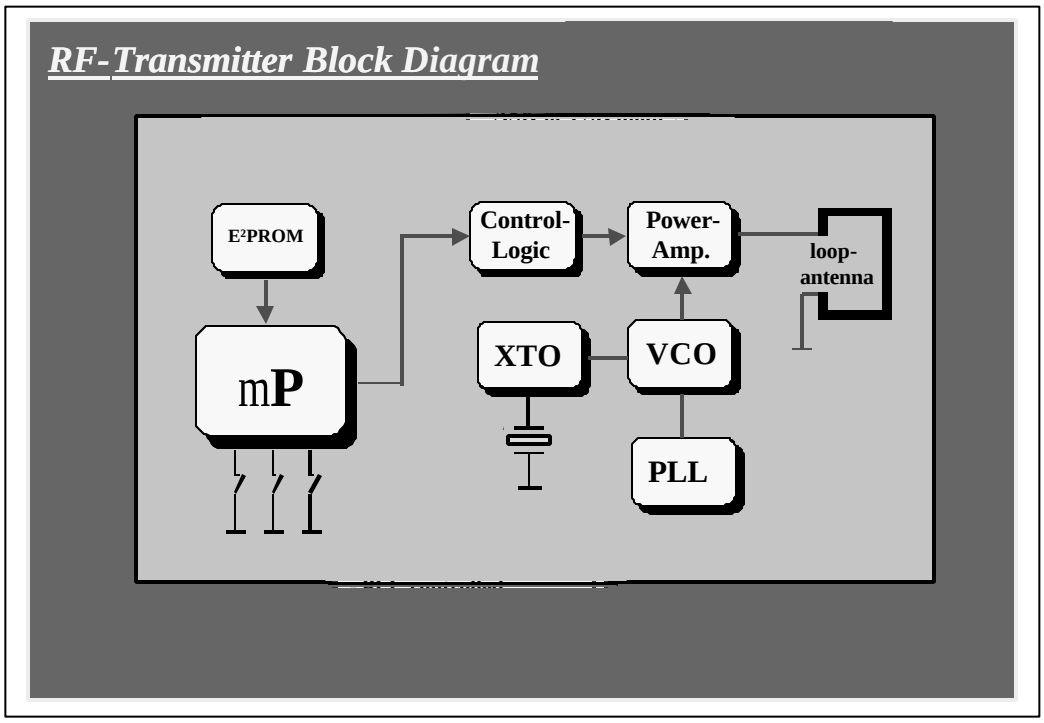
TEMIC
A company of DaimlerChrysler AG

Description
Transmitter 315 MHz

Costumer GM p/n: **15008008, 15008009, 15051014**
TEMIC p/n: **3X6898, 3X8728, 3X8731**

- Transmitter for keyless entry systems (for automobiles)
- Transmitter frequency 315 MHz
- OOK amplitude modulation
- Data rate 1.8 kBaud in Manchester Code



This RF transmitter works with a battery voltage of 3 V. A single lithium battery of type CR2032 will be used. The µC monitors the transmitter keypad buttons and generates the corresponding data telegram when a button is pressed. To meet high security requirements, the data telegram is encoded using a 64 bit crypto algorithm. The transmitter identification data are stored in a non-volatile memory (EEPROM). The data telegram is sent to the final transmitter stage in a serial pulse form, Manchester coded. The pulse train switches the RF power amplifier on and off which leads to an rf emission independend of data content of a switched carrier with a duty cycle of about 0.5 during the pulse trains without considering the breaks between two subsequently pulse trains of one actuation. The transmitters antenna is realized in form of a magnetic loop. The transmission frequency of 315 MHz is generated by a quartz stabilized PLL oscillator. The following key functions are possible:

- Open door
- Lock door
- Panic (alarm)

After a keyfob button has been pressed, one telegram, containing two subsequent data pulse trains is emitted. The complete duration of the emission is less than 5 sec. During pulse trains, about half the time there is sero emission, in the other half, there is full field strength. During breaks, between pulse trains, is sero emission too.