

CT2520-23 Series

LOW POWER +5 VOLTS ONLY TRANSCEIVER FOR MIL-STD-1553B

GENERAL DESCRIPTION

The CT2520 + 5V only transceiver is a third generation hybrid device utilizing custom monolithic drivers and receivers. This allows the device to be operated from a single +5V supply. This design results in lower power and 100% duty cycle is permissible at 125°C case temperature. Each driver dissipates less than 1.0 watt at 25% duty cycle.

FEATURES

- Monolithic +5V only drivers
- AC interstage coupling prevents static burnout
- Receiver filtered to improve S/N ratio of system
- 20mV typical output offset
- TTL compatible
- Available to Standard Military Drawings, please consult your nearest Customer Service Centre

TRANSCEIVER	TYPE	PACKAGE	NOTES
CT2520	DUAL	36PIN DIL OR FP	
CT2521	DUAL	36PIN DIL OR FP	1
CT2522	SINGLE	24PIN DIL OR FP	1
CT2523	SINGLE	44PIN LCC	

Note 1: PLUG IN PIN FOR PIN COMPATIBLE with Industry Standard Transceivers

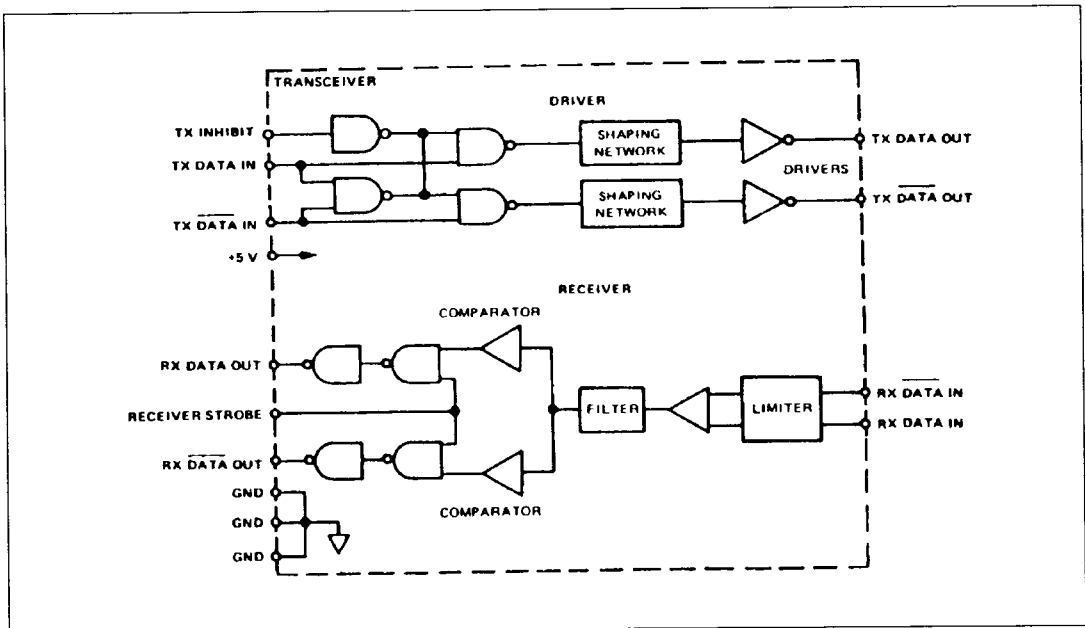


Figure 1: Functional Diagram

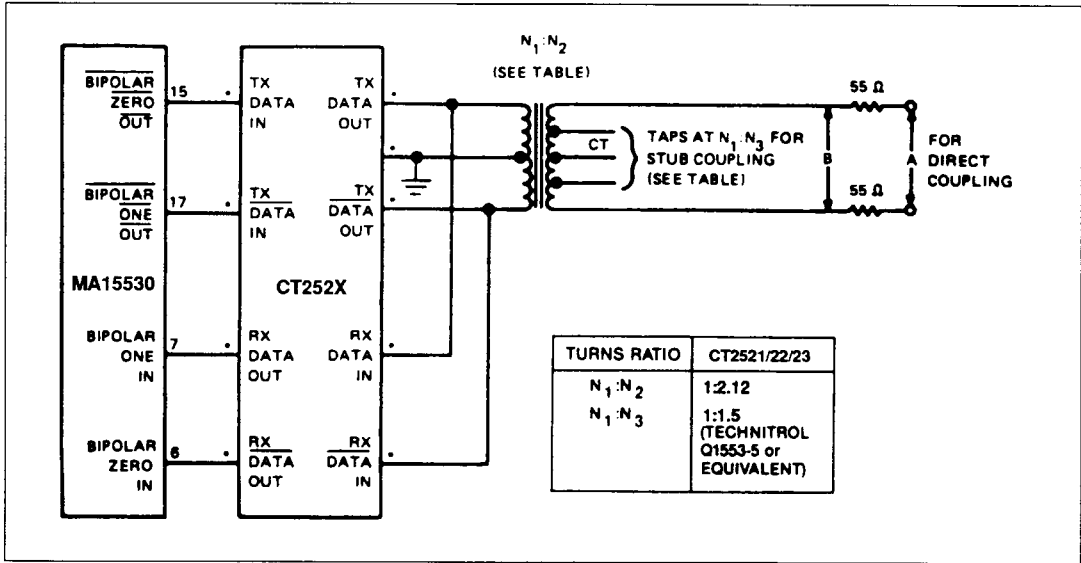


Figure 3: Typical Input/Output Connections - CT2521/22/23

