

Voltage Controlled Crystal Oscillators (VCXO)

Surface Mount Type KV7050B-C3 Series



CMOS/ 3.3V/ 7.0x5.0mm



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 (7.0x5.0mm SMD VCXO)
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (3.3V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ INH Function (45/ 55%, Disable)
- ⑦ Customer Special Model Suffix (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

Specifications

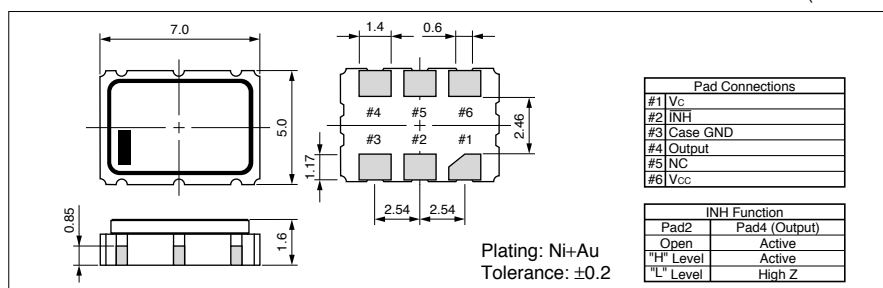
Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range ^{Note1}	f_o		1.5	170	MHz	
Frequency Tolerance ^{Note2}	f_{tol}	Initial tolerance, Operating temperature range, Rated power supply voltage change, Aging (1 year @25°C), Shock and vibration	Op. Temp.: -10 to +70°C/ -40 to +85°C	-50	+50	$\times 10^{-6}$
			Op. Temp.: -10 to +70°C	-30	+30	
Absolute Pull Range	APR	1.5 $\leq f_o \leq 30$ MHz 30 $< f_o \leq 170$ 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	-10	+70	°C	
		Extend (Option)	-40	+85		
Max. Supply Voltage	—	1.5 $\leq f_o \leq 80$ MHz 80 $< f_o \leq 170$ MHz	-0.5	+7	V	
Supply Voltage	V_{CC}		-0.5	+5	V	
Current Consumption	I_{CC}	1.5 $\leq f_o \leq 80$ MHz	+2.97	+3.63	V	
		80 $< f_o \leq 170$ MHz	—	15	mA	
Disable Current	I_{dis}	1.5 $\leq f_o \leq 80$ MHz	—	35	mA	
		80 $< f_o \leq 170$ MHz	—	10	mA	
Symmetry	SYM	@50% V_{CC}	45	55	%	
Rise/ Fall Time (10% V_{CC} to 90% V_{CC})	t_r/ t_f	1.5 $\leq f_o \leq 30$ MHz	—	8	ns	
		30 $< f_o \leq 80$ MHz	—	5		
		80 $< f_o \leq 170$ MHz	—	4		
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	—		5	—	Mohm	
Disable Time	t_{dis}		—	100	ns	
Enable Time	t_{ena}	1.5 $\leq f_o \leq 80$ MHz	—	100	ns	
		80 $< f_o \leq 170$ MHz	—	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.

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

