

LOW-JITTER SAW OSCILLATOR (SPSO)

OUTPUT : LV-PECL, LVDS

For high temperature environment



Product Number
XG-2123CA P: X1M000331xxxx00
XG-2123CA L: X1M000371xxxx00

XG-2123CA

- Frequency range : 100 MHz to 700 MHz
- Supply voltage : 2.5 V ... XG-2123CA
- Output : LV-PECL or LVDS
- Function : Output enable (OE)
- External dimensions : 7.0 × 5.0 × 1.2 mm

•Low jitter and low phase noise by SAW unit.



Specifications (characteristics)

Item	Symbol	LV-PECL		LVDS		Conditions / Remarks	
		XG-2123CA P		XG-2123CA L			
Output frequency range	f _o	100 MHz to 700 MHz				Please contact us about available frequencies.	
Supply voltage	V _{CC}	2.5 V ± 0.125 V		2.5 V ± 0.125 V			
Storage temperature	T _{stg}	-55 °C to +125 °C				Storage as single product.	
Operating temperature	T _{use}	P: 0 °C to +70 °C, R: -5 °C to +85 °C, S: -20 °C to +70 °C					
Frequency tolerance	f _{tol}	H: ±100 × 10 ⁻⁶					
Current consumption	I _{CC}	60 mA Max.		30 mA Max.		OE=V _{CC} , L_ECL=50 Ω or L_LVDS=100 Ω	
Disable current	I _{dis}	2 mA Max.		15 mA Max.		OE=GND	
Symmetry	SYM	45 % to 55 %				At outputs crossing point	
Output voltage (LV-PECL)	V _{OH}	1.55 V Typ.		-		DC characteristics	
		V _{CC} -1.025 V to V _{CC} -0.88 V		-			
	V _{OL}	0.80 V Typ.		-			
Output voltage (LVDS)	V _{OD}	-		350 mV Typ., 247 mV to 454 mV		DC characteristics	
	dV _{OD}	-		50 mV Max.			
	V _{OS}	-		1.25 V Typ., 1.125 V to 1.375 V			
	dV _{OS}	-		150 mV Max.			
Output load condition (ECL) / (LVDS)	L_ECL	50 Ω		-		Terminated to V _{CC} -2.0 V	
	L_LVDS	-		100 Ω		Connected between OUT to $\bar{O}UT$	
Input voltage	V _{IH}	70 % V _{CC} Min.				OE terminal	
	V _{IL}	30 % V _{CC} Max.					
Rise time / Fall time	tr / tf	400 ps Max.				Between 20 % and 80 % of (V _{OH} -V _{OL}). Between 20 % and 80 % of Differential Output Peak to Peak voltage.	
Start-up time	t _{str}	10 ms Max.				Time at minimum supply voltage to be 0 s	
Phase Jitter	t _{pj}	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 _{age}	H: Included in Frequency tolerance				Max operating temperature, 5 years, V _{CC} =2.5 V, 3.3 V	

Product Name **XG-2123 CA 156.250000MHz P H R H**

(Standard form)

- ① Model ② Package type ③ Frequency
 ④ Output(P:LV-PECL, L:LVDS)
 ⑤ Frequency tolerance ⑥ Operating temperature
 ⑦ Frequency aging (H*1: Frequency tolerance include aging)

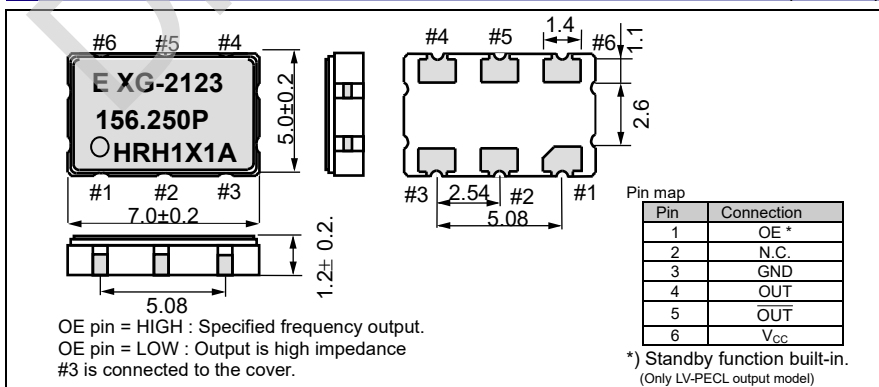
⑤ Frequency tolerance	
H	±100 × 10 ⁻⁶

⑥ Operating temp.	
P	0 °C to +70 °C
R	-5 °C to +85 °C
S	-20 °C to +70 °C

*1 This includes initial frequency tolerance, temperature variation, supply voltage change, reflow drift and estimation of 5 years aging at max operating temperature.

External dimensions

(Unit:mm)



Footprint (Recommended)

(Unit:mm)

