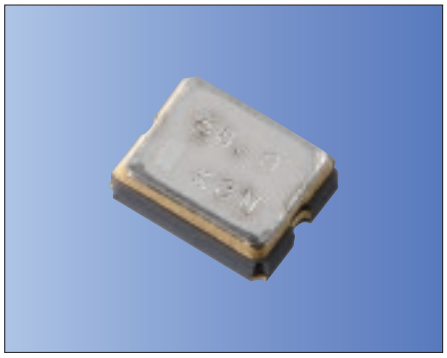
High Stability Clock Oscillators Surface Mount Type
KC2520C-C2 Series

KYOCERA

CMOS/ 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.)
- High Stability Output Frequency
  ±10×10⁻⁶ (–10 to +70°C)
  ±15×10⁻⁶ (–40 to +85°C)
- CMOS output
- Supply voltage Vcc=2.5V/ 3.3V Compatible
  Low Power Supply Consumption
- Wide Operating Voltage Range 2.25 to 3.63V

Applications

- Wi-Fi, Bluetooth® etc.

How to Order

KC2520C 40.0000 C 2 L 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 (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)

Table 1

Freq. Tol. Code	Freq. Tol. × 10⁻⁶	Operating Temperature Range (°C)	Note
Y	±10	–10 to +70	With only certain frequencies
K	±20	–40 to +85	
L	±15		Standard specifications

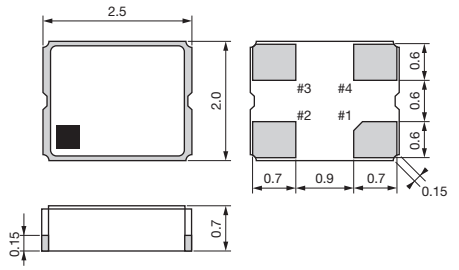
Specifications

Item	Symbol	Conditions		Min.	Max.	Units
Output Frequency Range	fo			1.5	54	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	–15	+15	×10⁻⁶
			Op. Temp.: –40 to +85°C	–20	+20	
			Op. Temp.: –10 to +70°C	–10	+10	
Storage Temperature Range	T_stg			–55	+125	°C
Operating Temperature Range	T_use			–10	+70	°C
				–40	+85	
Max. Supply Voltage	—			–0.3	+4.0	V
Supply Voltage	Vcc			+2.25	+3.63	V
Current Consumption (Maximum Loaded)	Icc	No-load	1.5≤fo<24MHz	—	3.0	mA
			24≤fo≤40MHz	—	3.5	
			40<fo≤54MHz	—	4.0	
		CL≤15pF	1.5≤fo<24MHz	—	3.5	
			24≤fo≤40MHz	—	5.0	
			40<fo≤54MHz	—	6.0	
Stand-by Current	I_std			—	5	µA
Symmetry	SYM	@50% Vcc		45	55	%
Rise/ Fall Time (10% Vcc to 90% Vcc Maximum Loaded)	tr/ tf			—	4	ns
Low Level Output Voltage	VOL	IOL=4mA		—	10% Vcc	V
High Level Output Voltage	VOH	IOH=–4mA		90% Vcc	—	V
CMOS Load	L_CMOS	CMOS Output		—	15	pF
Input Voltage Range	VIN			0	Vcc	V
Low Level Input Voltage	VIL			—	30% Vcc	V
High Level Input Voltage	VIH			70% Vcc	—	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)



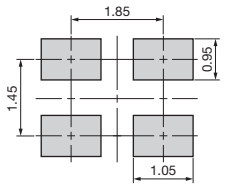
Plating: Ni+Au
Tolerance: ±0.1

Pad Connections	
#1	INH
#2	Case GND
#3	Output
#4	Vcc

INH Function	
Pad1	Pad3 (Output)
Open	Active
"H" Level	Active
"L" Level	High Z (No-Oscillation)

Recommended Land Pattern

(Unit: mm)



Note: A capacitor of value 0.01µF between Vcc and GND is recommended.

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