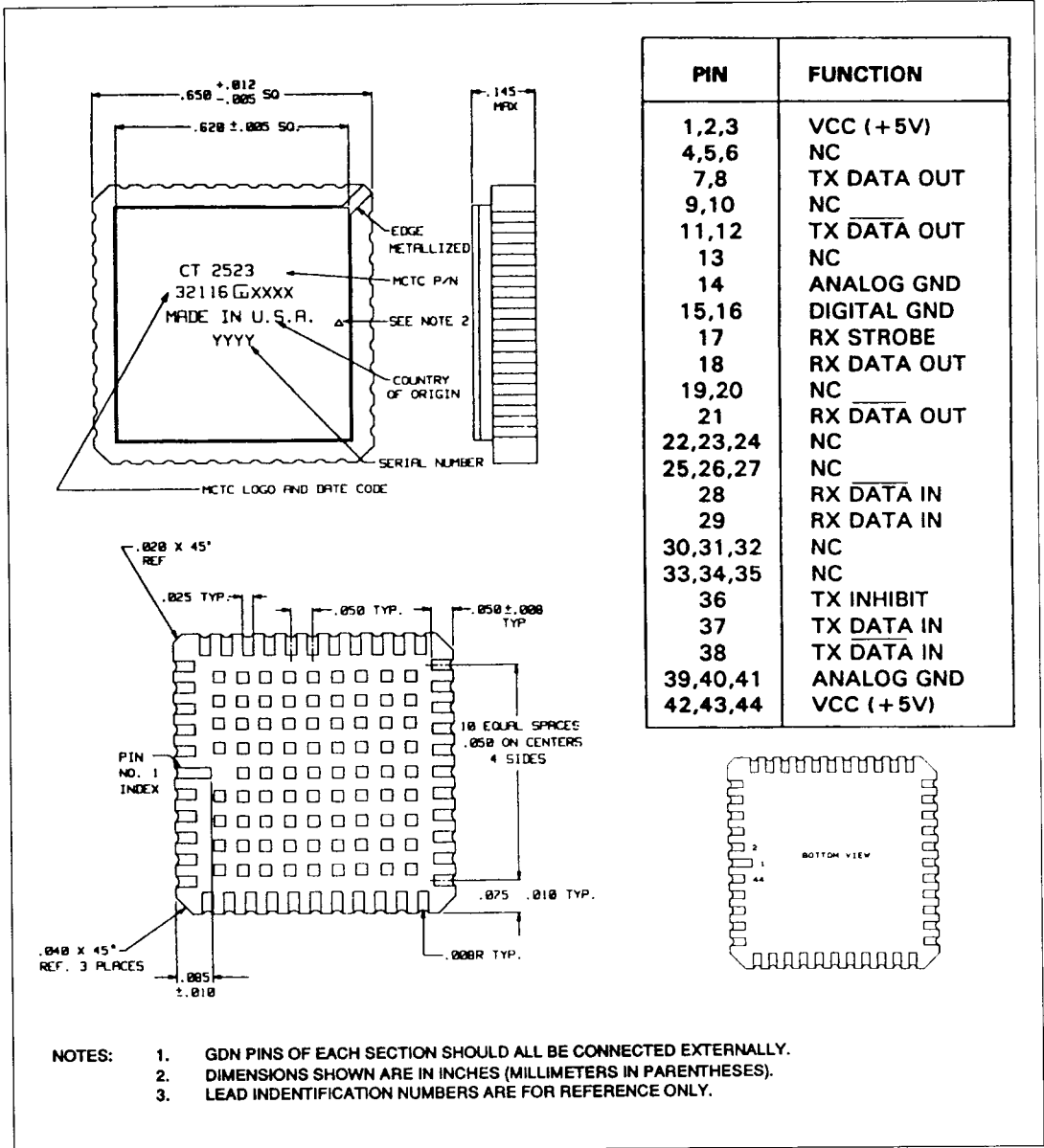


Figure 6: Mechanical Outline and Pinouts - CT2523

RECOMMENDED DESIGN PRACTICES

(a) DECOUPLING

Decouple V_{cc} to ground, close to the hybrid with a $>10\mu\text{F}$ tantalum capacitor in parallel with a 100nF ceramic bypass capacitor.

Note: Peak transmission current drawn from V_{cc} is 650mA.

(b) PCB LAYOUT

- Full PCB ground - planning is recommended.
- It is good practice to ensure connections from encoder/decoder to 'TXLOGICIN', 'TXLOGICIN' and 'TXINHIBIT' are as short as possible and of balanced length, shape and area. Optimum results are obtained when these signals have minimum rise/fall times and minimum differential delays.
- Connections between 'TXDATAOUT' and the center tapped transformer should be designed to:
 - (i) Withstand peak transmission currents at required operating duty cycles
 - (ii) Minimise added series inductance
 - (iii) Ensure system capacitance in conjunction with transceiver and transformer impedances does not reduce overall input impedance below the value stated in MIL-STD-1553B.

These connections should also be balanced in terms of length, shape and area.