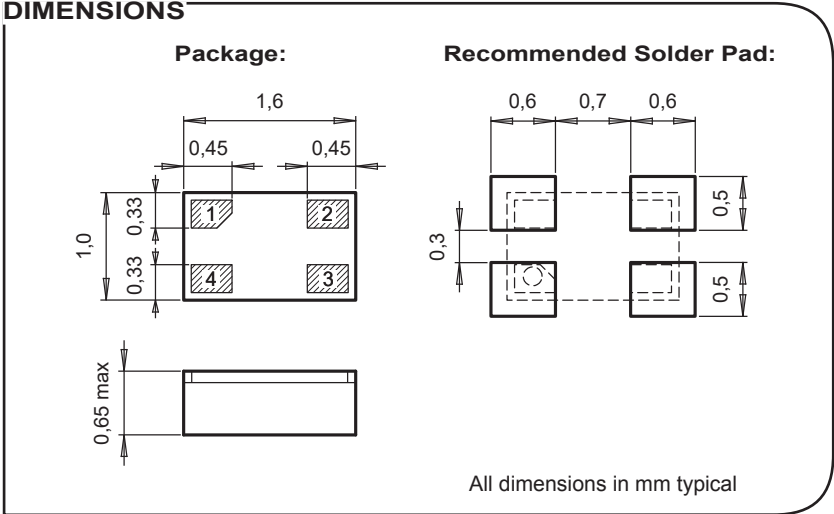
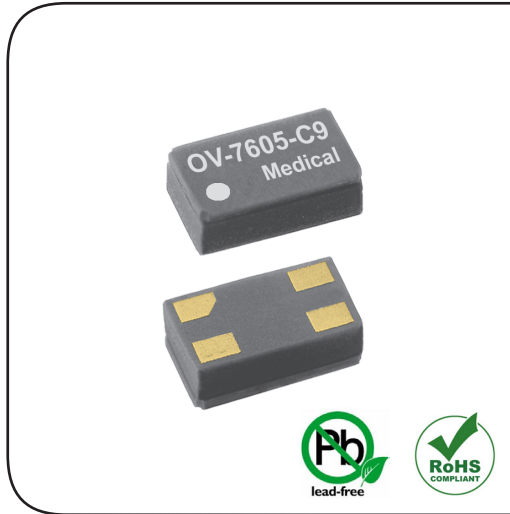


# OV-7605-C9 Medical

## Low Power Clock Oscillator 32.768 kHz



**APPLICATIONS**

- Pacemakers
- Defibrillators
- Neurostimulators
- Cardiac Monitoring Devices
- Implantable Drug Delivery Pumps
- Infusion Pumps
- Cochlear Implants
- Smart Orthopedic Implants

**DESCRIPTION**

The OV-7605-C9 Medical Low Frequency Oscillator is manufactured specifically for use in implantable medical devices. It incorporates a CMOS circuit and built in 32.768 kHz crystal. Micro Crystal's long history in supplying medical grade timing devices ensures that the OV-7605-C9 Medical is produced in accordance with the highest quality production technologies. Long-term reliability is of utmost importance (Class III Implantable) and a hallmark of Micro Crystal's entire medical implantable grade portfolio.



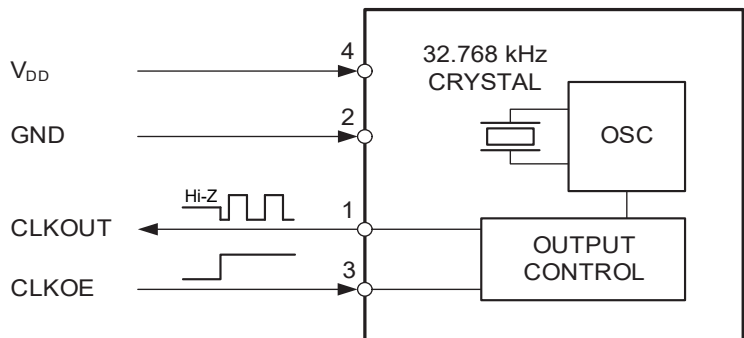
**MEDICAL IMPLANTABLE KEY FEATURES**

- Safe for Helium environment: Ceramic lid with gold-tin preform-seal for best long-term hermeticity and stability
- Proprietary manufacturing and testing processes
- Long-term aging stability
- Extended operating temperature range: -40°C to +125°C
- Customer specific testing/screening on request
- Components and manufacturing traceability records retained
- Small size, low profile, lightweight (2.8 mg)

