



Product Overview

NB2969A: 3.3 V / 2.5 V Low Power, Reduced EMI Clock Synthesizer

For complete documentation, see the [data sheet](#)

Product Description

The NB2969A is a versatile spread spectrum frequency modulator designed specifically for a wide range of clock frequencies. The NB2969A reduces ElectroMagnetic Interference (EMI) at the clock source, allowing system wide reduction of EMI of all clock dependent signals. The NB2969A allows significant system cost savings by reducing the number of circuit board layers, ferrite beads and shielding that are traditionally required to pass EMI regulations.

The NB2969A uses the most efficient and optimized modulation profile approved by the FCC and is implemented by using a proprietary all digital method.

The NB2969A modulates the output of a single PLL in order to "spread" the bandwidth of a synthesized clock, and more importantly, decreases the peak amplitudes of its harmonics. This results in

significantly lower system EMI compared to the typical narrow band signal produced by oscillators and most frequency generators. Lowering EMI by increasing a signal's bandwidth is called 'spread spectrum clock generation'.

The NB2969A is targeted towards all portable devices with very low power requirements like MP3 players, Notebooks and digital still cameras.

Features

- Generates an EMI Optimized Clocking Signal at the Output
- Integrated Loop Filter Components
- Operates with a 3.3v / 2.5V Supply
- Operating Current typically less than 4.0 mA
- Low Power CMOS Design
- Input Frequency Range: 6.0 MHz to 12 MHz for 2.5V; 6.0 MHz to 13 MHz for 3.3V
- Generates a 1X Low EMI Spread Spectrum clock of the Input Frequency
- Frequency Deviation 1% @ 10MHz
- Available in TSOP-6 Package (TSOT-23-6)
- Pb-Free Package is Available

Applications

- ElectroMagnetic Interference reduction in portable and consumer applications.
- Reduction of system clock noise to meet FCC regulations.

For more information please contact your local sales support at www.onsemi.com

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