

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		
6	± 50	-40 to +105	

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)

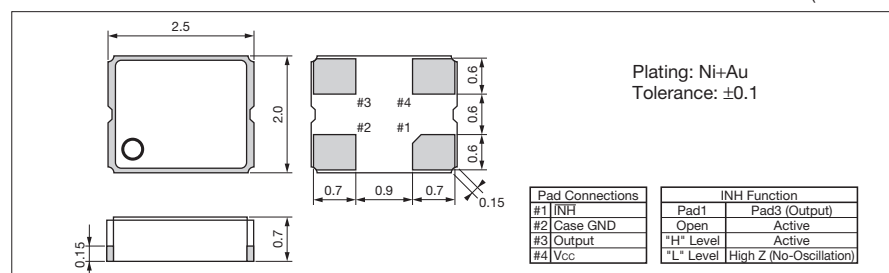
Specifications

Item	Symbol	Conditions		Specifications		Units
				Min.	Max.	
Output Frequency Range	f _o			1.5	125	MHz
				-100	+100	
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	-50	+50	×10 ⁻⁶
			Op. Temp.: -10 to +70°C/ -40 to +85°C/ -40 to +105°C			
			Op.Temp.: -10 to +70°C	-30	+30	
Storage Temperature Range	T _{stg}			-55	+125	
Operating Temperature Range	T _{use}	Standard Specifications		-10	+70	°C
		Extend (Option)		-40	+105	
Max. Supply Voltage	—	1.5≤f _o ≤80MHz		-0.6	+6.0	V
		80<f _o ≤125MHz		-0.3	+4.0	
Supply Voltage	V _{CC}			+1.6	+3.63	V
Current Consumption (Maximum Loaded/ 1.6≤V _{CC} ≤2.0V)		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)	I _{CC}	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		—	6.5	ns
		2.0<V _{CC} ≤2.8V/ 1.5<f _o ≤80MHz		—	5.0	
		2.8<V _{CC} ≤3.63V/ 1.5<f _o ≤80MHz		—	4.5	
		1.6≤V _{CC} ≤3.63V/ 80<f _o ≤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≤f _o ≤80MHz	—	8	ps
			80<f _o ≤125MHz	—	4	
Peak to Peak Jitter	J _{PK-PK}	Measured with Wavecrest SIA-3000	1.5≤f _o ≤80MHz	—	80	ps
			80<f _o ≤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.

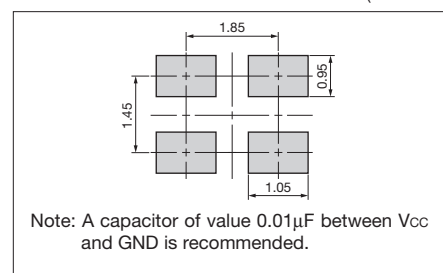
Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

AVX:

<u>KC2520B27.0000C20E00</u>	<u>KC2520B48.0000C10E00</u>	<u>KC2520B27.0000C10E00</u>	<u>KC2520B25.0000C10E00</u>
<u>KC2520B24.0000C10E00</u>	<u>KC2520B14.3182C10E00</u>	<u>KC2520B24.5760C10E00</u>	<u>KC2520B25.0000C1GE00</u>
<u>KC2520B33.3333C1GE00</u>	<u>KC2520B4.09600C1GE00</u>	<u>KC2520B48.0000C1GE00</u>	<u>KC2520B7.37280C1GE00</u>
<u>KC2520B12.0000C10E00</u>	<u>KC2520B14.7456C1GE00</u>	<u>KC2520B33.3333C1GESH</u>	<u>KC2520B50.0000C1FE00</u>
<u>KC2520B50.0000C1GE00</u>	<u>KC2520B66.6667C1GE00</u>	<u>KC2520B16.0000C20EME</u>	<u>KC2520B16.0000C10E00</u>
<u>KC2520B30.0000C10E00</u>	<u>KC2520B40.0000C10E00</u>	<u>KC2520B50.0000C10E00</u>	