



VISHAY INTERTECHNOLOGY, INC.

INFRARED DATA COMMUNICATION

Transceivers, Encoder/Decoders



OPTOELECTRONICS

SELECTOR GUIDE



INFRARED TRANSCEIVERS

Vishay Semiconductors

Vishay's infrared data transceivers enable short-distance wireless communication. Design engineers in the growing handheld market trust in their performance and rely on the worldwide, local sales, and application engineering support that only Vishay provides. Vishay offers a transceiver for every application. For samples, please contact us at irdc@vishay.com or through our website at www.vishay.com/ir-transceivers



USB-to-IrDA® V-Stick

Vishay can provide a USB-to-IrDA V-stick to allow for proof-of-concept and to aid in development. The USB-to-IrDA V-Sticks includes a FIR transceiver, supporting components, and test software.



RoHS Compliant and Lead-Free

All our transceivers are lead-free and capable of lead (Pb)-free processing. In addition, the transceivers are in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC. Please see the datasheets for recommended reflow profiles.



Remote Control

The emitter in Vishay's IrDA transceivers can be used to transmit Remote Control (RC) signals to a TV or other home appliances. Our emitters are uniquely designed to provide the industry's leading remote control transmit distance. For example, our SIR transceiver RC transmit distance is over 5 meters typical while our FIR is well over 15 meters.

I/O Voltage

To eliminate the need for voltage level converters and to be directly connected to a microcontroller, many of Vishay's transceivers feature I/O voltage levels equal to 1.8 V. For further I/O voltage flexibility, some of Vishay's transceivers feature I/O voltage levels that are dependent on the voltage of an external power supply connected to the transceivers. These support I/O voltage levels down to 1.5 V.

RoHS
COMPLIANT

IrDA and IrSimple®

All of Vishay's infrared transceivers meet the standards of the Infrared Data Association (IrDA). We are the industry's leading supplier of FIR transceivers, your best and most stable choice for IrSimple transceivers. In addition, Vishay is the only manufacturer to offer a VFIR transceiver. For more information, please contact us at irdc@vishay.com



Data Collection



Medical



Vending



POS



Access Control

IrDA Transceivers

Part Number	Size H x L x W (mm x mm x mm)	Link Distance (m)	Operating Voltage (V)	Idle Supply Current (mA)	Shutdown Current (μ A)	Pins	Pad Pitch (mm)	I/O Voltage Supply (V)	TXD - Echo
115 kbit/s SIR									
TFDU4101	4.0 x 9.7 x 4.7	0 to \geq 1.0	2.4 to 5.5	0.07	0.01	8	1.0	—	On
TFDU4301	2.5 x 8.3 x 3.0	0 to \geq 0.7	2.4 to 5.5	0.07	0.01	8	0.95	—	On
TFBS4711	1.9 x 6.0 x 3.1	0 to \geq 0.5	2.4 to 5.5	0.07	0.01	6	0.95	—	On
TFBS4650	1.6 x 6.8 x 2.8	0 to \geq 0.3	2.4 to 3.6	0.07	0.01	7	0.95	—	On
TFBS4652	1.6 x 6.8 x 2.8	0 to \geq 0.3	2.4 to 3.6	0.07	0.01	7	0.95	\geq 1.5	On
4 Mbit/s FIR									
TFDU6103	4.0 x 9.7 x 4.7	0 to \geq 1.0	2.4 to 5.5	2.0	0.01	8	1.0	—	On
TFDU6300	2.5 x 8.3 x 3.0	0 to \geq 0.7	2.4 to 3.6	2.0	0.01	8	0.95	—	On



SIR Encoder/Decoders

Part Number	Size H x L x W (mm x mm x mm)	Operating Voltage (V)	Operating Temperature ($^{\circ}$ C)	Internal Clock	Baud Rates	Package	Pulse Width
TOIM4232	2.7 x 10.3 x 10.4	2.7 to 3.6	- 25 to + 85	Yes	1.2 kbit/s to 115.2 kbit/s (13 rates)	SO16	Selectable: 3/16 bit duration or 1.6 μ s
TOIM5232	4.0 x 4.0 x 0.75	2.7 to 3.6	- 25 to + 85	Yes	1.2 kbit/s to 115.2 kbit/s (13 rates)	QFN-20	Selectable: 3/16 bit duration or 1.6 μ s



Mobile Phone



Notebook



PDA



Digital Camera



Printer

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• FETs • Optoelectronics • ICs • Modules

PASSIVE COMPONENTS:

Resistive Products • Magnetics • Capacitors



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