

SIMPLE PACKAGED CRYSTAL OSCILLATOR

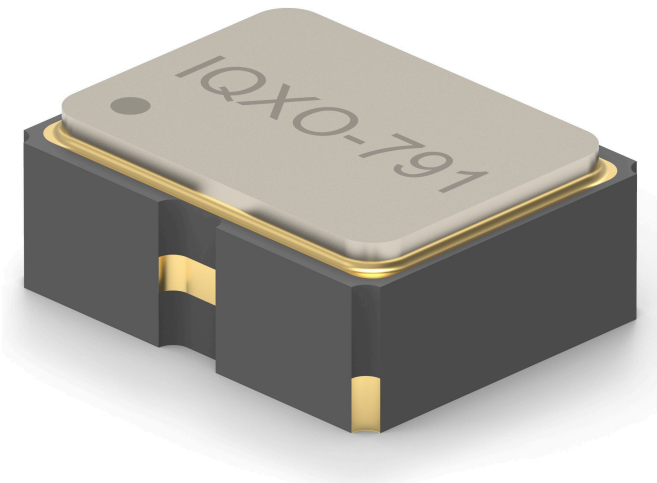
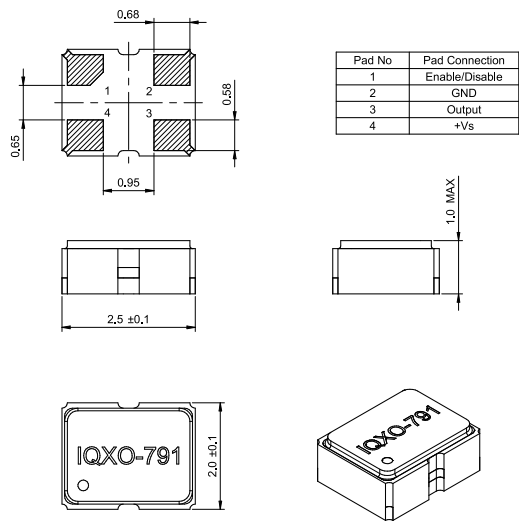
IQXO-791



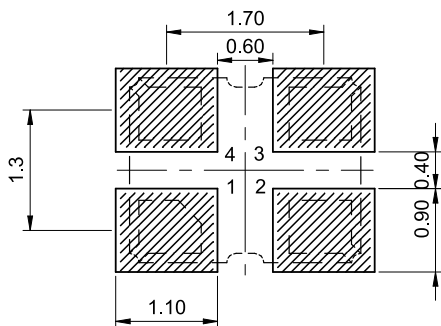
General Information

Standard 2.5 x 2.0 mm oscillator in a ceramic package with a hermetically sealed metal lid.

Dimensions [mm]



Recommended Land Pattern [mm]



Frequency Parameters

Frequency	1.0 MHz to 156.250 MHz
Frequency Tolerance	INCLUSIVE
Frequency Stability	± 50 ppm to ± 100 ppm
Ageing	± 5 ppm max. first year @ 25 °C

Electrical Parameters

Supply Voltage	3.3 V ± 10 %
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Operating Temperature Ranges

-20 °C to 70 °C
-40 °C to 85 °C

Output Details

Output Compatibility CMOS

- Drive Capability: 15 pF
- Output Voltage Levels:
 - Output Low (VoL): 10 % Vs max
 - Output High (VoH): 90 % Vs min.
- Start Up Time: 0.7 ms typ to 90 % of final amplitude (under ideal conditions @ 25 °C): 10 ms max.

Output Control

- Standby Operation:
 - Logic '1' ($\geq 70\%$ Vs) to pad 1 enables oscillator output.
 - Logic '0' ($\leq 30\%$ 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:
 - 1.0 μ A typ. @ 25 °C, 10 μ A max.

Material Parameters

Moisture Sensitivity Level (MSL)

1

Manufacturing Details

Reflow: 260 °C max for 10 secs max.

Ordering Information

- Frequency*
 - Model*
 - Output Frequency Stability (over operating temperature range)*
 - Operating Temperature Range*
 - Supply Voltage
 - (*minimum required)
- Example:
 - 20.0MHz IQXO-791
 - HCMOS ± 50 ppm -20 to 70C 3.3V

Noise Parameters

- Period Jitter (pk-pk): ± 80 ps typ.
- Period Jitter (1 σ): ± 10 ps typ.
- RMS Phase Jitter (12 kHz to 20 MHz): 1 ps rms max

Environmental Parameters

Storage Temperature Range: -55 °C to 125 °C

- Shock: Half Sine shock pulse with peak acceleration 500 g; Pulse duration: 0.3 ms
- Vibration: MIL-STD-202 Method 204. 5 g for 20 minutes, 12 cycles in each of the 3 orientations, 10 - 2000 Hz. As per Table 11 of AEC-Q200.

Technical Standards

RoHS Status 2015/863/EU - Compliant

REACH Status (EC)1907/2006 - Compliant

Packaging Details

Packaging SPQ Tape & Reel 3000 pcs

Tape & reel in accordance with EIA-481D

Quantities below the standard reel size to be supplied on cut tape.

Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability min	Current Draw	Rise/Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1 MHz	60 MHz	-20 to 70	±50	25	7	40/60
		-40 to 85				
60.000001 MHz	156.25 MHz	-20 to 70		20		
		-40 to 85				

Company Address

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