ROHS-Compliant Product

# XO-9000 Series

## 1. Specification

| Type: | XO-9100 | XO-9200 | XO-9300 | XO-9000 |
|---|---|---|---|---|
| Supply Voltage $V_S$ : | +5.0 V ± 5% | +3.3 V ± 5% | +2.5 V ± 5% | +1.8 V ± 5% |
| Nominal frequency range: | 12kHz …125MHz | 12kHz…156.25MHz | 12kHz … 125MHz | 12kHz … 160MHz |
| Frequency stability options:<br>±25 ppm:<br>±50 ppm:<br>±100 ppm: | <br>**XO-9110**<br>**XO-9120**<br>**XO-9130** | <br>**XO-9210**<br>**XO-9220**<br>**XO-9230** | <br>**XO-9310**<br>**XO-9320**<br>**XO-9330** | <br>**XO-9010**<br>**XO-9020**<br>**XO-9030** |
| Frequency stability is considered as the overall stability including nominal frequency tolerance at +25°C, frequency stability vs. temperature, vs. load changes (±5%), vs. supply voltage changes (±5%) and 1st year aging. | | | | |
| Temp. range Options<br>-10 °C to +60 °C<br>-20 °C to +70 °C:<br>-40 °C to +85 °C: | <br>**R**<br>**S**<br>**E** | | | |
| Tri-State Options: | **F:** Fixed Frequency without Tri-State<br>**T:** Tri-State function | | | |
| Tri-State Function: | Logic High or NC: Output Enable<br>Logic Low: Output Disable | | | |
| Current consumption (with 15 pF load): | ≤ 20mA < 20MHz<br>≤ 30mA < 50MHz<br>≤ 40mA < 70MHz<br>≤ 50mA < 125MHz | ≤ 10mA < 20MHz<br>≤ 20mA < 50MHz<br>≤ 40mA < 100MHz<br>≤ 50mA < 156MHz | ≤ 8mA < 20MHz<br>≤ 15mA < 50MHz<br>≤ 20mA < 70MHz<br>≤ 25mA < 125MHz | ≤ 5mA < 20MHz<br>≤ 15mA < 50MHz<br>≤ 20mA < 125MHz<br>≤ 30mA < 160MHz |
| Output voltage :<br>level :<br>load :<br>duty cycle : | HCMOS / TTL<br>low < 10% $V_S$, high > 90% $V_S$<br>1 kOhm // 15 pF (option **H**: 50 pF)<br>40% / 60% (option **J**: 45% / 55%) | | | |
| Phase jitter:<br>(12 kHz to 20 MHz BW) | < 1 ps rms | | | |

## 2. Environmental conditions

According to KVG Product Qualification Procedure AA-QM-200

## 3. Marking

Manufacturer's name, date code (week/year); Specification; Center frequency

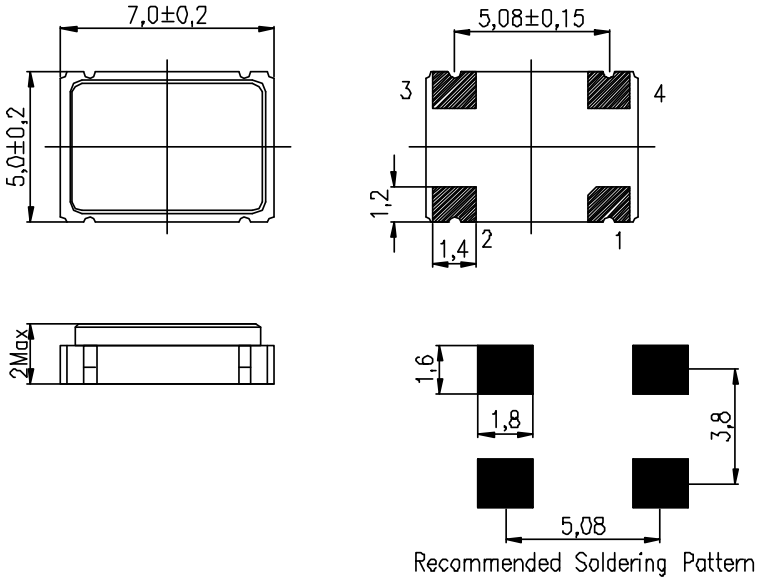
| ED | Description | Date | Name |
|---|---|---|---|
| 8 | Current consumption | 25.10.06 | M. Zupan |
| 11 | Output voltage level added | 22.04.09 | M. Zupan |
| 10 | 1.8V Option added | 30.07.08 | M. Zupan |
| 9 | phase jitter added | 02.03.07 | Rudolph |

