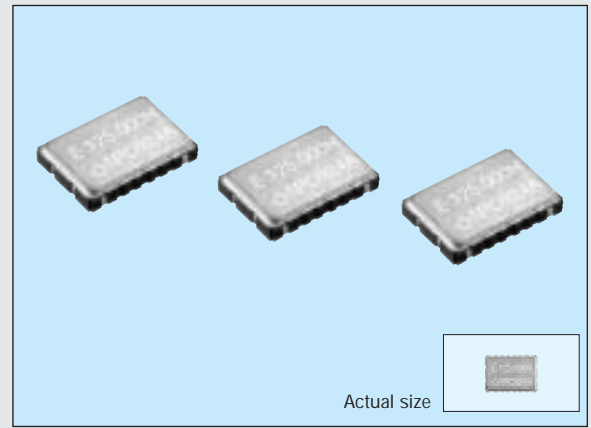


LOW-JITTER HIGH FREQUENCY CRYSTAL OSCILLATOR

EG-2001CA

Product number (please refer to page 2)
Q3801CA0xx xxx 00

- Generates high frequency clock with fundamental mode.
- Very low jitter and low phase noise.
- Ceramic package with 1.4 mm Max. thickness.
- Excellent environmental capability.
- Low current consumption due to use of CMOS technology.



Specifications (characteristics)

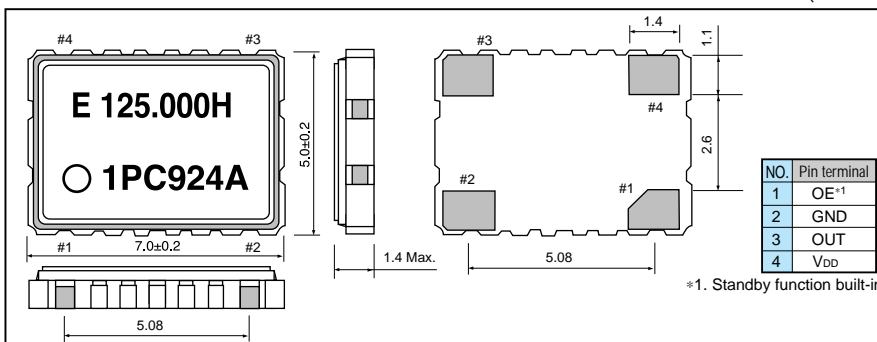
Item	Symbol	Specifications	Remarks
Output frequency range	f_0	106.2500 MHz to 170.0000 MHz	Please contact us for inquiries about the available frequency
Power source voltage	Max. supply voltage	V_{DD-GND}	-0.5 V to +7.0 V
	Operating voltage	V_{DD}	3.3 V \pm 0.3 V
Temperature range	Storage temperature	T_{STG}	-40 °C to +100 °C
	Operating temperature	T_{OPR}	0 °C to +70 °C
Frequency stability	$\Delta f/f_0$	$\pm 50 \times 10^{-6}$, $\pm 100 \times 10^{-6} *1$	0 °C to +70 °C
Current consumption	I_{OP}	50 mA Max.	$OE = V_{DD}$
Output disable current	I_{OE}	10 μ A Max.	$OE = GND$
Duty	CMOS level	tw/t	45 % to 55 %
	TTL level		40 % to 60 %
Output voltage	V_{OH}	$V_{DD} - 0.4$ V Min.	$I_{OH} = -8$ mA
	V_{OL}	0.4 V Max.	$I_{OL} = 8$ mA
Output load condition (fan out)	C_L	25 pF Max.	$f_0 \leq 135.0000$ MHz
		15 pF Max.	$f_0 > 135.0000$ MHz
Output enable/disable input voltage	V_{IH}	0.7 V_{DD} Min.	OE
	V_{IL}	0.3 V_{DD} Max.	OE
Output rise time	CMOS level	t_{TLH}	2 ns Max.
	TTL level		1.5 ns Max.
Output fall time	CMOS level	t_{THL}	2 ns Max.
	TTL level		1.5 ns Max.
Oscillation start up time	t_{OSC}	10 ms Max.	Time at 3.0 V to be 0 s
Jitter	t_{DJ}	5 ps Typ.(10 ps Max.)	Deterministic Jitter
	t_{RJ}	3 ps Typ.(4 ps Max.)	Random Jitter
	t_{RMS}	3 ps Typ.(4 ps Max.)	σ
	t_{P-P}	25 ps Typ.(40 ps Max.)	Peak to Peak
	t_{ACC}	4 ps Typ.(5 ps Max.)	Accumulated Jitter (σ) n = 2 to 50000 cycles

*1 Frequency stability is including variation in reflow soldering drift, operating temperature range, operating voltage range, load change and Aging.(As per below table)

Operating voltage	C : 3.3 V	
Output mode	P : Fundamental frequency	
Frequency stability	H : $\pm 100 \times 10^{-6}$ (0 °C to +70 °C)	PCH
	Y : $\pm 100 \times 10^{-6}$ (0 °C to +70 °C) except Aging	PCY
	Z : $\pm 50 \times 10^{-6}$ (0 °C to +70 °C) except Reflow soldering drift, Load change, Operating voltage range and Aging	PCZ

External dimensions

(Unit: mm)



Recommended soldering pattern

(Unit: mm)

