



# AnaSem Analog Semiconductor IC

## AS-CM13300BMA

### 133MHz/CMO : CMOS Monolithic Cbck Oscillator+Spread Spectrum

#### 特長

CMOS高精度Monolithic発振IC:133.00MHz/3.3V  
 周波数安定度:  $\pm 1000\text{ppm}/-40\sim 85$ ,  $V_{\text{dd}}=3.3\text{V}\pm 5\%$   
 スペクトラム拡散: センター( $\pm 1\%$ )/ダウン( $-2\%$ )  
 低消費電流: 25mA/133.00MHz/3.3V  
 動作電圧範囲:  $3.3\text{V}\pm 5\%$   
 SON-6Lパッケージ( $2.0\times 1.8\times 0.6\text{mm}$ )  
 カスタム周波数範囲: 0.5Hz~250MHz

#### Features

CMOS High Accuracy Monolithic OSC  
 Frequency Stability:  $\pm 1000\text{ppm}$   
 Spread Spectrum: Center( $\pm 1\%$ )/Down( $-2\%$ )  
 Low Power Consumption: 25mA/3.3V  
 Operating Voltage:  $3.3\text{V}\pm 5\%$   
 SON-6L Package( $2.0\times 1.8\times 0.6\text{mm}$ )  
 Custum Frequency Range: 0.5Hz~250MHz

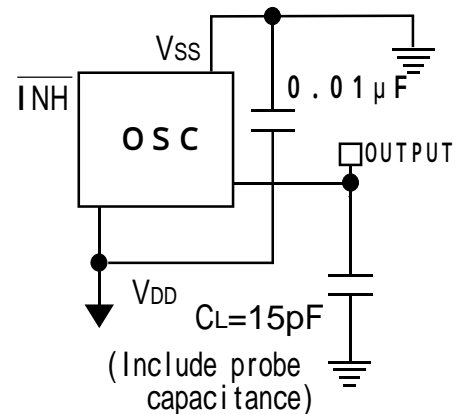
#### 電気的特性 Specifications

項目 ITEM	型名 TYPE	AS-CM13300BMA
Output Frequency 出力周波数		133.000MHz
Frequency Stability 周波数安定度		$\pm 1000\text{ppm min}/-40\sim 85 / 3.3\text{V}\pm 5\%$
Frequency Temperature Deviation 周波数温度偏差		$\pm 200\text{ppm max}/3.3\text{V}/-40\sim +85$
Frequency Room Temperature Deviation 常温周波数偏差		$\pm 200\text{ppm min}/25 / 3.3\text{V}$
Spread Spectrum スペクトラム拡散		Center Spectrum: $\pm 2\%$ /Down Spectrum: $-4\%$
Operating Temperature Range 動作温度範囲		-40+85
Storage Temperature Range 保存温度範囲		-50~+125
Power Supply Voltage 電源電圧		+3.3V $\pm 5\%$
Power Consumption(No Load) 消費電流(無負荷)		typ:25mA/3.3V, max:35mA/3.3V
Output Symmetry 出力波形対称性		45% to 55%(at 1/2V <sub>DD</sub> )/3.3V/25
Rise Time/Fall Time 立ち上がり、立ち下がり時間		2nS max(0.3~3.0V)/2nS max(3.0~0.3V)
Output Load 出力負荷		15pF
Input Level 入力レベル		V <sub>IH</sub> :+3.0V min/V <sub>IL</sub> :+0.3V max
Output Level 出力レベル		V <sub>OH</sub> :+3.0V min/V <sub>OL</sub> :+0.3V max
Assembly Temperature Range 実装温度条件		Peak Temperature 255 $\pm 5$ for 5seconds max.Maximum Temperature:260

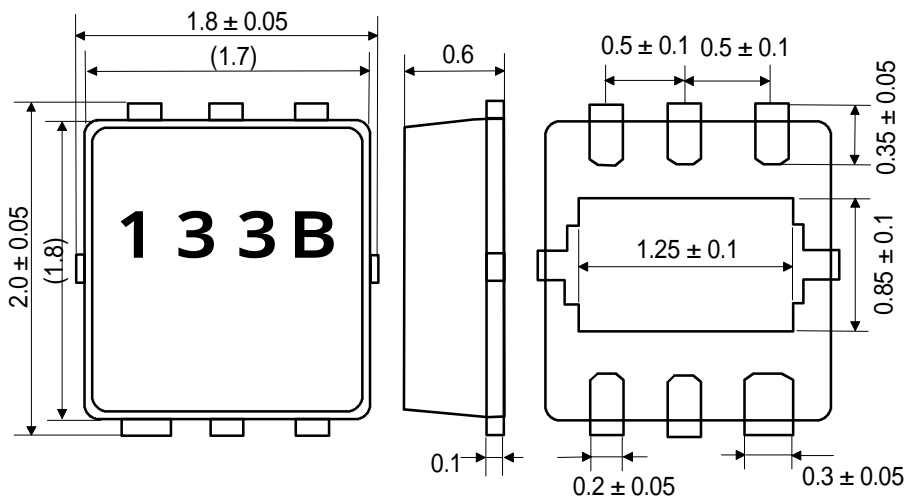
# スペクトラム拡散 / Spread Spectrum

S1	S2	A:Series Center Spectrum	B:Series Down Spectrum
-	-	0%	0%
L	L	±0.25%	-0.5%
L	H	±0.50%	-1.0%
H	L	±0.75%	-1.5%
H	H	±1.00%	-2.0%

# 測定回路 Measurement Circuit



# 外形寸法 Package



# 接続端子 Pin Connections

Pin	Function
INH	INHIBIT
S1	Series Center Spectrum
GND (V <sub>SS</sub> )	Ground
Output	Output
S2	Series Down Spectrum
+3.3V (V <sub>DD</sub> )	Supply Voltage

# マーキング Marking

## 1 3 3 B

a      b      c

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

<b>a</b>	133: 133MHz
<b>b</b>	Series: Down Spectrum/3.3V
<b>c</b>	Production Lot: Company Rule

**製造元: アナセム株式会社**  
**Maker: Ana Sem Inc**  
 〒274-0825 船橋市前原西2丁目13-10  
 2-13-10 Maehara Nishi Funabashi Chiba Japan  
 TEL (047) 470-5810 FAX 470-5825  
 Home Page: <http://www.anasem.co.jp>  
 e-mail: [support@anasem.co.jp](mailto:support@anasem.co.jp)