Dual High-Speed CAN Transceiver with Standby Mode

TJA1046

Last Updated: Jun 24, 2026

The TJA1046 is a dual high-speed CAN transceiver that provides two interfaces between a Controller Area Network (CAN) protocol controller and the physical two-wire CAN-bus. It is composed of two fully independent TJA1044GT transceivers. The transceivers are designed for high-speed CAN applications in the automotive industry, providing the differential transmit and receive capability to (a microcontroller with) a CAN protocol controller. The TJA1046 guarantees robust communication at data rates up to 5 Mbit/s as used in, for example, CAN FD networks.

The TJA1046 offers a feature set optimized for 12 V automotive applications and excellent ElectroMagnetic Compatibility (EMC) performance.

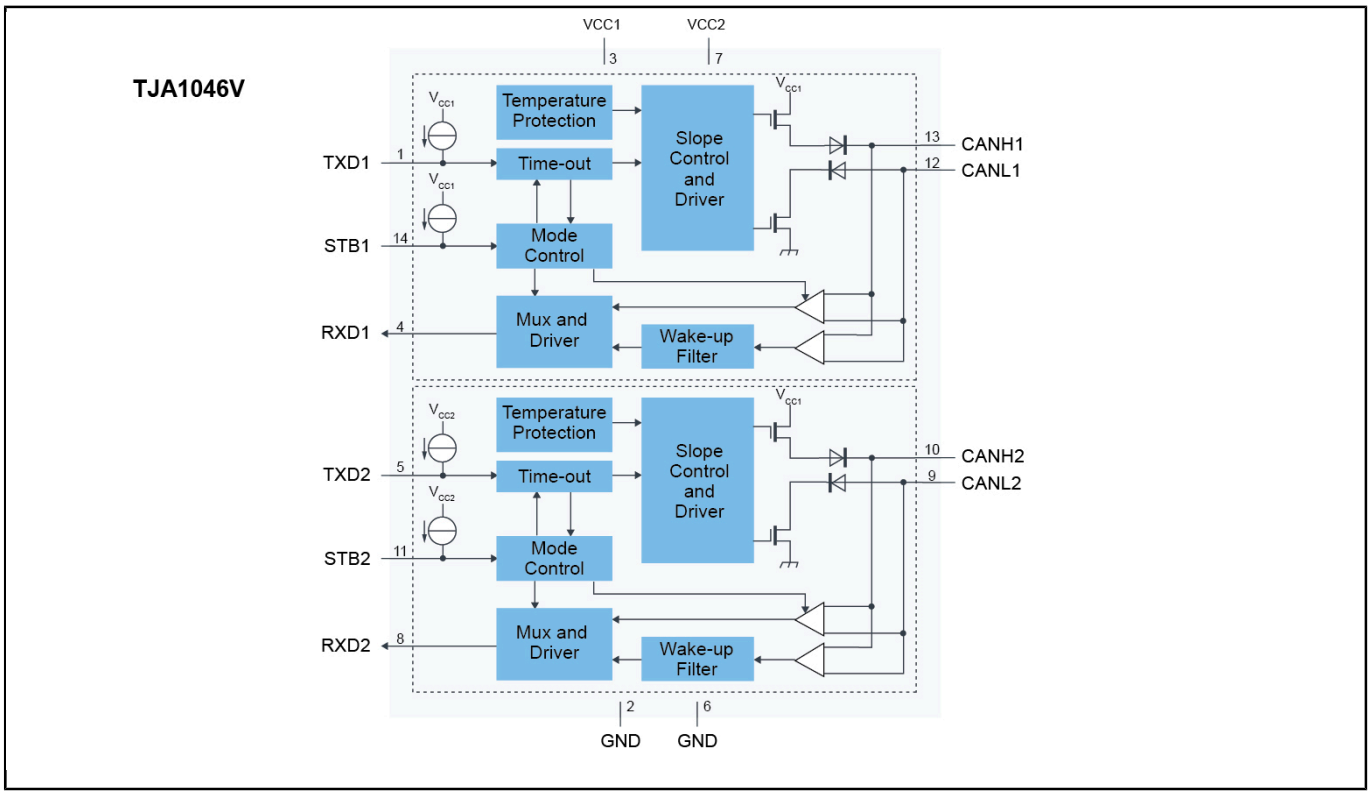
Additionally, the TJA1046 features:

- Ideal passive behavior to the CAN-bus when the supply voltage is off
- A very low-current Standby mode with bus wake-up capability
- Excellent EMC performance at speeds up to 500 kbit/s, even without a common mode choke

The HVSON package allows for more than 70 % PCB space saving compared with traditional SO packages. These features make the TJA1046 an excellent choice for networks containing more than one HS-CAN interface requiring a low-power mode with wake-up capability via the CAN-bus, especially for body and gateway control units.

The TJA1046 implements the CAN physical layer as defined in the current ISO11898 standard (ISO11898-2: 2003, ISO11898-5: 2007 and the pending updated version of ISO 11898-2:2016). Pending the release of ISO11898-2:2016 including CAN FD and SAE-J2284-4/5, additional timing parameters defining loop delay symmetry are specified. This implementation enables reliable communication in the CAN FD fast phase at data rates up to 5 Mbit/s.

TJA1046V Block Diagram



View additional information for Dual High-Speed CAN Transceiver with Standby Mode.

Note: The information on this document is subject to change without notice.