



OPTOELECTRONICS

Infrared (IR) Receivers

World's Leading Supplier of Infrared (IR) Receivers



Vishay is the world's leading supplier of infrared (IR) receivers. No other supplier offers a similar breadth of products, holders, application and technical support, and overall knowledge of infrared communication. Our customers have confidence that our IR receivers will receive remote control signals while filtering out noise in the most demanding ambient environments. Vishay's IR receivers are used for remote control as reflective or light barrier sensors and for code learning and repeater functions.

APPLICATIONS

- Remote control
- Reflective and light barrier sensors
- Code learning and repeater functions

RESOURCES

- More IR receiver products at: <http://www.vishay.com/ir-receiver-modules/>
- Full optoelectronics portfolio at: <http://www.vishay.com/optoelectronics/>
- Technical questions contact: IRR@vishay.com
- Sales contacts: <http://www.vishay.com/doc?99914>





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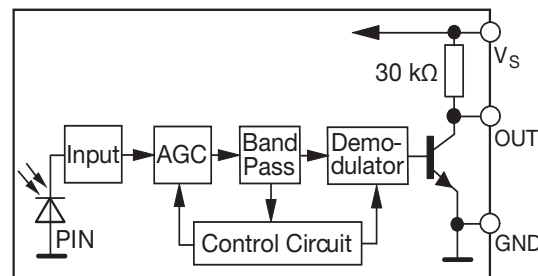
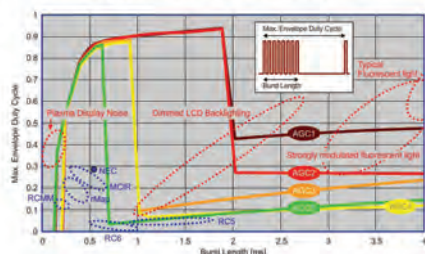
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Remote Control

No single automatic gain control (AGC) algorithm can completely suppress all noise and pass data signals.











Vishay has developed five different AGC response algorithms based on coding schemes and ambient noise conditions. These AGC algorithms allow developers to choose the most appropriate receiver for their application and coding scheme.

Any signal below the curve will be received as a legitimate data signal and passed to the output.
Any signal above the curve will be filtered out as noise.



Holders and Bends.
Over 60 different holders and 20 different lead bend and cut options available.



Code, Applications	Carrier Freq. (kHz)	Best AGC													
			VSOP 2.0W x 2.0H x .76D (mm)	Belobog 3.95W x 3.95H x .8D (mm)	Belobog Shield 4.3W x 4.3H x 1.0D (mm)	Heimdall No-lens 6.8W x 3.0H x 2.3D (mm)	Heimdall 6.8W x 3.0H x 3.2D (mm)	Panhead 7.5W x 5.3H x 4.0D (mm)	Mold 6.0W x 6.95H x 5.6D (mm)	Minimold 5.4W x 6.35H x 4.9D (mm)	Minicast 5.0W x 6.95H x 4.8D (mm)	Cast 10W x 12.5H x 5.8D (mm)			
Sony SIRCS 15 and 20 bit	40	2				TSOP75S40FW	TSOP75S40F								
Sony 12 bit		4				TSOP75S40FW	TSOP75S40F								
RC-5	36	4	VSOP58436	TSOP37436 TSOP57436	TSOP37436H TSOP57436H	TSOP75436W	TSOP75436	TSOP36436	TSOP34436	TSOP33436	TSOP38436	TSOP31436			
RC-6	36					TSOP77436W	TSOP77436	TSOP6436	TSOP4436	TSOP53436	TSOP58436				
Panasonic	36.7														
NEC	38					VSOP58438	TSOP37438 TSOP57438	TSOP37438H TSOP57438H	TSOP75438W	TSOP75438	TSOP36436		TSOP34438	TSOP33436	TSOP38438
Sharp									TSOP77438W	TSOP77438	TSOP6438		TSOP4438	TSOP53438	TSOP58438
r-step															
r-step	56	4		TSOP57456	TSOP37456H TSOP57456H	TSOP75456W	TSOP75456	TSOP36456	TSOP34456	TSOP33456	TSOP38456	TSOP31456			
Thomson RCA						TSOP77456W	TSOP77456	TSOP6456	TSOP4456	TSOP53456	TSOP58456				
MCIR	36	3 or 5	VSOP38336	TSOP37336 TSOP57336	TSOP37336H TSOP57336H	TSOP75536W TSOP77336W	TSOP75536 TSOP77336	TSOP36536 TSOP6336	TSOP34536 TSOP4336	TSOP33536	TSOP38536 TSOP58336	TSOP31536 TSOP31336			
Mitsubishi	38	3 or 5	VSOP38338	TSOP37338 TSOP57338	TSOP37338H TSOP57338H	TSOP75538W	TSOP75538	TSOP36538	TSOP34538	TSOP53336	TSOP38538	TSOP31538			
RECS-80 Code		3 or 5		TSOP57338	TSOP57338H	TSOP77338W	TSOP77338	TSOP6338	TSOP4338	TSOP33538	TSOP58338	TSOP31338			
r-map		3 or 5								TSOP53338					
XMP-1, XMP-2	38	3	VSOP38338	TSOP57338	TSOP57338H	TSOP75338W	TSOP75338	TSOP36338	TSOP34338		TSOP38338	TSOP31338			
Presence sensor	38	0		TSSP57038	TSSP57038H			TSSP6038	TSSP4038 TSSP4056	TSOP33338	TSSP58038				
Proximity sensor	38	P		TSSP57P38	TSSP57P38H			TSSP6P38			TSSP58P38				
Proximity sensor	38/56	0							TSSP4038 TSSP4056						
Code Learning/ Repeater	carrier out	---					TSMP77000	TSMP6000			TSMP58000				
		---							TSMP4138		TSMP58138				
		---							TSMP4138			TSMP1138			

