

RXO3225C

The RXO3225C is a Crystal Oscillator (XO) in a compact 3.2 x 2.5 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 156.25 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 RXO3225C is well-suited for diverse applications in consumer electronics, computing, networking, data centres, industries, and more.

Features

- Frequency (Fn): 0.5 to 156.25 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

3.2 x 2.5 x 0.9 mm



Standard Specifications

Parameter	Min.	Typ.	Max.	Unit	Test Condition / Description
Nominal frequency (Fn)	0.5		156.25	MHz	
Temperature range	-40		85 ~ 125	°C	
Frequency stability			$\pm 25 \sim \pm 50$	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 $\pm 5\%$
Supply current				mA	
	≤ 20 MHz		6		
	≤ 40 MHz		7		
	≤ 60 MHz		9		
	≤ 75 MHz		17		
	≤ 100 MHz		25		
	≤ 156.25 MHz		28		
RMS phase jitter			1	ps	Integrated from 12kHz to 20MHz

Model Outline and Recommended Pad Layout

TOP VIEW: Overall dimensions 3.2 mm x 2.5 mm.

SIDE VIEW: Height dimensions 0.90 mm and 0.40 mm.

BOTTOM VIEW: Pad dimensions 1.20 mm, 0.90 mm (x4), 0.65 mm (x4), and R0.15 (x4).

RECOMMENDED PAD LAYOUT

- TOP VIEW: Pad dimensions 1.20 mm (x4), 0.95 mm (x4), 1.75 mm, and 2.20 mm.

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

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

NOTE: Outline unit is mm.