



Voltage Controlled Crystal Oscillators (VCXO) Surface Mount Type KV7050B-C3 Series



CMOS/ 3.3V/ 7.0×5.0mm



RoHS Compliant

Features

- Miniature ceramic package
- CMOS output
- High frequency to 170MHz
- Highly reliable with seam welding
- Supply voltage $V_{CC}=3.3V$
- Excellent Jitter performance

Table 1

Freq. Tol. Code	$\times 10^{-6}$	Operating Temperature Range (°C)	Note
0	± 50	-10 to +70	Standard specifications
S	± 30	-10 to +70	Please contact us for available frequencies.
G	± 50	-40 to +85	

How to Order

KV7050B 24.576 C 3 □ □ 00
① ② ③ ④ ⑤ ⑥ ⑦

- ①Series
②Output Frequency
③Output Type (CMOS)
④Supply Voltage (3.3V)
⑤Frequency Tolerance (See Table 1)
⑥Symmetry/ INH Function/ Input Resistance
D: $1.5 \leq f_o \leq 70\text{MHz}$
N: $70 \leq f_o \leq 170\text{MHz}$
⑦Individual Specification
(STD Specification is "00".)

Packaging (Tape & Reel 1000 pcs./ reel)

Specifications

Item	Symbol	Conditions	Min.	Max.	Unit
Output Frequency Range ^{Note1}	f_o		1.5	170	MHz
Frequency Tolerance ^{Note2}	f_{tol}	Initial tolerance, Operating temperature range, Rated power supply voltage change, Load change, Aging (1 year @25°C), Shock and vibration Temp.: -10 to +70°C/ -40 to +85°C	-50	+50	$\times 10^{-6}$
		Temp.: -10 to +70°C	-30	+30	
Absolute Pull Range	APR	$1.5 \leq f_o \leq 30\text{MHz}$ $30 < f_o \leq 170\text{MHz}$	± 100 ± 50	—	$\times 10^{-6}$
Control Voltage	V_C		0	+3.3	V
Storage Temperature Range	T_{stg}		-55	+125	°C
Operating Temperature Range	T_{use}	Standard Specifications Extend (Option)	-10 -40	+70 +85	°C
Max. Supply Voltage	—	$1.5 \leq f_o \leq 80\text{MHz}$ $80 < f_o \leq 170\text{MHz}$	-0.5 -0.5	+7.0 +5.0	V
Supply Voltage	V_{CC}		+2.97	+3.63	V
Current Consumption	I_{CC}	$1.5 \leq f_o \leq 80\text{MHz}$ $80 < f_o \leq 170\text{MHz}$	— —	15 30	mA
Disable Current	I_{dis}	$1.5 \leq f_o \leq 80\text{MHz}$ $80 < f_o \leq 170\text{MHz}$	— —	10 15	mA
Symmetry	SYM	@50% V_{CC}	45	55	%
Rise/ Fall Time (10% V_{CC} to 90% V_{CC})	T_r/ T_f	$1.5 \leq f_o \leq 30\text{MHz}$ $30 < f_o \leq 80\text{MHz}$ $80 < f_o \leq 170\text{MHz}$	— — —	8 5 2.5	ns
Low Level Output Voltage	V_{OL}		—	10% V_{CC}	V
High Level Output Voltage	V_{OH}		90% V_{CC}	—	V
Output Load	L_{CMOS}	CMOS Output	—	15	pF
Input Voltage Range	V_{IN}		0	+3.3	V
Low Level Input Voltage	V_{IL}		—	30% V_{CC}	V
High Level Input Voltage	V_{IH}		70% V_{CC}	—	V
Input Resistance	—	Code⑥ : D Code⑥ : G or N	100 5	—	k ohm Mohm
Disable Time	t_{dis}	$1.5 \leq f_o \leq 30\text{MHz}$ $30 \leq f_o \leq 170\text{MHz}$	— —	100 200	ns
Enable Time	t_{ena}	$1.5 \leq f_o \leq 80\text{MHz}$ $80 < f_o \leq 170\text{MHz}$	— —	100 2	ns ms
Start-up Time	t_{str}	@Minimum operating voltage to be 0 sec.	—	10	ms
Phase Jitter	J_{Phase}	@155.52MHz BW : 12kHz to 20MHz	—	0.4	ps
Phase Noise	—	@155.52MHz	@10Hz offset @100Hz offset @1kHz offset @10kHz offset @100kHz offset @1MHz offset @10MHz offset	Typ. -70 Typ. -102 Typ. -128 Typ. -147 Typ. -158 Typ. -160 Typ. -161	dBc/ Hz

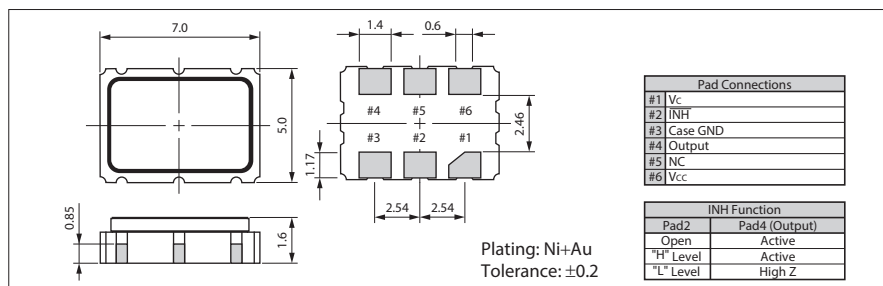
Note : All electrical characteristics are defined at the maximum load and operating temperature range.

Note1: Please contact us for inquiry about operating temperature range, available frequencies and other conditions.

Note2: Please contact us for the Frequency tolerance of -40 to +85°C.

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

