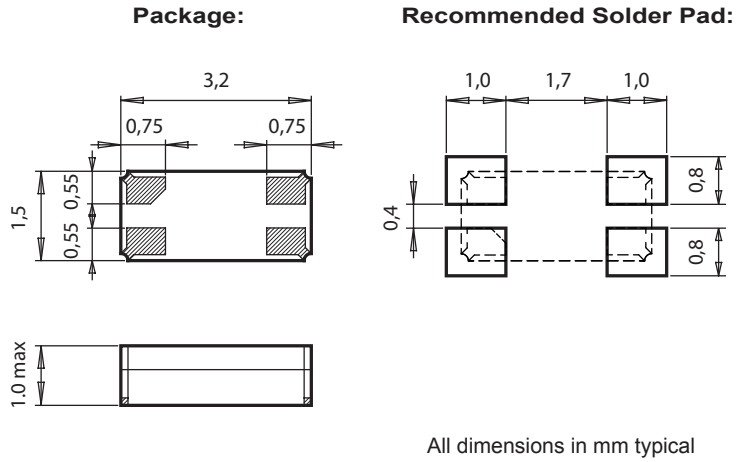


# OV-0100-C7

Low Power Clock Oscillator 100.000 kHz



## DIMENSIONS



## APPLICATIONS

Metering  
Industrial  
Automotive  
Health Care  
Medical Implantable

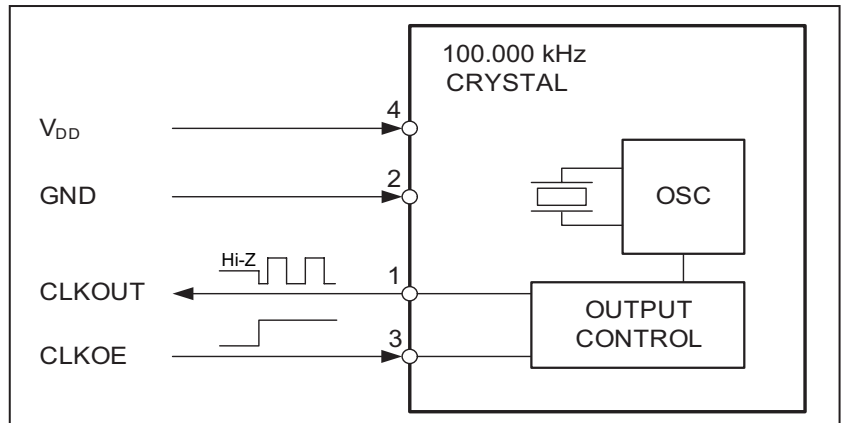
## DESCRIPTION

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

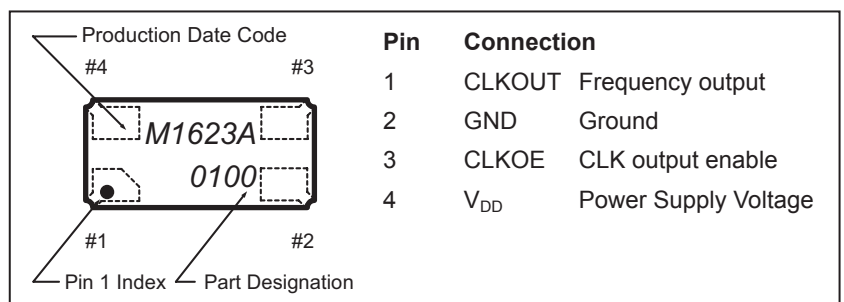
## FEATURES

Wide supply voltage range.  
Very low power consumption.  
CLKOUT enable/disable.  
Small size, low profile, lightweight (12.4 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>	1.2 – 5.5	V
Current consumption (typ./max.)	<sup>2)</sup> I <sub>DD</sub>	0.65 / 0.85	µA
Duty cycle (min./max.)		40 / 60	%
Start up time (max.)	t <sub>start</sub>	0.5	s
Voltage coefficient (max.)		±1.5	ppm/V
Aging first year max. @ 25°C	$\Delta F/F$	±3	ppm
Turnover temperature (typ.)	T <sub>0</sub>	18 ±5	°C
Frequency vs. temperature	$\Delta F/F_0$	-0.035 ppm/°C <sup>2</sup> (T - T <sub>0</sub> ) <sup>2</sup> ±10%	ppm

1) Tighter tolerances on request.

2) V<sub>DD</sub> = 3.0 V, CLKOE = LOW.

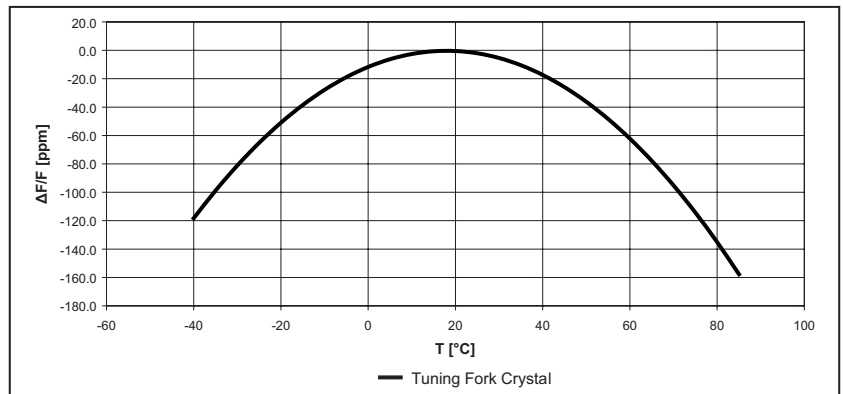
## ENVIRONMENTAL CHARACTERISTICS

		Conditions	Max. Dev.
Storage temp. 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

Type	Termination	Processing
OV-0100-C7	For SMT mounting Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s

## FREQUENCY TEMPERATURE CHARACTERISTICS:



## ORDERING INFORMATION

**OV - 0100 - C7 ±20 ppm TA QC**

<p><b>Oscillator</b></p> <p><b>Ceramic lid</b></p> <p><b>Frequency</b> 0100 = 100.000 kHz</p> <p><b>Package size</b> C7 = 3.2 x 1.5 x 1.0 mm</p>	<p><b>Qualification</b>  <b>QC</b> = Commercial Grade (Standard)  <b>QA</b> = Automotive Grade AEC-Q200  <b>QM</b> = Medical Grade</p> <p><b>Temperature range</b>  <b>TA</b> = -40 to +85°C (Standard)</p> <p><b>Frequency tolerance</b></p>
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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.

