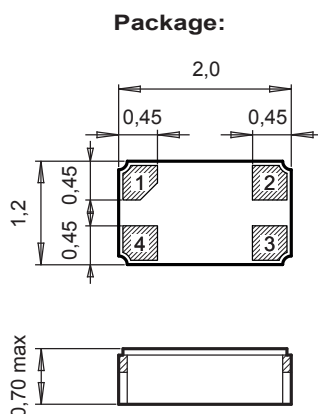


OM-0100-C8

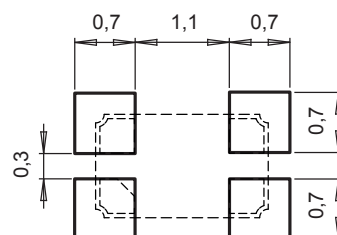
Low Power Clock Oscillator 100.000 kHz



DIMENSIONS



Recommended Solder Pad:



Metal lid is connected to GND (pin #2)

All dimensions in mm typical

APPLICATIONS

IoT
Metering
Industrial
Automotive
Health Care
Wearables, Portables

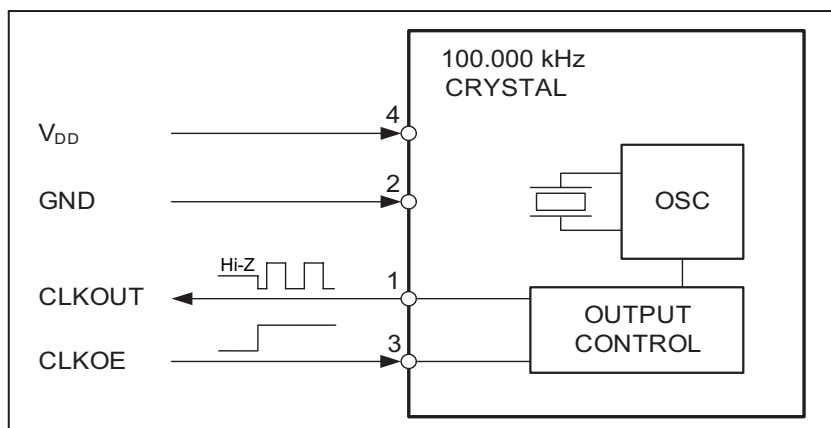
DESCRIPTION

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.

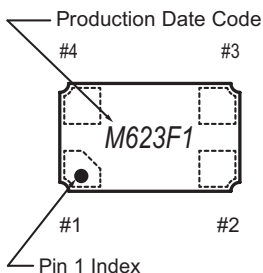
FEATURES

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



Pin	Connection
1	CLKOUT Frequency output
2	GND Ground
3	CLKOE CLK output enable
4	V _{DD} Power Supply Voltage

ELECTRICAL CHARACTERISTICS AT 25°C

More detailed information can be found in the Application Manual.

Output Frequency	F	100.000	kHz
Frequency tolerance ¹⁾	ΔF/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	ΔF/F	±3	ppm
Turnover temperature (typ.)	T ₀	28 ±5	°C
Frequency vs. temperature	ΔF/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.

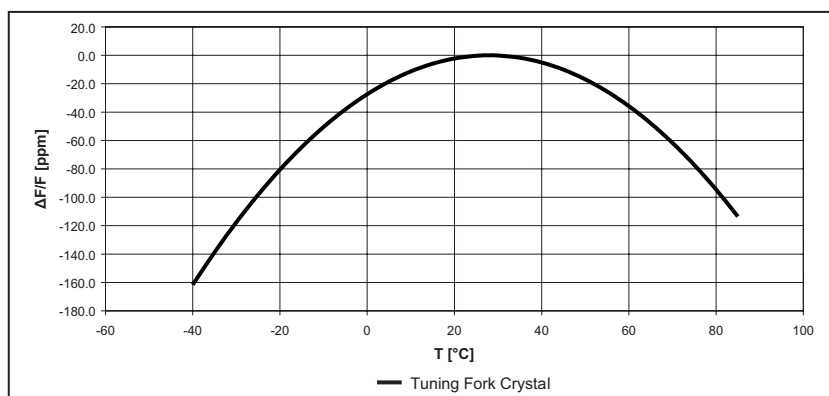
ENVIRONMENTAL CHARACTERISTICS

		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	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	QA = Automotive Grade AEC-Q200
0100 = 100.000 kHz	Temperature range
Package size	TA = –40 to +85°C (Standard)
C8 = 2.0 x 1.2 x 0.70 mm	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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[OM-0100-C8-100.00kHz-20PPM-TA-QC](#)