DS-3 RECEIVE ONLY
DS3RX Device
TXC™-02003

PRELIMINARY DATA SHEET

TranSwitch © 1990   Patents Pending

Features

- Provides this functionality required to terminate a DS3 signal:
  - Clock recovery and filter
  - All line equalization
  - LOS detection and AIS generation
  - B3ZS decoding

- Satisfies Jitter Tolerance requirements on the DS-3 inputs

- Receives at STS-1 rate (51.84 MHz) as well as the DS-3 rate (44.736 MHz)

- Meets all applicabele ANSI/BellCore standards
  - T1.102, 107
  - TR-TSY-000009

- Detects and indicates coding errors

- CMOS for low power and enhanced reliability

Description

The DS3RX is similar in function with the DS3RT (TXC-02001). The DS3RX contains the receive path only, however, and this data sheet is therefore abbreviated.

> Please see TXC-02001-AXXX-MB, the data sheet for the DS3RT for timing details and packaging. All of the receive side features of the DS3RT are included in the DS3RX.

In summary, the DS3RX receives DS-3 B3ZS encoded line data, recovers the clock, decodes the B3ZS signal, counts and outputs coding violations, records the loss of DS-3 input data, and provides for the introduction of an AIS (blue) signal to be passed to the NRZ side of the chip.

Applications

- DS-3 Monitoring

- SONET STS-1 Monitoring

- Retrofit changes / cost reduction

Functional Diagram
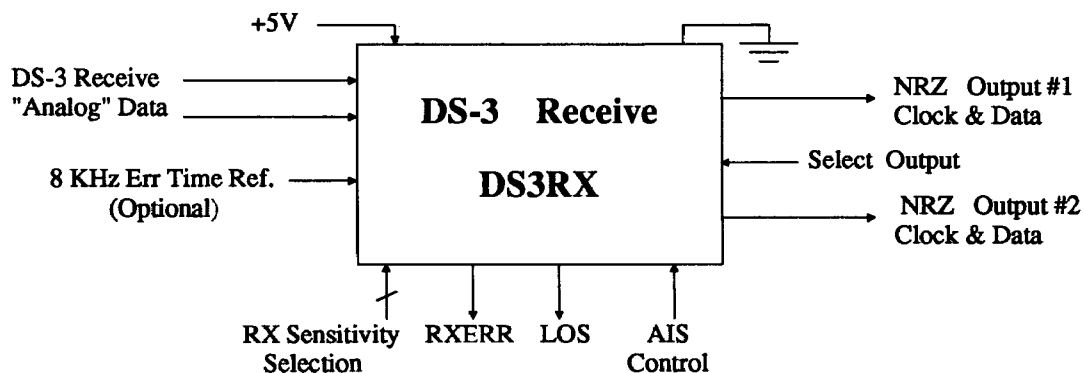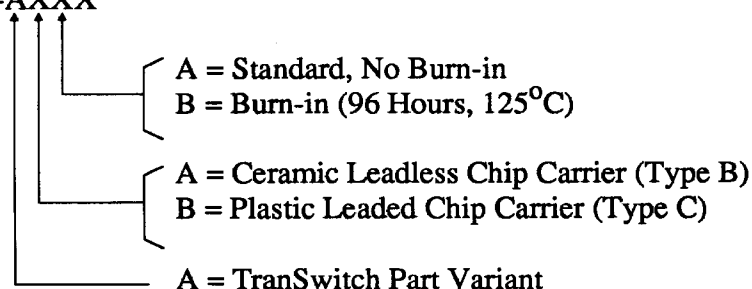
TXC-02003-AXXX-MA
Bd. C, August, 1990

8 PROGRESS DRIVE • SHELTON, CT • 06484 • USA • TEL: 203-929-8810 • FAX: 203-926-9453

DS3RX PIN I/O AND FUNCTION

NAME	I/O	PIN NO.	FUNCTION
AVDD	P	23,24,37	5-volt supply voltage, +/- 5%, Analog
DVDD	P	10,42,43	" " " Digital
AGND	P	31,32,36	VSS or ground, 0 volts reference, Analog
AGND1	P	16	" " " Analog (PLL)
DGND	P	6,11, 44	" " " Digital
RXAIS	I	3	Strap to ground to enable receive AIS
CLK8	I	4	8 KHz clock input to estimate BER
RXERR	O	5	Approximate Indication of BER>10-6
VCOC	O	7	External capacitor connection
DCK	I	9	DS-3 external clock for AIS
D3RD2	O	12	NRZ DS3 Receive Data no. 2
D3RD1	O	13	NRZ DS3 Receive Data output no. 1
D3RC2	O	14	Clock out for Receive DS3 data output no. 2
DS3C1	O	15	Clock out for Receive DS3 data output no. 1
RPLLC	O	17	External Capacitor Connection
BPV	O	19	Coding Violation pulse output
RXLOS	O	20	Ground-true indication of Loss of Signal
RXDIS	I	21	Strap to ground to disable the outputs
SLCT	I	22	Strap to ground to enable NRZ I/O no. 2
ASEL0	I	26	Receive Gain control LSB
ASEL1	I	27	Receive Gain control MSB
DS3IN1	I	29	DS-3 Line Input (1 of 2)
DS3IN2	I	30	DS-3 Line Input (2 of 2)
N.C.		1,3,8,18 26,27,33-35 38-41,44	Not Connected

ORDERING INFORMATION

TXC-02003-AXXX

A = Standard, No Burn-in
B = Burn-in (96 Hours, 125°C)

A = Ceramic Leadless Chip Carrier (Type B)
B = Plastic Leaded Chip Carrier (Type C)

A = TranSwitch Part Variant

2