

Clock Oscillators Surface Mount Type

KC2520B-C1 Series



CMOS/ 1.8V, 2.5V, 3.3V Compatible/ 2.5×2.0mm



RoHS Compliant

Features

- Miniature ceramic package
2.5 (L) × 2.0 (W) × 0.7 (H) mm (Typ.)
- Highly reliable with seam welding
- CMOS output
- Supply voltage 1.8/ 2.5/ 3.3V
Wide operating voltage range 1.6 to 3.63V
- Low current consumption
- High output frequency 125MHz

Table 1

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

How to Order

KC2520B 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, 2.5V, 3.3V Compatible)
- 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)

Specifications

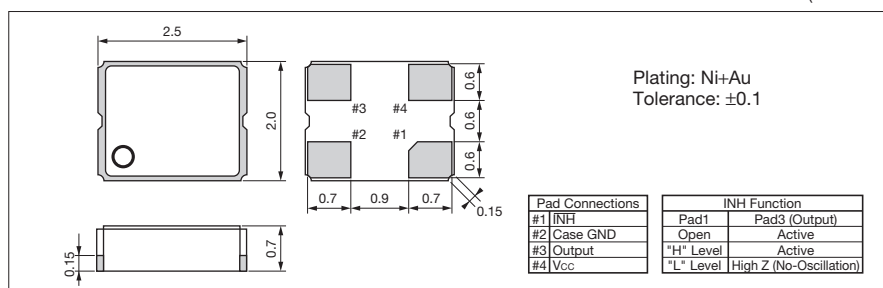
Item	Symbol	Conditions	Specifications		Units
			Min.	Max.	
Output Frequency Range	f _o		1.5	125	MHz
Frequency Tolerance	f _{tol}	Initial tolerance, Operating temperature range, Rated power supply voltage change, Aging (1 year @25°C), Shock and vibration	Op.Temp.: -40 to +85°C Op.Temp.: -10 to +70°C Op.Temp.: -10 to +70°C	-100 +50 +30	$\times 10^{-6}$
Storage Temperature Range	T _{stg}		-55	+125	°C
Operating Temperature Range	T _{use}	Standard Specifications Extend (Option)	-10 -40	+70 +85	°C
Max. Supply Voltage	—	1.5≤f _o ≤80MHz 80<f _o ≤125MHz	-0.6 -0.3	+6.0 +4.0	V
Supply Voltage	V _{CC}		+1.6	+3.63	V
Current Consumption (Maximum Loaded/ 1.6≤V _{CC} ≤2.0V)	I _{CC}	1.5≤f _o ≤24MHz	—	2.5	mA
		24<f _o ≤40MHz	—	3.5	
		40<f _o ≤60MHz	—	5.0	
		60<f _o ≤80MHz	—	6.0	
		80<f _o ≤125MHz	—	11.0	
Current Consumption (Maximum Loaded/ 2.0<V _{CC} ≤2.8V)		1.5≤f _o ≤24MHz	—	3.0	
		24<f _o ≤40MHz	—	4.5	
		40<f _o ≤60MHz	—	5.5	
		60<f _o ≤80MHz	—	6.5	
		80<f _o ≤125MHz	—	14.0	
Current Consumption (Maximum Loaded/ 2.8<V _{CC} ≤3.63V)		1.5≤f _o ≤24MHz	—	3.5	
		24<f _o ≤40MHz	—	5.0	
		40<f _o ≤60MHz	—	6.0	
		60<f _o ≤80MHz	—	8.0	
		80<f _o ≤125MHz	—	17.0	
Stand-by Current	I _{std}		—	10	μA
Symmetry	SYM	@50%V _{CC}	45	55	%
Rise/ Fall Time (10% V _{CC} to 90% V _{CC} Maximum Loaded)	tr/ tf	1.6≤V _{CC} ≤2.0V/ 1.5<f _o ≤80MHz 2.0<V _{CC} ≤2.8V/ 1.5<f _o ≤80MHz 2.8<V _{CC} ≤3.63V/ 1.5<f _o ≤80MHz 1.6≤V _{CC} ≤3.63V/ 80<f _o ≤125MHz	— — — —	6.5 5.0 4.5 4.0	ns
Low Level Output Voltage	V _{OL}	I _{OL} =4mA	—	10%V _{CC}	V
High Level Output Voltage	V _{OH}	I _{OH} =-4mA	90%V _{CC}	—	V
Output Load	L _{CMOS}	CMOS Output	—	15	pF
Low Level Input Voltage	V _{IL}		—	30%V _{CC}	V
High Level Input Voltage	V _{IH}		70%V _{CC}	—	V
Disable Time	t _{dis}		—	100	ns
Enable Time	t _{ena}		—	5	ms
Start-up Time	t _{str}	@Minimum operating voltage to be 0 sec.	—	10	ms
1 Sigma Jitter	J _{Sigma}	Measured with Wavecrest SIA-3000	1.5≤f _o ≤80MHz 80<f _o ≤125MHz	8 4	ps
Peak to Peak Jitter	J _{PK-PK}	Measured with Wavecrest SIA-3000	1.5≤f _o ≤80MHz 80<f _o ≤125MHz	80 40	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)

