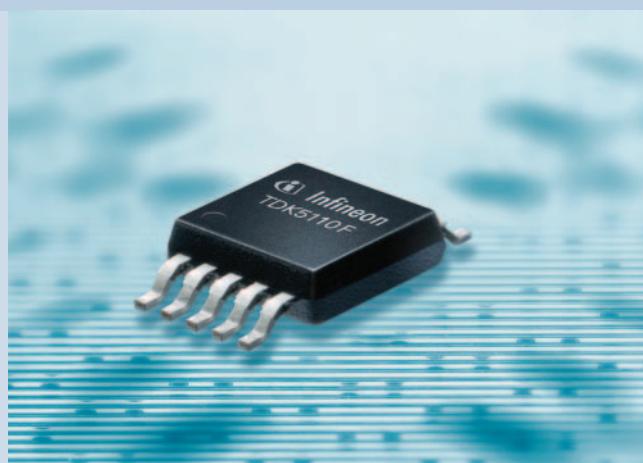


# TDK511xF Series

High Power 315/434/868 MHz,  
ASK/FSK Transmitters (-40 ... +125°C)



**WIRELESS CONTROL** – The TDK511xF series is a family of high power ASK/FSK transmitters for the frequency bands 311 – 317 MHz, 433 – 435 MHz and 868 – 870 MHz. The IC offers a high level of integration and needs only a few external components. The device contains a fully integrated PLL synthesizer and a high efficiency power amplifier to drive a loop antenna. A special circuit design and a unique power amplifier design are used to save current consumption and therefore to save battery life. Additional features like power down mode and divided clock output are implemented. The IC can be used for both ASK and FSK modulation.

## Applications

- Remote Keyless Entry (RKE) systems
- Tire Pressure Monitoring (TPM) systems
- Remote control systems
- Alarm systems
- Communication systems

## Ordering Information

| Type     | Ordering Code | Package     |
|----------|---------------|-------------|
| TDK5110F | SPoooo56180   | PG-TSSOP-10 |
| TDK5111F | SPoooo56181   | PG-TSSOP-10 |
| TDK5116F | SPoooo56182   | PG-TSSOP-10 |

## Evaluation Kits

| Type             | Modulation | Frequency | Ordering Code |
|------------------|------------|-----------|---------------|
| TDK5110F-TDA5210 | FSK        | 434 MHz   | SPoooo86722   |
| TDK5111F-TDA5211 | FSK        | 315 MHz   | SPoooo86723   |
| TDK5116F-TDA5210 | FSK        | 868 KHz   | SPoooo87099   |

[www.infineon.com/wireless](http://www.infineon.com/wireless)

