

Product Overview

NB7N017M: 8-bit Divider with CML Output

For complete documentation, see the data sheet.

The NB7N017M is a high speed 8 bit dual modulus programmable divider/prescaler with 16 mA CML outputs capable of switching at input frequencies greater than 3.5 GHz. The CML output structure contains internal 50 ohm source termination resistor to VCC. The device generates 400 mV output amplitude with 50 ohm receiver resistor to VCC. This I/O structure enables easy implementation of the NB7N017M in 50 ohm systems.

The differential inputs contain 50 ohm termination resistors to VT pads and all differential inputs accept RSECL, ECL, LVDS, LVCMOS, LVTTTL, and CML.

Internally, the NB7N017M uses a greater than 3.5 GHz 8 bit programmable down counter. A select pin, SEL, is used to select between two words, Pa(0:7) and Pb(0:7), that are stored in REGa and REGb respectively. Two parallel load pins, PLa and PLb, are used to load the level triggered programming registers, REGa and REGb, respectively. A differential clock enable, CE, pin is available.

The NB7N017M offers a differential output, TC. Terminal count output, TC, goes high for one clock cycle when the counter has reached the all zeros state. To reduce output phase noise, TC is retimed with the rising edge triggered latches.

Features

- Maximum Input Clock Frequency > 3.5 GHz Typical
- 50 ohm Internal Input and Output Termination Resistors
- All Single Ended Control Pins CMOS and PECL/NECL Compatible
- Counter Programmed Using One of Two Single-Ended Words, Pa and Pb, Stored in REGa and REGb
- CML Output Level: 400 mV PeakPeak Output with 50 ohm Receiver Resistor to VCC
- 16 mA CML output with 50 ohm Internal Source Termination to VCC
- Differential CLK, CE, and SEL Input
- Compatible with Existing 3.3 V LVEP, EP, and SG Devices
- PbFree Packages are Available

Applications

- PLL
- Divider

Part Electrical Specifications										
Product	Compliance	Status	Type	Input Level	Output Level	V _{CC} Typ (V)	f _{max} Typ (MHz)	t _{pd} Typ (ns)	t _r & t _f Max (ps)	Package Type
NB7N017MMNG	Pb-free	Active	Divider	LVDS	CML	3.3	3500	0.515	65	QFN-52
	Halide free			ECL						
				CML						
				LVCMOS						

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