HDS-26S (950~2600MHz)

SAT-IF Direct Modulated Optical Transmitter

PRODUCT DESCRIPTION

Guangtai HDS-26S (original model: HDBS-3000TX) series satellite L-Band optical transmitter, adopts high linearity DFB laser and direct modulated way. It can transmit 950~2600MHz L-Band analog or digital satellite signal (SAT-IF) receiving by satellite aerial radio high frequency head, to realize total transparency, high quality, long distance transmission through optical fiber. It also can sue satellite L-Band up/down link.

Optical operating wavelength of HDS-26S is optional as 1310nm or 1550nm.

1550nm optical transmitter, ITU standard wavelength can be selected, suitable for DWDM to realize network-upgrading and capability-expansion. It can work together with EDFA, YEDFA to amplify the optical power. It can be compatible with any FTTx PON，XGS PON technology.

HDS-26S series, covering essence of satellite L-Band optical fiber link in present market. Various specifications and performances and excellent cost price advantage provide more choose space for carriers. Flexible network organization is solution of the lowest cost price in present market.

HDS-26S has various wavelengths and lasers to select.

HDS-26S-1-□□-A1310: 1310nm with cooling DFB laser.

HDS-26S-1-□□-A1550: 1550nm with cooling DFB laser.

HDS-26S--1 □□-A15 □□: Cooling DFB laser, C-Band ITU wavelength adjustable.

HDS-26S-□-□□-B1310: 1310nm non-cooling optical isolated DFB laser.

HDS-26S-□-□□-B1550: 1550nm non-cooling optical isolated DFB laser.

HDS-26S-□-□□-B1 □□□: CWDM wavelength non-cooling DFB laser.

PRODUCT FEATURES

- Various specification and performances, covering essence of satellite L-band optical fiber link in present market.
- 950~2600MHz operating bandwidth, transmitting all satellite L-Band analogue and digital signals.
- Optical wavelength: 1310nm, 1550nm, CWDM optional, supply the biggest output power in the field.
- Laser type: A type (cooling), B type (non-cooling) high linearity, optical isolated DFB laser optional.
- TG optical transmitter (standard type), build-in AGC linearity amplifier.
- TO optical transmitter (type optional), build-in no IF amplifier, VOH input allowed, suitable for VOH output L-Band externally optical transmitter.
- Perfect laser APC, ATC control electric, prove long lifetime and high reliable work.
- Optical transmitter can supply 13VDC or 18 VDC to LNB.
- It realizes automatic switchover between main and spare link by choosing RF Switch (HRS-201) or Optical Switch (HOSW5000).
- Capacity of resisting electromagnetic, radio frequency, thunderstorm.
- Excellent P/P ratio.

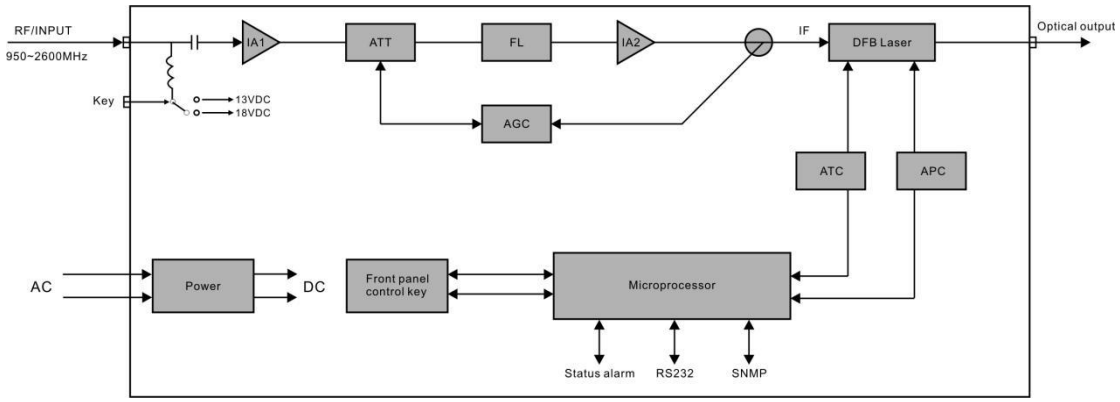
MAIN APPLICATION

- Satellite L-Band building fiber distribution system
- Ocean steamer satellite fiber distribution system
- Satellite L-Band uo/down fiber link

