



|                                |   |
|--------------------------------|---|
| <b>Title of Change:</b>        | 5 V MiniGate U04 Datasheet Changes  |
| <b>Effective date:</b>         | 14 Jan 2021   |
| <b>Contact information:</b>    | Contact your local ON Semiconductor Sales Office or <a href="mailto:logic.fpcn@onsemi.com">logic.fpcn@onsemi.com</a>  |
| <b>Type of notification:</b>   | This Product Bulletin is for notification purposes only.<br>ON Semiconductor will proceed with implementation of this change upon publication of this Product Bulletin. |
| <b>Change Category:</b>        | data sheet  |
| <b>Change Sub-Category(s):</b> | Datasheet/Product Doc change, Product specific change   |

**Sites Affected:**

|                               |                                      |
|-------------------------------|--------------------------------------|
| <b>ON Semiconductor Sites</b> | <b>External Foundry/Subcon Sites</b> |
| None                          | None                                 |

**Description and Purpose:**

The change will not impact form, fit, or function of products.

**MC74HC1GU04 – VOH/VOL**

**Existing Datasheet**

**New**

|     |                           |                                 |     |     |      |      |     |      |     |      |   |      |   |
|-----|---------------------------|---------------------------------|-----|-----|------|------|-----|------|-----|------|---|------|---|
| VOH | High-Level Output Voltage | VIN = VIH or VIL<br>IOH = -2 mA | 2.0 | 1.8 | 2.0  | -    | 1.8 | -    | 1.8 | -    | - | V    |   |
|     |                           |                                 | 3.0 | 2.7 | 3.0  | -    | 2.7 | -    | 2.7 | -    | - | -    | - |
|     |                           |                                 | 4.5 | 4.0 | 4.5  | -    | 4.0 | -    | 4.0 | -    | - | -    | - |
| VOL | Low-Level Output Voltage  | VIN = VIH or VIL<br>IOL = 20 µA | 2.0 | -   | 0.0  | 0.1  | -   | 0.1  | -   | 0.1  | - | -    | V |
|     |                           |                                 | 3.0 | -   | 0.0  | 0.1  | -   | 0.1  | -   | 0.1  | - | 0.1  | - |
|     |                           |                                 | 4.5 | -   | 0.0  | 0.1  | -   | 0.1  | -   | 0.1  | - | 0.1  | - |
|     |                           | VIN = VIH or VIL<br>IOL = 2 mA  | 4.5 | -   | 0.17 | 0.26 | -   | 0.33 | -   | 0.40 | - | -    | - |
|     |                           |                                 | 6.0 | -   | 0.18 | 0.26 | -   | 0.33 | -   | 0.40 | - | 0.40 | - |

|     |                           |                                 |     |     |      |      |     |      |     |      |   |      |   |
|-----|---------------------------|---------------------------------|-----|-----|------|------|-----|------|-----|------|---|------|---|
| VOH | High-Level Output Voltage | VIN = VIH or VIL<br>IOH = -2 mA | 2.0 | 1.8 | 2.0  | -    | 1.8 | -    | 1.8 | -    | - | V    |   |
|     |                           |                                 | 3.0 | 2.7 | 3.0  | -    | 2.7 | -    | 2.7 | -    | - | -    | - |
|     |                           |                                 | 4.5 | 4.0 | 4.5  | -    | 4.0 | -    | 4.0 | -    | - | -    | - |
| VOL | Low-Level Output Voltage  | VIN = VIH or VIL<br>IOL = 20 µA | 2.0 | -   | 0.0  | 0.1  | -   | 0.1  | -   | 0.1  | - | -    | V |
|     |                           |                                 | 3.0 | -   | 0.0  | 0.1  | -   | 0.1  | -   | 0.1  | - | 0.1  | - |
|     |                           |                                 | 4.5 | -   | 0.0  | 0.1  | -   | 0.1  | -   | 0.1  | - | 0.1  | - |
|     |                           | VIN = VCC<br>IOL = 2 mA         | 4.5 | -   | 0.17 | 0.26 | -   | 0.33 | -   | 0.40 | - | -    | - |
|     |                           |                                 | 6.0 | -   | 0.18 | 0.26 | -   | 0.33 | -   | 0.40 | - | 0.40 | - |

**NC7SU04 – Absolute Maximum Ratings**

**Existing Datasheet**

**New**

**ABSOLUTE MAXIMUM RATINGS**

| Symbol | Parameter               | Min                | Max       | Unit |    |
|--------|-------------------------|--------------------|-----------|------|----|
| VCC    | Supply Voltage          | -0.5               | 6.5       | V    |    |
| Iik    | DC Input Diode Current  | VIN ≤ -0.5 V       | -         | -20  | mA |
|        |                         | VIN ≥ VCC + 0.5 V  | -         | +20  |    |
| VIN    | DC Input Voltage        | -0.5               | VCC + 0.5 | V    |    |
| Iok    | DC Output Diode Current | VOUT < -0.5 V      | -         | -20  | mA |
|        |                         | VOUT > VCC + 0.5 V | -         | +20  |    |
| VOUT   | DC Output Voltage       | -0.5               | VCC + 0.5 | V    |    |

**ABSOLUTE MAXIMUM RATINGS**

| Symbol | Parameter               | Min        | Max       | Unit |    |
|--------|-------------------------|------------|-----------|------|----|
| VCC    | DC Supply Voltage       | -0.5       | +6.5      | V    |    |
| Iik    | DC Input Diode Current  | VIN < 0 V  | -         | -20  | mA |
|        |                         | VIN > VCC  | -         | +20  |    |
|        |                         |            |           |      |    |
| VIN    | DC Input Voltage        | -0.5       | VCC + 0.5 | V    |    |
| Iok    | DC Output Diode Current | VOUT < 0 V | -         | -20  | mA |
|        |                         | VOUT > VCC | -         | +20  |    |
|        |                         |            |           |      |    |
| VOUT   | DC Output Voltage       | -0.5       | VCC + 0.5 | V    |    |





