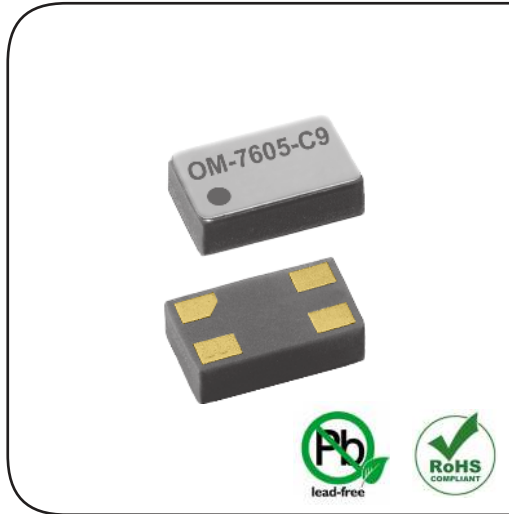
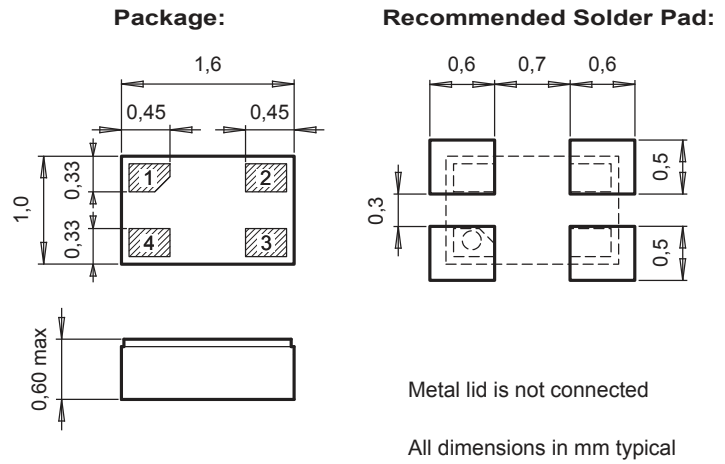


# OM-7605-C9

Low Power Clock Oscillator 32.768 kHz



## DIMENSIONS



## APPLICATIONS

IoT  
 Metering  
 Industrial  
 Automotive  
 Health Care  
 Wearables, Portables

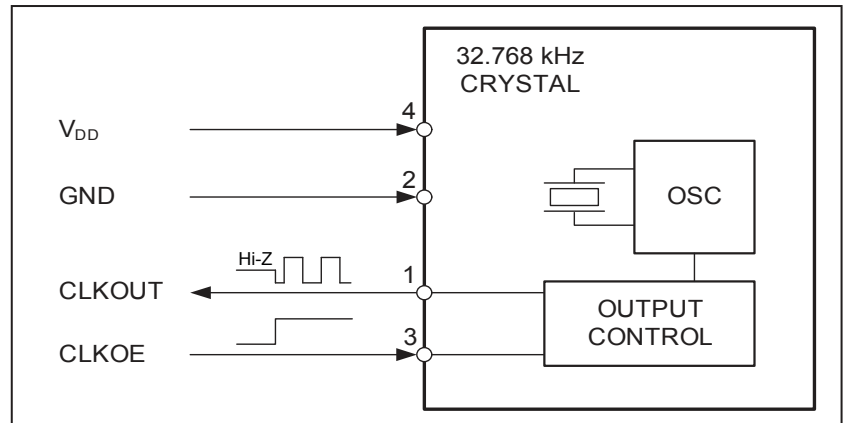
## DESCRIPTION

The OM-7605-C9 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 metal lid.

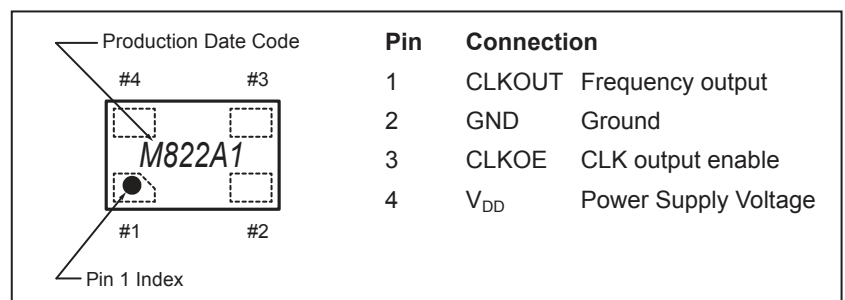
## FEATURES

Wide supply voltage range.  
 Very low power consumption.  
 CLKOUT enable/disable.  
 Ultra small size, low profile, lightweight (3.1 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	32.768	kHz
Frequency tolerance	<sup>1)</sup> ΔF/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>	0.45 / 0.65	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	ΔF/F	±3	ppm
Turnover temperature (typ.)	T <sub>0</sub>	25 ±5	°C
Frequency vs. temperature	ΔF/F <sub>0</sub>	-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.

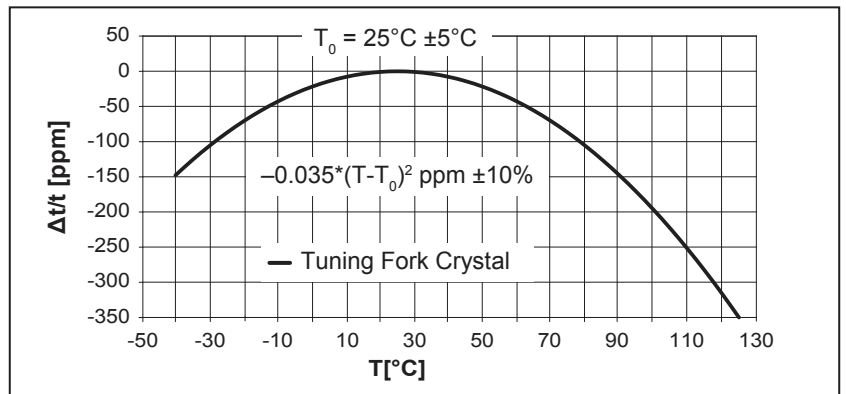
## ENVIRONMENTAL CHARACTERISTICS

	Conditions	Max. Dev.
Storage temp. range	-55 to +125°C	
TA Operating temperature range	-40 to +85°C	
TB Extended oper. temp. range	-40 to +125°C	
Shock resistance	ΔF/F 5000 g, 0.3 ms, ½ sine	±5 ppm
Vibration resistance	ΔF/F 20 g / 10–2000 Hz	±5 ppm

## TERMINATIONS AND PROCESSING

Type	Termination	Processing
OM-7605-C9	Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s

## FREQUENCY TEMPERATURE CHARACTERISTICS



## ORDERING INFORMATION

**OM - 7605 - C9 ±20 ppm TA QC**

**Oscillator**  
**Metal lid**  
**Frequency**  
 7605 = 32.768 kHz  
**Package size**  
 C9 = 1.6 x 1.0 x 0.60 mm

**Qualification**  
**QC** = Commercial Grade (Standard)  
**QA** = Automotive Grade AEC-Q200

**Temperature range**  
**TA** = -40 to +85°C (Standard)  
**TB** = -40 to +125°C

**Frequency tolerance**

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.



MICRO CRYSTAL SWITZERLAND

A COMPANY OF THE SWATCH GROUP

Micro Crystal AG  
 Muehlestrasse 14  
 CH-2540 Grenchen  
 Switzerland

Phone +41 32 655 82 82  
 Fax +41 32 655 82 83  
 sales@microcrystal.com  
 www.microcrystal.com