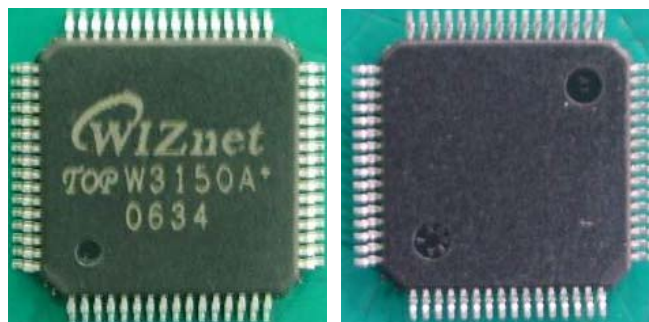


# Qualification Report

Company Name : WIZnet.Inc.  
Product Name : W3150A+  
Package Type : 64 LQFP  
Reported Date : Feb 28<sup>th</sup> ,2007





QRTC-D-0612-167

*QRT Semiconductor Inc*

# Qualification Report

Company Name : WIZnet.Inc.  
Product Name : W3150A+  
Package Type : 64 LQFP  
Reported Date : Feb 28<sup>th</sup> ,2007

Prepared by : J . H . Kang

Reviewed by : M . G . Kim

Approved by : Y . W . Hwang

## 1. Qualification Test Summary

DEVICE NO : W3150A+	PRODUCT TYPE :	PACKAGE TYPE : 64 LQFP	SAMPLE LOTS : 1 LOTS	REPORT NO : QRTC-D-0612-167		
FAB SITE :	ASS'Y SITE :	PURPOSE : W3150A+ QUALIFICATION		DATE : Feb 28 <sup>th</sup> , 2007		
<b>TEST RESULTS</b>						
TEST MODE	TEST CONDITION	Test Time	S/S	NO. OF FAIL	FAIL RATE(%)	REMARKS
LPW TEMPERATURE OPERATING LIFE	-40 °C, VCC = 3.3 V VIN, AVIN = 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.**

