

SDT501UBCARK1T OPERATIONAL DESCRIPTION

The SDT501UBCARK1T Transmitter is composed of a sophisticated software controlled DVB-T exciter, a linear UHF amplifier, and an emission mask filter.

The DVB-T exciter is an DVB-T professional exciter, designed for the most demanding digital broadcasting applications. It receives the input transport stream and processes the signal. It integrates a modulator module that incorporates modulus/group delay software precorrection as well as AM/PM software pre-correction for the power amplifier and emission mask filter.

Very high linearity performance is possible thanks to very careful RF design over the entire UHF band and with an optimal digital precorrection engine working simultaneously in the time and frequency domains. A high degree of reliability is guaranteed, moreover, by the use of four amplifiers operating in parallel and soft-fail operation. Multiple power supplies are operated in parallel to reduce the possibility of single-point failure modes. Also, multiple cooling fans are used to keep the operational temperature of critical components

Due to the unique design, the transmitter amplifier is suitable to any digital TV standard: DVB-T, DVB-H, DMB-T, and DVB-T. It is only necessary to reconfigure the modulator and use the appropriate RF output band pass filter. The remaining components may be used without any change.

The emission mask filter is a low-loss filter that reduces the out-of-channel radiation to limits that are acceptable to prevent interference to other services and eliminate harmonic radiation.