

TOIM3232

115 kb/s IrDA Adapter Integrated Circuit

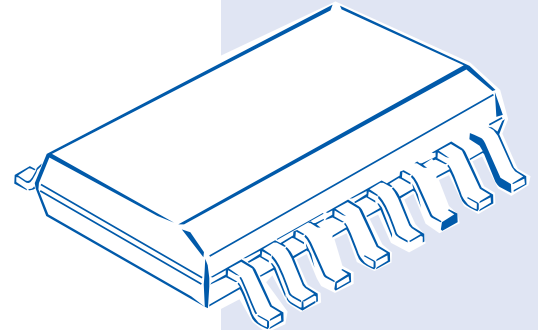
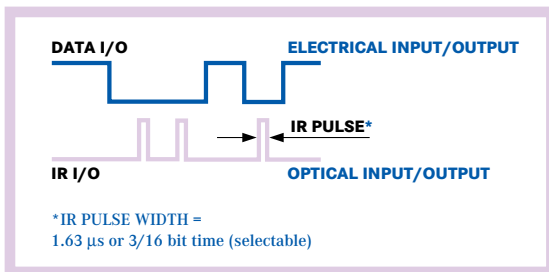
FEATURES

- Ideal solution for an RS232 external IR adapter (up to 115.2 kb/s)
- Integrated programmable Baud rate generator
- Pulse shaper according to IrDA physical layer
- Transmits either 1.63 μ s or 3/16 bit time pulses
- Receives 1.63 μ s to 3/16 bit time pulses
- Digital filtering of received pulses
- Power supply: 3.0 V to 5.5 V
- SO16L Package

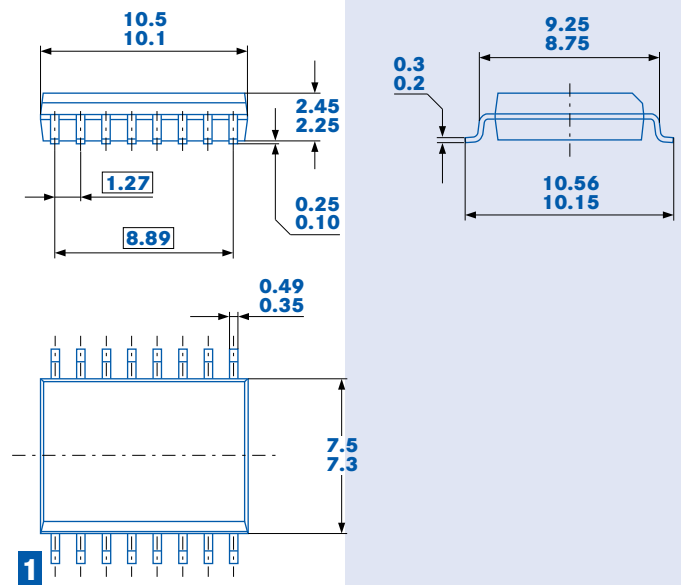
APPLICATIONS

- Personal computer, printer
- Personal digital assistant
- Handy terminal
- Cellular phone, pager

