

NLB6213

NEL
SELIC

Clock Distributor with Enable D Flip-Flop

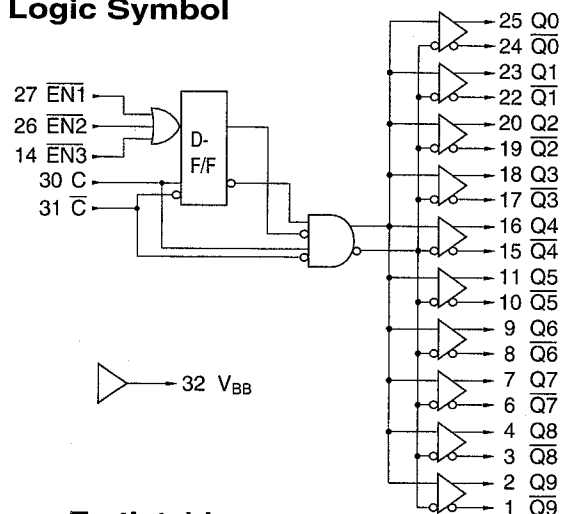
Description

The NLB6213 is an ultra high-speed monolithic clock distributor with 3 enable inputs and 10 differential outputs.

Features

- Typical AC characteristics
Clock rate up to 2.5GHz.
 $t_r=130ps$
 $t_f=130ps$
- Internal pull down resistors on input pins ($\overline{EN1}$, $\overline{EN2}$, $\overline{EN3}$, C) to maintain logic LOW level with the pins left open.
- Internal pull up resistors on input pin ($\overline{C}$) to maintain logic HIGH level with the pin left open.
- ECL 100K compatible I/O levels.
- Differential outputs.

Logic Symbol



Truth table

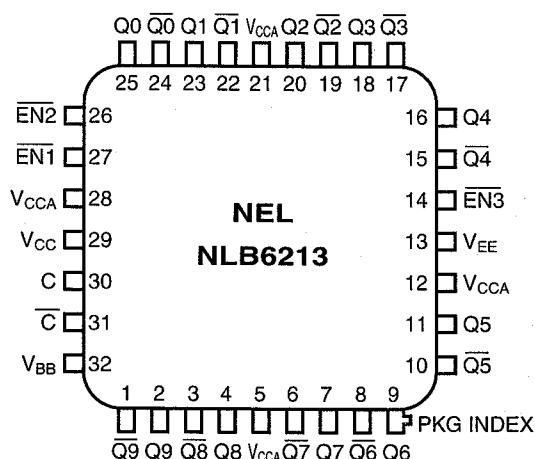
Input			output	
$\overline{EN}_n$	C	$\overline{C}$	Q_n	$\overline{Q}_n$
H	X	X	L	H
L	H	L	H	L
L	L	H	L	H

H : High voltage level

L : Low voltage level

X : Arbitrary

Pin Assignment Top View (Ceramic)

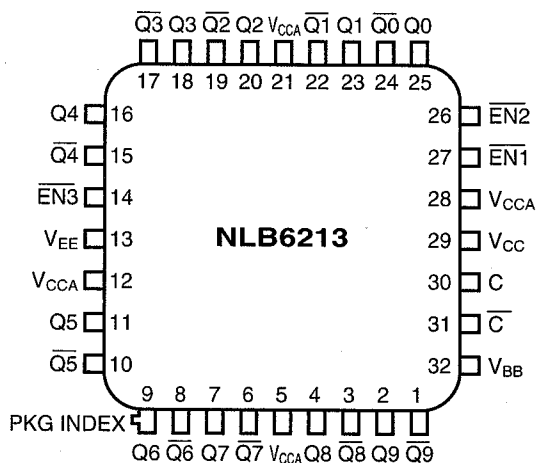


Pin Name

C, $\overline{C}$	Clock input
Q_n , $\overline{Q}_n$	Clock output
$\overline{EN}_n$	Enable inputs
V_{CC}	Circuit GND
V_{CCA}	Circuit GND for outputs
V_{BB}	Reference voltage output
V_{EE}	-4.5V

V_{CC} 29
 V_{CCA} 5,12,21,28
 V_{EE} 13

Back View (Metal Cap)



NLB6213

Clock Distributor with Enable D Flip-Flop

DC Characteristics

$V_{EE} = -4.5V \pm 0.3V$, $V_{CC} = V_{CCA} = GND$, $V_{TT} = -2V$, $T_c = 0^{\circ}C$ to $+85^{\circ}C$, $R_T = 50\Omega$ to V_{TT}

Characteristics	Symbol	Min.	Typ.	Max.	Unit
Power supply current	I_{EE}	180	290	390	mA

AC Characteristics

$V_{EE} = -4.5V \pm 0.3V$, $V_{CC} = V_{CCA} = GND$, $V_{TT} = -2V$, $T_c = 0^{\circ}C$ to $+85^{\circ}C$, $R_T = 50\Omega$ to V_{TT}

Characteristics	Symbol	Input	output	Min.	Typ.	Max.	Unit
Propagation delay time to output	t_{PLH}	C	Qn		550	740	ps
	t_{PHL}				610	810	
Skew between outputs	t_{SO}				50		
Setup time	t_s	$C, \overline{EN}_n$		390	290		
Hold time	t_h			450	340		
Rise time 20% to 80%	t_r	C			130	180	
Rise time 20% to 80%	t_f				130	180	

Typical Output Voltage Swing

$V_{EE} = -4.5V$, $V_{CC} = V_{CCA} = GND$, $V_{TT} = -2V$, $R_T = 50\Omega$ to V_{TT}

