

BUS-63100 II® AND BUS-63100® SERIES

T-75-45-09



MIL-STD-1553 DATA BUS SINGLE AND DUAL TRANSCEIVERS



BUS-63102 II



BUS-63105



BUS-63125 II

DESCRIPTION

The BUS-63100 II transceivers are complete transmitter and receiver pairs conforming fully to MIL-STD-1553A and 1553B. Features available with selected models of this high reliability series include: Smiths and Harris interface type choices, $\pm 12V/\pm 15V$ power supply voltage range, variable threshold levels, and single (24 pin DDIP or square) and completely independent dual redundant (36 pin DDIP) packaging configurations. All models are also available in flatpacks.

The receiver section of the BUS-63100 II series accepts phase-modulated bipolar data from a MIL-STD-1553 Data Bus and produces TTL signal data at its outputs: RX Data Out and RX Data Out. These outputs represent positive and negative variations of the input data sig-

nals beyond an internally fixed or externally set threshold level. An external STROBE input enables or disables the receiver outputs.

The transmitter section accepts bipolar TTL signal data at its TX Data and TX Data input lines and produces phase-modulated bipolar data at the TX Data and TX Data outputs. The transmitters' output voltage level is typically 28Vpp to 30Vpp. An external input, INHIBIT, takes priority over the transmitter inputs and disables the transmitter when activated with a logic "1".

The small size and different model capabilities available with the BUS-63100 II series simplify engineering design, making it an excellent choice for interfacing with any MIL-STD-1553 system.

FEATURES

- CONFORMS FULLY TO MIL-STD-1553A AND 1553B
- SOME MODELS AVAILABLE TO MILITARY (DESC) DRAWINGS
- MODEL CAPABILITIES:
SINGLE OR DUAL
REDUNDANT PACKAGING
- 12V/-15V POWER SUPPLY
VOLTAGE RANGE AVAILABLE
HARRIS OR SMITHS I/O
COMPATIBILITY
- SMALL SIZE:
SINGLE - 24 DDIP OR SQUARE
DUAL - 36 DDIP FLATPACKS
- LOW POWER
- HIGH RELIABILITY - LSI

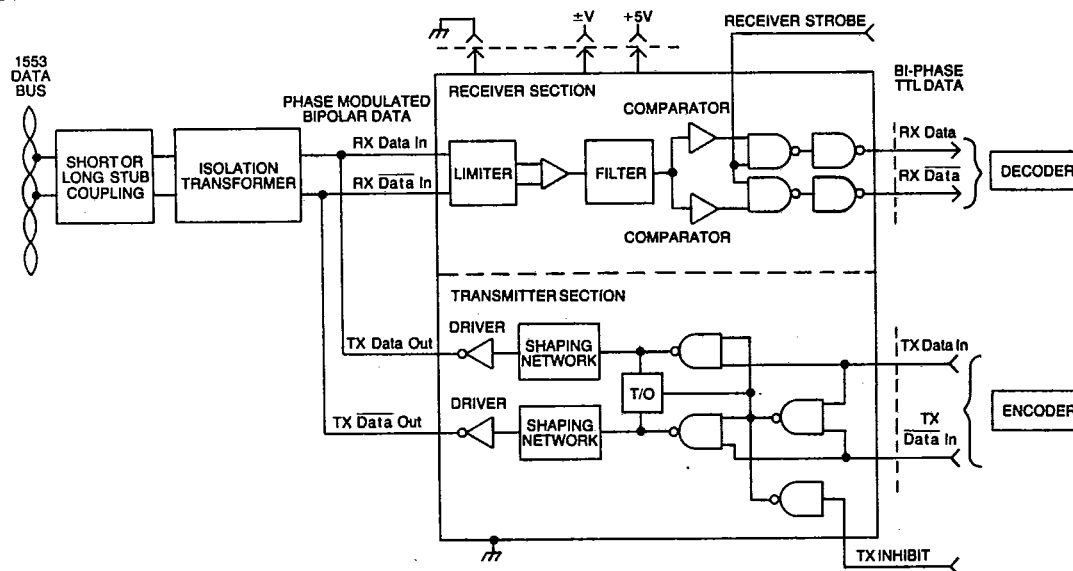


FIGURE 1. BUS-63100 II SERIES BLOCK DIAGRAM

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BUS-63100 II® AND BUS-63100® SERIES

GENERAL

The BUS-63100 II series offers complete transmitter and receiver pairs packaged in either single or dual redundant form which are designed for use in any MIL-STD-1553 application.

Figure 1 illustrates a BUS-63100 II series transceiver with connections to a MIL-STD-1553 Data Bus. Once transformer isolated, coupling to a MIL-STD-1553 Data Bus can be either short stub (direct) or long stub (transformer). Figure 2 illustrates the different configurations and lists the recommended DDC transformer bus product for use with each model.

