

# Crystal Oscillator

## Model Name 7311S-GF

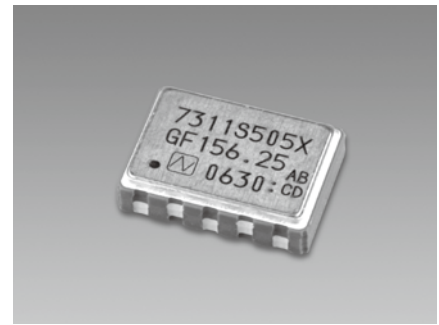
Simple Packaged Crystal Oscillator (SPXO) 7300 Series

### Main Application

For SONET-, SDH-, and GbEthernet-related equipment

### Features

- Low power supply voltage (2.5 V)
- LVPECL output level.
- Supports a wide frequency range (62.5 to 313MHz).
- Low phase jitter : Max. 1ps
- Compact with dimensions of 7.0 x 5.0 x 1.7 mm.



Pb Free

RoHS Compliant  
Directive 2011/65/EU

### Specifications

Item	Model		7311S				
	Classification		GF-255R	GF-505X	GF-104X	GF-505P	GF-104P
Nominal frequency range (MHz)	62.5 to 220						
Supply voltage [V <sub>cc</sub> ] (V)	+2.5 ± 5 %						
Load resistance (Ω)	50 (to V <sub>cc</sub> -2.0 V)						
Current consumption	During operation (mA)		Max. 88 (Typ. 55)				
	During standby (μA)		Max. 30				
Output level	LVPECL (Complementary)						
Operating temperature range (°C)	0 to +70	0 to +85			-40 to +85		
Storage Temperature Range (°C)	-55 to +125						
Frequency tolerance	Max. ±25×10 <sup>-6</sup>	Max. ±50 ×10 <sup>-6</sup>	Max. ±100 ×10 <sup>-6</sup>	Max. ±50 ×10 <sup>-6</sup>	Max. ±100 ×10 <sup>-6</sup>		
Symmetry (%)	45 to 55 (at 50% Waveform)						
Phase jitter [ RMS ] (ps)	Max. 1 (12 kHz to 20 MHz)						
Stand-by function [ Three-state ]	Available						
Number for specifying an order	NSA3344B	NSA3345B	NSA3346B	NSA3345K	NSA3346K		

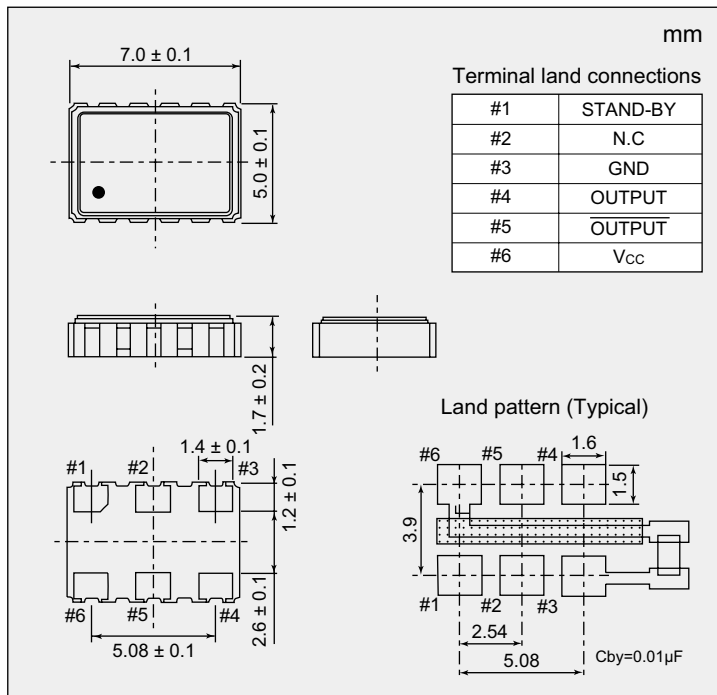
Item	Model		7311S			
	Classification		GF-505X	GF-104X	GF-505P	GF-104P
Nominal frequency range (MHz)	220 to 313					
Supply voltage [V <sub>cc</sub> ] (V)	+2.5 ± 5 %					
Load resistance (Ω)	50 (to V <sub>cc</sub> -2.0 V)					
Current consumption	During operation (mA)		Max. 88 (Typ. 55)			
	During standby (μA)		Max. 30			
Output level	LVPECL (Complementary)					
Operating temperature range (°C)	0 to +85			-40 to +85		
Storage Temperature Range (°C)	-55 to +125					
Frequency tolerance	Max. ±50 ×10 <sup>-6</sup>	Max. ±100 ×10 <sup>-6</sup>	Max. ±50 ×10 <sup>-6</sup>	Max. ±100 ×10 <sup>-6</sup>		
Symmetry (%)	45 to 55 (at 50% Waveform)					
Phase jitter [ RMS ] (ps)	Max. 1 (12 kHz to 20 MHz)					
Stand-by function [ Three-state ]	Available					
Number for specifying an order	NSA3345F	NSA3346F	NSA3345F	NSA3346F		

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### ■ Dimensions



### ■ Standby Function Table (Three-state)

#1 Input	#4 and #5 output
Level H ( $V_{IH} \geq 0.7 V_{CC}$ ) or OPEN	Oscillation output ON
Level L ( $V_{IL} \leq 0.3 V_{CC}$ )	High impedance

### ■ How to Specify an Order

When ordering our products, specify them with an "Ordering Code" that consists of the following:

Model name – Frequency (up to 8 digits) M – Number for specifying an order

Example :When ordering +2.5 V, Max.  $\pm 100 \times 10^{-6}/0$  to 85 °C, 156.25 MHz

Ordering Code: 7311S-GF-104X-156.25M-NSA3346B

If you have any queries concerning our standard frequencies and numbers for specifying orders, please contact our sales representatives or visit our homepage (<http://www.ndk.com/>).