**PI49FCT32807 IBIS Model Check**

**IBIS Models: PI49FCT32807\_H\_RevA.ibs and PI49FCT32807\_Q\_RevA.ibs.**

**1. Model Type**

 These two ibis models are just different in packaging, their pin information are the same.

PI49FCT32807\_H\_RevA.ibs – 20-pin 209-mil wide QSOP (Q)

PI49FCT32807\_Q\_RevA.ibs– 20-pin 150-mil wide SSOP (H)

**[Pin]** signal\_name model\_name

1 A INPUT

2 GND GND

3 B0 OUTPUT

4 VCC POWER

5 B1 OUTPUT

6 GND GND

7 B2 OUTPUT

8 VCC POWER

9 B3 OUTPUT

10 GND GND

11 B4 OUTPUT

12 B5 OUTPUT

13 GND GND

14 B6 OUTPUT

15 VCC POWER

16 B7 OUTPUT

17 GND GND

18 B8 OUTPUT

19 B9 OUTPUT

20 VCC POWER



**Conclusion**

1. The PIN and PIN mapping information described in IBIS model is **exactly correct** according to the datasheet.

**2. Internal Series Resistor based on IBIS Model:**

1) **PullDown**: V = 0.09917V, I = 0.00402A, so **Rs = 23.612Ω**

 V = -0.09915V, I = -0.00404A, so **Rs = 24.542Ω**

2) **PullUp**: V = 0. 09918V, I = 0. 00391A, so **Rs = 25.366Ω**

 V = -0. 09913V, I = -0. 00384A, so **Rs = 25.815Ω**

**Conclusion:**

The values of Internal Series Resistor based on IBIS model are **correct** according to the datasheet.

 

**3. Analog Switch simulation result with following circuit diagram:**

PI49FCT32807

**OUT1**

**SCL\_C**

**SDA\_C**

25Ω / 33Ω

**SCL\_C**

**SDA\_C**

50Ω

**SCL\_C**

**SDA\_C**

IN

**SCL\_C**

**SDA\_C**

C

**SCL\_C**

**SDA\_C**

OUT

**SCL\_C**

**SDA\_C**

**IN**

**SCL\_C**

**SDA\_C**

OUT0

**SCL\_C**

**SDA\_C**

Trace=2inch

**SCL\_C**

**SDA\_C**

Input signal frequency is 250MHz:

a. Add **25Ω** resistor, **2inch trace** and **5pF** **pull-down** capacitance to the output.



a. Add **33Ω** resistor, **2inch trace** and **5pF** **pull-down** capacitance to the output.



**4. IBIS Data Graph of the IBIS models**

**(1) Model INPUT:**

a. POWER Clamp

****

b. GND Clamp

****

**(2) Model OUTPUT:**

a. Pullup

****

b. Pulldown

