

# Voltage Controlled Crystal Oscillators (VCXO) Surface Mount Type KV7050W-P3 Series (K50V-3P Series)



LV-PECL/ 3.3V/ 7.0×5.0mm

**This product is NOT recommended for new designs.**



Ph Free

RoHS Compliant

## Features

- Miniature ceramic package
- Highly reliable with vacuum welding
- LV-PECL output
- Supply voltage  $V_{CC}=3.3V$
- With built-in by-pass capacitor
- Low jitter

Table 1

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

## How to Order

KV7050W 155.520 P 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 (LV-PECL)
- ④ Supply Voltage (3.3V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ Enable Function (45/ 55%, Disable)
- ⑦ Customer Special Model Suffix (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

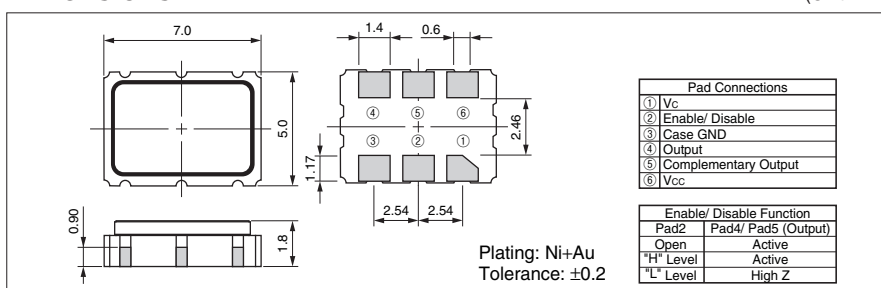
## Specifications

Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	$f_o$		70	180	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.: 0 to +70°C/ -40 to +85°C	-50	+50	$\times 10^{-6}$
Aging	Aging	@25°C 20 years	—	$\pm 15$	$\times 10^{-6}$
Absolute Pull Range	APR	$70 \leq f_o \leq 120$	$\pm 20$	—	$\times 10^{-6}$
		$120 < f_o \leq 180$	$\pm 50$		
		$f_o = 155.52 \text{MHz}$	$\pm 100$		
Control Voltage	$V_c$		0	3.3	V
Storage Temperature Range	$T_{stg}$		-55	+90	°C
Operating Temperature Range	$T_{use}$	Standard Specifications Extend (Option)	0 -40	+70 +85	°C
Max. Supply Voltage	—		-0.5	+7	V
Supply Voltage	$V_{CC}$		2.97	3.63	V
Current Consumption	$I_{CC}$	50 ohm	—	60	mA
Disable Current	$I_{dis}$		—	10	mA
Symmetry	SYM	50 ohm @50% Output Swing	45	55	%
Rise/ Fall Time (20% to 80% Output Level)	tr/ tf	50 ohm	—	0.6	nS
Low Level Output Voltage	$V_{OL}$	Op. Temp.: 0 to +85°C/ Typ. 1.600V	$V_{CC}-1.810$	$V_{CC}-1.620$	V
		Op. Temp.: -40 to 0°C/ Typ. 1.605V	$V_{CC}-1.830$	$V_{CC}-1.555$	
High Level Output Voltage	$V_{OH}$	Op. Temp.: 0 to +85°C/ Typ. 2.350V	$V_{CC}-1.025$	$V_{CC}-0.880$	V
		Op. Temp.: -40 to 0°C/ Typ. 2.295V	$V_{CC}-1.085$	$V_{CC}-0.900$	
Output Load	RL	LV-PECL	50		ohm
Input Voltage Range	$V_{IN}$		0	$V_{CC}$	V
Low Level Input Voltage	$V_{IL}$		—	30% $V_{CC}$	V
High Level Input Voltage	$V_{IH}$		70% $V_{CC}$	—	V
Disable Time	$t_{dis}$		—	200	nS
Enable Time	$t_{ena}$		—	200	nS
Start-up Time	$t_{str}$	@ Minimum operation voltage to be 0 sec.	—	10	mS
Input Resistance	—		150k	—	ohm
Phase Jitter	JPhase	12kHz to 20MHz @ 155.52MHz	—	1	pS
Phase Noise @ 155.52MHz	—	- 60 (@ 10Hz offset) - 90 (@ 100Hz offset) - 120 (@ 1kHz offset) - 140 (@ 10kHz offset) - 147 (@ 100kHz offset) - 147 (@ 1MHz offset) - 147 (@ 10Hz offset)			dBc/ Hz

Note: All electrical characteristics are defined at the maximum load and operating temperature range.  
Please contact us for inquiry about operating temperature range, available frequencies and other conditions.

## Dimensions

(Unit: mm)



## Recommended Land Pattern

(Unit: mm)

