

ISSUE 2; April 2016

Description

- Standard 2 x 1.6mm crystal oscillator in a ceramic package with a seam sealed metal lid, hermetically sealed

Frequency Parameters

- Frequency: 1.0MHz to 80.0MHz
- Frequency Stability: $\pm 30.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$

Electrical Parameters

- Supply Voltage: $2.5\text{V} \pm 10\%$
- Standby Current: $10\mu\text{A}$ max (pad 1 at logic '0')

Operating Temperature Ranges

- 20 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max

Output Control

- Standby Operation: Logic '1' ($\geq 70\%V_S$) to pad 1 enables oscillator output
Logic '0' ($\leq 30\%V_S$) 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

Environmental Parameters

- Impact: Weight of 10g dropped to centre of part from a height of 6mm
- Vibration: IEC 60068-2-6: 1.5mm amplitude, 10Hz-55Hz, 1min in 3 mutually perpendicular planes, duration 2hrs each plane (total 6hrs)
- Storage Temperature Range: -40 to 85°C

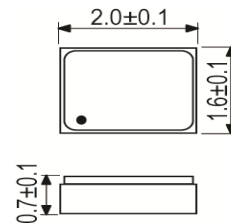
Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage
- (*minimum required)
- Example
- 10.0MHz IQXO-541
- CMOS $\pm 50\text{ppm}$ -20 to 70°C 2.5V

Compliance

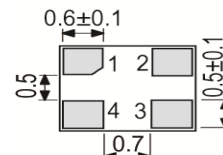
- RoHS Status (2011/65/EU): Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Outline (mm)



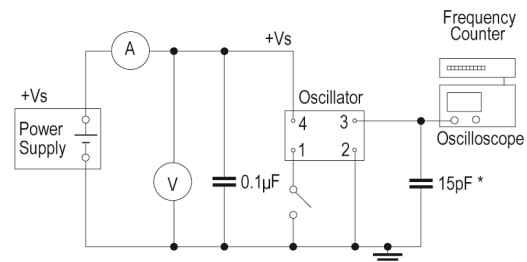
- Pad Connections**
- Standby Operation
 - GND
 - Output
 - +Vs

Solder Pad Layout



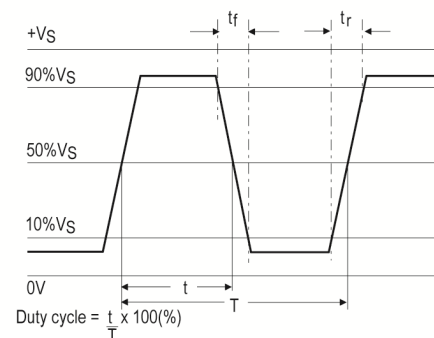
Underside View

Test Circuit



* Inclusive of jiggig and equipment capacitance

Wave Form



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Packaging Details

- Pack Style: Cutt In tape, cut from a reel
Pack Size: 100
- Pack Style: Bulk Loose in bulk pack
Pack Size: 100
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- Pack Style: R250 Tape & reel in accordance with EIA-481-D
Pack Size: 250
- Pack Style: R500 Tape & reel in accordance with EIA-481-D
Pack Size: 500

Electrical Specification - maximum limiting values 2.5V $\pm$ 10%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	19.999999MHz	-20 to 70	$\pm$ 30.0	4	5	45/55%
		-40 to 85	$\pm$ 50.0	4	5	45/55%
20.0MHz	39.999999MHz	-20 to 70	$\pm$ 30.0	6	5	45/55%
		-40 to 85	$\pm$ 50.0	6	5	45/55%
40.0MHz	59.999999MHz	-20 to 70	$\pm$ 30.0	7	5	45/55%
		-40 to 85	$\pm$ 50.0	7	5	45/55%
60.0MHz	80.0MHz	-20 to 70	$\pm$ 30.0	10	5	45/55%
		-40 to 85	$\pm$ 50.0	10	5	45/55%

This document was correct at the time of printing; please contact your local sales office for the latest version.

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