

# Crystal Oscillator

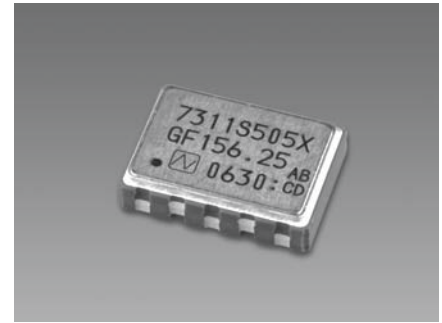
## Model Name 7311S-GF Simple Packaged Crystal Oscillator (SPXO) 7300 Series

### Main Application

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

### Features

- Power supply voltage and LV-PECL output level are 2.5 V and 62.5 to 350 MHz, respectively.
- Ultra-compact with dimensions of 7.0 x 5.0 x 1.7 mm.
- A surface-mount crystal oscillator.



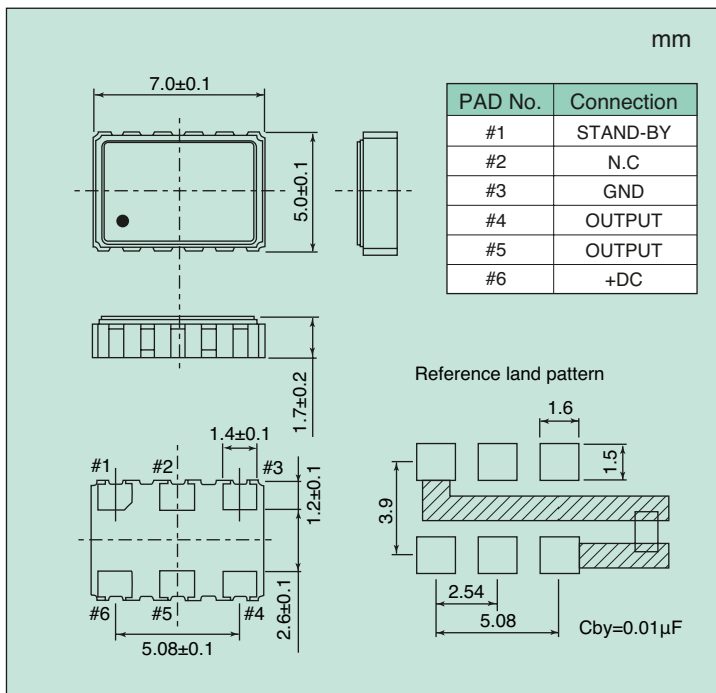
Pb Free

RoHS Compliant  
Directive 2002/95/EC

### Specifications

| Item                              | Model Classification | 7311S-GF-XXXX   |   |
|-----------------------------------|----------------------|---|---|
|                                   |                      | XXXX : 255R, 505X, 104X   |   |
| Standard nominal frequency (MHz)  |                      | 62.5 to 220   | 220 to 350  |
| Power supply voltage              |                      | +2.5V DC $\pm 5\%$  |   |
| Load                              |                      | 50 $\Omega$   |   |
| Operating temperature range       |                      | 0 to 70°C, 0 to 85°C  | 0 to 85°C   |
| Comprehensive frequency stability |                      | $\pm 25 \times 10^{-6}$ max/0 to 70°C (255R)<br>$\pm 50 \times 10^{-6}$ max/0 to 85°C (505X)<br>$\pm 100 \times 10^{-6}$ max/0 to 85°C (104X) | $\pm 50 \times 10^{-6}$ max/0 to 85°C (505X)<br>$\pm 100 \times 10^{-6}$ max/0 to 85°C (104X) |
| Consumption current               | During operation     | 55mA typ. (88mA max)  |   |
|                                   | During standby       | 30 $\mu$ A max.   |   |
| Output level                      |                      | PECL level (Complementary)  |   |
| Duty cycle                        |                      | 45 to 55% (at Waveform)   |   |
| Phase jitter (1 $\sigma$ )        |                      | 1ps max. (12KHz to 20MHz)   |   |
| Standby function (tristate)       |                      | Available   |   |

### Dimensions



### Standby Function Table (Tristate)

| #1 Input   | #4 and #5 output      |
|--|-----------------------|
| Level H ( $V_{IH} \geq 0.7 V_{CC}$ )<br>or OPEN is selected. | Oscillation output ON |
| Level L ( $V_{IL} \leq 0.3 V_{CC}$ )                         | High impedance        |

### Number for specifying an order (+2.5V LV-PECL)

| Comprehensive frequency stability      | Nominal frequency range (MHz) |                    |
|--|-------------------------------|--------------------|
|  | $62.5 \leq F < 220$           | $220 \leq F < 350$ |
| $\pm 25 \times 10^{-6}$ max/0 to 70°C  | NSA3344B                      | -                  |
| $\pm 50 \times 10^{-6}$ max/0 to 85°C  | NSA3345B                      | NSA3345F           |
| $\pm 100 \times 10^{-6}$ max/0 to 85°C | NSA3346B                      | NSA3346F           |

### How to Specify an Order

|            |   |                            |   |   |                                |
|------------|---|----------------------------|---|---|--------------------------------|
| Model name | - | Frequency (up to 9 digits) | M | - | Number for specifying an order |
|------------|---|----------------------------|---|---|--------------------------------|

When ordering +2.5V,  $\pm 100 \times 10^{-6}$  max/0 to 85°C, 156.25 MHz 7311S-GF-104X-156.250000M-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/>).