## Wireless Control

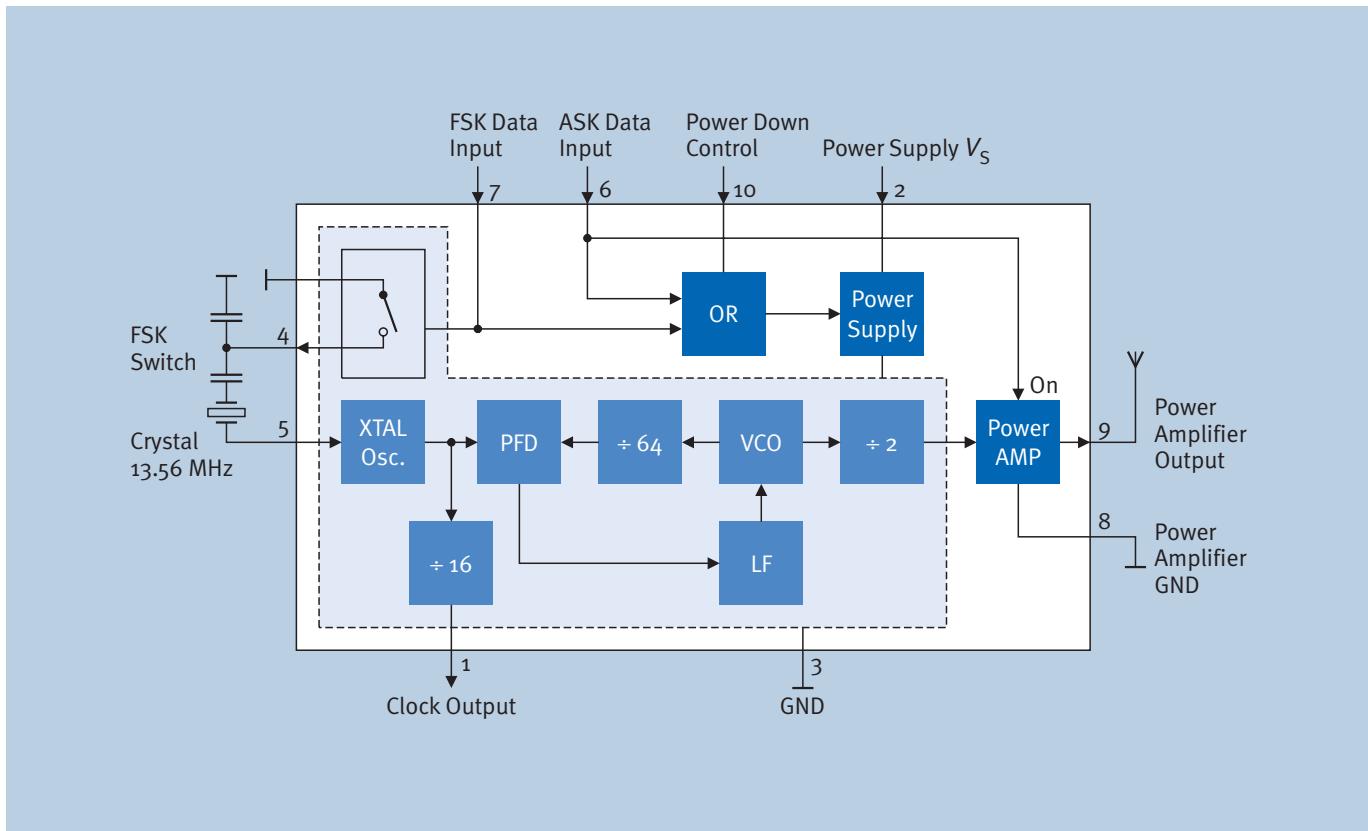
## Features

- Frequency range 311 – 317 MHz/433 – 435 MHz/868 – 870 MHz
- ASK and FSK modulation
- High efficiency power amplifier typically 10 dBm @ 3 V
- Fully integrated frequency synthesizer
- VCO without external components
- Fully integrated frequency synthesizer
- Power down mode
- Divided clock output for µC
- Low external component count
- Integrated FSK-switch
- Low supply current typ. 14 mA @ 3 V
- Voltage supply range 2.1 – 4 V
- Temperature range -40 ... +125°C



Never stop thinking

## Block Diagram TDK5110F



| Type   | TDK5110F         | TDK5111F         | TDK5116F         |
|--|------------------|------------------|------------------|
| Frequency Range  | 433 – 435 MHz    | 311 – 317 MHz    | 868 – 870 MHz    |
| Data Rate  | 20 kHz (ASK/FSK) | 20 kHz (ASK/FSK) | 20 kHz (ASK/FSK) |
| Supply Voltage   | 2.1 – 4 V        | 2.1 – 4 V        | 2.1 – 4 V        |
| Supply Current typ.<br>(PLL Enable Mode/Transmit Mode $V_s = 3$ V) | 4/14.2 mA        | 4/14 mA          | 4/14 mA          |
| Power Down Current   | 4 $\mu$ A        | 4 $\mu$ A        | 4 $\mu$ A        |
| RF Transmit Power typ.   | 10.0 dBm         | 10.0 dBm         | 10.0 dBm         |
| Package  | PG-TSSOP-10      | PG-TSSOP-10      | PG-TSSOP-10      |
| Temperature Range  | -40°C ... +125°C | -40°C ... +125°C | -40°C ... +125°C |

How to reach us:  
<http://www.infineon.com>

Published by  
 Infineon Technologies AG  
 81726 München, Germany

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