



## Data Sheet Supplement Version 1.0

**Dynamic Differential Hall Effect Sensor**

**TLE4928C E6547**

For all parameters not specified in this document the TLE4926C-HT E6547 data sheet is valid.



| Type           | Marking | Ordering Code | Package     |
|----------------|---------|---------------|-------------|
| TLE4928C E6547 | 28D8    | SP000718274   | PG-SSO-3-92 |

### 1.1 Absolute Maximum Ratings

| No.   | Parameter            | Symbol | min. | typ. | max. | Unit | Conditions                                |
|-------|----------------------|--------|------|------|------|------|-------------------------------------------|
| 1.1.1 | Junction temperature | $T_j$  | -40  |      |      | °C   | -                                         |
|       |                      |        |      |      | 155  | °C   | 2000 h (not additive)                     |
|       |                      |        |      |      | 165  | °C   | 1000 h (not additive)                     |
|       |                      |        |      |      | 175  | °C   | 168 h (not additive)                      |
|       |                      |        |      |      | 195  | °C   | 3x1 h (additive to the other life times). |

### 1.2 Operating Range

| No.   | Parameter                      | Symbol   | min. | typ. | max. | Unit | Conditions                                                                                                                                                              |
|-------|--------------------------------|----------|------|------|------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.2.1 | Operating junction temperature | $T_j$    | -40  |      |      | °C   | -                                                                                                                                                                       |
|       |                                |          |      |      | 155  | °C   | 2000 h (not additive)                                                                                                                                                   |
|       |                                |          |      |      | 165  | °C   | 1000 h (not additive)                                                                                                                                                   |
|       |                                |          |      |      | 175  | °C   | 168 h (not additive)<br>reduced signal<br>quality permissible<br>(e.g. jitter).                                                                                         |
| 1.2.2 | Power on time                  | $t_{on}$ |      |      | 1    | ms   | Time to achieve<br>specified accuracy<br>After power on the<br>output of the IC is<br>always in high-state.<br>After internal resets<br>output is locked <sup>1</sup> . |

### 1.3 AC/DC Characteristics

Note: Not part of production testing, verified by design and characterization.

| No.   | Parameter       | Symbol | min   | typ | max | Unit | Remarks                          |
|-------|-----------------|--------|-------|-----|-----|------|----------------------------------|
| 1.3.1 | Frequency range | f      | 0.006 |     | 8   | kHz  | Operation below 6Hz <sup>2</sup> |

<sup>1</sup> Output of the IC is locked in present state (high-state or low-state) after an internal reset is launched. This reset happens typically every 195ms when there is no output switching in either case. See also 1.3.2. A voltage reset causes a release of the output and output is in high state after power on again.

<sup>2</sup> Output will switch if magnetic signal is changing more than  $2 \times |\Delta B_{min}|$  within offset recalibration time even below 6Hz once per magnetic edge, increased phase error is possible.

|       |                                                    |                    |     |     |     |    |                                                                          |
|-------|----------------------------------------------------|--------------------|-----|-----|-----|----|--------------------------------------------------------------------------|
| 1.3.2 | Offset recalibration time after last output change | $t_{\text{reset}}$ | 165 | 195 | 225 | ms | Valid for calibrated mode<br>Output locked to state before recalibration |
|-------|----------------------------------------------------|--------------------|-----|-----|-----|----|--------------------------------------------------------------------------|

**Revision History:****November 2009****Version 1.0**

|                     |                                              |
|---------------------|----------------------------------------------|
| Previous Version: - |                                              |
| Page                | Subjects (major changes since last revision) |
| -                   | -                                            |

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