TRANSCIVER CAPABILITIES

DDC's BUS-63100 II series of transceivers offer a wide range of capabilities (on selected models) which include: power supply voltage levels, packaging configurations, Smiths or Harris type Encoder/Decoder direct compatibility, and internal (pre-set) and/or external (adjustable) threshold levels. The capabilities of the different models are described in the following paragraphs and summarized in table 1.

Power Supply Voltages

Power supply voltage requirements on BUS-63102 II and BUS-63104 II are met over a range from $\pm 12V$ to $\pm 15V$. BUS-63105 and BUS-63115 use $\pm 15VDC$; BUS-63107 and BUS-63117 use $\pm 12VDC$. All other models operate with either $-12V$ or $-15V$ supplies. All models require $+5V$ supply.

Packaging Configurations

Single transceivers, BUS-63102 II and BUS-63104 II are packaged in 24 pin square packages, all other single transceivers are packaged in 24 pin DDIPs. Dual transceivers are packaged in 36 pin DDIPs.

Encoder/Decoder Compatibility

BUS-63105, BUS-63107, BUS-63125 II, and BUS-63127 II are directly compatible to Harris 15530 type of Encoder/Decoders. All other transceivers are directly compatible to Smiths type. Transceivers which are directly compatible with one type can be converted for use with the other by simply switching the output lines, RX Data and RX Data, and inverting their signals by means of external inverting gates.

Waveforms

T-75-45-09

All transceivers conform fully to MIL-STD-1553 requirements. BUS-63102 II additionally conforms to MACAIR standards, producing sinusoidal waveforms at 1MHz.

Threshold Levels

All models offer internal (factory preset) threshold levels. BUS-63102 II and BUS-63104 II additionally offer externally set threshold levels. These external threshold levels are adjustable from 0V to 2V, with the use of two external 10K Ohm potentiometers (see figure 5).

TRANSMIT OPERATING MODE

The transmitter section accepts encoded TTL data and converts this data to phase-modulated bipolar form by means of a wave-shaping network and driver circuitry. These driver outputs are coupled to a MIL-STD-1553 Data Bus via a transformer which is driven from the TX Data Out and TX Data Out terminals. These output terminals can be put into a high impedance state when transmitting by enabling INHIBIT (logic '1'), or by placing both inputs at the same logic level. Table 2, Transmit Operating Mode, lists the functions for the output data and input data in reference to the state of INHIBIT.

The transceivers are able to operate in a "wraparound" mode. This allows output data to be monitored by the receiver section and returned to the decoder where it can be checked for errors.

TABLE 2. TRANSMIT OPERATING MODE

TX Data In	TX Data In	TX INHIBIT	DRIVER OUTPUT ⁽²⁾
X ⁽¹⁾	X	H	OFF ⁽³⁾
0	0	X	OFF
0	1	L	ON
1	0	L	ON
1	1	X	OFF

Notes:

(1) X = Don't care.

(2) DRIVER OUT = TX Data Out and TX Data Out.

(3) DRIVER OUTPUT terminals are in the high impedance mode during OFF time, independent of INHIBIT status.

BUS-63100 II SERIES SPECIFICATIONS

Specifications for all transceivers are listed in table 3.

TABLE 1. TRANSCIVER CAPABILITIES

	$\pm 12VDC$ to $\pm 15VDC$	$-12VDC$ to $+12VDC$	$-15VDC$ to $+15VDC$	24 PIN DDIP	24 PIN SQUARE	36 PIN DDIP	I/O COMPATIBILITY		THRESHOLD		MACAIR	MIL-STD- 1553	FLATPACK MODEL NO.
							SMITHS	HARRIS	INT	EXT			
Single													
BUS-63102 II	●				●		●		●	●	●	●	BUS-63112 II
BUS-63104 II	●				●		●		●	●		●	BUS-63114 II
BUS-63105		●	●	●				●	●			●	BUS-63106
BUS-63107		●	●	●				●	●			●	BUS-63108
BUS-63115		●	●	●			●		●			●	BUS-63116
BUS-63117		●	●	●			●		●			●	BUS-63118
Dual													
BUS-63125 II		●	●			●		●	●			●	BUS-63126 II
BUS-63127 II		●	●			●		●	●			●	BUS-63128 II
BUS-63135 II		●	●			●	●		●			●	BUS-63136 II
BUS-63137 II		●	●			●	●		●			●	BUS-63138 II



