

SIMPLE PACKAGED CRYSTAL OSCILLATOR

Part Number: **831056300** | IQXO-791

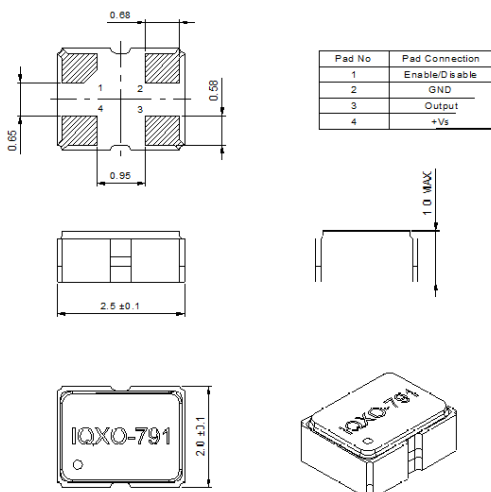
AKA Number: LFSPX0056300



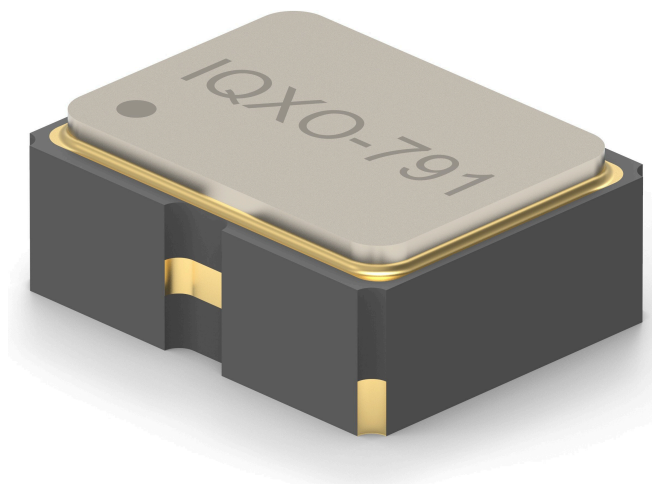
General Information

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

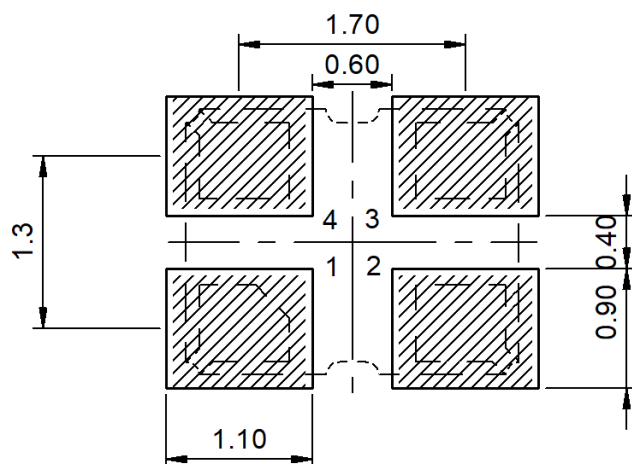
Dimensions [mm]



Pad No	Pad Connection
1	Enable/Disable
2	GND
3	Output
4	+Vs



Recommended Land Pattern [mm]



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Frequency Parameters

Frequency	48.0 MHz
Frequency Tolerance	INCLUSIVE
Frequency Stability	± 50 ppm
Operating Temperature	-40 °C to 85 °C
Ageing	± 5 ppm max. first year @ 25 °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' (≥ 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:
 - 1.0 µA typ. @ 25 °C
 - 10 µA max.

Material Parameters

Moisture Sensitivity Level (MSL)	1
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Manufacturing Details

Reflow: 260 °C max for 10 secs max

Company Address

IQD Frequency Products Ltd.
Station Road
Crewkerne
Somerset
TA18 8AR, United Kingdom

Electrical Parameters

Supply Voltage	3.3 V ± 10 %
Current Consumption	25 mA max.
Rise Time tr	7 ns max.
Fall Time tf	7 ns max.
Duty Cycle	40/60 %

Noise Parameters

- Period Jitter (pk-pk): ± 80 ps typ.
- Period Jitter (1σ): ± 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	