

CRYSTAL OSCILLATOR (SPXO)

OUTPUT: LV-PECL, LVDS

SG3225EAN / VAN SG5032EAN / VAN SG7050EAN / VAN

•Achieved wide frequency range by PLL technology and Fundamental AT crystal units

Frequency range
Supply voltage
Function
Output enable (OE)
UV-PECL or LVDS





Product Number

SG3225EAN: X1G004251xxxx00 SG3225VAN: X1G004241xxxx00 SG5032EAN: X1G004271xxxx00 SG5032VAN: X1G004261xxxx00 SG7050EAN: X1G004291xxxx00 SG7050VAN: X1G004281xxxx00





SG3225EAN/VAN (3.2 × 2.5 × 1.05 mm) SG5032EAN/VAN (5.0 × 3.2 × 1.0 mm)

SG7050EAN/VAN (7.0 × 5.0 × 1.4 mm)

Specifications (characteristics)

	Symbol	Specifications			
Item		LV-PECL	LVDS	Conditions / Remarks	
		SG3225EAN / SG5032EAN / SG7050EAN	SG3225VAN / SG5032VAN / SG7050VAN		
Output frequency range	fo	73.5 MHz to 700 MHz		Please contact us about available frequencies.	
Supply voltage	Vcc	K: 2.5 V - 10 % to 3.3 V + 10 %			
Storage temperature	T_stg	-40 °C to +125 °C		Storage as single product.	
Operating temperature range	T_use	B: -20 °C to +70 °C, G: -40 °C to +85 °C			
Frequency tolerance range	f_tol	J: ± 50 × 10 ⁻⁶ , E: ± 30 × 10 ⁻⁶ , C: ± 20 × 10 ⁻⁶			
Current consumption	Icc	65 mA Max.	30 mA Max.	OE = Vcc, L_ECL = 50Ω or L_LVDS = 100Ω	
Disable current	I_dis	20 mA Max.		OE = GND	
Symmetry	SYM	45 % to 55 % At outputs crossing point			
Output voltage (LV-PECL)	Vон	Vcc - 1.0 V to Vcc - 0.8 V	_	DC characteristics	
	Vol	Vcc - 1.78 V to Vcc - 1.62 V	_		
Output voltage (LVDS)	Vod	_	250 mV to 450 mV	Vod1, Vod2	DC characteristics
	dVod	_	50 mV Max.	dVod = Vod1-Vod2	
	Vos	_	1.15 V to 1.35 V	Vos1, Vos2	
	dVos	_	150 mV Max.	dVos = Vos1-Vos2	
Output load condition	L_ECL	50 Ω	_	Terminated to Vcc -2.0 V	
(ECL) / (LVDS)	L_LVDS	_	100 Ω	Connected between OUT to OUT	
Input voltage	VIH	70 % Vcc Min.		OE terminal	
	VIL	30 % Vcc Max.			
Rise time / Fall time	tr / tf	350 ps Max.	300 ps Max.	LV-PECL: Between 20 % and 80 % of (VOH-VOL). LVDS: Between 20 % and 80 % of Differential Output peak to peak voltage	
Start-up time	t_str	3 ms Max.		Time at minimum supply voltage	to be 0 s
Phase Jitter	tpJ	0.6 ps Max.*1		Offset frequency: 12 kHz to 20 MHz	
Frequency aging	f age	± 5 × 10 ⁻⁶ / year Max.		+25 °C, First year, Vcc = 2.5 V, 3.3 V	

*1 0.9 ps Max. (f₀ = 243 MHz ~ 250 MHz, 486 MHz ~ 500 MHz)

Product Name (Standard form)

SG3225 E AN 156.250000MHz K J G A ① ② ③ ④56⑦ (56: CG is not available)

②Output (E: LV-PECL, V: LVDS) ③Frequency ④Supply voltage ⑤Frequency tolerance

⑥Operating temperature ⑦Internal identification code ("A" is default)

K	2.5 V ~ 3.3 V	

①Model

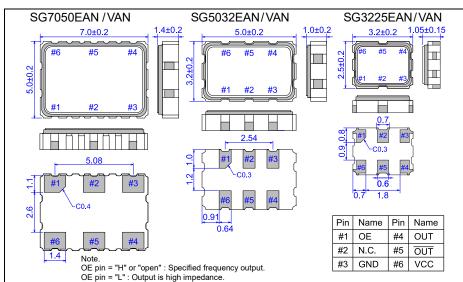
⑤Fre	⑤Frequency tolerance		
J	±50 × 10 ⁻⁶		
Е	±30 × 10 ⁻⁶		
C	+20 × 10 ⁻⁶		

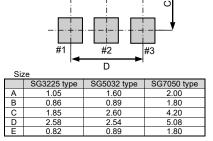
6Operating temperature		
В	-20 °C ~ +70 °C	
G	-40 °C ~ +85 °C	

External dimensions

(Unit: mm)

Footprint (Recommended) (Unit: mm)





To maintain stable operation, provide a 0.01 μ F to 0.1 μ F by-pass capacitor at a location as near as possible to the power source terminal of the crystal product (between Vcc - GND).