



# AnaSem

*Analog Semiconductor IC*
**AS-CM32768BNA**

## 32.768KHz/CMO: CMOS Monolithic Clock Oscillator

### ■ 特長

- CMOS高精度発振 IC: 32.768KHz/3.3V
- 周波数安定度:  $\pm 1000\text{ppm}/-40\sim 85^\circ\text{C}$ ,  $V_{\text{DD}}=3.3\text{V}\pm 5\%$
- 低消費電流:  $5\mu\text{A}/32.768\text{KHz}/3.3\text{V}$
- 動作電圧範囲:  $3.3\text{V}\pm 5\%$
- SON-4Lパッケージ ( $2.0\times 2.0\times 0.6\text{mm}$ )
- カスタム仕様/周波数安定度:  $\pm 500\sim \pm 10000\text{ppm}$
- CMシリーズカスタム周波数範囲:  $0.5\text{Hz}\sim 500\text{MHz}$

### ■ Features

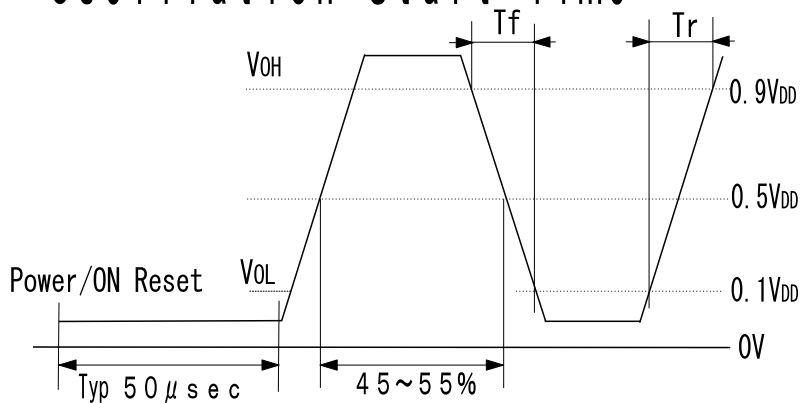
- CMOS High Accuracy Monolithic OSC
- Frequency Stability:  $\pm 1000\text{ppm}$
- Low Power Consumption:  $5\mu\text{A}/3.3\text{V}$
- Operating Voltage:  $3.3\text{V}\pm 5\%$
- SON-5L Package ( $2.1\times 2.0\times 0.6\text{mm}$ )
- Custom Spec/Stability:  $\pm 500\sim \pm 10000\text{ppm}$
- CM Series Custom Frequency Range:  $0.5\text{Hz}\sim 500\text{MHz}$

### ■ 電気的特性 Specifications

項目 ITEM	型名 TYPE	AS-CM32768BNA
Output Frequency 出力周波数		32.768KHz
Frequency Stability 周波数安定度		$\pm 1000\text{ppm min}/-40\sim 85^\circ\text{C}/3.3\text{V}\pm 5\%$
Frequency Temperature Deviation 周波数温度偏差		$\pm 250\text{ppm typ}/3.3\text{V}/-40\sim +85^\circ\text{C}$
Frequency Room Temperature Deviation 常温周波数偏差		$\pm 250\text{ppm typ}/25^\circ\text{C}/3.3\text{V}$
Oscillation Start Time 発振開始時間		$50\mu\text{sec typ}/25^\circ\text{C}/3.3\text{V}$
Operating Temperature Range 動作温度範囲		$-40\sim +85^\circ\text{C}$
Storage Temperature Range 保存温度範囲		$-50\sim +125^\circ\text{C}$
Power Supply Voltage 電源電圧		$+3.3\text{V}\pm 5\%$
Power Consumption(No Load) 消費電流 (無負荷)		$\text{typ}: 5\mu\text{A}/3.3\text{V}, \text{max}: 8\mu\text{A}/3.3\text{V}$
Output Symmetry 出力波形対称性		$45\% \text{ to } 55\% (\text{at } 1/2V_{\text{DD}}) / 3.3\text{V}/25^\circ\text{C}$
Rise Time/Fall Time 立ち上がり、立ち下がり時間		$80\text{nS max } (0.3\sim 3.0\text{V}) / 80\text{nS max } (3.0\sim 0.3\text{V})$
Output Load 出力負荷		15 pF
Input Level 入力レベル		$V_{\text{IH}}: +3.0\text{V min} / V_{\text{IL}}: +0.3\text{V max}$
Output Level 出力レベル		$V_{\text{OH}}: +3.0\text{V min} / V_{\text{OL}}: +0.3\text{V max}$
Assembly Temperature Range 実装温度条件		Peak Temperature $255^\circ\text{C}\pm 5^\circ\text{C}$ for 5 seconds max. Maximum Temperature: $260^\circ\text{C}$

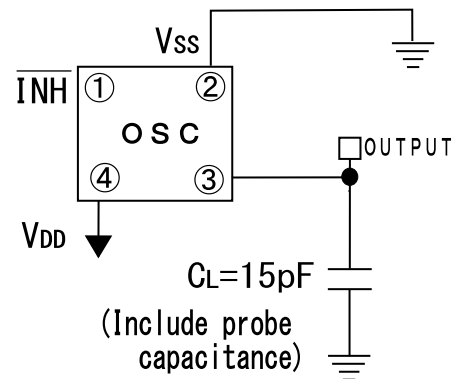
■ 発振波形／発振時間

Output Wave Form/Oscillation  
Oscillation Start Time

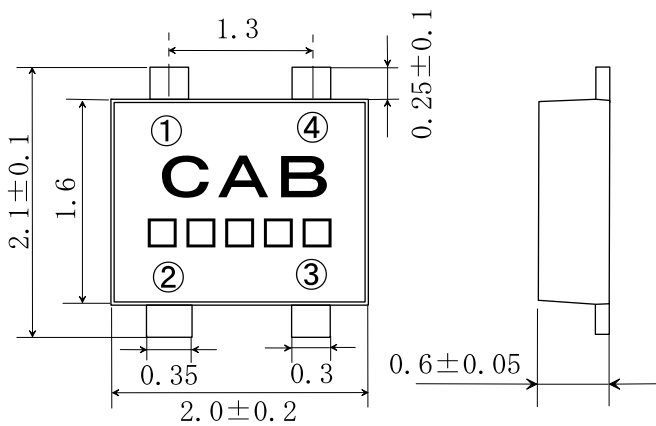


■ 測定回路

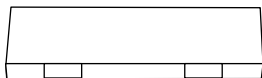
Measurement Circuit



■ 外形寸法



TOP VIEW



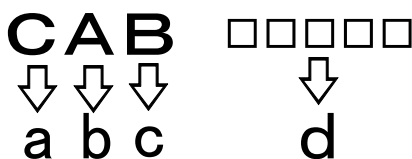
■ 接続端子

Pin Connections

①	$\overline{\text{INH}}$
②	GND ( $V_{SS}$ )
③	OUTPUT
④	3.3V ( $V_{DD}$ )

/ INHIBIT	
"L" Level	Open or "H" Level
High Impedance	Enable:Output

■ マーキング



a	C:CMOS Monolithic Clock Oscillator
b	A:32.768KHz/3.3V
c	B:Frequency/Spec
d	Lot/Company Rule

製造元:アナセム株式会社

Maker :AnaSem. InC

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