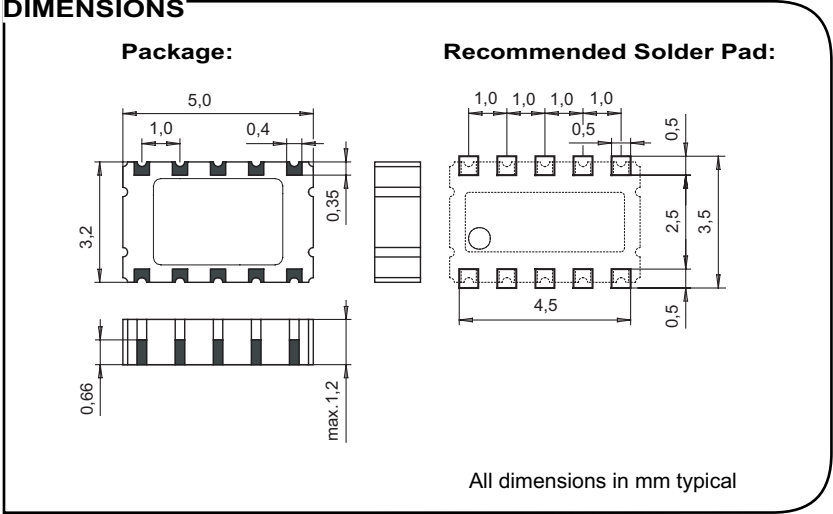


OV-1564-C2

Low Power Clock Oscillator 32.768 kHz



- All-in-one-package solution
- Miniature ceramic package
- Very low power consumption
- Very tight frequency tolerance
- Low aging
- High shock and vibration resistant

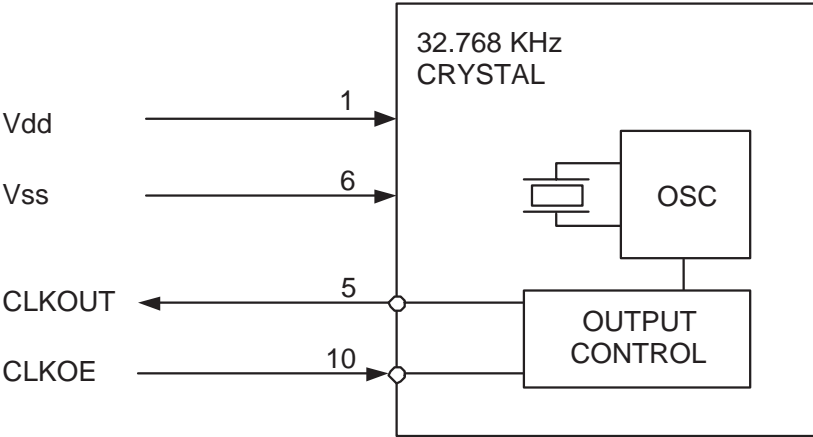
The OV-1564-C2 is a completely leadfree product.

DESCRIPTION:

This very small SMD ceramic package has been specially designed to combine the 32.768 kHz crystal unit with the CMOS-based oscillator circuit.

- For pick-and-place equipment, the parts are available in 12 mm tape:
- 7" (178 mm) reel with 1'500 parts
 - 10" (254 mm) reel with 3'500 parts
 - 13" (330 mm) reel with 7'000 parts

BLOCKDIAGRAM:



Preliminary

PIN DESCRIPTION:

| Terminal | Pin No. | Description |
|----------|------------------|--------------------|
| VDD | 1 | VDD |
| CLKOUT | 5 | Frequency output |
| GND | 6 | GND |
| CLKOE | 10 | FOUT output enable |
| | 2, 3, 4, 7, 8, 9 | N.C. |

ELECTRICAL CHARACTERISTICS AT 25°C:

| | | | |
|---------------------------|----------------------------|--|-----|
| Output frequency | | 32768 | Hz |
| Frequency tolerance | ¹⁾ $\Delta F/F$ | +/-15 | ppm |
| Aging first year max. | $\Delta F/F$ | +/-3 | ppm |
| Turnover temperature | T_0 | 25 +/-5 | °C |
| Frequency vs. temperature | $\Delta F/F_0$ | $-0.035 \text{ ppm}/^\circ\text{C}^2 (T - T_0)^2$ +/-10% | ppm |

1) Tighter and wider frequency tolerances on request.

| | Symbol | Condition | Min. | Typ. | Max | Unit |
|---------------------------------|-----------|----------------------------|------|-------------|----------|---------------|
| Supply voltage | V_{DD} | | 1.0 | | 5.5 | V |
| Current consumption backup mode | I_{DD} | OE, no load, 3 V OE, 3V | | 1.5 0.28 | 2 0.7 | μA |
| Start-up time | T_{str} | 3 V | | 350 | 700 | ms |

ENVIRONMENTAL CHARACTERISTICS:

| | | Conditions | Max. Dev. |
|----------------------------------|--------------|--------------------------|-----------|
| Storage temp. range | | -55 to +125°C | |
| Industrial operating temp. range | | -40 to +85°C | |
| Shock resistance | $\Delta F/F$ | 5000 g, 0.3 ms, 1/2 sine | +/-5 ppm |
| Vibration resistance | $\Delta F/F$ | 20 g / 10-2000 Hz | +/-5 ppm |

PACKAGE, TERMINATIONS AND PROCESSING:

| Package-Type | Termination | Processing |
|--------------|-------------------------------------|-------------------------------------|
| SON 10-pin | For SMD mounting Au flashed pads | Reflow soldering 260°C/20 s max. |

All specifications subject to change without notice. 01.04



A COMPANY OF THE **SWATCH GROUP**

Headquarters:

Micro Crystal
Div. of ETA SA
Mühlestrasse 14
CH-2540 Grenchen
Switzerland
Tel. +41 32 655 82 82
Fax +41 32 655 82 83
sales@microcrystal.ch
www.microcrystal.ch

North American Sales Office:

Micro Crystal
A Div. of The Swatch Group (U.S.) Inc.
601 Campus Drive, Suite B4
Arlington Heights, IL 60004
USA
Tel. +1 847 818 9825
Fax +1 847 818 9915
sales@microcrystal.com
www.microcrystal.com