

# 日立半導体技術情報

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|      |                  |        |      |  |  |      |       |
|------|------------------|--------|------|--|--|------|-------|
| 製品分類 | マイクロコントローラ       |        | 発行番号 | TN-MC*-002A  |  | Rev. | 第 1 版 |
| 題名   | F-ZTAT 製品仕様変更の案内 |        | 情報分類 | ①. 仕様変更<br>2. ドキュメント訂正追加等<br>3. 使用上の注意事項<br>4. マスク変更<br>5. ライン変更 |  |      |       |
| 適用製品 | 添付リスト参照          | 対象ロット等 | 関連資料 | H8 シリーズ, H8S シリーズ, SH シリーズ<br>F-ZTAT ハードウェアマニュアル                 |  | 有効期限 |       |
|      |                  | 全ロット   |      |  |  | 永年   |       |

0.35um プロセスの F-ZTAT 製品の仕様について、下記のように変更致しますので連絡致します。

- 記 -

1 . 0.35umF-ZTAT仕様の変更

1 . 1 変更前（現行仕様）

|                       |      | min. | typ. | max. | 単位 |
|-----------------------|------|------|------|------|----|
| 書換え回数<br>(フラッシュメモリへの) | NWEC | -    | -    | 100  | 回  |

1 . 2 変更後（新仕様）

H8/300H Tinyシリーズおよび  
スーパーローパワーシリーズ（標準仕様品のみ）

|         |       | min.                | typ.                 | max. | 単位 |
|---------|-------|---------------------|----------------------|------|----|
| 書換え回数   | NWEC  | 1,000 <sup>1)</sup> | 10,000 <sup>2)</sup> | -    | 回  |
| データ保持時間 | t DRP | 10 <sup>3)</sup>    | -                    | -    | 年  |

上記以外の0.35umF-ZTAT標準仕様品

|         |       | min.              | typ.                 | max. | 単位 |
|---------|-------|-------------------|----------------------|------|----|
| 書換え回数   | NWEC  | 100 <sup>1)</sup> | 10,000 <sup>2)</sup> | -    | 回  |
| データ保持時間 | t DRP | 10 <sup>3)</sup>  | -                    | -    | 年  |

注 1): 書き換え後の全ての特性を保証するmin回数です。(保証は1~min値の範囲です)  
2): 25 度の時の参考値(通常この値まで書き換えは機能するという目安です。  
3): 書き換えがmin値を含む仕様範囲内で行われたときのデータ保持特性です。

対象製品の詳細は添付製品リストをご参照ください。

2 . 適用時期

即日。ただしハードウェアマニュアルは新規作成時または改定時から適用されます。

H8/300L Series F-ZTAT

| P/N         | 書き換え回数<br>Write/Erase Cycle(NWEC min) | 書き換え回数<br>Write/Erase Cycle(NWEC typ) | データ保持時間(year)<br>Data Retention Period(tDRP) | 備考 |
|-------------|---------------------------------------|---------------------------------------|--|----|
| HD64F38024F | 1,000                                 | 10,000                                | 10   |    |
| HD64F38024H | 1,000                                 | 10,000                                | 10   |    |
| HD64F38024W | 1,000                                 | 10,000                                | 10   |    |

# H8/300H Tiny F-ZTAT

| P/N          | 書き換え回数<br>Write/Erase Cycle(NWEC min) | 書き換え回数<br>Write/Erase Cycle(NWEC typ) | データ保持時間(year)<br>Data Retention Period(tDRP) | 備考 |
|--------------|---------------------------------------|---------------------------------------|--|----|
| HD64F3664BP  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3664FP  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3664FX  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3664FY  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3664H   | 1,000                                 | 10,000                                | 10   |    |
|              |                                       |                                       |  |    |
| HD64N3664FP  | 1,000                                 | 10,000                                | 10   |    |
|              |                                       |                                       |  |    |
| HD64F3672FP  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3672FX  | 1,000                                 | 10,000                                | 10   |    |
|              |                                       |                                       |  |    |
| HD64F3670FP  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3670FX  | 1,000                                 | 10,000                                | 10   |    |
|              |                                       |                                       |  |    |
| HD64F3687H   | 1,000                                 | 10,000                                | 10   |    |
| HD64F3687FP  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3687GH  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3687GFP | 1,000                                 | 10,000                                | 10   |    |
|              |                                       |                                       |  |    |
| HD64F3684H   | 1,000                                 | 10,000                                | 10   |    |
| HD64F3684FP  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3684GH  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3684GFP | 1,000                                 | 10,000                                | 10   |    |
|              |                                       |                                       |  |    |
| HD64F3694FY  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3694FX  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3694FP  | 1,000                                 | 10,000                                | 10   |    |
| HD64F3694H   | 1,000                                 | 10,000                                | 10   |    |
|              |                                       |                                       |  |    |
| HD64F3694GFY | 1,000                                 | 10,000                                | 10   |    |
| HD64F3694GFX | 1,000                                 | 10,000                                | 10   |    |
| HD64F3694GFP | 1,000                                 | 10,000                                | 10   |    |
| HD64F3694GH  | 1,000                                 | 10,000                                | 10   |    |