BUS-63100 II® AND BUS-63100® SERIES

T-75-45-09

TABLE 3. BUS-63100 AND BUS-63100 II SPECIFICATIONS

TABLE 3. BUS-63100 AND BUS-63100 II SPECIFICATIONS												
TRANSCEIVER NUMBER	BUS-63102 II ⁽¹⁾ BUS-63112 II		BUS-63104 II BUS-63114 II		BUS-63105 † BUS-63106		BUS-63115 BUS-63116		BUS-63107 BUS-63108		BUS-63117 BUS-63118	
CHANNELS	Single		Single		Single		Single		Single		Single	
POWER SUPPLIES	±12V to ±15V		±12V to ±15V		±15V		±15V		±12V		±12V	
ENCODER/DECODER INTERFACE TYPE	Smiths		Smiths		Harris		Smiths		Harris		Smiths	
MATCHING TRANSFORMER MODEL	BUS-27765		BUS-27765		BUS-25679		BUS-25679		BUS-29854		BUS-29854	
RECEIVER												
Strobe	1 'LS Load		*		1TTL		*		*		*	
Input Level	40Vpp, Diff, max		*		*		*		*		*	
Threshold Level (Internal) ⁽²⁾⁽³⁾	0.5Vpp min, 1.0Vpp max		*		0.56Vpp min, 1.0Vpp max		*		*		*	
CMRR	40 db, min		*		*		*		*		*	
Input Resistance-Diff	7K Ohm, min		*		*		*		*		*	
Input Capacitance- Diff	5pf, max		*		*		*		*		*	
Output Fan Out	10 TTL Loads		*		*		*		*		*	
TRANSMITTER												
TX Inhibit	1 'LS Load		*		1TTL		*		*		*	
Input Level	1 'LS Load		*		1TTL		*		*		*	
Output Level (Direct Coupled) ⁽⁴⁾	29Vpp, nom		*		*		*		*		*	
	across 140 Ohm load		*		*		*		*		*	
Rise/Fall Time	280ns, typ		150ns, typ		125ns, typ		*		115ns, typ		*	
Output Noise	10mVpp, Diff, max		*		*		*		*		*	
Output Offset Voltage	±90mVpp, max across		*		*		*		*		*	
	35 Ohm load		*		*		*		*		*	
Output Impedance – Non-Transmitting												
Output Resistance-Diff	10K Ohm, min		*		*		*		*		*	
Output Capacitance-Diff	5pf, max		*		*		*		*		*	
LOGIC												
TTL/CMOS Compatible												
All Inputs	2 'LS Loads, max		*		1 TTL		*		*		*	
All Outputs	10 TTL Loads, min		*		*		*		*		*	
POWER SUPPLY REQUIREMENTS												
	+5V±10%	+12V to +15V±5%	–12V to –15V±5%	+5V±10%	+15V±5%	–15V±5%	+5V±10%	+12V–5%	–12V±5%			
Non-Transmitting – (typ/max)	30/45mA	24/30mA	51/65mA	25/35mA	35/55mA	35/55mA	25/35mA	35/55mA	35/55mA			
Transmitting – 50% duty cycle (typ/max)	30/45mA	85/114mA	118/135mA	25/35mA	35/55mA	125/145mA	25/35mA	35/55mA	170/195mA			
Transmitting – 100% duty cycle (typ/max)	30/45mA	140/180mA	175/195mA	25/35mA	35/55mA	200/225mA	25/35mA	35/55mA	290/325mA			
THERMAL												
Operating Junction Temperature	–55°C to +160°C		*		*		*		*		*	
Operating Case Temperature	–55°C to +125°C		*		*		*		*		*	
Storage Temperature	–65°C to +150°C		*		*		*		*		*	
Thermal Impedance –												
Junction to Case	40°C/W (Hottest Die)		*		8.8°C/W		*		*		*	
Case to Air (typ)	21°C/W (24 Pin Square)		*		30°C/W (24 Pin DDIP)		*		30°C/W (24 Pin DDIP)		*	
POWER DISSIPATION												
Single Channel	12V Supply		15V Supply		15V Supply		*		12V Supply		*	
Non-Transmitting – (typ/max)	1.05/1.37W		1.28/1.58W		1.2/1.8W		*		1.0/1.5W		*	
Transmitting – 50% duty cycle (typ/max)	1.86/2.49W		2.47/3.24W		1.8/2.5W		*		1.9/2.5W		*	
Transmitting – 100% duty cycle (typ/max)	2.48/3.28W		3.43/4.40W		2.4/3.0W		*		2.8/3.4W		*	
POWER DISSIPATION												
Hottest Die ⁽⁵⁾	12V Supply		15V Supply		15V Supply		*		12V Supply		*	
Non-Transmitting – (typ/max)	0.0W		0.0W		1.2/1.8W		*		1.0/1.5W		*	
Transmitting – 50% duty cycle (typ/max)	0.12/0.15W		0.15/0.18W		1.8/2.5W		*		1.9/2.5W		*	
Transmitting – 100% duty cycle (typ/max)	0.24/0.29W		0.30/0.36W		2.4/3.0W		*		2.8/3.4W		*	
MECHANICAL												
Size	24 Pin Square		*		24 Pin DDIP		*		*		*	
Dimensions	1.258" x 1.258" x 0.175"		*		1.400" x 0.805" x 0.200"		*		*		*	
Size	24 Pin Square Flatpack		*		24 Pin Flatpack		*		*		*	
Dimensions	1.255" x 1.255" x 0.160"		*		1.275" x 0.775" x 0.175"		*		*		*	
Weight	0.6 oz		*		0.6 oz		*		*		*	

