

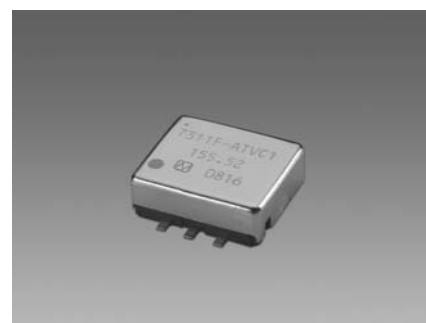
## Model Name 7311F Voltage-Controlled Crystal Oscillator (VCXO) 7300 Series

### ■ Main Application

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

### ■ Features

- Frequency range: 60 to 185 MHz.
- A surface-mount crystal oscillator.
- Complies with the RoHS Directive.

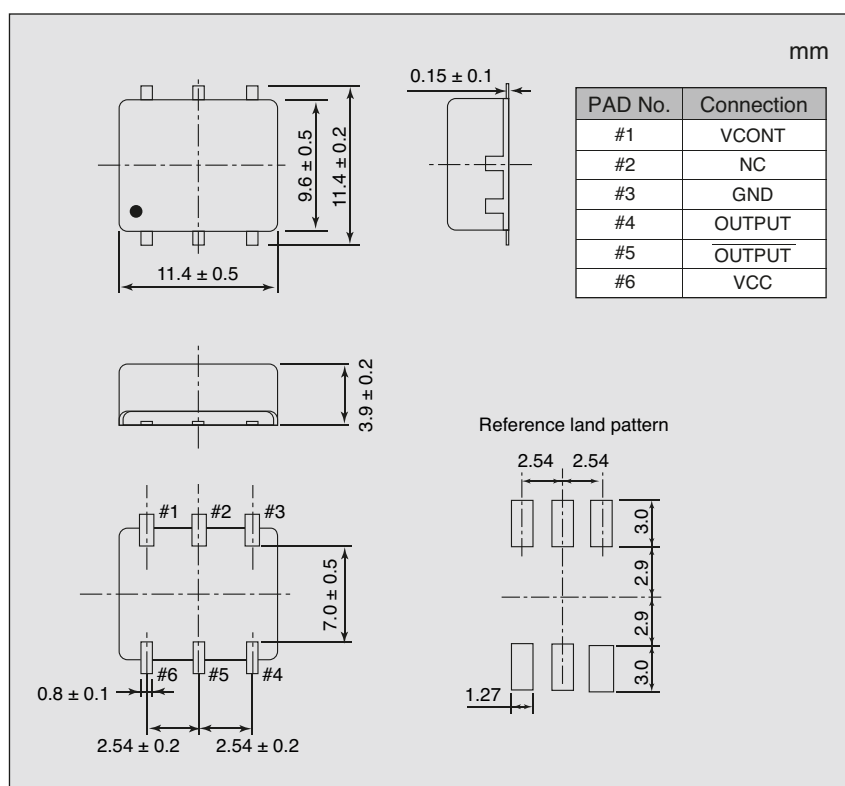


**RoHS Compliant**  
Directive 2002/95/EC

### ■ Specifications

| Item                             | Model Classification | 7311F                                          |
|----------------------------------|----------------------|------------------------------------------------|
|                                  |                      | ATVC1                                          |
| Nominal frequency range (MHz)    |                      | 60 to 185                                      |
| Power supply voltage [VCC] (V)   |                      | +3.3 ± 5 %                                     |
| Current consumption (mA)         |                      | Max. 60                                        |
| Output level                     |                      | PECL level (Complementary)                     |
| Duty cycle (%)                   |                      | 40 to 60 (VCC – 1.3 V)                         |
| Load (Ω)                         |                      | 50 (VCC – 2.0 V)                               |
| Operating temperature range (°C) |                      | –10 to +70                                     |
| Frequency stability              |                      | Max. ± 50 × 10 <sup>–6</sup>                   |
| Frequency control characteristic |                      | Min. ± 100 × 10 <sup>–6</sup> / + 1.65 ± 1.5 V |
| Control polarity                 |                      | Positive                                       |

### ■ Dimensions



### ■ List of Ordering Codes

| Frequency (MHz) | Ordering Code            |
|-----------------|--------------------------|
| 125             | 7311F-125M-NSA3330A      |
| 155.52          | 7311F-155.52M-NSA3330A   |
| 156.1762        | 7311F-156.1762M-NSA3330A |
| 156.25          | 7311F-156.25M-NSA3330A   |
| 160             | 7311F-160M-NSA3330A      |
| 161.1328        | 7311F-161.1328M-NSA3330A |
| 166.6286        | 7311F-166.6286M-NSA3330A |
| 167.3316        | 7311F-167.3316M-NSA3330A |
| 172.6423        | 7311F-172.6423M-NSA3330A |
| 173.3707        | 7311F-173.3707M-NSA3330A |
| 176             | 7311F-176M-NSA3330A      |

The above frequencies are NDK' s standard frequencies.  
Frequencies other than the above are available.  
Feel free to contact our sales representatives.