NBC12429

PLL Synthesized Clock Generator, Programmable, 3.3 V / 5.0 V (25 to 400 MHz)

Product Overview

For complete documentation, see the data sheet.

The NBC12429 and NBC12429A are general purpose, PLL based synthesized clock sources. The VCO will operate over a frequency range of 200 MHz to 400 MHz. The VCO frequency is sent to the N-output divider, where it can be configured to provide division ratios of 1, 2, 4, or 8. The VCO and output frequency can be programmed using the parallel or serial interfaces to the configuration logic. Output frequency steps of 1.0 MHz can be achieved using a 16 MHz crystal, depending on the output dividers. The PLL loop filter is fully integrated and does not require any external components. The NBC12429 is specified to operate across the commercial temperature range. The NBC12429A is specified to operate across the industrial temperature range.

Features

- Best-in-Class Output Jitter Performance, ±20 ps Peak-to-Peak
- 25 MHz to 400 MHz Programmable Differential PECL Outputs
- Fully Integrated Phase-Locked Loop with Internal Loop Filter
- Parallel Interface for Programming Counter and Output Dividers During Power-Up
- Minimal Frequency Overshoot
- Serial 3-Wire Programming Interface
- Parallel Interface for Power-Up
- Crystal Oscillator Interface
- Operating Range: VCC = 3.0 V to 5.5 V
- CMOS and TTL Compatible Inputs
  For more features, see the data sheet

Applications

- Clock generation and synthesis for computing and servers.

Part Electrical Specifications

Product	Pricing ($/Unit)	Compliance	Status	Input Level	Output Level	V_S Typ (V)	f_{in} Typ (MHz)	f_{out} Typ (MHz)	t_{jitter}(Cy-Cy) Typ (ps)	t_{jitter}(Period) Typ (ps)	t_{jitter}(Φ) Typ (ps)	t_R & t_F Typ (ps)	t_R & t_F Max (ps)	T_A Min (°C)	T_A Max (°C)	Package Type
NBC12429AFNR2G	10.0317	Pb H	Active	CMOS	ECL		10-20	25-400		25	20	175	425	0	70	PLCC-28
NBC12429AMNR4G	9.1198	Pb H	Active	CMOS	ECL		10-20	25-400		25	20	175	425	0	70	QFN-32
NBC12429FAG	6.6665	Pb H	Active	CMOS	ECL		10-20	25-400		25	20	175	425	0	70	LQFP-32
NBC12429FAR2G	6.6665	Pb H	Active	CMOS	ECL		10-20	25-400		25	20	175	425	0	70	LQFP-32
NBC12429FNR2G	5.3332	Pb H	Active	CMOS	ECL		10-20	25-400		25	20	175	425	0	70	PLCC-28