BUS-63100 II® AND BUS-63100® SERIES

T-75-45-09

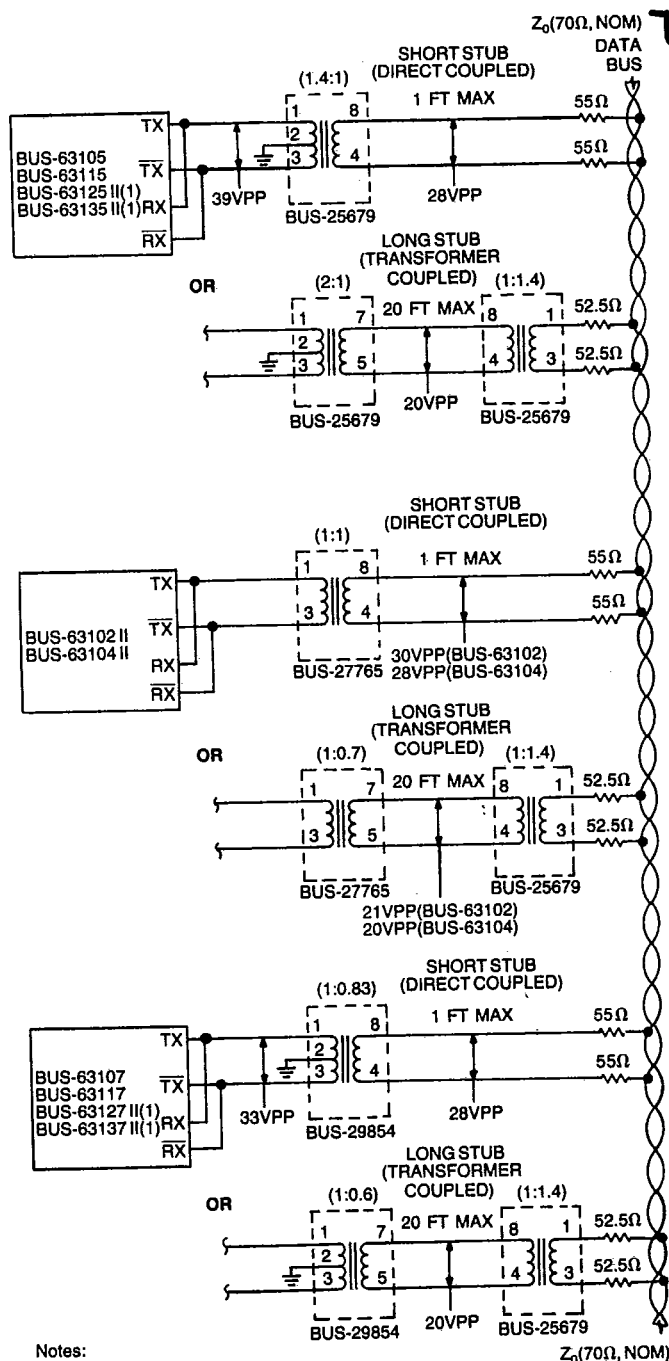
TABLE 3. BUS-63100 AND BUS-63100 II SPECIFICATIONS - Continued

BUS-63125 II †† BUS-63126 II †† Dual -15V Harris BUS-25679		BUS-63135 II BUS-63136 II Dual -15V Smiths BUS-25679		BUS-63127 II BUS-63128 II Dual -12V Harris BUS-29854		BUS-63137 II BUS-63138 II Dual -12V Smiths BUS-29854	
1'LS * * * * *		* * * * *		* * * * *		* * * * *	
1'LS 1'LS * * 150ns, typ * * * * *		* * * * * * * * *		* * * * * * * * *		* * * * * * * * *	
2'LS *		* *		* *		* *	
(Total Hybrid)		(Total Hybrid)		(Total Hybrid)		(Total Hybrid)	
+5V±10%	-15V±5%	+5V±10%	-15V±5%	+5V±10%	-12V±5%	+5V±10%	-12V±5%
60/90mA 60/90mA 60/90mA	40/60mA 115/160mA 190/255mA	60/90mA 60/90mA 60/90mA	40/60mA 115/160mA 190/255mA	60/90mA 60/90mA 60/90mA	40/60mA 135/185mA 230/305mA	60/90mA 60/90mA 60/90mA	40/60mA 135/185mA 230/305mA
* * *		* * *		* * *		* * *	
7.0°C/W 20°C/W (36 Pin DDIP)		* *		* *		* *	
(Total Hybrid, One Channel Transmitting)		(Total Hybrid, One Channel Transmitting)		(Total Hybrid, One Channel Transmitting)		(Total Hybrid, One Channel Transmitting)	
0.90/1.35W 1.30/2.13W 1.75/2.91		0.90/1.35W 1.30/2.13W 1.75/2.91W		0.78/1.18W 1.20/1.95W 1.69/2.75W		0.78/1.18W 1.20/1.95W 1.69/2.75W	
(Each Channel)		(Each Channel)		(Each Channel)		(Each Channel)	
0.45/0.68W 0.85/1.45W 1.30/2.23W		0.45/0.68W 0.85/1.45W 1.30/2.23W		0.39/0.59W 0.81/1.36W 1.30/2.16W		0.39/0.59W 0.81/1.36W 1.30/2.16W	
36 Pin DDIP 1.895" x 0.775" x 0.210" 36 Pin Flatpack 1.905" x 0.785" x 0.165" 0.6 oz		* * * * *		* * * * *		* * * * *	

