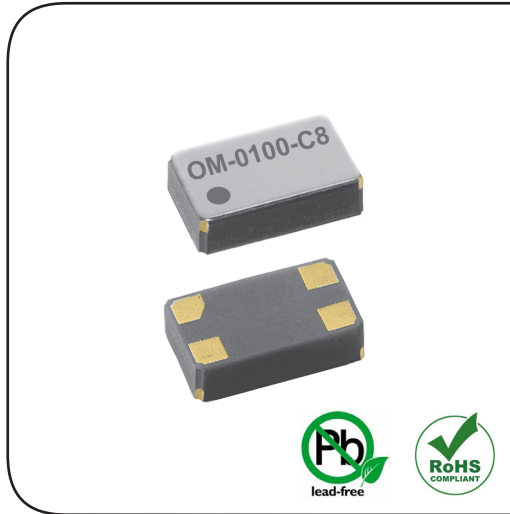
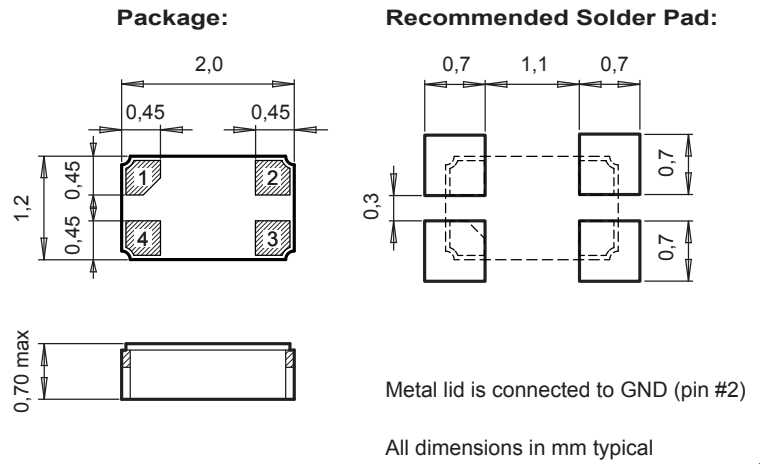


OM-0100-C8

Low Power Clock Oscillator 100.000 kHz



DIMENSIONS



APPLICATIONS

lot
 Metering
 Industrial
 Automotive
 Health Care
 Wearables, Portables

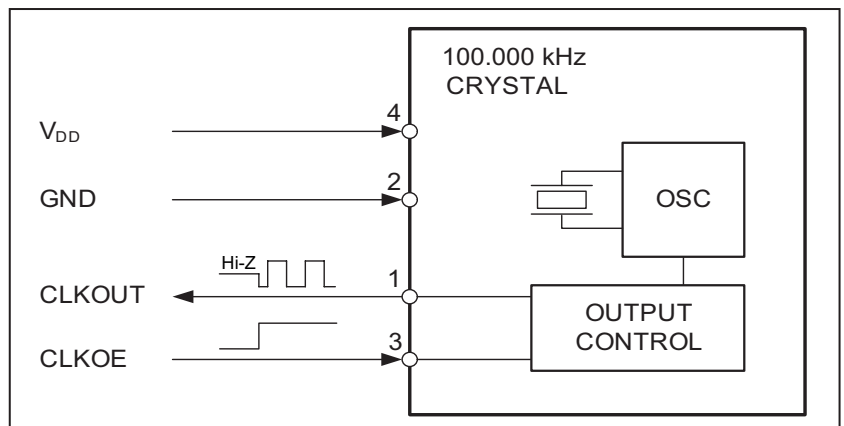
DESCRIPTION

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.

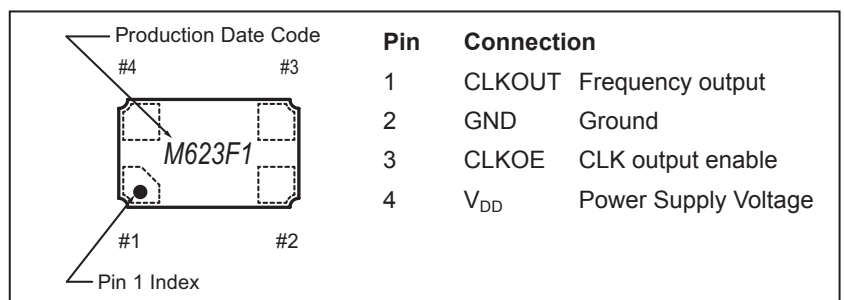
FEATURES

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 | $\Delta F/F_0$ | $-0.035 \text{ ppm}/^{\circ}\text{C}^2 (T - T_0)^2 \pm 10\%$ | ppm |

1) Tighter tolerances on request.

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

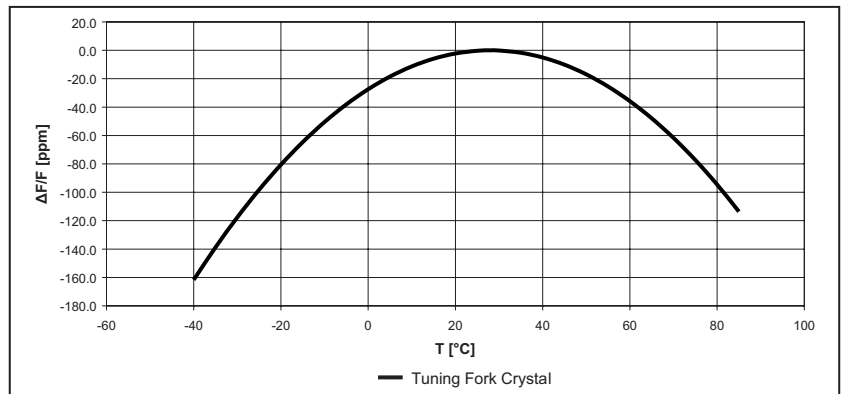
ENVIRONMENTAL CHARACTERISTICS

| | | 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 | Au flashed pads | IPC/JEDEC J-STD-020C 260°C / 20 - 40 s |

FREQUENCY TEMPERATURE CHARACTERISTICS



ORDERING INFORMATION

OM - 0100 - C8 ±20 ppm TA QC

Oscillator
Metal lid
Frequency
0100 = 100.000 kHz
Package size
C8 = 2.0 x 1.2 x 0.70 mm

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

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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