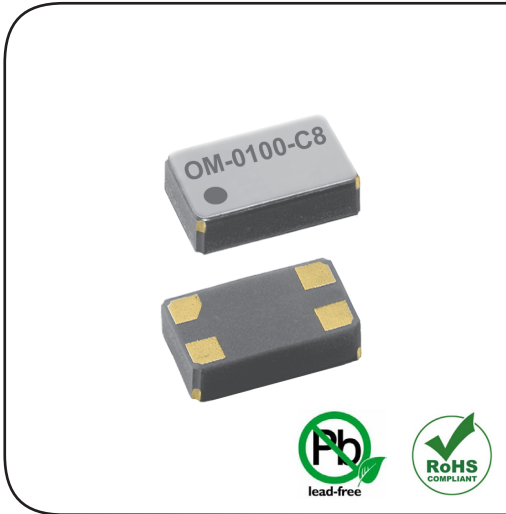
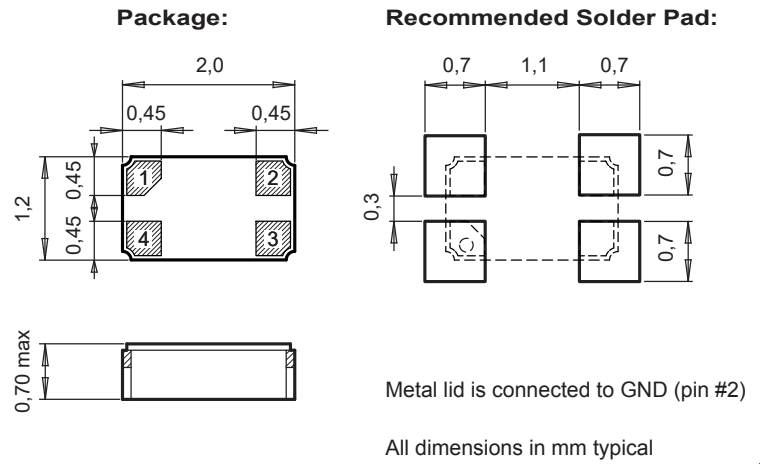


# OM-0100-C8

Low Power Clock Oscillator 100.000 kHz



## DIMENSIONS



## APPLICATIONS

IoT  
 Metering  
 Industrial  
 Automotive  
 Health Care  
 Wearables, Portables

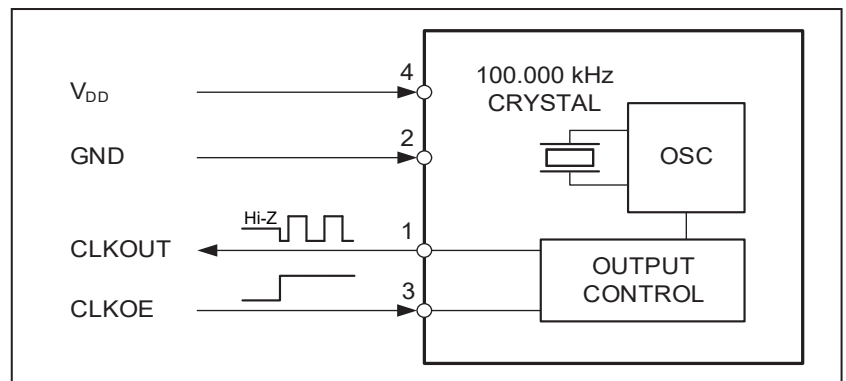
## DESCRIPTION

The OM-0100-C8 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.

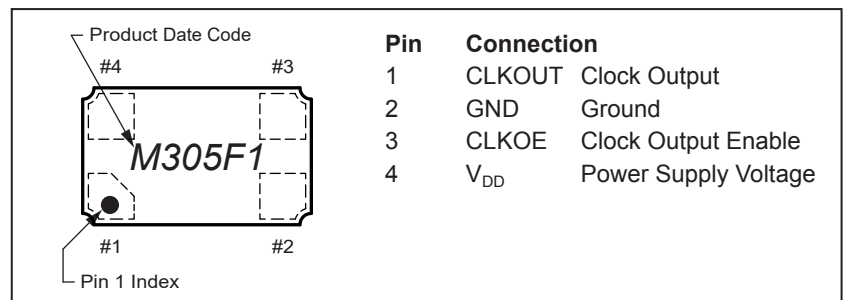
## FEATURES

Wide supply voltage range.  
 Very low power consumption.  
 CLKOUT enable/disable.  
 Small size, low profile, lightweight (5.1 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> $\Delta F/F$	±20	ppm
Supply voltage	V <sub>DD</sub>	1.6 – 5.5	V
Current consumption (typ./max.)	<sup>2)</sup> I <sub>DD</sub>	0.55 / 0.75	µA
Duty cycle (min./max.)		40 / 60	%
Start up time (max.)	t <sub>start</sub>	0.5	s
Voltage coefficient (max.)		±3	ppm/V
Aging first year max. @ 25°C	$\Delta F/F$	±3	ppm
Turnover temperature (typ.)	T <sub>0</sub>	28 ±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<sub>DD</sub> = 3.0 V, CLKOE = LOW.

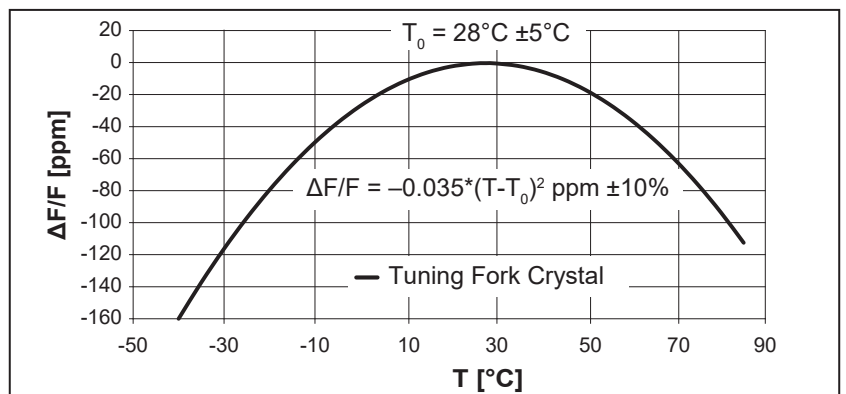
## ENVIRONMENTAL CHARACTERISTICS

		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, ½ sine	±5 ppm
Vibration resistance	$\Delta F/F$	20 g / 10–2000 Hz	±5 ppm

## TERMINATIONS AND PROCESSING

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

## FREQUENCY TEMPERATURE CHARACTERISTICS



## ORDERING INFORMATION

**O M - 0100 - C8 ±20 ppm TA QC**

<b>Oscillator</b>	<b>Qualification</b>
<b>Metal lid</b>	<b>QC</b> = Commercial Grade (Standard) <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>C8</b> = 2.0 x 1.2 x 0.70 mm	±20 ppm Tighter freq. tolerances on request

A unique part number will be generated for each product specification, i.e:	
20xxxx-MC01	1'000 pcs (in 8 mm tape on 7" reel)
20xxxx-MC03	3'000 pcs (in 8 mm tape on 7" reel)

All specifications subject to change without notice.



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