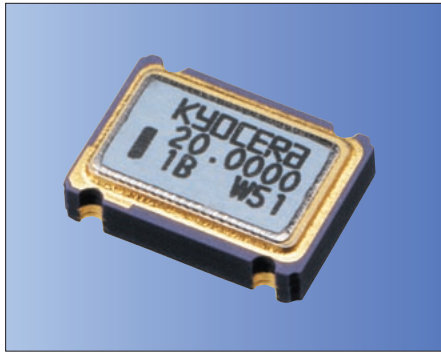


# Clock Crystal Oscillators Surface Mount Type K50-HC Series



CMOS/ 5.0V/ 7.0×5.0mm

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



Pb Free

RoHS Conforming

## Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage  $V_{DD}=5.0V$
- $\pm 25ppm$  available

Table 1

Stability Code	Stability (ppm)	$T_{OPR}$ (°C)	Note
0	$\pm 50$	-10 to +70 (Standard)	Standard specifications
S	$\pm 30$	-10 to +70 (Standard)	With only certain frequencies
U	$\pm 25$	-10 to +70 (Standard)	With only certain frequencies
F	$\pm 100$	-40 to +85 (Extend)	With only certain frequencies
G	$\pm 50$	-40 to +85 (Extend)	With only certain frequencies

## How to Order

K50-HC 0 - C S E 25.0000  
① ② ③ ④ ⑤ ⑥

- ① Type(7×5 SMD, 5.0V)
- ② Frequency Stability Code(See Table1)
- ③ CMOS Output
- ④ Duty Ratio(S: 45% to 55% STD)
- ⑤ Enable/Disable Function(STD)
- ⑥ Oscillation Frequency(Ex.: 25.0000MHz)

Packaging(Tape & Reel 1Kpcs/reel)

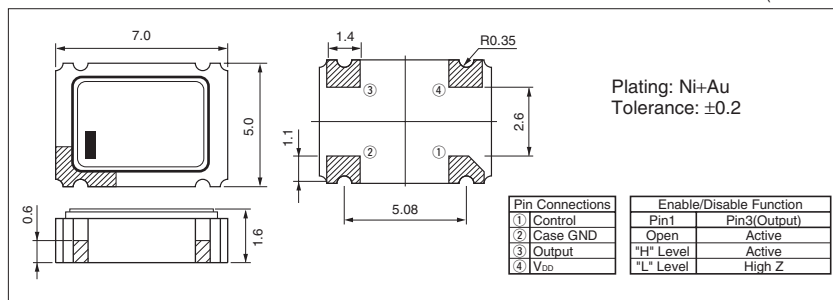
## Specifications

Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	$F_{OUT}$		1.5	68	MHz
Frequency Stability	$F_{SBY}$	Overall conditions: initial tolerance, operating temperature range, rated power supply voltage change, load change, aging(1year @25°C), shock and vibration	-25 -30 -50	+25 +30 +50	ppm
Storage Temperature Range	$T_{STG}$		-55	+125	°C
Operating Temperature Range	$T_{OPR}$	Standard Extend(option)	-10 -40	+70 +85	
Max. Supply Voltage	—		-0.5	7.0	Volt
Supply Voltage	$V_{DD}$	Stability: $\pm 50ppm, \pm 30ppm, \pm 100ppm$ (Ext Temp) Stability: $\pm 25ppm, \pm 50ppm$ (Ext Temp)	4.5 4.75	5.5 5.25	
Current Consumption (Maximum Loaded)	$I_{DD}$	$1.5 < F_{OUT} \leq 20MHz$ $20 < F_{OUT} \leq 40MHz$ $40 < F_{OUT} \leq 68MHz$	— — —	25 35 50	mA
Disable Current	$I_{DE}$	@68.0000MHz	—	30	mA
Duty Ratio(Symmetry)	SYM	@50% $V_{DD}$	45	55	%
Rise/Fall Time (10% $V_{DD}$ to 90% $V_{DD}$ Maximum Loaded)	$T_r/T_f$	$8 < F_{OUT} \leq 26MHz$ $26 < F_{OUT} \leq 45MHz$ $45 < F_{OUT} \leq 68MHz$	— — —	10 8 5	nS
Output Voltage-"L"	$V_{OL}$	$I_{OL}=16mA$	—	10% $V_{DD}$	Volt
Output Voltage-"H"	$V_{OH}$	$I_{OH}=-16mA$	90% $V_{DD}$	—	
Output Load(CMOS)	CL	$8 < F_{OUT} \leq 50MHz$ $50 < F_{OUT} \leq 68MHz$	— —	50 15	pF
Input Voltage Range	$V_{IN}$		0	$V_{DD}$	Volt
Input Voltage-"L"	$V_{IL}$		—	0.8	Volt
Input Voltage-"H"	$V_{IH}$		2.2	—	
Output Disable Time	—		—	100	nS
Output Enable Time	—		—	100	nS
Start-up Time	ST	@ Minimum operating Voltage to be 0sec.	—	10	mS

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

## Dimensions

(Unit : mm)



## Recommended Land Pattern

(Unit : mm)

