



MIL-STD-1553B

dual transceiver

The MIL-STD-1553B DTRX is an integrated and cost effective MIL-STD-1553B Dual Transceiver function implemented in hybrid technology qualified for space applications.

It consists of dual complete transmitter and receiver pairs fully compliant to MILSTD- 1553B standard. Each MIL-STD-1553B DTRX is connected on one hand to the MIL-STD-1553B bus through an external isolation transformer and, on the other hand, to a standard Manchester encoder/decoder.

The interface with Airbus DS MIL-STD-1553B Remote Terminal ASIC, MIL-STD-1553B Bus Controller /Remote Terminal /Bus Monitor ASIC and MIL-STD-1553B Repeater ASIC has been fully characterised.

The MIL-STD-1553B DTRX low power consumption and its radiation tolerance are especially relevant for space applications. Thus, the MIL-STD-1553B DTRX is already space qualified on several programs like ARIANE 5, STENTOR,

COLUMBUS, International Space Station.

The MIL-STD-1553B DTRX is manufactured in hybrid technology and available in flatpack package in order to be easily integrated and to reduce the board size.

Main Functions

- Two channels completely independent
- and transmitters fully compliant to MIL-STD-1553B standard
- Operates with standard centre tapped transformers
- Compatible with long stub or short stub coupling
- Filtering on receiver to improve S/N ratio
- Internal threshold voltage on receivers
- Inhibition of driver externally provided
- HCMOS compatible logic signals

Technical Specifications

Thick film hybrid

- Power supply voltage: +5 V and +15 V
- Power consumption (total hybrid, one channel transmitting, other at idle):
 - stand-by: 120 mW 25% duty cycle: 1.1 W max.
- Temperature: -30°C to +85°C (to guarantee a junction temperature below 110°C)
- Radiation tolerance: 30 kRads, LU free
- Packaging: 46 pins Flat Pack (32.2 x 32.2 x 4.3 mm)
- Mass: 17 g



MIL-STD-1553B DTRX Block diagram

