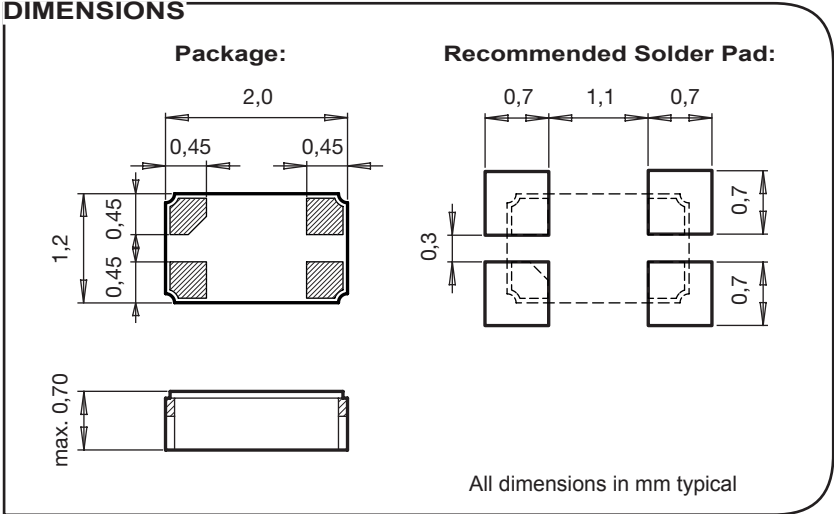
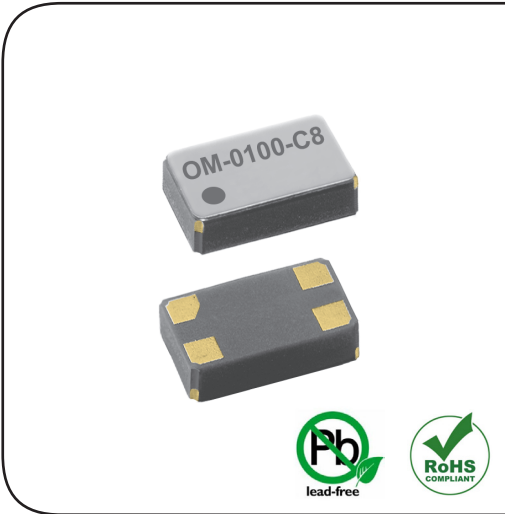


OM-0100-C8

Low Power Clock Oscillator 100.000 kHz



APPLICATIONS

- lot
- Metering
- Industrial
- Automotive
- Health Care
- Wearables, Portables

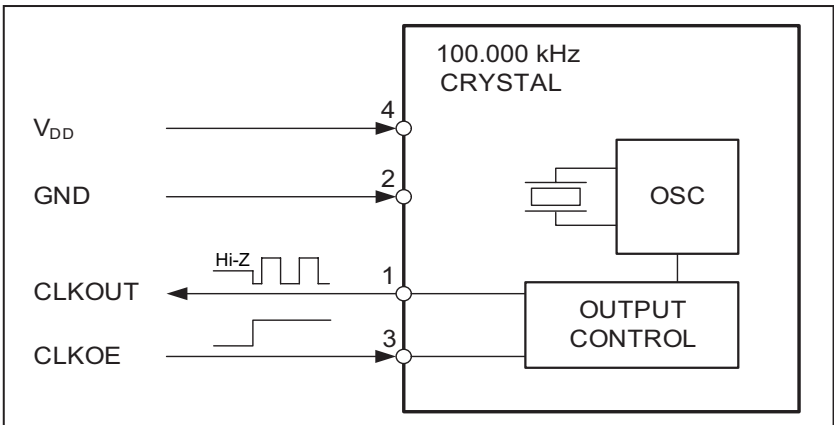
DESCRIPTION

The OM-0100-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 metal lid.

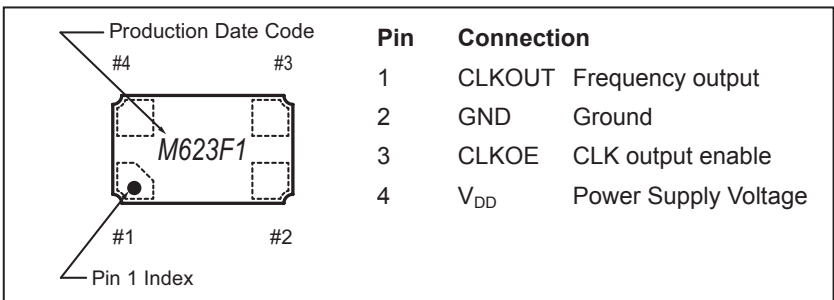
FEATURES

- 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 | ¹⁾ $\Delta F/F$ | ±100 | ppm |
| Supply voltage | V _{DD} | 1.6 – 5.5 | V |
| Current consumption (typ./max.) | ²⁾ I _{DD} | 0.55 / 0.75 | µA |
| Duty cycle (min./max.) | | 40 / 60 | % |
| Start up time (max.) | t _{start} | 0.5 | s |
| Voltage coefficient (max.) | | ±3 | ppm/V |
| Aging first year max. @ 25°C | $\Delta F/F$ | ±3 | ppm |
| Turnover temperature (typ.) | T ₀ | 28 ±5 | °C |
| Frequency vs. temperature | $\Delta F/F_0$ | -0.035 ppm/°C ² (T - T ₀) ² ±10% | ppm |

1) Tighter tolerances on request.

2) V_{DD} = 3.0 V, CLKOE = LOW.

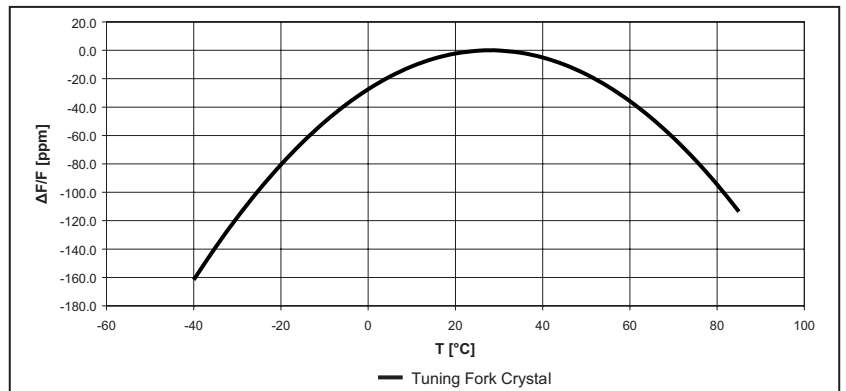
ENVIRONMENTAL CHARACTERISTICS

| | 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 |
|------------|-------------------------------------|---|
| OM-0100-C8 | For SMT mounting 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

| | | |
|---------------------|--------------------------------|---|
| Oscillator | | Qualification |
| Metal lid | | QC = Commercial Grade (Standard) |
| Frequency | 0100 = 100.000 kHz | QA = Automotive Grade AEC-Q200 |
| Package size | C8 = 2.0 x 1.2 x 0.7 mm | 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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