Notes:

- (1) On BUS-63102 II, filtering eliminates harmonics above 1 MHz. Differential group delay is ±35ns (10KHz-2MHz).
 - (2) The Threshold Level, as referred to in this specification, is meant to be the maximum peak to peak voltage (measured on the Data Bus) that can be applied to the receivers' input without causing the output to change from the OFF state.
 - (3) On BUS-63102 II and BUS-63104 II, external threshold levels are adjustable from 0V to 2V, with two external 10K potentiometers. Connect one pot between pin 5 and GND and the other between pin 12 and GND.
 - (4) On BUS-63102 II, Output Level (direct coupled) is 30Vpp.
 - (5) On BUS-63102 II and BUS-63104 II, Hottest Die are defined as the driver transistors.
- * Same as value to the left:
† BUS-63105 available as Military (DESC) drawing 5962-86049-01XC.
†† BUS-63125 II and BUS-63126 II available as Military (DESC) drawing 5962-87579-02XC.

BUS-63100 II® AND BUS-63100® SERIES



Notes:

- (1) One half of dual transceivers shown.
- (2) Bus must be terminated with its characteristic impedance at both ends.
- (3) Only one connection can be made from the Transceiver to the MIL-STD Data Bus, either long stub or short stub but not both.

FIGURE 2. BUS COUPLING CONFIGURATIONS

BUS-63100 II® AND BUS-63100® SERIES

T-75-45-09

RECEIVER OPERATING MODE

The receiver section accepts data from a MIL-STD-1553 Data Bus when properly coupled through a transformer in either of the two possible configurations (long or short stub). This data is converted to bi-phase TTL and made available for decoding at the RX Data and RX Data output terminals. Applying a logic "1" to the STROBE input allows data to pass through to the receiver output. Applying a logic "0" to the STROBE input, turns the output OFF.

BUS-63102 II, BUS-63104 II, BUS-63115, BUS-63135 II, BUS-63117, and BUS-63137 II receiver outputs are both at a logic "1" when they are either strobed off, or no signal is being received. This makes these models directly compatible with Smiths type of encoder/decoder. All other models (BUS-63105, BUS-63107, BUS-63125 II, and BUS-63127 II) receiver outputs are both at

logic "0" when they are either strobed off, or no signal is being received. This makes this type directly compatible with Harris 15530 type of encoder/decoders.

BUS-63100 SERIES WAVEFORMS

Waveforms for BUS-63100 II series transceivers (BUS-63102 II, BUS-63104 II, BUS-63115, BUS-63117, BUS-63135 II, and BUS-63137 II) which are directly compatible to Smiths type Encoders/Decoders are illustrated in figure 3. Waveforms for transceivers (BUS-63105, BUS-63107, BUS-63125 II, and BUS-63127 II) which are directly compatible with Harris type Encoder/Decoders are illustrated in figure 4.

Data and Data inputs must be complementary waveforms of 50% duty cycle. Care must be taken that the Manchester bi-phase truth table is followed (see timing diagram below).

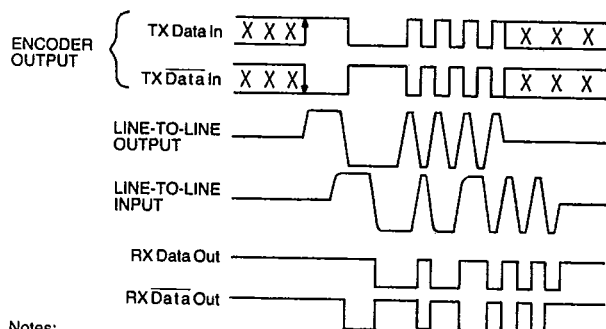


FIGURE 3. WAVEFORMS (SMITHS DIRECT COMPATIBILITY)

- Notes:
- (1) TX Data In and RX Data Out are TTL signals.
 - (2) TX Data In inputs must be at opposite logic levels during transmission, and at the same logic level when not transmitting.
 - (3) LINE-TO-LINE output voltage is measured between TX Data Out and TX Data Out.
 - (4) LINE-TO-LINE output voltage for BUS-63102 II are sinusoidal waveforms for 1 MHz operating frequency.
 - (5) LINE-TO-LINE input voltage is measured on the Data Bus.

