

CRYSTAL OSCILLATOR (SPXO)
OUTPUT : LV-PECL, LVDS
**Pb
Free**
**RoHS
Compliant**
Product Number
SG2016EGN: X1G006131xxx15
SG2016VGN: X1G006111xxx15
SG2520EGN: X1G005881xxx15
SG2520VGN: X1G005901xxx15
SG2016EGN/VGN (high frequency range)
SG2520EGN/VGN (high frequency range)

- Frequency : 500 MHz to 625 MHz
- Supply voltage : 2.5 V Typ. / 3.3 V Typ.
- Frequency tolerance : $\pm 50 \times 10^{-6}$
- Operating temperature : -40 °C to +85 °C, -40 °C to +105 °C
- Function : Output enable (OE)
- Phase jitter : 40 fs Max. ($f_o = 625$ MHz)


**SG2016EGN
SG2016VGN**
(2.0 × 1.6 × 0.63 mm)

**SG2520EGN
SG2520VGN**
(2.5 × 2.0 × 0.74 mm)

Specifications (characteristics)

Item	Symbol	Specifications		Conditions / Remarks
		LV-PECL	LVDS	
		SG2016EGN / SG2520EGN	SG2016VGN / SG2520VGN	
Output frequency	f_o	500 MHz to 625 MHz		Please contact us for available frequencies.
Supply voltage	V_{CC}	C: 3.3 V $\pm 5\%$, D: 2.5 V $\pm 5\%$		
Storage temperature	T_{stg}	-55 °C to +125 °C		
Operating temperature	T_{use}	G: -40 °C to +85 °C, H: -40 °C to +105 °C		
Frequency tolerance	f_{tol}	$\pm 50 \times 10^{-6}$ Max.		Includes initial frequency tolerance, frequency / temperature characteristics, frequency / voltage coefficient and 10 years aging (+25 °C)
Current consumption	I_{CC}	60 mA Max.	—	OE = V_{CC} , L, ECL = 50 Ω
Disable current	I_{dis}	35 mA Max.	40 mA Max.	OE = V_{CC} , L, LVDS = 100 Ω
Symmetry	SYM	45 % to 55 %		OE = GND
Output voltage (LV-PECL)	V_{OH}	$V_{CC} - 1.1$ V Min.	—	Output option: A, DC characteristic
	V_{OL}	$V_{CC} - 1.6$ V Max.		
Differential swing	V_{SW}	0.8 V to 1.6 V	500 mV to 900 mV	Output option: A
		—	800 mV to 1 400 mV	Output option: B
Output voltage (LVDS)	V_{OD}	—	700 mV to 1 100 mV	Output option: C
			250 mV to 450 mV	Output option: A
			400 mV to 700 mV	Output option: B
	dV_{OD}	—	350 mV to 550 mV	Output option: C
			50 mV Max.	Differential output voltage, V_{OD1} , V_{OD2}
			1.15 V to 1.35 V	
Output load condition	L_{ECL}	50 Ω	—	$dV_{OS} = V_{OS1} - V_{OS2} $
	L_{LVDS}	—	100 Ω	Offset voltage, V_{OS1} , V_{OS2}
Input voltage	V_{IH}	70 % V_{CC} Min.		Terminated to $V_{CC} - 2.0$ V
	V_{IL}	30 % V_{CC} Max.		Connected between OUT and $\overline{OUT}$
Rise/Fall times	t_r/t_f	0.2 ns Max.		OE terminal
Start-up time	t_{str}	10 ms Max.		20 % - 80 % of V_{SW}
Phase jitter	t_{PJ}	40 fs Max.		$t = 0$ at 90 % V_{CC}
				$f_o = 625$ MHz, Offset frequency: 12 kHz to 20 MHz

Product name

Product Name **SG2016EGN 625.000000MHz C J H P X A**
(Standard form) a b c d e f g h i

a: Model b: Output (E: LV-PECL, V: LVDS) c: Frequency d: Supply voltage e: Frequency tolerance
f: Operating temperature g: Function h: Internal identification code ("X" is default) i: Output option

d: Supply voltage
C 3.3 V Typ.
D 2.5 V Typ.

e: Freq. tolerance
J $\pm 50 \times 10^{-6}$

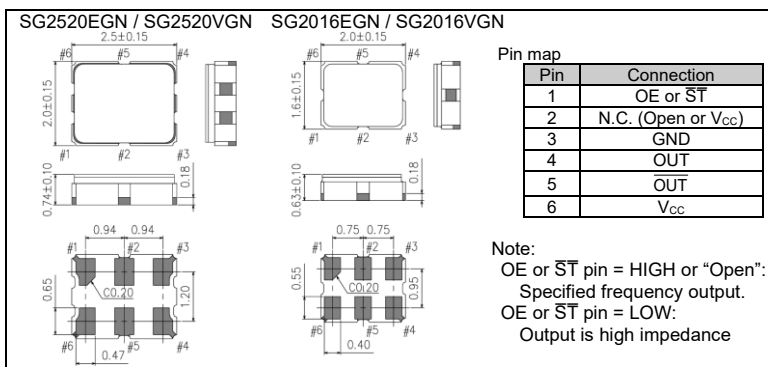
f: Operating temperature
G -40 °C to +85 °C
H -40 °C to +105 °C

g: Function
P OE

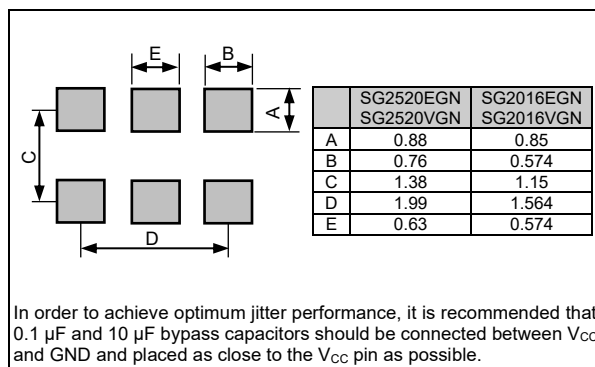
i: Output option	SG2016EGN / SG2520EGN	SG2016VGN / SG2520VGN
A Default		$V_{OD} = 250$ mV to 450 mV
B —		$V_{OD} = 400$ mV to 700 mV
C —		$V_{OD} = 350$ mV to 550 mV

External dimensions

(Unit:mm)


Footprint (Recommended)

(Unit:mm)



► Explanation of the mark that are using it for the catalog

	► PLead-free product. *No lead is intentionally added.
	► EU RoHS Compliant Product. *Compliant with the EU RoHS Directive. The product is either exempt or below applicable limits for restricted substances.
	► Designed for automotive general equipment.
	► Designed for automotive applications related to driving and safety.

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