DOCUMENT CHANGE REQUEST

DCR number 1733	Changes required for: N/A	Originator: Khlifa Hadre
Date: 2025/07/17	Date sent: 2025/03/28	Organisation: ST Microelectronics
Status: IMPLEMENTED		

Title:	CMOS 4-Bit Latch/4-to-16 Decoder, based on type 4514B		
Number:	9408/012	Issue:	5

Other documents affected:

Page:

13, 14

Paragraph:

2.3.1 Room Temperature Electrical Measurements

Original wording:

Min limit for IOL1 =510 µA; Max limit for TPHL1 =920 ns ; Max limit for TPHL2 =450 ns

Proposed wording:

Min limit for IOL1 = 400 µA; Max limit for TPHL1 =1750 ns ; Max limit for TPHL2 =850 ns

Justification:

During the radiation tests performed on recent diffusion lots at 100 krad Total dose on HCC4514B of the CMOS4000B family, the performance of the switching time and the Low Level Output Current exceeded the post radiation specification limit as defined in ST internal specification shared with customers in DEDICATED IRRADIATION TEST FLOW FOR CMOS TECHNOLOGY (0038618).
The initial minimum limit pre radiation for IOL1 (Low Level Output Current 1) is 510 µA, and we propose a new limit of 400 µA.
The initial maximum limit pre radiation for TPHL1 (Propagation Delay High to Low 1) is 920 ns, and we propose a new limit of 1750 ns.
The initial maximum limit pre radiation for TPHL2 (Propagation Delay High to Low 2) is 450 ns, and we propose a new limit of 850 ns.
These new limits will be able to pass the 100krad radiation test with fresh diffusion lots preventing any product discontinuity.

Attachments:
N/A
Modifications:
N/A
Approval signature:

Date signed:
2025-07-17