**DELPHI**
Automotive Systems

**mecamos**
Partner of the Automotive Industry

## Circuit Description Of RF-System FM 315 P3

### Receiver: Type: RXF 315P3

The receiver is designed as a single superhet with an IF of 1 MHz.
Almost all RF-functionallity is integrated in the IC.
The signal from the 50 Ohm input feeds the RF preamplifier, integrated in RX-IC.
The LO-frequency of 314 MHz is generated by a PLL-stabilized VCO, running on
64 times the reference-frequency ( 4.90625 MHz), which is cristal-controlled.
The demodulated and preconditioned serial datastream is put to the disposal of the decoding
processor by module output „RF_Daten".
The second output „RSSI_Out and RSSI_Ana" deliveres an input signal dependent voltage,
conditioned by T 900 and IC 901, to the processor for carrier detection.
The RX is set to active or sleep mode by the fourth line „Enable"
The receiver is supplied from the same stabilized 5Volts, the decoding processor runs with.

### Transmitter: Type: TXF 315P3

Almost all RF-functionallity is integrated in the IC2.
The transmitter frequency is generated by a PLL-stabilized VCO, running on 32 times the
reference frequency ( 9.84375 MHz), which is cristal-controlled. After appropriate decoupling
and amplification it feeds the integrated Loop-antenna.
The frequency-modulation is achieved by pulling the reference frequency. The modulation
stage is integrated in the TX-IC too. Controlling and modulation of this TX-IC as well as
scanning the pushbuttons and switching the LED is performed by the microprocessor IC1.
After transmission, the processor will switch off the whole circuit.
The transmitter is supplied from a standard lithium-cell CR2032.