NC7SZU04 – Absolute Maximum Ratings and VOH/VOL

Existing Datasheet

ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter               | Min   | Max | Unit |
|------------------|-------------------------|---|-----|------|
| V <sub>CC</sub>  | Supply Voltage          | -0.5  | 6.0 | V    |
| V <sub>IN</sub>  | DC Input Voltage        | -0.5  | 6.0 | V    |
| V <sub>OUT</sub> | DC Output Voltage       | -0.5  | 6.0 | V    |
| I <sub>IK</sub>  | DC Input Diode Current  | V <sub>IN</sub> < -0.5 V                        | -50 | mA   |
| I <sub>OK</sub>  | DC Output Diode Current | V <sub>OUT</sub> < -0.5 V                       | -50 | mA   |
| I <sub>OUT</sub> | DC Output Current       | V <sub>OUT</sub> > 0.5 V, V <sub>CC</sub> = GND | +20 | mA   |
| I <sub>OUT</sub> | DC Output Current       |   | ±50 | mA   |

| V <sub>OH</sub> | HIGH Level Output Voltage | V <sub>IN</sub> = V <sub>IL</sub> , I <sub>OH</sub> = -100 μA | 1.65 | 1.85 | 2.10 | 2.30 | 2.70 | 3.00 | 4.50 |      |      |      |      |      |
|-----------------|---------------------------|---|------|------|------|------|------|------|------|------|------|------|------|------|
|                 |                           |   | 1.65 | 1.80 | 2.10 | 2.30 | 2.70 | 3.00 | 4.50 | 1.55 | 1.65 | 1.80 | 2.10 | 2.30 |
| V <sub>OL</sub> | LOW Level Output Voltage  | V <sub>IN</sub> = V <sub>IH</sub> , I <sub>OL</sub> = 100 μA  | 1.65 | 1.85 | 2.10 | 2.30 | 2.70 | 3.00 | 4.50 |      |      |      |      |      |
|                 |                           |   | 1.65 | 1.80 | 2.10 | 2.30 | 2.70 | 3.00 | 4.50 | 0.00 | 0.10 | 0.20 | 0.30 | 0.50 |

New

ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter               | Min                                | Max | Unit |
|------------------|-------------------------|------------------------------------|-----|------|
| V <sub>CC</sub>  | Supply Voltage          | -0.5                               | 6.5 | V    |
| V <sub>IN</sub>  | DC Input Voltage        | -0.5                               | 6.5 | V    |
| V <sub>OUT</sub> | DC Output Voltage       | -0.5                               | 6.5 | V    |
| I <sub>IK</sub>  | DC Input Diode Current  | V <sub>IN</sub> < 0 V              | -50 | mA   |
| I <sub>OK</sub>  | DC Output Diode Current | V <sub>OUT</sub> < 0 V             | -50 | mA   |
| I <sub>OUT</sub> | DC Output Current       | V <sub>OUT</sub> > V <sub>CC</sub> | +50 | mA   |
| I <sub>OUT</sub> | DC Output Current       |                                    | ±50 | mA   |

| V <sub>OH</sub> | High-Level Output Voltage | V <sub>IN</sub> = GND<br>I <sub>OH</sub> = -100 μA | 1.65 to 5.5 | V <sub>CC</sub> - 0.1 | V <sub>CC</sub> | V <sub>CC</sub> - 0.1 | V <sub>CC</sub> - 0.1 | V    |      |      |      |      |      |      |
|-----------------|---------------------------|--|-------------|-----------------------|-----------------|-----------------------|-----------------------|------|------|------|------|------|------|------|
|                 |                           |  | 1.65        | 1.85                  | 2.10            | 2.30                  | 2.70                  | 3.00 | 4.50 | 1.55 | 1.65 | 1.80 | 2.10 | 2.30 |

NC7WZU04 – Absolute Maximum Ratings and VOH/VOL

Existing Datasheet

ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter               | Min   | Max | Unit |
|------------------|-------------------------|---|-----|------|
| V <sub>CC</sub>  | Supply Voltage          | -0.5  | 6.5 | V    |
| V <sub>IN</sub>  | DC Input Voltage        | -0.5  | 6.5 | V    |
| V <sub>OUT</sub> | DC Output Voltage       | -0.5  | 6.5 | V    |
| I <sub>IK</sub>  | DC Input Diode Current  | V <sub>IN</sub> < -0.5 V                        | -50 | mA   |
| I <sub>OK</sub>  | DC Output Diode Current | V <sub>OUT</sub> < -0.5 V                       | -50 | mA   |
| I <sub>OUT</sub> | DC Output Current       | V <sub>OUT</sub> > 0.5 V, V <sub>CC</sub> = GND | +50 | mA   |
| I <sub>OUT</sub> | DC Output Current       |   | ±50 | mA   |

| V <sub>OH</sub> | HIGH Level Output Voltage | V <sub>IN</sub> = V <sub>IL</sub> , I <sub>OH</sub> = -100 μA | 1.65 | 1.85 | 2.10 | 2.30 | 2.70 | 3.00 | 4.50 |      |      |      |      |      |
|-----------------|---------------------------|---|------|------|------|------|------|------|------|------|------|------|------|------|
|                 |                           |   | 1.65 | 1.80 | 2.10 | 2.30 | 2.70 | 3.00 | 4.50 | 1.55 | 1.65 | 1.80 | 2.10 | 2.30 |
| V <sub>OL</sub> | LOW Level Output Voltage  | V <sub>IN</sub> = V <sub>IH</sub> , I <sub>OL</sub> = 100 μA  | 1.65 | 1.85 | 2.10 | 2.30 | 2.70 | 3.00 | 4.50 |      |      |      |      |      |
|                 |                           |   | 1.65 | 1.80 | 2.10 | 2.30 | 2.70 | 3.00 | 4.50 | 0.01 | 0.2  | 0.3  | 0.5  |      |

New

ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter               | Min                                | Max | Unit |
|------------------|-------------------------|------------------------------------|-----|------|
| V <sub>CC</sub>  | Supply Voltage          | -0.5                               | 6.5 | V    |
| V <sub>IN</sub>  | DC Input Voltage        | -0.5                               | 6.5 | V    |
| V <sub>OUT</sub> | DC Output Voltage       | -0.5                               | 6.5 | V    |
| I <sub>IK</sub>  | DC Input Diode Current  | V <sub>IN</sub> < 0 V              | -50 | mA   |
| I <sub>OK</sub>  | DC Output Diode Current | V <sub>OUT</sub> < 0 V             | -50 | mA   |
| I <sub>OUT</sub> | DC Output Current       | V <sub>OUT</sub> > V <sub>CC</sub> | +50 | mA   |
| I <sub>OUT</sub> | DC Output Current       |                                    | ±50 | mA   |

| V <sub>OH</sub> | High-Level Output Voltage | V <sub>IN</sub> = GND<br>I <sub>OH</sub> = -100 μA | 1.65 to 5.5 | V <sub>CC</sub> - 0.1 | V <sub>CC</sub> | V <sub>CC</sub> - 0.1 | V <sub>CC</sub> - 0.1 | V    |      |      |      |      |      |      |
|-----------------|---------------------------|--|-------------|-----------------------|-----------------|-----------------------|-----------------------|------|------|------|------|------|------|------|
|                 |                           |  | 1.65        | 1.85                  | 2.10            | 2.30                  | 2.70                  | 3.00 | 4.50 | 1.55 | 1.65 | 1.80 | 2.10 | 2.30 |



