



CMOS/ 1.8V to 3.3V/ 2.5×2.0mm for Automotive



AEC-Q100/200 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

Table 1

Freq. Tol. Code	× 10 ⁻⁶	Operating Temperature Range (°C)	Note
F	±100	-40 to +85	Please contact us for available frequencies.
G	± 50	-40 to +125	
6	± 50	-40 to +105	Standard specifications
X	±100	-40 to +125	

How to Order

KC2520M 25.0000 C 1 □ E SH
① ② ③ ④ ⑤ ⑥ ⑦

- ①Series
- ②Output Frequency
- ③Output Type (CMOS)
- ④Supply Voltage (1.8V, 2.5V, 3.3V Compatible)
- ⑤Frequency Tolerance (See Table 1)
- ⑥Symmetry/ INH Function (45/ 55%)
- ⑦Individual Specification (STD Specification is "SH")

Packaging (Tape & Reel 2000 pcs./ reel)

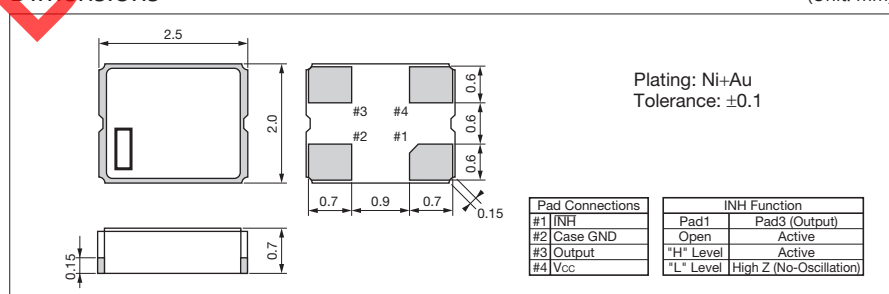
Specifications

Item	Symbol	Conditions	Specifications		Unit	
			Min.	Max.		
Output Frequency Range	f _o		1.5	60	MHz	
Frequency Tolerance	f _{tol}	Initial tolerance, Operating temperature range, Rated power supply voltage change, Aging (1 year @25°C), Shock and vibration	Temp.: -40 to +85°C -40 to +125°C	-100	+100	× 10 ⁻⁶
Storage Temperature Range	T _{stg}		-55	+125	°C	
Operating Temperature Range	T _{use}		-40	+125	°C	
Max. Supply Voltage	—	1.5 ≤ f _o ≤ 60MHz	-0.6	+6.5	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	—	3.0		
		40 < f _o ≤ 60MHz	—	4.5		
		1.5 ≤ f _o ≤ 24MHz	—	3.0		
Current Consumption (Maximum Loaded/ 2.0 < V _{cc} ≤ 2.8V)	I _{cc}	24 < f _o ≤ 40MHz	—	4.0	mA	
		40 < f _o ≤ 60MHz	—	5.0		
		1.5 ≤ f _o ≤ 24MHz	—	3.5		
Current Consumption (Maximum Loaded/ 2.8 < V _{cc} ≤ 3.63V)	I _{cc}	24 < f _o ≤ 40MHz	—	5.0	mA	
		40 < f _o ≤ 60MHz	—	6.5		
		1.5 ≤ f _o ≤ 24MHz	—	10		
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	—	6.5	ns	
		2.0 < V _{cc} ≤ 2.8V	—	5.5		
		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	
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	—	8	ps	
Peak to Peak Jitter	J _{pk-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)

