

Product Overview

NCN49597: Power Line Communication (PLC) Modem

For complete documentation, see the data sheet.



ON Semiconductor's NCN49597 is a power line carrier modem using spread-FSK (S-FSK) modulation for robust low data rate communication over power lines. NCN49597 is built around an ARM processor core, and includes the MAC layer. With this robust modulation technique, signals on the power lines can pass long distances. The half-duplex operation is automatically synchronized to the mains, and can be up to 4800 bits/second. The product configuration is done via its serial interface, which allows the user to concentrate on the development of the application. The NCN49597 is implemented in ON Semiconductor mixed signal technology, combining both analog circuitry and digital functionality on the same IC.

Features

- Dual S-FSK channel, each @ 4800 Baud
- Half duplex Power Line Carrier Modem for 50 and 60 Hz mains
- Embedded Cortex M0 processor, programmable embedded software
- Compliant with CENELEC EN 50065-1 & EN 50065-7
- Programmable Carrier Frequencies in CENELEC A, B, C and D Band
- Data Rate selectable: 300 600 1200 2400 4800 baud (@ 50 Hz); 360 720 1440 2880 5760 baud (@ 60 Hz)
- UART for interfacing with an application microcontroller
- Power supply 3.3 V
- Ambient temperature range: -40°C to +125°C

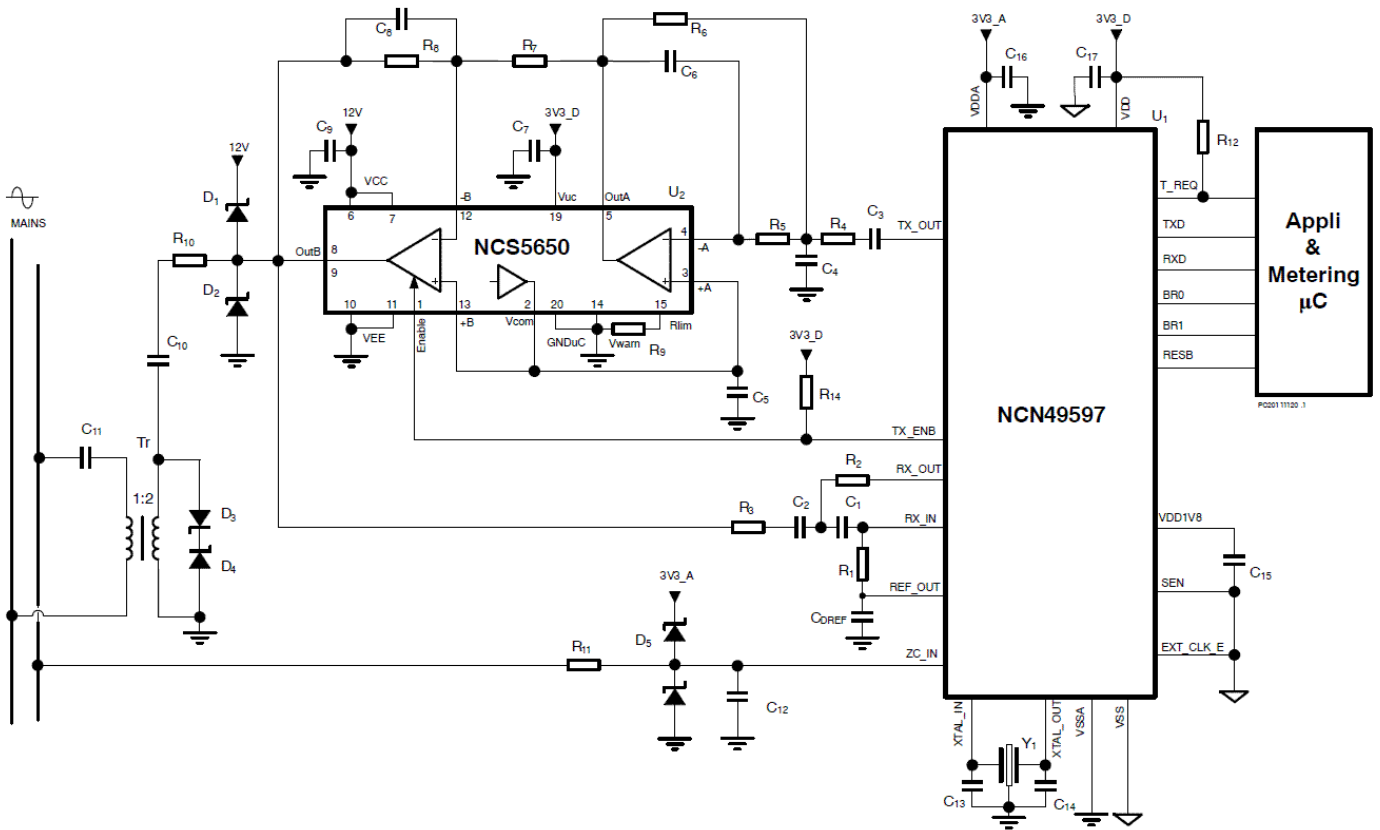
Applications

- Smart and renewable energy controls
- Solar panel control
- Smart street lighting control
- In-home display for split metering
- Home and building automation

Part Electrical Specifications

| Product | Compliance | Status | Data Transmission Standard | Data Rate | Number of Drivers | Number of Receivers | V _{CC} Min (V) | V _{CC} Max (V) | t _{PLH} Max (μs) | I _O Max (μA) | I _{IH} Max (mA) | Package Type |
|--------------|------------------------|--------|----------------------------|-----------|-------------------|---------------------|-------------------------|-------------------------|---------------------------|-------------------------|--------------------------|--------------|
| NCN49597MNRG | Pb-free Halide free | Active | S-FSK | 4800 baud | 1 | 1 | 3 | 3.6 | | | | QFN-52 |

Application Diagram



For more information please contact your local sales support at www.onsemi.com.

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