

Fiber Optic Receiver

Features

- High speed signal transmission (12.5Mbps, NRZ signal)
- Operating voltage : 4.5 to 5.5 V
- Directly connectable to demodulation IC for digital audio equipment

Applications

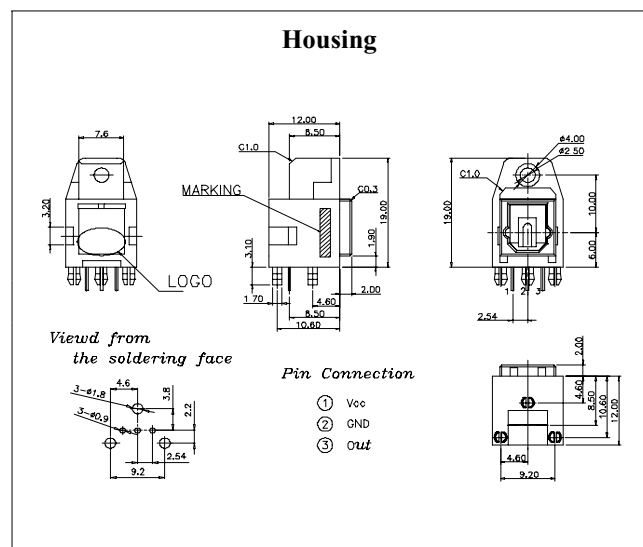
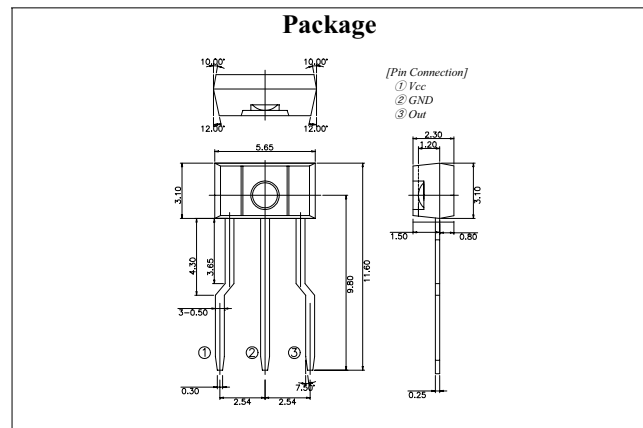
- AC-3 amp
- PC-sound card
- MD player

Ordering Information

Part Number	Type
ACRX531D	Die
ACRX531P	Package
ACRX531H	Housing

Outline Dimensions

(Unit : mm)



Absolute Maximum Ratings

(Ta=25℃)

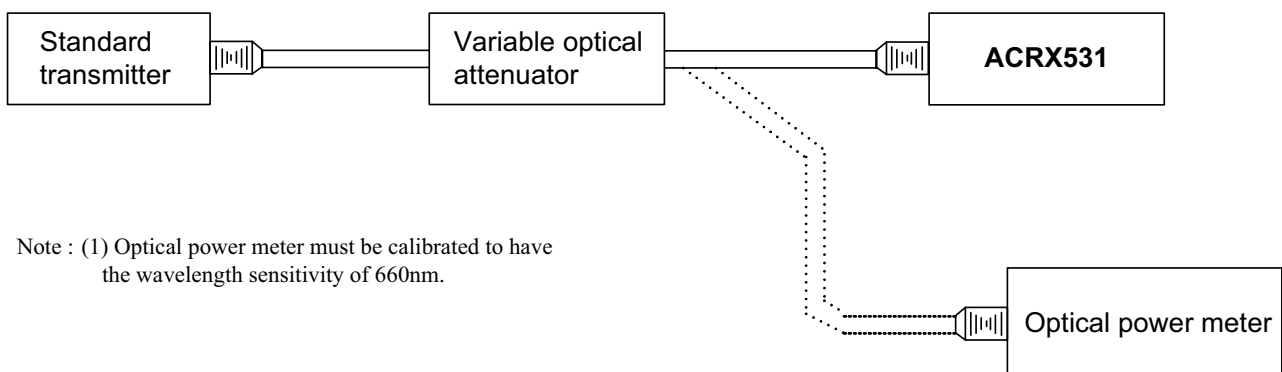
PARAMETER	SYMBOL	RATING	UNIT
Supply Voltage	Vcc	-0.5 ~ +7	V
High Level Output Current	I _{OH}	4	mA
Low Level Output Current	I _{OL}	4	mA
Operating Temperature	T _{opr}	-20 ~ +70	℃
Storage Temperature	T _{stg}	-30 ~ +80	℃
Soldering Temperature ^[1]	T _{sol}	260	℃