## H8/300H F-ZTAT

| P/N            | 書き換え回数<br>Write/Erase Cycle(NWEC min) | 書き換え回数<br>Write/Erase Cycle(NWEC typ) | データ保持時間(year)<br>Data Retention Period(tDRP) | 備考 |
|----------------|---------------------------------------|---------------------------------------|--|----|
| HD64F3052BF25  | 100                                   | 10,000                                | 10   |    |
| HD64F3052BX25  | 100                                   | 10,000                                | 10   |    |
| HD64F3068F25   | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3068X25   | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3028F25   | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3028TE25  | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3064BF25  | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3064BX25  | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3026F25   | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3026TE25  | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3062BF25  | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3062BX25  | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3024F25   | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3024TE25  | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3048BF25  | 100                                   | 10,000                                | 10   |    |
| HD64F3048BV25  | 100                                   | 10,000                                | 10   |    |
|                |                                       |                                       |  |    |
| HD64F3048BX25  | 100                                   | 10,000                                | 10   |    |
| HD64F3048BVX25 | 100                                   | 10,000                                | 10   |    |

## H8S F-ZTAT

| P/N             | 書き換え回数                      | 書き換え回数                      | データ保持時間(year)               | 備考 |
|-----------------|-----------------------------|-----------------------------|-----------------------------|----|
|                 | Write/Erase Cycle(NWEC min) | Write/Erase Cycle(NWEC typ) | Data Retention Period(tDRP) |    |
| HD64F2676VFC33  | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2667VFC33  | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2377VFC33  | 100                         | 10,000                      | 10                          |    |
| HD64F2377RVFC33 | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2367VFC33  | 100                         | 10,000                      | 10                          |    |
| HD64F2367VTE33  | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2339VFC25  | 100                         | 10,000                      | 10                          |    |
| HD64F2339EVFC25 | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2338VFC25  | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2326VFC25  | 100                         | 10,000                      | 10                          |    |
| HD64F2326VTE25  | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2329VFC25  | 100                         | 10,000                      | 10                          |    |
| HD64F2329EVFC25 | 100                         | 10,000                      | 10                          |    |
| HD64F2329VTE25  | 100                         | 10,000                      | 10                          |    |
| HD64F2329EVTE25 | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2329BVF25  | 100                         | 10,000                      | 10                          |    |
| HD64F2329BVTE25 | 100                         | 10,000                      | 10                          |    |
| HD64F2398F20    | 100                         | 10,000                      | 10                          |    |
| HD64F2398TE20   | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2328VFC25  | 100                         | 10,000                      | 10                          |    |
| HD64F2328VTE25  | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2319EVFC25 | 100                         | 10,000                      | 10                          |    |
| HD64F2319EVTE25 | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2319VFC25  | 100                         | 10,000                      | 10                          |    |
| HD64F2319VTE25  | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2315VFC25  | 100                         | 10,000                      | 10                          |    |
| HD64F2315VTE25  | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2318VFC25  | 100                         | 10,000                      | 10                          |    |
| HD64F2318VTE25  | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2317VFC25  | 100                         | 10,000                      | 10                          |    |
| HD64F2317VTE25  | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2227TE13   | 100                         | 10,000                      | 10                          |    |
| HD64F2227TF13   | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2268FA13   | 100                         | 10,000                      | 10                          |    |
| HD64F2268TE13   | 100                         | 10,000                      | 10                          |    |
| HD64F2268TF13   | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2268FA20   | 100                         | 10,000                      | 10                          |    |
| HD64F2268TE20   | 100                         | 10,000                      | 10                          |    |
| HD64F2268TF20   | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2258F13    | 100                         | 10,000                      | 10                          |    |
| HD64F2258TE13   | 100                         | 10,000                      | 10                          |    |

