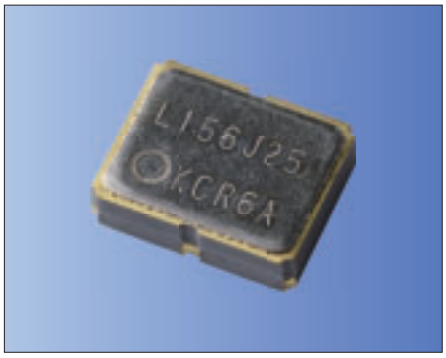
Clock Oscillators Surface Mount Type
KC3225L-L2/ KC3225L-L3 Series

KYOCERA

LVDS/ 3.3V or 2.5V/ 3.2×2.5mm



RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- LVDS 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		
U	± 25		Please contact us for available frequencies.
F	±100	−40 to +85	
G	± 50		
6	± 50	−40 to +105	

How to Order

KC3225L 125.000 L □ □ J 00
① ② ③ ④ ⑤ ⑥ ⑦

① Series
② Output Frequency
③ Output Type (LVDS)
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 Individual Specification
(STD Specification is "00")

Packaging (Tape & Reel 2000 pcs./ reel)

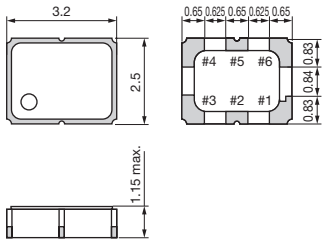
Specifications

Item	Symbol	Conditions		Specifications KC3225L-L2	Specifications KC3225L-L3	Units
Output Frequency Range[Note1]	fo			25 to 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/ −40 to +105°C		ppm
				±100/ −40 to +85°C		
				±50/ −40 to +85°C		
				±50/ 0 to +70°C		
				±30/ 0 to +70°C		
				±25/ 0 to +70°C		
Storage Temperature Range	T_stg			−55 to +125		°C
Operating Temperature Range	T_use	Standard Specifications		0 to +70/ −40 to +85		°C
		Extend (Option)		−40 to +105		
Max. Supply Voltage	—			−0.5 to +5.0		V
Supply Voltage	Vcc			+2.375 to +2.625	+2.97 to +3.63	V
Current Consumption	Icc			50 max.		mA
Stand-by Current	I_std			20 max.		μA
Symmetry	SYM	100ohm @crossing point		50±5		%
Rise/ Fall Time (20% Vcc to 80% Vcc Maximum Loaded)	tr/ tf	100ohm		0.6 max.		ns
Low Level Output Voltage[Note2]	VOL			0.9 min. Typ.:1.1		V
High Level Output Voltage[Note2]	VOH			1.6 max. Typ.:1.43		V
Diffrentical Output Voltage[Note2]	VOD			247 to 454 Typ.:330		mV
Diffrentical Output Voltage Error[Note2]	dVOD	dVOD = |VOD1−VOD2|		50 max.		mV
Offset Voltage	VOS			1.125 to 1.375		V
Offset Voltage Error	dVOS	dVOS = |VOS1−VOS2|		50 max.		mV
Output Load	RL	LVDS Output		100		ohm
Input Voltage Range	VIN			0 to Vcc		V
Low Level Input Voltage	VIL			30% Vcc max.		V
High Level Input Voltage	VIH			70% Vcc min.		V
Disable Time	t_dis			200 max.		ns
Enable Time	t_ena			10 max.		ms
Start-up Time	t_str	@Minimum operating voltage to be 0 sec.		10 max.		ms
Deterministic Jitter	DJ	Measured with Wavecrest SIA-3000		2 max.		ps
1 Sigma Jitter	JSigma			4 max.		ps
Peak to Peak Jitter	JPK-PK			30 max.		ps
Phase Jitter	JPhase	@156.25MHz Vcc = 3.3V	BW : 12kHz to 20MHz	0.3 max.		ps
Phase Noise	—	@156.25MHz Vcc = 3.3V	@10Hz offset	Typ. −77		dBc/ Hz
			@100Hz offset	Typ. −103		
			@1kHz offset	Typ. −133		
			@10kHz offset	Typ. −143		
			@100kHz offset	Typ. −149		
			@1MHz offset	Typ. −149		
			@10MHz offset	Typ. −154		

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)



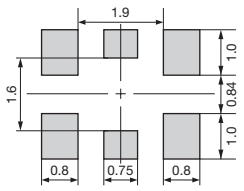
Plating: Ni+Au
Tolerance: ±0.2

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 between Vcc and GND is recommended.