Note [1] : Soldering time=5 seconds 2 times or less

Electrical and Optical Characteristics (V_{dd}=5V, T_a=25°C)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Operating Voltage	V _{cc}	-	4.5	5	5.5	V
Peak Sensitivity Wavelength	λ_p	-	-	700	-	nm
Maximum Input Optical Power for Receiving Unit	P _{CMAX}	Refer to Fig.1	-14.5	-	-	dBm
Minimum Input Optical Power for Receiving Unit	P _{CMIN}	Refer to Fig.1	-	-	-24	dBm
Dissipation Current	I _{cc}	Refer to Fig.2	-	5	8	mA
High Level Output Voltage	V _{OH}	Refer to Fig.3	2.7	4.8	-	V
Low Level Output Voltage	V _{OL}	Refer to Fig.3	-	0.1	0.4	V
Rise Time	t _r	Refer to Fig.3	-	6	30	ns
Fall Time	t _f	Refer to Fig.3	-	6	30	ns
Low→High Propagation Delay Time	t _{pLH}	Refer to Fig.3	-	-	100	ns
High→Low Propagation Delay Time	t _{pHL}	Refer to Fig.3	-	-	100	ns
Pulse Width Distortion	Δtw	Refer to Fig.3	-30	-	+30	ns
Jitter	Δtj	Refer to Fig.4 , P _c =-15dBm	-	1	30	ns
Operating Transfer Rate	T	-	0.1	-	12.5	Mbps
Transmission Distance	-	-	-	-	10	m

**Fig.1 Maximum Input Optical Power Level/Minimum Input Optical Power Level
Measuring Method of Receiving Unit**



Note : (1) Optical power meter must be calibrated to have the wavelength sensitivity of 660nm.

