



VISHAY INTERTECHNOLOGY, INC.

OPTOELECTRONICS

SELECTOR GUIDE



INFRARED DATA COMMUNICATION

Transceivers

Encoder/Decoder



Infrared Transceivers

For Every Application

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 more information or samples, please contact us at irdc@vishay.com

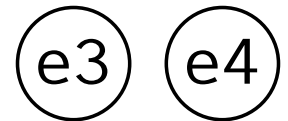
Evaluation Board

Vishay can provide this evaluation board to allow for proof-of-concept and to aid in development. The evaluation board includes the TFDU4100, TOIM4232, supporting components and test software.



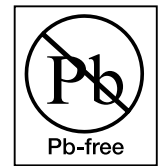
Lead-Free

All our transceivers are lead-free and capable of lead-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. For Media-centric PCs that require both IrDA and RC receiving, samples of the TFDU7100 are available. The TFDU7100 allows design engineers to support both features using a single component.



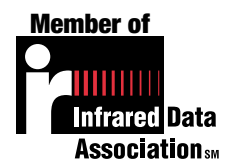
I/O Voltage

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®

All of Vishay's infrared data transceivers meet the standards of the Infrared Data Association (IrDA). Vishay is proud to be a board member of this association and strongly encourages designs that meet the IrDA standards.



Data Collection



Medical



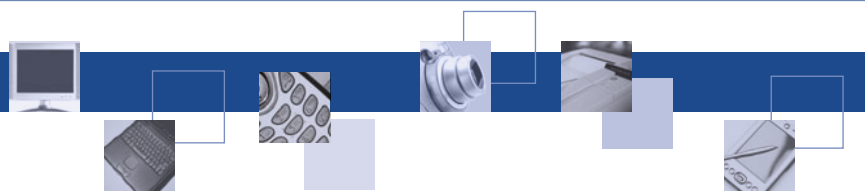
Vending



IrFM-POS



Access Control



IrDA Transceivers

Part Number	Size H x L x W (mm x mm x mm)	Link Distance (m)	Operating Voltage V _{cc} (V)	Idle Supply Current (mA)	Shutdown Current (μ A)	Pins	Pad Pitch (mm)	I/O Voltage (V)	TxD - Echo
SIR - 115 kbit/s									
TFDU4100	4.0 x 9.7 x 4.7	0 to \geq 1.0	2.7 to 5.5	1.0	-	8	1.0	V _{cc}	Off
TFDU4300	2.5 x 8.3 x 3.1	0 to \geq 0.7	2.4 to 5.5	0.08	0.01	8	0.95	\geq 1.5	Off
TFBS4711	1.9 x 6.0 x 3.1	0 to \geq 0.5	2.7 to 5.5	0.08	0.01	6	0.95	V _{cc}	Off
TFBS4650	1.6 x 6.8 x 2.8	0 to \geq 0.3	2.4 to 3.6	0.08	0.01	7	0.95	V _{cc}	On
TFBS4652	1.6 x 6.8 x 2.8	0 to \geq 0.3	2.4 to 3.6	0.08	0.01	7	0.95	\geq 1.5	On
MIR - 1 Mbit/s									
TFDU5307	2.5 x 8.3 x 3.1	0 to \geq 0.7	2.7 to 5.5	0.55	0.01	8	0.95	\geq 1.5	On
TFBS5700	1.6 x 6.8 x 2.8	0 to \geq 0.5	2.4 to 3.6	0.45	0.01	6	0.95	1.8	On
FIR - 4 Mbit/s									
TFDU6102	4.0 x 9.7 x 4.7	0 to \geq 1.0	2.7 to 5.5	1.6	< 1.0	8	1.0	V _{cc}	On
TFDU6300	2.5 x 8.3 x 3.0	0 to \geq 0.7	2.4 to 3.6	1.7	0.01	8	0.95	V _{cc}	On
TFDU6301	2.5 x 8.3 x 3.0	0 to \geq 0.7	2.4 to 3.6	1.7	0.01	8	0.95	1.8	On
TFBS6711	1.9 x 6.0 x 3.1	0 to \geq 0.5	2.4 to 3.6	1.7	0.01	6	0.95	V _{cc}	On
TFBS6712	1.9 x 6.0 x 3.1	0 to \geq 0.5	2.4 to 3.6	1.7	0.01	6	0.95	1.8	On
VFIR 16 Mbit/s									
TFDU8108	4.0 x 9.7 x 4.7	0 to \geq 0.7	2.7 to 5.5	3.0	0.01	8	1.0	\geq 1.8	On



SIR Encoder/Decoder

Part Number	Size H x L x W (mm x mm x mm)	Operating Voltage (V)	Operating Temperature (°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



Mobile Phone



Notebook



PDA



Digital Camera



Printer

SEMICONDUCTORS:

Rectifiers • Small-Signal Diodes • Zener and Suppressor Diodes • MOSFETs
• RF Transistors • Optoelectronics • ICs

PASSIVE COMPONENTS:

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