

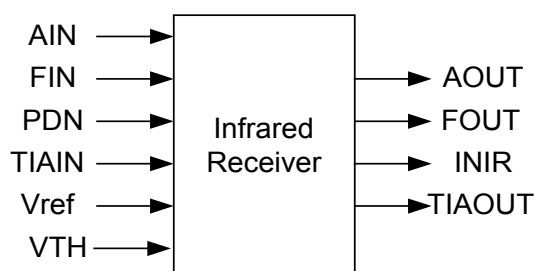
DATA SHEET

Typical Applications

→ contactless readers

Features

- Technology CMOS
- Area : 1.240 mm² (2287µm x 484 µm)
- Consumption : 10 mA typical
- Operating supply voltage : 4.5 V – 5.5 V
- IrDA link compliant
- 2400 to 115.2 kbits data rate
- pulses width : 3/16 data rate



Pin Name	Description
AOUT	Amplifier output
AIN	Amplifier input
TIAOUT	Transimpedance amplifier output
TIAIN	Transimpedance amplifier input (photodiode)
FOUT	Feedback output
FIN	Feedback input
Vref	reference voltage for amplifiers
VTH	Second amplifier input
PDN	Power down mode control input
INIR	photodiode output converted for digital part
VDD	High power supply
VSS	Low power supply

Product Description

This cell is an infrared receiver. It filters and amplifies received infrared signal in order to generate digital signal.

Some capacitors and resistor are external in order to have the possibility to adjust gain and filtering as necessary.

A power down mode is available.

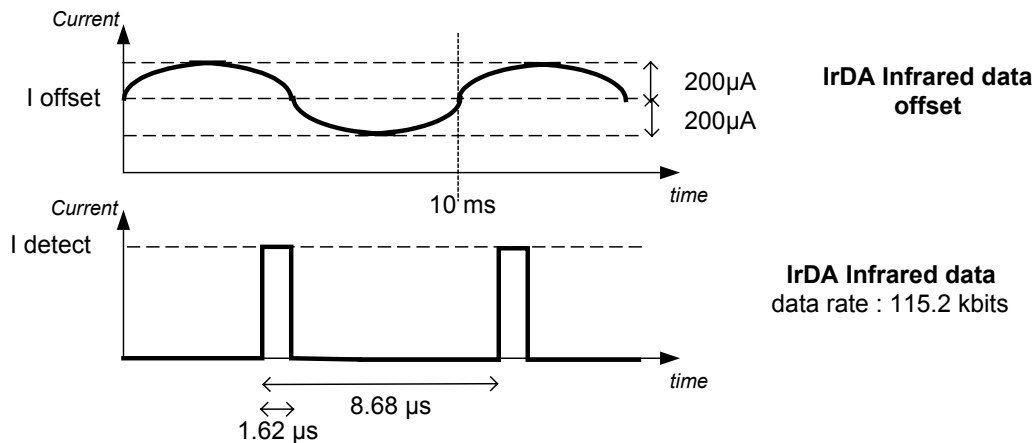
Absolute Maximum Ratings

Symbol	Parameter	Min	Typ	Max	Unit
VDD	Power supply voltage	4.5		5.5	V
Tjc	Junction temperature	-40		80	°C
Tst	Storage temperature	-65		150	°C

Characteristics

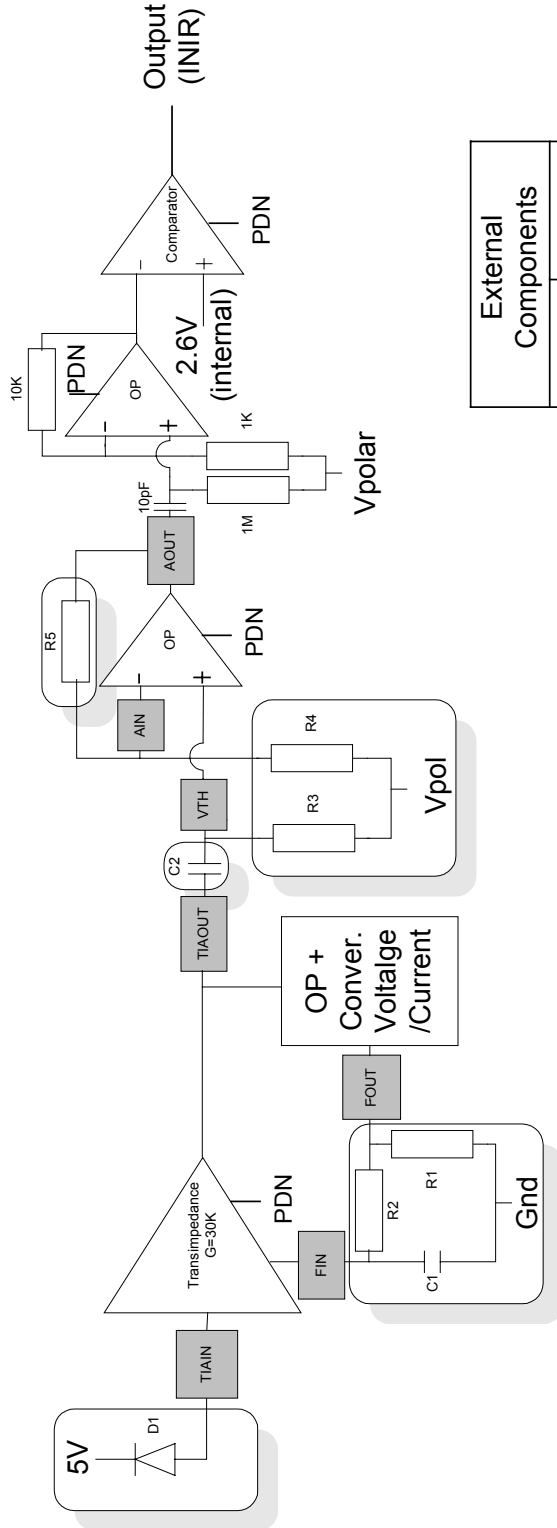
Symbol	Parameter	Min	Typ	Max	Unit
VDD	High power supply	4.5	5	5.5	V
VSS	Low power supply		0		V
IDD	Supply Current		10		mA
I offset	offset			4	mA
I detect min	minimum current for detection	250			nA
I detect max	maximum current for detection			7	mA
I noise	input equivalent noise			15	pA/Hz ^{1/2}

Infrared signal timing diagram



The infrared signal is the result of the combination of the 2 signals above.

Block diagram



External Components	
D1	BP104
R1	8.2K
R2	82K
C1	33nF
R3	10K
R4	1K
R5	18K
C2	2.2nF
R6	10K
R7	18K
C3	100nF