MC74VHC1GU04 – VOH/VOL

Existing Datasheet

|     |   |                                  |     |      |      |      |      |   |
|-----|---|----------------------------------|-----|------|------|------|------|---|
| VOH | Minimum High-Level Output Voltage<br>VIN = VIH or VIL | VIN = VIH or VIL<br>IOH = -50 µA | 2.0 | 1.9  | 2.0  | 1.9  | 1.9  | V |
|     |   |                                  | 3.0 | 2.9  | 3.0  | 2.9  | 2.9  |   |
|     |   | VIN = VIH or VIL<br>IOH = -4 mA  | 3.0 | 2.58 |      | 2.48 | 2.34 | V |
|     |   | IOH = -8 mA                      | 4.5 | 3.94 |      | 3.80 | 3.66 |   |
| VOL | Maximum Low-Level Output Voltage<br>VIN = VIH or VIL  | VIN = VIH or VIL<br>IOL = 50 µA  | 2.0 |      | 0.0  | 0.1  | 0.1  | V |
|     |   |                                  | 3.0 |      | 0.0  | 0.1  | 0.1  |   |
|     |   | VIN = VIH or VIL<br>IOL = 4 mA   | 3.0 |      | 0.36 | 0.44 | 0.52 | V |
|     |   | IOL = 8 mA                       | 4.5 |      | 0.36 | 0.44 | 0.52 |   |

New

|     |   |                                  |     |      |      |      |      |   |
|-----|---|----------------------------------|-----|------|------|------|------|---|
| VOH | Minimum High-Level Output Voltage<br>VIN = VIH or VIL | VIN = VIH or VIL<br>IOH = -50 µA | 2.0 | 1.9  | 2.0  | 1.9  | 1.9  | V |
|     |   |                                  | 3.0 | 2.9  | 3.0  | 2.9  | 2.9  |   |
|     |   | VIN = GND<br>IOH = -4 mA         | 3.0 | 2.58 |      | 2.48 | 2.34 | V |
|     |   | IOH = -8 mA                      | 4.5 | 3.94 |      | 3.80 | 3.66 |   |
| VOL | Maximum Low-Level Output Voltage<br>VIN = VIH or VIL  | VIN = VIH or VIL<br>IOL = 50 µA  | 2.0 |      | 0.0  | 0.1  | 0.1  | V |
|     |   |                                  | 3.0 |      | 0.0  | 0.1  | 0.1  |   |
|     |   | VIN = VCC<br>IOL = 4 mA          | 3.0 |      | 0.36 | 0.44 | 0.52 | V |
|     |   | IOL = 8 mA                       | 4.5 |      | 0.36 | 0.44 | 0.52 |   |

List of Affected Standard Parts:

**Note:** Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the [PCN Customized Portal](#).

|                    |                    |                    |
|--------------------|--------------------|--------------------|
| NL17SZU04DFT2G     | M74VHC1GU04DFT2G   | M74VHC1GU04DFT1G   |
| MC74HC1GU04DFT1G   | MC74HC1GU04DFT2G   | MC74VHC1GU04DF1G   |
| NC7SZU04P5X        | NC7SU04P5X         | MC74VHC1GU04DBVT1G |
| MC74HC1GU04DBVT1G  | NL17SZU04DBVT1G    | NC7SZU04M5X        |
| NC7SU04M5X         | MC74VHC1GU04MU1TCG | MC74VHC1GU04MU3TCG |
| MC74VHC1GU04MU2TCG | NL17SZU04XV5T2G    | NL17SZU04P5T5G     |
| NL27WZU04DBVT1G    | NL27WZU04DFT2G     | NC7WZU04P6X        |
| NC7SU04L6X         | NC7WZU04L6X        | NC7SZU04L6X        |
| NC7SZU04FHX        |                    |                    |

Japanese translation of the notification starts here.  
通知の日本語訳はここから始まります。

*Note: The Japanese version is for reference only. In case of any differences between the English and Japanese version, the English version shall control.*

注：日本語版は参照用です。英語版と日本語版の違いがある場合は、英語版が優先されます。



|                |  |  |
|----------------|--|--|
| 変更件名:          | 5 V MiniGate U04 データシート変更  |  |
| 発効日:           | 14 Jan 2021  |  |
| 連絡先情報:         | 現地のオン・セミコンダクター営業所または < <a href="mailto:logic.fpcn@onsemi.com">logic.fpcn@onsemi.com</a> > にお問い合わせください。 |  |
| 通知種別:          | 本製品速報は通知目的のみのもです。オン・セミコンダクターは本製品速報の発行により本変更を実行します。   |  |
| 変更カテゴリ:        | データシート   |  |
| 変更サブカテゴリ:      | データシート/製品資料の変更/製品仕様の変更   |  |
| 影響を受ける拠点:      |  |  |
| オン・セミコンダクター拠点: | 外部製造工場 / 下請業者拠点:   |  |
| なし             | なし   |  |

説明および目的:

この変更は製品の形状、適合性、または機能に影響を及ぼしません。

MC74HC1GU04 – VOH/VOL

Existing Datasheet

New

|                 |                           |  |                          |                          |                          |                  |                          |                  |                          |                  |   |
|-----------------|---------------------------|--|--------------------------|--------------------------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|---|
| V <sub>OH</sub> | High-Level Output Voltage | V <sub>IN</sub> = V <sub>IH</sub> or V <sub>IL</sub><br>I <sub>OH</sub> = -2 mA                              | 2.0<br>3.0<br>4.5<br>6.0 | 1.8<br>2.7<br>4.0<br>5.5 | 2.0<br>3.0<br>4.5<br>6.0 | -<br>-<br>-<br>- | 1.8<br>2.7<br>4.0<br>5.5 | -<br>-<br>-<br>- | 1.8<br>2.7<br>4.0<br>5.5 | -<br>-<br>-<br>- | V |
|                 |                           | V <sub>IN</sub> = V <sub>IH</sub> or V <sub>IL</sub><br>I <sub>OH</sub> = -2 mA<br>I <sub>OH</sub> = -2.6 mA | 4.5<br>6.0               | 4.18<br>5.68             | 4.33<br>5.76             | -<br>-           | 4.13<br>5.63             | -<br>-           | 4.08<br>5.58             | -<br>-           | V |
| V <sub>OL</sub> | Low-Level Output Voltage  | V <sub>IN</sub> = V <sub>IH</sub> or V <sub>IL</sub><br>I <sub>OL</sub> = 20 μA                              | 2.0<br>3.0<br>4.5<br>6.0 | -<br>0.0<br>0.1<br>0.1   | 0.1<br>0.1<br>0.1<br>0.1 | -<br>-<br>-<br>- | 0.1<br>0.1<br>0.1<br>0.1 | -<br>-<br>-<br>- | 0.1<br>0.1<br>0.1<br>0.1 | -<br>-<br>-<br>- | V |
|                 |                           | V <sub>IN</sub> = V <sub>IH</sub> or V <sub>IL</sub><br>I <sub>OL</sub> = 2 mA<br>I <sub>OL</sub> = 2.6 mA   | 4.5<br>6.0               | -<br>0.17<br>0.18        | 0.26<br>0.26             | -<br>-           | 0.33<br>0.33             | -<br>-           | 0.40<br>0.40             | -<br>-           | V |

