

Product Information

TH72036

868/915MHz FSK/ASK Transmitter

The TH72036 FSK/ASK transmitter IC is designed for applications in the European 868 MHz industrial-scientific-medical (ISM) band, according to the EN 300 220 telecommunications standard. It can also be used for any other system with carrier frequencies ranging from 850 MHz to 930 MHz (e.g. for applications in the US 902 to 928 MHz ISM band).

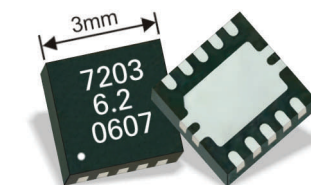
The transmitter's carrier frequency f_c is determined by the frequency of the reference crystal f_{ref} . The integrated PLL synthesizer ensures that each RF value, ranging from 850 MHz to 930 MHz, can be achieved. This is done by using a crystal with a reference frequency according to: $f_{ref} = f_c/N$, where $N = 32$ is the PLL feedback divider ratio. A clock signal with selectable frequency is provided. It can be used to drive a microcontroller.

Dedicated for Tire Pressure Monitoring Systems

Features

- Fully integrated PLL-stabilized VCO
- Frequency range from 850 MHz to 930 MHz
- Single-ended RF output
- FSK through crystal pulling allows modulation from DC to 40 kbit/s
- High FSK deviation possible for wideband data transmission
- ASK achieved by on/off keying of internal power amplifier up to 40 kbit/s
- Wide power supply range from 1.95 V to 5.5 V
- Wide operating temperature range from -40°C to 125°C

- Very low standby current
- Microcontroller clock output
- On-chip low voltage detector
- High over-all frequency accuracy
- FSK deviation and center frequency independently adjustable
- Adjustable output power range from -11 dBm to $+9.5\text{ dBm}$
- Adjustable current consumption from 5.5 mA to 13.8 mA
- Conforms to EN 300 220 and similar standards
- 10-pin Quad Flat No-Lead (10L QFN 3x3 Dual)



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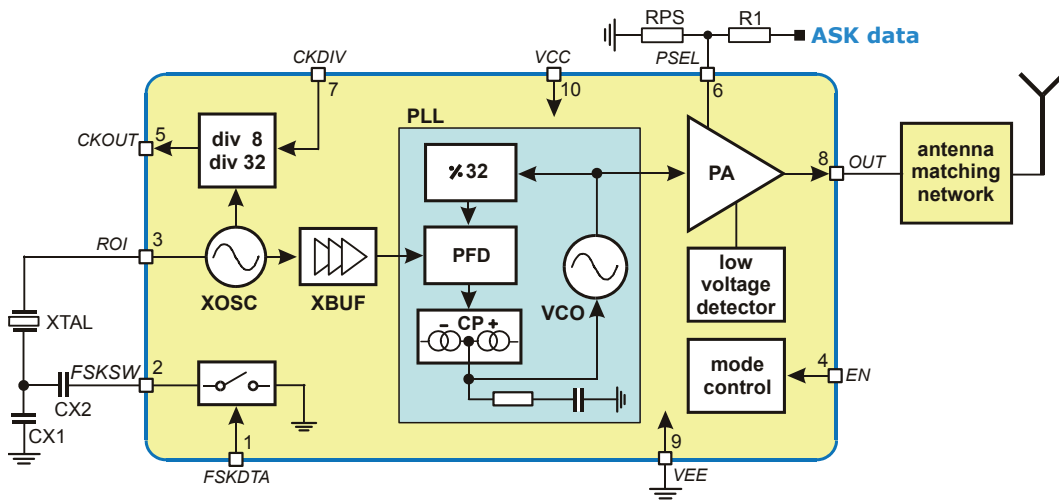
Silicon MEMS

CMOS Imaging

Bus ICs

IR Temperature

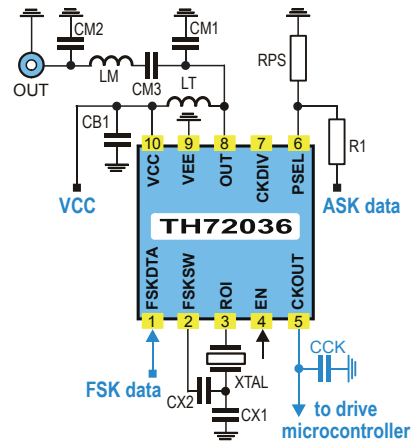
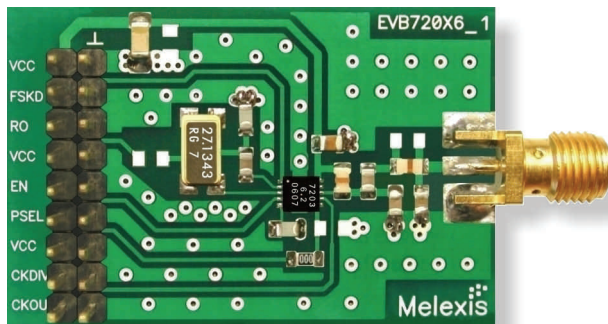
Block Diagram with external Components



Applications

- General digital data transmission
- Tire Pressure Monitoring Systems (TPMS)
- Remote Keyless Entry (RKE)
- Low-power telemetry systems
- Home and building automation
- Alarm and security systems
- Garage door openers
- Remote controls

Evaluation Board



Application Circuit

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