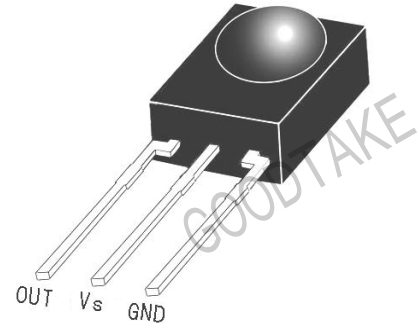


Photo Module for PCM Remote Control Systems

Description

The HM2140RS is miniaturized receiver for use infrared carrier frequency PCM remote control systems. A photo PIN diode and a low noise preamplifier are assembled on lead frame.

The epoxy package is designed as IR filter. The demodulated output signal can directly be decoded by a microprocessor.



Features

- Photo detector and Preamplifier in one package
- Internal filter for PCM frequency
- TTL and CMOS compatibility
- Output active low
- Wide supply voltage 2.2 to 5.5 Volt
- Lead-Free component in accordance with RoHS directives

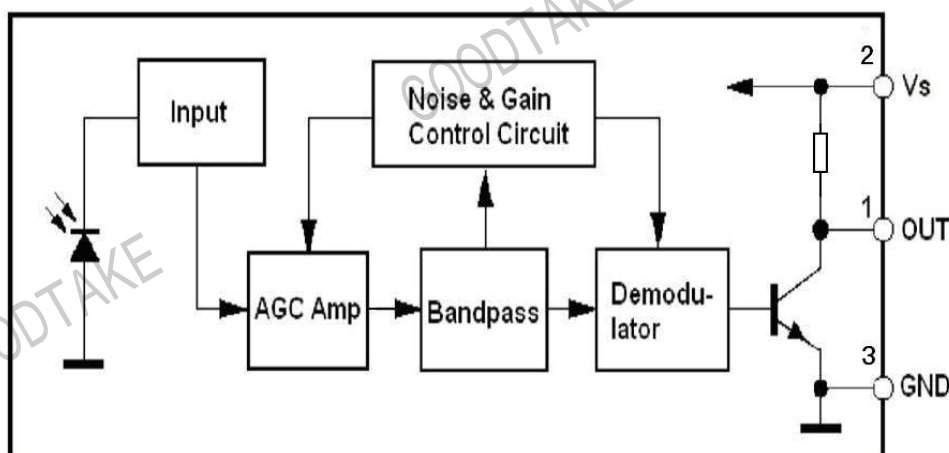
Special Features

- Suitable burst length • 8cycles/burst
- Suitable for Sony 20 bit code format

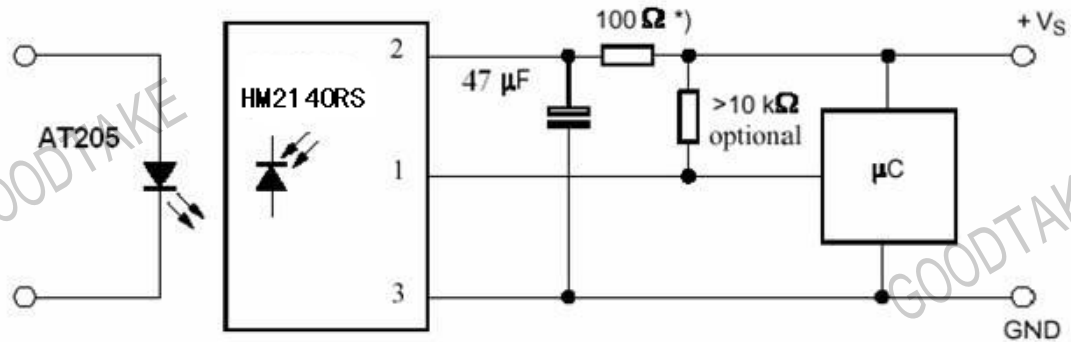
Applications

AV equipments, Car Stereo, Toys, Computers & multi-media equipments

Block Diagram



Application Circuit



*) recommended to suppress power supply disturbance

Absolute Maximum Ratings

Tamb = 25 °C

Parameter	Test Conditions	Symbol	Value	Unit
Supply Voltage	(Pin 2)	Vs	6.0	V
Supply Current	(Pin 2)	Is	5	mA
Output Voltage	(Pin 1)	Vo	6.0	V
Storage Temperature Range		Tstg	-30...+85	°C
Operating Temperature Range		Tamb	-25...+85	°C
Power Consumption	(Tamb ≦ 85 °C)	ptot	10	mW
Soldering Temperature (Wave)	t ≦ 5s, 1 mm from case	Tsd	260 ± 5	°C

Basic Characteristics

Tamb = 25 °C

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Supply Current (Pin2)	Vs = 5V, Ev = 0	ISD	0.25	0.5	0.9	mA
Supply Voltage (Pin2)		Vs	2.2		5.5	V
Transmission Distance	IR diode AT205, If=0.4A	d		30		m
Output Voltage High (Pin1)	Vs = 5V	VOH	45			V
Output Voltage Low (Pin1)	Cycle 1.2mS , 50% duty	VOL			250	mV
Level Output Pulse Width	Burst Wave= 600µs ,	TWH	400		800	µs
Level Output Pulse Width	Cycle 1.2mS , 50% duty	TWL	400		800	µs
Carrier frequency		fo		40		kHz
Peak Wavelength		•		940		nm
Directivity	Angle of half transmission distance	• 1/2		±45		deg

Package Outline

Dimensions in mm: tolerance ± 0.3 mm

