

# Clock Oscillators Surface Mount Type KC2520A-C1 Series



CMOS/ 1.8V/ 2.5×2.0mm



Ph Free

RoHS Compliant

## Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage  $V_{CC} = 1.8V$   
Lower voltage available

Table 1

Freq. Tol. Code	Tol. $\times 10^{-6}$	Operating Temperature Range (°C)	Note
0	$\pm 50$	-10 to +70	Standard specifications
S	$\pm 30$		
U	$\pm 25$		
F	$\pm 100$	-40 to +85	With only certain frequencies
G	$\pm 50$		

## How to Order

KC2520A 25.0000 C 1 0 E 00  
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Type (2.5×2.0mm SMD)
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (1.8V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ Enable Function (45/ 55%, Stand-by)
- ⑦ Customer Special Model Suffix (STD Specification is "00")

Packaging (Tape & Reel 2000 pcs./ reel)

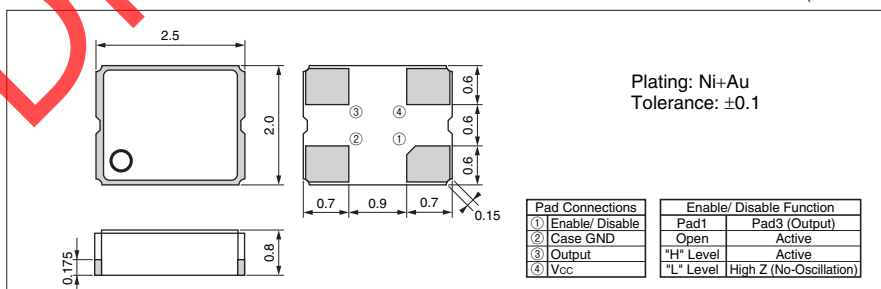
## Specifications

Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range	Fo		1.5	50	MHz	
Frequency Tolerance	F <sub>tol</sub>	Initial tolerance, Operating temperature range, Rated power supply voltage change, Load change, Aging (1 year @25°C), Shock and vibration	Op. Temp.: -40 to +85°C	-100	+100	$\times 10^{-6}$
			Op. Temp.: -10 to +70°C/ -40 to +85°C	-50	+50	
			Op. Temp.: -10 to +70°C	-30	+30	
			Op. Temp.: -10 to +70°C	-25	+25	
Storage Temperature Range	T <sub>stg</sub>		-55	+125	°C	
Operating Temperature Range	T <sub>use</sub>	Standard Specifications	-10	+70	°C	
		Extend (Option)	-40	+85		
Max. Supply Voltage	—		-0.5	+7.0	V	
Supply Voltage	V <sub>CC</sub>	Freq. Tol.Code: 0, S, F	1.62	1.98	V	
		Freq. Tol.Code: U, G	1.71	1.89		
Current Consumption (Maximum Loaded)	I <sub>CC</sub>	1.5 ≤ Fo ≤ 24MHz	—	3	mA	
		24 < Fo ≤ 40MHz	—	4		
		40 < Fo ≤ 50MHz	—	5		
Stand-by Current	I <sub>std</sub>		—	10	μA	
Symmetry	SYM	@ 50% V <sub>CC</sub>	45	55	%	
Rise/ Fall Time (10% V <sub>CC</sub> to 90% V <sub>CC</sub> Maximum Loaded)	tr/ tf	1.8 ≤ Fo < 26MHz	—	9	nS	
		26 < Fo ≤ 50MHz	—	7		
Low Level Output Voltage	V <sub>OL</sub>	I <sub>OL</sub> = 2mA	—	10% V <sub>CC</sub>	V	
High Level Output Voltage	V <sub>OH</sub>	I <sub>OH</sub> = 2mA	90% V <sub>CC</sub>	—	V	
Output Load	CL	CMOS Output	—	15	pF	
Input Voltage Range	V <sub>IN</sub>		0	V <sub>CC</sub>	V	
Low Level Input Voltage	V <sub>IL</sub>		—	30% V <sub>CC</sub>	V	
High Level Input Voltage	V <sub>IH</sub>		70% V <sub>CC</sub>	—	V	
Disable Time	t <sub>dis</sub>		—	100	nS	
Enable Time	t <sub>ena</sub>		—	3	mS	
Start-up Time	t <sub>str</sub>	@ Minimum operation voltage to be 0 sec.	—	10	mS	

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

## Dimensions

(Unit: mm)



## Recommended Land Pattern

(Unit: mm)

