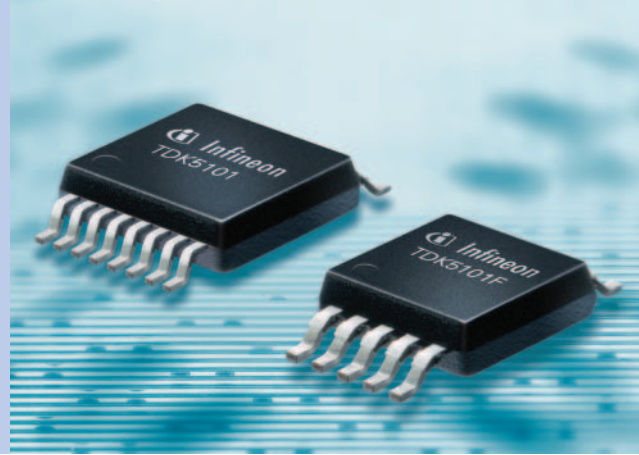


TDK510x(F) Series

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



Wireless Control – The TDK510x(F) family is a group of single chip 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 an unique power amplifier design are used to save current consumption and therefore to save battery life. Additional features like power down mode, low power detect, selectable crystal oscillator frequency 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 |
|----------|---------------|------------|
| TDK5100 | Q67100-H2060 | P-TSSOP-16 |
| TDK5101 | Q67100-H2062 | P-TSSOP-16 |
| TDK5100F | Q62705-K721 | P-TSSOP-10 |
| TDK5101F | Q62705-K720 | P-TSSOP-10 |

Evaluation Kits

| Type | Modulation | Frequency | Ordering Code |
|------------------|------------|-----------|---------------|
| TDK5100-TDA5220 | ASK/FSK | 434 MHz | Q62705-K716 |
| TDK5100-TDA5220 | ASK/FSK | 868 MHz | Q62705-K717 |
| TDK5101-TDA5221 | ASK/FSK | 315 MHz | Q62705-K718 |
| TDK5100F-TDA5220 | FSK | 434 MHz | Q62705-K736 |
| TDK5101F-TDA5221 | FSK | 315 MHz | Q62705-K735 |

Features

- Frequency ranges
311–317 MHz/433–435 MHz/868–870 MHz
- ASK and FSK modulation
- Fully integrated frequency synthesizer
- VCO without external components
- Power down mode
- Integrated FSK-switch
- Low external component count
- Low supply current (typ. 7 mA)
- Voltage supply range 2.1–4 V
- Temperature range -40 ... +125°C

Additional Features TDK510x

- Low voltage sensor
- Programmable clock-output

Additional Features TDK5100 (only)

- Switchable frequency ranges
433–435 MHz/868–870 MHz
- Selectable crystal oscillator 6.78 MHz/13.56 MHz
- High efficiency power amplifier
(typ. 5 dBm@434 MHz/2 dBm@868 MHz)

