



Voltage Controlled Crystal Oscillators (VCXO)

Surface Mount Type KV7050B-C3 Series



CMOS/ 3.3V/ 7.0×5.0mm



RoHS Compliant

Features

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

Table 1

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

How to Order

KV7050B 74.1758 C 3 0 D 00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type (7.0×5.0mm SMD VCXO)
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (3.3V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ INH Function/ Input Resistance (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}	f _o		1.5	170	MHz	
Frequency Tolerance ^{Note2}	f _{tol}	Initial tolerance, Operating temperature range, Rated power supply voltage change, Aging (1 year @25°C), Shock and vibration	Op. Temp.: -10 to +70°C/ -40 to +85°C	-50	+50	×10 ⁻⁶
			Op. Temp.: -10 to +70°C	-30	+30	
Absolute Pull Range	APR	1.5≤f _o ≤30MHz	±100	—	×10 ⁻⁶	
Control Voltage	V _c	30<f _o ≤170MHz	±50	—		
Storage Temperature Range	T _{stg}		0	+3.3	V	
Operating Temperature Range	T _{use}	Standard Specifications	-55	+125	°C	
		Extend (Option)	-10	+70	°C	
Max. Supply Voltage	—	1.5≤f _o ≤80MHz	-40	+85	V	
Supply Voltage	V _{CC}	80<f _o ≤170MHz	-0.5	+7.0		
			-0.5	+5.0	V	
Current Consumption	I _{CC}		+2.97	+3.63	V	
Disable Current	I _{dis}	1.5≤f _o ≤80MHz	—	15	mA	
		80<f _o ≤170MHz	—	30		
Symmetry	SYM	1.5≤f _o ≤80MHz	—	10	mA	
		80<f _o ≤170MHz	—	15		
Rise/ Fall Time (10% V _{CC} to 90% V _{CC})	tr/ tf	@50% V _{CC}	45	55	%	
		1.5≤f _o ≤30MHz	—	8	ns	
		30<f _o ≤80MHz	—	5		
		80<f _o ≤170MHz	—	2.5		
Low Level Output Voltage	V _{OL}		—	10% V _{CC}	V	
High Level Output Voltage	V _{OH}		90% V _{CC}	—	V	
Output Load	L _{CMOS}		—	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	—	Code ⑥ : D	100	—	k ohm	
Disable Time	t _{dis}	Code ⑥ : G or N	5	—	Mohm	
Enable Time	t _{ena}		—	100	ns	
		1.5≤f _o ≤80MHz	—	100	ns	
		80<f _o ≤170MHz	—	2	ms	
Start-up Time	t _{str}	@Minimum operating voltage to be 0 sec.	—	10	ms	
Phase Jitter	J _{Phase}	12kHz to 20MHz @155.52MHz	—	1	ps	
Phase Noise @155.52MHz	—	- 55 (@10Hz offset) - 85 (@100Hz offset) -115 (@1kHz offset) -130 (@10kHz offset) -145 (@100kHz offset) -150 (@1MHz offset) -155 (@10MHz offset)			dBc/ Hz	

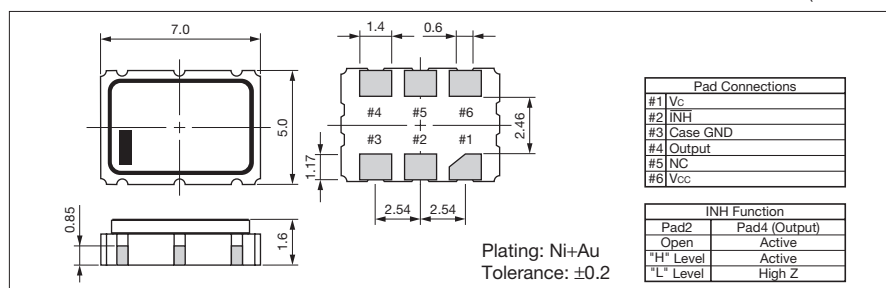
Note : All electrical characteristics are defined at the maximum load and operating temperature range.

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

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

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

