Voltage Controlled Crystal Oscillators (VCXO)
Surface Mount Type KV5032R Series

KYOCERA

LV-PECL or LVDS/ 3.3V or 2.5V/ 5.0×3.2mm

RoHS Compliant

Features

- High frequency to 900MHz
- LV-PECL output or LVDS output
- Miniature ceramic package
- Compact and low profile (5.0×3.2×1.2mm max.)
- Low current consumption

Applications

- WDM/ Networking

Table 1

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

How to Order

KV5032R 622.080 P 3 G D 00
① ② ③ ④ ⑤ ⑥ ⑦

① Type (5.0×3.2mm SMD)
② Output Frequency
③ Output Type (LV-PECL or LVDS)
④ Supply Voltage (3 : 3.3V or 2 : 2.5V)
⑤ Frequency Tolerance (See Table 1)
⑥ Symmetry/ INH Function (45/ 55%, Disable)
⑦ Customer Special Model Suffix (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

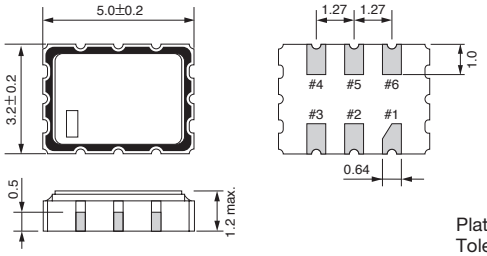
Specifications

Item	Symbol	Conditions		Min.	Max.	Units
Output Frequency Range Note1	fo			10	900	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	–50	+50	×10^{-6}
Absolute Pull Range	APR			±100	—	×10^{-6}
Control Voltage	Vc			0	+3.3	V
Storage Temperature Range	T_stg			–55	+125	°C
Operating Temperature Range	T_use			–40	+85	°C
Max. Supply Voltage	—			–0.5	+4.2	V
Supply Voltage	Vcc			+2.25	+3.63	V
Linearity	—	Vc=0V to +3.3V		–10	10	%
Current Consumption	Icc	LV-PECL Output (2.25≤Vcc≤2.75V)		—	80	mA
		LV-PECL Output (2.75<Vcc≤3.63V)		—	100	
		LVDS Output (2.25≤Vcc≤3.63V)		—	40	
Symmetry	SYM	LV-PECL Output 50ohm @crossing point		45	55	%
		LVDS Output 100ohm @crossing point		45	55	
Rise/ Fall Time (20% to 80% Output Level)	tr/ tf	LV-PECL Output 50ohm		—	0.4	ns
		LVDS Output 100ohm		—	0.6	
Low Level Output Voltage Note2	VOL	LV-PECL Output		—	Vcc –1.620	V
High Level Output Voltage Note2	VOH			Vcc –1.025	—	V
Output Load	—			50		ohm
Low Level Output Voltage Note2	VOL	LVDS Output	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	175	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	—			100		ohm
Low Level Input Voltage Note2	VIL			—	30% Vcc	V
High Level Input Voltage Note2	VIH			70% Vcc	—	V
Input Resistance	—			150	—	k ohm
Disable Time	t_dis			—	200	ns
Enable Time	t_ena			—	2	ms
Start-up Time	t_str	@Minimum operating voltage to be 0 sec.		—	10	ms
Phase Jitter	JPhase	12kHz to 20MHz @622.08MHz		—	1.0	ps
Phase Noise @622.08MHz	—	– 40 (@10Hz offset) – 70 (@100Hz offset) – 95 (@1kHz offset) –105 (@10kHz offset) –105 (@100kHz offset) –125 (@1MHz offset) –135 (@10MHz offset)				dBc/ Hz

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)



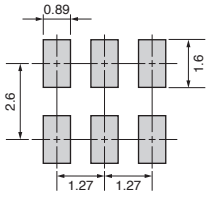
Plating: Ni+Au
Tolerance: ±0.2

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

Frequency Select Function	
Pad2	Pad4/ Pad5 (Output)
Open	Active
"H" Level	Active
"L" Level	High Z(Non-Oscillation)

Recommended Land Pattern

(Unit: mm)



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