



Product Brief

AK1555

ETC RF Transceiver

1. Features

The AK1555 is an RF Transceiver for the electronic toll collection (ETC) of the Dedicated Short Range Communication (DSRC) based on GB/T 20851.1-2007 Class A.

Transmitter (TX) Block

Modulation: ASK 512kbit/s

Digital Data Input for Transmit

Internal Power Amplifier (PA): Output Power +10dBm

Receiver (RX) Block

Internal Low Noise Amplifier (LNA)

Demodulation: ASK 256kbit/s

Demodulated Digital Data Output

Synthesizer

Fractional-N Synthesizer with integrated VCO

Master Clock

32.768MHz Xtal or TCXO input

Power Supply

+3.15 to +3.45V

Operating Temperature

-40 to +85°C

Package

32-pin QFN 5.0x5.0 (0.5mm pitch)

2. Block Diagram

The AK1555 has two modes, one is Raw data mode, the other is Frame data mode. This mode is selected by register.

Raw data mode's interface of RX/TX data is serial, and BB LSI handles to generate and check the frame, Frame data mode's interface of RX/TX data uses the register access interface with FIFO, and the AK1555 has the support function to generate and check frame.

Below are two block diagrams for each.

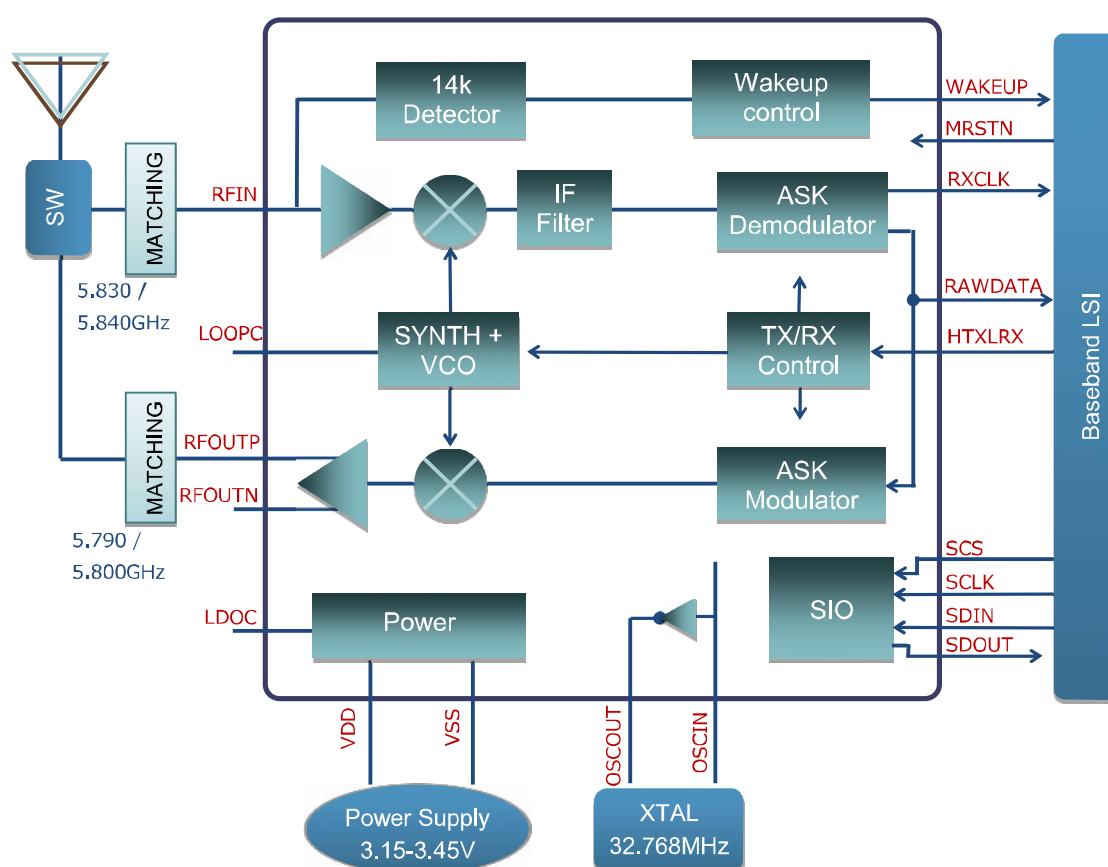


Figure 1 Overall Block Diagram (Raw data mode)

