

# Qualification Report

Company Name : WIZnet.Inc.  
Product Name : W5300  
Package Type : 100 LQFP  
Reported Date : Sep 25<sup>th</sup> ,2008





QRTC-D-0808-169

*QRT Semiconductor Inc*

# Qualification Report

Company Name : WIZnet.Inc.  
Product Name : W5300  
Package Type : 100 LQFP  
Reported Date : Sep 25<sup>th</sup> ,2008

Reviewed by : M . G . Kim

Approved by : Y . W . Hwang

### 1. Qualification Test Summary

DEVICE NO : W5300	PRODUCT TYPE :	PACKAGE TYPE : 100 LQFP	SAMPLE LOTS : 1 LOTS	REPORT NO : QRTC-D-0808-0169		
FAB SITE :	ASS'Y SITE :	PURPOSE : W5300 QUALIFICATION		DATE : Sep 25 <sup>th</sup> , 2008		
TEST RESULTS						
TEST MODE	TEST CONDITION	Test Time	S/S	NO. OF FAIL	FAIL RATE(%)	REMARKS
LPW TEMPERATURE OPERATING LIFE	-40 °C, V0 = 3.3 V V4 = 1.8 V, VIH = 3.3 V	504 h	77	0	0.00 %	

※ The test results are based on customer's data

### 2. Qualification Test Item & Results

#### 2.1 LTOL ( Low Temperature Operating Life)

This test is intended to look for failures caused by hot carriers, and is typically applied on memory devices or devices with submicron device dimensions.

A total of 77 devices are completed 504 hours with no failure.

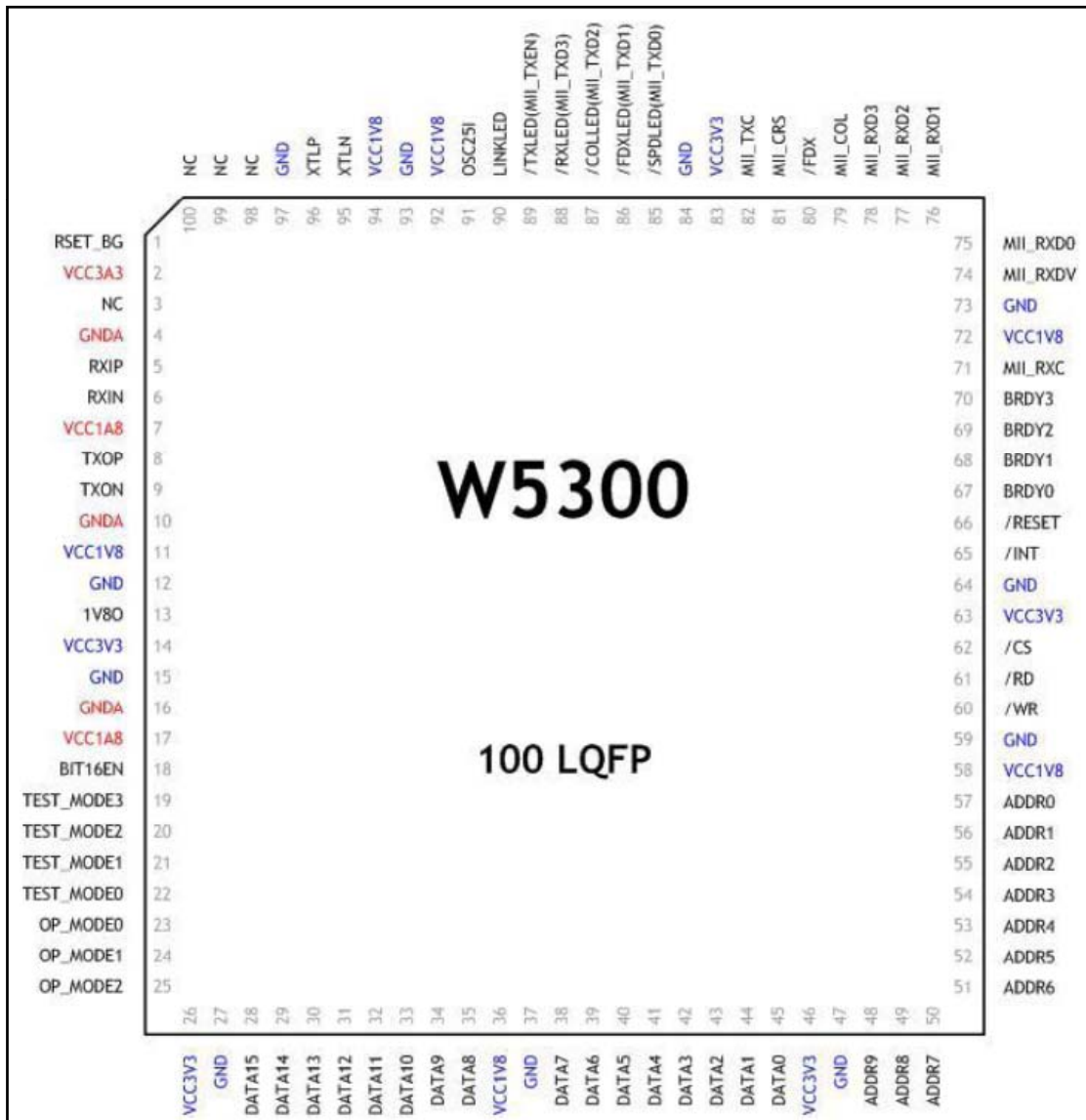


Test Condition	Reference Document	Duration	SS	Results
- 40 °C, V0= 3.3 V V4 = 1.8 V, VIH = 3.3 V	JESD22-A108-C	504 h	77	PASS

