



## LOW-JITTER SAW OSCILLATOR (SPSO)

OUTPUT : LV-PECL, LVDS



Product Number  
 EG-2121CB P: X1M000211xxxx00  
 EG-2121CB L: X1M000231xxxx00  
 EG-2102CB P: X1M000201xxxx00  
 EG-2102CB L: X1M000221xxxx00

# EG-2121CB

# EG-2102CB

- Frequency range : 100 MHz to 700 MHz
  - Supply voltage : 2.5 V ... EG-2121CB  
3.3 V ... EG-2102CB
  - Output : LV-PECL or LVDS
  - Function : Output enable (OE)
  - External dimensions : 5.0 × 3.2 × 1.4 mm
- Low jitter and low phase noise by SAW unit.



## Specifications (characteristics)

Item	Symbol	LV-PECL		LVDS		Conditions / Remarks
		EG-2121CB P	EG-2102CB P	EG-2121CB L	EG-2102CB L	
Output frequency range	f <sub>o</sub>	100 MHz to 700 MHz				Please contact us about available frequencies.
Supply voltage	V <sub>cc</sub>	2.5 V ± 0.125 V	3.3 V ± 0.33 V	2.5 V ± 0.125 V	3.3 V ± 0.33 V	
Storage temperature	T <sub>stg</sub>	-55 °C to +125 °C				Storage as single product.
Operating temperature	T <sub>use</sub>	P: 0 °C to +70 °C, R: -5 °C to +85 °C, S: -20 °C to +70 °C				
Frequency tolerance	f <sub>tol</sub>	G: ±50 × 10 <sup>-6</sup> , H: ±100 × 10 <sup>-6</sup>				
Current consumption	I <sub>cc</sub>	60 mA Max.		30 mA Max.		OE=V <sub>cc</sub> , L_ECL=50 Ω or L_LVDS=100 Ω
Disable current	I <sub>dis</sub>	2 mA Max.		15 mA Max.		OE=GND
Symmetry	SYM	45 % to 55 %				At outputs crossing point
Output voltage (LV-PECL)	V <sub>OH</sub>	1.55 V Typ.	2.35 V Typ.	-		DC characteristics
		V <sub>cc</sub> -1.025 V to V <sub>cc</sub> -0.88 V				
	V <sub>OL</sub>	0.80 V Typ.	1.60 V Typ.	-		
Output voltage (LVDS)	V <sub>OD1</sub>	-		350 mV Typ., 247 mV to 454 mV		DC characteristics
	dV <sub>OD</sub>	-		50 mV Max.		
	V <sub>OS1</sub>	-		1.25 V Typ., 1.125 V to 1.375 V		
	dV <sub>OS</sub>	-		150 mV Max.		
Output load condition (ECL) / (LVDS)	L_ECL	50 Ω		-		Terminated to V <sub>cc</sub> -2.0 V
	L_LVDS	-		100 Ω		Connected between OUT to OUT
Input voltage	V <sub>IH</sub>	70 % V <sub>cc</sub> Min.				OE terminal
	V <sub>IL</sub>	30 % V <sub>cc</sub> Max.				
Rise time / Fall time	t <sub>r</sub> / t <sub>f</sub>	400 ps Max.				Between 20 % and 80 % of (V <sub>OH</sub> -V <sub>OL</sub> ). Between 20 % and 80 % of Differential Output Peak to Peak voltage.
Start-up time	t <sub>str</sub>	10 ms Max.				Time at minimum supply voltage to be 0 s
Phase Jitter	t <sub>pj</sub>	0.23 ps Max.		0.27 ps Max.		Offset frequency: 12 kHz to 20 MHz
		0.22 ps Max.		0.24 ps Max.		
		0.21 ps Max.		0.23 ps Max.		
		0.18 ps Max.		0.19 ps Max.		
		0.16 ps Max.		0.16 ps Max.		
		0.14 ps Max.		0.14 ps Max.		
Frequency aging	f <sub>age</sub>	± 10 × 10 <sup>-6</sup> / year Max.				+25 °C, First year, V <sub>cc</sub> =2.5 V, 3.3 V

Product Name EG-2121CB 212.500000MHz P H P A (⑤⑥⑦: GRA, GSA are not available)

(Standard form)

① ② ③ ④⑤⑥⑦

① Model ② Package type ③ Frequency

④ Output(P:LV-PECL, L:LVDS)

⑤ Frequency tolerance ⑥ Operating temperature

⑦ Frequency aging (A\*1: Frequency tolerance include aging, N\*2: Frequency tolerance exclude aging)

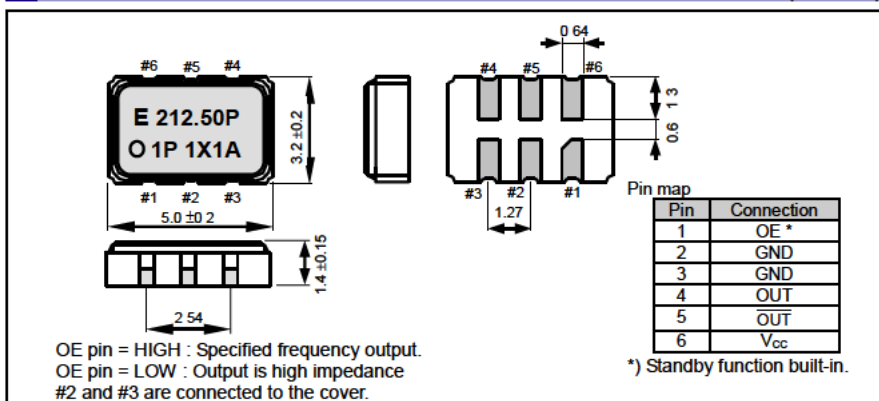
\*1 This includes initial frequency tolerance, temperature variation, supply voltage change, reflow drift, and aging(+25 °C, 10 years).

\*2 This includes initial frequency tolerance, temperature variation, supply voltage change, and reflow drift (except aging).

⑤ Frequency tolerance		⑥ Operating temp.	
G	±50 × 10 <sup>-6</sup>	P	0 °C to +70 °C
H	±100 × 10 <sup>-6</sup>	R	-5 °C to +85 °C
		S	-20 °C to +70 °C

## External dimensions

(Unit:mm)



## Footprint (Recommended)

(Unit:mm)

