ETRREWT25RCAT3FKDEGIGL

XGSPON OLT BOSA module with SC receptacle

Features

◆ Downstream up to 9.953Gbps

◆ Upstream up to 9.953Gbps

◆ Case operating temperature range: 0 to 70℃

◆ +3.3V single power supply

◆ ROHS Compliant

Applications

◆ Optical transceiver for XGSPON OLT

Absolute maximum ratings

Parameter	Symbol	Min	Max	Unit
Storage temperature	T_{ST}	-40	85	℃
Operating temperature	T_{OP}	0	70	℃
EML reverse voltage	EML V_R	-	2	V
EML forward current	EML I_F	-	125	mA
EML output power	EML P_O	-	10	mW
EA modulator reverse bias	EA V_R	-	2.5	V
TEC voltage	V_{TEC}	-	0.9	V
TEC current	I_{TEC}	-	0.6	A
APD forward current	APD I_F	-	5	mA
APD reverse current	APD I_R		2	mA
APD reverse voltage	APD V_R	-	Vbr	V
TIA supply voltage	Vcc	-0.5	6	V
Soldering temperature	-	-	260(<10s)	℃

TX:1577 transmitter optical and electrical characteristics

(Unless specified else,the specifications below are defined at Tc=25℃)

| Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Laser operating temperature	T_{OP}	40		50	℃	-
Threshold current	I_{TH}	-	-	30	mA	-
Operating current	I_{OP}	-	-	110	mA	-
Laser forward voltage	V_F	-	-	2.0	V	IOP , TOP
EA center-point bias voltage	V_{EA}	-2.0	-	0	V	-
P-P modulation voltage (EA section)	V_{PP}	-	-	2.5	V	-
Center wavelength	λ_C	1575	1577	1580	nm	CW, TOP
Side-mode suppression ratio	SMSR	35	-	-	dB	-
Input impedance	ZIN	-	45	55	Ohm	-
Dark current	I_D	-	-	10	uA	IOP=0mA, VEA = -0.5V
Monitor PD current	I_{MON}	50	-	-	uA	CW, Iop, Vr=-5V
Operating output power	P_{OP}	2	-	-	mW	CW, Vop, Top,Iop=70mA No modulation
Optical isolation	I_{SO}	30	-	-	dB	CW, Pop, Tc=25℃
Monitor PD capacitance	C	-	-	5	pF	Vr=-5V,f=1MHz
Thermistor resistance	R_{TH}	4.2-	-	4.6	KΩ	TOP = 45℃
B constant	B	3800	-	4000	K	
TEC current	I_{TEC}	-	-	0.56	A	Iop, Vpp, Von, Top, 75℃
TEC voltage	V_{TEC}	-	-	0.8	V	Iop, Vpp, Von, Top, 75℃
TEC power	P_{TEC}	-	-	0.45	W	Iop, Vpp, Von, Top, 75℃

RX:1270 receiver optical and electrical characteristics

(Unless specified else,the specifications below are defined at Tc=25℃)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Supply voltage	Vcc	3.0	3.3	3.6	V	
TIA supply current	Icc	-	40	-	mA	Vcc=3.3V
Receiving wavelength	λ	1260	1270	1280	nm	
Optical sensitivity	S	-	-	-26	dBm	Vcc 3.3V AC,Vop 10Gbps,PRBS=2E^{31}-1, BER=1E-3,ER=6dB
Overload power	Pload	-5	-	-	dBm	
Breakdown voltage	Vbr	25	32	38	V	Id=10uA
Operating voltage	Vop	-	Vbr-3	-	V	-
Cut-off frequency(3dB)	-	7.0	8.5	-	GHz	RL=50Ω,M=9
Vbr temperature coefficient	Δ Vbr/Δ T	-	0.05	-	V/℃	

