DVB-T Transmitters

Parts
The Teletechnika DVB-T transmitter is built up from three distinct parts.

1. The power supply of the DVB-T MODULATOR and the UPCONVERTER
2. The DVB-T MODULATOR and the UPCONVERTER
3. The DVB-T RF terminal amplifier

Functions
The incommending SPTS or MPTS gets to the DVB-T modulator and the Upconverter via the ASI or the Ethernet interfaces. The Transport Stream could be both MPEG2 or MPEG4. The TS can be modulated in QPSK, 16QAM or 64QAM. After the modulation the upconverter converts the modulated signal into UHF frequency range through an amplifier and an attenuator. After this the signal gets to the terminal amplifier through an adjustable filter and another amplifier level.

Modulator
The DVB-T modulator modulates the incoming (MPEG2/MPEG4) multi or signal program which can be modulated with 2 or 8 thousands of carriers. The maximum of the incoming data throughput depends on the bandwidth, the modulation method, Guard intervals and FEC rate.
Parameters

Constellation: QPSK, 16QAM, 64QAM
Carriers: 2K, 8K
FEC rate: 1/2, 2/3, 3/4, 5/6, 7/8
Bandwith 6,7,8 MHz
IF frekvencia 36 MHz

The outcomming 36 MHz KF signal is agree with the ETSI EN 300 744 (DVB-T) standard.

The Terminal Amplifier (with filter)

Thanks to the ALC with the amplifier and attenuator levels the out coming signal is clear and stable. The solid state LDMOS technology Terminal Amplifier amplifies this signal with a constant level. The design of the amplifier is modular, air cooled and high-efficiency. It has got own power supply in order to save the system in case of any power overloads.

Parameters

Typical amplifying: 23 dB
Output: 40-500 W (depend on the configuration)
Frequency range: 470-860 MHz (UHF)