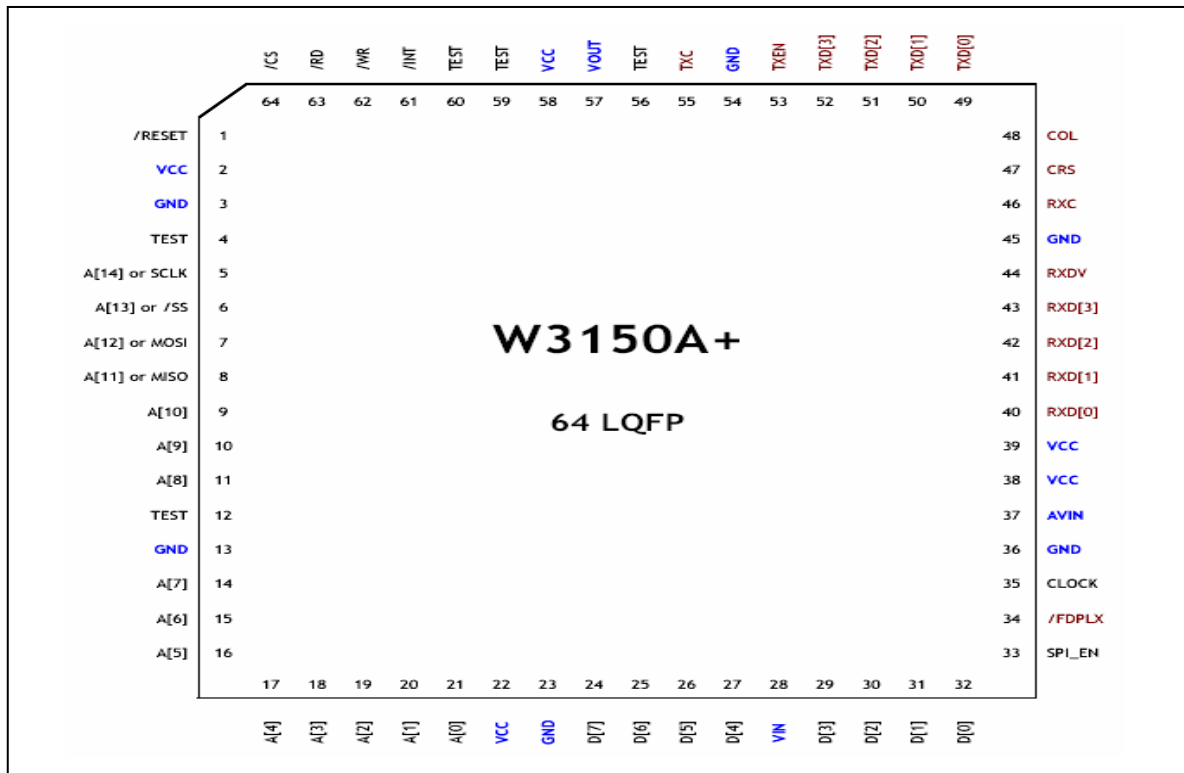


Test Condition	Reference Document	Duration	SS	Results
- 40 °C, VCC= 3.3 V VIN, AVIN = 1.8 V, VIH = 3.3 V	JESD22-A108-C	504 Hrs	77	PASS

## 2.2 HTOL Test Conditions

HTOL Board Density : 80 ea / Board	Load S/S : 77 ea / Board
VCC : 3.3 V ,	VIH : 3.3 V
VIN,AVIN : 1.8 V	
Vector Type : Function Vector	Cycle Time : 1us
<b>Timing Format Condition</b>	
<ul style="list-style-type: none"> <li>◆ Frequency : 2 Mhz</li> <li>◆ CLOCK (RZ) : Start =&gt; 230 ns, Stop =&gt; 280 ns</li> </ul>	
<b>Remark :</b>	