Pin assignment

TYPE: 12

CY LD-pin-12 / TYPE:R
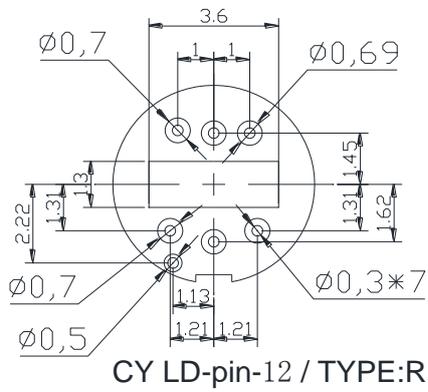
TYPE: F

APD-pin-F
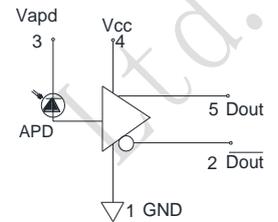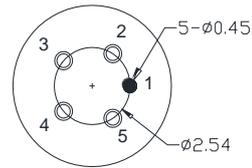
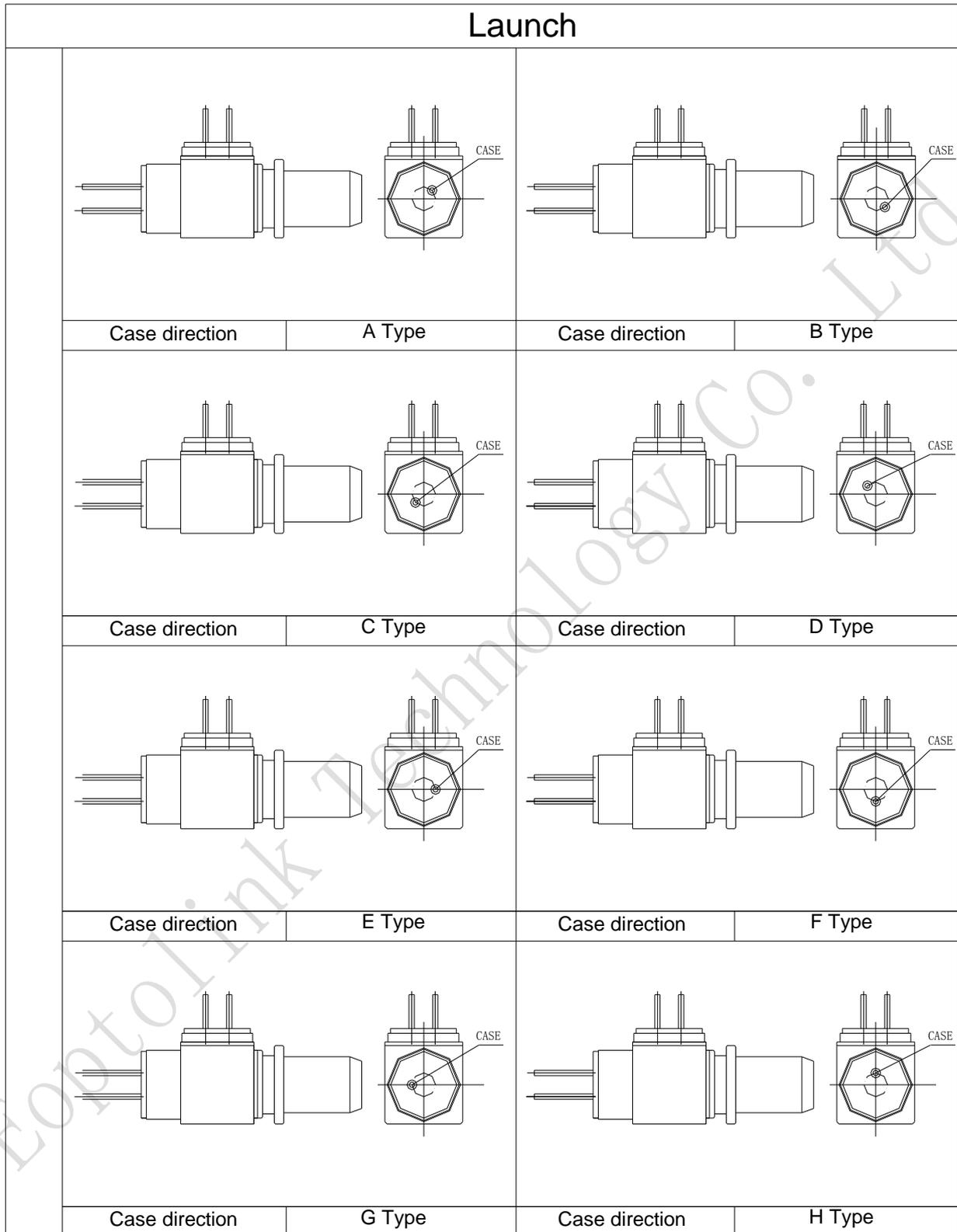## Receptacle package series
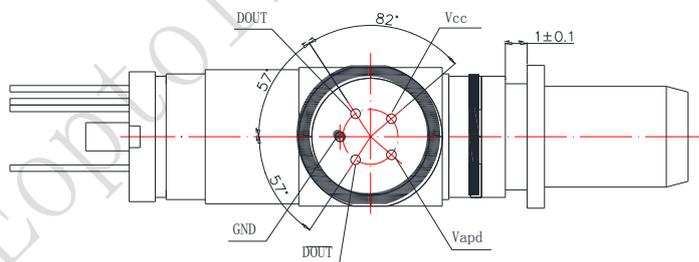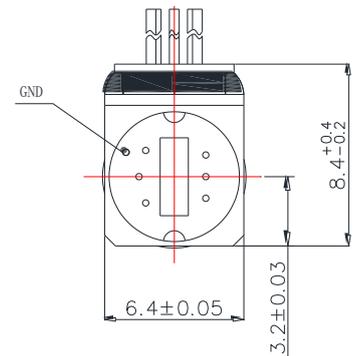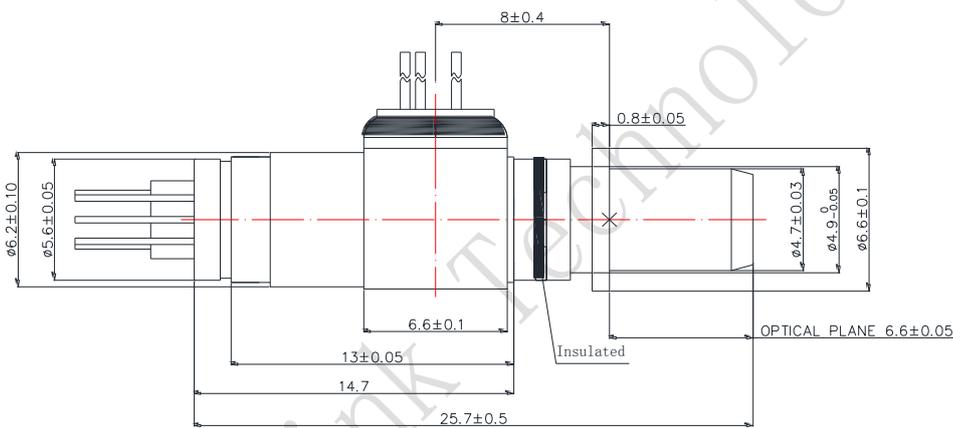
TX pin order code*Note1.2.3