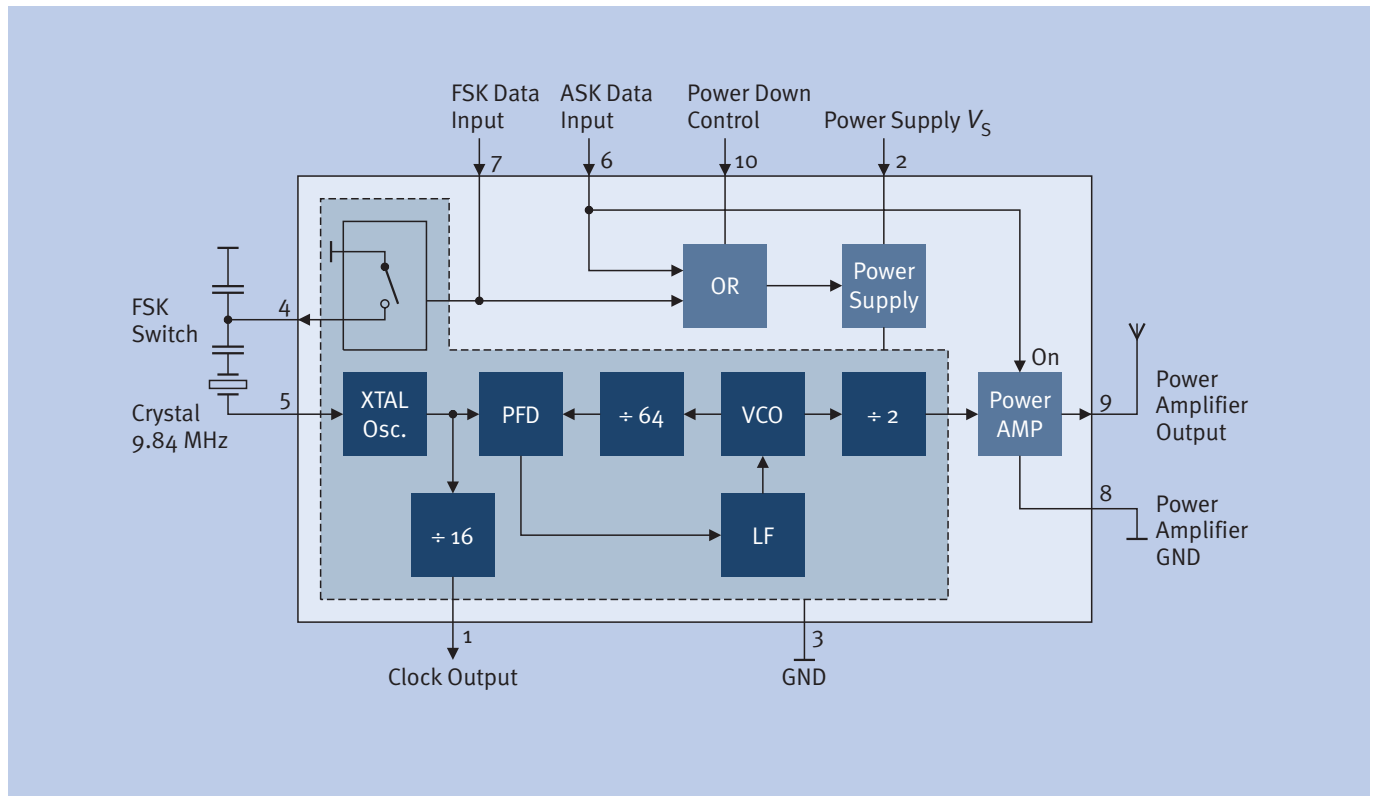
www.infineon.com/wireless

Wireless Control



Never stop thinking.

Block Diagram TDK5101F, 315 MHz



| Type | TDK5100 | TDK5101 | TDK5100F | TDK5101F |
|------------------------------------------------------------------------|------------------------------------|------------------|--------------------|--------------------|
| Frequency Range | 868 – 870 MHz 433 – 435 MHz | 311 – 317 MHz | 433 – 435 MHz | 311 – 317 MHz |
| Data Rate | 20 kHz (ASK/FSK) | 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 | 2.1 – 4 V |
| Supply Current typ. (PLL Enable Mode/ Transmit Mode $V_s = 3$ V) | 3.5/7 mA | 3.5/7 mA | 3.3/7 mA | 3.3/7 mA |
| Power Down Current | 4 μ A | 4 μ A | 4 μ A | 4 μ A |
| Modulation | ASK/FSK | ASK/FSK | ASK/FSK | ASK/FSK |
| RF Transmit Power typ. | 5 dBm (434 MHz) 2 dBm (868 MHz) | 5 dBm (315 MHz) | 5 dBm (434 MHz) | 5 dBm (315 MHz) |
| Package | P-TSSOP-16 | P-TSSOP-16 | P-TSSOP-10 | P-TSSOP-10 |
| Temperature Range | -40°C ... +125°C | -40°C ... +125°C | -40°C ... + 125 °C | -40°C ... + 125 °C |

URL:

http://www.infineon.com/cgi/ecrm.dll/ecrm/scripts/prod_cat.jsp?oid=-9470

How to reach us:

<http://www.infineon.com>

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