VS1550TX 1550nm Forward Transmitter

Description

The VS1550TX series is a family of high performance 1550nm externally modulated analog transmitters. These optical transmitters are packaged in a 1RU 19'' standard chassis and are available in several configurations to meet various network requirements. The VS1550TX series transmitters provide a minimum optical output power of 7 dBm from 2 ports with adjustable SBS(13~18dBm). The VS1550TX series transmitters feature high carries to noise ratio (CNR), superior flatness, low power consumption and easy to use. With integrated proprietary pre-distortion circuit, the VS1550TX series transmitter could provide excellent CSO and CTB performance. This family of transmitters is part of the full products developed by VALE Systems to support and enhance the deployment of traditional HFC, passive HFC and fiber to the home (FTTH) networks.

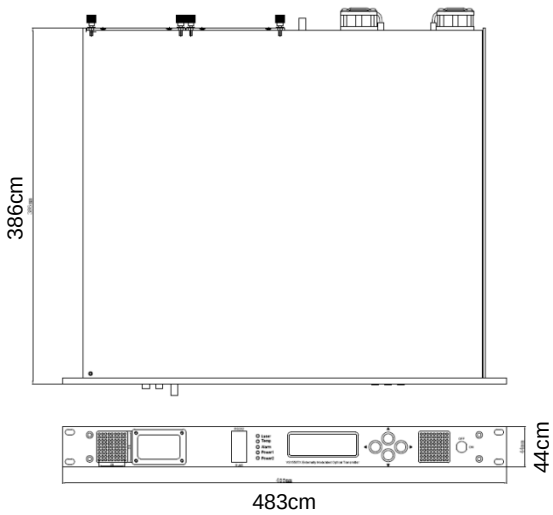
Specifications

Parameter	Unit	Specification	Note
Optical Performance			
Wavelength	nm	1550 +/-10	--
Output power	dBm	≥ 7	--
RIN	dB/Hz	≤-160	--
Optical connector	--	SC/APC or FC/APC	--
Output port	--	2	--
Laser type	--	1550nm DFB LD	--
Return loss	db	>45	
SBS	dBm	13,16,18 or 13~19 adjustable	--
RF Performance			
Bandwidth	MHz	45 to 1000	--
Return loss	-dB	≥16	--
Input level	dBmV	18 to 28	--
Impedance	ohm	75	--
Flatness	dB	+/-0.75	--
Test point	dB	-20+/-1	--
Link Performance 65km fiber + EDFA (NF ≤ 5), SBS setting16dBm, receive optical power 0dBm (120CH 256 QAM)			
CNR	dB	≤-52	--
CSO	dBc	≤-65	--
CTB	dBc	≤-65	--
MER	dB	≥ 40	--
BER	dB	<1E-9 at Pre FEC	
Electrical/Physical Performance			
Supply voltage	V	48VDC or 110~220VAC	--
Power consumption	W	<50	--
Dimensions	mm	386D x 483W x 44H	--
Weight	Kg	8.5	--

Features

- 19'' standard 1U rack design
- High performance cooled DFB laser diode with integrated optical isolator
- Two 7 dBm optical output ports
- +18~28 dBmV/channel RF input level
- Superior flatness, +/-0.75 dB
- Automatic/manual gain control ±5 db(AGC/MGC)
- Local and remote status monitoring features (SNMP-oriented, HMS compliance)
- -20 dB input test point
- SBS adjustable
- Front panel laser On/Off interlock switch

Dimensions [Unit:mm]



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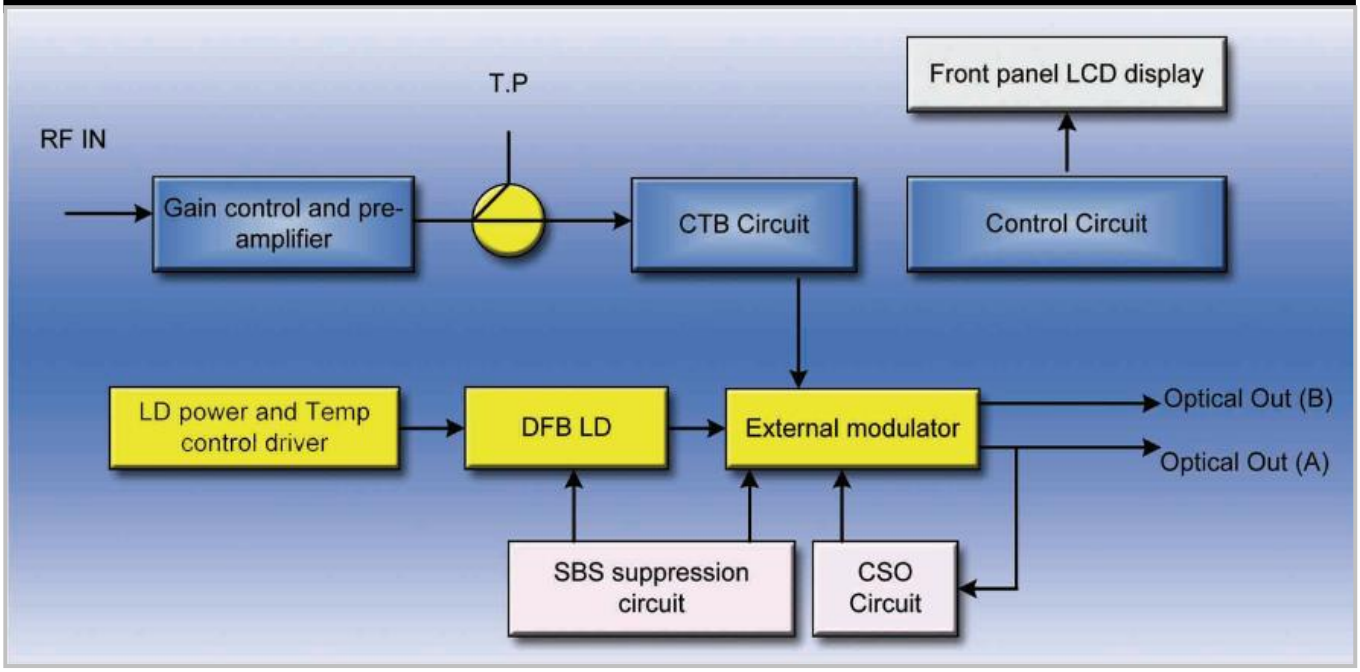
Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only. Functional operation of the device is not implied at these conditions. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

Parameter	Symbol	Unit	Min	Max
Operating temperature	Top	˚C (˚F)	0(32)	50(122)
Storage temperature	Tstg	˚C (˚F)	-20(-4)	60(140)
Humidity	H	%		85, non-condensing

Block Diagram



Ordering Information

VS1550TX series	-	Optical Output power	-	Optical connector	-	SBS	-	Power supply
VS1550TX	**-**	**07**	**-**	**SA**	**-**	**D**	**-**	**D2**
VS1550TX	-	2 optical outputs: 07=7dBm 09=9dBm 10=10dBm	-	SA=SC/APC FA=FC/APC	-	13=13dBm, 16=16dBm, 18=19dBm, D=Adjustable 13~19dBm	-	D1=Single -48V AC D2=Dual -48VAC A1=Single 110~260VAC A2=Dual 110~260VAC

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