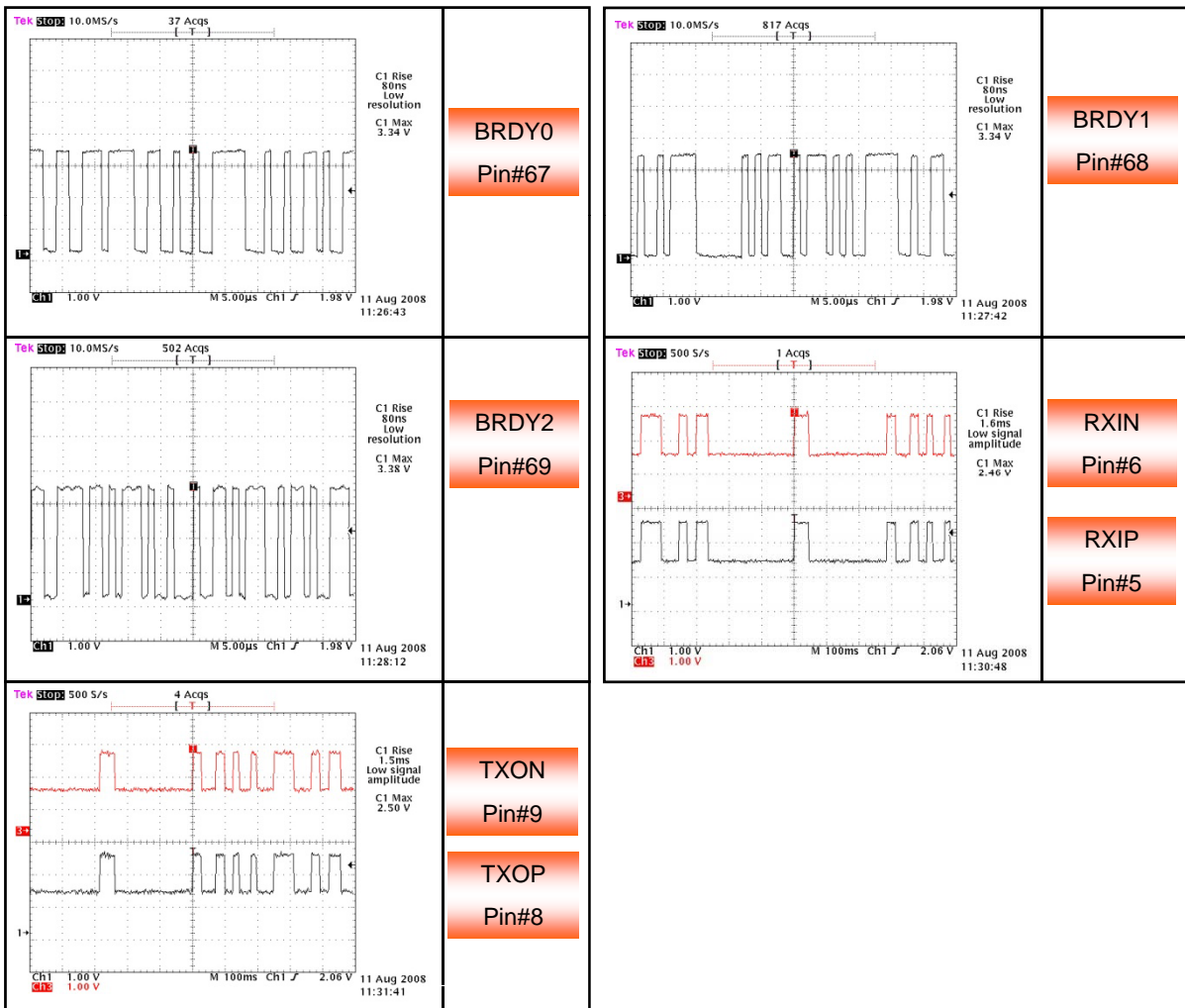
### 3. HTOL Test Conditions

<b>HTOL Board Density : 80 ea / Board</b>	<b>Load S/S : 77 ea / Board</b>
<b>VCC3A3 (V0) :3.3 V</b> <b>VCC1A8 (V4) : 1.8 V</b>	<b>VIH : 3.3 V</b> <b>VIL : 0 V</b>
<b>Vector Type :</b> <a href="#">ATPG_SEQ.ftl + ATPG_short.ftl + scan_chain.ftl</a> HTOL was tested with 3 vector summation	<b>Cycle Time : 1 000 ns</b>
<b>Timing Format Condition</b>	
<ul style="list-style-type: none"> <li>◆. Signal Rate : 1 000 ns</li> <li>◆. Frequency : 1 MHz</li> <li>◆. ADDR9" { force { format RZ; start 150 , stop 500ns; } }</li> <li>◆. ADDR8" { force { format RO; start 150; stop 500; } }</li> </ul>	
<b>Remark :</b>	

### 3.1 W5300 Pin MAP



### 3.2 HTOL timing sample chart





# Quality Reliability Technology

Semiconductor Inc.



## Offices and Representatives

### Ichon Head Office

.....San 136-1 Ami-ri Bubal-eup Ichon-si Kyoungki-do, 467-701  
Tel. 82-31-639-7683, 7617 Fax 82-31-639-7654

### Cheongju Branch

.....1 Hyangjeong-dong Hungduk-gu Cheongju-si Chung buk, 361-725  
Tel. 82-43-270-2749, 7128 Fax 82-43-270-2653

### Gumi Branch

.....171 Imsoo-dong Gumi-si Kyung buk, 730-723  
Tel. 82-54-470-1528, Fax 82-54-472-8031

### Technical Sales (Cheongju)

Tel. 82-44-270-2656 / E-mail : ywhwang@qrkr.com

**World Class Reliability Testing & Failure  
Analysis Company**