### 2.2.1 W3150A+ 64 LQFP Pin Map



**2.2.2 W3150A+ In-Put Test Vector Condition**

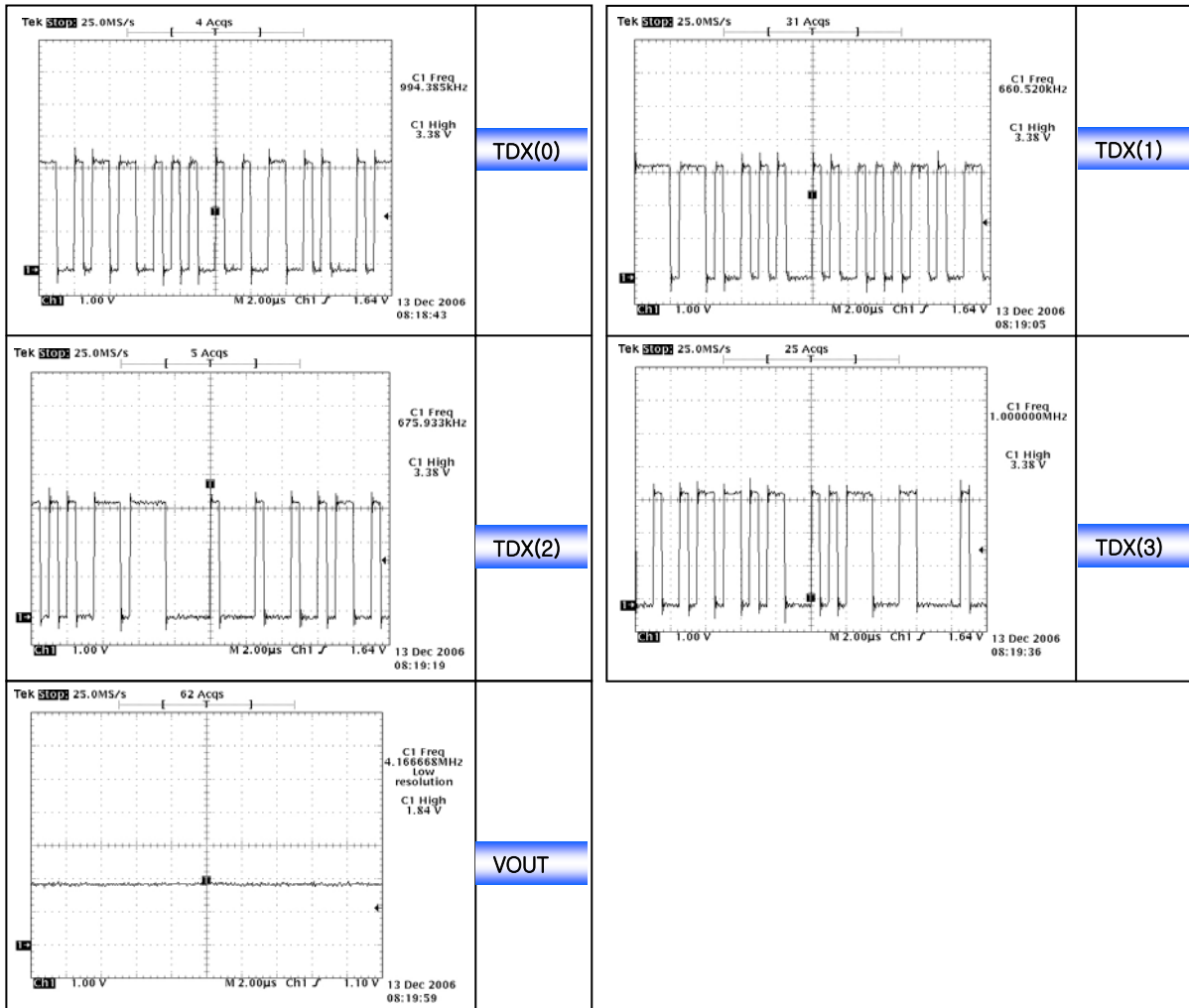
```

RPMMMMMMTMMMMMMMSDPRRRRMCCMSTTMMM ; Test Vector Pin Name
EWAAAAAAAAEAAAAAAAAAPULXXXXRRROTEMMWRC
SDDDDDDDDSDDDDDDDIPLDDD_XSLX.OORDS
ENDDDDDDDTDDDDDDDELCO123D_._.DDBBB
T_RRRRRRR.RRRRRRRNEL..VC.C.EE..
BE1111198.76543210 XK..L.L.10..
N43210..B..K.K..
=====
/TAAAAAATAAAAAAAS/CRRRRRCCTTTT/// ; RT PLAN PIN NAME
RE1111198E76543210PFLXXXXXROXEEEWRC
SS43210 S IDDDDDDCSLGSSSRDS
ET T _PC0123V TTT
T ELK
NX
=====
1456789111111112233344444445556666 ; Pin NO
01245678901345012346785690234
=====
012345678911111111222222222333333 ; Channel NO
01234567890123456789012345
=====
Z0ZZZZZZZZZZZZZZZZ0ZZZZZZZZZZZZZZ
10ZZZZZZ1ZZZZZZZZ0ZZZZZZZZ01ZZZ
10ZZZZZZ1ZZZZZZZZ0ZZZZZZZZ101ZZZ
10ZZZZZZ1ZZZZ000ZZ10000ZZZZ101ZZZ
10ZZZZZZ10000000ZZ10000ZZZZ101ZZZ
10ZZZZZZ10000111ZZ11111ZZZZ101ZZZ
10ZZZZZZ11111111ZZ11111ZZZZ101ZZZ
10ZZZZZZ11111000ZZ10000ZZZZ101ZZZ
10ZZZZZZ10000000ZZ10000ZZZZ101ZZZ
10ZZZZZZ10000111ZZ11111ZZZZ101ZZZ
10ZZZZZZ11111111ZZ11111ZZZZ101ZZZ
10ZZZZZZ11111000ZZ10000ZZZZ101ZZZ
10ZZZZZZ10000000ZZ10000ZZZZ101ZZZ
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10ZZZZZZ11111111ZZ11111ZZZZ101ZZZ
10ZZZZZZ11111000ZZ10000ZZZZ101ZZZ

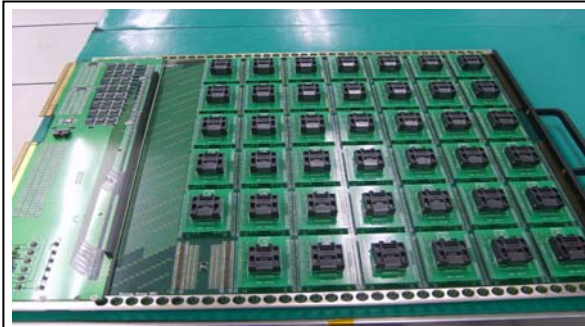
```

