

Crystal Oscillator

Model Name 7311S-DF

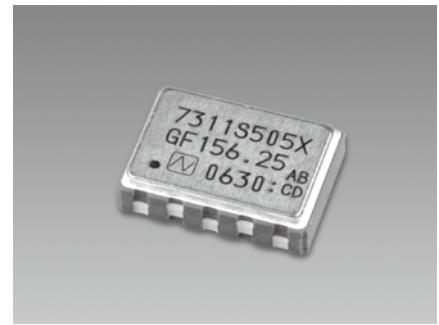
Simple Packaged Crystal Oscillator (SPXO) 7300 Series

Main Application

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

Features

- Low power supply voltage (3.3 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 Classification | 7311S | | | | |
|---------------------------------------|-----------------------|--------------------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|
| | | DF-255R | DF-505X | DF-104X | DF-505P | DF-104P |
| Nominal frequency range (MHz) | | 62.5 to 220 | | | | |
| Supply voltage [V _{cc}] (V) | | +3.3 ± 10 % | | | | |
| Load resistance (Ω) | | 50 (to V _{cc} -2.0 V) | | | | |
| Current consumption | During operation (mA) | Max. 90 (Typ. 60 mA) | | | | |
| | 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 ⁻⁶ | Max. ±50 ×10 ⁻⁶ | Max. ±100 ×10 ⁻⁶ | Max. ±50 ×10 ⁻⁶ | Max. ±100 ×10 ⁻⁶ |
| 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 | | NSA3344A | NSA3345A | NSA3346A | NSA3345G | NSA3346G |

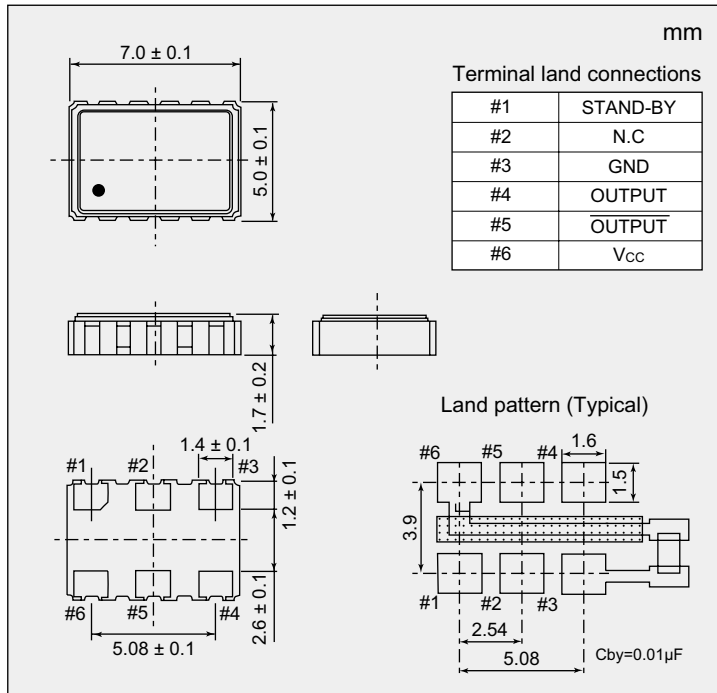
| Item | Model Classification | 7311S | | | |
|---------------------------------------|-----------------------|--------------------------------|-----------------------------|----------------------------|-----------------------------|
| | | DF-505X | DF-104X | DF-505P | DF-104P |
| Nominal frequency range (MHz) | | 220 to 313 | | | |
| Supply voltage [V _{cc}] (V) | | +3.3 ± 10 % | | | |
| Load resistance (Ω) | | 50 (to V _{cc} -2.0 V) | | | |
| Current consumption | During operation (mA) | Max. 90 (Typ. 60) | | | |
| | 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 ⁻⁶ | Max. ±100 ×10 ⁻⁶ | Max. ±50 ×10 ⁻⁶ | Max. ±100 ×10 ⁻⁶ |
| 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 | | NSA3345E | NSA3346E | NSA3345E | NSA3346E |

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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 +3.3 V, Max. $\pm 100 \times 10^{-6}/0$ to 85°C, 156.25 MHz

Ordering Code: 7311S-DF-104X-156.25M-NSA3346A

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/>).