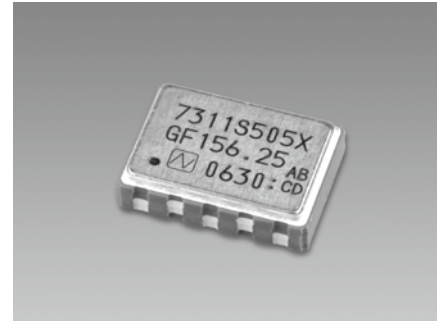


#### ■ Main Application

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

#### ■ Features

- LVPECL output level
- Supports a wide frequency range(220 to 313MHz).
- Low phase jitter : Max. 1ps



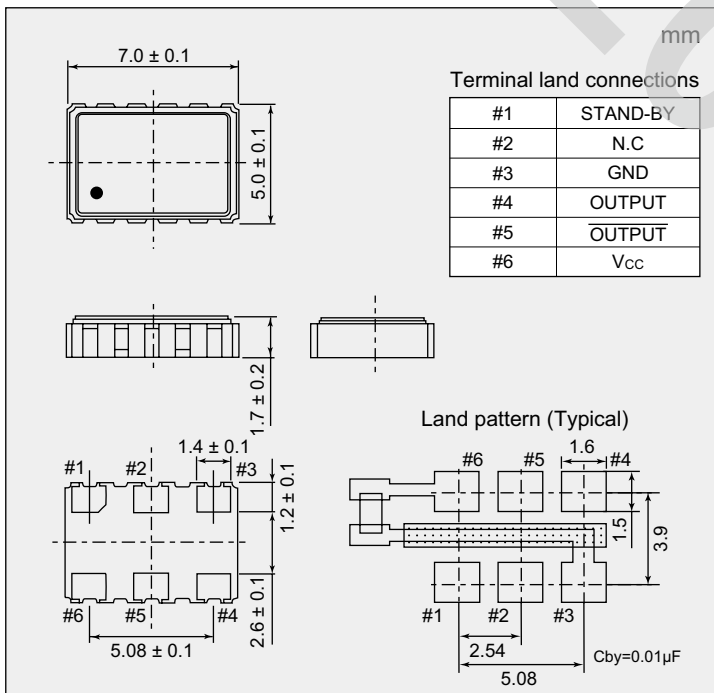
Pb Free

RoHS Compliant  
Directive 2011/65/EU

#### ■ Specifications

| Item                                  | Model                 | 7311S                          |                              |                             |                              |
|---------------------------------------|-----------------------|--------------------------------|------------------------------|-----------------------------|------------------------------|
| Nominal Frequency Range (MHz)         |                       | 220 to 313                     |                              |                             |                              |
| Supply Voltage [V <sub>cc</sub> ] (V) |                       | +2.5 ± 5 %                     |                              | +3.3 ± 10 %                 |                              |
| Load Resistance (Ω)                   |                       | 50 (to V <sub>cc</sub> -2.0 V) |                              |                             |                              |
| Current Consumption                   | During Operation (mA) | Max. 88 (Typ. 55)              |                              | 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 <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                      |                              |                             |                              |

#### ■ Dimensions



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

| #1 Input                                                    | #4 and #5 output      |
|-------------------------------------------------------------|-----------------------|
| Level H (V <sub>IH</sub> ≥ 0.7 V <sub>cc</sub> )<br>or OPEN | Oscillation output ON |
| Level L (V <sub>IL</sub> ≤ 0.3 V <sub>cc</sub> )            | High impedance        |

#### ■ Specification Number

Supply Voltage : +2.5V

| Frequency Tolerance        | Operating Temp. Range (°C) | Classification | Specification Number |
|----------------------------|----------------------------|----------------|----------------------|
| Max. ±50×10 <sup>-6</sup>  | 0 to +85                   | GF-505X        | NSA3345F             |
|                            | -40 to +85                 | GF-505P        | NSA3345F             |
| Max. ±100×10 <sup>-6</sup> | 0 to +85                   | GF-104X        | NSA3346F             |
|                            | -40 to +85                 | GF-104P        | NSA3346F             |

Supply Voltage : +3.3V

| Frequency Tolerance        | Operating Temp. Range (°C) | Classification | Specification Number |
|----------------------------|----------------------------|----------------|----------------------|
| Max. ±50×10 <sup>-6</sup>  | 0 to +85                   | DF-505X        | NSA3345E             |
|                            | -40 to +85                 | DF-505P        | NSA3345E             |
| Max. ±100×10 <sup>-6</sup> | 0 to +85                   | DF-104X        | NSA3346E             |
|                            | -40 to +85                 | DF-104P        | NSA3346E             |