

JEDEC STANDARD

1.8 V HIGH-SPEED LVCMOS (HS_LVCMOS) INTERFACE

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JEDEC SOLID STATE TECHNOLOGY ASSOCIATION



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1.8 V HIGH-SPEED LVCMOS (HS_LVCMOS) INTERFACE

(From JEDEC Board Ballot JCB-18-11, formulated under the cognizance of the JC-16 Committee on Interface Technology.)

1 Scope

This standard defines the dc and ac input levels, output levels, and input overshoot and undershoot specifications for the 1.8 V High-speed LVCMOS (HS_LVCMOS) interface. The non-terminated interface has a switching range that is nominally expected to be 0 V to 1.8 V.

2 1.8 V High-speed LVCMOS (HS_LVCMOS) interface specifications

2.1 Recommended DC operating conditions

Table 1 — Recommended DC operating conditions

	Min.	Typ.	Max.	Unit	
V_{DD}	1.7	1.80	1.95	V	Power Supply
NOTE If there is a VDDQ, all I/O levels are referenced to VDDQ. If there only is VDD, then all levels are referenced to VDD.					

2.2 Leakage Current

Table 2 — Leakage Current

Parameter	Min	Max	Voltage
Input leakage current	-5	5	μA
Output leakage current	-5	5	μA

2.3 Input level

Table 3 — Input level

Parameter	Symbol	Min	Max	Unit
Input HIGH level (AC)	$V_{IH(AC)}$	$0.80 \cdot V_{DD}$	$V_{DD} + 0.3$	V
Input LOW level (AC)	$V_{IL(AC)}$	-0.3	$0.20 \cdot V_{DD}$	V
Input HIGH level (DC)	$V_{IH(DC)}$	$0.7 \cdot V_{DD}$	$V_{DD} + 0.3$	V
Input LOW level (DC)	$V_{IL(DC)}$	-0.3	$0.3 \cdot V_{DD}$	V

2.3 Input level (cont'd)

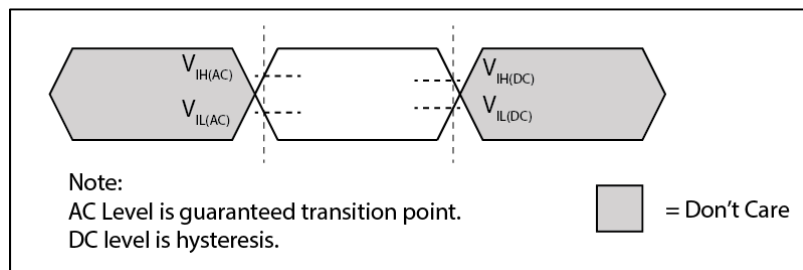


Figure 1 — Input AC timing definition

2.4 Output measurement level

Table 3 — Output measurement Level

Parameter	Symbol	Min	Max	Unit
Output HIGH voltage	V_{OH}	$0.75 \cdot V_{DD}$	-	V
Output LOW voltage	V_{OL}	-	$0.25 \cdot V_{DD}$	V

2.5 AC input over/undershoot

Table 4 — AC input over/undershoot

Parameter	Specification	Unit
Maximum peak amplitude allowed for overshoot area (above V_{DD})	$0.30 \cdot V_{DD}$	V
Maximum peak amplitude allowed for undershoot area (below V_{SS})	$0.30 \cdot V_{DD}$	V
Maximum overshoot area above V_{DD}	1.2	V • ns
Maximum undershoot area below V_{SS}	1.2	V • ns

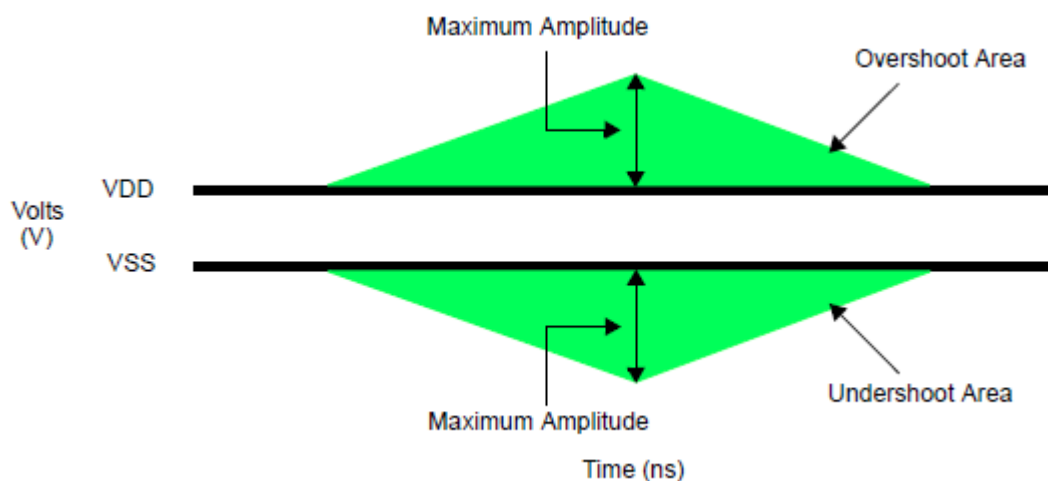


Figure 2 — AC overshoot and undershoot definition for input pins



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