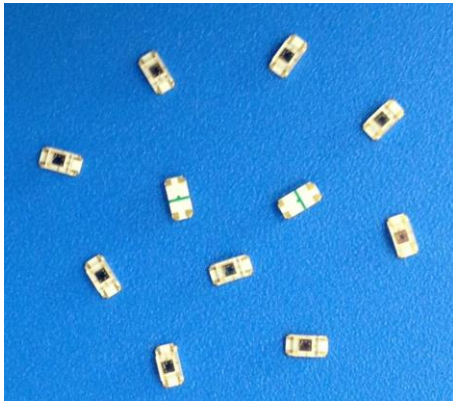


Light Detectors for Infrared Communication

OSC1811M



Description

The OSC1811M is monolithic integrated circuits incorporating A photodiode, linear preamplifier, driver in a single chip. It is a light detector for high speed infrared communication, Visible light cut off package is also available.

Features

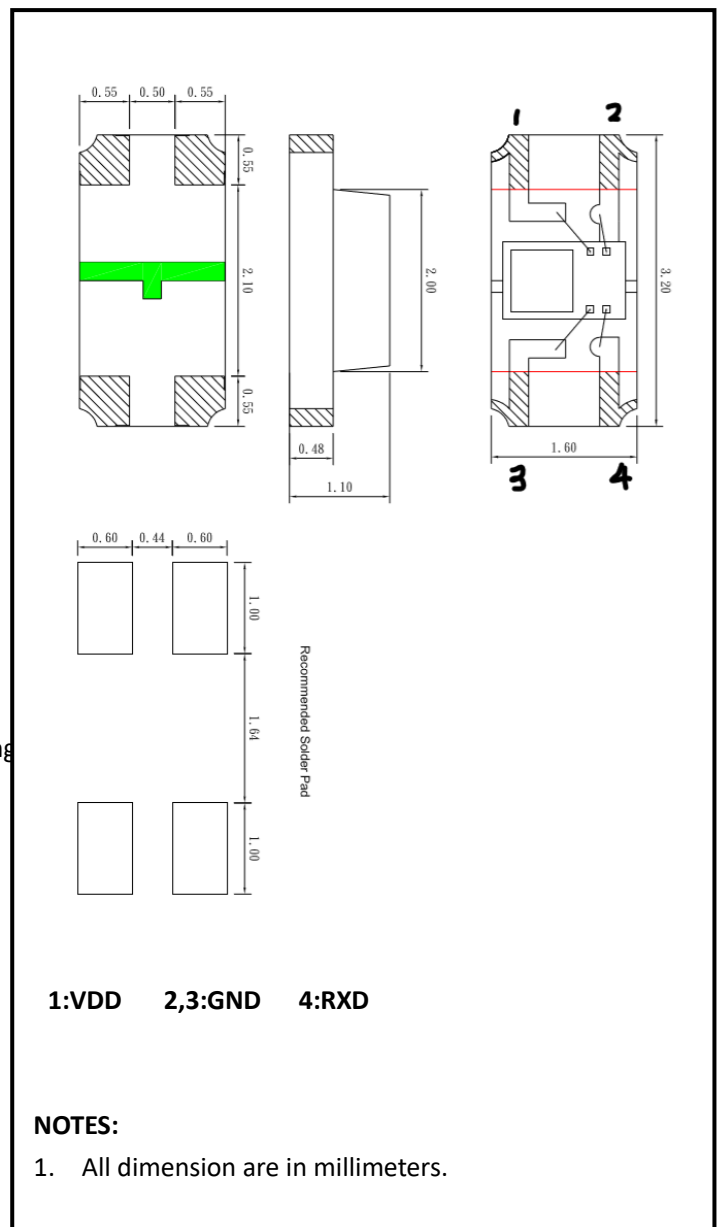
- * Light detector of infrared
- * Operation voltage: 2.7V to 5.0V.
- * Low cost

Applications

- *Automatic door
- *Light curtain
- *Safekeeping switch equipment

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply Voltage	Vcc	0		7	V
Continuous power dissipation			200		mW
Operating Temperature	Topr	-25		+85	°C
Storage Temperature	Tstg	-40		+100	°C



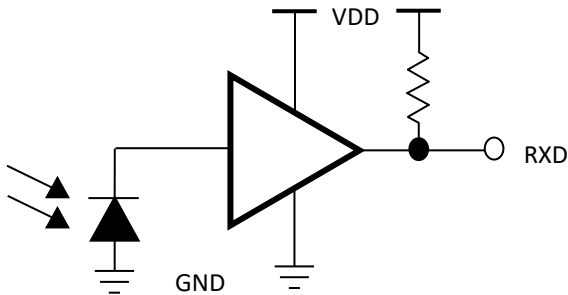
Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject change without notice

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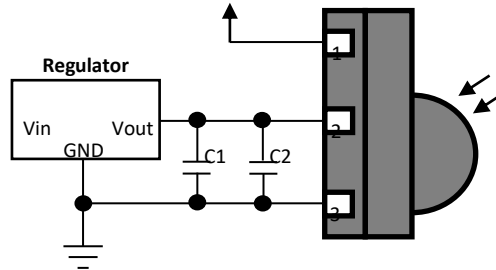
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Block Diagram & Application Circuit:



Integrated 500KΩ pull-up Resistor



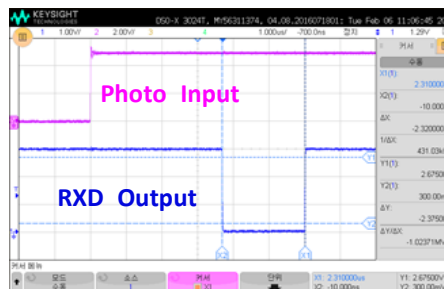
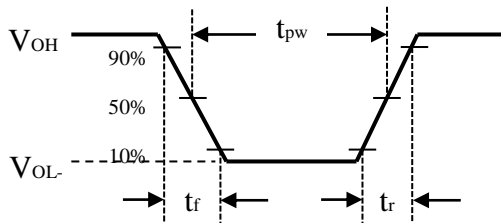
Recommended Application Capacitor

C1= 4.7µF Tantalum , C2= 0.1µF Ceramic

Pin assignment	Symbol	Type	Function
1	RXD	Output, Active Low	This output indicated received serial data. It is a push-pull CMOS driver capable of driving a standard CMOS/TTL load
2	VDD	Power	Supply voltage
3	GND	Ground	Power ground

Typical Characteristics:

RXD output waveform



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Electrical and Optical characteristics (Ta=25°C)

Parameter	Symbol	Condition	Index			Unit
			Min.	Typ.	Max.	
Operation Supply Voltage	V _{DD}	-	2.7		5.0	V
Dissipation current	I _{DD}	V _{DD} =3.6V	-	200	4	uA
High level output voltage	V _{OH}	I _{OH} =200uA	2/3V _{DD}	-	V _{DD}	V
Low level output voltage	V _{OL}	I _{OL} =200uA	0	-	1/3V _{DD}	V
Rise/Fall time	Tr/Tf	C _{load} =0pF	-	15	20	nS
Min. detection threshold Irradiance	Elmin	-	40	-		uW/cm ²
Spectral response sensitivity	λ	-	400	-	1100	nm
Peak wavelength	λ _p	-		850		nm
Half angle	∠θ			±60		deg
Output pulse width	Tpw	C _{load} =10pF	2.0	2.45	3.0	uS

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