2.5G PIN-TIA Receiver with Pigtail Modules

OSMPTP-913XXX

Features:

- High sensitivity
- Differential ended output
- Single +3.3V operation
- Trans-impedance amplifier with AGC
- RoHS Compliant products available

Applications:

- 2.5G application
- SDH/SONET application

General:

OSMPTP-913XXX Series is a 4 pin or 5 pin PIN-TIA with pigtail operating on 2.5G. It provides high sensitivity with AGC, 100ohm differential outputs and the 5 pin PIN-TIA provides a monitor pin. A photodiode is mounted into a low capacitance coaxial package integrated with a pigtail.

Ordering Information: (Standard version *Note1)

Part No.	Wavelength (nm)	Voltage (V)	Package	Pin Type	Connector
OSMPTP-9130AF	1270～1620	3.3	A	A	FC/PC
OSMPTP-913DBSA	1270～1620	3.3	B	D	SC/APC
OSMPTP-913DCT	1270～1620	3.3	C	D	ST/PC
OSMPTP-9130DS	1270～1620	3.3	D	A	SC/PC
OSMPTP-9130ES	1270～1620	3.3	E	A	SC/PC

*Note1: For more ordering information, please refer the nomenclature and contact OSM sales.

ADD: No.189, BINHE ROAD,HUAYANG,TIANFU NEW AREA,CHENGDU,SICHUAN,CHINA 610213
TEL: +86-28-64570369
FAX: +86-28-64570369
E-mail: sales@osemos.com http://www.osemos.com

Absolute Maximum Ratings: *Note2

Parameter	Min.	Typ.	Max.	Unit
Storage Temperature	-40	25	85	℃
Operating Temperature	-40	25	85	℃
TIA Supply Voltage	3.1	3.3	3.5	V
Operation Relative Humidity	-		85	%
Soldering Temperature / Time	-		260/10	°C/S

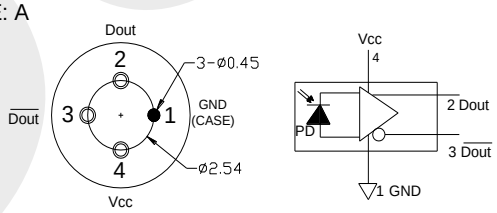
*Note2: Exceeding any one of these values may destroy the device permanently.

Electrical and Optical Characteristics:

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Operating Wavelength	λ	1270		1620	nm	
Supply Current	Icc		40	60	mA	No Loads
Saturation Power	Psat	-3	0	-	dBm	@ 1310nm
Small-Signal Bandwidth	BW	1.65			GHz	
Low-Frequency Cut off	LF			5	kHz	
Sensitivity			-23	-21	dBm	1310nm, 2.5G, ER=10@ PRBS= 2^{23}-1, BER=1E-10
Single Ended Output Impedance	R	40	50	60	Ω	
Rise /Fall Time	T		0.15	0.2	ns	20～80%

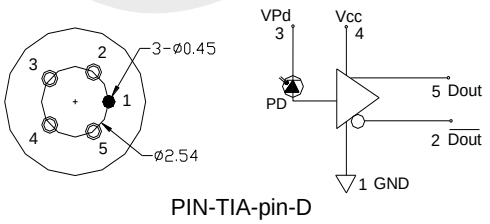
Pin Assignment: *Note3

TYPE: A

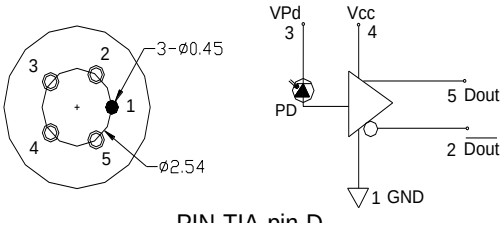


PIN-TIA-pin-A

TYPE: D



PIN-TIA-pin-D



Note3: Other Pin type can be customized.

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Pigtail Package Dimension: *Note4、5、6

TYPI

*Note4: PIN direction and laser mark can be customized. Pigtail is standard SM fiber; the length also can be customized.

*Note5: For the package series D, the clamping rings dimensions (A) and drill size (B) are can be selected. The following types can be available. Please designate the detailed type while ordering the package series D.

Fixed card type	A(mm)	B(mm)
D	16	12
D-S	17	12.7

*Note6: For the package series B, the fix card is fixed by customer self. For the detailed information of fix card of

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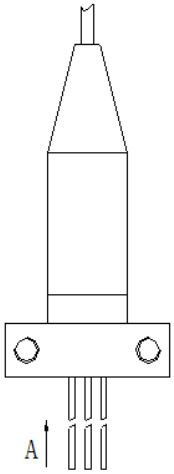
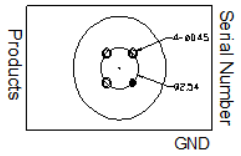
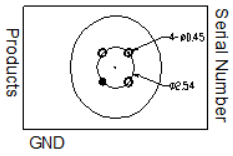
A, C, D package series, please refers the following graphs.

