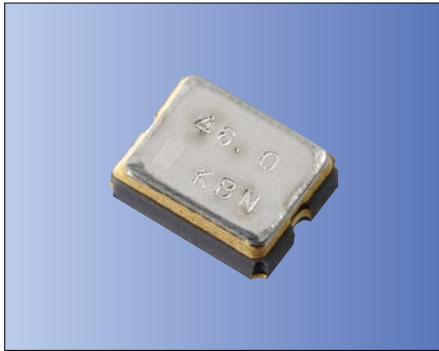


# High Stability Clock Oscillators Surface Mount Type

## KC2520C-C1 Series



CMOS/ 1.8V/ 2.5×2.0mm



RoHS Compliant

### Features

- Miniature ceramic package  
2.5 (L) × 2.0 (W) × 0.7 (H) mm (Typ.)
- High Stability Output Frequency  
±10×10<sup>-6</sup> (-10 to +70°C)  
±15×10<sup>-6</sup> (-40 to +85°C)
- CMOS output
- Supply voltage V<sub>CC</sub> = 1.8V

### Applications

- Wi-Fi, Bluetooth® etc.

### How to Order

KC2520C 40.0000 C 1 L E 00  
① ② ③ ④ ⑤ ⑥ ⑦

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

Packaging (Tape & Reel 2000 pcs./ reel)

Table 1

Freq. Tol. Code	Tol. × 10 <sup>-6</sup>	Operating Temperature Range (°C)	Note
Y	±10	-10 to +70	With only certain frequencies
K	±20	-40 to +85	Standard specifications
L	±15	-40 to +85	

### Specifications

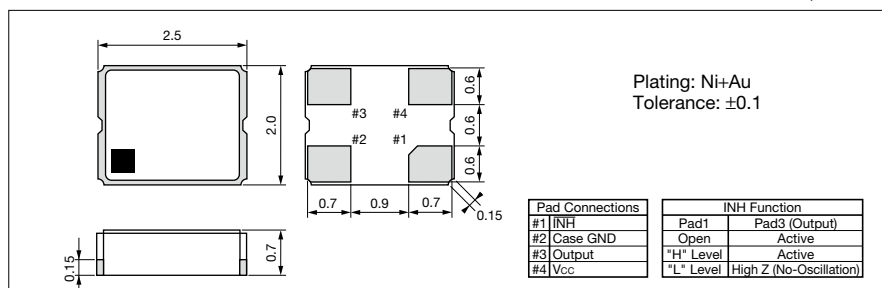
Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range	f <sub>o</sub>		1.5	54	MHz	
Frequency Tolerance	f <sub>tol</sub>	Initial tolerance, Operating temperature range, Rated power supply voltage change, Aging (1 year @25°C), Shock and vibration	Op. Temp.: -40 to +85°C	-15	+15	×10 <sup>-6</sup>
			Op. Temp.: -40 to +85°C	-20	+20	
			Op. Temp.: -10 to +70°C	-10	+10	
Storage Temperature Range	T <sub>stg</sub>		-55	+125	°C	
Operating Temperature Range	T <sub>use</sub>		-10	+70	°C	
			-40	+85		
Max. Supply Voltage	—		-0.3	+4.0	V	
Supply Voltage	V <sub>CC</sub>		+1.6	+2.0	V	
Current Consumption (Maximum Loaded)	I <sub>CC</sub>	No-load	1.5 ≤ f <sub>o</sub> < 24MHz	—	3	mA
			24 ≤ f <sub>o</sub> ≤ 54MHz	—	3.5	
		CL ≤ 15pF	1.5 ≤ f <sub>o</sub> < 24MHz	—	4	
			24 ≤ f <sub>o</sub> ≤ 54MHz	—	4.5	
Stand-by Current	I <sub>std</sub>		—	5	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		—	4	ns	
Low Level Output Voltage	V <sub>OL</sub>	I <sub>OL</sub> = 4mA	—	10% V <sub>CC</sub>	V	
High Level Output Voltage	V <sub>OH</sub>	I <sub>OH</sub> = -4mA	90% V <sub>CC</sub>	—	V	
CMOS Load	L <sub>CMOS</sub>	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>		—	5	ms	
Start-up Time	t <sub>str</sub>	@Minimum operating voltage to be 0 sec.	—	10	ms	
1 Sigma Jitter	J <sub>Sigma</sub>	Measured with Wavecrest SIA-3000	—	8	ps	
Peak to Peak Jitter	J <sub>PK-PK</sub>		—	80	ps	

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)