|                 |                           |   |                          |                          |                          |                  |                          |                  |                          |                  |   |
|-----------------|---------------------------|---|--------------------------|--------------------------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|---|
| V <sub>OH</sub> | High-Level Output Voltage | V <sub>IN</sub> = V <sub>IH</sub> or V <sub>IL</sub><br>I <sub>OH</sub> = -20 μA        | 2.0<br>3.0<br>4.5<br>6.0 | 1.8<br>2.7<br>3.0<br>5.5 | 2.0<br>3.0<br>4.5<br>6.0 | -<br>-<br>-<br>- | 1.8<br>2.7<br>4.0<br>5.5 | -<br>-<br>-<br>- | 1.8<br>2.7<br>4.0<br>5.5 | -<br>-<br>-<br>- | V |
|                 |                           | V <sub>IN</sub> = GND<br>I <sub>OH</sub> = -2 mA<br>I <sub>OH</sub> = -2.6 mA           | 4.5<br>6.0               | 4.18<br>5.68             | 4.33<br>5.76             | -<br>-           | 4.13<br>5.63             | -<br>-           | 4.08<br>5.58             | -<br>-           | V |
| V <sub>OL</sub> | Low-Level Output Voltage  | V <sub>IN</sub> = V <sub>IH</sub> or V <sub>IL</sub><br>I <sub>OL</sub> = 20 μA         | 2.0<br>3.0<br>4.5<br>6.0 | -<br>0.0<br>0.1<br>0.1   | 0.1<br>0.1<br>0.1<br>0.1 | -<br>-<br>-<br>- | 0.1<br>0.1<br>0.1<br>0.1 | -<br>-<br>-<br>- | 0.1<br>0.1<br>0.1<br>0.1 | -<br>-<br>-<br>- | V |
|                 |                           | V <sub>IN</sub> = V <sub>CC</sub><br>I <sub>OL</sub> = 2 mA<br>I <sub>OL</sub> = 2.6 mA | 4.5<br>6.0               | -<br>0.17<br>0.18        | 0.26<br>0.26             | -<br>-           | 0.33<br>0.33             | -<br>-           | 0.40<br>0.40             | -<br>-           | V |

NC75U04 – 絶対最大定格

Existing Datasheet

New

ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter               | Min   | Max                   | Unit |
|------------------|-------------------------|---|-----------------------|------|
| V <sub>CC</sub>  | Supply Voltage          | -0.5  | 6.5                   | V    |
| I <sub>IK</sub>  | DC Input Diode Current  | V <sub>IN</sub> ≤ -0.5 V<br>V <sub>IN</sub> ≥ V <sub>CC</sub> + 0.5 V   | -<br>+20              | mA   |
| V <sub>IN</sub>  | DC Input Voltage        | -0.5  | V <sub>CC</sub> + 0.5 | V    |
| I <sub>OK</sub>  | DC Output Diode Current | V <sub>OUT</sub> < -0.5 V<br>V <sub>OUT</sub> > V <sub>CC</sub> + 0.5 V | -<br>+20              | mA   |
| V <sub>OUT</sub> | DC Output Voltage       | -0.5  | V <sub>CC</sub> + 0.5 | V    |

ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter               | Min  | Max                   | Unit |
|------------------|-------------------------|--|-----------------------|------|
| V <sub>CC</sub>  | DC Supply Voltage       | -0.5   | +6.5                  | V    |
| I <sub>IK</sub>  | DC Input Diode Current  | V <sub>IN</sub> < 0 V<br>V <sub>IN</sub> > V <sub>CC</sub>   | -<br>+20              | mA   |
| V <sub>IN</sub>  | DC Input Voltage        | -0.5   | V <sub>CC</sub> + 0.5 | V    |
| I <sub>OK</sub>  | DC Output Diode Current | V <sub>OUT</sub> < 0 V<br>V <sub>OUT</sub> > V <sub>CC</sub> | -<br>+20              | mA   |
| V <sub>OUT</sub> | DC Output Voltage       | -0.5   | V <sub>CC</sub> + 0.5 | V    |



NL17SZU04 – 最大定格、VOH/VOL and IOFF

Existing Datasheet

MAXIMUM RATINGS

| Symbol           | Characteristics               | Value                                     | Unit |
|------------------|-------------------------------|---|------|
| V <sub>CC</sub>  | DC Supply Voltage             | SC-88A (NLV) -0.5 to +7.0<br>-0.5 to +6.5 | V    |
| V <sub>IN</sub>  | DC Input Voltage              | SC-88A (NLV) -0.5 to +7.0<br>-0.5 to +6.5 | V    |
| V <sub>OUT</sub> | DC Output Voltage             | -0.5 to V <sub>CC</sub> + 0.5             | V    |
| I <sub>IK</sub>  | DC Input Diode Current        | V <sub>IN</sub> < GND -50                 | mA   |
| I <sub>OK</sub>  | DC Output Diode Current       | V <sub>OUT</sub> < GND -50                | mA   |
| I <sub>OUT</sub> | DC Output Source/Sink Current | ±50                                       | mA   |

|                 |                           |  |             |                       |                 |      |                       |      |    |
|-----------------|---------------------------|--|-------------|-----------------------|-----------------|------|-----------------------|------|----|
| V <sub>OH</sub> | High-Level Output Voltage | V <sub>IN</sub> = V <sub>OH</sub> or V <sub>IL</sub> | 1.65 to 5.5 | V <sub>CC</sub> - 0.1 | V <sub>CC</sub> | -    | V <sub>CC</sub> - 0.1 | -    | V  |
|                 |                           | I <sub>OH</sub> = -100 μA                            | 1.65        | 1.29                  | 1.4             | -    | 1.29                  | -    |    |
|                 |                           | I <sub>OH</sub> = -4 mA                              | 2.3         | 1.9                   | 2.1             | -    | 1.9                   | -    |    |
|                 |                           | I <sub>OH</sub> = -8 mA                              | 2.7         | 2.2                   | 2.4             | -    | 2.2                   | -    |    |
|                 |                           | I <sub>OH</sub> = -12 mA                             | 3.0         | 2.4                   | 2.7             | -    | 2.4                   | -    |    |
|                 |                           | I <sub>OH</sub> = -16 mA                             | 3.0         | 2.3                   | 2.5             | -    | 2.3                   | -    |    |
| V <sub>OL</sub> | Low-Level Output Voltage  | V <sub>IN</sub> = V <sub>OH</sub> or V <sub>IL</sub> | 1.65 to 5.5 | -                     | 0.1             | -    | 0.1                   | -    | V  |
|                 |                           | I <sub>OL</sub> = 100 μA                             | 1.65        | -                     | 0.08            | 0.24 | -                     | 0.24 | -  |
|                 |                           | I <sub>OL</sub> = 4 mA                               | 2.3         | -                     | 0.2             | 0.3  | -                     | 0.3  | -  |
|                 |                           | I <sub>OL</sub> = 8 mA                               | 2.7         | -                     | 0.22            | 0.4  | -                     | 0.4  | -  |
|                 |                           | I <sub>OL</sub> = 12 mA                              | 3.0         | -                     | 0.28            | 0.4  | -                     | 0.4  | -  |
|                 |                           | I <sub>OL</sub> = 16 mA                              | 3.0         | -                     | 0.38            | 0.55 | -                     | 0.55 | -  |
| I <sub>IN</sub> | Input Leakage Current     | V <sub>IN</sub> = 5.5 V or GND                       | 1.65 to 5.5 | -                     | -               | ±0.1 | -                     | ±1.0 | μA |
|                 |                           | V <sub>IN</sub> = 5.5 V or V <sub>OUT</sub> = 5.5 V  | 0           | -                     | -               | 1.0  | -                     | 10   | μA |