## 2.3 HTOL timing sample chart

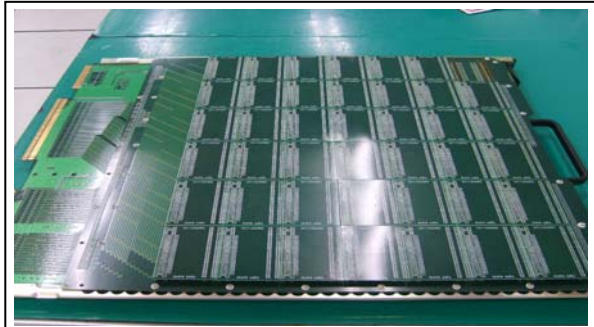
### 2.3.1 Output Signal Check Data



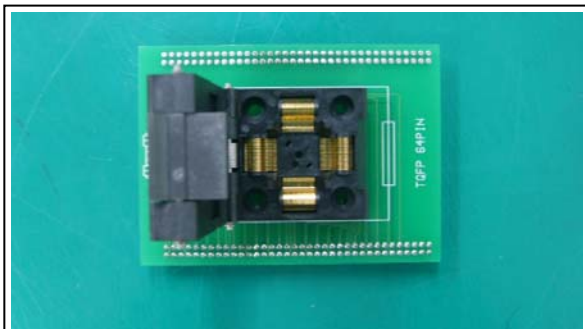
### 2.3.2 Universal MCC Board Image



Board Top Image



Board Bottom Image



Socket Board Image



PGM Card Image

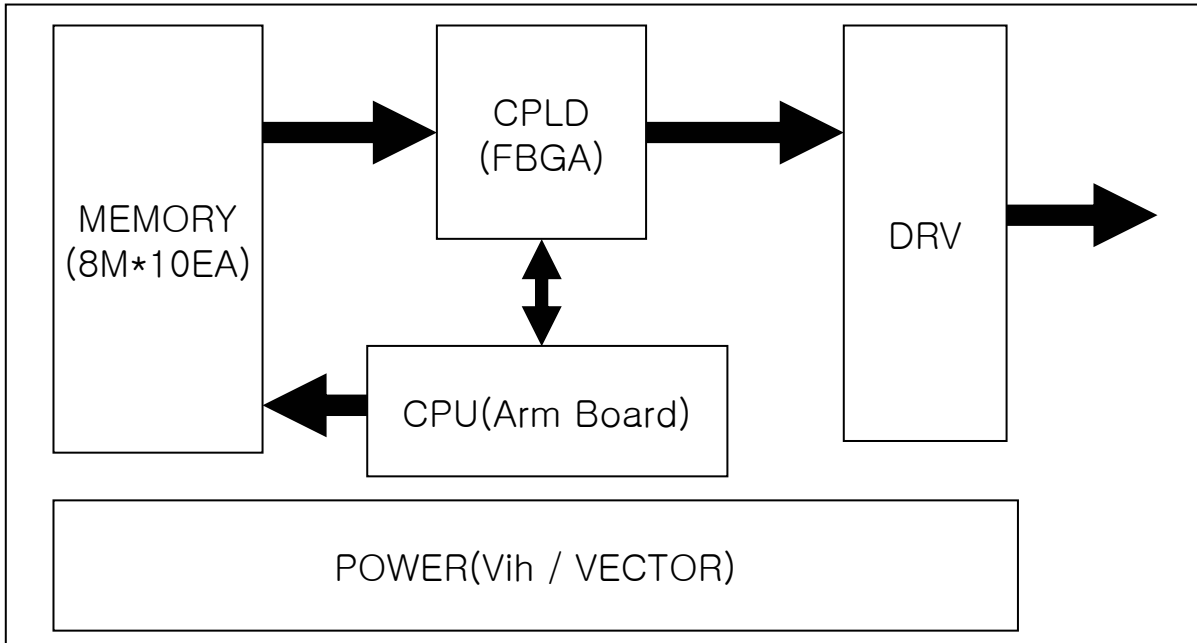


External Function Generator



External Power Supply

### 2.3.3 External Function Generator



### 2.3.4 External Function Generator Driver Schematic

