



## **Future Technology Devices International Ltd.**

### **TN\_126 FT4232H Errata Technical Note**

**Document Reference No.: FT\_000345**

**Version 1.0**

**Issue Date: 2010-11-05**

The intention of this errata technical note is to give a detailed description of known functional or electrical issues with the FTDI FT4232H devices.

The current revision of the FT4232H is **revision C, released March 2010**. At the time of releasing this Technical Note there are no known issues with this silicon revision.

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## 1 FT4232H Revision

FT4232H part numbers are listed in **Table 1**. The letter at the end of date code identifies the device revision.

The current revision of the FT4232H is **revision C, released March 2010**. At the time of releasing this Technical Note there are no known issues with this silicon revision.

Part Number	Package
FT4232HL	64 Pin LQFP
FT4232HQ	64 Pin QFN

**Table 1 FT4232H Part Numbers**

This errata technical note covers the revisions of FT4232H listed in **Table 2**.

Revision	Notes
A	First device revision
B	Second device revision
C	Third device revision

**Table 2 FT4232H Revisions**

## 2 Errata History Table – Functional Problems

Functional Problem	Short description	Errata occurs in device revision
FT4232H	Error reading EEPROM interface	A
FT4232H	3 Phase clocking in MPSSE mode incorrect	A

### 2.1 Errata History Table – Electrical and Timming Specification Deviations.

Deviations	Short description	Errata occurs in device revision
Suspend timer failure (USB Chapter 9 Compliance)	The USB specification requires a maximum time to suspend of 3.125ms. The device takes up to 4ms to suspend.	A, B

### 3 Functional Problems of FT4232H

#### 3.1 Revision A

##### 3.1.1 Error reading EEPROM Interface

**Introduction:**

The FT4232H uses an external EEPROM to store USB descriptors. These descriptors must be correctly read for the device to be properly identified and configured.

**Problem:**

There is an issue that under the right conditions the internal address counter can increment by 2 (incorrectly). This appears as though the data read from the EEPROM has missed a byte.

**Workaround:**

There are no known workarounds available. This issue is corrected at silicon revision B.

**Package specific:**

The effected packages are listed in Table 3.

Package	Applicable (Yes/No)
FT4232HL	Y
FT4232HQ	Y

**Table 3**

#### 3.2 Revision B

##### 3.2.1 3 Phase clocking in MPSSE mode incorrect

**Introduction:**

The FT4232H introduced a new function to the MPSSE mode called 3 phase clocking to allow data to be clocked on both edges.

**Problem:**

3 Phase clocking was not being enabled.

**Workaround:**

There are no known workarounds available. This issue is corrected at silicon revision B.

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**Package specific:**

The effected packages are listed in Table 4.

Package	Applicable (Yes/No)
FT4232HL	Y
FT4232HQ	Y

**Table 4**

## 4 Electrical and Timing specification deviations of FT4232H

### 4.1 Revision A

#### 4.1.1 Suspend Timer Failure

**Introduction:**

The FT4232H has the ability to be put into suspend by the host to conserve power usage.

**Problem:**

The USB specification chapter 9 compliance tests require the device to go into suspend within 3.125ms. The device is taking up to 4ms to enter suspend state.

**Workaround:**

There are no known workarounds available. This issue is corrected at silicon revision C.

**Package specific:**

The effected packages are listed in Table 5.

Package	Applicable (Yes/No)
FT4232HL	Y
FT4232HQ	Y

**Table 5**

## 5 FT4232H Package Markings

FT4232H is available in a RoHS Compliant package, 64 pin LQFP and 64 pin QFN. An example of the markings on the package is shown in Figure 3-x.