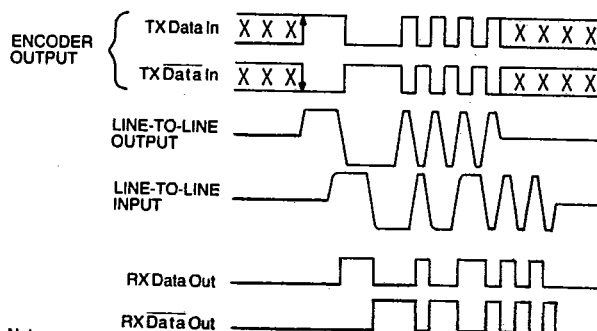


FIGURE 4. WAVEFORMS (HARRIS DIRECT COMPATIBILITY)

- Notes:
- (1) TX Data In and RX Data Out are TTL signals.
 - (2) TX Data In inputs must be at opposite logic levels during transmission, and at the same logic level when not transmitting.
 - (3) LINE-TO-LINE output voltage is measured between TX Data Out and TX Data Out.
 - (4) LINE-TO-LINE input voltage is measured on the Data Bus.

BUS-63100 II[®] AND BUS-63100[®] SERIES

24 PIN SQUARE AND 24 PIN SQUARE FLATPACK TRANSCEIVERS

T-75-45-09

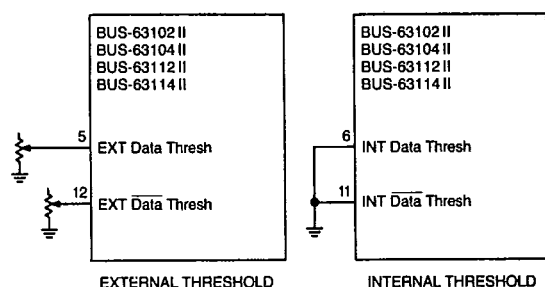
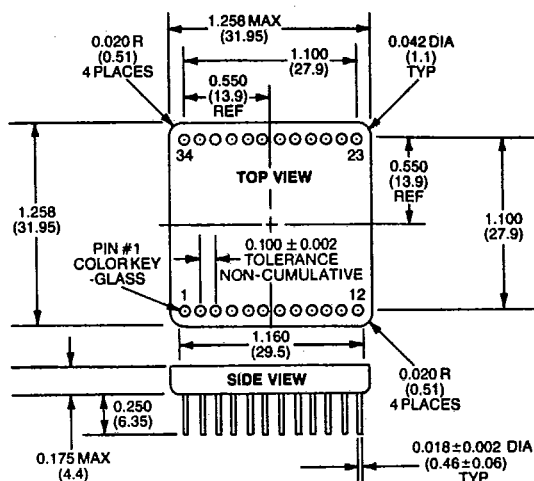


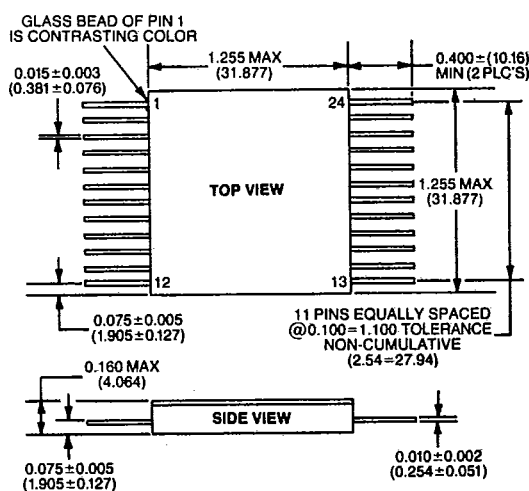
FIGURE 5. THRESHOLD CONNECTIONS



**FIGURE 6. BUS-63102 II AND BUS-63104 II
MECHANICAL OUTLINE—24 PIN SQUARE PACKAGE**

TABLE 4 BUS-63102 II, BUS-63104 II (24 PIN SQUARE) AND BUS-63112 II, BUS-63114 II (24 PIN SQUARE FLATPACK) PIN CONNECTIONS	
PIN	FUNCTION
1	TX Data Out
2	TX Data Out
3	GND
4	+12V to +15V
5	EXT Data Thresh
6	INT Data Thresh
7	RX Data Out
8	Strobe
9	GND
10	RX Data Out
11	INT Data Thresh
12	EXT Data Thresh
23	+12V to +15V
24	NC
25	RX Data In
26	RX Data In
27	GND
28	GND (case)
29	-12V to -15V
30	+5V
31	TX Inhibit
32	TX Data In
33	TX Data In
34	-12V to -15V

Note:
For internal threshold levels, ground pins 6 and 11.
For external threshold, connect two 10K Ohm pots
(one between pin 5 and GND, and one between pin
12 and GND). (See figure 5.)