PULSE-SHAPING FUNCTION



DIMENSIONS



ELECTRICAL CHARACTERISTICS

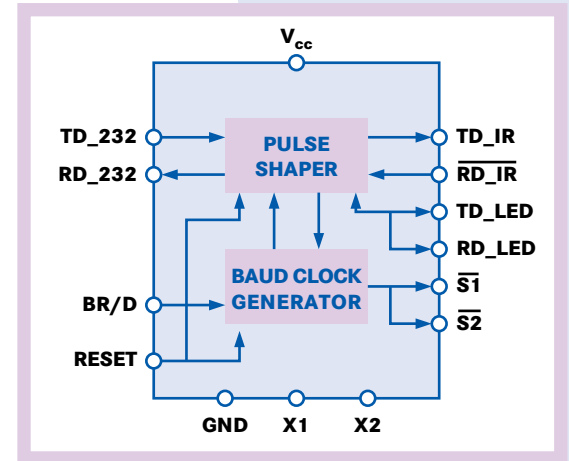
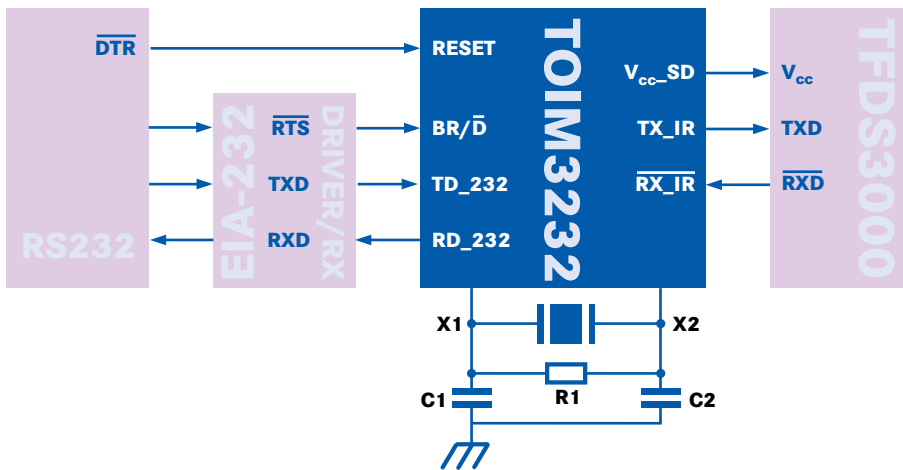
PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply voltage	V_{CC}		3.0		5.5	V
Current consumption, dynamic	I_{DD}	$V_{CC}=5$ V, 25°C		2.0		mA
standby	I_{SB}				1	μ A
Reset=low						
Inputs Schmitt trigger, positive threshold	V_{T+}	All input pins	1.4			V
negative threshold	V_{T-}				1.1	V
Input HIGH voltage	V_{IH}	All input pins	2.2			V
Input LOW voltage	V_{IL}	All input pins			0.8	V
Input leakage current	I_{IL}	All input pins			5	μ A
Output HIGH voltage	V_{OH}	All output pins	2.4			V
Output LOW voltage	V_{OL}	All output pins			0.4	V
Output current	I_{OUT}	All output pins	4			mA

TOIM3232

TYPICAL APPLICATION AND BLOCK DIAGRAMM

The TOIM3232 interfaces the RS232 port to an infrared transceiver. Due to the various voltage levels, an additional level converter (discrete or integrated) is necessary. BR/D controls the mode of the TD_232 input. When active ("1"), the TD_232 is switched to the Baud rate programming mode.

Otherwise, TD_232 operates in the normal data mode. The Baud rate can be programmed to operate from 1200 b to 115 kb/s, including all IrDA Baud rates. External power supply circuitry is not shown in the diagram (see flyer TOIM3000 for equivalent circuitry).



SOFTWARE

Application software including a TOIM3232 device driver is available from PUMA Technologies (TranXit 2.0). Licencing has to be arranged with PUMA Technologies.

PIN ASSIGNMENT

PIN#	PIN NAME	DESCRIPTION	I/O	ACTIVE
1	RESET	Resets all internal registers when active switches TOIM3232 to the baud rate programming mode	I	High
2	BR/D	Baud rate control/Data.	I	
3	RD_232	Data output of stretched signal to the RS232 port. Received signal	O	High
4	TD_232	Data input from the RS232 port. Signal to be transmitted	I	High
5	V _{CC_SD}	V _{CC} shutdown output function. Inverted RESET input	O	Low
6	X1	Crystal input clock, 3.6864 MHz	I	
7	X2	Crystal input clock	I	
8	GND	Ground		
9	TD_LED	Transmit LED indicator driver	O	Low
10	RD_LED	Receive LED indicator driver	O	Low
11	NC	No connection		
12	S1	User programmable output	O	Low
13	S2	User programmable output	O	Low
14	TD_IR	Data output of shortened signal to the infrared transceiver	O	High
15	RD_IR	Data input from infrared transmitter TFDS3000	I	Low
16	V _{CC}	Supply voltage	I	

MEMBER
IrDA



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