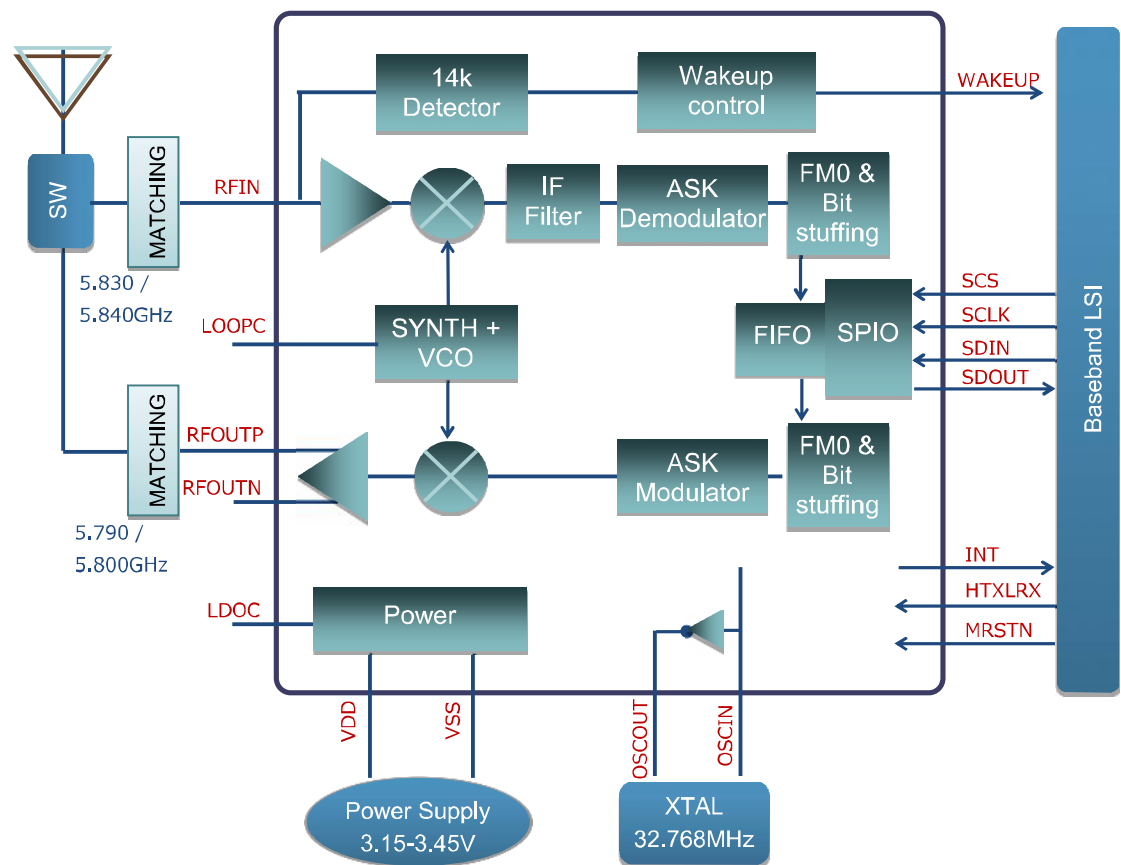


Figure 2 Overall Block Diagram (Frame data mode)

3. Marking

- a. Style : QFN
- b. Number of pins : 32pins
- c. A1 pin marking : ●
- d. Logo : AKM
- e. Product number : AK1555
- f. Date code : YYWWHH (6 digits)
 - YY : Lower 2 digit of calendar year
(Year 2016 -> 16, 2017 -> 17 ...)
 - WW : Week
 - HH : Management code

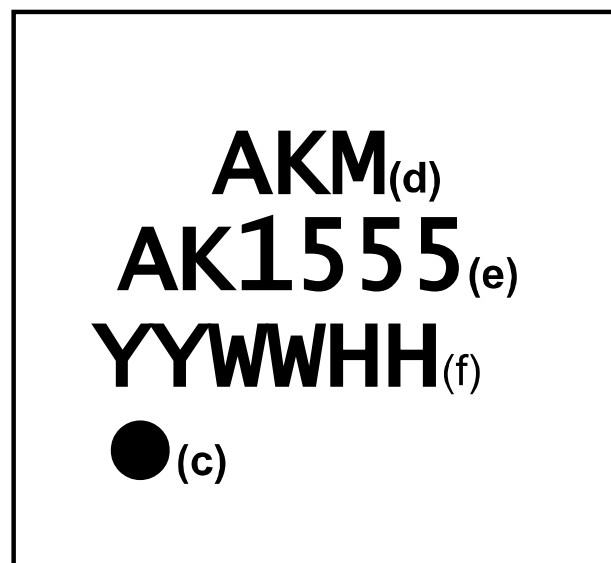


Figure 3 Marking

Thank you for your access to AKM product information.
More detail product information is available,
Please contact our sales office or authorized distributors

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