Note: Part dimensions shown in millimeter (mm)



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Mid Range Sensors

Presence of an Object

For details on mid range sensors and object detection:

- Mid-range Infrared Sensors for Object Detection and Ranging Product Literature Brochure (www.vishay.com/doc?49009)
- Vishay's TSSP4056 Sensor for Fast Proximity Sensing Application Note (www.vishay.com/doc?82741)





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SEMICONDUCTORS

MOSFETs Segment

MOSFETs

- Low-Voltage TrenchFET® Power MOSFETs
- Medium-Voltage Power MOSFETs
- High-Voltage Planar MOSFETs
- High-Voltage Superjunction MOSFETs
- Automotive-Grade MOSFETs

ICs

- VRPower® DrMOS Integrated Power Stages
- Power Management and Power Control ICs
- Smart Load Switches
- Analog Switches and Multiplexers

Diodes Segment

Rectifiers

- Schottky Rectifiers
- Ultra-Fast Recovery Rectifiers
- Standard and Fast Recovery Rectifiers
- High-Power Rectifiers/Diodes
- Bridge Rectifiers

Small-Signal Diodes

- Schottky and Switching Diodes
- Zener Diodes
- RF PIN Diodes

Protection Diodes

- TVS Diodes or TRANSZORB® (unidirectional, bidirectional)
- ESD Protection Diodes (including arrays)

Thyristors/SCRs

- Phase-Control Thyristors
- Fast Thyristors

IGBTs

- Field Stop Trench
- Punch-Through Trench

Power Modules

- Input Modules (diodes and thyristors)
- Output and Switching Modules (contain MOSFETs, IGBTs, and diodes)
- Custom Modules

Optoelectronic Components Segment

Infrared Emitters and Detectors

Optical Sensors

- Proximity
- Ambient light
- Light Index (RGBW, UV, IR)
- Humidity
- Quadrant Sensors
- Transmissive
- Reflective

Infrared Remote Control Receivers

Optocouplers

- Phototransistor, Photodarlington
- Linear
- Phototriac
- High-Speed
- IGBT and MOSFET Driver

Solid-State Relays

LEDs and 7-Segment Displays

Infrared Data Transceiver Modules

Custom Products

PASSIVE COMPONENTS

Resistors and Inductors Segment

Film Resistors

- Metal Film Resistors
- Thin Film Resistors
- Thick Film Resistors
- Power Thick Film Resistors
- Metal Oxide Film Resistors
- Carbon Film Resistors

Wirewound Resistors

- Vitreous, Cemented, and Housed Resistors
- Braking and Neutral Grounding Resistors
- Custom Load Banks

Power Metal Strip® Resistors

Battery Management Shunts

Crowbar and Steel Blade Resistors

Thermo Fuses

Chip Fuses

Pyrotechnic Initiators / Igniters

Variable Resistors

- Cermet Variable Resistors
- Wirewound Variable Resistors
- Conductive Plastic Variable Resistors
- Contactless Potentiometers
- Hall Effect Position Sensors
- Precision Magnetic Encoders

Networks/Arrays

Non-Linear Resistors

- NTC Thermistors
- PTC Thermistors
- Thin Film RTDs
- Varistors

Magnetics

- Inductors
- Wireless Charging Coils
- Planar Devices
- Transformers
- Custom Magnetics

Connectors

Capacitors Segment

Tantalum Capacitors

- Molded Chip Tantalum Capacitors
- Molded Chip Polymer Tantalum Capacitors
- Coated Chip Tantalum Capacitors
- Solid Through-Hole Tantalum Capacitors
- Wet Tantalum Capacitors

Ceramic Capacitors

- Multilayer Chip Capacitors
- Disc Capacitors
- Multilayer Chip RF Capacitors
- Chip Antennas
- Thin Film Capacitors

Film Capacitors

Power Capacitors

Heavy-Current Capacitors

Aluminum Electrolytic Capacitors

ENYCAP™ Energy Storage Capacitors