

Clock Oscillators Surface Mount Type

KC2016B-C1 Series



CMOS/ 1.8V ~ 3.3V/ 2.0×1.6mm



RoHS Compliant

Features

- Ultra Miniature ceramic package
2.0 (L) × 1.6 (W) × 0.55 (H) mm (Typ.)
- Highly reliable with seam welding
- CMOS output
- Supply voltage $V_{CC} = 1.8V/2.5V/3.3V$
Wide operating voltage range 1.6 to 3.63V
- Low current consumption

Table 1

Freq. Tol. Code	$\times 10^{-6}$	Operating Temperature Range (°C)	Note
O	± 50		Standard specifications
S	± 30	-10 to +70	With only certain frequencies
U	± 25		
F	± 100	-40 to +85	
G	± 50		
6	± 50	-40 to +105	

How to Order

KC2016B 40.0000 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)

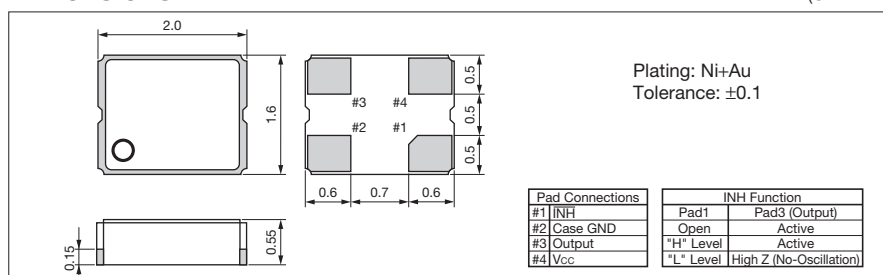
Specifications

Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	f_o		1.5	50	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	-100	+100
			Op. Temp.: -10 to +70°C/ -40 to +85°C/ -40 to +105°C	-50	+50
			Op. Temp.: -10 to +70°C	-30	+30
			Op. Temp.: -10 to +70°C	-25	+25
Storage Temperature Range	T_{stg}		-55	+125	°C
Operating Temperature Range	T_{use}	Standard Specifications	-10	+70	°C
		Extend (Option)	-40	+85	
Max. Supply Voltage	—		-0.6	+6.0	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 ≤50MHz	—	4.5	
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 ≤50MHz	—	5.0	
Current Consumption (Maximum Loaded/ 2.8< V_{CC} ≤3.63V)	I_{CC}	1.5≤ f_o ≤24MHz	—	3.5	
		24< f_o ≤40MHz	—	5.0	
		40< f_o ≤50MHz	—	6.0	
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)	t_r/ t_f	1.6≤ V_{CC} ≤2.0V	—	6.5	ns
		2.0< V_{CC} ≤2.8V	—	5.0	
		2.8< V_{CC} ≤3.63V	—	4.5	
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
CMOS Load	L_{CMOS}	CMOS Output	—	15	pF
Input Voltage Range	V_{IN}		0	V_{CC}	V
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	JSigma	Measured with Wavecrest SIA-3000	—	8	ps
Peak to Peak Jitter	JPk-Pk		—	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.

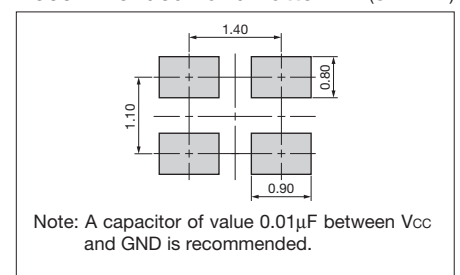
Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)



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