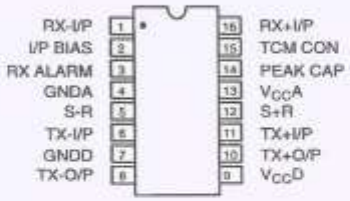
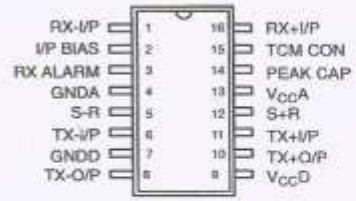
Annexure for 61/15/6136

PIN CONFIGURATION



16 Lead PDIP (0.300")



16 Lead SOIC (Jedec, 0.300")

PIN DESCRIPTION

Pin#	Symbol	Type	Description
1	RX-I/P	I	**Receiver Negative Bipolar Input.** Line analog input.
2	I/P BIAS	O	**Receive Input Bias.** Connects to center tap of input transformer secondary winding.
3	RX ALARM	O	**Loss of Signal Alarm.** Active low.
4	GNDA		**Analog Ground.**
5	S-R	O	**Receive Negative Data Output.** Output from negative bipolar input pulses (active low).
6	TX-I/P	I	**Transmit Negative Input Data.** Input for negative output driver (active high).
7	GNDD		**Digital Ground.**
8	TX-O/P	O	**Transmit Negative Output Driver.** Open collector, drives output transformer primary.
9	$V_{CC}D$		**+5V +/-5% Digital Supply.**
10	TX+O/P	O	**Transmit Positive Output Driver.** Open collector, drives output transformer primary.
11	TX+I/P	I	**Transmit Positive Input Data.** Input for positive output driver (active high).
12	S+R	O	**Receive Positive Data Output.** Output from positive bipolar input pulses (active low).
13	$V_{CC}A$		**+5V +/-5% Analog Supply.**
14	PEAKCAP		**Peak Detector Capacitor.** Stores peak detector voltage.
15	TCM CON	I	**Time Compression Multiplex Control.** When active, disconnects peak detector charge and discharge paths (active low).
16	RX+I/P	I	**Receiver Positive Bipolar Input.** Line analog input.

ELECTRICAL CHARACTERISTICS

Test Conditions: V_{CC} = 5V +/- 5%, T_A = 25°C, Unless Otherwise Specified

Parameters	Min.	Typ.	Max.	Units	Conditions
DC Electrical Characteristics					
Supply Voltage	4.75	5	5.25	V	
Analog Supply Current	**4**		**8**	mA	
Digital Supply Current	**13**		**20**	mA	
Receiver					
Input Signal		1	2.2	Vp	Measured from Pins 1 or 16 with Respect to Pin 2
Dynamic Range			10	dB	Maximum Cable Loss Range
Input Impedance		20		kΩ	Measured Between Pins 1 and 16
Input Slicing Threshold		50		%	Percent of Peak Input Signal Amplitude
Input Bias Voltage		**1.45**		V	Measured at Pin 2
Loss of Signal Alarm Threshold		150		mVp	Measured from Pins 1 or 16 with Respect to Pin 2
Loss of Signal Alarm Level Hysteresis		+/-1.5		dB	Difference Between Alarm-on and Alarm-off Levels
Peak Detector Leakage		-80		µA	
Data Output Low			**0.4**	V	Measured at Pins 5 or 12, I OUT = +1.6mA
Data Output High	**3.8**			V	Measured at Pins 5 or 12, I OUT = -40µA
Alarm Output Low			**0.4**	V	Measured at Pin 3; I OUT = +1.6mA
Alarm Output High	V_{cc} - 0.5			V	Measured at Pin 3; I OUT = -40µA
TCM Input Low Voltage			**0.8**	V	Measured at Pin 15; I IN Min = -500µA, I IN Max = +5µA
Transmitter					
Input Low Voltage			0.8	V	Measured at Pins 6, 11; I IN = -700µA
Input High Voltage	2.2			V	Measured at Pins 6, 11; I IN = +5µA
Output Low Voltage			**1**	V	Measured at Pins 8, 10; I OUT = -40mA
Output Low Current			40	mA	Measured at Pins 8, 10; V OUT = 1V
Output Leakage Current	**-100**			µA	Measured at Pins 8, 10; V OUT = 10V Outputs in off state
AC Electrical Characteristics					
Receiver					
Input Level		1	2.2	Vp	Pin 1, 16 with Respect to Pin 2 1
Output Rise Time			**50**	ns	Pins 5, 12; C L = 15pF, 10% to 90%
Output Fall Time			50	ns	Pins 5, 12; C L =15pF, 90% to 10%

Notes:

1. Higher input voltages are possible if a resistive input attenuator is used.

***Bold face parameters** are covered by production test and guaranteed over operating temperature range.*

ELECTRICAL CHARACTERISTIC (CONT'D)

Parameters	Min.	Typ.	Max.	Units	Conditions
AC Electrical Characteristics (Cont'd)					
Transmitter					
Output Rise Time			50	ns	Pins 8, 10; R L = 130, C L = 15pF, 10% to 90%
Output Fall Time			50	ns	Pins 8, 10; R L = 130, C L = 15pF, 90% to 10%
Rising Edge Delay			100	ns	Pins 8, 10; R L = 130, C L = 15pF, 50% to 50% (I/P to O/P)
Falling Edge Delay			100	ns	Pins 8, 10; R L = 130, C L = 15pF, 50% to 50% (I/P to O/P)

Notes:
Bold face parameters are covered by production test and guaranteed over operating temperature range.
Specifications are subject to change without notice

ABSOLUTE MAXIMUM RATINGS

Supply Voltage 20V . . . . . Storage Temperature -65°C to +150°C . . . . . .