

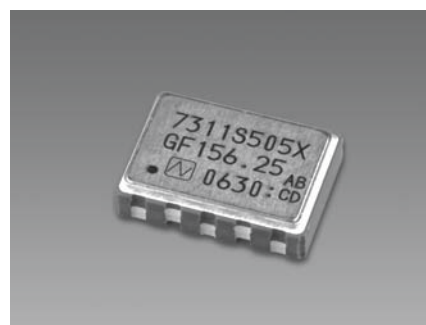
## Model Name 7311S-GF Simple Packaged Crystal Oscillator (SPXO) 7300 Series

### ■ Main Application

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

### ■ Features

- Power supply voltage is 2.5 V, LVPECL output level.
- Output frequency range are 62.5 to 313 MHz.
- Ultra-compact with dimensions of 7.0 x 5.0 x 1.7 mm.
- A surface-mount crystal oscillator.



Pb  
Free

RoHS Compliant  
Directive 2002/95/EC

### ■ Specifications

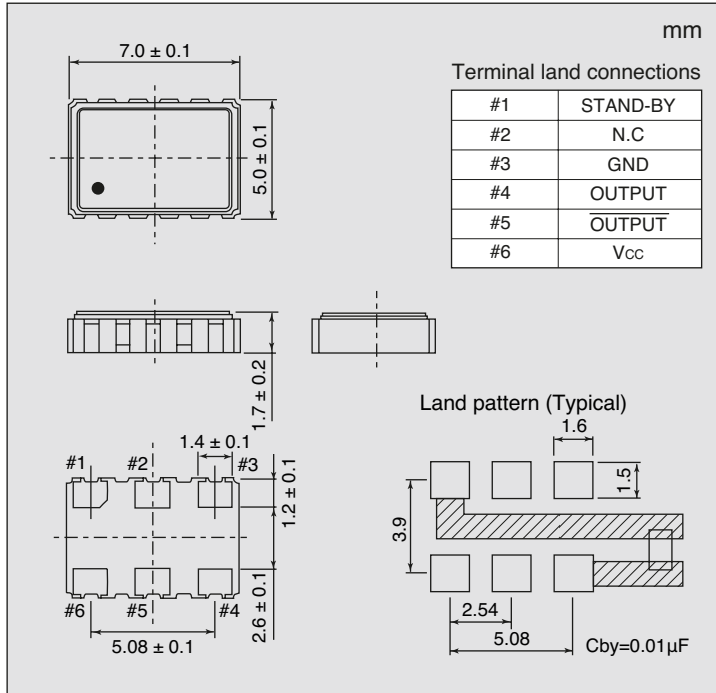
Item	Model Classification	7311S				
		GF-255R	GF-505X	GF-104X	GF-505P	GF-104P
Nominal frequency range (MHz)		62.5 to 220				
Supply voltage [Vcc] (V)		+2.5 ± 5 %				
Load resistance		50 Ω (to Vcc-2.0 V)				
Current consumption	During operation	Max. 88 mA (Typ. 55 mA)				
	During standby	Max. 30 μA				
Output level		LVPECL (Complementary)				
Operating temperature range		0 to +70°C	0 to +85°C		-40 to +85°C	
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)		Max. 1ps (12 kHz to 20 MHz)				
Stand-by function (tristate)		Available				
Number for specifying an order		NSA3344B	NSA3345B	NSA3346B	NSA3345K	NSA3346K

Item	Model Classification	7311S			
		GF-505X	GF-104X	GF-505P	GF-104P
Nominal frequency range (MHz)		220 to 313			
Supply voltage [Vcc] (V)		+2.5 ± 5 %			
Load resistance		50 Ω (to Vcc-2.0 V)			
Current consumption	During operation	Max. 88 mA (Typ. 55 mA)			
	During standby	Max. 30 μA			
Output level		LVPECL (Complementary)			
Operating temperature range		0 to +85°C		-40 to +85°C	
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)		Max. 1ps (12 kHz to 20 MHz)			
Stand-by function (tristate)		Available			
Number for specifying an order		NSA3345F	NSA3346F	NSA3345F	NSA3346F

# Crystal Oscillator

## Model Name 7311S-GF Simple Packaged Crystal Oscillator (SPXO) 7300 Series

### ■ Dimensions



### ■ Standby Function Table (Tristate)

#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

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

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