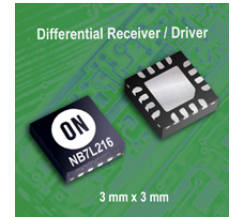


Product Overview

NB7L216: Multi Level Clock/Data Input to RSECL High Gain Receiver/Buffer/Translator with Internal Termination

For complete documentation, see the data sheet.



The NB7L216 is a differential receiver/driver with high gain output targeted for high frequency applications. The device is functionally equivalent to the NBSG16 but with much higher gain output. This highly versatile device provides 35 dB of gain up to 7 GHz. Inputs incorporate internal 50 Ω termination resistors and accept NECL (Negative ECL), PECL (Positive ECL), HSTL, LVTTTL, LVCMOS, CML, or LVDS. Outputs are RSECL (Reduced Swing ECL), 400 mV. The VBB pin is internally generated voltage supply available to this device only. The VBB is used as a reference voltage for single-ended NECL or PECL inputs. For all single-ended input conditions, the unused complementary differential input is connected to VBB as a switching reference voltage. VBB may also re bias AC coupled inputs. When used, decouple VBB via a 0.01 μF capacitor and limit current sourcing or sinking to 0.5 mA. When not used, VBB output should be left open.

Features

- High Gain of 35 dB from DC to 7 GHz
 - High IIP3: 0 dB
 - 20 mV Minimum Input Voltage Swing
 - Maximum Input Clock Frequency > 8.5 GHz Typical
 - Maximum Input Data Rate > 12 Gb/s
 - 120 ps Typical Propagation Delay
 - 30 ps Typical Rise and Fall Times
 - RSECL Output Level (400 mV Peak-to-Peak Output), Differential Output Only
 - 50 ohms Internal Input Termination Resistors (temp-coefficient of < 6 m/C)
 - Functionally Compatible with Existing 2.5 V / 3.3 V LVEL, LVEP, EP, and SG Devices
- For more features, see the data sheet

Applications

- OC-192 Data Buffer
- High Speed Post Amplifier
- Test Equipment Front-end Amplifier

Part Electrical Specifications

Product	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V _{CC} Typ (V)	t _{Jitter} RMS Typ (ps)	t _{skew(w/o)} Max (ps)	t _{pd} Typ (ns)	t _r & t _f Max (ps)	f _{max} Clock Typ (MHz)	f _{max} Data Typ (Mbps)	Package Type
NB7L216MNG	Pb-free	Active	Signal Driver	1	1:1	ECL	ECL	3.3	0.1		0.18	45	8500	12000	QFN-16
	Halide free					2.5									
	LVD S														
	CML CMO S														
NB7L216MNR2G	Pb-free	Active	Signal Driver	1	1:1	CMO S	ECL	3.3	0.1		0.18	45	8500	12000	QFN-16
	Halide free					2.5									
	ECL														
	LVD S														
	CML														
TTL															

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

Created on: 4/19/2019