**FEATURES**

- Very low power consumption: 450 nA @ 3 V
- Wide operating voltage range: 1.6 V to 5.5 V
- CLKOUT enable/disable

**BLOCK DIAGRAM**



## 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> $\Delta F/F$	±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
Start up time (max.)	t <sub>start</sub>	0.5	s
Aging first year max. @ 25°C	$\Delta F/F$	±2	ppm
Turnover temperature (typ.)	T <sub>0</sub>	25 ±5	°C
Frequency vs. temperature	$\Delta F/F_0$	-0.035 ppm/°C (T-T <sub>0</sub> ) <sup>2</sup> ±10%	ppm

1) Other tolerances on request.

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

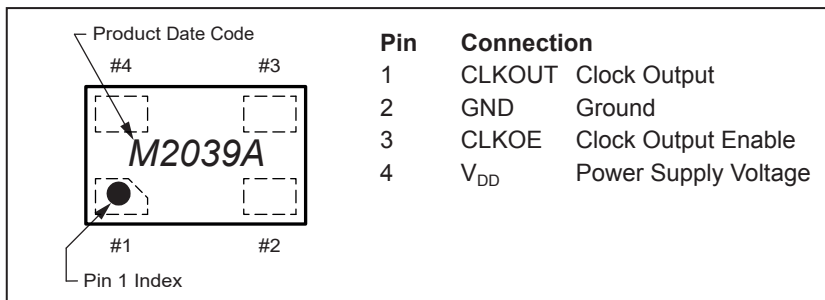
## ENVIRONMENTAL CHARACTERISTICS

		Conditions	Max. Dev.
Storage temperature range		-55 to +125°C	
TA Operating temperature range		-40 to +85°C	
TB Extended oper. temp. range		-40 to +125°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

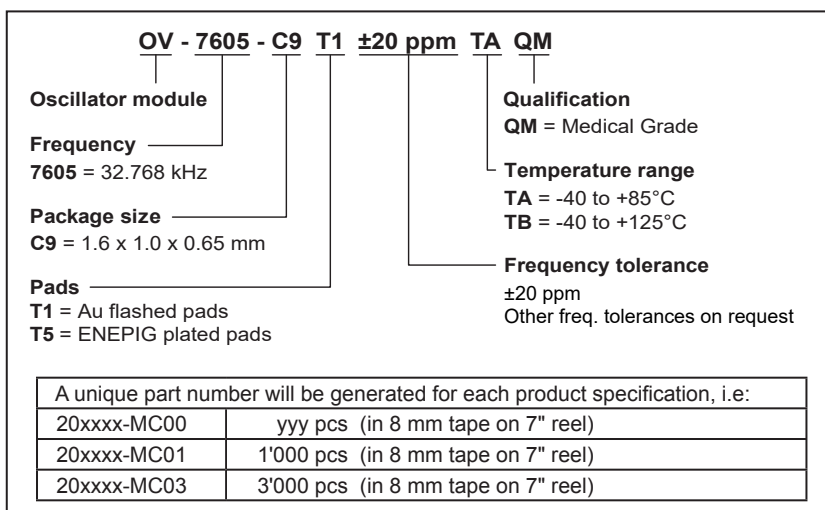
## TERMINATIONS AND PROCESSING

Type	Termination	Processing
OV-7605-C9 T1	Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s
OV-7605-C9 T5	ENEPIG plated pads	

## PIN CONNECTIONS TOP VIEW



## ORDERING INFORMATION



All specifications subject to change without notice.



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