

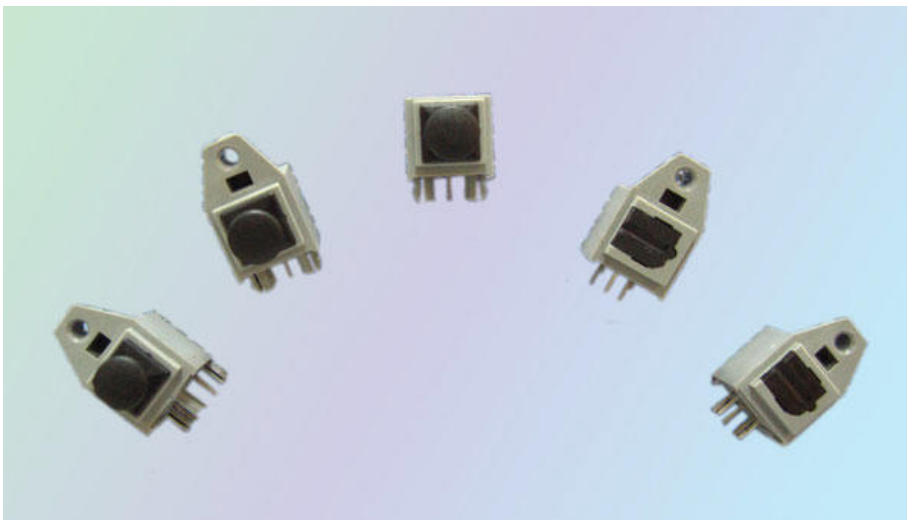
POF Toslink Receiver Optical Module Series

Data Sheet

Overview

The TS-RXXXXX is a standard-package Receiver module that is fully compatible for JEITA standard CP-1212 and EIAJ RC-5720B. The receiver is an opto-electric component packaged with PD and amplifier IC. The function of unit changes the light signal into electric signal.

The TS-RXXXXX is operated at +4.75V~+5.25V and the signal output interface is TTL compatible. The module has good performance at low power consumption.



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Features

- (1) High PD Sensitivity for Red Light
- (2) Low Current Dissipation and Power Consumption
- (3) 16Mbps Data Rate (NRZ Signal)
- (4) Power Source: +4.75V~+5.25V
- (5) TTL Interface Compatible

Application

- DVD, CD, MD Player
- Audio Equipment
- PC, Notebook
- Sound Card

Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Min.	Max.	Unit
Supply Voltage	V _{cc}	-0.5	5.5	V
DC Input Voltage	V _{in}	-	V _{cc} +0.5	V
Storage Temperature	T _{stg}	-30	80	°C
Operating Temperature	T _{opr}	-20	70	°C
Soldering Temperature	T _{soi}	-	260 ⁽¹⁾	°C

Note: (1) Soldering time ≤ 10s

Optical and Electrical Characteristics of Transmitter

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operation Voltage	V _{cc}	4.75	5	5.25	V
Peak Wavelength	λ _p	-	650	-	Nm
Transmission Rate (NRZ Code)		0.1	-	16	Mbps
Fiber Coupling Input Power	P _i	-27	-	-14.5	dBm
Dissipation Current	I _{cc}	-	-	15	mA
High Level Output Voltage	V _{OH}	2.1	-	-	V
Low Level Output Voltage	V _{OL}	-	-	0.4	V
Rise Time	t _r	-	-	25	Ns
Fall Time	t _f	-	-	25	Ns
Low to High Propagation Delay Time	T _{PLH}	-	-	120	Ns
High to Low Propagation Delay Time	T _{PHL}	-	-	120	Ns
Pulse Width Distortion	Δtw	-25	-	25	Ns
Jitter	Δt _j	-	-	25	ns

Reliability Test Items

No.	Item	Test Condition	Test Hour / Cycle	Failure / Sample Number
1	Soldering Heat	260°C±5°C	10s	0/22
2	High Temperature & Humidity Test	Ta=40°C, 90%RH	500hrs	0/22
3	High Storage Temperature	Ta=80°C	500hrs	0/22
4	Low Storage Temperature	Ta=-30°C	500hrs	0/22
5	Temperature (Cycling)	-30°C ~ 80°C (30min) (30min)	20cycle	0/22
6	High Temperature Operation Life	Ta=60°C, Vcc=5V, ON	500hrs	0/22
7	Mechanical Shock	Acceleration: 1000m/s ² Pulse Width: 6 ms 3 times/ X, Y, Z direction		0/22
8	Terminal Strength (tension)	Weight: 500g	30 sec./each terminal	0/22
9	Terminal Strength (bending)	Weight: 500g	2 times/each terminal	0/22
10	Vibration	Frequency Range: 10~55Hz/ sweep 1 min Overall Amplitude: 1.5mm 2hrs/ X, Y, Z direction		0/22
11	Repeated Operation	Coupling Force<2kg 0.4kg<Detaching Force<2kg	500 times	0/22