New

MAXIMUM RATINGS

| Symbol           | Characteristics               | Value                                     | Unit |
|------------------|-------------------------------|---|------|
| V <sub>CC</sub>  | DC Supply Voltage             | SC-88A (NLV) -0.5 to +7.0<br>-0.5 to +6.5 | V    |
| V <sub>IN</sub>  | DC Input Voltage              | SC-88A (NLV) -0.5 to +7.0<br>-0.5 to +6.5 | V    |
| V <sub>OUT</sub> | DC Output Voltage             | -0.5 to V <sub>CC</sub> + 0.5             | V    |
| I <sub>IK</sub>  | DC Input Diode Current        | V <sub>IN</sub> < GND -50                 | mA   |
| I <sub>OK</sub>  | DC Output Diode Current       | ±50                                       | mA   |
| I <sub>OUT</sub> | DC Output Source/Sink Current | ±50                                       | mA   |

|                 |                           |                                   |             |                       |                 |      |                       |      |    |
|-----------------|---------------------------|-----------------------------------|-------------|-----------------------|-----------------|------|-----------------------|------|----|
| V <sub>OH</sub> | High-Level Output Voltage | V <sub>IN</sub> = GND             | 1.65 to 5.5 | V <sub>CC</sub> - 0.1 | V <sub>CC</sub> | -    | V <sub>CC</sub> - 0.1 | -    | V  |
|                 |                           | I <sub>OH</sub> = -100 μA         | 1.65        | 1.29                  | 1.4             | -    | 1.29                  | -    |    |
|                 |                           | I <sub>OH</sub> = -4 mA           | 2.3         | 1.9                   | 2.1             | -    | 1.9                   | -    |    |
|                 |                           | I <sub>OH</sub> = -8 mA           | 2.7         | 2.2                   | 2.4             | -    | 2.2                   | -    |    |
|                 |                           | I <sub>OH</sub> = -12 mA          | 3.0         | 2.4                   | 2.7             | -    | 2.4                   | -    |    |
|                 |                           | I <sub>OH</sub> = -16 mA          | 3.0         | 2.3                   | 2.5             | -    | 2.3                   | -    |    |
| V <sub>OL</sub> | Low-Level Output Voltage  | V <sub>IN</sub> = V <sub>CC</sub> | 1.65 to 5.5 | -                     | 0.1             | -    | 0.1                   | -    | V  |
|                 |                           | I <sub>OL</sub> = 100 μA          | 1.65        | -                     | 0.08            | 0.24 | -                     | 0.24 | -  |
|                 |                           | I <sub>OL</sub> = 4 mA            | 2.3         | -                     | 0.2             | 0.3  | -                     | 0.3  | -  |
|                 |                           | I <sub>OL</sub> = 8 mA            | 2.7         | -                     | 0.22            | 0.4  | -                     | 0.4  | -  |
|                 |                           | I <sub>OL</sub> = 12 mA           | 3.0         | -                     | 0.28            | 0.4  | -                     | 0.4  | -  |
|                 |                           | I <sub>OL</sub> = 16 mA           | 3.0         | -                     | 0.38            | 0.55 | -                     | 0.55 | -  |
| I <sub>IN</sub> | Input Leakage Current     | V <sub>IN</sub> = 5.5 V or GND    | 1.65 to 5.5 | -                     | -               | ±0.1 | -                     | ±1.0 | μA |
|                 |                           | V <sub>IN</sub> = 5.5 V           | 0           | -                     | -               | 1.0  | -                     | 10   | μA |

NL27WZU04 – 最大定格、VOH/VOL and IOFF

Existing Datasheet

MAXIMUM RATINGS

| Symbol           | Characteristics               | Value                                     | Unit |
|------------------|-------------------------------|---|------|
| V <sub>CC</sub>  | DC Supply Voltage             | SC-88A (NLV) -0.5 to +7.0<br>-0.5 to +6.5 | V    |
| V <sub>IN</sub>  | DC Input Voltage              | SC-88A (NLV) -0.5 to +7.0<br>-0.5 to +6.5 | V    |
| V <sub>OUT</sub> | DC Output Voltage             | -0.5 to V <sub>CC</sub> + 0.5             | V    |
| I <sub>IK</sub>  | DC Input Diode Current        | V <sub>IN</sub> < GND -50                 | mA   |
| I <sub>OK</sub>  | DC Output Diode Current       | V <sub>OUT</sub> < GND -50                | mA   |
| I <sub>OUT</sub> | DC Output Source/Sink Current | ±50                                       | mA   |

|                 |                           |  |             |                       |                 |      |                       |      |    |
|-----------------|---------------------------|--|-------------|-----------------------|-----------------|------|-----------------------|------|----|
| V <sub>OH</sub> | High-Level Output Voltage | V <sub>IN</sub> = V <sub>OH</sub> or V <sub>IL</sub> | 1.65 to 5.5 | V <sub>CC</sub> - 0.1 | V <sub>CC</sub> | -    | V <sub>CC</sub> - 0.1 | -    | V  |
|                 |                           | I <sub>OH</sub> = -100 μA                            | 1.65        | 1.29                  | 1.4             | -    | 1.29                  | -    |    |
|                 |                           | I <sub>OH</sub> = -4 mA                              | 2.3         | 1.9                   | 2.1             | -    | 1.9                   | -    |    |
|                 |                           | I <sub>OH</sub> = -8 mA                              | 2.7         | 2.2                   | 2.4             | -    | 2.2                   | -    |    |
|                 |                           | I <sub>OH</sub> = -12 mA                             | 3.0         | 2.4                   | 2.7             | -    | 2.4                   | -    |    |
|                 |                           | I <sub>OH</sub> = -16 mA                             | 3.0         | 2.3                   | 2.5             | -    | 2.3                   | -    |    |
| V <sub>OL</sub> | Low-Level Output Voltage  | V <sub>IN</sub> = V <sub>OH</sub> or V <sub>IL</sub> | 1.65 to 5.5 | -                     | 0.1             | -    | 0.1                   | -    | V  |
|                 |                           | I <sub>OL</sub> = 100 μA                             | 1.65        | -                     | 0.08            | 0.24 | -                     | 0.24 | -  |
|                 |                           | I <sub>OL</sub> = 4 mA                               | 2.3         | -                     | 0.2             | 0.3  | -                     | 0.3  | -  |
|                 |                           | I <sub>OL</sub> = 8 mA                               | 2.7         | -                     | 0.22            | 0.4  | -                     | 0.4  | -  |
|                 |                           | I <sub>OL</sub> = 12 mA                              | 3.0         | -                     | 0.28            | 0.4  | -                     | 0.4  | -  |
|                 |                           | I <sub>OL</sub> = 16 mA                              | 3.0         | -                     | 0.38            | 0.55 | -                     | 0.55 | -  |
| I <sub>IN</sub> | Input Leakage Current     | V <sub>IN</sub> = 5.5 V or GND                       | 1.65 to 5.5 | -                     | -               | ±0.1 | -                     | ±1.0 | μA |
|                 |                           | V <sub>IN</sub> = 5.5 V or V <sub>OUT</sub> = 5.5 V  | 0           | -                     | -               | 1.0  | -                     | 10   | μA |