The Direction of Fix Card:

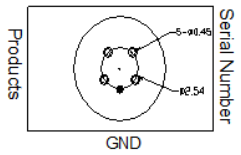




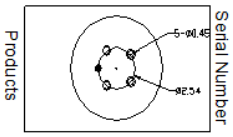
Direction A view
PPT4A-1(DEFAULT)



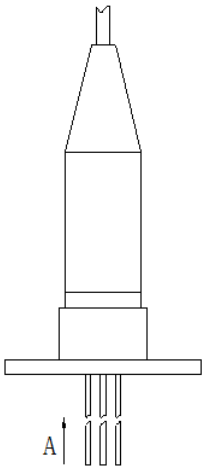
Direction A view
PPT4A-2

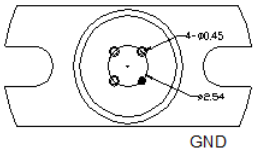


Direction A view
PPT5A-1(DEFAULT)

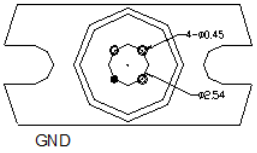


Direction A view
PPT5A-2

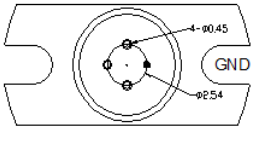




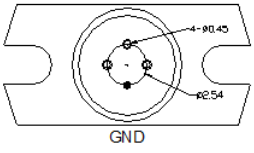
Direction A view
PPT4C-1(DEFAULT)



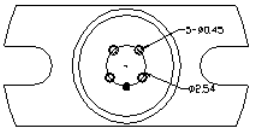
Direction A view
PPT4C-2



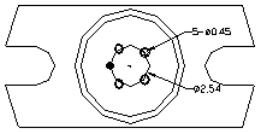
Direction A view
PPT4C-3



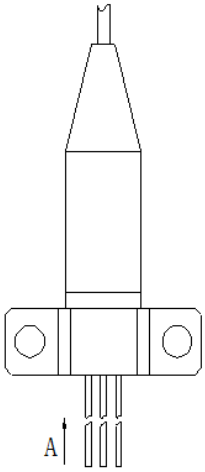
Direction A view
PPT4C-4

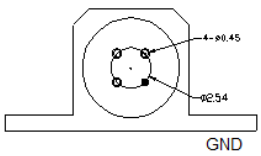


Direction A view
PPT5C-1(DEFAULT)

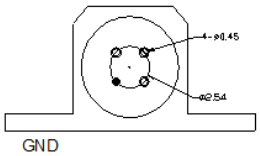


Direction A view
PPT5C-2

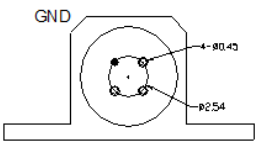




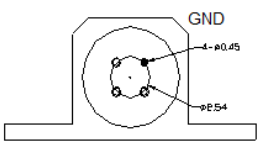
Direction A view
PPT4D-1(DEFAULT)



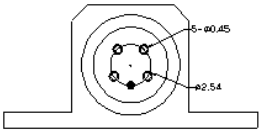
Direction A view
PPT4D-2



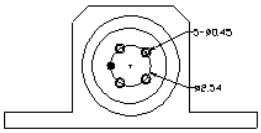
Direction A view
PPT4D-3



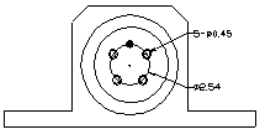
Direction A view
PPT4D-4



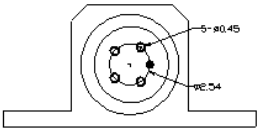
Direction A view
PPT5D-1(DEFAULT)



Direction A view
PPT5D-2



Direction A view
PPT5D-3



Direction A view
PPT5D-4

ADD: No.189, BINHE ROAD,HUAYANG,TIANFU NEW AREA,CHENGDU,SICHUAN,CHINA 610213
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Nomenclature:

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A B C D E F G

A	**Data Rate**	9=2.5G				
B	**Wavelength**	1=1270～1620nm				
C	**Voltage**	3=3.3V				
D	**Pin Type**	0= pin-A	D= pin-D	E= pin-E		
E	**Package Series**	A	B	C	D	E
F	**Connector**	F=FC/PC	S=SC/PC	T=ST/PC	SA=SC/APC	
		FA=FC/APC	L=LC/PC	Blank=None		
G	**Fiber Type**	Blank=SM	M=MM			

Precaution:

(1) The modules should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safe keeping and carrying, the modules should be packaged with ESD proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.

(2) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.

(3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

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