

## Product Overview

### NBSG11: SiGe Clock / Data Fanout Buffer, 1:2 Differential, 2.5 V / 3.3 V, with RSECL Outputs

For complete documentation, see the data sheet.

The NBSG11 is a 1-to-2 differential fanout buffer, optimized for low skew and ultra-low JITTER.

Inputs incorporate internal 50-ohm termination resistors and accept NECL (Negative ECL), PECL (Positive ECL), CML, LVCMOS, LVTTTL, or LVDS. Outputs are RSECL (Reduced Swing ECL), 400 mV.

### Features

- Maximum Input Clock Frequency up to 12 GHz Typical
- Maximum Input Data Rate up to 12 Gb/s Typical
- 30 ps Typical Rise and Fall Times
- 125 ps Typical Propagation Delay
- RSPECL Output with Operating Range:  $V_{CC} = 2.375\text{ V to }3.465\text{ V}$  with  $V_{EE} = 0\text{ V}$
- RSNECL Output with RSNECL or NECL Inputs with Operating Range:  $V_{CC} = 0\text{ V}$  with  $V_{EE} = -2.375\text{ V to }-3.465\text{ V}$
- RSECL Output Level (400 mV Peak-to-Peak Output), Differential
- 50  $\Omega$  Internal Input Termination Resistors
- Compatible with Existing 2.5 V/3.3 V LVEP, EP, and LVEL Devices

### Applications

- Router, Server, Networking,

### End Products

- ATE Instrumentation, Networking

### Part Electrical Specifications

Product	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	$V_{CC}$ Typ (V)	$t_{jitter}^{RMS}$ Typ (ps)	$t_{skew(o)}^{Max}$ (ps)	$t_{pd}$ Typ (ns)	$t_r$ & $t_f$ Max (ps)	$f_{max,Clock}$ Typ (MHz)	$f_{max,Data}$ Typ (Mbps)	Package Type
NBSG11MNNG	Pb-free Halide free	Active	Buffer	1	1:2	LVD	ECL	3.3 2.5	0.2	15	0.125	55	12000	12000	QFN-16
						S									
						CMOS									
						TTL									
						ECL									
CML															
NBSG11MNHTBG	Pb-free Halide free	Active	Buffer	1	1:2	CML	ECL	3.3 2.5	0.2	15	0.125	55	12000	12000	QFN-16
						ECL									
						LVD									
						S									
						CMOS									
TTL															

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

Created on: 4/20/2019