Ver.2.3en

HA5700Series

CATV MSA EDFA(1540~1563nm)

Technical Specification

CONTENT

1.0 PRODUCT DESCRIPTION

With the development of digital TV and the application of value added business such as VOD, optical fiber CATV develops towards high capacity and high bandwidth continuously. Optical fiber dispersion is the main factor that limits the distance of 1550nm fiber CATV system. There are many ways in dispersion compensation. Practice has proved that adopting dispersion compensation module (DCF, DCM) is the most simple, effective and economical methods. The DCF has the feature of high attenuation (ordinary 0.5~2dB/Km) and small diameter of mode field. Generally, the adopted method is post compensation, that is, PA → DCM → BA.

Huatai HA5700, the Mid-Stage Access (MSA) CATV fiber amplifier, is developed and produced specially for the dispersion compensation of over-long trunk. HA5700 is composed of lower noise per-amplifier (PA) and booster amplifier (BA). There is access connector between these two amplifiers and thus the dispersion compensation module (DCM) can be accessed in the mid-stage conveniently. It offers the most simple and effective application.

HA5700P: the output power is adjustable. Users can adjust the output power in the range of -6dB~0dB with ±0.2dB stepping through the button at the front panel and can provide redundancy back up to the system upgrading and aging.

Huatai is the famous manufacturer of EDFA. HA5700 adopts the world's top class pump laser and America OFS erbium-doped optical fiber. Perfect APC, ACC and ATC control, excellent design in the ventilation and heat-dissipation ensure the long life and high reliable work of pump laser. RS232 and RJ45 offer serial commutation and SNMP network management port. The LCD at the front panel offers the work index of all equipment and warning alarm. The laser will switch off automatically if optical power is missing, which offers security protection for the laser. All the optical port can be installed in the front panel (also can be in the back panel if customers specify).

Huatai product, for its high quality, high reliable and high cost performance, is the ideal choice of the system integration and system operation.

2.0 PRODUCT FEATURE

- 1540~1563nm gain bandwidth
- Low noise, high performance, high reliability
- APC, ACC, ATC controlled selection（HA5700/P）
- Standard RS232 communication interface, powerful SNMP network management function
- Efficient space, flexible installation and easy operation
- Excellent P/P ratio

3.0 MAIN APPLICATION

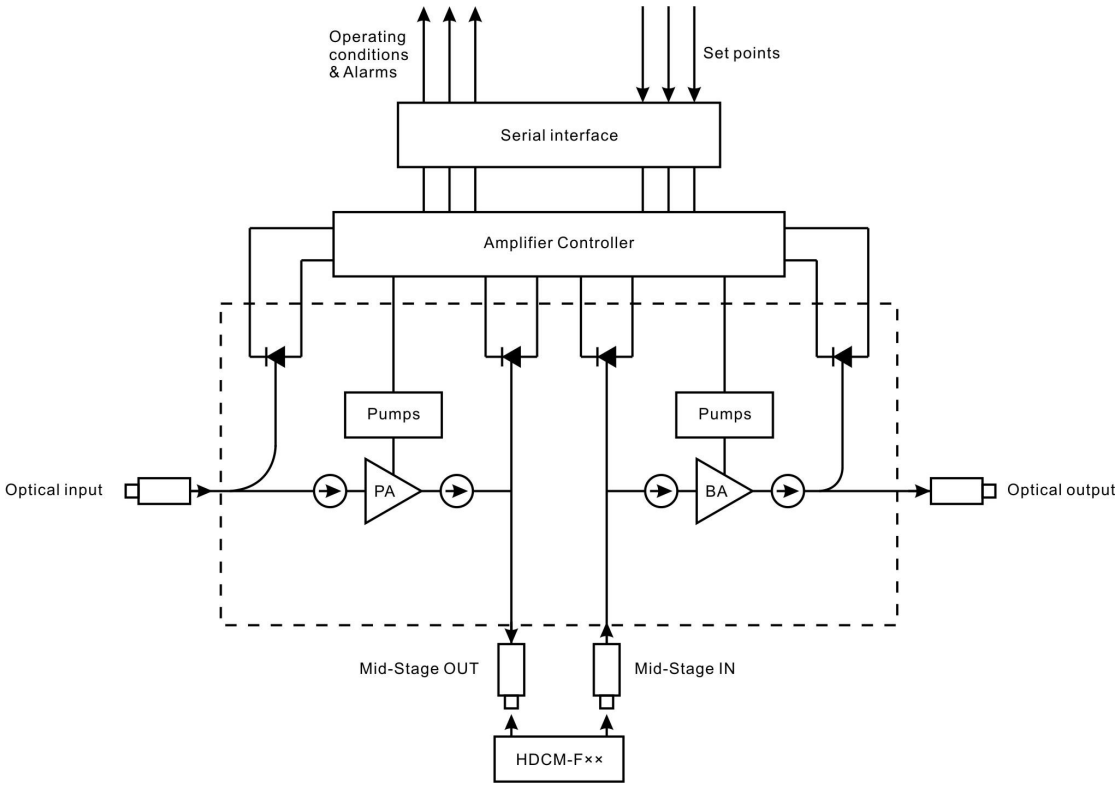
- DCM in digital TV over long trunk
- DCM in AM TV over long optical cable trunk
- DCM in single channel or 1~8 continuous ribbon channel (ITU wavelength) over long trunk

