

# **TAB001**

# 50 GHz Differential Amplifier - Active Balun

#### **Features**

- Single End to Differential Conversion
- ♦ Can Also Be Used as a Differential Amplifier
- Up to 50 GHz Operation
- ♦ Amplitude Match of ±0.2dB up to 30GHz
- ♦ Phase Match of ±5 Degrees up to 30GHz
- ♦ Selectable Gain: 0, 6, 14, 20dB
- Single Power Supply: -5.2V
- ♦ 4mm x 4mm QFN Package
- ♦ Power Dissipation of 700mW

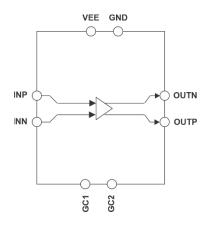


Figure 1 - Functional Block Diagram.

#### **Product Description**

The active balun is a single end to differential, or differential to differential amplifier with selectable gain. With a very good amplitude and phase match up to 50GHz it is ideal for RF applications where a single end signal needs to be converted to a differential signal.

#### Ordering information

PART NUMBER	DESCRIPTION	CAUTION	
TAB001-QN	50GHz Active Balun	DEVICE SUSCEPTIBLE TO	
EVTAB001	Evaluation Board	DAMAGE BY ELECTROSTATIC	
		DISCHARGE (ESD)	



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

P/I/O	PIN	NUM.	NAME	FUNCTION	
Р	1,3,5,8,11,13,15,16, 18,19,bottom pad	11	GND	Power Supply Ground	
Р	6,7,17,20	4	VEE	Positive Power Supply	
I	2	1	INP	INP Input	
I	4	1	INN		
0	12	1	OUTP Output		
0	14	1	OUTN Output		
I	9	1	GC1	GC1 2 Bit Gain Control	
I	10	1	GC2	GC2 Z DIL GAIII COIILIOI	

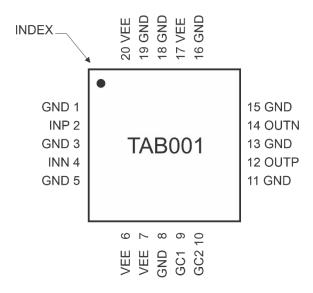


Figure 2 - TAB001 pinout (top view) 20 I/O QFN package.



## Package Information -QN

The package is an organic laminate 20 IO QFN.

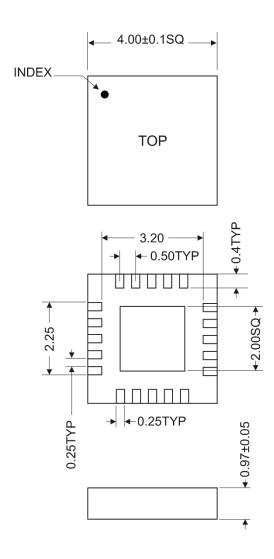


Figure 3 – TAB001-QN package outline, dimensions in mm.