New

MAXIMUM RATINGS

| Symbol           | Characteristics               | Value                                     | Unit |
|------------------|-------------------------------|---|------|
| V <sub>CC</sub>  | DC Supply Voltage             | SC-88A (NLV) -0.5 to +7.0<br>-0.5 to +6.5 | V    |
| V <sub>IN</sub>  | DC Input Voltage              | SC-88A (NLV) -0.5 to +7.0<br>-0.5 to +6.5 | V    |
| V <sub>OUT</sub> | DC Output Voltage             | -0.5 to V <sub>CC</sub> + 0.5             | V    |
| I <sub>IK</sub>  | DC Input Diode Current        | V <sub>IN</sub> < GND -50                 | mA   |
| I <sub>OK</sub>  | DC Output Diode Current       | ±50                                       | mA   |
| I <sub>OUT</sub> | DC Output Source/Sink Current | ±50                                       | mA   |

|                 |                           |                                   |             |                       |                 |      |                       |      |    |
|-----------------|---------------------------|-----------------------------------|-------------|-----------------------|-----------------|------|-----------------------|------|----|
| V <sub>OH</sub> | High-Level Output Voltage | V <sub>IN</sub> = GND             | 1.65 to 5.5 | V <sub>CC</sub> - 0.1 | V <sub>CC</sub> | -    | V <sub>CC</sub> - 0.1 | -    | V  |
|                 |                           | I <sub>OH</sub> = -100 μA         | 1.65        | 1.29                  | 1.4             | -    | 1.29                  | -    |    |
|                 |                           | I <sub>OH</sub> = -4 mA           | 2.3         | 1.9                   | 2.1             | -    | 1.9                   | -    |    |
|                 |                           | I <sub>OH</sub> = -8 mA           | 2.7         | 2.2                   | 2.4             | -    | 2.2                   | -    |    |
|                 |                           | I <sub>OH</sub> = -12 mA          | 3.0         | 2.4                   | 2.7             | -    | 2.4                   | -    |    |
|                 |                           | I <sub>OH</sub> = -16 mA          | 3.0         | 2.3                   | 2.5             | -    | 2.3                   | -    |    |
| V <sub>OL</sub> | Low-Level Output Voltage  | V <sub>IN</sub> = V <sub>CC</sub> | 1.65 to 5.5 | -                     | 0.1             | -    | 0.1                   | -    | V  |
|                 |                           | I <sub>OL</sub> = 100 μA          | 1.65        | -                     | 0.08            | 0.24 | -                     | 0.24 | -  |
|                 |                           | I <sub>OL</sub> = 4 mA            | 2.3         | -                     | 0.2             | 0.3  | -                     | 0.3  | -  |
|                 |                           | I <sub>OL</sub> = 8 mA            | 2.7         | -                     | 0.22            | 0.4  | -                     | 0.4  | -  |
|                 |                           | I <sub>OL</sub> = 12 mA           | 3.0         | -                     | 0.28            | 0.4  | -                     | 0.4  | -  |
|                 |                           | I <sub>OL</sub> = 16 mA           | 3.0         | -                     | 0.38            | 0.55 | -                     | 0.55 | -  |
| I <sub>IN</sub> | Input Leakage Current     | V <sub>IN</sub> = 5.5 V or GND    | 1.65 to 5.5 | -                     | -               | ±0.1 | -                     | ±1.0 | μA |
|                 |                           | V <sub>IN</sub> = 5.5 V           | 0           | -                     | -               | 1.0  | -                     | 10   | μA |





NC7SZU04 – 絶対最大定格および VOH/VOL

Existing Datasheet

ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter               | Min   | Max | Unit |    |
|------------------|-------------------------|---|-----|------|----|
| V <sub>CC</sub>  | Supply Voltage          | -0.5  | 6.0 | V    |    |
| V <sub>IN</sub>  | DC Input Voltage        | -0.5  | 6.0 | V    |    |
| V <sub>OUT</sub> | DC Output Voltage       | -0.5  | 6.0 | V    |    |
| I <sub>IK</sub>  | DC Input Diode Current  | V <sub>IN</sub> < -0.5 V                        | -   | -50  | mA |
| I <sub>OK</sub>  | DC Output Diode Current | V <sub>OUT</sub> < -0.5 V                       | -   | -50  | mA |
| I <sub>OUT</sub> | DC Output Current       | V <sub>OUT</sub> > 0.5 V, V <sub>CC</sub> = GND | -   | ±50  | mA |

| Symbol          | Parameter                 | V <sub>IN</sub> = V <sub>IL</sub> , I <sub>OH</sub> = -100 μA |      |       |      |      |      |
|-----------------|---------------------------|---|------|-------|------|------|------|
|                 |                           | 1.65  | 1.80 | 2.30  | 3.00 |      |      |
| V <sub>OH</sub> | HIGH Level Output Voltage | 1.65  | 1.65 | -     | 1.55 | -    |      |
|                 |                           | 1.80  | 1.60 | 1.80  | -    | 1.60 | -    |
|                 |                           | 2.30  | 2.10 | 2.30  | -    | 2.10 | -    |
|                 |                           | 3.00  | 2.70 | 3.00  | -    | 2.70 | -    |
|                 |                           | 4.50  | 4.00 | 4.40  | -    | 4.00 | -    |
| V <sub>OH</sub> | HIGH Level Output Voltage | 1.65  | 1.29 | 1.52  | -    | 1.29 | -    |
|                 |                           | 2.30  | 1.90 | 2.14  | -    | 1.90 | -    |
|                 |                           | 3.00  | 2.40 | 2.75  | -    | 2.40 | -    |
|                 |                           | 3.00  | 2.30 | 2.61  | -    | 2.30 | -    |
|                 |                           | 4.50  | 3.80 | 4.13  | -    | 3.80 | -    |
| V <sub>OL</sub> | LOW Level Output Voltage  | 1.65  | -    | 0.00  | 0.10 | -    | 0.10 |
|                 |                           | 1.80  | -    | 0.00  | 0.20 | -    | 0.20 |
|                 |                           | 2.30  | -    | 0.00  | 0.20 | -    | 0.20 |
|                 |                           | 3.00  | -    | 0.00  | 0.30 | -    | 0.30 |
|                 |                           | 4.50  | -    | 0.00  | 0.50 | -    | 0.50 |
| V <sub>OL</sub> | LOW Level Output Voltage  | 1.65  | -    | 0.80  | 0.24 | -    | 0.24 |
|                 |                           | 2.30  | -    | 0.10  | 0.30 | -    | 0.30 |
|                 |                           | 3.00  | -    | 0.17  | 0.40 | -    | 0.40 |
|                 |                           | 3.00  | -    | 0.25  | 0.55 | -    | 0.55 |
|                 |                           | 4.50  | -    | 0.226 | 0.55 | -    | 0.55 |