**FIGURE 7. BUS-63112 II AND BUS-63114 II
MECHANICAL OUTLINE-24 PIN SQUARE FLATPACK**

BUS-63100 II® AND BUS-63100® SERIES

24 PIN DDIP AND 24 PIN FLATPACK TRANSCEIVERS

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TABLE 5 BUS-63105, BUS-63107, BUS-63115, BUS-63117 (24 PIN DDIP) AND BUS-63106, BUS-63108, BUS-63116, BUS-63118, (24 PIN FLATPACK) PIN CONNECTIONS	
PIN	FUNCTION
1	TX Data Out
2	TX Data Out
3	GND
4	NC
5	NC
6	NC
7	RX Data Out
8	Strobe
9	GND
10	RX Data Out
11	NC
12	NC
13	+12V or +15V
14	NC
15	RX Data In
16	RX Data In
17	NC
18	GND
19	-12V or -15V
20	+5V
21	TX Inhibit
22	TX Data In
23	TX Data In
24	NC

Notes:
(1) ±12V for BUS-63107, BUS-63108,
BUS-63117, and BUS-63118.
(2) ±15V for BUS-63105, BUS-63106,
BUS-63115, and BUS-63116.

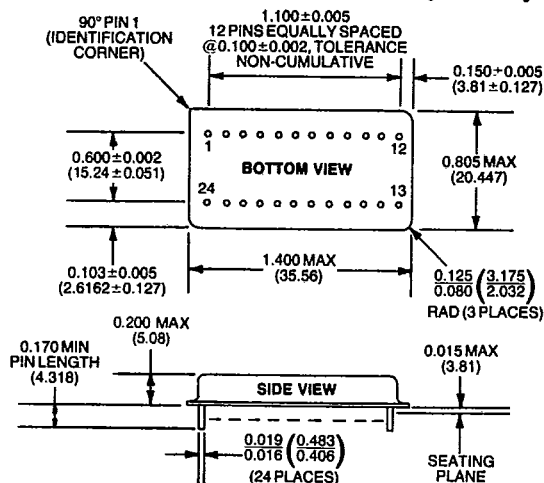


FIGURE 8. BUS-63105, BUS-63107, BUS-63115, AND BUS-63117 MECHANICAL OUTLINE-24PIN DDIP

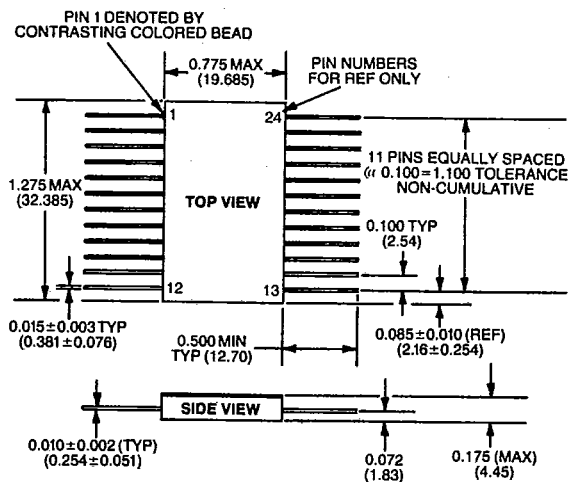


FIGURE 9. BUS-63106, BUS-63108, BUS-63116, AND BUS-63118 MECHANICAL OUTLINE-24 PIN FLATPACK



BUS-63100 II® AND BUS-63100® SERIES

36 PIN DDIP AND 36 PIN FLATPACK TRANSCEIVERS

TABLE 6 BUS-63125 II, BUS-63127 II, BUS-63135 II, BUS-63137 II (36 PIN DIP) AND BUS-63126 II, BUS-63128 II, BUS-63136 II, BUS-63138 II, (36 PIN FLATPACK) PIN CONNECTIONS		
PIN	FUNCTION	
1	TX Data Out	*
2	TX Data Out	*
3	GND	*
4	NC	*
5	RX Data Out	*
6	Strobe	*
7	GND	*
8	RX Data Out	*
9	GND (case)	*
10	TX Data Out	**
11	TX Data Out	**
12	GND	**
13	NC	*
14	RX Data Out	**
15	Strobe	**
16	GND	**
17	RX Data Out	**
18	NC	*
19	NC	*
20	RX Data In	**
21	RX Data In	**
22	GND	**
23	-12V or -15V	**
24	+5V	**
25	Inhibit	**
26	TX Data In	**
27	TX Data In	**
28	NC	*
29	RX Data In	*
30	RX Data In	*
31	GND	*
32	-12V or -15V	*
33	+5V	*
34	Inhibit	*
35	TX Data In	*
36	TX Data In	*

Notes:

- (1) -12V for BUS-63127 II, BUS-63128 II,
BUS-63137 II, and BUS-63138 II.
(2) -15V for BUS-63125 II, BUS-63126 II,
BUS-63135 II, BUS-63136 II.

