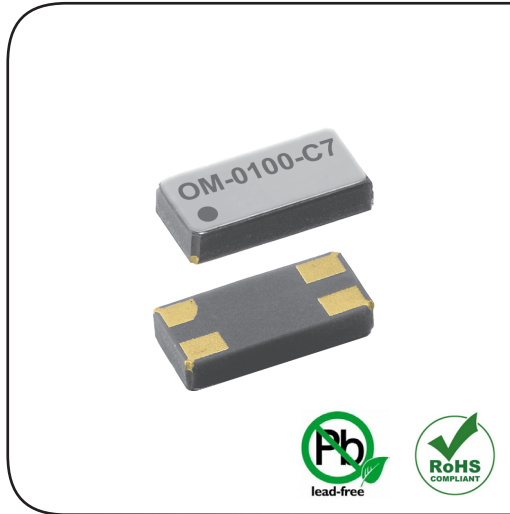
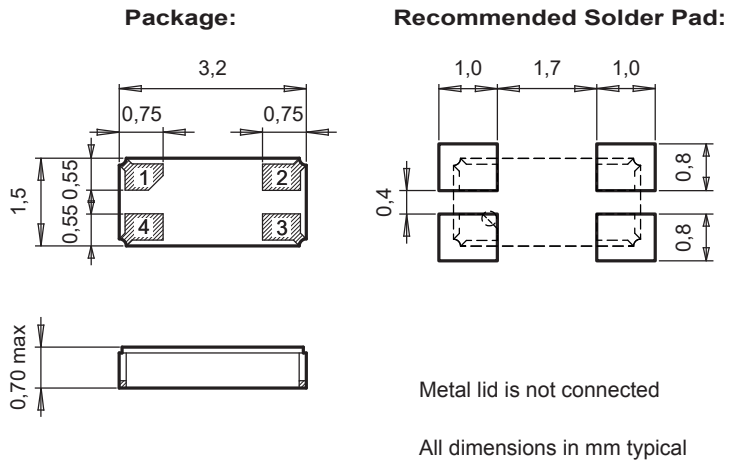


# OM-0100-C7

Low Power Clock Oscillator 100.000 kHz



## DIMENSIONS



## APPLICATIONS

IoT  
Metering  
Industrial  
Automotive  
Health Care  
Wearables, Portables

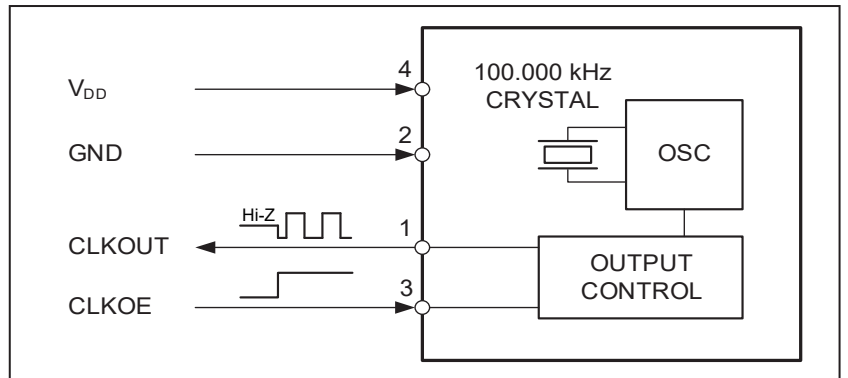
## DESCRIPTION

The OM-0100-C7 is a Low Frequency SMD Oscillator that incorporates an integrated CMOS circuit together with an XTAL. It operates under vacuum in a hermetically sealed ceramic package with metal lid.

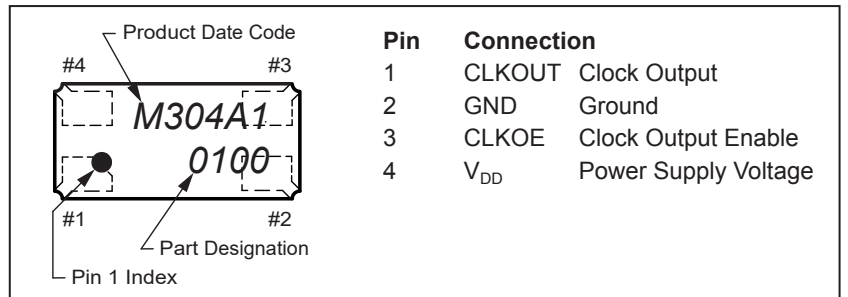
## FEATURES

Wide supply voltage range.  
Very low power consumption.  
CLKOUT enable/disable.  
Small size, low profile, lightweight (10.6 mg).  
High shock and vibration resistant.  
100% Pb-free, RoHS-compliant.  
Automotive qualification according to AEC-Q200 available.

