ONFI Technical Errata

Errata ID	**009**
Affected Spec Ver.	**ONFI 3.0, 3.1, 3.2, 4.0**
Corrected Spec Ver.	

Submission info

Name	Company	Date
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The erratum changes test conditions for output slew rate VOH(AC), VOL(AC), VOHdiff(AC), and VOLdiff(AC) for NV-DDR2 and NV-DDR3. The changes align industry standards for these parameters based on discussions in the ONFI/JEDEC JTG.

Description of the specification change

Modify Section 4.9 Table 40 shown below:

Parameter	NV-DDR	~~NV-DDR2 single-ended~~	~~NV-DDR2 differential~~	NV-DDR2/NV-DDR3 single-ended	NV-DDR2/NV-DDR3 differential
VOL(DC)	0.4 * VccQ	~~—~~	~~—~~	—	—
VOH(DC)	0.6 * VccQ	~~—~~	~~—~~	—	—
VOL(AC)	0.3 * VccQ	~~Vtt – (VccQ * 0.15)~~	~~—~~	Vtt – (VccQ * 0.10)	—
VOH(AC)	0.7 * VccQ	~~Vtt + (VccQ * 0.15)~~	~~—~~	Vtt + (VccQ * 0.10)	—
VOLdiff(AC)			~~-0.3 * VccQ~~		-0.2 * VccQ
VOHdiff(AC)			~~0.3 * VccQ~~		0.2 * VccQ
Positive output transition	VOL (DC) to VOH (AC)	~~VOL (AC) to VOH (AC)~~	~~VOLdiff(AC) to VOHdiff(AC)~~	VOL (AC) to VOH (AC)	VOLdiff(AC) to VOHdiff(AC)
Negative output transition	VOH (DC) to VOL (AC)	~~VOH (AC) to VOL (AC)~~	~~VOHdiff(AC) to VOLdiff(AC)~~	VOH (AC) to VOL (AC)	VOHdiff(AC) to VOLdiff(AC)
tRISE[1]	Time during rising edge from VOL(DC) to VOH(AC)	~~Time during rising edge from VOL(AC) to VOH(AC)~~	~~—~~	Time during rising edge from VOL(AC) to VOH(AC)	—
tFALL[1]	Time during falling edge from VOH(DC) to VOL(AC)	~~Time during falling edge from VOH(AC) to VOL(AC)~~	~~—~~	Time during falling edge from VOH(AC) to VOL(AC)	—
tRISEdiff[2]	—	~~—~~	~~Time during rising edge from VOLdiff(AC) to VOHdiff(AC)~~	—	Time during rising edge from VOLdiff(AC) to VOHdiff(AC)
tFALLdiff[2]	—	~~—~~	~~Time during falling edge from VOHdiff(AC) to VOLdiff(AC)~~	—	Time during falling edge from VOHdiff(AC) to VOLdiff(AC)
Output slew rate rising edge	[VOH(AC) – VOL(DC)] / tRISE	~~[VOH(AC) – VOL(AC)] / tRISE~~	~~[VOHdiff(AC) – VOLdiff(AC)] / tRISEdiff~~	[VOH(AC) – VOL(AC)] / tRISE	[VOHdiff(AC) – VOLdiff(AC)] / tRISEdiff
Output slew rate falling edge	[VOH(DC) – VOL(AC)] / tFALL	~~[VOH(AC) – VOL(AC)] / tFALL~~	~~[VOHdiff(AC) – VOLdiff(AC)] / tFALLdiff~~	[VOH(AC) – VOL(AC)] / tFALL	[VOHdiff(AC) – VOLdiff(AC)] / tFALLdiff
Output reference load	5pf to Vss				

NOTE:
1. Refer to **Error! Reference source not found.** and **Error! Reference source not found.**.
2. Refer to **Error! Reference source not found.**.

Table 1 Testing Conditions for Output Slew Rate

Disposition log

2/9/2015	Erratum captured.
2/24/2015	Fixed dates in erratum

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