4.0 Technical index

Performance			Index			Supplement
			Min.	Typ.	Max.	
Optical feature	Operating wavelength range (λ)	(nm)	1540		1563	CATV
	Input power range	(dBm)	-10		+10	
	Gain range	(dB)	3		33	
	Mid-stage access loss range	(dB)	0		15	
	Max. output power	(dBm)			17	HA5717
					20	HA5720
					21	HA5721
					22	HA5722
					23	HA5723
					24	HA5724
					25	HA5725
					26	HA5726
	Noise figure (Max output, max gain)	(dB)		5.0	5.3	HA5717
				5.5	5.8	HA5720
				6.0	6.3	HA5723
				6.5	6.8	HA5726
	Polarization dependence loss	(dB)			0.3	
	Polarization dependence gain	(dB)			0.5	
	Polarization mode dispersion	(ps)			0.3	
	Pump power leakage	(dBm)			-30	
	Echo loss	(dB)	55			APC
General feature	SNMP network management interface		RJ45			
	Series interface		RS232			
	Power supply	(V)	90		265	220VAC
			30		72	-48VDC
	Power consume	(W)			50	

	Operating temp.	(°C)	0		65	
	Storage temp.	(°C)	-40		80	
	Relative humidity	(%)	5		95	
	Size (W)×(D)×(H)	(")	19×14.5×1.75			1RU (19”)

5.0 OPTIC/ELECTRICAL SCHEMA



6.0 Product series

Mode	Wavelength (nm)	PA output power Max (dBm)	BA output power Max (dBm)	Function	Optical port mode
HA5717/0N-M4	1540~1563	14	17	With SNMP network management, output power is not adjustable	1 way input, 1 way output, Mid-stage 1 input port, Mid-stage 1 output port
HA5720/0N-M4			20		
HA5721/0N-M4			21		
HA5722/0N-M4			22		
HA5723/0N-M4			23		
HA5724/0N-M4			24		
HA5725/0N-M4			25		
HA5726/0N-M4			26		
HA5717/PN-M4	1540~1563	14	17	With SNMP network management, output power 0~-6 adjustable	1 way input, 1 way output, Mid-stage 1 input port, Mid-stage 1 output port
HA5720/PN-M4			20		
HA5721/PN-M4			21		
HA5722/PN-M4			22		
HA5723/PN-M4			23		
HA5724/PN-M4			24		
HA5725/PN-M4			25		
HA5726/PN-M4			26		

7.0 Model explanation

HA 5 7 22 /0 N– M4 – 1U – F / SA – 22

Product series	Operating bandwidth		Product type		Saturation output power		Function		Network management		Number of optical port		Exterior		Optical port position		Connector		Power supply	
Amplifier of communication class	5	1540~1563nm CATV	1	BA	17	17dBm	0	Without	0	Without	M4	4 optical ports	1U	19" 1RU	F	Front panel	FA	FC/APC	22	220VAC
			2	LA	18	18dBm	P	Optical power adj.	N	With					B	Back panel	FP	FC/UPC	11	110VAC
	4	C-Band 1528~1565nm	3	PA	19	19dBm											SA	SC/APC	48	-48VDC
			4	High Power	20	20dBm	G	Gain adj.									SP	SC/UPC		
	6	L-Band 1570~1610nm	5	VGA	21	21dBm											LA	LC/APC		
			7	MSA	22	22dBm											LP	LC/UPC		
	7	C+L-Band	8	FTTP with CWDM, for FTTx PON	23	23dBm														
	8	Bi-direction EDFA			24	24dBm														
					25	25dBm														
					26	26dBm														