RXO2520C

The RXO2520C is a Crystal Oscillator (XO) in a compact 2.5 x 2.0 mm footprint, designed with a CMOS output for reliable clock generation. Its small form factor makes it an ideal choice for space-constrained Surface-Mount Device (SMD) applications. It delivers ≤1 ps RMS phase jitter (measured from a 12 kHz to 20 MHz offset). For applications requiring even lower jitter, an option with typical jitter as low as 50 fs is available upon request.

This device supports a wide range of industry-standard frequencies from 0.5 to 133 MHz. It provides various frequency stability options across a wide operating temperature range, considering factors such as initial frequency calibration, supply and load variations, and one-year ageing effects. The RXO2520C is well-suited for diverse applications in consumer electronics, computing, networking, data centres, industries, and more.

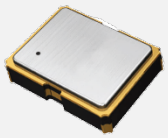
Features

- Frequency (Fn): 0.5 to 133 MHz
- Output: CMOS
- Wide frequency range
- Operating temperature: -40 to 125°C
- Low phase noise and RMS jitter

Applications

- Consumer electronics
- Computing, Networking
- Processing, Data storage
- Data centre
- Medical, Industrial

2.5 x 2.0 mm



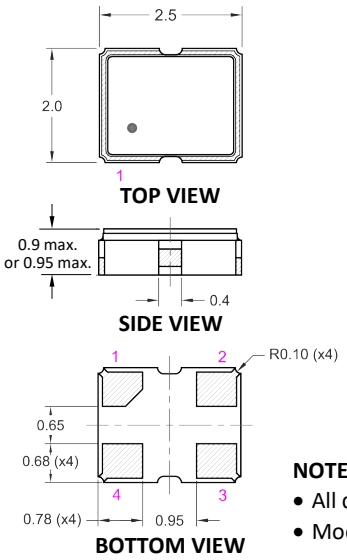
Pb FREE

RoHS COMPLIANT

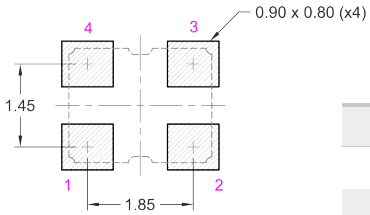
Standard Specifications

Parameter		Min.	Typ.	Max.	Unit	Test Condition / Description
Nominal frequency (Fn)		0.5		133	MHz	
Temperature range		-40		85 ~ 125	°C	
Frequency stability				±25 ~ ±50	ppm	Including frequency calibration, operating temperature range, supply and load variations, and 1 year ageing at 25°C
Supply voltage (V_{DD})			1.8/2.5/3.3		V	With a tolerance of ±5%
Supply current	≤20 MHz ≤40 MHz ≤60 MHz ≤133 MHz			6 7 9 18	mA	
RMS phase jitter				1	ps	Integrated from 12kHz to 20MHz

Model Outline and Recommended Pad Layout



RECOMMENDED PAD LAYOUT
– TOP VIEW



Pin	Connections
1*	Enable/Disable (E/D)
2	GND
3	Output
4	V_{DD}

* Output Enabled: >70% of VDD on E/D, or E/D pin left open (Connected to internal pull-up resistor)
Output Disabled: <30% of VDD on E/D, or E/D pin to GND

NOTE:
- All dimensions are in millimetres (mm).
- Model height options are 0.9mm max. or 0.95mm max.