*Channel One
**Channel Two

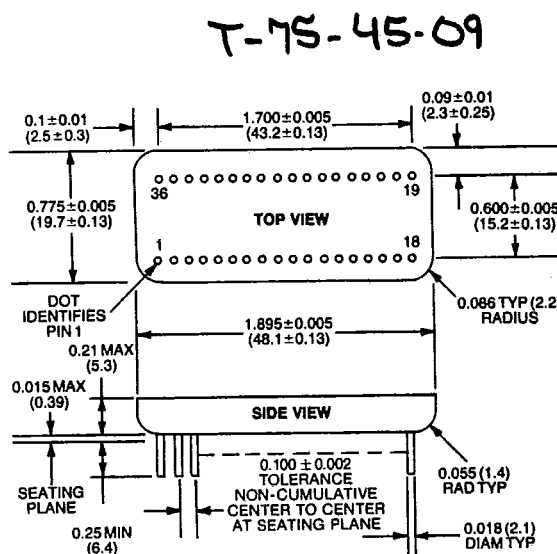


FIGURE 10. BUS-63125 II, BUS-63127 II, BUS-63135 II, AND BUS-63137 II MECHANICAL OUTLINE-36 PIN DDIP

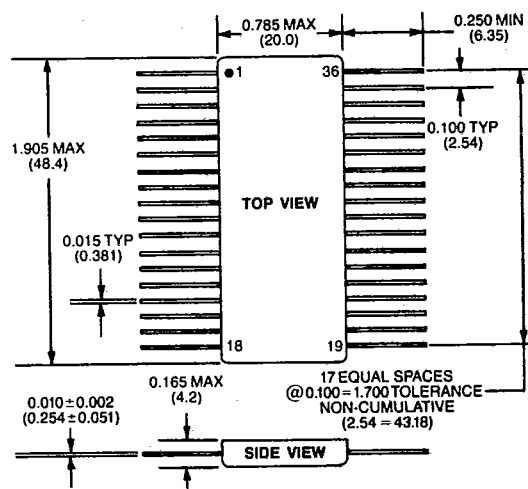


FIGURE 11. BUS-63126 II, BUS-63128 II, BUS-63136 II, AND BUS-63138 II MECHANICAL OUTLINE-36 PIN FLATPACK

BUS-63100 II® AND BUS-63100® SERIES

ORDERING INFORMATION

T-75-45-09

SINGLE TRANSCEIVERS

BUS-63105-883B

- Reliability Grade:
 - 883B = Fully compliant with MIL-STD-883.
 - B = Screened to MIL-STD-883 but without QCI testing
 - Blank = Standard DDC procedures.
- Power Supply Voltage Range/Package
 - 5 = $\pm 15\text{VDC/DDIP}$
 - 6 = $\pm 15\text{VDC/Flatpack}$
 - 7 = $\pm 12\text{VDC/DDIP}$
 - 8 = $\pm 12\text{VDC/Flatpack}$
- Enc-Dec Compatibility:
 - 0 = Compatible with Harris Encoder/Decoder
 - 1 = Compatible with Smiths Encoder/Decoder

BUS-63105 available as Military (DESC) drawing 5962-86049-01XC.

See figure 2 for mating transformer.

BUS-63102 II-883B

- Reliability Grade:
 - 883B = Fully compliant with MIL-STD-883.
 - B = Screened to MIL-STD-883 but without QCI testing
 - Blank = Standard DDC procedures.
- 2 = Universal transceiver (MACAIR and 1553) $\pm 12\text{V}$ to $\pm 15\text{V}$ power supply range, compatible with Smiths Encoder/Decoder.
- 4 = 1553, $\pm 12\text{V}$ to $\pm 15\text{V}$ power supply range, compatible with Smiths Encoder/Decoder.
- Packaging:
 - 0 = 24 pin square
 - 1 = 24 pin square flatpack

See figure 2 for mating transformer.

DUAL TRANSCEIVERS

BUS-63125 II-883B

- Reliability Grade:
 - 883B = Fully compliant with MIL-STD-883.
 - B = Screened to MIL-STD-883 but without QCI testing
 - Blank = Standard DDC procedures.
- Power Supply Voltage Range/Package
 - 5 = -15VDC/DDIP
 - 6 = -15VDC/Flatpack
 - 7 = -12VDC/DDIP
 - 8 = -12VDC/Flatpack
- Enc-Dec Compatibility:
 - 2 = Compatible with Harris Encoder/Decoder
 - 3 = Compatible with Smiths Encoder/Decoder

BUS-63125 II and BUS-63126 II available as Military (DESC) drawing 5962-87579-02XC.

See figure 2 for mating transformer.