New

ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter               | Min                                | Max | Unit |    |
|------------------|-------------------------|------------------------------------|-----|------|----|
| V <sub>CC</sub>  | Supply Voltage          | -0.5                               | 6.5 | V    |    |
| V <sub>IN</sub>  | DC Input Voltage        | -0.5                               | 6.5 | V    |    |
| V <sub>OUT</sub> | DC Output Voltage       | -0.5                               | 6.5 | V    |    |
| I <sub>IK</sub>  | DC Input Diode Current  | V <sub>IN</sub> < 0 V              | -   | -50  | mA |
| I <sub>OK</sub>  | DC Output Diode Current | V <sub>OUT</sub> < 0 V             | -   | -50  | mA |
| I <sub>OUT</sub> | DC Output Current       | V <sub>OUT</sub> > V <sub>CC</sub> | -   | ±50  | mA |

| Symbol          | Parameter                 | V <sub>IN</sub> = GND, I <sub>OH</sub> = -100 μA |                       |                 |                       |      |
|-----------------|---------------------------|--|-----------------------|-----------------|-----------------------|------|
|                 |                           | 1.65 to 5.5                                      | V <sub>CC</sub> - 0.1 | V <sub>CC</sub> | V <sub>CC</sub> - 0.1 |      |
| V <sub>OH</sub> | High-Level Output Voltage | 1.65 to 5.5                                      | 1.65                  | 1.29            | 1.4                   | -    |
|                 |                           | I <sub>OH</sub> = -4 mA                          | 2.3                   | 1.9             | 2.1                   | -    |
|                 |                           | I <sub>OH</sub> = -8 mA                          | 2.7                   | 2.2             | 2.4                   | -    |
|                 |                           | I <sub>OH</sub> = -12 mA                         | 3.0                   | 2.4             | 2.7                   | -    |
|                 |                           | I <sub>OH</sub> = -16 mA                         | 3.0                   | 2.3             | 2.5                   | -    |
| V <sub>OL</sub> | Low-Level Output Voltage  | 1.65 to 5.5                                      | -                     | -               | 0.1                   | -    |
|                 |                           | I <sub>OL</sub> = 4 mA                           | 1.65                  | -               | 0.08                  | 0.24 |
|                 |                           | I <sub>OL</sub> = 8 mA                           | 2.3                   | -               | 0.2                   | 0.3  |
|                 |                           | I <sub>OL</sub> = 12 mA                          | 2.7                   | -               | 0.22                  | 0.4  |
|                 |                           | I <sub>OL</sub> = 16 mA                          | 3.0                   | -               | 0.28                  | 0.4  |
| V <sub>OL</sub> | Low-Level Output Voltage  | 1.65 to 5.5                                      | -                     | -               | 0.38                  | 0.55 |
|                 |                           | I <sub>OL</sub> = 24 mA                          | 3.0                   | -               | 0.38                  | 0.55 |
|                 |                           | I <sub>OL</sub> = 32 mA                          | 4.5                   | -               | 0.42                  | 0.55 |
|                 |                           | I <sub>OL</sub> = 4 mA                           | 1.65                  | -               | 0.08                  | 0.24 |
|                 |                           | I <sub>OL</sub> = 8 mA                           | 2.3                   | -               | 0.2                   | 0.3  |

NC7WZU04 – 絶対最大定格および VOH/VOL

Existing Datasheet

ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter               | Min   | Max | Unit |    |
|------------------|-------------------------|---|-----|------|----|
| V <sub>CC</sub>  | Supply Voltage          | -0.5  | 6.5 | V    |    |
| V <sub>IN</sub>  | DC Input Voltage        | -0.5  | 6.5 | V    |    |
| V <sub>OUT</sub> | DC Output Voltage       | -0.5  | 6.5 | V    |    |
| I <sub>IK</sub>  | DC Input Diode Current  | V <sub>IN</sub> < -0.5 V                        | -   | -50  | mA |
| I <sub>OK</sub>  | DC Output Diode Current | V <sub>OUT</sub> < -0.5 V                       | -   | -50  | mA |
| I <sub>OUT</sub> | DC Output Current       | V <sub>OUT</sub> > 0.5 V, V <sub>CC</sub> = GND | -   | ±50  | mA |

| Symbol          | Parameter                 | V <sub>IN</sub> = V <sub>IL</sub> , I <sub>OH</sub> = -100 μA |      |      |      |      |      |
|-----------------|---------------------------|---|------|------|------|------|------|
|                 |                           | 1.65  | 1.80 | 2.30 | 3.00 |      |      |
| V <sub>OH</sub> | HIGH Level Output Voltage | 1.65  | 1.65 | -    | 1.55 | -    |      |
|                 |                           | 1.80  | 1.6  | 1.79 | -    | 1.6  | -    |
|                 |                           | 2.30  | 2.1  | 2.29 | -    | 2.1  | -    |
|                 |                           | 3.00  | 2.7  | 2.99 | -    | 2.7  | -    |
|                 |                           | 4.50  | 4.0  | 4.48 | -    | 4.0  | -    |
| V <sub>OH</sub> | HIGH Level Output Voltage | 1.65  | 1.29 | 1.52 | -    | 1.29 | -    |
|                 |                           | 2.30  | 1.9  | 2.19 | -    | 1.9  | -    |
|                 |                           | 3.00  | 2.4  | 2.82 | -    | 2.4  | -    |
|                 |                           | 3.00  | 2.3  | 2.73 | -    | 2.3  | -    |
|                 |                           | 4.50  | 3.8  | 4.24 | -    | 3.8  | -    |
| V <sub>OL</sub> | LOW Level Output Voltage  | 1.65  | -    | 0.01 | 0.2  | -    | 0.2  |
|                 |                           | 1.80  | -    | 0.01 | 0.2  | -    | 0.2  |
|                 |                           | 2.30  | -    | 0.01 | 0.2  | -    | 0.2  |
|                 |                           | 3.00  | -    | 0.01 | 0.3  | -    | 0.3  |
|                 |                           | 4.50  | -    | 0.01 | 0.5  | -    | 0.5  |
| V <sub>OL</sub> | LOW Level Output Voltage  | 1.65  | -    | 0.10 | 0.24 | -    | 0.24 |
|                 |                           | 2.30  | -    | 0.12 | 0.3  | -    | 0.3  |
|                 |                           | 3.00  | -    | 0.19 | 0.4  | -    | 0.4  |
|                 |                           | 3.00  | -    | 0.29 | 0.55 | -    | 0.55 |
|                 |                           | 4.50  | -    | 0.29 | 0.55 | -    | 0.55 |