Note1:This picture is for pluggable, pigtail BIDI chip PIN package direction's reference

Note2:This picture is suitable for RX Pin direction comparison .

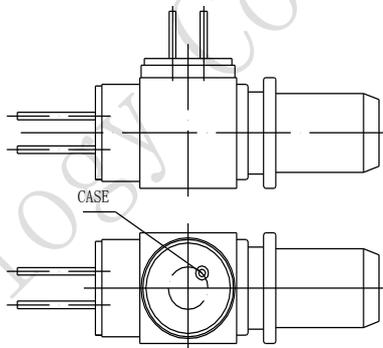Note3:The package direction is described as "×-×" For example "A-B", "A" is TX chip Pin direction, "B" is RX chip Pin direction.

RX pin order code
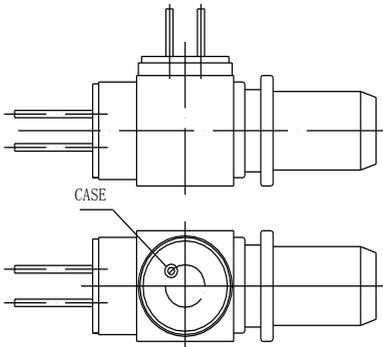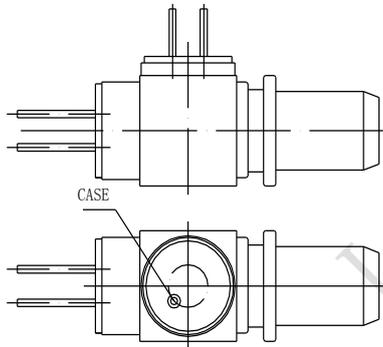
Receive	
Case direction — A Type	Case direction — B Type
Case direction — C Type	Case direction — D Type
Case direction — E Type	Case direction — F Type
Case direction — G Type	Case direction — H Type
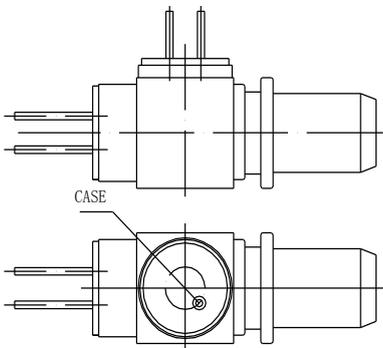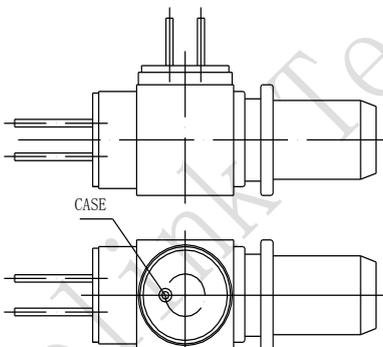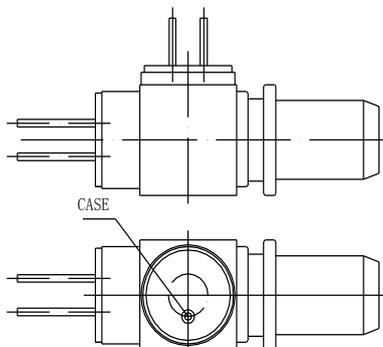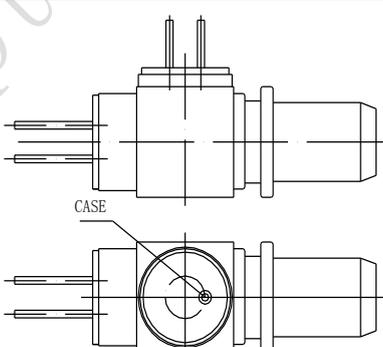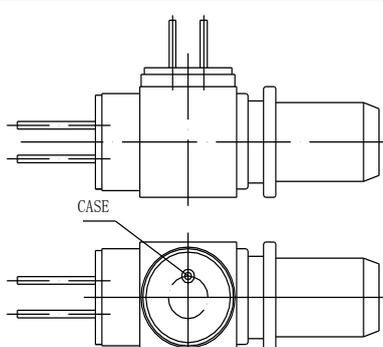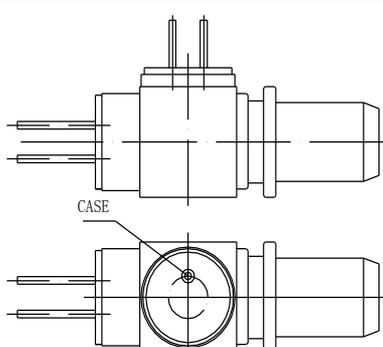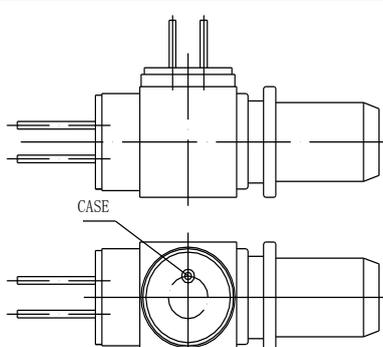
Ordering information

ETR R E W T 25 R C A T 3 F K D E G I GL
/ A B C D E F G H I J K L M N O P Q

Code	Parameter	Detailed Description							
A	Connection type	R= Receptacle							
B	TX type	E=EML							
C	TX wavelength	W=1577nm							
D	TX data rate	T=10G							
E	TX output Power	25≥2mW							
F	TX Pin type	R=LD-pin-12							
G	TX chip type	C=CY							
H	RX wavelength	A=1270nm							
I	RX data rate	T=10G							
J	TIA voltage	3=3.3V							
K	RX Pin type	F=APD-pin-F							
L	RX chip type	K=EO							
M	TX Pin package direction	A	B	C	D	E	F	G	H
N	RX Pin Package direction	A	B	C	D	E	F	G	H
O	Isolator	Blank=None				G=with I			
P	Insulation	Blank= Routine receptacle				I= Insulation receptacle			
Q	TIA model	GL=GN7052							

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.

Obtaining Document

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 http://www.eoptolink.com
Or contact Eoptolink Technology Inc., Ltd. listed at the end of the documentation to get the latest documentation.

Revision History

Verision	Initiated	Reviewed	Approved	Revision History	Release Date
Va-1	George.zhong	Zore.Zhao		The initial version	2018-03-21

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