Judgment Criteria

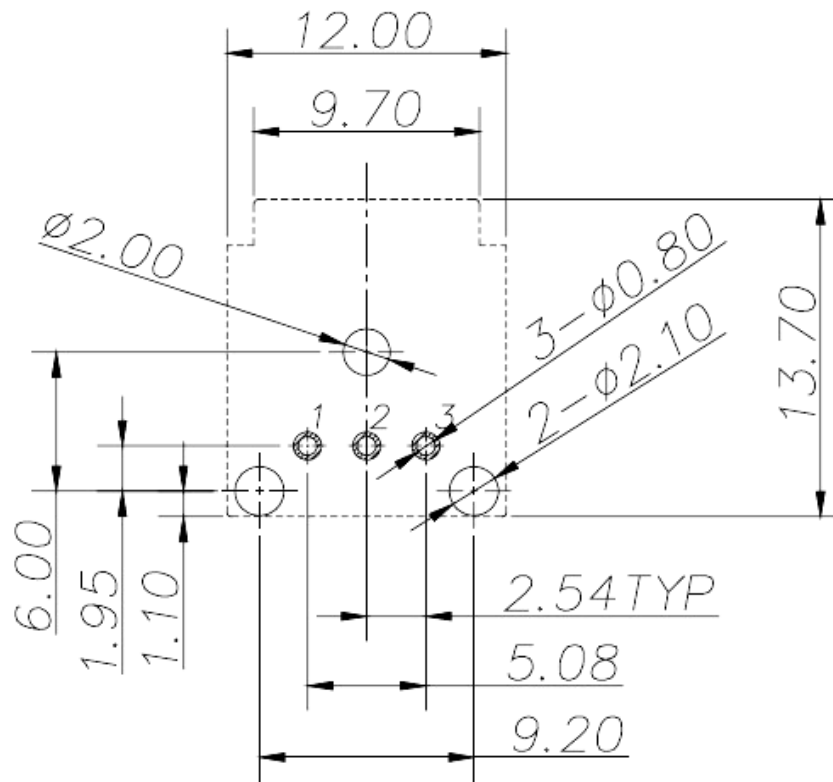
- **Icc (Dissipation Current): Current Difference<20%**
- **Pf (Fiber Coupling Output Power): Brightness Attenuate Difference<20%**

Physical Dimension

Please Review the Detail Drawings at COMOSS Website.