New

ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter               | Min                                | Max | Unit |    |
|------------------|-------------------------|------------------------------------|-----|------|----|
| V <sub>CC</sub>  | Supply Voltage          | -0.5                               | 6.5 | V    |    |
| V <sub>IN</sub>  | DC Input Voltage        | -0.5                               | 6.5 | V    |    |
| V <sub>OUT</sub> | DC Output Voltage       | -0.5                               | 6.5 | V    |    |
| I <sub>IK</sub>  | DC Input Diode Current  | V <sub>IN</sub> < 0 V              | -   | -50  | mA |
| I <sub>OK</sub>  | DC Output Diode Current | V <sub>OUT</sub> < 0 V             | -   | -50  | mA |
| I <sub>OUT</sub> | DC Output Current       | V <sub>OUT</sub> > V <sub>CC</sub> | -   | ±50  | mA |

| Symbol          | Parameter                 | V <sub>IN</sub> = GND, I <sub>OH</sub> = -100 μA |                       |                 |                       |      |
|-----------------|---------------------------|--|-----------------------|-----------------|-----------------------|------|
|                 |                           | 1.65 to 5.5                                      | V <sub>CC</sub> - 0.1 | V <sub>CC</sub> | V <sub>CC</sub> - 0.1 |      |
| V <sub>OH</sub> | High-Level Output Voltage | 1.65 to 5.5                                      | 1.65                  | 1.29            | 1.4                   | -    |
|                 |                           | I <sub>OH</sub> = -4 mA                          | 2.3                   | 1.9             | 2.1                   | -    |
|                 |                           | I <sub>OH</sub> = -8 mA                          | 2.7                   | 2.2             | 2.4                   | -    |
|                 |                           | I <sub>OH</sub> = -12 mA                         | 3.0                   | 2.4             | 2.7                   | -    |
|                 |                           | I <sub>OH</sub> = -16 mA                         | 3.0                   | 2.3             | 2.5                   | -    |
| V <sub>OL</sub> | Low-Level Output Voltage  | 1.65 to 5.5                                      | -                     | -               | 0.1                   | -    |
|                 |                           | I <sub>OL</sub> = 4 mA                           | 1.65                  | -               | 0.08                  | 0.24 |
|                 |                           | I <sub>OL</sub> = 8 mA                           | 2.3                   | -               | 0.2                   | 0.3  |
|                 |                           | I <sub>OL</sub> = 12 mA                          | 2.7                   | -               | 0.22                  | 0.4  |
|                 |                           | I <sub>OL</sub> = 16 mA                          | 3.0                   | -               | 0.28                  | 0.4  |
| V <sub>OL</sub> | Low-Level Output Voltage  | 1.65 to 5.5                                      | -                     | -               | 0.38                  | 0.55 |
|                 |                           | I <sub>OL</sub> = 24 mA                          | 3.0                   | -               | 0.38                  | 0.55 |
|                 |                           | I <sub>OL</sub> = 32 mA                          | 4.5                   | -               | 0.42                  | 0.55 |
|                 |                           | I <sub>OL</sub> = 4 mA                           | 1.65                  | -               | 0.08                  | 0.24 |
|                 |                           | I <sub>OL</sub> = 8 mA                           | 2.3                   | -               | 0.2                   | 0.3  |





MC74VHC1GU04 – VOH/VOL

Existing Datasheet

|     |   |     |     |     |     |     |   |
|-----|---|-----|-----|-----|-----|-----|---|
| VOH | Minimum High-Level Output Voltage<br>VIN = VIH or VIL<br>IOH = -50 µA | 2.0 | 1.9 | 2.0 | 1.9 | 1.9 | V |
|     |   | 3.0 | 2.9 | 3.0 | 2.9 | 2.9 | V |
| VOL | Maximum Low-Level Output Voltage<br>VIN = VIH or VIL<br>IOL = 50 µA   | 2.0 | 0.0 | 0.1 | 0.1 | 0.1 | V |
|     |   | 3.0 | 0.0 | 0.1 | 0.1 | 0.1 | V |

New

|     |   |     |     |     |     |     |   |
|-----|---|-----|-----|-----|-----|-----|---|
| VOH | Minimum High-Level Output Voltage<br>VIN = VIH or VIL<br>IOH = -50 µA | 2.0 | 1.9 | 2.0 | 1.9 | 1.9 | V |
|     |   | 3.0 | 2.9 | 3.0 | 2.9 | 2.9 | V |
| VOL | Maximum Low-Level Output Voltage<br>VIN = VIH or VIL<br>IOL = 50 µA   | 2.0 | 0.0 | 0.1 | 0.1 | 0.1 | V |
|     |   | 3.0 | 0.0 | 0.1 | 0.1 | 0.1 | V |

影響を受ける部品の一覧:

注: 標準の部品番号(既製品)のみが部品一覧に記載されます。本 PCN に影響を受けるカスタム 部品は、PCN メールのお客様の特定の PCN の付属文書、または PCN カスタマイズポータルに記載されています。

|                    |                    |                    |
|--------------------|--------------------|--------------------|
| NL17SZU04DFT2G     | M74VHC1GU04DFT2G   | M74VHC1GU04DFT1G   |
| MC74HC1GU04DFT1G   | MC74HC1GU04DFT2G   | MC74VHC1GU04DF1G   |
| NC7SZU04P5X        | NC7SU04P5X         | MC74VHC1GU04DBVT1G |
| MC74HC1GU04DBVT1G  | NL17SZU04DBVT1G    | NC7SZU04M5X        |
| NC7SU04M5X         | MC74VHC1GU04MU1TCG | MC74VHC1GU04MU3TCG |
| MC74VHC1GU04MU2TCG | NL17SZU04XV5T2G    | NL17SZU04P5T5G     |
| NL27WZU04DBVT1G    | NL27WZU04DFT2G     | NC7WZU04P6X        |
| NC7SU04L6X         | NC7WZU04L6X        | NC7SZU04L6X        |
| NC7SZU04FHX        |                    |                    |



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## Appendix A: Changed Products

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| Product          | Customer Part Number | Qualification Vehicle | New Part Number | Replacement Supplier |
|------------------|----------------------|-----------------------|-----------------|----------------------|
| NL17SZU04DFT2G   |                      | NA                    |                 |                      |
| M74VHC1GU04DFT1G |                      | NA                    |                 |                      |
| MC74HC1GU04DFT1G |                      | NA                    |                 |                      |
| MC74HC1GU04DFT2G |                      | NA                    |                 |                      |
| NC7SZU04P5X      |                      | NA                    |                 |                      |
| NC7SU04P5X       |                      | NA                    |                 |                      |
| NC7SZU04M5X      |                      | NA                    |                 |                      |
| NC7SU04M5X       |                      | NA                    |                 |                      |
| NL27WZU04DFT2G   |                      | NA                    |                 |                      |
| NC7WZU04P6X      |                      | NA                    |                 |                      |
| NC7WZU04L6X      |                      | NA                    |                 |                      |
| M74VHC1GU04DFT2G |                      | NA                    |                 |                      |