TECHNICAL INDEX

Performance				Index			Supplement
				Min.	Typ.	Max.	
Optical feature	Laser Type	A Type		Cooling DFB			A1310, A1550, A15 □□
		B Type		Non-cooling DFB with optical isolation			B1310, B1550
	Operating Wavelength		(nm)	1300	1310	1320	A1310, B1310
				1530	1550	1563	A1550, B1550
					ITU-G		A15 □□
				1270	CWDM	1610	B1 □□
	Wavelength Adjustable Range			-1.6		+1.6	A15 □□
	Wavelength Adjustable Mode			In steps ±0.01nm			A15 □□
	Wavelength Stability		(Pm/℃)	-1		0	TC=20~70℃
	Equivalent Noise Temperature		(dB/Hz)			-155	
	Side Mode Suppression Ratio		(dB)	35			
	Optical Isolation		(dB)	30			
	Extinction Ratio		(dB)	8.2			
	SBS		(dBm)	16			1310nm
				18			1550nm
	Optical Output Power		(mW)	1		10	B1310
				10		30	A1310
				1		4	B1550, B1 □□□
				4		10	A1550, A15 □□
	Return Loss		(dB)	50			
	Optical Connector			SC/APC & LC/APC			
RF feature	Operating Bandwidth		(MHz)	950		2600	
	Input Range		(dBm)	-40		-25	TX, SAT-IF with AGC
					-8		TX, SAT-IF without IF
	Flatness		(dB)	-0.5		+0.5	40MHz
				-2.0		+2.0	950~2600MHz
	Return Loss		(dB)	10			950~2400MHz
	Input Impendence		(Ω)	75			
	CNR		(dB)	28			
	CTB		(dB)			-36	
	CSO		(dB)			-36	
	To Lnb Voltage		(V)		13/18		
	To Lnb Current		(mA)			300	
General Feature	Snmp			RJ45			HDS-26S-1-□□
	Communication Interface			RS232			HDS-26S-1-□□
	Power Supply	AC	(V)	90	220	265	
		DC		-30	-48	-72	
	Power Consumption		(W)			5	Single PS
	Operating Temp		(℃)	-5		+65	
	Storage Temp		(℃)	-40		+85	
	Relative Humidity		(%)	5		95	
	Size		(“)	19 ×14.5×1.75			HDS-26S-1-□□
			(mm)	88×50×22			HDS-26S-2-□□
				98×59.5×24			HDS-26S-3-□□

HDS-26S ELECTRICAL SCHEMATIC DIAGRAM



LINK PERFORMANCE

Optical input(dB)	Link loss (dB)	CNR (dB)	Link gain (dB)	RF output level (dBm/Ch.)
-13	14	30.18	-2	-38
-12	13	32.18	0	-36
-11	12	34.13	2	-34
-10	11	38.59	6	-32
-8	9	40.11	8	-30
-7	8	42.18	10	-28
-6	7	44.24	12	-26
-5	6	45.67	14	-24
-4	5	46.53	16	-22
-3	4	46.76	18	-20
-2	3	46.92	20	-18
-1	2	47.01	22	-16
0	1	47.03	24	-14

