



## Crystal Clock Oscillator Specification

*IQD Part No. + Packaging: LFSPX0024978Reel*

*Würth Part No. 831024978*



### Description

- 5 x 3.2mm crystal oscillator  
Ceramic package with a seam sealed metal lid, hermetically sealed
- Model CFPS-9
- Model Issue number 7
- Note: please be aware that devices supplied against this model may show slight cosmetic differences depending upon the frequency and specification, however all electrical details remain as per the model specification.

### Frequency Parameters

- Frequency 4.0MHz
- Frequency Stability  $\pm 50.00\text{ppm}$
- Operating Temperature Range  $-40.00$  to  $85.00^\circ\text{C}$
- Ageing  $\pm 3\text{ppm}$  max per year @  $25^\circ\text{C}$

### Electrical Parameters

- Supply Voltage  $3.3\text{V} \pm 0.3\text{V}$
- Current Draw  $20.000\text{mA}$

### Output Details

- Output Compatibility CMOS
- Drive Capability  $15\text{pF}$  max
- Rise and Fall Time  $10.0\text{ns}$  max
- Duty Cycle 40/60%

### Output Control

- Enable/Disable Operation:  
Logic '1' ( $>70\%$  VS) to pad 1 enables oscillator output  
Logic '0' ( $<30\%$  VS) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state  
No connection to pad 1 enables oscillator output  
Standby Current:  $10\mu\text{A}$  max

### Environmental Parameters

- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$
- Shock: MIL-STD-202F, Method 213B:  $1000\text{G}$ ,  $0.5\text{ms}$ ,  $1/2$  sine wave
- Vibration: MIL-STD-202F, Method 204D, Test Condition D:  $20\text{G}$  ( $10\text{Hz}$ - $2000\text{Hz}$ ),  $4\text{hrs}$  in 3 mutually perpendicular planes (total  $12\text{hrs}$ )

### Manufacturing Details

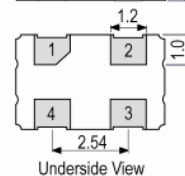
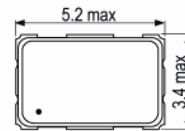
- RoHS Terminations NiAu
- RoHS Reflow Temp  $260\text{degC}$  10s

### Compliance

- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

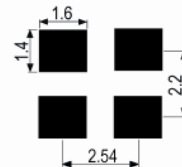


### Outline (mm)

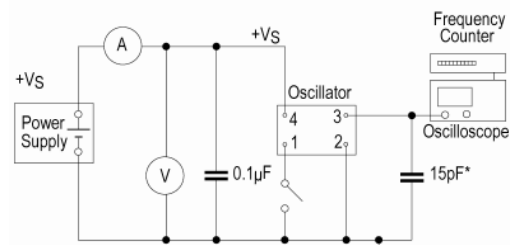


Pad Connections  
1. Enable/Disable  
2. GND  
3. Outout  
4. +Vs

### Solder Pad Layout



### Test Circuit



\* Inclusive of jigging and equipment capacitance

### CONTACT INFORMATION:

Würth Elektronik eiSos GmbH & Co. KG  
Max-Eyth-Str. 1, 74638 Waldenburg, Germany  
Tel: +49(0) 7942 945-0

Email: [eiSos@we-online.de](mailto:eiSos@we-online.de)  
Web: [www.we-online.com](http://www.we-online.com)



## Crystal Clock Oscillator Specification

*IQD Part No. + Packaging: LFSPX0024978Reel*

*Würth Part No. 831024978*



### Packaging Details

- Pack Style: Reel     Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000
- *Alternative packing option available*

### USEFUL LINKS

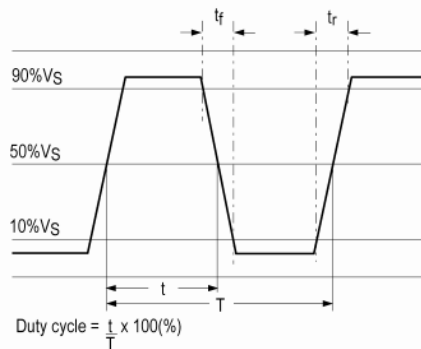
#### Toolbox:

[www.we-online.com/toolbox](http://www.we-online.com/toolbox)

#### Product Catalog:

[www.we-online.com/products](http://www.we-online.com/products)

### Wave Form



### CONTACT INFORMATION:

Würth Elektronik eiSos GmbH & Co. KG  
Max-Eyth-Str. 1, 74638 Waldenburg, Germany  
Tel: +49(0) 7942 945-0

Email: [eiSos@we-online.de](mailto:eiSos@we-online.de)  
Web: [www.we-online.com](http://www.we-online.com)