

## DC Parameter Specification Proposals

### Noise margins

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This table summarizes the main DC parameters and noise margins of the various proposals made recently, together with the agreement reached in the PHYDOGs meeting in Albuquerque on 16th December 1997. The various noise margin values have been recalculated, correcting errors in the table presented during the meeting. I hope that the values are now correct, and apologise for any remaining errors.

| <i>Parameter</i>                                     | <i>Current spec<br/>(D1.2)</i> | <i>Hasegawa</i> | <i>Whitby-<br/>Strevens</i> | <i>Skidmore</i> | <i>Selander</i> | <i>Agreed<br/>16 Dec 97</i> |
|--|--------------------------------|-----------------|-----------------------------|-----------------|-----------------|-----------------------------|
| <i>Voh (direct) @ 3.0V</i>                           | 2.45                           | 2.60            | 2.80                        | 2.80            | 2.80            | 2.80                        |
| <i>Voh (iso) @ 3.0V</i>                              | 2.45                           | 2.80            | 2.80                        | 2.60            | 2.80            | 2.60                        |
| <i>Vol (direct)</i>                                  | 0.55                           | 0.40            | 0.40                        | 0.40            | 0.40            | 0.40                        |
| <i>Vol (iso)</i>                                     | 0.55                           | 0.50            | 0.40                        | 0.40            | 0.40            | 0.40                        |
| <i>Vih</i>   | 2.35                           | 2.35            | 2.40                        | 2.60            | 2.60            | 2.60                        |
| <i>Vil</i>   | 0.80                           | 0.80            | 0.80                        | 0.70            | 0.60            | 0.70                        |
| <i>Vt+ max rel bias</i>                              | 1.30                           | 1.00            | 0.60                        | 0.80            | 0.80            | 0.90                        |
| <i>Vt+ max @ 3.6V</i>                                | 3.10                           | 2.80            | 2.40                        | 2.60            | 2.49            | 2.59                        |
| <i>Vt- min @3.6V</i>                                 | 0.50                           | 0.80            | 1.20                        | 1.00            | 1.00            | 0.90                        |
| <i>Vt+ min rel Vdd</i>                               | 0.20                           | 0.20            | 0.20                        | 0.20            | 0.30            | 0.30                        |
| <i>Vt- max rel Vdd</i>                               | 0.20                           | 0.20            | 0.20                        | 0.20            | 0.30            | 0.30                        |
| <i>Permitted Schmitt trigger threshold variation</i> | 1.30                           | 1.00            | 0.60                        | 0.80            | 0.70            | 0.90                        |
| <i>Noise margins</i>                                 |                                |                 |                             |                 |                 |                             |
| <i>Voh - Vih noise margin (direct)</i>               | 0.10                           | 0.25            | 0.40                        | 0.20            | 0.20            | 0.20                        |
| <i>Vil - Vol noise margin (direct)</i>               | 0.25                           | 0.40            | 0.40                        | 0.30            | 0.20            | 0.30                        |
| <i>Voh - Vt+ noise margin (iso - 1st symbol)</i>     | -0.35                          | 0.30            | 0.70                        | 0.30            | 0.50            | 0.20                        |
| <i>Vt- -Vol noise margin (iso - 1st symbol)</i>      | -0.35                          | 0.00            | 0.50                        | 0.30            | 0.30            | 0.20                        |
| <i>Noise margin for subsequent symbols</i>           | 0.20                           | 0.20            | 0.20                        | 0.20            | 0.30            | 0.30                        |