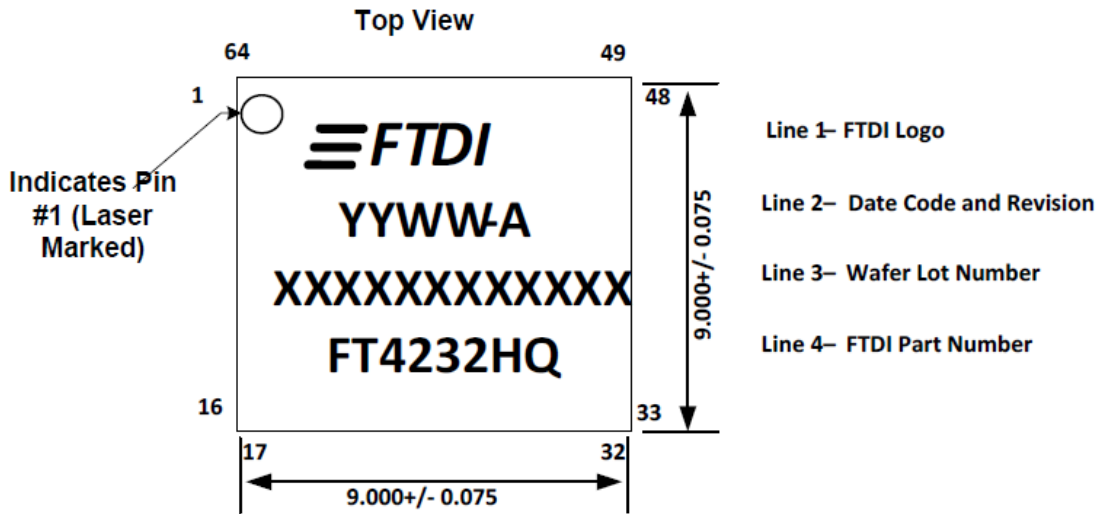


Figure 5-1 Package Markings – FT4232HQ

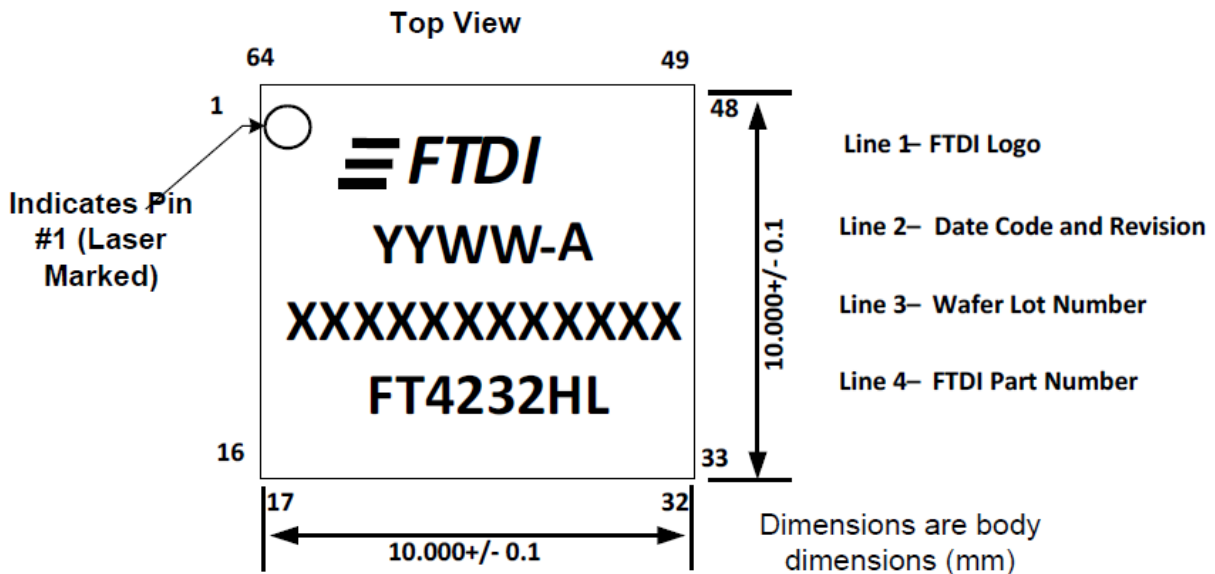


Figure 5-2 Package Markings – FT4232HL



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## Appendix C – Revision History

**Version 1.0** First Release

05/11/2010