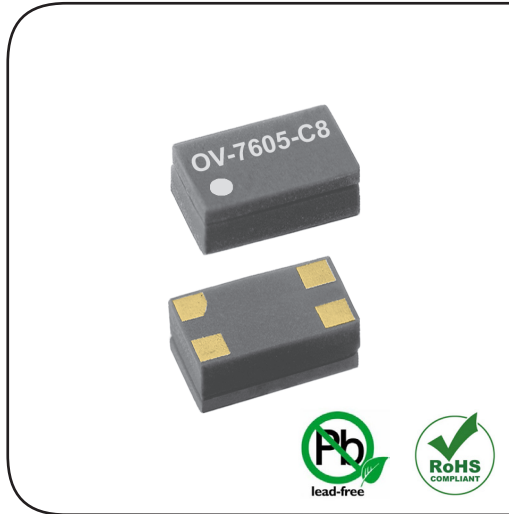
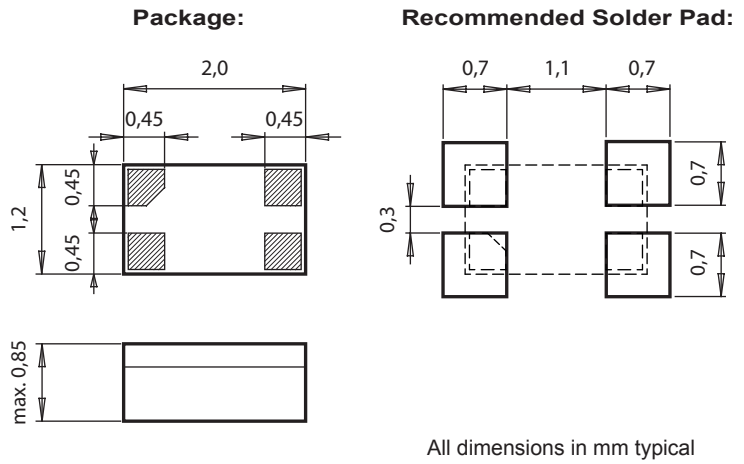


# OV-7605-C8

Low Power Clock Oscillator 32.768 kHz



## DIMENSIONS



## APPLICATIONS

Metering  
Industrial  
Automotive  
Health Care  
Medical Implantable

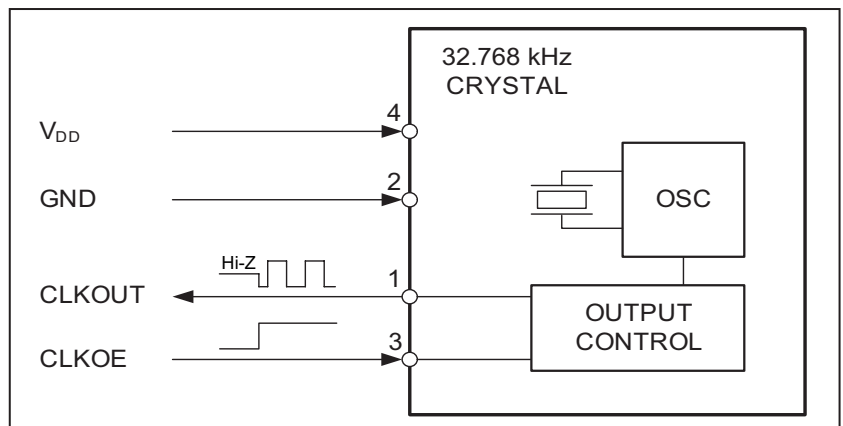
## DESCRIPTION

The OV-7605-C8 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.

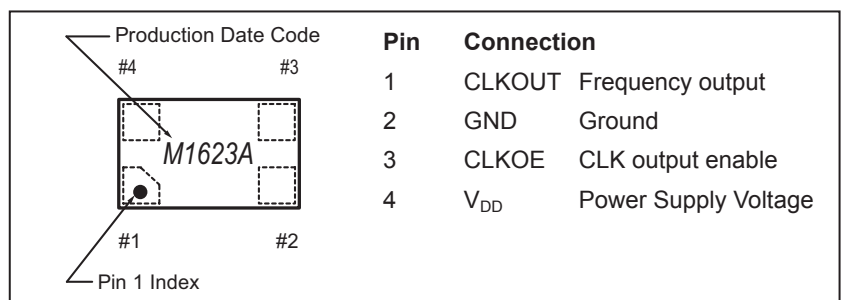
## FEATURES

Wide supply voltage range.  
Very low power consumption.  
CLKOUT enable/disable.  
Small size, low profile, lightweight (6.0 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> $\Delta F/F$	$\pm 20$	ppm
Supply voltage	$V_{DD}$	1.6 – 5.5	V
Current consumption (typ./max.)	<sup>2)</sup> $I_{DD}$	0.45 / 0.65	$\mu A$
Duty cycle (min./max.)		40 / 60	%
Start up time (max.)	$t_{start}$	0.5	s
Voltage coefficient (max.)		$\pm 3$	ppm/V
Aging first year max. @ 25°C	$\Delta F/F$	$\pm 3$	ppm
Turnover temperature (typ.)	$T_0$	25 $\pm$ 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.

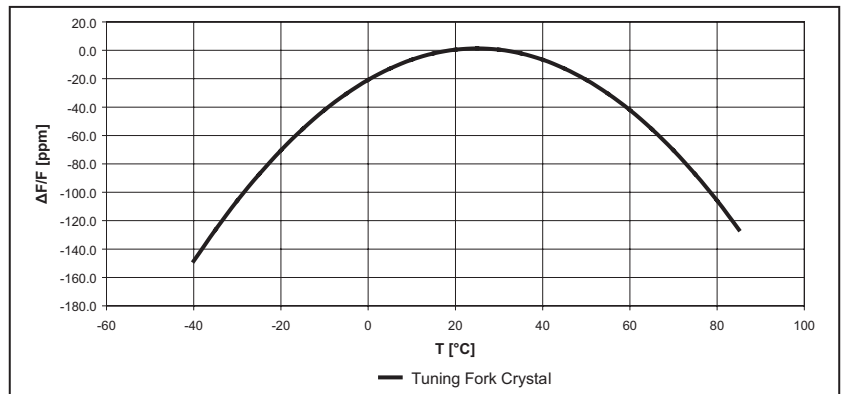
## ENVIRONMENTAL CHARACTERISTICS

	Conditions	Max. Dev.
Storage temp. 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

Type	Termination	Processing
OV-7605-C8	For SMT mounting Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s

## FREQUENCY TEMPERATURE CHARACTERISTICS



## ORDERING INFORMATION

**O V - 7605 - C8 ±20 ppm TA QC**

**Oscillator**  
**Ceramic lid**  
**Frequency**  
 7605 = 32.768 kHz  
**Package size**  
 C8 = 2.0 x 1.2 x 0.85 mm

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

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

**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.



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