**KVG Quartz Crystal Technology GmbH**
**P.O.Box 61**
**D-74924 Neckarbischofsheim**
Tel. +49 (0) 7263 / 648-0
Fax. +49 (0) 7263 / 6196

# XO-9000 Series

## 4. Case

**Case Style BF-189-2.0 A**

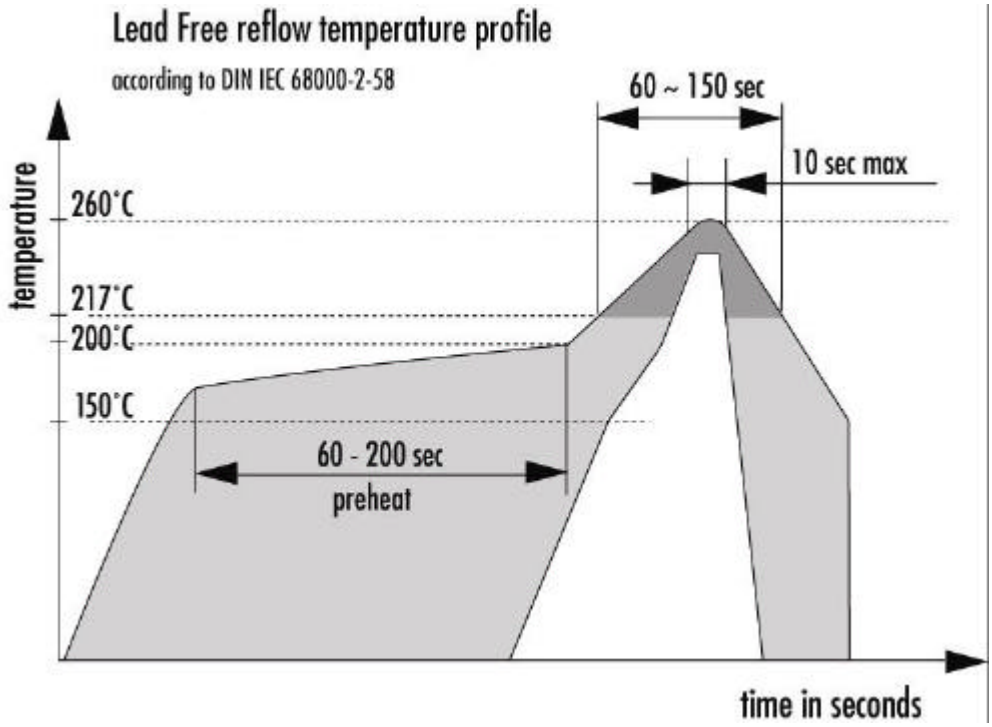



**1.Pin configuration**

1. Tri-State Control Input or N.C.
2. Ground (case)
3. RF Output
4. Supply Voltage $V_S$

| | | | | |
|---|---|---|---|---|
| 8 | Current consumption | 25.10.06 | M. Zupan | **KVG Quartz Crystal Technology GmbH** |
| 11 | Output voltage level added | 22.04.09 | M. Zupan | **P.O.Box 61** |
| 10 | 1.8V Option added | 30.07.08 | M. Zupan | **D-74924 Neckarbischofsheim** |
| 9 | phase jitter added | 02.03.07 | Rudolph | Tel. +49 (0) 7263 / 648-0 |
| ED | Description | Date | Name | Fax. +49 (0) 7263 / 6196 |

## 5. Reflow Soldering Profile




| | | | | |
|---|---|---|---|---|
| 8 | Current consumption | 25.10.06 | M. Zupan | **KVG Quartz Crystal Technology GmbH** |
| 11 | Output voltage level added | 22.04.09 | M. Zupan | **P.O.Box 61** |
| 10 | 1.8V Option added | 30.07.08 | M. Zupan | **D-74924 Neckarbischofsheim** |
| 9 | phase jitter added | 02.03.07 | Rudolph | Tel. +49 (0) 7263 / 648-0 |
| ED | Description | Date | Name | Fax. +49 (0) 7263 / 6196 |