcc	—	30% Vcc	V
High Level Input Voltage	VIH			70% Vcc	—	70% Vcc	—	V
Disable Time	t_dis			—	200	—	200	ns
Enable Time	t_ena			—	10	—	10	ms
Start-up Time	t_str	@Minimum operating voltage to be 0 sec.		—	10	—	10	ms
Deterministic Jitter	DJ	Measured with Wavecrest SIA-3000		—	2	—	2	ps
1sigma Jitter	Jsigma			—	4	—	4	ps
Peak to Peak Jitter	JPK-PK			—	30	—	30	ps
Phase Jitter	JPhase	@100MHz Vcc = 3.3V	BW : 12kHz to 20MHz	—	0.5	—	0.5	ps
Phase Noise	—	@100MHz Vcc = 3.3V	@10Hz offset	Typ. –77				dBc/ Hz
			@100Hz offset	Typ. –107				
			@1kHz offset	Typ. –130				
			@10kHz offset	Typ. –142				
			@100kHz offset	Typ. –149				
			@1MHz offset	Typ. –150				
			@10MHz offset	Typ. –152				

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)



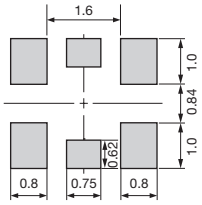
Plating: Ni+Au
Tolerance: ±0.2

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.