## BLOCK DIAGRAM



## PIN CONNECTIONS TOP VIEW



## ELECTRICAL CHARACTERISTICS AT 25°C

More detailed information can be found in the Application Manual.

|                                 |                            |  |         |
|---------------------------------|----------------------------|--|---------|
| Output Frequency                | F                          | 100.000  | kHz     |
| Frequency tolerance             | <sup>1)</sup> $\Delta F/F$ | $\pm 20$   | ppm     |
| Supply voltage                  | $V_{DD}$                   | 1.2 – 5.5  | V       |
| Current consumption (typ./max.) | <sup>2)</sup> $I_{DD}$     | 0.65 / 0.85  | $\mu A$ |
| Duty cycle (min./max.)          |                            | 40 / 60  | %       |
| Start up time (max.)            | $t_{start}$                | 0.5  | s       |
| Voltage coefficient (max.)      |                            | $\pm 1.5$  | ppm/V   |
| Aging first year max. @ 25°C    | $\Delta F/F$               | $\pm 3$  | ppm     |
| Turnover temperature (typ.)     | $T_0$                      | 18 $\pm 5$   | °C      |
| Frequency vs. temperature       | $\Delta F/F_0$             | $-0.035 \text{ ppm}/^{\circ}\text{C}^2 (T - T_0)^2 \pm 10\%$ | ppm     |

1) Tighter tolerances on request.

2)  $V_{DD} = 3.0 \text{ V}$ , CLKOE = LOW.

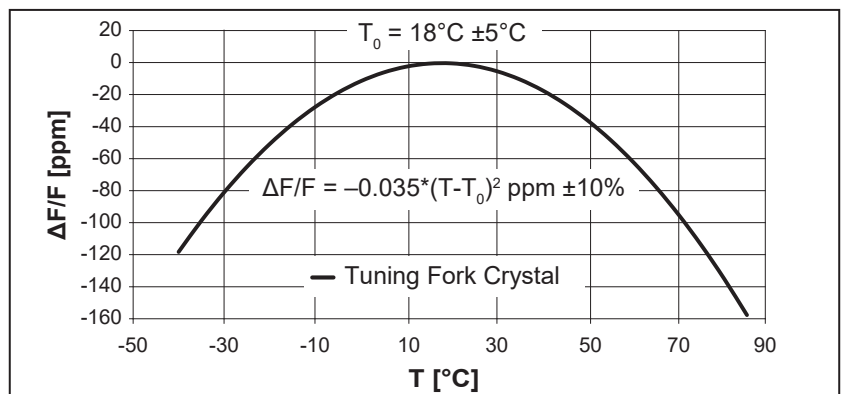
## ENVIRONMENTAL CHARACTERISTICS

|                                |              | Conditions               | Max. Dev.   |
|--------------------------------|--------------|--------------------------|-------------|
| Storage temperature range      |              | -55 to +125°C            |             |
| TA Operating temperature range |              | -40 to +85°C             |             |
| Shock resistance               | $\Delta F/F$ | 5000 g, 0.3 ms, 1/2 sine | $\pm 5$ ppm |
| Vibration resistance           | $\Delta F/F$ | 20 g / 10–2000 Hz        | $\pm 5$ ppm |

## TERMINATIONS AND PROCESSING

| Package | Termination     | Processing                                |
|---------|-----------------|---|
| SON-4   | Au flashed pads | IPC/JEDEC J-STD-020C<br>260°C / 20 - 40 s |

## FREQUENCY TEMPERATURE CHARACTERISTICS



## ORDERING INFORMATION

|   |  |
|---|--|
| <b>O M - 0100 - C7 <math>\pm 20</math> ppm TA QC</b>                        |  |
| <b>Oscillator</b>   | <b>Qualification</b>   |
| <b>Metal lid</b>  | <b>QC</b> = Commercial Grade (Standard)<br><b>QA</b> = Automotive Grade AEC-Q200 |
| <b>Frequency</b>  | <b>Temperature range</b>   |
| <b>0100</b> = 100.000 kHz   | <b>TA</b> = -40 to +85°C (Standard)  |
| <b>Package size</b>   | <b>Frequency tolerance</b>   |
| <b>C7</b> = 3.2 x 1.5 x 0.70 mm   | $\pm 20$ ppm<br>Tighter freq. tolerances on request                              |
| A unique part number will be generated for each product specification, i.e: |  |
| 20xxxx-MG01   | 1'000 pcs (in 12 mm tape on 7" reel)   |
| 20xxxx-MG03   | 3'000 pcs (in 12 mm tape on 7" reel)   |

All specifications subject to change without notice.



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