



Title of Change:	Datasheet Adjustment for MC74VHC1G14 to correct Positive Threshold Voltage and Negative Threshold Voltage.
Effective date:	9 June 2017
Contact information:	Contact your local ON Semiconductor Sales Office or <Rich.Field@onsemi.com>
Type of notification:	ON Semiconductor will consider this change accepted.
Change category:	☐ Wafer Fab Change ☐ Assembly Change ☐ Test Change ☒ Other <u>Datasheet</u>

Change Sub-Category(s):
☐ Manufacturing Site Change/Addition

☐ Material Change

☒ Datasheet/Product Doc change

☐ Manufacturing Process Change

☒ Product specific change

☐ Shipping/Packaging/Marking

☐ Other: _____
Sites Affected:
☐ All site(s)

☒ not applicable

☐ ON Semiconductor site(s) :

☐ External Foundry/Subcon site(s)
Description and Purpose:

The VT+ and VT- data points given in the datasheet are misleading and should be corrected.

The Min for VT+ and the Max for VT- are calculated values and the values entered are incorrect.

$$\text{Min } V_{T+} = \text{Min } V_{T-} + \text{Min } V_H$$

$$\text{Max } V_{T-} = \text{Max } V_{T+} - \text{Min } V_H$$

MC74VHC1G14 Datsheet Adjustment

Min $V_{T+} = \text{Min } V_{T-} + \text{Min } V_H$
 Correct Min V_{T+}
 $V_{CC}@3.0V$ **1.20** = 0.90 + 0.30
 $V_{CC}@4.5V$ **1.75** = 1.35 + 0.40
 $V_{CC}@5.5V$ **2.15** = 1.65 + 0.50

MC74VHC1G14

DC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test Conditions	V_{CC} (V)	$T_A = 25^\circ C$			$T_A \leq 85^\circ C$		$-55 \leq T_A \leq 125^\circ C$		Unit
				Min	Typ	Max	Min	Max	Min	Max	
V_{T+}	Positive Threshold Voltage		3.0 4.5 5.5	1.85 2.86 3.50	2.0 3.0 3.6	2.20 3.15 3.85		2.20 3.15 3.85		2.20 3.15 3.85	V
V_{T-}	Negative Threshold Voltage		3.0 4.5 5.5	0.9 1.35 1.65	1.5 2.3 2.9	1.65 2.46 3.05	0.9 1.35 1.65		0.9 1.35 1.65		V

Max $V_{T-} = \text{Max } V_{T+} - \text{Min } V_H$
 Correct Max V_{T-}
 $V_{CC}@3.0V$ **1.90** = 2.20 - 0.30
 $V_{CC}@4.5V$ **2.75** = 3.15 - 0.40
 $V_{CC}@5.5V$ **3.35** = 3.85 - 0.50

Min
1.20
1.75
2.15

Max
1.90
2.75
3.35

The change will not impact form, fit, or function of product(s)

List of affected Standard Parts:

NLVVHC1G14DFT1G

NLVVHC1G14DFT2G

NLVVHC1G14DTT1G