Product brief

TLE888x
Flexible LIN alternator regulator IC family

The Infineon alternator control ICs are monolithic full featured regulators specifically designed for closed loop voltage control for 12 V automotive multi-phase alternators with a rotating field winding. They are qualified according to AEC-Q100 and tailored to withstand the harsh conditions of the automotive environment. The regulators are able to communicate with an engine management or energy management ECU through a standard LIN interface (LIN 1.3/LIN 2.1/LIN 2.2 – see product table on page 2). The battery voltage is regulated at a precise value between 10.6 V and 16 V. By using free-adjustable parameters, the regulators are able to operate even without any communication interface.

The family is compliant to various LIN alternator regulator specifications (see product table on page 2) and thus qualified and released by leading OEMs.

The output driver stage consists of a high-side DMOS for up to 12 A excitation current to the field winding. The product family provides 8 kV ESD protection for all alternator lines. The EEPROM with adjustable parameters offers a customization of the alternator to the specific OEM or application needs.

The TLE8881-2, latest addition to the Infineon LIN alternator regulator IC family, builds upon the success of the existing ICs (TLE8880, TLE8881, TLE8886) while also offering several advantages:

- Easy switch from existing applications using MFC or LIN interface
- Flexibility (LIN interface and enhanced EEPROM)
- Enhanced regulation behavior.

Applications
- 12 V automotive alternators with LIN interface
- 12 V truck alternators with LIN interface
- 12 V aftermarket alternators
- 12 V industrial generators

www.infineon.com/alternator
TLE888x
Flexible LIN alternator regulator IC family

Application support
Infineon also provides an interface board (ACIC Board) together with interface software

› Reliable and simple for fast design-ins
› Easy EEPROM programming
› Strong customer support

Product family

<table>
<thead>
<tr>
<th>Product</th>
<th>OPN</th>
<th>Description</th>
<th>LIN interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLE8880TN</td>
<td>TLE8880TNAKSA1</td>
<td>Compliant to LIN VDA specification</td>
<td>LIN 1.3 (Datalink layer), LIN 2.1 (Physical layer)</td>
</tr>
<tr>
<td>TLE8881TN</td>
<td>TLE8881TNAKSA1</td>
<td>Compliant to LIN HKMC specification</td>
<td>LIN 1.3 (Datalink layer), LIN 2.1 (Physical layer)</td>
</tr>
<tr>
<td>TLE8886TN Variant 1</td>
<td>TLE8886TNAKSA1</td>
<td>Compliant to LIN Renault Nissan specification</td>
<td>LIN 2.1 (Datalink layer)</td>
</tr>
<tr>
<td>TLE8886TN Variant 2</td>
<td>TLE8886TNAKSA2</td>
<td>Compliant to LIN VDA specification</td>
<td>LIN 2.1 (Datalink layer)</td>
</tr>
<tr>
<td>TLE8881-2TN</td>
<td>TLE88812TNAKSA1</td>
<td>Compliant to LIN VDA, Renault Nissan and HKMC specification</td>
<td>LIN 1.3 (Datalink layer), LIN 2.1, LIN 2.2 (Datalink and Physical layer)</td>
</tr>
<tr>
<td>ACIC BOARD</td>
<td>ACICBOARDT0801</td>
<td>Interface board for Infineon LIN alternator control IC family</td>
<td>—</td>
</tr>
</tbody>
</table>

Additional information
For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings
Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.