

TCB001

20 GHz 1:1 Clock Buffer

Features

- ◆ Differential Input and Output
- ◆ 100Ω Differential Input Impedance (50Ω at each port)
- ◆ Up to 20GHz Operation
- ◆ Output Amplitude Control
- ◆ Maximum Output: 700mV Differential
- ◆ Minimum input: 30mV Differential
- ◆ Total Jitter < 1ps RMS
- ◆ Single Power Supply: 3.3V
- ◆ 4mm x 4mm QFN Package
- ◆ Power Dissipation of 270mW

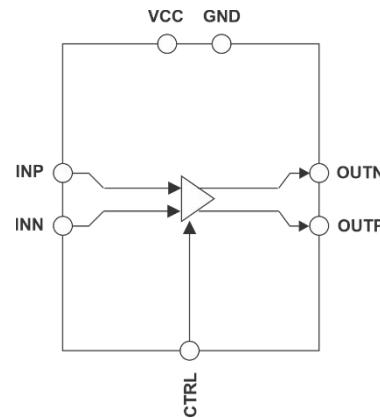



Figure 1 - Functional Block Diagram.

Product Description

The TCB001 is a 1:1 differential to differential buffer with an output enable. It can work with small input signals down to 30mV differential

and output an 800mV differential signal. The operation is rated up to 16GHz with low jitter.

Ordering information

PART NUMBER	DESCRIPTION	<p>CAUTION DEVICE SUSCEPTIBLE TO DAMAGE BY ELECTROSTATIC DISCHARGE (ESD)</p> 
TCB001-QN	16GHz 1:1 Clock Buffer	
EVTCB001	Evaluation Board	

Pin Description and Pin Out (20 I/O QFN Package)

P/I/O	PIN	NUM.	NAME	FUNCTION
P	1,3,5,8,11,13,15,20, bottom pad	9	GND	Power Supply Ground
P	7,18	2	VCC	Positive Power Supply
I	2	1	INP	Input
I	4	1	INN	
O	12	1	OUTP	Output
O	14	1	OUTN	
I	16	1	CTRL	Output Control (GND=OFF; VCC=ON)
I	17	1	IREF	*
R	6,9,10,19	4	NC	Reserved

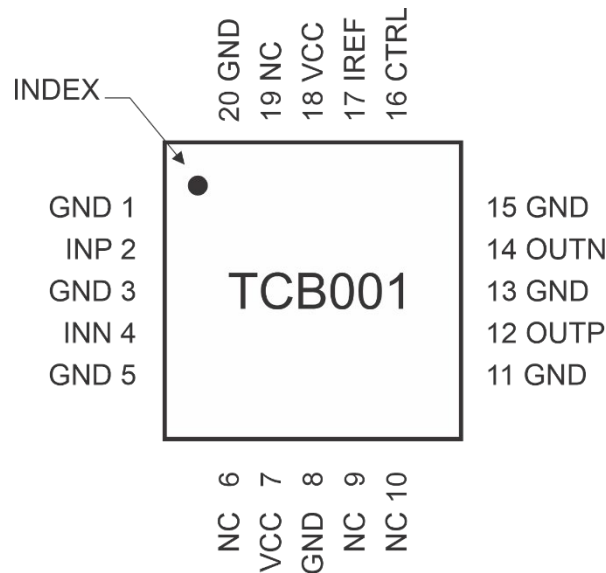


Figure 2 – TCB001 pinout (top view) 20 I/O QFN package.

Package Information -QN

The package is an organic laminate 20 IO QFN.

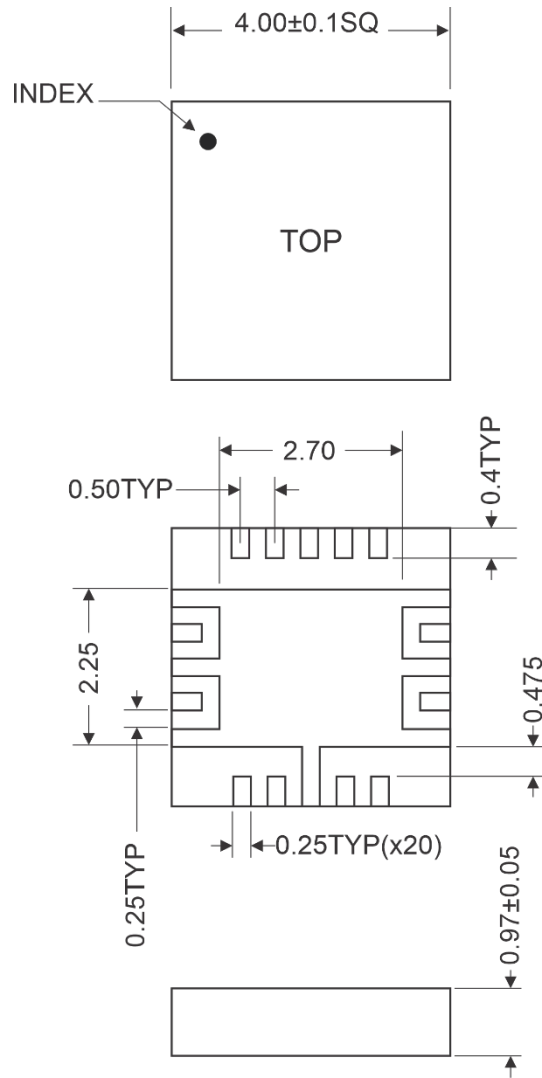


Figure 3 – TCB001-QN package outline, dimensions in mm.