PCB Layout

For TS-RADFP3 Examples



PCB Layout
Component Side View

Pin No.	Symbol	Function
1	Vout	Signal Output
2	GND	Ground
3	Vcc	Input Voltage

Measuring Circuit

Fig.1 Measuring Method of Input Power that TS-Rxxxxx Module Series Need

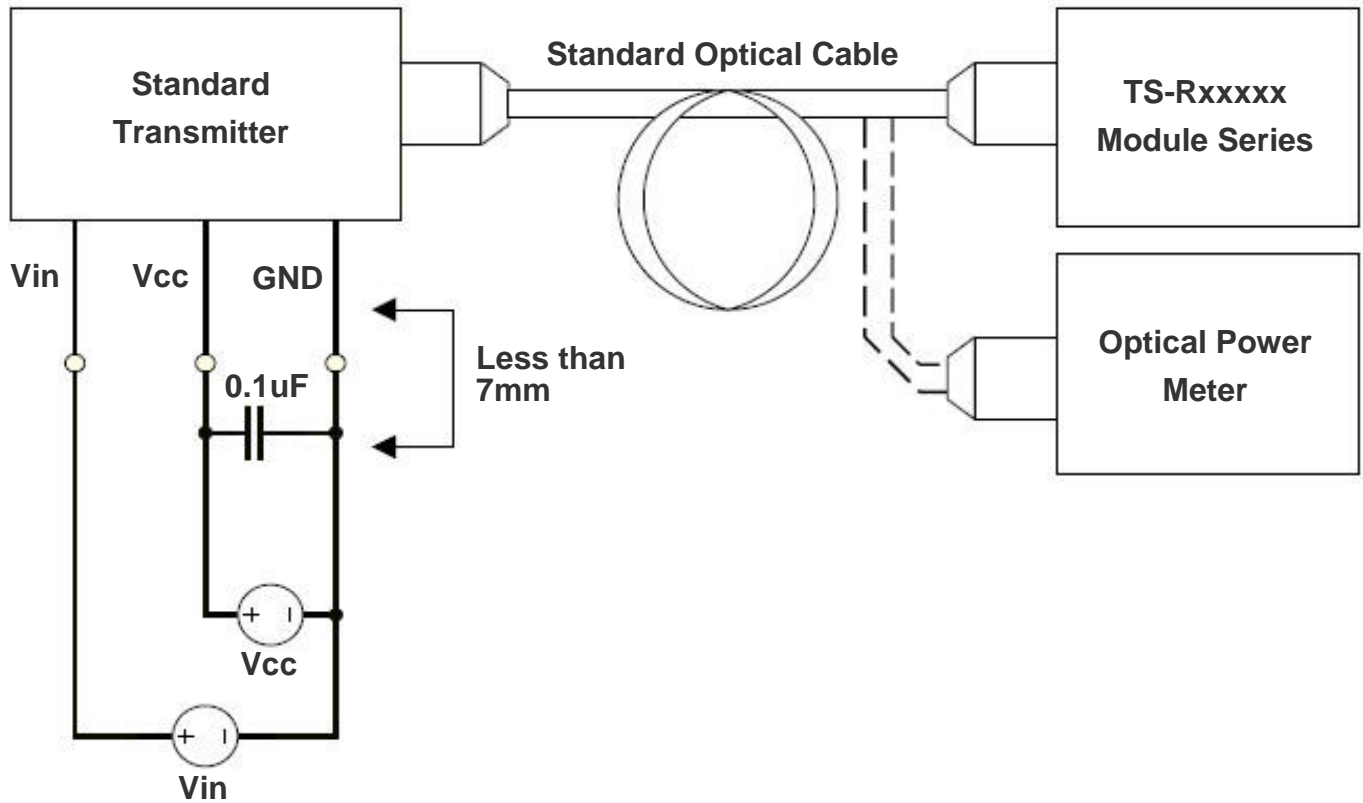
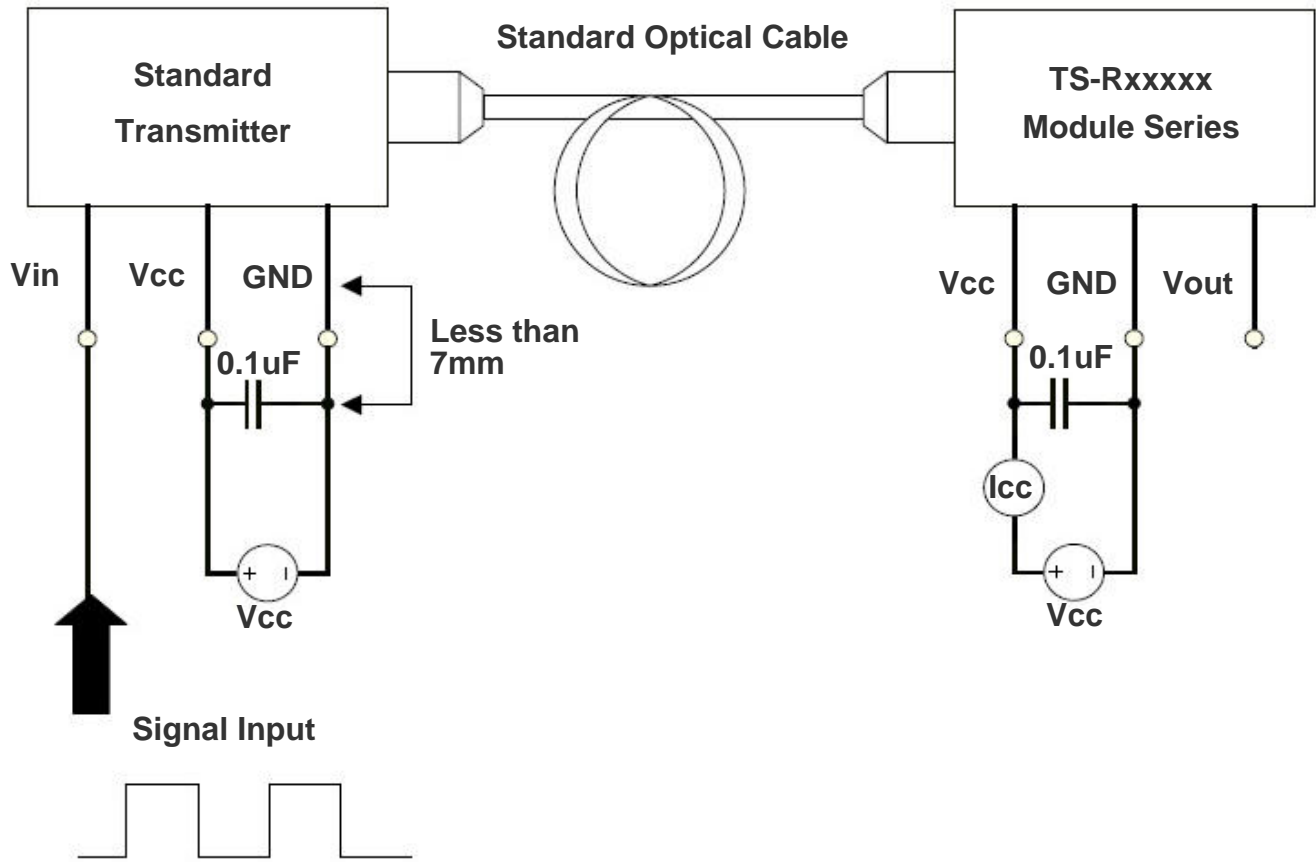
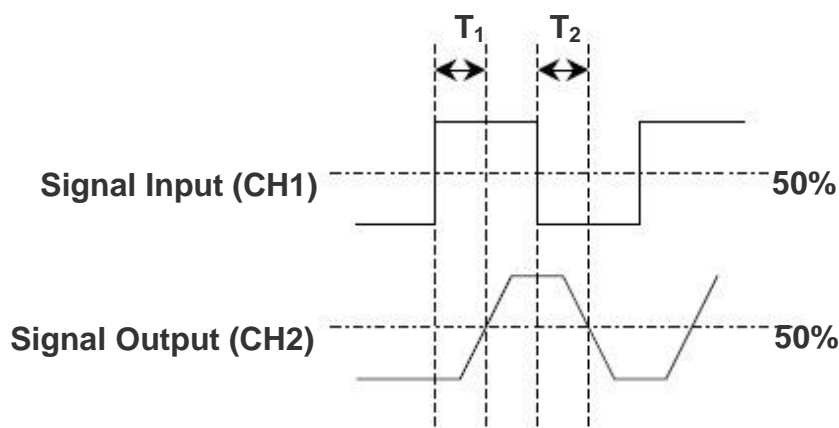
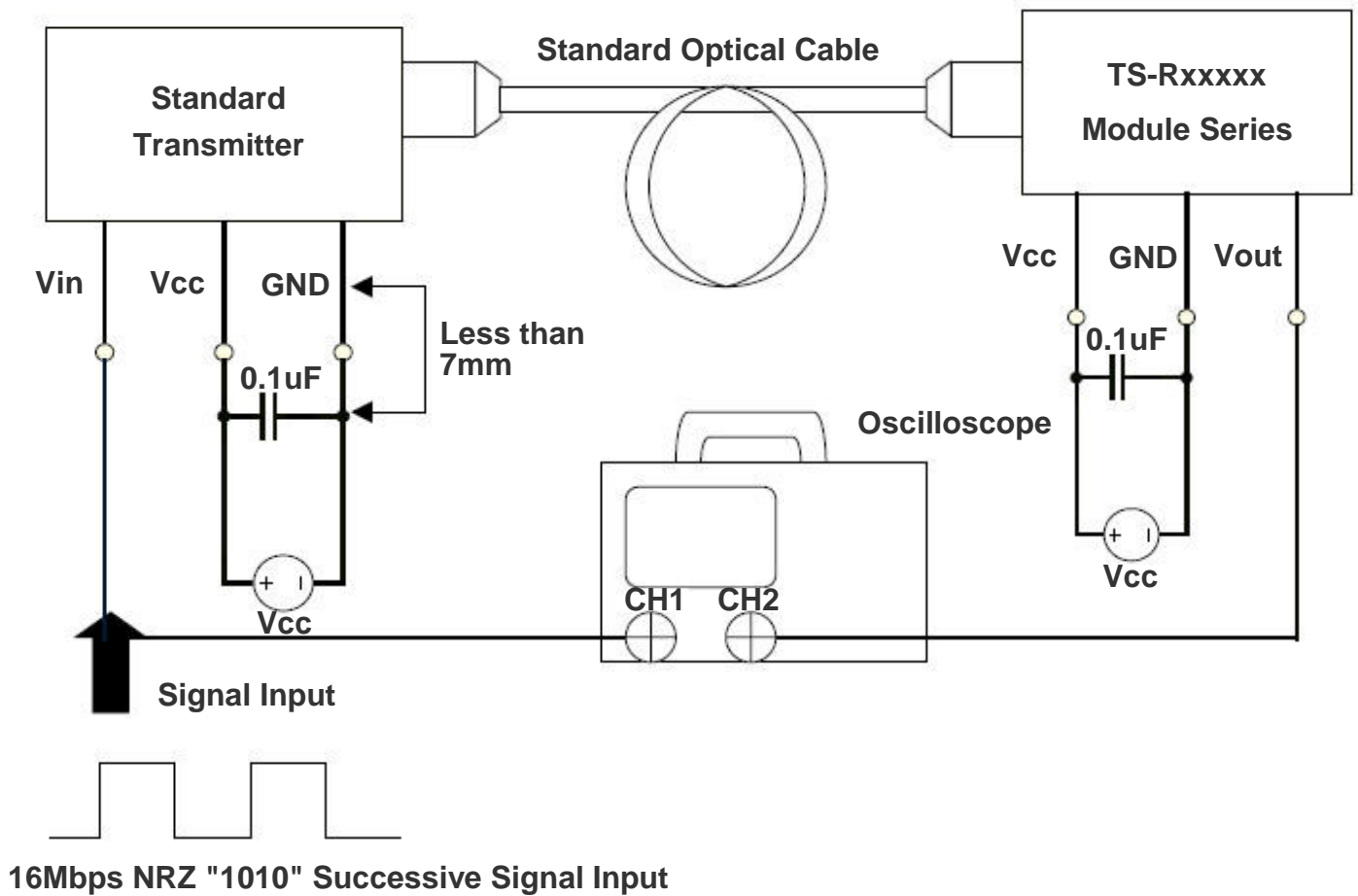


