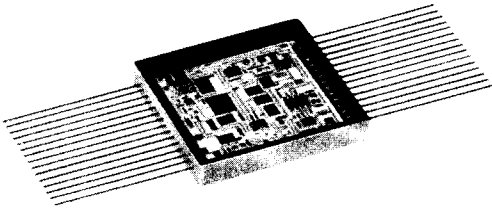


## DATA BUS RECEIVER



### FEATURES

#### DESCRIPTION AND APPLICATIONS

A hybrid data bus receiver, the BUS-8555 has been designed to convert bipolar, biphase Manchester II data to TTL levels, in accordance with McDonnell Douglas Corporation's A-3818, A-5232, A-4905, A-5690 and MIL-STD 1553 A/B specifications. This unit features the flexibility of internal and external threshold configurations†, which provide signal detection between 750 mV, peak to peak (nominal), preset internally; and 0.0 V to 2.0 V, peak to peak, adjusted externally (Figure 1). The BUS-8555's advanced design permits operation between 10 kHz and 1 MHz, while maintaining full accuracy with  $\pm 12$  V to  $\pm 15$  V power supply inputs. The BUS-8555 dissipates less power (550 mW) than competitive receivers.

Figure 2 illustrates the positive and negative excursions of a typical input waveform from the data bus.

† Internal threshold level is preset to 750 mV, peak to peak, when pins 18 and 28 are grounded.

- *MEET REQUIREMENTS OF McDONNELL DOUGLAS CORPORATION A-3818, A-5232, A-4905, A-5690 AND MIL-STD-1553 A/B*
- *550 mW POWER CONSUMPTION*
- *TTL COMPATIBLE OUTPUT*
- *MEETS MIL-STD-883B*

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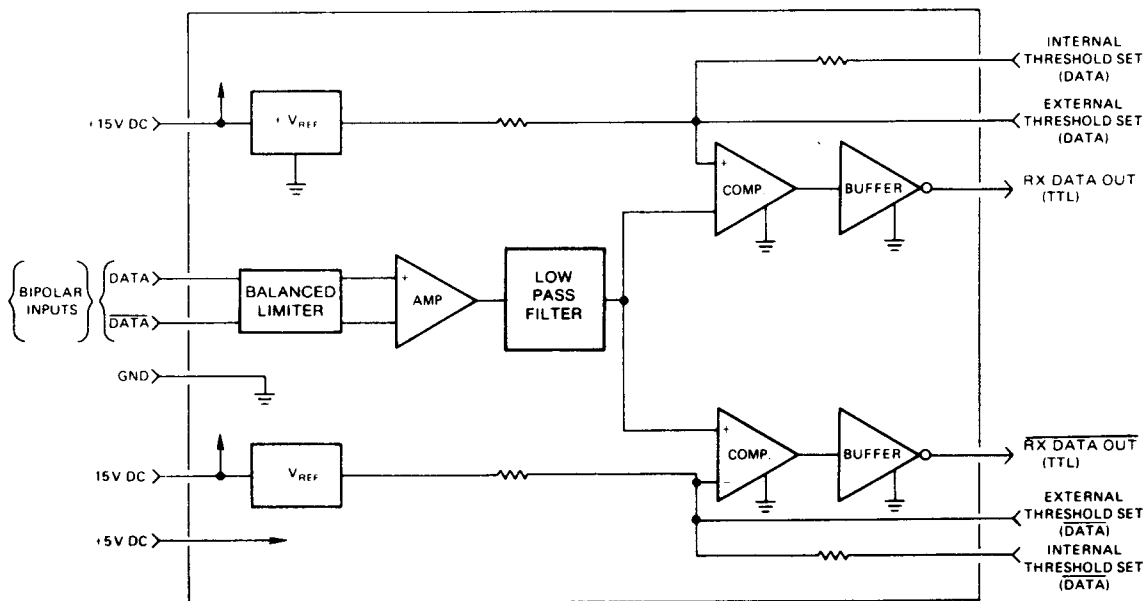
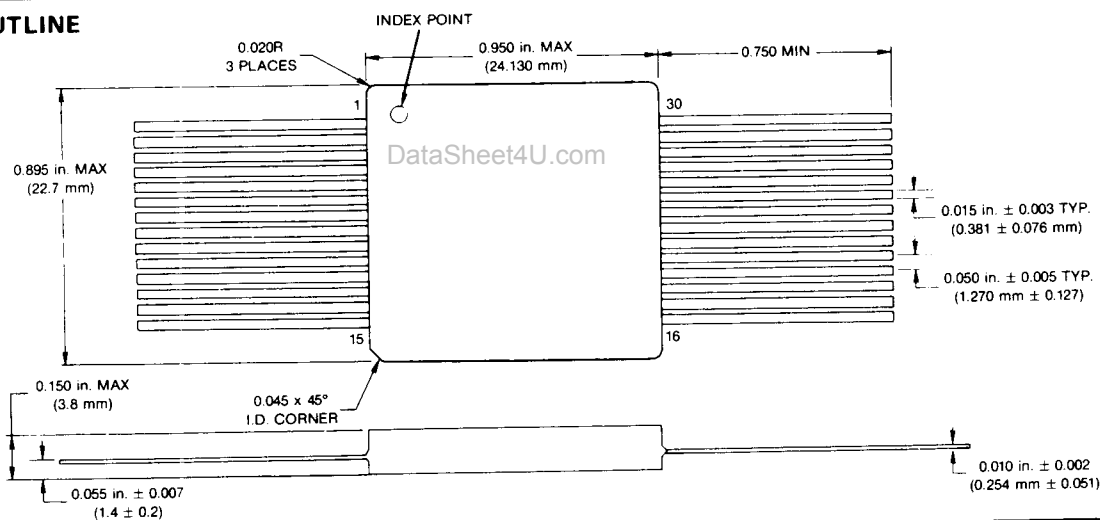


