



CRYSTAL OSCILLATOR

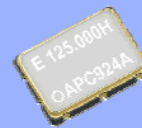
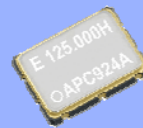
LOW-JITTER SAW OSCILLATOR

EG-2101CA

- Frequency range : 62.5 MHz to 99.999 MHz
- Supply voltage : 3.3 V
- Output : Differential LV-PECL
- Function : Output enable(OE)
- External dimensions : 7.0 × 5.0 × 1.2 t (mm) Typ.
- Very low jitter and low phase noise by SAW unit.



Product Number (please contact us)
Q3803CA00xxxx00



Actual size



Specifications (characteristics)

Item	Symbol	Specifications	Remarks
Output frequency range	f_0	62.500 MHz to 99.999 MHz	Please contact us for inquiries regarding available frequencies
Supply voltage	V_{CC}	3.3 V ± 0.15 V	
Temperature range	Storage temperature	T_{stg}	-40 °C to +100 °C
	Operating temperature	T_{use}	0 °C to +70 °C
Frequency tolerance	f_{tol}	$\pm 50 \times 10^{-6}$, $\pm 100 \times 10^{-6}$	0 °C to +70 °C *1
Current consumption	I_{CC}	60 mA Max.	OE=VCC, $R_L=50 \Omega$
Disable current	I_{OE}	25 mA Max.	OE=GND
Symmetry *3	SYM	D:47.5 % to 52.5 %	DCH,DCY,DCZ at outputs crossing point
High output voltage	V_{OH}	2.35 V Typ. $V_{CC}-1.025$ V to $V_{CC}-0.88$ V	DC characteristics
Low output voltage	V_{OL}	1.60 V Typ. $V_{CC}-1.81$ V to $V_{CC}-1.62$ V	
Output load condition	R_L	50 Ω	Terminated to VCC -2.0 V
High input voltage	V_{IH}	70 % V_{CC} Min.	OE terminal
Low input voltage	V_{IL}	30 % V_{CC} Max.	OE terminal
Rise time / Fall time	t_r / t_f	600 ps Max.	20 % to 80 % ($V_{OH}-V_{OL}$)
Start-up time	t_{str}	10 ms Max.	Time at minimum supply voltage to be 0 s
	t_{DJ}	0.2 ps Typ.	Deterministic Jitter
	t_{RJ}	3 ps Typ.	Random Jitter
	t_{RMS}	3 ps Typ.	σ (RMS of total distribution)
	t_{p-p}	25 ps Typ.	Peak to Peak
	t_{acc}	4 ps Typ.	Accumulated Jitter(σ) n=2 to 50000 cycles
Phase Jitter	t_{PJ}	0.05×10^{-3} UI Typ.	Offset frequency: 12 kHz to 20 MHz
		1 ps Max.	
Frequency aging *3	f_{aging}	$\pm 5 \times 10^{-6}$ / year Max.	+25 °C, First year, $V_{CC}=3.3$ V

*1 As per below table

*2 Based on DTS-2075 Digital timing system made from WAVECREST with jitter analysis software VISI6.

*3 Except : PCH,DCH

Output mode (Symmetry)		D:Symmetry 50 ± 2.5 %
Details of frequency tolerance	H: $\pm 100 \times 10^{-6}$ (0 °C to +70 °C)*4	DCH
	Y: $\pm 100 \times 10^{-6}$ (0 °C to +70 °C)*5	DCY
	Z: $\pm 50 \times 10^{-6}$ (0 °C to +70 °C)*6	DCZ

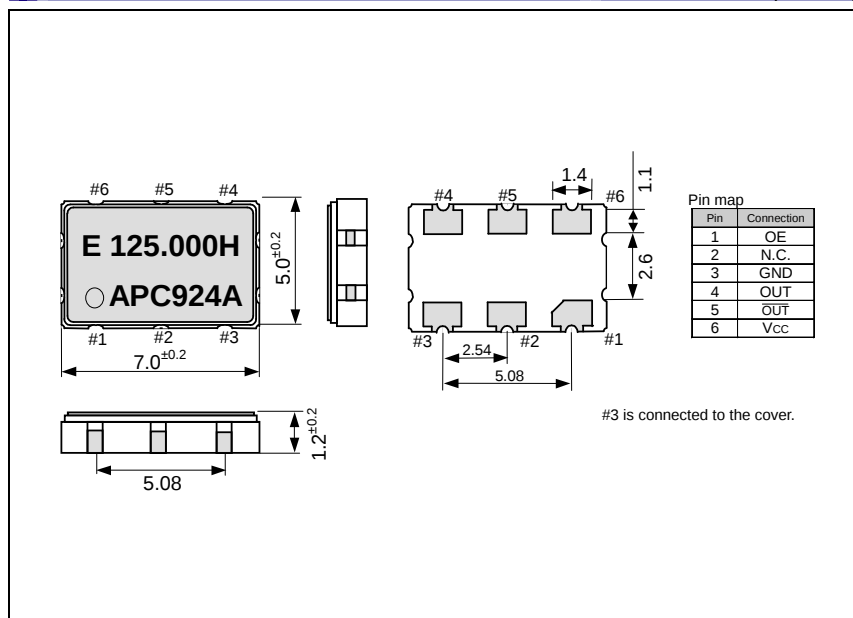
*4 This includes initial frequency tolerance, temperature variation, supply voltage variation, reflow drift, and aging(+25 °C,10 years).

*5 This includes initial frequency tolerance, temperature variation, supply voltage variation, and reflow drift(except aging).

*6 This includes initial frequency tolerance and temperature variation(except supply voltage variation, reflow drift, aging).

External dimensions

(Unit:mm)



Footprint (Recommended)

(Unit:mm)