Remark: 1. General input level of digital satellite receiver: -60dBm ~ -30dBm

2. TX Output=1dBm

3. RX adopt HRS26S/P

PRODUCT SERIES

Model	Wavelength	Output power	Exterior	Connector
HDS-26S-1-10-TG/A1310-SA	1310nm Cooling DFB	10	19" Stander type	SC/APC
HDS-26S-1-12-TG/A1310-SA		12		SC/APC
HDS-26S-1-14-TG/A1310-SA		14		SC/APC
HDS-26S-1-16-TG/A1310-SA		16		SC/APC
HDS-26S-1-18-TG/A1310-SA		18		SC/APC
HDS-26S-1-20-TG/A1310-SA		20		SC/APC
HDS-26S-1-24-TG/A1310-SA		24		SC/APC
HDS-26S-1-30-TG/A1310-SA		30		SC/APC
HDS-26S-1-01-TG/B1310-SA	1310nm Non-cooling DFB	1		SC/APC
HDS-26S-1-02-TG/B1310-SA		2		SC/APC
HDS-26S-1-03-TG/B1310-SA		3		SC/APC
HDS-26S-1-04-TG/B1310-SA		4		SC/APC
HDS-26S-1-06-TG/B1310-SA		6		SC/APC
HDS-26S-1-08-TG/B1310-SA		8		SC/APC
HDS-26S-1-10-TG/B1310-SA		10		SC/APC
HDS-26S-1-04-TG/A1550-SA	1550nm Cooling DFB	4		SC/APC
HDS-26S-1-06-TG/A1550-SA		6		SC/APC
HDS-26S-1-08-TG/A1550-SA		8		SC/APC
HDS-26S-1-10-TG/A1550-SA		10		SC/APC
HDS-26S-1-01-TG/B1550-SA	1550nm Non-cooling DFB	1		SC/APC
HDS-26S-1-02-TG/B1550-SA		2		SC/APC
HDS-26S-1-03-TG/B1550-SA		3		SC/APC
HDS-26S-1-04-TG/B1550-SA		4		SC/APC
HDS-26S-2-01-TG/B1310-SA	1310nm Non-cooling DFB	1	B-Type Desktop type	SC/APC
HDS-26S-2-02-TG/B1310-SA		2		SC/APC
HDS-26S-2-03-TG/B1310-SA		3		SC/APC
HDS-26S-2-04-TG/B1310-SA		4		SC/APC
HDS-26S-2-06-TG/B1310-SA		6		SC/APC
HDS-26S-2-08-TG/B1310-SA		8		SC/APC
HDS-26S-2-10-TG/B1310-SA		10		SC/APC
HDS-26S-2-01-TG/B1550-SA	1550nm Non-cooling DFB	1		SC/APC
HDS-26S-2-02-TG/B1550-SA		2		SC/APC
HDS-26S-2-03-TG/B1550-SA		3		SC/APC
HDS-26S-2-04-TG/B1550-SA		4		SC/APC
HDS-26S-3-01-TG/B1310-SA	1310nm Non-cooling DFB	1	C-Type Desktop type	SC/APC
HDS-26S-3-02-TG/B1310-SA		2		SC/APC
HDS-26S-3-03-TG/B1310-SA		3		SC/APC
HDS-26S-3-04-TG/B1310-SA		4		SC/APC
HDS-26S-3-06-TG/B1310-SA		6		SC/APC
HDS-26S-3-08-TG/B1310-SA		8		SC/APC
HDS-26S-3-10-TG/B1310-SA		10		SC/APC
HDS-26S-3-01-TG/B1550-SA	1550nm Non-cooling DFB	1		SC/APC
HDS-26S-3-02-TG/B1550-SA		2		SC/APC
HDS-26S-3-03-TG/B1550-SA		3		SC/APC
HDS-26S-3-04-TG/B1550-SA		4		SC/APC

Remarks: 1. Two type optional, without IF drive amplify.

2.HDS-26S-1 口口: ITU standard wavelength adjustable in 1550nm.

3. CWDM working wavelength optional.

MODEL EXPLANATION

HDS - 26S - □ - □□ - □□ / □ □□□□ - □ / □□ - □□

Product type		Operating bandwidth		Product feature		Output power		Type		Type of laser		Tx wavelength & transmission distance		Optical port position		Connector		Power supply	
HDS	Satellite Direct Modulated Optical Transmitter	26S	950~2600MHz SAT-IF	1	19" standered type	01	1mW	TG	TX, SAT-IF with AGC amplification	A	Cooling DFB	1310	1310nm	F	Front panel	SA	SC/APC	48	-48VDC
				2	B-type Desktop type, TX adopt non-cooling DFB laser direct type.	02	2mW			B	Non-cooling DFB	1550	1550nm	B	Back panel	FA	FC/APC	22	220VAC
						03	3mW	TO	TX, SAT-IF without IF amplification			15××	ITU			LA	LC/APC	11	110VAC
				3	C-type Desktop type, TX adopt non-cooling DFB laser direct type.	04	4mW					1×××	CWDM						
						06	6mW												
						08	8mW												
						10	10mW												
						12	12mW												
						14	14mW												
						16	16mW												
						18	18mW												
						20	20mW												
						24	24mW												
						30	30mW												