TX series AM optical transmitter module

Description

TX series AM optical transmitter module is one of the OPT1000 optical transmission platform application modules. The key part of the transmitter is an Agere high-performance DFB laser. It can be used for CATV system, data communication, delivering both analog and digital TV signals, compressing data information. 1310nm wavelength, via single mode fiber delivers any signals to each node in the HFC network. The die-cast aluminum housing and the thermal design extends product life and enhances reliability.

Feature

- High-performance DFB laser.
- AGC or MGC optional.
- Built-in microprocessor in the OTP1000 for real-time monitoring management VFD panel to provide real-time display of its operating status.
- Low distortion, high CNR.
- Automatic optical power control (APC) and temperature control (ATC) of the laser.

Product identification system

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Optical connector， SC：SC/APC
FC：FC/APC

Output optical power， 04: 4mW； 06: 6mW；……
16: 16mW； 20: 20mW

Variety , A :AGC,47～862MHz bandwidth
M: no AGC,47～862MHz bandwidth
R: MGC,5～200MHz bandwidth

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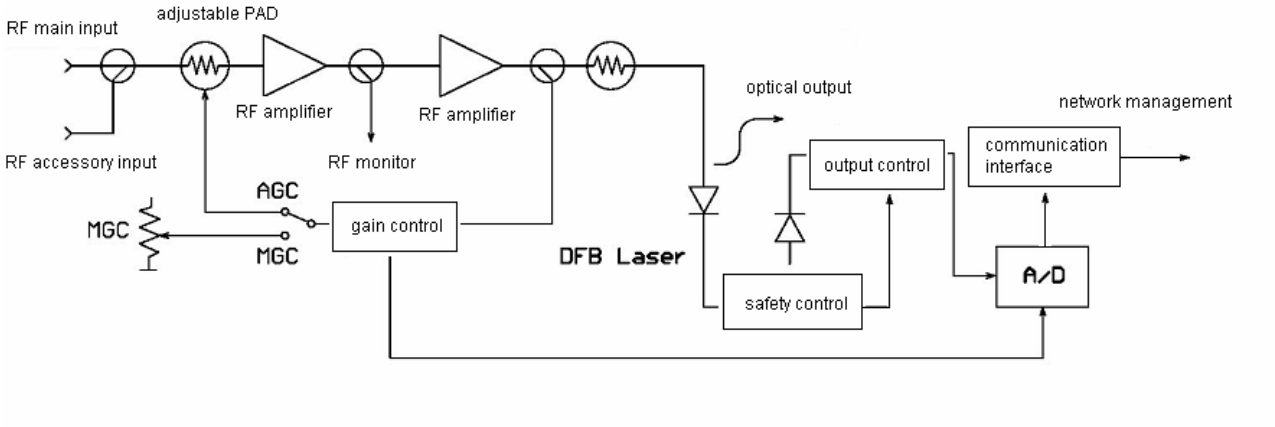
Block diagram



Specifications

	Note	TXA-**	Unit
Frequency range		47～862	MHz
Optical wavelength		1310（±10）	nm
Output power			
TXA-04		4～＜6	mW
TXA-06		6～＜8	mW
TXA-08		8～＜10	mW
TXA-10		10～＜13	mW
TXA-13		13～＜16	mW
TXA-16		16～＜20	mW
TXA-20		≥20	mW
Standard RF input level(C port)			
20 channels		82	dBμV
30 channels		80	dBμV
40 channels		79	dBμV
50 channels		78	dBμV
60 channels		77	dBμV
AGC range		±3	dB
Flatness		±0.5	dB
RF input impedance		75	Ω
RF input return loss		16	dB
RF test point		−20±1	dB
Auxiliary RF input level (A port)		−10(versus master port)	dB
C/N		52(see link table)	dB
C/CSO		62(see link table)	dB
C/CTB		67(see link table)	dB
Optical connector	1	SC/APC or FC/APC	
Environmental temperature		0～+50	℃
Dimensions W (L)*(W)*(H)		40.5×118.5×424	mm
Weight		1.5	kg

Notes 1. If customer doesn't select optical connector, provide SC/APC.

carrier-to-noise(in dB) for links carrying 59PAL-D channel plus 550～862MHz digital signal

Model No	TXA-04	TXA-06	TXA-08	TXA-10	TXA-13	TXA-16	TXA-20
Output optical power（mW）	4	6	8	10	13	16	20
Fiber length（km）	6	10	10	10	10	10	10
Link loss（dB）	C/N（dB）						
5	52.7						
6	**52**	53.5					
7	**51**	52.8	53.5				
8	50.1	**52**	52.8	53.5			
9	49	**51**	**52**	52.8	53.5		
10		50	**51**	**52**	52.8	53.5	
11		48.8	50	**51**	**52**	52.8	53.5
12			48.8	50	**51**	**52**	52.8
13				48.8	50	**51**	**52**
14					48.8	50	**51**
15						48.8	50
16							48.8

Notes:
1. Ensure C/N value type in bold face, other parameter is typical value.
2. Test way according to <GY/T143-2000>standard.
3. Test Environmental temperature is 22℃，optical link standard doesn't contain launch RF amplifier of optical receiver.