



# 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  
 $\pm 10 \times 10^{-6}$  (–10 to +70°C)  
 $\pm 15 \times 10^{-6}$  (–40 to +85°C)
- CMOS output
- Supply voltage  $V_{CC} = 1.8V$   
Low Power Supply Consumption

### Applications

- Wi-Fi, Bluetooth® etc.

### How to Order

KC2520C 40.0000 C 1 □ 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 Individual Specification (STD Specification is "00")

Packaging (Tape & Reel 2000 pcs./ reel)

Table 1

Freq. Tol.		Operating Temperature Range (°C)	Note
Code	$\times 10^{-6}$		
Y	$\pm 10$	–10 to +70	Please contact us for available frequencies. Standard specifications
K	$\pm 20$	–40 to +85	
L	$\pm 15$		

### Specifications

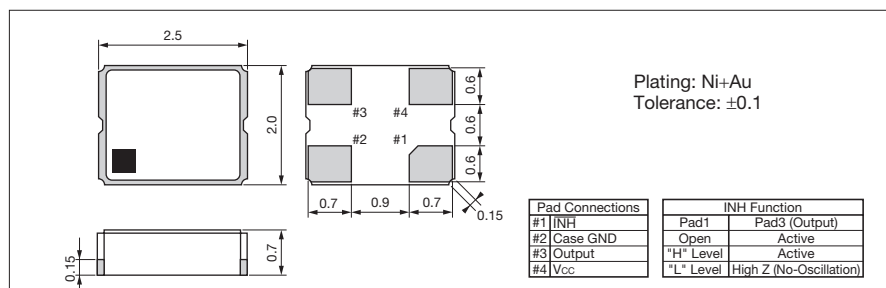
Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	fo		1.5	54	MHz
Frequency Tolerance	f <sub>tol</sub>	Initial tolerance, Operating temperature range, Rated power supply voltage change, Aging (1 year @25°C), Shock and vibration	Op. Temp.: –40 to +85°C Op. Temp.: –40 to +85°C Op. Temp.: –10 to +70°C	–15 +15 –20 +20 –10 +10	$\times 10^{-6}$
Storage Temperature Range	T <sub>stg</sub>		–55	+125	°C
Operating Temperature Range	T <sub>use</sub>		–10 –40	+70 +85	°C
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>	CL≤15pF	1.5≤fo<24MHz 24≤fo≤54MHz	— 4 4.5	mA
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 Wavcrest 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)