Fig.2 Measuring Method of TS-Rxxxxx Module Series Dissipation Current (I_{cc})



16Mbps NRZ "1010" Successive Signal Input

Fig.3 Pulse Response and Jitter Measuring Method



Order Information

TS - R A X X X X
(1) (2) (3) (4) (5) (6)

(1) Function Type :

- T: Transmitter (Black)
- R: Receiver (Gray)

(2) Data Rate (Mbps):

- A: 16.0

(3) Lid Option:

- D: Dust Cover
- S: Shutter

(6) Number of Post:

- 2: Two Posts
- 3: Three Posts

(5) Location Option:

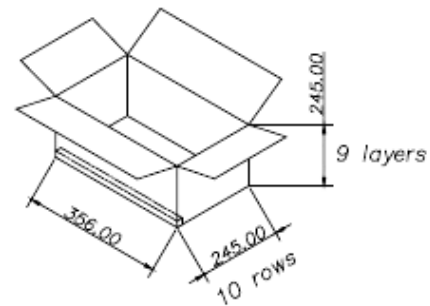
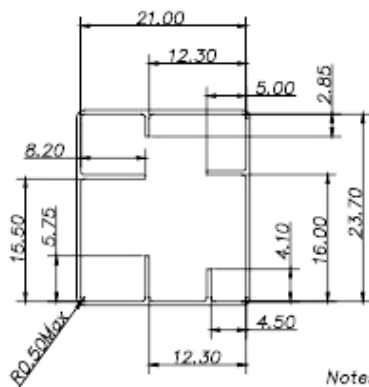
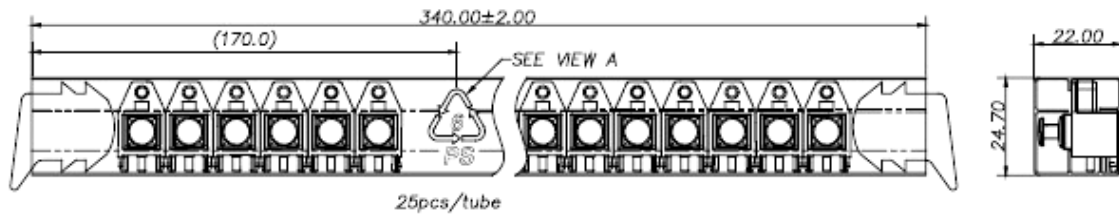
- M: Metal Post
- P: Press Fit Post
- R: Round Post

(4) Shape Type:

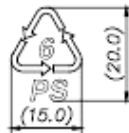
- F: Flange
- W: Without Flange

Packaging Specification

Unit: mm



- Notes:
1. Material: Transparent PS (Recycling material)
 2. Thickness: 0.50
 3. Printer Color: Blue



Recycling Mark
VIEW A