FIGURE 1. BLOCK DIAGRAM

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SPECIFICATIONS										
PARAMETER	UNITS	VALUE								
<b>ANALOG INPUTS</b> Bipolar (Differential) DATA and $\overline{\text{DATA}}$ Input Impedance (Differential) Common Mode Rejection Ratio Threshold Levels Internal (preset) External Threshold Adjustment	V $\Omega$ dB mV V	40, p-p (max) 4 k (min) 40 (min) 750, p-p (nom. with pins 18 & 20 grounded) 0.0 to 2.0 (adjustable linearly with 0.0 $\Omega$ to 10.0 k $\Omega$ resistor respectively to ground.)								
<b>OUTPUTS</b> DATA and $\overline{\text{DATA}}$ Output		TTL Level Manchester II (biphase) serial data								
<b>POWER SUPPLY CHARACTERISTICS</b> Operating Voltage Range		<table border="1"> <thead> <tr> <th>RANGE</th> <th>CURRENT</th> </tr> </thead> <tbody> <tr> <td>+ 4.5 V to 5.5 V</td> <td>20 mA @ + 5 V</td> </tr> <tr> <td>- 10 V to - 18 V</td> <td>15 mA @ - 15 V</td> </tr> <tr> <td>+ 10 V to + 18 V</td> <td>15 mA @ + 15 V</td> </tr> </tbody> </table>	RANGE	CURRENT	+ 4.5 V to 5.5 V	20 mA @ + 5 V	- 10 V to - 18 V	15 mA @ - 15 V	+ 10 V to + 18 V	15 mA @ + 15 V
RANGE	CURRENT									
+ 4.5 V to 5.5 V	20 mA @ + 5 V									
- 10 V to - 18 V	15 mA @ - 15 V									
+ 10 V to + 18 V	15 mA @ + 15 V									
<b>THERMAL CHARACTERISTICS</b> Temperature Range Operating Storage Temperature Range	$^{\circ}\text{C}$ $^{\circ}\text{C}$	- 55 to + 125 (Case) - 55 to + 135								
<b>PHYSICAL CHARACTERISTICS</b> Size Weight	in. oz	.895 X .950 X 0.15 max (22.7 X 24.1 X 3.8 mm max) 0.3 (8.5g)								

## MECHANICAL OUTLINE



PIN CONNECTION TABLE

PIN	FUNCTION	PIN	FUNCTION
1	+15 VDC	16	EXT THRESH (DATA)
2	NC	17	NC
3	NC	18	INT THRESH SET (DATA)
4	NC	19	NC
5	DATA INPUT	20	DATA OUTPUT
6	NC	21	NC
7	$\overline{\text{DATA}}$ INPUT	22	SEE NOTE
8	NC	23	NC
9	GND	24	GND
10	NC	25	NC
11	CASE GND	26	$\overline{\text{DATA}}$ OUTPUT
12	NC	27	NC
13	-15 VDC	28	INT THRESH SET (DATA)
14	NC	29	NC
15	+5 VDC	30	EXT THRESH (DATA)

## ORDERING INFORMATION

ORDER:  
BUS-8555-883B

### Reliability Grade:

- 883B = Fully compliant with MIL-STD-883  
 B = Screened to MIL-STD-883 but without QCI testing.  
 Blank = Standard DDC procedures.