Fig.2 Measuring Method of Dissipation Current

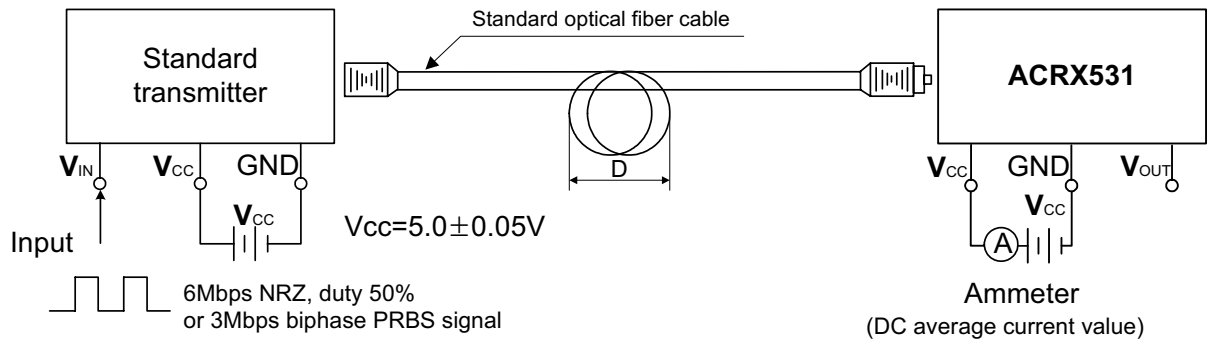


Fig.3 Measuring Method of Output Voltage and Pulse

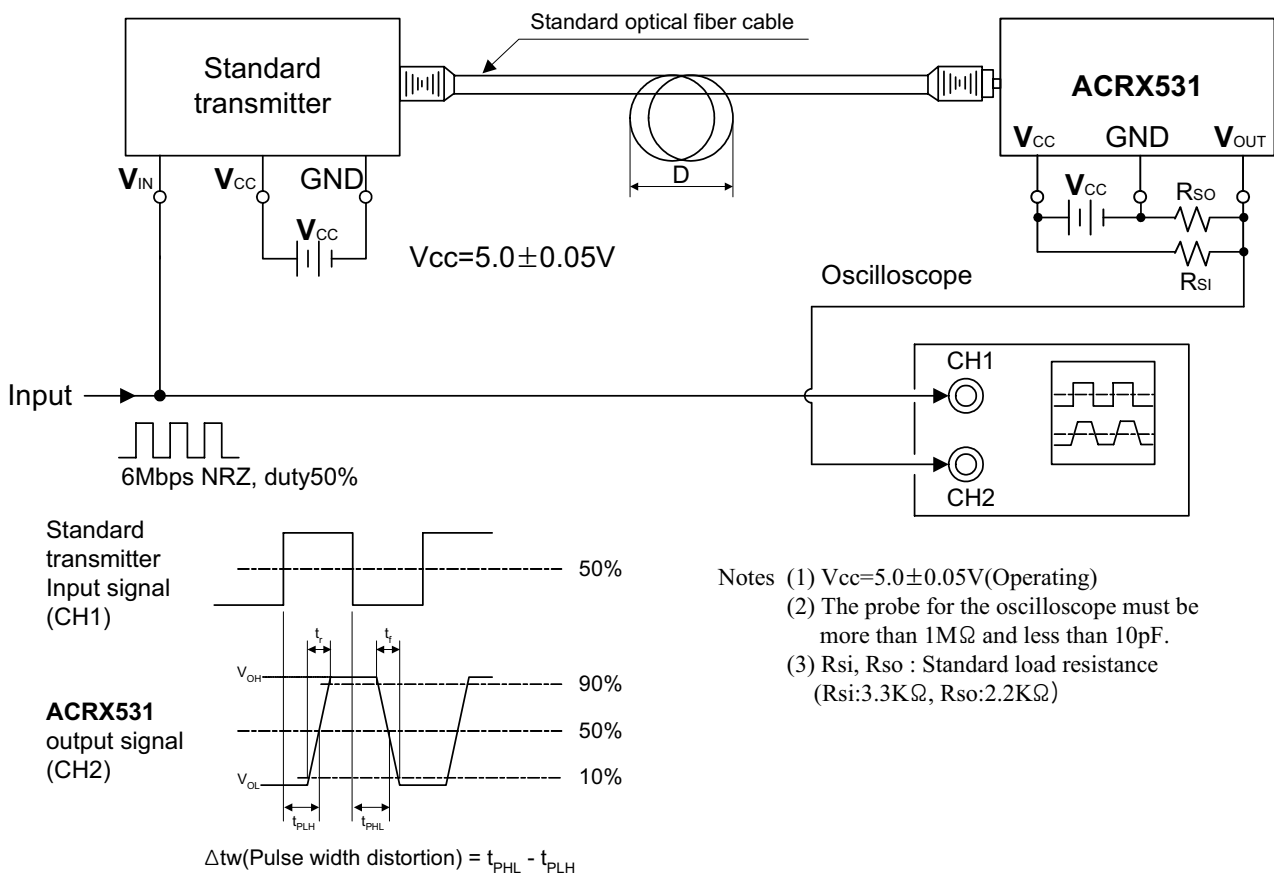


Fig.4 Measuring Method of Jitter

