

Clock Oscillators Surface Mount Type

KC2520B-C1 Series



CMOS/ 1.8V ~ 3.3V/ 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. Tol. Code	Tol. × 10 ⁻⁶	Operating Temperature Range (°C)	Note
0	± 50	-10 to +70	Standard specifications
S	± 30		
U	± 25	-40 to +85	With only certain frequencies
F	± 100		
G	± 50		
6	± 50	-40 to +105	

How to Order

KC2520B 25.0000 C 1 0 E 00
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Series
- 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)

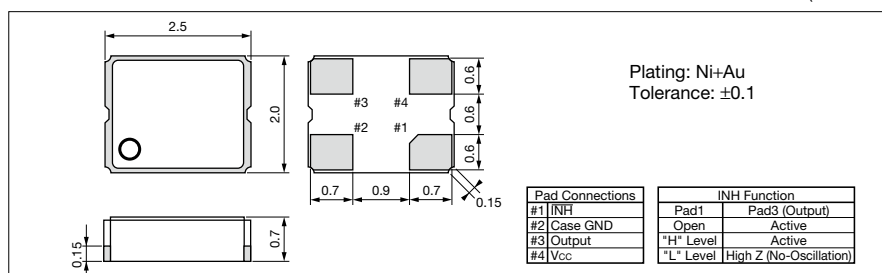
Specifications

Item	Symbol	Conditions	Specifications		Units	
			Min.	Max.		
Output Frequency Range	fo		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/ -40 to +85°C/ -40 to +105°C Op.Temp.: -10 to +70°C	-100 -50 -30	+100 +50 +30	×10 ⁻⁶
Storage Temperature Range	T _{stg}		-55	+125	°C	
Operating Temperature Range	T _{use}	Standard Specifications Extend (Option)	-10 -40	+70 +105	°C	
Max. Supply Voltage	—	1.5 ≤ fo ≤ 80MHz 80 < fo ≤ 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 ≤ fo ≤ 24MHz	—	2.5	mA	
		24 < fo ≤ 40MHz	—	3.5		
		40 < fo ≤ 60MHz	—	5.0		
		60 < fo ≤ 80MHz	—	6.0		
Current Consumption (Maximum Loaded/ 2.0 < V _{cc} ≤ 2.8V)	I _{cc}	80 < fo ≤ 125MHz	—	11.0	mA	
		1.5 ≤ fo ≤ 24MHz	—	3.0		
		24 < fo ≤ 40MHz	—	4.5		
		40 < fo ≤ 60MHz	—	5.5		
Current Consumption (Maximum Loaded/ 2.8 < V _{cc} ≤ 3.63V)	I _{cc}	60 < fo ≤ 80MHz	—	6.5	mA	
		80 < fo ≤ 125MHz	—	14.0		
		1.5 ≤ fo ≤ 24MHz	—	3.5		
		24 < fo ≤ 40MHz	—	5.0		
Current Consumption (Maximum Loaded/ 2.8 < V _{cc} ≤ 3.63V)	I _{cc}	40 < fo ≤ 60MHz	—	6.0	mA	
		60 < fo ≤ 80MHz	—	8.0		
Current Consumption (Maximum Loaded/ 2.8 < V _{cc} ≤ 3.63V)	I _{cc}	80 < fo ≤ 125MHz	—	17.0	mA	
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 < fo ≤ 80MHz	—	6.5	ns	
		2.0 < V _{cc} ≤ 2.8V/ 1.5 < fo ≤ 80MHz	—	5.0		
		2.8 < V _{cc} ≤ 3.63V/ 1.5 < fo ≤ 80MHz	—	4.5		
		1.6 ≤ V _{cc} ≤ 3.63V/ 80 < fo ≤ 125MHz	—	4.0		
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 ≤ fo ≤ 80MHz	—	8	ps
			80 < fo ≤ 125MHz	—	4	
Peak to Peak Jitter	J _{PK-PK}	Measured with Wavecrest SIA-3000	1.5 ≤ fo ≤ 80MHz	—	80	ps
			80 < fo ≤ 125MHz	—	40	

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)