## H8S F-ZTAT

| P/N             | 書き換え回数<br>Write/Erase Cycle(NWEC min) | 書き換え回数<br>Write/Erase Cycle(NWEC typ) | データ保持時間(year)<br>Data Retention Period(tDRP) | 備考 |
|-----------------|---------------------------------------|---------------------------------------|--|----|
| HD64F2258FA13   | 100                                   | 10,000                                | 10   |    |
| HD64F2239FA16   | 100                                   | 10,000                                | 10   |    |
| HD64F2239TE16   | 100                                   | 10,000                                | 10   |    |
| HD64F2239TF16   | 100                                   | 10,000                                | 10   |    |
| HD64F2238RFA13  | 100                                   | 10,000                                | 10   |    |
| HD64F2238RTE13  | 100                                   | 10,000                                | 10   |    |
| HD64F2238RTF13  | 100                                   | 10,000                                | 10   |    |
| HD64F2238RBP13  | 100                                   | 10,000                                | 10   |    |
| HD64F2238RFA6   | 100                                   | 10,000                                | 10   |    |
| HD64F2238RTE6   | 100                                   | 10,000                                | 10   |    |
| HD64F2238RTF6   | 100                                   | 10,000                                | 10   |    |
| HD64F2238RBP6   | 100                                   | 10,000                                | 10   |    |
| HD64F2238BF13   | 100                                   | 10,000                                | 10   |    |
| HD64F2238BFA13  | 100                                   | 10,000                                | 10   |    |
| HD64F2238BTE13  | 100                                   | 10,000                                | 10   |    |
| HD64F2238BTF13  | 100                                   | 10,000                                | 10   |    |
| HD64F2215TE16   | 100                                   | 10,000                                | 10   |    |
| HD64F2215BP16   | 100                                   | 10,000                                | 10   |    |
| HD64F2215UTE16  | 100                                   | 10,000                                | 10   |    |
| HD64F2215UBR16  | 100                                   | 10,000                                | 10   |    |
| HD64F2214TE16   | 100                                   | 10,000                                | 10   |    |
| HD64F2214TF16   | 100                                   | 10,000                                | 10   |    |
| HD64F2214BP16   | 100                                   | 10,000                                | 10   |    |
| HD64F2633F25    | 100                                   | 10,000                                | 10   |    |
| HD64F2633TE25   | 100                                   | 10,000                                | 10   |    |
| HD64F2643FC25   | 100                                   | 10,000                                | 10   |    |
| HD64F2158VBP25  | 100                                   | 10,000                                | 10   |    |
| HD64F2158VTE25  | 100                                   | 10,000                                | 10   |    |
| HD64F2169AVTE10 | 100                                   | 10,000                                | 10   |    |
| HD64F2161BVTE10 | 100                                   | 10,000                                | 10   |    |
| HD64F2160BVTE10 | 100                                   | 10,000                                | 10   |    |
| HD64F2141BVFA10 | 100                                   | 10,000                                | 10   |    |
| HD64F2141BVTE10 | 100                                   | 10,000                                | 10   |    |
| HD64F2140BVFA10 | 100                                   | 10,000                                | 10   |    |
| HD64F2140BVTE10 | 100                                   | 10,000                                | 10   |    |
| HD64F2145BVTE10 | 100                                   | 10,000                                | 10   |    |
| HD64F2148BFA20  | 100                                   | 10,000                                | 10   |    |
| HD64F2148BVFA10 | 100                                   | 10,000                                | 10   |    |
| HD64F2148BTE20  | 100                                   | 10,000                                | 10   |    |
| HD64F2148BVTE10 | 100                                   | 10,000                                | 10   |    |
| HD64F2148AFA20  | 100                                   | 10,000                                | 10   |    |
| HD64F2148AVFA10 | 100                                   | 10,000                                | 10   |    |

## H8S F-ZTAT

| P/N             | 書き換え回数                      | 書き換え回数                      | データ保持時間(year)               | 備考 |
|-----------------|-----------------------------|-----------------------------|-----------------------------|----|
|                 | Write/Erase Cycle(NWEC min) | Write/Erase Cycle(NWEC typ) | Data Retention Period(tDRP) |    |
| HD64F2148ATE20  | 100                         | 10,000                      | 10                          |    |
| HD64F2148AVTE10 | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2147AFA20  | 100                         | 10,000                      | 10                          |    |
| HD64F2147AVFA10 | 100                         | 10,000                      | 10                          |    |
| HD64F2147ATE20  | 100                         | 10,000                      | 10                          |    |
| HD64F2147AVTE10 | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2144AFA20  | 100                         | 10,000                      | 10                          |    |
| HD64F2144AVFA10 | 100                         | 10,000                      | 10                          |    |
| HD64F2144ATE20  | 100                         | 10,000                      | 10                          |    |
| HD64F2144AVTE10 | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2138AFA20  | 100                         | 10,000                      | 10                          |    |
| HD64F2138AVFA10 | 100                         | 10,000                      | 10                          |    |
| HD64F2138ATF20  | 100                         | 10,000                      | 10                          |    |
| HD64F2138AVTF10 | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2134AFA20  | 100                         | 10,000                      | 10                          |    |
| HD64F2134AVFA10 | 100                         | 10,000                      | 10                          |    |
| HD64F2134ATF20  | 100                         | 10,000                      | 10                          |    |
| HD64F2134AVTF10 | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2199F      | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2199RF     | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2194CF     | 100                         | 10,000                      | 10                          |    |
|                 |                             |                             |                             |    |
| HD64F2194F      | 100                         | 10,000                      | 10                          |    |

# SH Series F-ZTAT

| P/N           | 書き換え回数<br>Write/Erase Cycle(NWEC min) | 書き換え回数<br>Write/Erase Cycle(NWEC typ) | データ保持時間(year)<br>Data Retention Period(tDRP) | 備考 |
|---------------|---------------------------------------|---------------------------------------|--|----|
| HD64F7046F50  | 100                                   | 10,000                                | 10   |    |
|               |                                       |                                       |  |    |
| HD64F7047F50  | 100                                   | 10,000                                | 10   |    |
|               |                                       |                                       |  |    |
| HD64F7144F50  | 100                                   | 10,000                                | 10   |    |
|               |                                       |                                       |  |    |
| HD64F7145F50  | 100                                   | 10,000                                | 10   |    |
|               |                                       |                                       |  |    |
| HD64F7065AF60 | 100                                   | 10,000                                | 10   |    |